Illustrated glossary of
Australian rural fence terms

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Cover image: Derelict palisade fence built across an ephemeral lake to avoid problems of rusting wires every time the lake fills. S of Yantabulla NSW (29° 25.7’S 145° 38.0’E), 8 August 2007.


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Executive Summary


Rural fences are management tools used to mark boundaries, restrain stock, and facilitate management. Fences were built at Sydney Cove as early as 1788, and subsequently have been built in almost every environment in Australia. The physical remains of early fences provide tangible historical evidence of the sequence of land settlement, development of legislation, importation and local innovation of fencing technology, environmental changes, and the hopes and aspirations of settlers. But using the information contained in rural fences is difficult without a stable nomenclature.

The purpose of this glossary is to record and explain the many terms that have been applied to rural fences in Australia. Each term listed is defined, described using primary sources, and where possible, illustrated.

Acknowledgements

I started collecting fence terms in the early 1990s when I began studying rural fences. After several changes in format, the present Glossary was conceived in 2005. Collating the terms, acquiring images etc. has been partially supported by the Department of Physical Geography, Macquarie University, and a grant from the Heritage Branch, NSW Department of Planning (grant THM 2007-16 Rural fences in NSW: a thematic history and heritage assessment guide). Many individuals have helped me over the years by suggesting sources etc. The staff of the Document Supply Section, Macquarie University Library located many of the older and more obscure sources for me.

Many thanks to the following individuals and organisations for granting copyright permission to re-use the diagrams or images which add considerably to the Glossary:

- Art Gallery of South Australia: detail of Arthur Stretton (1888) painting Early summer - gorse in bloom.
- Clive Tilsley (Fullers Bookshop, Hobart) Emma von Steiglitz sketch of shepherd’s watchbox.
- Gerald Walsh (sketches of fence structures)

Over the past decade I have discussed fences with many farmers and pastoralists across Australia. Without exception they have willingly shared their knowledge and experience with me, and allowed me access to their properties to examine fences. Several guided me to particular fences, or retrieved current or old tools and explained their use: Don Nicolson (previously Middleback Station, SA; member of the SA Dog Fence Board), Ray Browne (Myall, NSW), Richard Warwick (Holowiliena, SA), Graham Randle (Scone, NSW), Barry Turner (Polpah, NSW), Dave Worseley (Maryland, NSW).
Part 1: Introduction

1. Why a glossary of fence terms?

Rural fences have been built by landholders in Australia since the first settlement in 1788. As the colonists moved across the landscape with their crops, flocks and herds, the range of fences increased, and so did the names for the various types. With time, fences evolved and the ubiquitous and rather plain post-and-wire fence became the de facto standard across most of Australia. However, fences include a much wider range of structures and forms, thus a general definition is:

A generally linear structure erected or established to mark property boundaries, exclude or enclose stock, and to facilitate management.

Like many other farm structures that are management tools, fences are built, modified, replaced or allowed to become derelict. Consequently, the remnants of early fences still occur in back paddocks, hidden on remote hills and even alongside major highways. As part of our historic heritage these fences provide insights into the sequence of land settlement, development of technology and legislation, environmental changes, and the hopes and aspirations of the settlers. Until now, any consideration of the historic and heritage values of fences has been hindered by the confusing range of names and terms applied to rural fences. For example, an important criterion in determining “heritage significance” is the commonness or rarity of the object (e.g. a rural fence). This is usually determined by comparing known distributions of the particular fence structure, but can be very difficult because of the confusion in names of fences. This Illustrated glossary is an attempt to redress these problems.

There are several reasons for compiling this glossary. A stable and reliable terminology is essential for communication. It is difficult to have a clear idea of fence structures from the many names used in both contemporary and later descriptions. There is an unrealistic assumption in many modern reports that merely using a name will automatically engender an accurate image of a particular fence in the mind of the reader. Of particular concern are the names of now-obsolete fence structures that were once common and widespread. Accurate names gradually fade from community consciousness, and may well be misapplied in later accounts.

There are four major problems in the current confusion of names and terms:

a. the same name is used for different fence structures,
b. the same fence structure can have different names,
c. incomplete / ambiguous descriptions and inaccurate diagrams,

and we should not forget that

d. the rich variation in names is part of our cultural heritage.

To further confuse matters, some fences and names fall into both the first two categories.
a. Same name, different structure (e.g. cockatoo fence)

Probably the best (?) worst) example of the same name being used to describe different fences is “cockatoo fence”. Comparing six definitions / descriptions highlights the problem (Box 1).


This definition suggests some form of brush fence or log fence where material is dragged to the line of the fence and piled to make a barrier, rather than a structure using cut poles carefully arranged in a repetitive manner along the fence line.

ii. 1861: “…a cockatoo fence, … consists of forked sticks driven into the ground, and saplings or young trees laid across them. A second and shorter row is requisite, making it a two railed fence.” (Anon 1861, p. 13).

This description matches the illustration very well, indeed both are reasonably unambiguous.

iii. 1881 “Cockatoo fencing. Log fencing made of forked logs pronged together, also called fork-and-log.” (Karney 1991, p. 189 Glossary.)

In the context that Karney uses this definition, he is interpreting a vague description of fence building in 1881. The original diary entry only states that posts and rails were being carted to the line of the fence (pp. 13-14), so there is no contemporary confirmation that Karney’s interpretation is correct.

iv. 1909 “Snake or Zigzag Fences, Cockatoo, or, as called in Australia, ‘Drop Fences,’ shown by Fig. 50 (*b*), are still; used in American and Australia, … (Vernon 1909, p. 165).

The diagram clearly shows a worm (or zig-zag, snake, or Virginia) fence. In most other sources, “drop fences” have a completely different structure.


Peterson does not offer any description, and his illustration matches neither the dictionary definition, nor the contemporary description of Anon (1861). It is worth noting that Edward’s (1987, p. 14) sketch of a “fork-and-pole” fence (see below) combines elements of the diagrams provided by Anon (1861) and Peterson (1988). This suggests that fence builders were capable and ready to adapt designs for what are now unclear reasons, and they were not bound to rigid specifications.
“a rough fence made of logs and branches”

Yallop et al. (2005, p. 285.)
(also known as brush, bush, and log)

Anon (1861, frontispiece)

“Log fencing made of forked logs pronged together, …”

Karney (1991, p. 189)
(also called fork-and-log)

Vernon (1909, Figure 50 b, c)

Box 1: Comparison of six definitions / diagrams of cockatoo fences illustrating the extent of the differences.
vi. 1991 Pulsford (1991, pp. 31-32) noted a derelict fence that he called a “cockatoo fence” at Mt Trooper, south of Ingebyra NSW. He did not describe it, but provided a diagram of the structure.

Pulsford’s diagram does not match any of the other descriptions of a cockatoo fence. Pickard (2007a, p. 495) rejected the name “cockatoo” for the Mt Trooper fence, preferring “dog-leg fence” on the basis that the structure accurately matches the contemporary description of a “dog-leg fence” provided by Armstrong & Campbell (1882, p. 195).

Summing up, we have (at least) six conflicting descriptions or illustrations of a cockatoo fence, with no real way of determining which has historical priority, which was the most widespread, and indeed, if all six structures were termed “cockatoo” by the builders and their contemporaries. As will be seen below in the glossary, a similar problem arises with “dog-leg fence”.

b. Same structure, different names (e.g. double post-and-rail fence)

Unlike “cockatoo”, this term is at least somewhat descriptive and self-explanatory. But several other names have been applied.

In 1867, Patrick R. Gordon, an experienced pastoral inspector with a keen interest in fencing (perhaps more accurately termed a zealous proselytiser of fencing), described the structure and typical dimensions of this fence.

i. 1867 (NSW) “The … double post and rail [fence] is more frequently used for sheep yard than for paddock fencing. It is formed by sinking two posts in the ground, about six inches apart, at intervals of from twelve to fifteen feet. Saplings of any diameter not exceeding eight inches are then dropped between the posts, and when built up to a height of about four feet, the posts are secured together at the top by a coil of wire, hoop, green hide, or, in some instances, stringy-bark.” (Gordon 1867, p. 33.)

Although not illustrated, this is a clear and unambiguous description. However, within 15 years, two other names were being used.

ii. 1882 “[The drop fence] is better, neater, and lasts longer when made with round rails and split posts. … It is made by placing two posts (half-round, or D-shaped, being the best, as they are enabled to fit close against the rails), not more than 4 inches apart, in each hole, both being well rammed, and sunk to a depth of not less than 2 feet in the ground. It is better to erect a number of posts before commencing to place the rails, which is done by cutting the ends of them so as to make them fit between the posts - a small block being laid between every two posts, underneath the bottom rail, to prevent it sinking too close to the ground. When the rails are placed, the posts must be securely bound together with a double ply of wire, either just above the top rail or sufficiently low to allow this rail to rest thereon. (Armstrong & Campbell 1882, pp. 192-193.)

iii. 1887 (NSW) Fences permitted under the Crown Lands Act 1884 (NSW) Regulations: “4. A ‘drop’ or ‘stub’ fence, not less than four feet in height,
composed of sapling or split rails not more than ten feet in length nor less than
four inches in diameter at the smaller end, held between two posts or uprights of
split or barked round timber, the posts or uprights to be not more than nine feet
apart and sunk not less than eighteen inches in the ground and tied firmly at the
tops with wire of not less that No. 8 gauge; provided that growing trees or
saplings may be used in lieu of posts where conveniently situated in the line of
fence; the rails to overlap for a length of not less than twelve inches, the space
between the rails and the lowest rail and the ground to be not more than eight
inches.” (NSW 1887a, p. 471.)

As befits a legislative regulation, the latter description is precise, and it clearly indicates
a double post-and-rail structure. Both this regulation and the description of Armstrong
& Campbell suggest a neater fence than Gordon’s. Whereas Gordon simply piles
saplings etc. between the pairs of posts, the regulation requires careful stacking of the
saplings to overlap the ends. This structure would use fewer saplings / rails to achieve
the same height as Gordon’s version. But it would require straighter logs, most likely
small trees or split logs rather than just saplings.

Once again, there is added confusion with the names, as “stub fence” is used by others
to describe a completely different structure.

iv. 1988 “A double post-and-rail fence, similar to the Harper fence of Western
Australia was formed by sinking two posts in the ground about six inches apart
and dropping saplings between. Green-hide lashed the posts together.” (Peterson
1988, p. 11).

v. 19th C (WA) “Another type of fence was the ‘Harper’ fence. This consisted of
rails laid one on top of the other and held in place by two upright posts. … The
variation of the Harper fence … comprised a double set of jam [Acacia
acuminata] posts held together at the top with greenhide (later tie wire) and
placed about 1.5 metres apart. The branches and lops of the felled jam trees
would be stacked length-ways between the posts, …” (Underwood 2004, pp. 28,
35.)

As Peterson notes, these descriptions match a double post-and-rail fence, but the name
“Harper” seems confined to Western Australia.

Summing up, double post-and-rail fences can be untidy or neat, and can also be called
“drop”, “stub” or “Harper”, with the added confusion that “stub” and “drop” are also
used for completely different structures. Thus, anyone reading contemporary or later
descriptions could misidentify the actual structure if they were not aware of the range of
names used.

**c. Incomplete / ambiguous descriptions and inaccurate diagrams**

Many contemporary descriptions are detailed, often with dimensions, and allow an
accurate mental image or drawing of the structure. Unfortunately, there are probably
more that are incomplete or ambiguous, and far too many modern descriptions simply
rehash older incomplete descriptions and exacerbate the problem.
With no view to history, several incomplete contemporary descriptions are prefaced by remarks such as “This Fence, …, is now so generally known and approved, that a detailed description of it is scarcely necessary.” (Hill & Smith Brierley Hill Iron Works 1894, p. 5.) A variation is “The dog-leg fence is now almost out of use, and is very seldom seen. It forms neither a secure nor neat fence, and is so seldom used that we consider an explanation of its construction almost unnecessary.” (Armstrong & Campbell 1882, p. 195.) Gordon (1867, p. 32) describes a number of traditional fences in use at the time, but says “I have purposely omitted post-and-rail and wire fences, their construction being familiar to every one.” As wire fences were rapidly spreading across the colonies in the late 1860s, it would have been nice to have a contemporary description of the early variations.

These disclaimers frustrate attempts to visualise the fence structures either commonly or rarely used in the past. But the comments are understandable; why bother to describe something that is so common at the time that everyone knows what it looks like, or conversely, is no longer used and therefore not worth describing?

Before the widespread use of photographs to illustrate objects, sketches were given to engravers who executed a drawing for publication. Engravers often had to interpret sketches that were unclear, with the possibility of introducing inaccuracies (see discussion comparing four engraved versions of the same fence in Pickard 1999.) Regardless of the source of inaccuracies (field sketch / engraver), early drawings must be used carefully. This is particularly the case with the engravings and descriptions in Anon (1861) because many of the examples appear to have never been used in Australia, and are at best, the interpretation of an engraver from a vague description.

d. Names as cultural heritage

Finally, the rich variation in names and terms from different regions is as much part of our historic and cultural heritage as the structures themselves, and thus deserves to be accurately recorded. A consequence is that any attempts at standardising names must walk a thin line between trying to create some order in the chaotic names while simultaneously retaining and celebrating the variation.

Two examples illustrate this. Firstly, wire gates are also known as “Bogan gates” in NSW, “mallee gates” in Victoria, and “cooky’s gates” in several states. Secondly, although by common usage and definition, a dropper is not embedded in the ground, many landholders refer to star posts in fences as “star droppers”. Indeed, many older landholders refer to any intermediate steel post as a “dropper”. While this may be technically incorrect, it is an (un)common but widespread usage, and because it is used by landholders, it is as culturally valid as the technically correct usage.

Patents are legal documents describing an invention (see below), and often use very strange language to describe everyday items, e.g. a “fencing unit” is nothing more than a post. Fortunately, these bizarre usages never seem to gain acceptance outside the legal fraternity.

2. How the glossary was compiled

The glossary was compiled over several years by accumulating terms from a wide range of contemporary sources, secondary sources, catalogues, old books on agriculture,
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Australian colonial and post-Federation patents, and information gleaned during conversations with many landholders.

Secondary sources posed particular problems when names are used with no other description or illustration. Exacerbating the problem, a distressing number of secondary sources simply ignore the tenets of good scholarship and give no or incomplete references for their information. In some cases the primary source is obvious, but in most the primary source(s) are unclear, and even locations and dates are vague at best.

3. What you won’t find in this glossary

This glossary is precisely that - a list of names and terms with examples, illustrations and explanations - and nothing more. It is not a history of rural fencing in Australia. The complex history of fencing is being covered in other publications (see Pickard 1992, 1994, 1998, 1999, 2005, 2007a, b, c, 2008, 2009 ms). However, some historical information is included to establish a context, or historical continuity. I have also included a number of terms describing manufacturing processes because they frequently appear in early works, or they provide background to understanding other terms.

As this glossary focuses on rural fences, there is essentially nothing dealing with the rich complexity of changes in urban fences (see Peterson 1988 for a summary). Similarly, there is little on the types of fences found around homesteads, gardens, orchards and stock yards. In contrast to the strictly utilitarian nature of paddock and boundary fences, those around homesteads often embody more aesthetic features of design and arrangement. Thus these fences have more in common with urban / suburban fences than those found around paddocks. Stock yards are generally bounded by very strong fences designed to withstand the pressure of large numbers of confined and agitated stock. While these strong fences are essentially similar to some paddock fences, they are not included here except to illustrate some of the forms that are now rare in paddock fences. Some fence structures which are now obsolete and rare (e.g. double post-and-rail, paling and palisade fences) may still be found in yards.

Fences around peri-urban (rural residential / lifestyle) blocks are not included because like urban fences, they often have aesthetic elements and are more costly than strictly functional paddock fences. On the other hand, many examples of older fences, especially the iconic post-and-rail fences, are retained to emphasise the faux rural appearance. Most examples are translocated from elsewhere and re-built. Others are built from scratch using modern tools, or a few are even built using cast concrete replicas of split posts and rails complete with simulated weathering cracks. (Pickard 2005). Understandably but sadly, such concern for rural appearance does not extend to retaining derelict fences with rare components or structures when the fences are “messy”.

Overseas literature includes many names of fence types that were either never built in Australia (or perhaps not yet recorded), or were known here under local names. Neither overseas fence structures nor names are included. For US terms see Meredith (1951) which was an important inspiration for this glossary. Adams (1976) lists many early British terms, and demonstrates the cultural richness of regional variations in fence terms. Although Australian fence terminology lacks the many centuries and many dialects of Britain, the variation that does exist - both regionally and over time - needs recording as part of the cultural heritage of European settlement in Australia.
Although rarely found in fences, palisades are still used in sheep yards. Old fence posts have been reused in the foreground, and in the middle, the palisade has just been rebuilt using sawn slabs. Mulgowan NW of Stanthorpe Qld (28° 31.8’S 151° 44.3’E), 22 March 2005.


Collectors of barbed wire and other fence components typically name the many variations using the name of the inventor combined with some self-evident descriptor. Although some named wire types are listed here, they are all trade names, rather than the informal names of wire collectors. There is no attempt to list the hundreds of
“named” varieties of barbed wire. Some recourse may be had to illustrated lists from the USA (e.g. Campbell & Allison 1986, Hagemeier 1998, Brown 2006). However, as many of the patented wires were never made, and many were never imported into Australia, identification using these books can be difficult. Both plain and barbed wires have been sold in Australia under a range of trade names, but only a few of these names are included. Finally, the Australian droppers included in the predominantly US compilation by Sowle (2007) are mostly poorly illustrated and identified. A comprehensive list of Australian fence-related patents is currently being compiled to address these issues. The compilation will include wires, posts, droppers and other components, but not gates.

4. Format of the glossary

The bulk of the glossary is a series of longer or shorter quotations using the terms. Where possible, I have used contemporary sources which unambiguously explain / describe / illustrate the term. This is not always possible, especially with some of the less common terms. Some of the quotes are extended to provide descriptions of how fences were erected in the past and the types of (improvised) tools used. Many of these extended passages come from Henry G. Lamond (1885 - 1969), a vastly experienced Queensland pastoralist who was a regular writer for The Pastoral Review for many decades (Walsh 1993, p. 256.) Although extremely verbose, the details in Lamond’s descriptions are both informative and credible because of his first-hand personal experience.

Overseas references are included where they provide historical or other context to the term, e.g. “bank” and “fold”.

Description

A short description of the item.

Quotations

The general format of the quotations is: Year (state) “quotation” Source.

Where the source provides a date for the fence or item, or if a date can be inferred from the context of the quotation, this is used, otherwise the publication date of the source is given. The state is the modern state rather than the original colony. No state is listed when the reference is primarily nation-wide, or the states are not given. This means that some excellent sources lack a firm date (e.g. much of Lamond’s information) or state. Even if it is historically incorrect, the term “UK” is used for the various countries in the British Isles. Original units (generally imperial) are retained in all quotes to avoid cluttering up the quotes with metric equivalents in parentheses.

Synonyms / also known as

Alternative names for the object / structure.

Historical note(s)

“Historical notes” have been appended to some terms to correct mistakes in the quotation used, and to avoid perpetuating some egregious historical errors.
Other references
Selected additional references using the term.

Hyphenated names
One vexed issue is use of hyphens in compound names, e.g. “post and rail fence” versus “post-and-rail fence.” As a general rule, I have used hyphens because the older sources seem to favour hyphens, and for some names (e.g. post-and-rail), this seems to be more common today.
Part 2: Glossary of Australian rural fence terms

**AMERICAN CHOCK-AND-LOG FENCE**

Synonym for *chock-and-log fence*.

There is no information on the origin of the adjective “American”. Despite examining many tens of contemporary sources on fences in the USA, I have not been able to find an unambiguous description of a fence matching the Australian chock-and-log fences.

1865 (Qld) No details other than being listed, but from the context, it is apparent that Gordon is referring to chock-and-log fences (Gordon 1865, p. 3.)

1867 (NSW) No details other than being listed. (Gordon 1867, p. 17.)

**AMERICAN FENCE**

Synonym for *zig-zag fence*.

No contemporary source provides a clear definition of this fence, other than the engraving in Anon (1861) shown below. Given the dominant use of zig-zag / Virginia / worm fences in eastern USA in the 18th and 19th centuries (see e.g. US Department of Agriculture 1871, p. 1398; Larsen 1947 and Primack 1969), it is reasonable to conclude that the term “American” was used in the Australian colonies to describe zig-zag fences. However, Curr’s description (see below) of them as “the most unsightly of all enclosures, the American consisting of trunks of trees piled upon each other” is more suggestive of log fences rather than carefully made zig-zag fences. Alternately, Curr may simply have been just one of the earliest British visitors dismayed that colonial farms were not neat and orderly like those of Britain.

1803 (Tas) “Bowen [Lieutenant-Governor 1803-1804] was instructed to direct settlers to erect American log fences, as they made use of cleared timber and could be constructed without the necessity of using the colony's precious, small supply of nails.” (Morgan 1992, p. 142.)

1824 (Tas) “Those lands that are protected from depredations upon stock are generally surrounded either with a brush fence or with the most unsightly of all enclosures, the American consisting of trunks of trees piled upon each other.” (Curr 1824, p. 119.)

1861 (Vic) Illustration in frontispiece (Anon 1861.)

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Source: Anon (1861, frontispiece.)
This engraving of the “American fence” very clearly shows the structure, but it is problematic. The posts (technically “stakes” in the US) shown are all on one side of the fence, alternately located in inside and outside corners of the zig-zag. This would give a less stable fence than one with the posts on both sides of the corners. Compare this image with Vernon’s illustrating the discussion of “cockatoo fence” in the Introduction.

Other references: Cox (1980, pp. 47, 49); Dutton (1846, p. 203); Ryan (1894, p. 286).

**AMERICAN SLIP RAILS**

A form of slip rails.

1861 “American slip-rails … consist of three posts put outside the fence, (not in the same line) and long saplings run through the whole of the posts; and these sapling rails are only pushed along when you wish to enter the field. They have the great advantage of never being left down, as the usual ones frequently are; and are very easily slipped aside.” (Anon 1861, p. 13).

Source: Anon (1861, frontispiece).

**AMERICAN WATER FENCE**

There is no description or illustration of this fence structure.

1840s (Tas) “There is also a chevaux de frize, called the American water-fence. It is not greatly in use, because if broken at any part of the line, it is apt (one portion leaning against another) to tumble down like a pack of cards.” (Burn 1973, p. 182.)

See also *chevaux de frise*.

**ANGLE POST**

A strong post used at a corner or bend in a fence.

1893 (patent) “In an angle post for wire fencing purposes, … ” (Wratten 1893). Although this is a Victorian colonial patent, Wratten was from New Zealand, and thus this usage may have been peculiar to that colony.
ANNEALING
“A process involving heating and cooling [various metals] applied usually to induce softening. The term is also used to cover treatments intended to remove stresses; alter mechanical or physical properties; produce a definite microstructure; remove gases.” (Oberg et al. 1979, p. 2135.)

1877 (SA) “… the wire, … will consist of that kind known as ‘Black annealed drawn fencing wire’ Nos. (6) six and (8) eight gauge …” (Mais 1877, p. 1.)

1936 Description of annealing at Rylands wire mills in Newcastle NSW: “The process of wiredrawing causes the wire to become harder and less ductile, particularly in the finer gauges. While this hard wire is suitable for many purposes, other uses such as weaving, tying, etc., require the wire to be soft and ductile.

This change is effected by loading the wire into steel annealing pots holding two to three tons. These pots are then charged into furnaces where the whole mass is brought up to 650°C. to 750°C. according to requirements, and then allowed to cool off slowly.

This results in a soft wire which can be readily bent and worked. All wire used in the manufacture of Wire-netting passes through this process.” (Rylands Brothers (Australia) Limited 1936, p. 6.)

APRON
A strip of netting laid along the surface of the ground and for a variable height up a fence. Designed to discourage animals from digging under the fence.

In early netting fences, the foot of the netting was placed in a trench at least 150 mm deep, to stop burrowing by rabbits. This was extremely labour-intensive, and by trial-and-error, landholders found that simply laying a strip of netting along the ground and up the fence was both cheaper and as effective. The apron may be on the surface and pegged down, or buried under a thin cover of soil. Most government-maintained rabbit and dog fences use aprons. (See diagram under verandah).

AUGER
A spirally twisted tool with sharp cutting edges at one end and a loop at the other for a handle. Similar to a bit, but generally for drilling large holes and not used in a brace.

See also bit.
A range of augers of different diameters. Some are fitted with handles through the top loops. Note the auger on the far left which is held in a home-made brace. Holowiliena E of Hawker SA (31° 52.5’S 138° 50.1’E), 12 December 2005.

**BANK**
An elongate mound made by piling earth excavated from an adjacent ditch or ditches.

Although banks were a common form of fence in Britain from pre-mediaeval times, they do not appear to have been either common or widespread in the Australian colonies. Banks, usually planted with a hedge, ran parallel with ditches which were the source of the material in the bank. In British use, the term “bank” is frequently the second component of more specific compound descriptors: hedge-bank (Bass 2001); wood-bank (Rackham 1976, p. 115 ff.), park-bank (Cantor & Moore 1963), etc. None of these terms appears to have been used in Australia.

Banks were permitted as fences in NSW legislation from the late 19th century (see below), but I have found no references to banks without ditches being used as fences in Australia. It is likely that the labour cost of making even a low bank, of doubtful use as a fence, was too high, and alternatives such as timber fences were preferred.

1805 (UK) “Earth banks are chiefly employed in those districts where other materials for constructing fences are difficult to be procured. The best mode of forming such banks is, to dig up some turfs in a spot abounding with grass, about one spit deep, and four or five inches in thickness. These should be laid even on one side by a line, with the, grass outwards; and on the back of these is to be placed another row of turf, leaving a space of one foot of solid ground on the outside, in order to prevent the bank from slipping or falling in, in case any part of it should be deficient. On the outside of this is to be excavated a ditch, otherwise it will be necessary to make both sides with a slope two feet deep; but this will not materially affect the fence, as both sides will produce pasture. The earth which is dug out of the ditches, or from the slopes, ought to be thrown in between the two, rows of turf, till the whole is made level in the same manner, and the bank
becomes four, five, or more feet in height, the width of the foundation being at the same, time increased according to the width of the bank. In proportion as the bank ascends, the two sides must be made gradually to slope, so that the top shall be about two feet and a half wide. It should, however, be uniformly regarded, in forming earth-banks, that they never be constructed or raised in dry weather; for, in the event of sudden or long-continued rains descending, the soil between the sods would swell and bulge out, and of course materially affect, if not totally destroy, the solidity as well as the symmetry of the banks. The top may be planted with quick [i.e. hawthorn], or any of the other shrubs useful for fencing, …” (‘A Lincolnshire grazier’ 1805, pp. 379-380.)

1885 (NSW) Fences permitted under the Crown Lands Act 1884 (NSW) Regulations: “3. A bank or wall of substantial material, at least four feet in height, and not less than two feet wide at the bottom and nine inches at the top.” (NSW 1885, p. 192). Identical specification in NSW (1887a, p. 471.)

Historical note: It is difficult to understand why the regulations permitted banks as legal fences in the 1880s when wire fences were already the de facto standard (Pickard 2007b).

Other references: Britain: almost any standard agricultural work from the 19th century; Cantor & Moore (1963, p. 43.)

BAR FENCE
Synonym for post-and-rail fence.

1870s (Vic) Langford near Hamilton “is everywhere well fenced, either with wire or bar fences, ... ” (Cornish 1880, pp. 175-176.)

BARB (1)
The actual barb on a barbed wire.

BARB (2) Contraction of “barbed wire”
Contraction of “barbed wire”, commonly used in descriptions of fences, e.g. a fence may be described as comprising “6 plain and 1 barb”.

1902 “... top wire to be barb, ...” (‘Crossbred’ 1902a, p. 166.)
Box 2: Four of the many types of barbs found in rural fences

“Iowa” and “Waukegan” are standard terms used in the wire industry. “Abbott” and “Arrowhead” are informal names based on the name of the inventor and shape of the barb respectively.

BARBED WIRE

Single or multiple strand wire or narrow metal strip with a variable number of barbs of widely varying design, size and shape attached by various means or integral with the strip. In rare cases, the “barbs” may be reduced to acute edges on wire of triangular cross-section.

Despite popular belief that barbed wire is an American invention, the first barbed wire were patented in France in 1860 by Léonce Eugène Grassin-Baledans, but it was not commercially successful unlike Joseph Glidden’s US patent from 1874 (Krell 2002, pp. 15-19.)

Currently (2009) there is no single reference listing the different types of barbed wires used in Australia. Illustrated compilations from the USA are useful but many of the designs were never made, and many not imported to Australia. The most useful are Campbell & Allison (1986), Hagemeier (1998), and Brown (2006). A further complication is that several designs were patented locally and are essentially identical to some US patents.
**BARKING / DEBARKING**

Removing the bark from a log prior to using the timber (either in-the-round, or split or sawn-and-split) in a fence. The practice is highly variable with some farmers saying that barking improves the in-ground life of posts.

1955 (Qld) “… I prefer to have [posts] barked. A couple of reasons: bark provides harbour for vermin; bark holds moisture which might tend to rot; bark is an inducement to a bush fire to make a start. … This is the way I had it done - and it refers to more than one hundred, and perhaps several hundred, miles of fencing.

When the post was erected and in the line the borer would come along to do his job. Part of his contract with me was that, before boring, he took a sliver of bark down each side of the post to coincide with the entry and exit of the hole he bored. … And when that post had been in place a month or so, and the sun had dried it, the bark stripped from the post, hung forlornly for a while, and then dropped off on each side, leaving the post bare. Strainers are different. The wire has to be twisted round them and tied. I didn’t insist on the strainers being blazed, though the borers did it to make their work easier. After a bit, and not too long a period at that, the free bark would peel and fall. That which was held by the wires would have the life squeezed out of it. The stuff would die. A wire-wide piece of bark would be all which remained on the strainer. Barked posts look stark and bare. But there’s a beauty about them which no post clothed in ragged bark can equal. I’m all for barked posts.” (Lamond 1955a, pp. 34-35.)

**Other references:** Armstrong & Campbell (1882, pp. 192-193); Anon (1994a, p. 132.)

**BARRIER FENCE**

Although all fences are barriers, this term has a specific meaning in Australia and other countries (e.g. Zimbabwe: Taylor & Martin 1987), referring to a fence built to exclude native or exotic animals (generally labelled with the pejorative “vermin”) from agricultural areas.

Barrier fences are typically erected around a group of properties, a district or even a region, rather than a single property. Examples are the Rabbit-proof Fences Nos. 1-3 in Western Australia, and the Dog Fence running from South Australia to central Queensland. The Rabbit-proof Fences in WA have been restructured as the Western Australia Barrier Fence, and today its main function is to exclude emus from agricultural areas. McKnight (1969) describes the history of barrier fencing in Australia.

1902 (NSW) Definition of barrier fence: “A barrier fence shall be taken to mean a rabbit-proof fence which protects, or will protect, from the incursions of rabbits the rabbit district, or any part thereof, whether such fence is erected without or within the district.” (Rabbit Act (NSW) 1902, S22 (2).)

Internationally the term appears to now apply primarily to massive structures used on disputed borders to prevent people from entering a nation or region. Among many examples are the now-demolished Berlin Wall (Baker 1993), and the Israeli separation fence (Trottier 2007). Historical examples include the famous Great Wall of China and the less-well known Great Wall of Gorgan in Iran (Nokandeh et al. 2006, Omrani Rekavandi et al. 2007) and the Great Hedge of India (Moxham 2001.)
BASKET FENCE
A fence made by weaving relatively thin saplings and sticks between upright stakes firmly placed in the ground. The finished result is identical to wattling.

Synonyms  *Lattice fence*, woven *hurdles* (Peterson 1988, p. 11), *wattled fence*.

1840s (SA) The Bowman brothers “also made miles of ‘basket’ yards out of the small mallee scrub for lambing purposes - high enough to keep out the wild dogs.” (Cockburn 1925, p. 21.)

The use of “yards” in this quotation is intriguing. It is inconceivable that the Bowmans literally made strings of yards extending considerable distances. Perhaps Cockburn simply means that the Bowmans made many yards. Alternatively, they may have applied the same technique used in basket yards (i.e. wattled hurdles) to make several miles of fence.

1867 (NSW, Qld) “The … ‘basket’ fence, will be found serviceable to those residing in scrubby or brigalow country. It is made by driving 5 feet 6 inch stakes in the ground with mauls, to a depth of 9 or 12 inches, and 4 feet 6 inches apart; saplings from about 2 inches in diameter are then closely entwined with the stakes to a height of 4 feet six inches. It can be strengthened by staying it at intervals with strong forks; or if erected in scrub, stumps of saplings should be made available where practicable instead of driven stakes.” (Gordon 1867, p. 33.)

The basket fence appears very similar to wattled fences, both being made by intertwining horizontal saplings between closely spaced stakes or posts.

Source: Walsh (1993, Figure 1, p. 11.)

BATTEN
Synonym for *dropper*.

1876 (NSW) “Brock, the Engine driver,… will commence cutting battens for Sheep fences.” (Australian Agricultural Company Papers, Hudson’s Report 1876, cited in Butlin 1962, p. 337.)

Other references: NSW (1887b, p. 587); Offen & Offen 1957).

BATTER
Sloping surface of a dry stone wall. (Vines 1990, p. 37.) If the surface is vertical, it is called a *face*.
BAY

Synonym for panel

1960 (patent) “…Figure 1 shows a fence in which a bay (i.e. the part between two posts …)" (Corrie 1960).

BELLY WIRE

A wire added to netting fences, generally running in the middle of wire netting or on the junction between two strips of netting, to provide additional strength and security against pressure by domestic stock and other animals, which would otherwise more easily damage the netting. May be either plain wire or barbed wire.

BILLABONG FENCE

A fence of logs with a smaller log in the crutch formed by laying smaller poles across the lower logs. Gordon (1867, p. 32) suggests that the name is derived from Billabong Run where Rawdon F. Greene first erected a fence with this structure.

1868 (NSW) “The foundation of the fence is made by laying a number of logs, of any length, and as nearly us possible of a uniform diameter of two feet,
longitudinally along the ground on the line in which it is proposed to erect the fence, the ends being so cut and fitted together as to prevent the possibility of the escape of lambs; care also being taken that any inequalities should be chocked up, so that there may be no means of escape under the bottom log.

After the bottom logs have thus been laid along a considerable portion of the line, logs of a somewhat smaller diameter are, in the same manner, laid along on the tops of the former.

Strong ‘crosslegs’ are then split, sunk in the ground, one on either side of the fence, and made to cross each other on the top of the second log in the usual way; and in the angle formed by this crossing, a large heavy sapling, not less than nine inches in diameter, is embedded. This binds the fence firmly, and forms its top rail. The intervals between each pair of crosslegs ought not to exceed twelve feet, and it is desirable, in all cases, to have the cross-legs of split stuff, as it is found that they last longer in the ground than saplings.” (‘Jumbuck’ 1868b, p. 6.)

Source: Walsh (1993, Figure 1. p. 11.)

**Other references:** Gordon (1867, pp. 32-33.)

**BIRMINGHAM WIRE GAUGE**

The most commonly used system of specifying wire diameters in the 19th and early 20th centuries in Britain and Australia. See under *gauge (1)* for more details.

**BIT (AUGER BIT)**

A spirally twisted tool held in a brace and used for boring holes in wood.

See also *auger* and *brace*.

**BLACK WIRE**

Ungalvanised iron or steel wire.

When ungalvanised wire leaves the factory its surface is black, perhaps with a thin coating of oil or varnish to inhibit rust. Exposed to the elements, the wire quickly rusts to brown. Further exposure leads to pitting and eventual breaking. Bush fires hasten rusting and pitting such that the extent of pitting is not a reliable indicator of age. Old galvanised wire which has lost its zinc coating also rusts and then pits, making it difficult to determine if the wire was originally black or galvanised. Careful looking close to posts for remnants of the galvanising may resolve this.
BLUE GALVANISING
A proprietary finish applied to high tensile plain and barbed wire, and fabricated (woven) wire by OneSteel Ltd by adding a blue dye to the final galvanised coating. The colour frequently appears more green than blue.

BOARD FENCE
A fence with a variable number of horizontal wooden (or pressed steel) boards, usually bolted or nailed to posts. Typically found in areas with large numbers of horses, and frequently painted white. Because of the high cost, board fences are virtually never encountered in large paddocks, or in areas where sheep and cattle raising are the primary land uses.

BOGAN GATE
Synonym for wire gate.

BOUNDARY FENCE
Synonym for dividing fence.

BOUNDARY RIDER (1) Station employee
A station employee whose primary task was to ride around fences to check for and repair any damage. Boundary riders also assisted with stock management.

BOUNDARY RIDER (2) Straining fork
Synonym for straining fork.

An improvised portable fence strainer made from a forked stick with or without a hole drilled through the main stem. Presumably the name is derived from the work of boundary riders who may have carried these strainers with them.
1955 (Qld) “There are various devices and gadgets advertised and employed for straining wires in a fence. If you haven’t got one of them there’s no need to worry - the old forked stick, the ‘boundary-rider’, is as good as any and perhaps better than most. It’s so delightfully simple; it’s ease to get and to make it costs nothing other than the time spent in finding a suitable tree, cutting it and fixing it with your own fancy notions.

... You cut a forked stick, and your own judgment directs you to size and strength. ... You leave a spur at the fork about a foot or so long.” (Lamond 1955b, p. 5.)

**BRACE (1) Tool for drilling holes**

A tool for holding the auger bits used to drill holes through wooden posts and droppers for wires.

1928 (Qld) “The bottom wire-hole should be bored about 8 in. from the ground. That leaves one just sufficient room to turn a brace with a 7-in, crank - the size most commonly used by fencers.” (Pearson 1928, p. 1114.)

Note the implications of this quote: firstly, the holes were drilled after the post was set in the ground; and secondly, the height of the lowest wire was determined by the swing radius of the brace to avoid skinned knuckles.

The most commonly used bit was ⅝” diameter even though a ⅜” hole would easily accommodate a plain wire. A ⅝” bit was the smallest that could be used in hardwood posts (*Eucalyptus* spp. and *Acacia* spp.) without frequently breaking. Barbed wire requires holes 30 - 35 mm diameter.
**BRACE (2) / BRACE WIRE** A form of dropper

A vertical wire twitched onto the line wires, thus acting as a dropper.

See also *lace fence*.

1955 (Qld) “I don’t think they called them ‘droppers’ at the start. I’ve an idea that they were termed braces and standards. A ‘brace’ was length of wire looped around each wire and finally tied to the top and bottom wires. In effect, with a couple of braces to a panel, it made an exaggerated form of wire netting with a 4-ft. mesh when there were two braces to a 12-ft. panel.” (Lamond 1955c, p. 5.)

1900 (NSW) “… panels being in turn braced by two battens, …” (McLeod 1900, p. 165.)

The McLeod quote suggests that bracing was a generic term for attaching any form of dropper (wooden batten or wire twitch) to strengthen the fence.

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**Other references:** Fetherstonhaugh (1917, p. 316); Robinson (1971, p. 55).

**BRAKE**

An obsolete name for a portable or temporary yard. The only use of the term seems to be in patent applications.

1908 (patent) “Claim 1: An improved movable brake or fence for use when droving sheep or other animals, constructed of hemp or other light flexible rope …” (McMaster 1908.)

**Other references:** Gairdner (1922).

**BREASTER WIRE**

An additional wire erected parallel to, but separated from a fence, to provide additional security against damage by e.g. kangaroos.
1964: “If ’roos are left undisturbed they will often kick and force an opening in a soft spot about damaged netting or a broken dropper. Over-laying of the fence with old fabricated fence, and the erection of breaster wires 3 ft. out from netting are means of reducing this problem.” (Piesse 1964, p. 210.)

**BRUSH DROP FENCE**
A rough variant of the double post-and-rail fence where brush and branches are stacked between pairs of close posts along the line of the fence.

1882 “[The brush drop fence] is suitable only to scrubby country, and is commenced, as in the drop fence, by placing posts, of any description, about 1 foot apart, with panels suitable to the length of the scrub to be used. Dry yarren \[Acacia homalophylla\] makes the best fence. The scrub is dropped between the posts to whatever height may be required, the posts being then tightly bound with wire. This fence can be built with forks instead of posts, cut and sunk into the ground, and then filled up with scrub; this method does not make so good a fence, but saves the expense of the wire required to bind the posts. For a very temporary and inexpensive fence the following will be found serviceable:- Place posts at long distances apart, say 20 yards, or even further, if necessary; one hole is then bored at the top, and a strong wire strained tightly through it, and green bushy boughs hung thereon. This fence can be removed and the posts used again in the ordinary wire fence.” (Armstrong & Campbell 1882, p. 196.)

**BRUSH FENCE**
A fence made by piling logs and branches into a line up to 1.5 m high, and about 2 m wide. Some variants are staked down with forked timber to increase security (Trollope 1873, volume 1, p. 302.)

Synonyms: *deadwood fence* (Peterson 1988, p. 9.); *brushwood fence* (Cameron 1981, p. 131.)

Brush fences were quite widespread before the advent of wire fences and were probably the most common fence in Victoria before the 1850s. They were also used in other colonies, but any surviving examples are much degraded and extremely rare. Because they harboured rabbits, rabbit inspectors were empowered to order the fences burnt (Report of S. Black, Chief Inspector under the Vermin Destruction Act (Vic) to Rabbit Pest Conference 1895, p. 21.)

Although Aborigines had no domestic stock, they used fences to assist in trapping various animals for food. Two early descriptions of brush fences from Victoria (‘A lady’ [Mrs Thompson] 1845, p. 17) and South Australia (Richardson 1925, p. 64) show that Aborigines made brush fences to both restrain stolen sheep in a yard, and to trap animals near water. It is interesting to speculate whether they built such yards and traps before Europeans began using brush fences and yards for their stock.
A partially buried, discontinuous line of logs and branches marks the remains of a brush fence on Coona Coona, N of Wilcannia NSW (31° 08.4'S 143° 20.5'E), 13 February 1992.

Derelict brush yard on Tongo NE of White Cliff NSW (30° 31.9'S 143° 41.9'E), 4 July 2005. Most of the numerous brush yards in this area are more-or-less circular with a distinct opening, very few are rectangular such as this example.

1865 (NSW) “Two descriptions of this [fence] are in use; the first being formed by cutting down the trees along the line of fence, laying down the butts, as well as any dead timber which may be lying about as a foundation; and making it up to a height of four or five feet with the brush obtained from the trees just cut down. …

The other description of brush fence is formed by cutting down a tree; drawing it by means of a strong team of bullocks on to the line; and chopping off only such branches as rise to a height of over seven feet. The next tree is then drawn on and placed so that its branches commence to form part of the fence immediately where the branches of the first tree left off, and so on throughout. This fence …being very broad will not require “topping up” for several years. Division boundary fences are frequently erected of this description of material in Victoria, and are perfectly cattle-proof.” (Gordon 1865, p. 3.) Gordon 1867 p. 34 repeats these descriptions verbatim.
1882 “The only difference existing, of any consequence, between the roll-over and brush fences is in the fact that the latter can be constructed where the former would be found impracticable, owing to the difference in the timber required. … The brush fence requires no such distinctive character of timber, and can be built of almost any kind, crooked or straight, the limbs being cut off and the trunk rolled in on the line, the limbs and leaves being inserted into any open space which may exist.” (Armstrong & Campbell 1882, pp. 193-194.)

Other references: Brown (1968, p. 103); Fetherstonhaugh (1917, p. 74); Pratten (2002, p. 70).

BRUSH FENCE WITH FORK AND TOP RAIL
Presumably a brush fence with added forked posts supporting a top rail to increase the height and thus security of the fence.

1875-76 (NSW) No details other than being listed under “Irregular Wooden Fences”. (Bruce 1875-76, p. 722.)

BRUSHWOOD FENCE
Synonym for brush fence.

1835 (WA) “Fencing costs up to £100 per mile and was still uncommon. Where it did exist, it was either post-and-rail, ditch-and-bank, or ditch-and-rail. The sturdy brushwood fence developed in the Avon Valley had not yet appeared.” (Cameron 1981, p. 131.)

Other references: Cornish (1880, p. 137.)

BULL LOOP KNOT
See knot.

BULL WIRE
Iron wire of No. 4 gauge or thicker (see below under Gauge 1) originally used as line wires in early post-and-wire, and post-and-rail-and-wire fences.

Early British practice with wire fences was to use rod or tube up to 25 mm diameter, or stranded wire. When used, individual wires were also very thick, typically > 6 mm or No. 4 gauge). Among the reasons was that early iron wire was soft, of variable quality, with low breaking strain, and difficult to strain. Perhaps more importantly, there seemed to be a reluctance to trust thinner wire. Nineteenth century British fencing catalogues rarely show thin wire in the fences. In Australia, as thinner and stronger steel wire became available, bull wire was relegated to yards or fences subject to high stock pressure (e.g. near gates). The primary reason was cost. Wire was essentially sold by weight, and a ton of thinner wire was considerably longer than a ton of bull wire. Transport to remote properties was a large component of costs, so thinner wire was more economical.

1850s “The first wire fences were introduced during the gold rush years in areas where natural timber and stone were scarce. Called ‘bull wire’, the material was
an expensive imported product - up to £20 a ton - and had to be at least ¼ in. thick because of its low tensile strength.” (Cannon 1973, p. 90. *italics* in original.)

Historical note: Cannon is perpetuating two historical errors. The first recorded wire fences in Australia were built on Phillip Island (Victoria) in 1842, well before the gold rushes of the 1850s, and the ⅜” wire used was more like rod than bull wire (Piesse 1960, p. 1363). Secondly, there is little evidence that a perceived lack of natural timber and stone had much influence on decisions by most landholders to erect wire fences (Pickard 2007b).

**BUNNY BOARDS**
An obsolete and rare name for pickets or palings in a paling fence built to stop rabbits.

19th C “Closely spaced pieces of wood (usually called pickets or bunny-boards) were also popular as fencing material, but the wood rotted fairly rapidly.” (McKnight 1969, p. 333.)

**BURRAWONG**
Synonym for *straining fork* (Edwards 1987, p. 17).

**BUSH FENCE**
Synonym for *brush fence*.

1871 (NSW) “There were over forty miles of fencing on the run, made either with … or of bushes laid lengthways and staked down with forked timber. This fencing suffices for sheep, but would be of no use at all on a run intended for cattle. …. A bush fence is easily broken down, but is as easily put up again.” (Trollope 1873, p. 302.)

*Other references:* Thornley (1973, p. 53); Underwood (2004, p. 28.)

**BY POST**
Synonym for *dropper*.

1888 (patent) “… for taking up the slack in the top and bottom wires of a wire fence the top wire is strained above its level and the bottom wire below its level either by means of what are called spreading droppers or by posts.” (Webster & Echlin 1888.)

**CAP**
The very top of a fence post.

1912 “The gauge runs: - From ground to bottom wire, 5 in.; from bottom to second wire, 5 in.; from second wire to bottom of first rail mortise, 8 in.; 6 in. mortise; from top of lower rail to third wire, 6 in.; from third wire to bottom of upper rail mortise, 10 in.; 6-in. mortise; and 4 in. from top of rail to cap of post.” (Anon 1912, p. 8.)
**CAP (RAIL)**

The top rail of a post-and-rail fence, fitted into a rectangular slot cut into the top of the post so that the rail is level with the tops of the posts. The objective is to provide a smooth top to the fence. Although there are some examples from paddock fences, caps were more common in yards. In old fences now lacking any rails, open slots at the top are diagnostic of the previous use for cap rails. Broken mortises from standard post-and-rail fences are easily distinguished by the greater distance from the bottom of the mortise to the top of the post.

1879 (NSW) “Fencing required. The description of the fencing itself used for the erection of the stock-yard, where expense is no object, and the main object of the proprietor is to have the work done well and substantially, is usually what is known by bushmen as ‘four rails and a cap.’ The posts and rails, of split eucalyptus, are about double the substance of ordinary fencing stuff. The posts should be from eighteen inches to two feet wide, standing seven feet out of the ground and two feet in it, the post-holes being well rammed. The rails are from nine to fifteen inches broad, and from three to five inches thick; care should be taken to fill up the mortices well; the rails are about nine feet in length and not more than six, or indeed four, inches apart.

When the rails and posts are fairly up, the top rails being about six feet from the ground, and the bottom one not more than six inches, the cap or capping is put on. A stout round sapling is fixed upon, from eighteen to twenty feet in length, if procurable, if not, shorter, just sufficiently long to pass over two or two and a half panels. This is generally morticed, and the tops of the posts being tenoned, the heavy sapling is dropped on. It consolidates the fence, holding the panels together laterally; the height, too, is raised to seven feet, which hardly any cow or bullock will try to jump.” (Boldrewood 1879, p. 225.)

**Other references:** Browne (2003, frontispiece photograph); Buxton (1967, p. 39.)

**CAP-AND-WIRE FENCE**


**CASS TILT (GATE)**

A form of gate for modern electric fences. No further details are known.

1981 (WA) “Lighter-weight [electric] fences with longer strains can be built. These lighter fences are more flexible. New fence opening include the popular Read Lift, the Cass Tilt and the Drop Panel.” (Buxton 1981, p. 54.)

**CCA (copper - chromium - arsenic)**

Acronym for a preservative mixture of copper, chromium and arsenic impregnated into timber using controlled vacuum or pressure processes (Cookson 2008).

Each of the components serves a different function: copper controls fungi, arsenic controls termites and inhibits copper-tolerant fungi, chromium fixes the copper and arsenic in the wood (Cookson 2008). CCA is the most widespread and common preservative used in fence posts, typically plantation-grown eucalypt or radiata pine,
which have been machined on the outside to a uniform diameter. Initially the posts are green, but weather to grey. CCA is highly effective, typically extending the life of radiata pine posts from a few years to 40 years. It has been used in Australia for 50 years.

The chemistry of CCA preservative is complex, and commercial products using CCA must meet the requirements of Australian Standard 1604.1-2005 *Specification for preservative treatment. Part 1: Sawn and round timber.*

**CENTRE STRAND WIRE NETTING**

Wire netting strengthened by the addition of a doubled wire strand woven into the middle of the netting. This reinforcing was usually only available in larger 3 and 4 inch mesh sizes.

![Centre strand wire netting sold by Lysaght Bros. and Co. Ltd. Source: Lysaght Bros. and Co. Ltd. (pre-1901?, p. 9.)](image)

**CHAIN**

An imperial unit of length, equal to 22 yards (20.12 m). There are 80 chains to one mile (1,760 yards). Even though Australia converted to metric units in 1970, chain is commonly used today in informal discussions of fencing. A typical instance would be a farmer describing a fence as having “posts a chain apart”, or quantifying a distance as “about 20 chains past the gate.”

**CHAIN WIRE**

A specific form of netting made with interlinked strands of wire in zig-zag form. Commonly used in security fences and rarely seen in rural fences except as infill in homestead fences.

![Chain wire netting](image)

*Source: Rylands Bros. (Australia) Ltd. (1930 p. 379.)*
CHARRING

Burning the surface of the lower end of wooden posts before putting them into the ground. Charring is believed by many farmers to improve the in-ground life of posts. The practice was used in Britain at least in the early 19th century, so it was probably imported from Britain rather than invented independently in the Australian colonies.

1805 (UK) “With regard to the gate-post, where timber is used, it ought to be either prepared by tar, pitch, or oil-paint, in that part which is intended to be deposited (and such posts should always be fixed firmly and deeply) in the earth, or by charring.” (‘A Lincolnshire grazier’ 1805, p. 388.)

1827 (NSW) “…the hardness and durability of our timbers enabling a wooden fence to last for thirty or forty years without any material repairs being required, if the feet of the posts be charred before imbedding [sic] them in the ground.” (Cunningham 1827, p. 176.)

Other references: Kelly (1859, volume 1, p. 373); Mais (1877, p. 1); Richard Johnson & Nephew Limited (1925, p. 29.)

CHEVAUX DE FRISE

Synonym (?) for American water fence

There is no description or illustration of this fence structure.

1840s (Tas) “There is also a chevaux de frize, called the American water-fence. It is not greatly in use, because if broken at any part of the line, it is apt (one portion leaning against another) to tumble down like a pack of cards.” (Burn 1973, p. 182.)

In 1708 “Chevaux de frise” were described as “large Joists, or pieces of Timber, Ten or Twelve Foot in length, with Six Sides into which are driven a great Number of wooden Pins above Six Foot long, crossing one another, and having their Ends armed with Iron-Points” (Simpson & Weiner 1989, volume 3, p. 98). For more information and images, see the Wikipedia article “cheval de frise” http://en.wikipedia.org/wiki/Cheval_de_frise accessed 26 July 2009). Chevaux de frise were used in the US Revolutionary War to impede the passage of British ships up the Delaware River. This may account for the expression “American water fence”. Although eminently suited to restrain stock, they would be too labour- and material-intensive for general use. In the context here, the expression most likely refers to some form of (perhaps open) palisade with sharpened points at the tops of the posts. Alternatively, it could be one of the several forms of log fence made by interlocking the logs and forming a zig-zag upper surface. Without a more detailed description, it is impossible to visualize the structure.

Chevaux de frise are used in urban areas, often as a revolving series of spikes, to deter intruders climbing over fences. Vernon (1909, p. 261) illustrates a number of static and decorative but still vicious post tops. Similar devices are used on the tops of prison walls.
CHINESE FENCE
A local name for lace fences in northern NSW, some of which were built by Chinese labourers (Gojak 2000).

Synonym for lace fence.

CHOCK-AND-BLOCK FENCE
Possibly a synonym for double post-and-rail fence, but more likely a distinct form using chocks and blocks to increase the spacing when using small diameter logs. (Edwards 1987, p. 14.)

This “sapling fence” is a very clear diagram of a chock-and-log fence.

1987 “Sapling fence. This is a variant of the chock and block fence … It was used in country where the local timber consisted only of small saplings.

The farmer could quickly knock up this type of fence at the same time as he was clearing his block. If the soil was soft enough he would simply hammer in two pointed saplings a few centimetres apart. Long and short lengths of timber would then be placed in the gap between the posts as shown in the sketch.

These fences would soon succumb to rot, fire or termites due to their contact with the ground, but they served as a first simple fence while the farmer was busy getting his place established.” (Edwards 1987, p. 14.)

CHOCK-AND-LOG FENCE
A fence where short transverse logs (chocks) support successive tiers of logs which alternate from side-to-side along the length of the fence.

In areas with numerous straight trees of the right size (e.g. White Cypress Pine Callitris glaucophylla), chock-and-log fences were very common and popular because they could be erected by unskilled labour, but they were labour-intensive to build, harboured rabbits and were susceptible to bush fires. Chock-and-log fences had been largely superseded on mainland Australia by the late 19th century, but they were built in Tasmania for several more decades (Collett 1995, p. 19). This may have been a consequence of abundant free timber, and the cost of buying and transporting wire.

Synonyms American chock-and-log fence (Gordon 1865, p. 3); Chock-and-rail fence (Peterson 1988, p. 10); chock log fence (Kerr 1987, Figure 10); dog-and-log
1882 “This fence we consider the most useful, secure, substantial, and economical of all fences for general station purposes, and we would strongly recommend the erection of it in preference to all others wherever it is practicable. … The longer the panels of the chock and log fence, the cheaper it is; and the longer they are the worse it is, as the extra length of the logs causes them to ‘sag,’ and, in time, break in the middle. A very desirable length for the panels of a chock and log fence feet is 16 feet 6 in.; and no panels should be made longer this. For a four-log fence of a good, substantial character, the bottom log should be from 8 to 10 inches in diameter at the small end; the second one, 6 inches; third, 5 inches; and the top log, 4 inches in diameter at the small end. The bottom chock should be 10 inches; the second, 8 inches; the third, 7 inches; and the fourth 6 inches thick. This, after deducting the depths of the hollows which are cut for the logs to rest in, gives a fence of a little over 4 feet in height. By increasing the size of the logs and chocks, the number can be reduced, and the fence still be the same height. … In the erection of a fence, split timber may be used; but, if possible, all round timber should be employed for the logs.” (Armstrong & Campbell 1882, pp. 191-192.)

Other references: Cockburn (1925, p. 97); Trollope (1873, p. 302).
**CHOCK-AND-RAIL FENCE**
Synonym for *chock-and-log fence*. (Peterson 1988, p. 10.)

**CHOCK LOG FENCE**
Synonym for *chock-and-log fence*. (Kerr 1987, Figure 10.)

**CILL**
Synonym for *sill*. (Pennycuick 1995, p. 28.)

**CLASPING POST AND LOG FENCE**
Synonym for *double post-and-rail fence*. (Kerr 1987, Figure 11.)

**CLEARANCE WALL**
A very thick section of a dry stone wall built primarily to use up stone cleared from the fields. (Vines 1990, p. 37.)

Also known as *consumption wall*.

**COBB & Co. HITCH**
The knot preferred all over Australia using a doubled length of wire to join logs and poles in bush timber structures including fences and yards. Named after the legendary Cobb & Co who dominated coach lines across Australia from 1854 to 1924 (Austin 1969). I have been unable to locate any information on *why* the knot is named after Cobb & Co.

Also known as *Queensland hitch* (Edwards 1989, p. 29.)

Tying a Cobb & Co hitch using the tang of a file may not be the most appropriate use of the file, but it is effective. One handle of a pair of pliers is the most common tool used. When properly tied and tightened, the hitch is remarkably secure.

*Source*: Edwards (1975, p. 10.)

**COCKATOO FENCE**
This is the most problematic Australian fence term. It is used by different observers to describe different fence structures, and as a generic term for any rough fence. The *Macquarie Dictionary* (Yallop et al. 2005, p. 285) defines it as “a rough fence made of
logs and branches”. The *Oxford English Dictionary* (Simpson & Weiner 1989, volume 3, p. 412) has a similar definition: “a rough fence of logs and saplings” with its etymology from the use of “cockatoo” as a (derisive) name for small farmers or selectors. Both these dictionary descriptions of cockatoo fences suggest some form of brush fence or log fence.

Bean (1956, p. 206 footnote) explains the derivation of “cockatoo” in more detail: “For the benefit of non-Australians it should be explained that a ‘cockatoo farmer’ or ‘cocky’ is not one who (at any rate intentionally) rears cockatoos, but one of the small farmers who are as ubiquitous as that bird.” Buley (1905, p. 32) is more explicit: “In the vernacular of the bush, the selector is a ‘cockie,’ and cockie is short for cockatoo farmer. He is a cockatoo farmer because he works early and late to clear a patch of ground and plough it. Then he sows his seed, only to wake at dawn the next day and find his field white with cockatoos, all busily devouring the grain. Those cockatoos are the only crop he has, …”.

1861 “…a cockatoo fence, … consists of forked sticks driven into the ground, and saplings or young trees laid across them. A second and shorter row is requisite, making it a two railed fence.” (Anon 1861, p. 13).

1909 “Snake or Zigzag Fences, Cockatoo, or, as called in Australia, ‘Drop Fences,’ … are still; used in American and Australia, … (Vernon 1909, p. 165). [See illustration in discussion of problems with the term “cockatoo” in the Introduction.]


**COCKY’S GATE**

Synonym for *wire gate.*

See *cockatoo fence* for the derivation of the name.

**COLD-ROLLED**

Forming a cross-section in steel or other metal by rolling when cold. In the context of fence components, cold-rolling is usually restricted to steel less than about 3 mm thick. Typically used in small (now long-gone) rural factories to produce fence posts or droppers from steel strip or sheets. Also of major importance in modern production of droppers. Steel fence posts of a variety of cross sections can be produced in a surprisingly small machine, occupying very little floor area.
CONSUMPTION WALL
Synonym for clearance wall (Vines 1990, p. 37.)

COPING STONE
Large stones placed along the top of a dry stone wall to provide stability. (Vines 1990, p. 37.) [See illustration under Dry stone wall]

Also known as cope, capstone

Course
Stones in a dry stone wall that have been more-or-less levelled to make a regular line. (Vines 1990, p. 37.)

CORRIMONY FENCE
An obsolete (?) late 19th century British term for post-and-wire fences with droppers developed in New Zealand.

Post-and-wire fences were developed in Great Britain from the 1840s. Although the early types advertised in trade catalogues used bar, rod or tube up to 25 mm across, thinner iron wire and stranded wire (wire rope) was also used. By the 1880s, some landed proprietors were building fences using the Corrimony system with posts much further apart and droppers to keep the thinner steel wires separated. The name “Corrimony” comes from the Scottish estate of Thomas Ogilvie near Inverness where these fences were first built in Britain after importing the system from New Zealand in the early 1870s (Ogilvie 1875, p. 269.) It was so successful that within a few years most major manufacturers of fencing products were advertising Corrimony fences as complete packages, with erection as an optional extra (see e.g. A. & J. Main 1882, p. 16; Hill & Smith Brierley Hill Ironworks 1894.)

1894 (UK) “The ‘Corrimony’ Fencing consists of wrought-iron winding straining pillars, placed alternately on an average of nine to the mile, T iron standards, with stays placed 18 yards apart, in connection with which steel wire is used for the horizontal rods, of No. 8 or No. 10 gauge according to the required strength of the fence. Threaded upon these wires, between the T iron standards, are ‘droppers,’ or intermediate uprights, six feet apart, which are not fixed in the ground, but merely rest upon the surface.” (Hill & Smith Brierley Hill Ironworks 1894, p. 76.)

Other references: Smith (1891, p. 325.)
COUPLING CLIPS
Clips of varying length with a distinctive triangular loop at each end, used to support pairs of wires, or when chained together, to support multiple wires or netting.

A pair of coupling clips link wires #1 and #2, and #2 and the fabricated woven wire. Note that the clips are chained together at wire #2.

Irish Lords E of Ivanhoe NSW (32° 54.3’S 144° 43.8’E), 14 June 2007.

CRAPO PATENTED GALVANISED WIRE
A process for galvanising wire patented by Frederick M. Crapo in 1929 (Crapo 1929) that improved the quality of galvanising.
Rylands Brothers (Australia) Limited used the process under licence, operating “two plants on this patented process which consists of treating the red hot wire with a molten cyanide salt, the wire being subsequently allowed to carry away from the galvanising bath the maximum amount of spelter possible. This results in twice the protective coating of their general output of standard galvanised wire, yet, owing to this treatment the wire will stand the most severe bending without cracking of the thick zinc coating.” (Rylands Brothers (Australia) Limited 1936, p. 6.)

There is probably no way of distinguishing wire that has been galvanised using the Crapo process from other processes in the field.

See also galvanising and electrogalvanising.

**CREOSOTE**
A complex mix of various organic chemicals, distilled from coal tar to produce a thick oily liquid, typically light brown to black in colour. Used extensively as a preservative for wooden fence posts.

**CRINKLE CRANKLE FENCE**
Synonym for zig-zag fence. (Kerr 1987, Figure 9.)

Kerr does not give any further information, and I am not aware of any other use of this term for Australian rural fences. I assume that the term is applied because of the superficial similarity between zig-zag fences and the original crinkle-crankle walls built in England.

“In eighteenth-century England serpentine walls were called crinkle-crankle walls and were designed that way to enhance the growing of fruit espaliered against their south-facing surfaces. Such structures were more stable and economical than ordinary walls since they required fewer materials.” (Mann 1993, p. 405.)

**CROW FENCE**
1864 (SA) No details other than being noted as present (McArthur 2007, p. 80).

**CUT TREE FENCE**
A form of wattled fence.

Although Anon (1861) describes and illustrates this fence, it seems to be derived directly from some British practice of building one form of “dead fence”, and may not have ever been used in Australia.

1861 “Where trees are growing in the line where you wish your fence to be, stakes may be driven in the ground, the trees cut down to the height you wish your fence, and the lower branches twisted among the stakes, with the addition of some loose boughs; it forms a fence which cattle cannot penetrate, but soon dies, and looks unsightly.” (Anon 1861, p. 16.)
CWT / cwt / c
Abbreviation for hundred weight.

DEAD FENCE
An obsolete British term embracing all fences except hedges (live fences).

1844 (UK) [The most common hedge plant in Britain was White Hawthorn (Craetagus monogyna) was also known as “quick”, hence the term “quick fence.”] “There are two principal kinds of fences - dead fences and quick fences, the latter of which are generally designated hedges. …

The following are the dead fences in most common use:-
1. Walls …
2. Fences of dead wood. These fences are sometimes constructed by means of posts fixed in the ground, and thus made to form palings of various kinds. …Fences are sometimes made of pieces of wood twisted together, where plenty of branches can be obtained. …

Mounds, or ramparts, or banks of earth. These are usually defended on both sides by ditches, from which the earth of which they are formed was dug. They are usually covered with a hedge planted on the top; or, if the land be well drained, it may be planted on the sides or on the edges of the ditches.” (Thaër 1844, pp. 165-168; italics in original.)

DEAD LOG FENCE
Synonym for log fence.

1840-1912 (Tas) “… the earliest fences were either chock and log or dead log. … the south eastern boundary of the plot purchased by Frederick McDowall in 1912 was originally a dead log fence. … By 1912 most of the original fence had been destroyed by fire.” (Collett 1995, p. 19.)

DEADWOOD FENCE
Synonym for brush fence and log fence.

19th C (Tas) “… they had all sorts of fences of course in those days. There was what we called ‘dead-wood’ fences. They used to be all timber. One way of getting rid of the timber: make a fence out of it. Miles and miles and miles of timber just stacked together …” (Collett 1995, p. 19.)

DEBARKING
Synonym for barking.

DERWENT FENCE
Synonym for Tasmanian fence, stubb fence (2) (‘Jumbuck’ 1868c, p. 7.)

1868 (Tas) “the ‘stubb’ fence of Tasmania, better known amongst the old hands as the ‘Derwent fence.’” (‘Jumbuck’ 1868c, p. 7.)

DIAMOND MESH
A particular form of netting with triangular or diamond meshes rather than the more usual hexagonal. Multiple line wires are linked by thinner diagonally arranged mesh wires. Sold under trade name “K fencing” by Cyclone Fence & Gate Co. Pty Ltd.

Panel of diamond mesh or Cyclone “K fencing”. Source: Cyclone Fence & Gate Co. Pty Ltd. (no date, p. 8.)

DIKE
Alternate spelling of dyke.

DITCH
An elongate excavation forming a fence on its own, or more usually, in combination with and associated and adjacent bank formed using the material dug out of the ditch (“ditch-and-bank”).

Even when ditches were common in Britain, usage of the term was confused: “Much confusion is often created by the misapplication of the terms ditch and dike, the former being used indiscriminately to denote both the hedge-bank and the excavation from which the bank is formed: but it should be confined to the latter signification alone.” (Sproule 1844, footnote p. 143; italics in original)

I have not found any references to ditches alone being used as fences in the colonies, but ditches with associated wooden fences were recorded by Collins (1791, p. 167) and with a two-rail fence by Bigge (1823, p. 47). (See below under ditch-and-rail for more details.)

1791 (NSW) July 1791: “To guard against a recurrence of the accident which happened to our cattle soon after we had arrived, the governor had for some time past employed a certain number of convicts at Parramatta in forming inclosures;
and at the commencement of this month not less than one hundred and forty acres were thinned of timber, surrounded by a ditch, and guarded by a proper fence.” (Collins, 1791, volume 1, p. 167.)

**Other references:** Cameron (2006, p. 137); Piesse (1960, p. 1363.) Cameron’s use of “ditch” could have two distinct meanings: a shallow furrow used just to mark a boundary, or a deeper ditch to form a fence and mark the boundary. From the context and other entries in the diary, a ditch-and-bank is intended.

**DITCH-AND-BANK**

A fence formed by a combination of an elongate ditch and an adjacent bank formed using the material dug out of the ditch.

c. 1840 (ACT) Photograph of “Ditch and bank field boundary assumed to be c 1840.”

“The integrity of the nineteenth century landscape is intact with a number of significant components remaining: e.g. Wright’s assumed ditch and bank field boundaries (c1838); Cunningham’s ditch and bank boundary (c1869); …” (Taylor 1989, p. 20.)

**Other references:** Cameron (1981, p. 131); Cameron (2006, p. 131); Dutton (1846, p. 203); Lancelott (1852, p. 137).

**DITCH-AND-RAIL**

Presumably a combination of a ditch and adjacent post-and-rail fence acting together as a boundary. While it is difficult to envision such a combination being more effective than a three-rail post-and-rail fence alone, the key is the total height of the barrier facing an animal with its forelegs in the ditch. This may have the untoward consequence that the combination is only effective from one side unless there are ditches on both sides.

Although Governor Lachlan Macquarie ordered that fences, including ditch-and-rail must be used, I have found no record that any were ever built.

1820 (NSW) Governor Macquarie issued “a government and general order [Sydney Gazette 15 April 1820] , wherein, … declaring ‘that as ground sown with grain should be sufficiently fenced to secure it against the trespass of cattle, it was ordered and directed that, in conformity with the principles of decision prevalent in England, no damages should be demanded or receivable for trespass committed on cropped or cultivated lands, unless such lands be inclosed with a good and sufficient fence, at least equal to a three-railed mortise fence, or one composed of two rails and a ditch.’” (Bigge 1823, p. 47.)

Historical note: Macquarie erred in law with this proclamation. British common law did not require land to be fenced to protect it from wandering stock. On the contrary, stock owners were required to restrain their animals (Pickard 1998).

**Other references:** Cameron (1981, p. 131.)
DIVIDING FENCE
A legal term for a fence on the boundary between two properties. See e.g. NSW (1991).

Also known as boundary fence.

DODGING
An obsolete colloquial expression for shepherding and droving.

1915 “The word ‘dodging’ is an appellation applied to shepherding, or droving sheep, and is an Australian invention given to the occupation by old-time drovers and shepherds, and as both these personages are nearly defunct, the term has gone out of general use.” (‘Crowfoot’ 1915, p. 138.)

This is the only use of this term that I have found. While ‘Crowfoot’ [Henry G. Lamond] says that by 1915 the term is out of use, it appears that it was neither a widespread nor a commonly used piece of slang. It is interesting that the same term is applied to two quite different forms of stock management. Shepherding and droving have common elements, but the tasks and skills required differ considerably.

DOG-AND-LOG FENCE
Synonym for chock-and-log fence, less likely for dog-leg fence.

1840s (SA) “The ‘ditch and bank’, and ‘dog and log’ fence are occasionally met with.” (Lancelott 1852, p. 137.)

DOG-LEG FENCE
A wooden fence with forked poles embedded in the ground about 4 m apart, supporting a line of logs in the forks. Pairs of poles are laid diagonally across the log, forming a higher crutch which supports a second log.

Dog-leg fence on ‘A cleared property in Southern New South Wales, c. 1880’.
Source: detail from Merritt & O’Brien (1985, p. 5.)

1882 “The dog-leg fence is now almost out of use, and is very seldom seen. It forms neither a secure nor neat fence, and is so seldom used that we consider an explanation of its construction almost unnecessary. A somewhat similar description of fence may be used to raise the height of a low chock and log, which is done by placing two straight spars in opposite slanting directions at stated intervals, resting against the top log, and then placing additional logs in the forks...”
formed by these spars. A two-rail fence may be formed by placing one log upon sawn blocks, or in forks, sunk into the ground, and about 2 feet from the surface, and completing the fence in the manner we have just described.” (Armstrong & Campbell 1882, p. 195).

Lateral view of dog-leg fence showing forked posts supporting logs laid head to butt. The second layer of logs rested in the crutch of the crossed poles, and one partly dislodged log remains. The log in the right foreground had been a second-layer log, but fell as the next pair of crossed poles collapsed. Mt Trooper, S of Ingebyra NSW (36° 50.8’S 148° 25.6’E), 29 May 2005.

End elevation of the dog-leg fence at Mt Trooper. Ian Pulsford who found the fence called it a “cockatoo fence”, but Pickard (2007a, p. 495) preferred “dog-leg” because of the close match with the detailed description of a dog-leg fence by Armstrong & Campbell (1882, p. 195.) Source: Pulsford (1991, Figure 3.1.)
DOLLY
A manual driver for steel posts. Typically a length of steel pipe with a cap on one end, and with a pair of bent steel tubes welded on for handles.

The dolly is slipped over a steel post and brought down sharply to hammer the post into the ground. Many farmers and pastoralists make their own, so there is considerable variation in size, type and shape of handles, etc. Dollies have also been patented, and various forms are available commercially.

See also driver

DOUBLE POST-AND-RAIL FENCE
A fence made by stacking rails, either regularly and with minimal overlap, or more roughly, between pairs of posts separated from each other by a gap one rail wide. The tops of the posts are subsequently fastened with a wire “shackle” twisted in a characteristic manner. Because of the amount of material used, these fences were more common in yards than paddock fences.

Synonyms Drop fence (NSW 1887b, p. 471); Harper fence (Peterson 1988, p. 11), clasping post and log fence (Kerr 1987, Figure 11.)

1868 (NSW) “The strength of the posts and their distance apart will depend upon the size of rails to be used. They should be at least 6 feet 9 inches or 7 feet long, well sunk in the ground, two in one hole, with a space between them regulated by the diameter of the rails to be used. The rails are placed one above another, alternately, in the panels, thus: - Starting at any given point - in panels 1, 3, 5, 7, and so on - the bottom rail lies on the ground, six inches at least at each end being between the posts. In panels 2, 4, 6, 8, &c., the bottom rail rests, by it ends, on the bottom rail in 1, 3, 5, 7, &c., and in this manner it is piled up to the desired height. If constructed of small saplings, it makes an excellent dog-proof sheep yard fence, and for firmness can be constructed close enough to effectually shut out wallabies and paddymelons. The posts are kept together by a ‘shackle’ or ring of twisted vines round the top of both posts. I would here mention, en parenthése, that this has hitherto been the weak point of the fence. However well made, fitted, and secure at first, the ‘shackle’ breaks from exposure to sun and rain, and leaves the posts to diverge or ‘spread;’ and I should recommend that wire should be used instead. The easiest and speediest plan of erecting this fence, after having cleared and laid the stuff along the line, is first of all to put up the posts for some distance, and then to fill in the rails, one by one, panel after panel.” (Gordon 1868, p. 6.)
Illustrated glossary of Australian rural fence terms

Double post-and-rail fence, W of Burrara NSW (33° 54.3’S 149° 29.0’E), 17 October 2008.

Other references: Eaton (1979, p. 48); NSW (1887a, p. 471.) Although the latter calls the fence “drop” or stubb”, it is a very clear description of a double post-and-rail fence.

DOUBLE WALLING / DOUBLE DYKING
The most common form of construction of dry stone walls, built with two inwardly sloping outer surfaces (batters) of stones filled with small stone and rubble in between. (Vines 1990, p. 37.)

DRAWING / DRAWN
Reducing the cross sectional area of metal rod or wire by pulling it through progressively smaller holes. Drawing hardens the wire and sets up internal stresses, so the wire is annealed to soften it for the next pass through smaller dies. Depending on the shape of the die, virtually any cross-section can be produced (see Holtzapffel 1852, p. 427 for examples.)

Smith (1891 p. 330) notes that “large quantities of simply rolled fencing wire are sold annually - more especially by German and American manufacturers - although annealed wire that has been drawn [through] one hole or so to improve its surface symmetry are [sic] preferred in most markets.”

The principle of drawing wire through a die to reduce the cross-sectional area.

Source: based on Avitzur (1983, Figure 3.1, p. 62.)
Although the basic technique has remained unchanged since mediaeval times (Biringuccio 1540, pp. 377-381; Smith 1891, p. 1 ff; Newbury & Notis 2004), modern wire-drawing uses highly complex technology based on understanding of the physics of the process (Avitzur 1983, pp. 61-133, 193-245; Shemenski 2008.)

Schematic arrangement of wire-drawing equipment. The raw material enters from the left, is lubricated through the “soap box” (a traditional name derived from early use of soap as a lubricant) before being reduced through the die, then wound onto a drum.

Source: Avitzur (1983, Figure 5.2, p. 195.)

Other references: Rylands Brothers (Australia) Limited (1936, p. 5).

**DRIVER**

Also known as **dolly**.

1954 (patent application) “Claim 1. A manual post driver which consists of a central metal tube closed at the upper end and with two metal handles attached on opposite sides. The control [? central] tube is to be fitted over the top of a post to drive the latter into the ground.” (City Motor Panel and Engineering Works 1954).

Manual post driver or dolly.


Other references: Pearse (1965, pp. 55-56.)
DROP FENCE
Synonym for stub fence and double post and rail fence. (NSW 1887b, p. 471); and snake fence, zig-zag fence, and cockatoo fence (Vernon 1909 p. 165.)

Other references: Bruce (1875-76, p. 722.)

DROP PANEL (GATE)
A form of gate for modern electric fences. No further details are known.

1981 (WA) “Lighter-weight [electric] fences with longer strains can be built. These lighter fences are more flexible. New fence opening include the popular Read Lift, the Cass Tilt and the Drop Panel.” (Buxton 1981, p. 54.)

DROPPER
A light vertical component supported by the line wires in a post-and-wire fence, and not embedded in the ground.

Droppers serve several functions: to keep the wires spaced, to provide a visible signal that a fence exists, and to minimise the use of posts, and thus save costs. Common usage may be confusing because many farmers and graziers refer to any steel posts between wooden posts as “droppers”. Thus the ubiquitous Australian star posts which are invariably driven into the ground may be called “star droppers”. There is an almost bewildering number of different droppers of various cross-sections and shapes, made of folded sheet metal, formed wire, or wood (either sawn, split or round), and wire twitches (or braces / laces).

Synonyms: batten, brace, lace, spreader, stake;

1860s (NSW) “Droppers as fencing aids are almost as old as fencing - and that started in Australia at Brookong Station, managed by Cuthbert Featherstonehaugh, some time about the ’60’s of last century.” (Lamond 1955c, p. 5.)

Historical note: Lamond’s history of fencing is inaccurate. Fences were built at Sydney in 1788 (Pickard 1999, Figure 2), and the first wire fences in Australia were erected on Phillip Island in 1842 (Piesse 1960, p. 1363.) Unfortunately Lamond does not provide any information on where and when he thinks droppers were first used. I have found no independent evidence suggesting that Fetherstonehaugh used droppers when fencing Brookong. In fact, he specifically mentions using laces or braces of wire rather than droppers (Fetherstonehaugh 1917, p. 316.) From this I tentatively conclude that droppers were developed after braces, but there is no information on who invented them, or where and when. But by the mid-1870s, droppers (battens) were widely adopted in NSW and were approved by the Chief Inspector of Stock (Bruce 1875-76, p. 722).

It was about this time that British farmers were introduced to the New Zealand development subsequently called “Corrimony fencing” by the British. Clearly, the technology, regardless of which colony in was developed in - and it seems that New Zealand may be the source - was highly successful, was spreading rapidly and gaining official acceptance.
1884 (UK) “…flat pieces of wood called droppers are used; these may be of any hard wood, oak, ash, or larch 2 ½ by 7/8 inches, and 3 feet 3 inches long. Holes are bored in these at corresponding distances to those in the permanent standards, the wires passed through, and wedged in order to keep the droppers in position, their bottom ends merely resting on the ground. These droppers are placed at a distance of 2 feet 4 inches apart.” (Burness et al. 1884, p. 78).

Almost 150 different droppers have been patented in Australia, especially from the 1890s to about 1914, but fewer than about 50 were ever manufactured and sold in large numbers. The legalistic jargon used in patent applications can be either clear or quite obscure, and often contrary to normal usage of the term “dropper” (e.g. Hassell, 1966; Rush 1910).

Other references: Lincoln College (1974); Smith (1982).

**DRY STONE WALL**

A self-supporting stone wall made without using mortar or cement to hold the stones in place.

Stone walls are relatively uncommon in Australia, but occur in specific regions where the geology produces ideal stones: basalt plains of western Victoria and the Illawarra of NSW, northern Tasmania, limestone on the western Eyre Peninsula of SA, and various sandstone ranges of the mid-north of SA.

The most important Australian references are Vines (1990) and Corangamite Dry Stone Walls Conservation Project (1995). I have adopted their usage of “dry stone” as two unhyphenated words rather than alternatives: “drystone” or “dry-stone”.

Dry stone wall made of sandstone. Note the coping of large rocks to provide a relatively flat top, and how the wall is built up over the partially buried boulder on the left. Crest of Yappala Range, *The Oaks*, SW of Hawker SA (31° 55.6’S 138° 18.4’E), 11 December 2005.
Dry stone walls are a particular feature of parts of Great Britain, and there are notable regional variations in structure, and numerous specialised terms - with many dialect variants - are applied to construction and components of the walls. (Rainsford-Hannay 1972, Brooks 1994, pp. 118-119). Some of the terms have been applied to walls in Australia (see Vines 1990).

![Parts of a dry stone wall. Note that Australian usage may vary slightly from this English summary. Source: Brooks (1994, p. 7.).](image)

**DUMMY / DUMMY POST**

Another term with two similar meanings, but both involving using an additional post to repair a fence where posts have rotted or burnt, or the fence is leaning. Using dummy posts avoids having to cut the wires and re-strain them which would be necessary if the post was replaced.

**DUMMY (1) Prop post**

A post set beside a rotten or broken post to support the original post.

1955 (Qld) “A dummy is so simple it’s a wonder we’ve wasted so much time talking about it. We get another post of the requisite length and size; we sink a hole to the proper depth beside the fellow which is broken - we might even put him a few inches deeper for good measure; we put that new post in beside the broken chap, hard up against him, and we ram him home. Then the broken post is lashed and twitched to the support which we call a dummy.” (Lamond 1955d, p. 20.)
The earlier round wooden prop wired to the split wooden post was insufficient to support the original post, so a star post been added as a second prop. Mallee Highway, S of Balranald NSW (34°41.8’S 143°33.2’E), 4 July 2008.

**DUMMY (2) Dummy post**

Instead of propping a damaged post, the rotten post is removed by splitting it off the wires, and setting a dummy post alongside and touching the wires which are attached to the dummy using any of a number of different ties or staples (see staple below.)

Dummy post in derelict fence showing the wires attached with “omega” staples. The hingejoint fence in the rear is the current replacement. SE of Hillston NSW (33°38.1’S 145°37.4’E), 2 October 2008.
DYKE
Synonym for dry stone wall.

EARTH WIRE
A wire in an electric fence that is connected to the earth of the system (either to a controller or the earth itself).

ELASTIC FENCE
Synonym for suspension fence (2) (Brain 1976, p. 1).

ELECTRIC FENCE
A broad range of designs and commercial systems where electric currents are passed through some of the wires of a fence, to inflict a minor electric shock to some animal to dissuade it from touching or attempting the breach the fence.

Electric fences were first patented in Australia (to kill rabbits!) in 1904 (Milner 1904), but until the 1950s, controllers and batteries etc. were unreliable. Since then, many companies have developed entire systems, or components. The presence of insulators of various forms is a good indicator that the fence is or was charged with electric current. Using a tester is highly recommended to avoid a shock.

ELECTRO-GALVANISING
A technique for depositing zinc onto the surface of steel.

END ASSEMBLY
A combination of two or more strainer posts reinforced with horizontal braces and sloping struts, and designed to provide a solid anchor for the strain, and for gates. Also used at corners. As they can resist greater tension and are less likely to become loose or tilt, end assemblies are replacing single strainer posts in modern fences

End assembly forming a corner of an incomplete fence.

Source: detail: Arthur Stretton Australia, 1867-1943, Early summer - gorse in bloom. 1888, Melbourne, oil on canvas, 56.2 x 100.6 cm. Gift of Mrs Andrew Tennant through the Art Gallery of South Australia Foundation 1982, Art Gallery of South Australia, Adelaide.
Examples of end assemblies.  

Source: James (1994, p. 118.)

**FABRICATED FENCING**

A generic term for any form of woven wire (not netting) used in a fence. Examples include Hingedjoint, Ringlock and Tightgrip.

1964 In the context of discussing erecting woven wire fences, the term “fabricated fencing” is used several times ( Cyclone Company of Australia 1964, pp. 27-28.)

**FACE**

A vertical surface of a dry stone wall. (Vines 1990, p. 37.) If the surface is sloping, it is called a *batter*.

**FENCE (1) noun**

A generally linear structure erected or established to mark property boundaries, exclude or enclose stock, and to facilitate management.

Fences may take a bewildering range of forms, and although the ubiquitous post-and-wire fences are regarded as the normal type of fence in Australia, various other types have been used historically.

1991 (NSW legal definition) “[dividing] ‘fence’ means a structure, ditch or embankment, or a hedge or similar vegetative barrier, enclosing or bounding land, whether or not continuous or extending along the whole of the boundary separating the land of adjoining owners, and includes:

(a) any gate, cattlegrid or apparatus necessary for the operation of the fence, and

(b) any natural or artificial watercourse which separates the land of adjoining owners, and

(c) any foundation or support necessary for the support and maintenance of the fence,

but does not include a retaining wall or a wall which is part of a house, garage or
other building.” (Section 3. Dividing Fences Act 1991, NSW) ¹

Although this definition is specific to dividing or boundary fences, it encompasses all the elements of a “fence”.

**FENCE (2) verb**

To erect, build or establish a structure to act as a fence.

**FENCE BED**

An arrangement of poles used to support a bed against a post-and-rail fence. Although it is unlikely one of these would be found today, it is possible that some may remain next to derelict fences.

1979 (Qld) “Mr S.C. Petlitt of Ipswich, Queensland, wrote about a bushman’s bed in the days when post-and-rail fences were common. Two sticks were buried in the ground and these held up one end of the bed poles and also the pole that held either the mosquito net or a waterproof sheet for wet days. The bed was made by threading a couple of sacks on to the long poles.” (Edwards 1979, p. 16. *italics* in original.)

*Source:* Edwards (1979, p. 17.)

**FENCE LINE EFFECT**

A marked contrast between the vegetation on two sides of a fence, typically visible in aerial photos and satellite images, and on the ground.

Typically there is less biomass of grasses and herbs on one side of a fence, and this contrasts markedly with more vegetation on the other. Although dramatic fence line effects are commonly asserted to be evidence of overgrazing, animal behaviour and location of watering points may be the causes.

¹ Schedule 1 of the Dividing Fences and Other Legislation Amendment Bill 2008 “amends the definition of fence to provide for a retaining wall to be treated as part of a fence, … where the wall is necessary for the support and maintenance of the fence. As a result, such a retaining wall also becomes a dividing fence, for the purposes of the [Dividing Fences] Act, where it separates the land of adjoining owners.” (NSW 2008.) This amendment is unlikely to affect many rural fences.
**FENCEROW**
A hedgerow where a fence is present (Forman & Baudry 1984, p. 495.) This definition is from the USA, and I have not seen the term used in Australia.

**FENCERS’ TEA**
Coarse tea provided in the rations of shepherds and other rural workers in the 19th century, characterised by being light on leaf and heavy on twigs.

19th C (NSW) “His shepherds drew the ration that the first shepherds had drawn nearly one hundred years before: eight, ten, two and a quarter - eight pounds of flour, ten pounds of mat, two pounds of sugar, and a quarter of a pound of tea. The tea was more stem than leaf. ‘Fencers’ tea’ it was called, ‘Mostly posts and rails.’” (Rolls 1984, p. 191.)

See also post-and-rail tea.

**FENCING KEY / WIRE KEY**
A small piece of wood or metal used to wrap the free end of wire around a line wire, thus forming a knot. The telegraph hitch used in iron wire was formed by holding the overlapping ends of the two wires to be joined in a pair of pliers and then using the key to wind the free ends around the line wires in turn. Also used with various other knots, especially those used to tie wires to strainer posts, and to join line wires in woven wire fencing (e.g. Hinged joint and Ringlock).

1955 (Qld) “A key, … , is a bit of flat iron, 6 inches long, half an inch wide, by about a quarter deep. Those are rough dimensions which can be altered a bit either way. At each end, about half an inch from the tip, there’s a hole in the thing which is a shade bigger than the gauge of the wire you’re going to use. You put a length of wire shaped like a S in one hole and hang the thing on your belt. That is a fencing key.

When you strain a wire, take the end back to twist it round the wire to hold it in place, you slip the end of that wire through the hole in one end of the key; you lay the key over the strained wire and, as a sort of a lever, you twist it round and round the wire. That makes a neater, better and tighter tie than any hand-twisted tie could do. … If you’re short of a key, and you really wish to use one, if you pick up off the ground a length of stout steel wire, bend it in a sharp hair-pin and use the loop of that as the hole in the key it will do almost as well. If there’s not an odd hit of steel wire on the ground, and if you must use a key, then the stirrup-iron will do the same thing as effectively if in a more clumsy fashion.” (Lamond 1955e, p. 39.)
A well-used fencing key made by Ray Browne (Myall) from 3 mm thick steel, with multiple holes for different gauge wires. Myall, SW of Lockhart NSW (35° 21.4’S 146° 34.3’E), 3 July 2008.

Other references: Lamond (1955b, p. 39); O’Mara (1922).

FENCING PLUG
Synonym for plug.

FENCING UNIT
A classic legal obfuscation found in patent specifications for the simple and well-understood term post (see e.g. Andrews 1953).

FIGURE-8 KNOT
See knot.

FILL
Small stone and rubble used to fill the cavity between the two outside surfaces of a dry stone wall (Vines 1990, p. 37.) Also known as hearting.

FLAKE
Synonym for hurdle (Stephens 1844, volume 2, p. 31.)

1853 (Vic) “I think this fence had better be made in the shape of hurdles or flakes, say ten feet or twelve feet long each flake, with an iron stake for fixing in the ground at each end & one or two stretchers between the rods, …” (Brown 1963, p. 526.)

FLOOD FENCE
A fence designed to lift or collapse under the pressure of flood waters.

Creek crossings are one of the major difficulties with fences. Although both wire and netting fences offer little resistance to water, the debris carried by floods - leaves, sticks, branches and logs - builds up against the fence creating a dam. Water pressure then flattens the fence, or sweeps it away. To avoid or minimise the effort and cost of re-erecting fences in creeks and on flood plains, special designs have been developed including fences that “float” in the water, gates that open, and posts that collapse when a shear pin breaks under water pressure. After the flood has passed, the fences are (relatively) easily re-set in the upright position. Several examples are illustrated in Staton & O’Sullivan (2006, pp. 32-36).
**FLOOD GATE**

A gate in a fence crossing a creek, designed to open when the creek floods, and close when the water recedes.

Typically built with wood or galvanised sheet metal on wooden frames, most flood gates pivot upwards. Several examples are illustrated in Staton & O’Sullivan (2006, p. 36.) Some are almost major vernacular engineering works in their own right. The size varies with the size of the stream channel, and the type of fence. A derelict dingo fence northwest of Stanthorpe (Qld) crosses numerous streams, and to guarantee the efficacy of the fence, the builders put flood gates on every creek. The gates range from 1 m wide x 0.5 m high to 50 m wide x 3 m high. The example shown below is in this fence, and is about mid-size.

Upstream face of a flood gate made of wooden panels supported by wires hanging from the catenary support of multiple twisted plain wires. When the creek floods, the panels swing upwards to the right and as the water recedes, the panels fall back against the log sills. This gate is more elaborate than many because it is in a dingo-proof fence. Mulgowan NW of Stanthorpe Qld (28° 33.4’S 151° 42.6’E), 22 March 2005.

**FLOPPY PANELLED FENCE**

A fence with “loosely-tensioned netting in the body of [a ] fence to deny cats and foxes stable climbing footholds” (Long & Robley 2004, p. 24.) The design appears to have been developed by Earth Sanctuaries Ltd for a predator-proof fence around their reserve near Adelaide. Long & Robley report that there are considerable difficulties with constructing and maintaining the design.

**FLOPPY-TOP FENCE**

A suite of fence structures where the upper metre of so of netting is attached to overhanging or bent posts, and which is quite loose. Various native animals including
possums and koalas, and feral predators (cats and foxes) which readily climb over a normal netting fence, are reluctant to climb floppy fences. These fences are normally only found where there is major capital investment in fences, e.g. to keep koalas off highways, or around biodiversity conservation exclosures. See Long & Robley (2004, p. 24 and numerous figures) for more details.

2004 “The floppy-top fence is an extension of the [floppy panelled fence] and represents the only fence designed to exclude cats, foxes and rabbits that has been experimentally tested in Australia [see Moseby & Read 2006]. … The trials highlighted several critical design elements required for this fence to function optimally. The floppy top must be 600 mm in length, enabling it to form a full semi-circled cap, and electric wires were found necessary to contain all cats.” (Long & Robley 2004, p. 24.)

Other references: Anon (1994b, p. 284).

FOLD
A temporary yard made using hurdles standing more-or-less erect and butted against one another. Forked poles provide additional support to the hurdles. An alternative method was to hang nets off stakes. As the nets were more easily portable than hurdles, nets were often used by overlanders and others droving sheep. Folds have been used in Europe for several millennia (Ryder 1983, pp. 672-675), and the technology was transferred from Britain directly to the Australian colonies.

Colonial usage seems to distinguish between folds made of hurdles or nets and which could be moved and set up elsewhere on clean ground; and permanent stock yards. Wentworth (1819, pp. 97-98) and Parry (1832, in Campbell 1923, p. 142) clearly separate the two.

See also yard, and image under hurdles.
1819 (NSW) “[Sheep] are kept by night either in folds or yards. In the former case the shepherd sleeps in a small moveable box, which is shifted with the folds, and with his faithful dog, affords a sufficient protection for his flock, against the attempts of these midnight depredators. In the latter the paling of the yards is always made so high, that the native dog cannot surmount it; and the safety of the flock is still further ensued by the contiguity of shepherd's house, and the numerous dogs with which he is always provided.” (Wentworth 1819, pp. 97-98.)

Other references: Cockburn 1925, pp. 122, 155; Varro (36 BC, p. 335); Walter of Henley (13th C, p. 31).

FOOTINGS
The foundation stones of a dry stone wall, often set in an excavated trench (Vines 1990, p. 37.)

FORK-AND-LOG FENCE
A problematic term which appears to be a form of log fence.


FORK-AND-POLE FENCE (FORKS-AND-POLES FENCE)
Synonym for zig-zag fence.

1987 (Qld) “The fence in my sketch was easy to erect and handy if the local timber was on the light side. Stakes were driven into the ground and wired together at the top and top rails sat on them.

Shorter forked sticks held a lower rail and a third rail could be added if needed.” (Edwards 1987, p. 14.)


1988 “Forks-and-poles Fence (Cockatoo Fence or Zigzag Fence)” (Peterson 1988, p. 10.)
FOURTEEN-WIRE FENCE / 14-WIRE FENCE
Synonym for lace fence.

A local name from the upper Hunter River to Tenterfield (NSW) and around Stanthorpe (Qld) for lace fences. (Graham Randle, Scone, personal communication 3 February 2009.) A variant appearing on early property plans is “13-wire” or “thirteen-wire fence”.

These fences were built to exclude dingoes, and generally used closely spaced wires in a high fence to stop dingoes climbing the fence, or crawling underneath. Line wires may be either plain or barbed, in various combinations. While many examples remain intact in their original form, others were modified progressively by adding laces (braces) to increase security against dingoes. These modified fences are various forms of lace fences.

FOWLERS GAP FENCE
Synonym for suspension fence (2) (Brain 1976, p. 1.)

G, gge
Abbreviation for gauge (1).

GALLOWAY DYKE
A particular form of dry stone wall designed to restrain sheep, characterised by high coping and a projecting course below the coping (Brooks 1994, p. 17.)

GALSTAR®
A registered trademark of OneSteel Ltd for a range of star posts specifically designed for different conditions and applications. Unlike earlier posts with bitumen finish, GalStar® posts are either electrogalvanised or hot-dip galvanised. See the Waratah® website for more details and illustrations (http://www.onesteelwaratah.com.au/).

GALVANISED WIRE
Wire with a coating of zinc to protect it from corrosion.
Chemically, the zinc coating is a sacrificial anodic coating that corrodes preferentially before the iron in the coated wire. Like manufacture of wire itself, galvanising is a highly complex industrial process using a range of techniques and alloys of zinc (see e.g. Shemenski 2008, pp. 685-739).

Although modern galvanising was developed in 1837, “it was not until shortly after the International Exhibition of 1851 [i.e. the Great Exhibition of the Works of Industry of all Nations, or Crystal Palace], that galvanised fencing wire and strands were practically used in [Britain]; …” (Smith 1891, pp. 330-331.) The earliest record I have found for galvanised wire in Australia is 1854. In the USA, barbed wire was being galvanised as soon as it was commercialised in 1874 (Shemenski 2008, p. 687).

Because both black and galvanised wires were imported into the Australian colonies from the early 1850s (Brown 1968, p. 81; MacSmith 1972, p. 115; Pickard 2009 ms), the presence or absence of galvanising is not a reliable method of dating a particular wire.

**GALVANISING**

Coating steel with zinc metal to protect it from corrosion. Modern galvanising is highly complex, and various other metals including aluminium are added to the galvanising baths to improve the life span and other qualities of the galvanising.

Parisian engineer Stanislas Sorel (1803-1871) patented a hot-dip galvanising process in 1837 in which iron was dipped in a bath of molten zinc. He named it after Italian scientist Luigi Galvani who had described the basic principles of the zinc coating process (Lamesch 2004.)

See also *Crapo patented galvanised wire* and *electrogalvanising*.

**GATE MARK**

Short lengths of strengthened fences on either side of a gate designed to resist the pressure of stock when being driven through the gate.

1882 “[A drop fence] makes excellent ‘gate-marks,’ about four or five rods being placed upon either side of gate-ways in wire fences.” (Armstrong & Campbell 1882, pp. 192-193.)

*Gate marks of pressed steel panels added to the end assemblies on either side of the double gate. W of Hillston NSW (33° 23.4’S 145° 17.5’E), 2 October 2008.*
GAUGE (1) Wire gauge

A traditional unit measuring the diameter (or the cross-sectional area) of a wire and thickness of sheet metal (Rowlett 2005). Gauge sizes are indicated by numbers, e.g. No. 8 or 8G.

“Precise measurement of wire diameter only became possible with the advent of micrometers in 1869. … An interesting result of not having an accurate means to measure wire diameter available to both manufacturers and consumers alike was the development of wire gauges. Partly a result of nationalistic trade secrecy, each nation tended to develop its own numbering system for wire gauges. Even within a country, different gauge numbering systems were used for different industries, as dictated by the guild.” (Newbury & Notis 2004, p. 34.)

Table 1. Wire gauges used for fencing wire in Australia

<table>
<thead>
<tr>
<th>Country</th>
<th>Gauge</th>
<th>Abbrev.</th>
<th>Alternate names</th>
</tr>
</thead>
<tbody>
<tr>
<td>UK</td>
<td>Birmingham Wire Gauge</td>
<td>BWG</td>
<td>Stubs Iron Wire Gauge</td>
</tr>
<tr>
<td></td>
<td>Stubs Steel Wire Gauge</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Standard Wire Gauge</td>
<td>SWG</td>
<td>Imperial Wire Gauge (IWG)</td>
</tr>
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<td>ISWG</td>
<td>Imperial Standard Wire Gauge (ISWG)</td>
</tr>
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<td>(US)</td>
<td>Washburn and Moen Wire Gauge, American Steel and Wire</td>
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<td></td>
<td>Wire Gauge</td>
<td>SWG</td>
<td>Company Gauge, Roebling Wire Gauge</td>
</tr>
<tr>
<td></td>
<td>American Wire Gauge</td>
<td>AWG</td>
<td>Brown and Sharpe Wire Gauge</td>
</tr>
<tr>
<td>France</td>
<td>Paris Gauge</td>
<td>J. de P.</td>
<td></td>
</tr>
</tbody>
</table>

Source: Oberg et al. (1979, p. 464), Rylands Brothers (Australia) Limited (1937, p. 22.)

Six wire gauges with a range of names have been used in Australia, depending on the source of the wire and the date (Table 1). However, few contemporary sources actually specify the system being used, and it may be quite difficult to determine the diameter of the wire from a gauge number alone. Birmingham Wire Gauge was commonly used in Australia in the late 19th and early 20th centuries, but (Imperial) Standard Wire Gauge has been used since before World War II. For more information on the history of wire gauges and the likely derivation of the various numbering systems, see the Wikipedia article “Wire” (http://en.wikipedia.org/wiki/Wire accessed 6 February 2009). There are also similarly-named gauge numbering systems for sheet metal, but these may differ significantly from wire sizes.

The most common abbreviation is “G”, but “gge” is also used. In many cases “gauge” or some abbreviation is omitted, and a wire may be described simply as “No. 8” or “12½”.

Although it is possible in principle to deduce the gauge system being used by measuring the diameter of wire, this will not assist in dating a particular wire for several reasons. Firstly, the differences between e.g. BWG 8G (4.191 mm) and SWG 8G (4.064 mm) are small, and corrosion may have changed the diameter. Secondly, galvanising increases the diameter, and finally, old wire is often re-used and no record is kept other than a farmer’s memory.

Tables 2 and 3 give metric and imperial dimensions for the common wire gauges.

Illustrations of various size stranded and plain wire for fencing. Note that the thinnest wire shown is No. 8. Seven-stranded wire was commonly used in fences in Britain in the 19th and early 20th centuries.

Source: Vernon (1909, Figure 89.)
### Table 2. Wire gauges in approximate decimals of an inch.

<table>
<thead>
<tr>
<th>Gauge</th>
<th>BWG</th>
<th>Stub steel</th>
<th>SWG</th>
<th>US SWG (W&amp;M)</th>
<th>AWG</th>
<th>J. de P.</th>
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*Source: Oberg et al. (1979, p. 464), Rylands Brothers (Australia) Limited (1937, p. 22.)*

### Table 3. Wire gauges in approximate millimetres.

<table>
<thead>
<tr>
<th>Gauge</th>
<th>BWG</th>
<th>Stub steel</th>
<th>SWG</th>
<th>US SWG (W&amp;M)</th>
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GAUGE (2) Spacing of wires in a fence

The spacing of wires or rails down posts in a fence.

1882 “The following gauge will make a neat and secure six-wire fence:- From ground to bottom wire, 6 inches; from bottom to second wire, 5 inches; from second to third wire, 5½ inches; from third to fourth wire, 7 inches; from fourth to fifth wire, 8 inches; and from fifth to sixth wire, 11 inches.” (Armstrong & Campbell 1882, p. 186.)

![Diagram of post illustrating the wire spacing gauge described by Armstrong & Campbell (1882, p. 186.)](image)

Other references: Pearse (1965, p. 54); Synott (1931, p. 151).

GAUGE (3) Spacing of posts in a fence

This is an unusual usage.

1930 “To mark out the post holes a piece of wire 8 ins. longer than the gauge and with 4 ins. bent at right angles at each end will be very handy. You push the 4 ins. into the ground near your first post, stretch the wire along the fence, but about 2 ft. to one side to be out of your way, and push the other 4 ins. into the ground. You will then have two post holes marked out, and by moving the wire one end at a time you will have no trouble keeping the gauge.” (Simpson 1930, p. 1092.)

Every farmer and fencer I have talked with about fence building merely walks along the line of the fence counting steps, and dropping posts off at some pre-determined number
of paces. Dragging a length of wire as a measuring stick seems an unnecessary and rather impractical approach for most rural fences, other than post-and-rail fences where post spacing is more critical.

**GEDDES KNOT**
A knot used to join high tensile wire in the diagonal stay of an end assembly (Addison 1994, p. 122, Figure 2.)

See *knots*.

**GIVE-AND-TAKE FENCE**
A dividing fence deliberately erected off a property boundary to avoid problems of building and maintaining the fence because of some obstacle such as a salt lake.

Although “some land of one owner is fenced with the land of the other and vice-versa, in the absence of any express terms in the agreement on the matter, there arises an implied agreement that either party shall have exclusive occupation of the land and water lying on his side of the fence, …” (Collins 1984, p. 22.)

![Diagram illustrating a give-and-take fence avoiding problems of building and maintaining a boundary fence across an obstacle, in this case, a lake.](image)

**GREEN GALVANISING**
Also known as *blue galvanising*.

**GRID**
A form of gate in a fence using a parallel series of steel (or wood in old examples) bars or pipes, set above an excavation transverse to the road.

Grids have been used since the early 20th century when motor vehicles became more common on rural highways. Fence owners quickly realised that to avoid problems of travellers leaving gates open, or simply pushing them open and damaging them, a permanent opening protected by a grid was a good solution. Well-designed grids do not impede traffic, and do not have the problems of being left open like gates.
Although the most common form of grid is bars over a pit, some grids are simply white lines painted across black bitumen at the fence crossing. Apparently domestic animals that are used to normal grids see the white lines and perceive it as the same type of barrier. A very few grids are electric wires laid bare on the top of insulating rubber matting (usually old industrial conveyor belting).

Also known as ramps, (especially in Queensland), motor passes and motor bypasses. Both the latter terms are obsolete and rarely used.

See also ramp.

Plastic bags have been added to this grid to scare stock. The cut-out masonite dog on the right-hand side is an unusual addition. *Alum Rock* NW of Stanthorpe Qld (28° 31.0’S 151° 40.8’E), 22 March 2005.

Painted grid NW of Langlo Crossing Qld (26° 06.8’S 145° 38.4’E), 30 June 2004.
**GRIPPLE**
A patented device for joining wires using a special tool to tighten the wires which are then locked by camming balls inside the Gripple.

A medium-sized Gripple joining one of the line wires in hingejoint woven wire. NE of Boree Creek, NSW (35° 04.7’S 146° 32.2’E), 2 July 2008.

**GROUND PLATE**
A flat plate fixed to the lower end of steel posts, and driven into the ground with the post. Designed to provide additional stability and resistance to post movement. Generally the plates are in the same plane as the posts, but some examples are perpendicular to the posts.

Also known as *sole plate* in British catalogues.

Examples of feet of posts and ground plates available in Britain in the late 19th and early 20th centuries. Some similar forms have been found in Australia in fences using posts imported from Britain.

*Source: Vernon (1909, p. 219.)*

Ground plates are rare in Australia although they have been patented, either individually or in conjunction with posts, several times. Some rare fences built entirely of imported...
strainers, posts and wire imported from Britain used ground plates, but these are exceptional. The patent for the ubiquitous Waratah star post included a ground plate that clipped onto the post. I do not believe that these were ever manufactured and used. By contrast, in the USA, virtually every steel fence post has a ground plate attached.

![Ground plate designed for Waratah star posts in the original patent.](image)

**GRUNGE**

A gate in a fence made by leaving a narrow gap partially blocked with a post. The objective is to allow a person to pass, but not stock.

![Source: Edwards (1979, p. 22.)](image)

**HA-HA (FENCE)**

A fence formed by an asymmetric dry ditch with the steeper side reinforced with a stone (rarely) timber wall, used to conceal the paddock boundaries of an estate or a landscape, especially close to the manor house.

Ha-ha fences are not strictly “rural” in the sense used here, but are included for completeness. They have a long history in landed estates in both Britain and Europe from at least the early 17th century (Fletcher 1991, p. 146) where they were used to provide a barrier to stock without interrupting the view from some vantage point.

I know of no good description of an Australian example, but Taylor (1930) has detailed specifications from the USA.
Also known as: Ha ha fence, sunk fence.

Other references: Dézallier d’Argenville (1709, quoted from Fletcher 1991, p. 146); Miller (1764, no pagination).

HALVES
See thirds.

HARPER FENCE
Synonym for double post-and-rail fence (Peterson 1988, p. 11.)

I have been unable to find out the origin of the name, but presumably it comes from the man who first used it in Western Australia.

19th C (WA) “Another type of fence was the ‘Harper’ fence. This consisted of rails laid one on top of the other and held in place by two upright posts.” (Underwood 2004, p. 28.)

HEAD
The section of a fence post above the upper-most wire.

1928 (Qld) “I like a fencing post with a short head. Nothing is more objectionable than a line of fencing the posts of which have unduly long heads, say, 5 in. or 6 in. … the post-heads being all on the one level across the pockmarked plain.” (Pearson 1928, p. 1114.)

Also known as post head.

HEARTING
Synonym of fill in a dry stone wall (Vines 1990, p. 37.)

HEDGE
A line of shrubs deliberately planted to mark the boundary of a paddock or property, and / or to provide a stock-proof barrier along the boundaries. Usually trimmed to encourage dense lower growth which makes the hedge more stock-proof. Hedge maintenance is highly skilled, using a range of specific tools and techniques (see, e.g. Malden 1899, Hart 1981, Brooks & Agate 2005).

Although hedges (or live fences) were the most common and widespread form of fences used in the United Kingdom up to the late 19th century, they were relatively uncommon in the Australian colonies. Several English observers complained at the lack of hedges which they saw as the zenith of a well-ordered agricultural landscape (e.g. Howitt 1855, volume 1, pp. 53-54.) Excellent examples of both maintained and semi-feral hedges still occur in some regions (e.g. central Victoria and northern and central Tasmania). Tassall (1988) describes and illustrates the role of hedges in the cultural landscape of Tasmania.

Various plants were used in Australian hedges; most commonly African Boxtorn (Lycium ferocissimum), English Broom (Cytisus scoparius), Gorse or furze (Ulex
Prickly Pear (*Opuntia stricta*), Osage Orange (*Maclura pomifera*), Privet (*Ligustrum* spp.), Sweet Briar (*Rosa rubiginosa*) and White Hawthorn (*Crataegus monogyna*). With the exception of Osage Orange and White Hawthorn, all these plants have become serious environmental weeds in Australia. Problems with Sweet Briar were recognised as early as 1861 (Anon 1861, p. 15).


1854 (Tas) July 1854 near Oyster Bay: “Splendid hedges of English furze enclosed the approach to Mr. Charles Meredith's house, ...”; “Their fields were enclosed with hedges of blooming furze or sweet-briar, ...”; north of Hobart: “... the ... fields all enclosed with hedges generally of sweet briar, or furze, or broom, but also a good many of honest English hawthorn.” (Howitt 1855, volume 2, pp. 365, 366, 375.)
Hawthorn hedge near Mole Creek Tas (41° 33.3’S 146° 26.6’E), 28 December 2003. The upper image shows the junction of maintained and overgrown sections. The lower image shows detail of plashing (cutting part-way through the stems, then bending them diagonally and weaving together) used to increase the density of the hedge.

Other references: Backhouse (1843, p. 27); Curr (1824, p. 119); Pickard (2006); von Mueller (1881).

**HEDGE-AND-BANK / HEDGE-AND-DITCH / HEDGE-AND-WALL**

Each of these self-explanatory combinations was common in Britain in the 19th century, but rare in the Australian colonies.
1861 (Vic) “The only way a two railed fence can be made to answer, is to dig a trench on either side of it, say two feet deep, and eighteen inches wide at the bottom; and throw up the earth dug out, so as to form a bank.

On the top of this, insert the young plants you intend for a hedge, on the inside of the field, and they will stand a good chance of thriving, and making a useful hedge.” (Anon 1861, p. 14.)

**HEDGE FENCE**
Synonym for *hedge* (Anon 1866, title.)

**HEDGEROW**
A term not commonly used in Australia, but describing some of the variants of hedges in Europe and the USA.

1984 US / Europe) “Hedgerows are narrow bands of woody vegetation and associated organisms that separate fields. The term *hedge* is sometimes used interchangeably with *hedgerow*, but generally has the narrower sense of a hedgerow composed of low dense vegetation (shrubs or small trees), which is planted and managed. The term *fencerow* refers to those hedgerows where a fence is or was present. The term *shelterbelt* generally refers to a planted strip composed of several rows of woody plants. Many intersecting hedgerows form a *hedgerow network* or *bocage*. … The four major functional characteristic of a corridor [here specifically hedgerows] are to act as a: (a) habitat for certain species, particularly edge species, (b) barrier separating adjacent fields, (c) source of biotic and environmental influences on the adjacent fields, and (d) corridor for movement of certain species. In addition, the hedgerow network provides loops or alternative pathways for the movement of species, as well as subdividing the landscape into field units of varying mesh size.” (Forman & Baudry 1984, p. 495; italics in original.)

**HIGH TENSILE BARBED WIRE**
Barbed wire made with high-tensile steel, characterised by two line wires and four-point barbs wrapped around the line wires which are twisted in opposite directions between each pair of barbs.

Source: Australian Wire Industries Pty Ltd (post-1953, p. 27.)

**HIGH TENSILE FENCE**
Synonym for *suspension fence* (2) (Brain 1976, p. 1.)
HIGH TENSILE WIRE
Wire made using high tensile steel to increase the strength and resistance to stretching. Because the wire is thinner for a given tensile strength, the wire is lighter and thus reduces transport costs.

The first high tensile wires used in Australia appear to have been Waite’s Special Wire (see below), but because it was difficult to handle and became very brittle with age, it was not popular. Bad experiences (real or imagined) with this wire caused many landowners to reject all high tensile wire until better technology after World War 2 lead to high tensile wire with improved properties. Wire manufacturers sell a number of named brands of high tensile wire, each with different characteristics that make the brands suitable for different conditions (WA Agriculture Department 1994, pp. 91-92.)

HINGED JOINT
Trade name of a form of woven wire made by One Steel Ltd (and its precursor companies). Commonly referred to as “hingejoint”.

HORSE WIRE
Thick steel wire (typically 8G, 4 mm diameter) and covered with white PVC to increase visibility and minimise damage to the perceived delicate skin of horses. Usually found in peri-urban areas rather than the horse paddocks of pastoral stations.

HOT-ROLLED
A process of shaping steel billets by rolling when the material is red-hot. Typically used for thick sections, e.g. Star® posts.

HOT WIRE
A wire carrying the electric current in an electric fence.

HUNDRED WEIGHT
An imperial unit of mass, 112 lbs (~ 50.8 kg). There are 20 cwt to the imperial ton (2,240 lbs). Wire was commonly sold in hundredweight coils and lots of several tons, and most catalogues had tables showing the length per hundredweight of wires of different gauges.

Abbreviation: cwt, CWT, and less commonly, c.

HURDLE
Relatively short lengths of stand-alone fence panels with variable numbers of bars and vertical struts and diagonal braces. May be either wood or iron. Typical colonial Australian hurdles followed a standard design of four or five bars mortised into the end struts and reinforced with diagonal braces meeting in the middle. Mostly used to form temporary yards or folds to protect sheep at night, and for various management operations. When used in yards, each hurdle was propped up with forked sticks (see image below.)

Although hurdles could be butted end-to-end to form a fence, this would have been very uncommon because of the high cost of hurdles. Some driveways of colonial squatter’s mansions appear to have been fenced with iron hurdles. Hurdles were using the Britain
from at least pre-medieval times, often in the form of woven panels of wattling (Trow-Smith 1957, p. 97). Stephens (1844, volume 2, pp. 66-70) describes how to make hurdles of mortised rails.

Hurdle originally used by shepherds of the Australian Agricultural Company on Warrah, and now in the collection of the Tamworth District Historical Society. The left-hand vertical strut has been detached showing the mortices cut to accept the tenons on the five split rails. Each joint and intersection of the braces and the rails is nailed. 16 February 2005.

A hurdle (circled) of similar design to that shown above rests against the wall of the shepherd’s hut, while a fold (arrowed) made of hurdles supported by forked poles appears in the right-hand middle ground.

*Source: Australian News for Home Readers* 24 February 1864.
A very early advertisement showing a pair of iron hurdles bolted together. Note the pointed ends on the intermediate posts, and double feet on the end posts to provide additional stability.

*Source:* Charles D. Young and Co. (1847, p. 1.)

**Other references:** *Wood hurdles:* Cameron (2006, p. 221); Shumack (1967, p. 33); Wentworth (1819, p. 412). *Iron hurdles:* Brown (1968, pp. 46-47); Cameron (2006, p. 331); Iron hurdles were advertised by the Victoria Iron Rolling Co. Limited, Melbourne in every issue of the *Pastoral Review* from 15 February 1893 - 15 December 1894.

**HURDLE FENCING**

A fence built using hurdles butted end-to-end. In the case of iron hurdles, adjacent panels would have been bolted together.

Hurdle fencing was common in Britain in the 19th century, and many kilometres of iron hurdles still exist. Although such fences were relatively easy to erect, they were expensive because they used considerably more iron per kilometre than wire fences, even those using bull wire.

*Other references:* Armstrong & Campbell (1882, pp. 200-201); McKay (1962, p. 38).

**IMPERIAL (STANDARD) WIRE GAUGE**

Synonym for Standard Wire Gauge.

The most commonly used system of specifying wire diameters from the mid-20th century in Britain and Australia. See under *Gauge (1)* for more details.

**INSULTIMBER**

A trade name rectangular cross-section wooden droppers made from kiln-dried ironbark (various species of *Eucalyptus*). One face of the dropper has regularly spaced slots for wires which are retained using special clips or ties. Because dried ironbark has very low electrical conductivity, these droppers are frequently found in electric fences where they can be used without the need for insulators between the wire and the droppers.

**INTERNAL FENCE**

A fence inside the boundaries of a property, used to subdivide the property into paddocks.

Also known as paddock fences, subdivision fences.
IOWA BARBED WIRE
The most common steel (not high-tensile) barbed wire in Australia. Characterised by two line wires and a four-point barb wrapped around both. A key feature is the interlocking of the wire in the barbs. The origin of the name is unknown.

Source: Australian Wire Industries Pty Ltd (post-1953, p. 26.)

IRON
A metallic element that is the basis for many ferrous alloys including cast-iron, wrought iron and innumerable forms of steel. Before the development of various steels, iron was rolled for fence posts, and drawn for wire.

IRON FENCE
An obsolete expression describing a fence using iron rather than wood posts.

1955 “In the days when I used to handle such things I think these were called ‘iron’ fences. The wire, would be of steel; the droppers, if they used them, would be of the same material; the posts and standards would also be of steel. That is why I refer to them as ‘metal’ fences instead of the old-time title of ‘iron’”. (Lamond 1955f, p. 5.)

JENNY
A holder for rolls of wire, pivotted on a central axle, allowing the wire to be unrolled without tangles when erecting a fence. May also be used for rolling up old wire taken from a fence being repaired or demolished. Typically set up so that the roll of wire is horizontal.

Also known as spinner.

1905 (NSW) “An easy and simple way to [thread wire through split posts] is to place the coil on a reel made on the capstan principle; this allows the wire to run off freely, and prevents it getting tangled, &c.” (Gennys 1905, p. 961.)

Home-made jenny for unreeeling wire.

Source: Gennys (1905, p. 962.)
Commercially available jennies are more complex than the example illustrated above. Typically they have adjustable arms for different size rolls of wire.

**K FENCING**
Trade name of Cyclone Gate & Fence & Gate Co. Pty Ltd for *diamond mesh*.

**KANGAROO FENCE**
Synonym for a post-and-rail fence with added palings, and one form of palisade fence.

1840s (SA) “... wood forms the cheapest fence [for gardens or orchards], and the kangaroo, or the post and rail with palings, are the most preferred. You can, yourself, put up the fence, as it is only necessary to fit the rails well into the mortises, place the posts, after they have been mortised, firmly in the ground, and nail the palings thereto in a secure manner.” (Lancelott 1852, volume 1, p. 157.)

**Other references:** Peterson (1988, p. 11).

**KEY**
Synonym for *fencing key*.

**KNOTS**
Various means of joining line wires in a fence, or the line wires in fabricated (woven) wire.

By far the most common and widespread is the figure-eight, but others have local and regional concentrations. For optimum performance, wires of different materials (iron, steel, high tensile) require different knots, although this is not always seen in the field.

1902 “Fig. 1 represents the ‘knot splice’ now almost universally used. It is far better adapted to wire that is not pliable, and somewhat brittle, than any other.

Fig. 2 also represents a ‘knot splice,’ but not so good as Fig. 1.

Fig. 3 is the ‘loop and twist’ splice, often used, but not so good as the preceding splice.

Fig. 4 - The ‘Loop’ Splice. - This splice is objected to principally on account of its liability to break under sudden pressure, and the fact of one wire being liable to cut the other.
Fig. 5 - The ‘Telegraph’ Splice. - This is the oldest of all splices, and one that can only be recommended where new wire is used, as the short turns necessary to make it generally cause the wire to break, sometimes when one-half the splice has been completed.

The ‘knot’ splice is, to my mind, the best of them all. In the first place, is far easier to do, and, when done,. it is the most secure, and quite as neat.” (‘Crossbred” 1902b, pp. 242-243).

Although many of these knots may be used in iron wire, the pin-and-loop and Geddes are mostly found in high tensile wire fences. The telegraph splice is rarely found in other than iron wire, but is commonly used to join steel and high tensile barbed wire.

1950 (Vic) “… a variation of the tying knot usually used with a Donald wire strainer. The main advantage of it, …, is that when using fine wire or very soft wire the knot does not unravel after the strainer has been removed. He has found that when the old Donald knot is used on some of the modern soft wires it tends to unravel as soon as the strain comes on.” (Anon 1950, p. 485.)

Source: Anon (1950, p. 485).

KNOT SPLICE
Obsolete (?) synonym for figure-eight knot.

LACE / LACING
Synonym for brace.

1892 (SA) Evidence of Norman Alexander Richardson, Question 2357: “I am having fencing done now, consisting of myall [Acacia papyrocarpa] posts, 15ft. apart, five wires, two lacings, … (South Australia Royal Commission on the Valuation of Pastoral Improvements 1892, 84.)

LACE FENCE
Post-and-wire fences strengthened by adding braces / laces to form rectangular mesh as a dingo-proof barrier. Localised in southeast Queensland near Stanthorpe and extending south to near Scone NSW (Pickard 2007a). Generally built in the late 19th century. There is an isolated lace fence near Grenfell, built in the 1930s to exclude kangaroos.

Synonyms: Lattice style wire fence (Austral Archaeology Pty Ltd 2000, p. 7); Chinese fence (Gojak 2000); 14-wire fence.

Late 1870s (NSW) “John Black investigated the new forms of fencing then in vogue and decided to construct a lace (or brace) fence on Wallangra and a paling fence on Blue Nobby. The lace fence was 5 feet (1.5 metres) high and 10 feet (3 metres) between posts. Timber was stipulated as iron bark, all strainers and corner posts to be 8 feet (2.4 metres) long and not less than 1 foot (.3 metres) in diameter, to be sunk 3 feet (1 metre) into the ground. Stays were to be 10 feet (3 metres) long and not less than 6 inches (152 mm) diameter at the small end. Running posts had to be 7 feet 3 inches (2.2 metres) long, split, and to be 8 inches (203 mm) by 3 inches (76 mm). Posts were to be bored, run and strained with 8 wires of 8 gauge. All wire was delivered to the job by the station. The contract price for cutting and
carting the timber to the site and erecting the fence was 32 pounds a mile. After
the main frame of the fence was erected a team of Chinamen followed who braced
the 8 wires vertically together at 4 inch (100 mm) intervals. The bracing was done
by tying 14 or 16 gauge wire to the bottom wire of the fence, wrapping it round
the intervening wires and tying it off at the top wire. Expert bracers could apply
up to 700 braces a day. They were paid at the rate of 14 pounds per mile. At stress
points - gateways, corners and around small paddocks, a top split rail was added
which was mortised into the posts.” (Black 1988, pp. 59-60.)

Intact lace fence showing the complex arrangement of laces between the line wires. Note
that some laces start at #1 wire (at the top), but most start at #2 wire. Hexagonal rabbit
netting visible at lower right is a modern addition. Eastern boundary of Arakoola Nature
Reserve, SE of Coolatai NSW (29° 17.2’S 150° 50.6’E), 4 January 2005.

Lace fence extension to rabbit-proof netting fence. Designed to exclude
kangaroos. Seaton’s Farm, Weddin Mountains National Park, W of
Grenfell NSW (33° 54.4’S 147° 56.9’E), 20 October 2008.
**Other references:** Austral Archaeology Pty Ltd (2000, p. 7); Gojak (2000, p. 10).

**LATTICE FENCE**

Synonym for *basket fence*, and *lace fence*.

1988 “Split saplings were interwoven between posts sunk into the ground. This fence was cheap and easy to erect. It was common in the briga low country of Queensland. A variant was the weaving of an open lattice of split saplings.” (Peterson 1988, p. 11.)

**LIFT GATE**

See *Read lift gate*.

**LIGHTNING DROPPER**

A trade name for a particular form of wire dropper which can be easily added to a fence. Manufactured and sold by National Nail Pty Ltd in the late 1960s. The name seems to now be applied to almost any wire dropper of similar form. This can be confusing as several similar droppers have been used since the early 20th century.

Loop used to attach “Lightning droppers” to line wires. 


**LIGHTNING FENCE**

In the late 19th century, prominent pastoralist Peter Waite developed a form of four-wire fence designed for subdivision of his large properties in the rangelands of South Australia and New South Wales. The key features are widely spaced posts and intermediate droppers and four plain wires. In some fences, Waite used his *Waite’s special wire*, an early high-tensile wire. ‘Our Adelaide correspondent’ (1916, p. 534) describes how Waite experimented with the design, increasing post spacing, adding droppers and using fewer wires than normal. The final design was about 50% the cost of normal fences.

1969 “A special four-wire sheep fence … known as the ‘lightning fence,’ has the advantage of being cheap and easily erected, and is useful for subdivision. … Posts, 4 ft. 9 in. long, and placed 21 in. in the ground, should be well rammed, 50
ft. to 80 ft. apart, according to country passed through. The strainers are 5 ft. 6 in. long, and are embedded 2 ft. 6 in. in the ground, 135 yards apart. Droppers are necessary every 25 to 30 ft., and if the distance between posts is great the droppers must not be so heavy as to cause the wires to sag. The gauge, where Merinos are run, is:- Ground to first wire, 9½ in.; first to second wire, 7½ in.; second to third wire, 6½ in.; third to top wire, 9½ in.; top wire being 3 in. below the crown of the posts. The total height of the fence is thus only 2 ft. 9 in., but it can, of course, be made higher, if so desired, by the addition of an extra wire and the use of longer posts. It is necessary to use No. 10 or No. 12 gauge wire. The droppers should be 2 ft. 2 in. long, which allows for 1¼ in. above the top and below the bottom wires, a ½-in. hole being used.” (Pearse 1965, p. 64.)

Historical note: Evan Hope Pearse edited the influential Pastoral Review from 1917 to 1951 (Walsh 1993, p. 263.) Although the Review had been a leading source of information to graziers in the late 19th and early 20th centuries, its flagship book first published in 1912 became very dated by the time of the eighth edition quoted above. No landholder in the 1960s would consider building a fence with strainers as close as 135 yards, a distance constrained by iron wire in the 19th century. Wire of stronger steel and high-tensile steel was standard from the inter-war period, and strains would typically be 500 m or longer.

Other references: Anon (1897, p. 295); Lamond (1955c, p. 5); McLeod (1900, p. 165).

LINE POST
Any of the posts (other than strainer posts) in the line of a fence. Rarely used except to distinguish posts from strainer posts.

LINE WIRE
Any of the wires in the line of the fence, including the horizontal wires in fabricated / woven wire (but not netting).

LIVE FENCE
A British 19th century neologism for hedge. Previously hedges were referred to as fences, and as other forms of what we would today call fences became more common, these were called dead fences to distinguish them from live fences or hedges.

1873 (Vic) “…. live fences would soon enliven the monotony of post and rails, and largely increase the value of landed property” (Inspector of State Forests 1873, p. 76.)

Other references: Anon (1867).

LOG FENCE
A fence made by rolling logs of varying sizes into a line. Similar to a brush fence, but using larger material.

Also known as: dead log fence, deadwood fence.
Victorian squatters jumping a log fence while emulating the English gentry during a kangaroo hunt.

*Source:* detail from “Hunting in Victoria” *Australasian Sketcher* 3 October 1875, p. 156.

1882 “This is a fence seldom used on stations except where clearing or grubbing is done, the logs only being dragged in and built closely together; which, when properly done, forms a secure and neat fence, and is a good method of disposing of the timber, which would otherwise have to be burned.” (Armstrong & Campbell 1882, p. 195.)

**LOG-AND-BRUSH FENCE**

A variant form of *stubb fence*.

1865 (NSW) “Blocks or chocks about a foot in diameter are laid along the ground, across which two heavy logs, each not less than one foot in diameter, are laid along parallel to each other, and from one to two feet apart. The tops of the trees, cut down for the purpose of procuring these logs, are then cut in lengths of four or five feet, allowing the leaves to remain on them, and planted upright between these parallel logs.” (Gordon 1865, p. 3).

**Other references:** Bruce (1875-76, p. 722); Gordon (1867, p. 33).

**LOG-AND-CROSS LEG FENCE**

1865 (NSW) “…‘log-and-cross-leg,’ is formed by laying on the ground a large log, generally not less than eighteen inches in diameter; another large log is placed on the top of this; two shear or cross legs, about four and a half feet long, and six inches in diameter, are then put in the ground (one on each side of the logs), and crossed on the top of the second log, at a distance of about twelve feet apart; and is the fork formed by these cross-legs is laid another log of from six to nine inches in diameter, which firmly binds the two first logs, and forms the upper rail of the fence.” (Gordon 1865, p. 3)

**LOG-AND-SHEARS FENCE**

Synonym for *log-and-cross log fence.* (Gordon 1865, p. 3).
LOOP KNOT
See knots.

LOW-COST FENCE
Synonym for suspension fence (2) (Brain 1976, p. 1.)

MALLEE GATE
Synonym for wire gate.

MAUL
A large hammer with an iron-bound wooden head used to drive iron posts into the ground. Mostly replaced by steel sledge hammers, manual dollies (drivers) and pneumatic post drivers.

MESH
The width of each cell in hexagonal wire netting,

METAL FENCE
An obsolete expression describing a fence using iron or steel posts, rather than wood.

1955 “In the days when I used to handle such things I think these were called ‘iron’ fences. The wire, would be of steel; the droppers, if they used them, would be of the same material; the posts and standards would also be of steel. That is why I refer to them as ‘metal’ fences instead of the old-time title of ‘iron’”. (Lamond 1955f, p. 5.)

MILE
In most cases “mile” refers to the imperial unit of length (~ 1.6 km), but in some instances, it is a contraction of “square miles”. Early pastoral leases in far northern and north-eastern South Australia were very large, and typically described in square miles rather than acres. In many official documents the area is referred to simply as “miles”. There is rarely any doubt about which is meant - length or area - but brief quotes out of context may be confusing.

1892 (SA) Evidence of Hurtle Willoughby Morphett, Question 2016: “Do you know how much a mile the improvements on the run came to?” [Translation: “Do you know the value, in pounds per square mile, of the improvements on the run?”] (South Australia Royal Commission on the Valuation of Pastoral Improvements (1892, p. 74.)

MIXED MESH NETTING
Wire netting with two mesh sizes in the same width of netting. Because of the limitations of manufacturing, the smaller mesh must be half the size of the larger (Barnard, Bishop, and Barnards 1875, p. 6.)

Mixed mesh netting is very uncommon in Australia, either from the limited amount imported, or by subsequent replacement. The best examples are on the Eyre Peninsula (SA) in a number of old dingo- and rabbit-proof fences (both derelict and intact).
1895: “Mixed or combined mesh netting consists of two descriptions of netting woven together in one continuous and unbroken width, the lower portion being of a small mesh - viz., 1¼ inch; and the upper of a larger one - viz., 2¼ inch [sic 2½ inch]. These two meshes have been selected as best fulfilling the requirements of such a fence - viz., that the lower portion shall be of such a size as will effectually prevent passage or [sic] even the smallest rabbits, while the upper portion need only be sufficiently small in the mesh to afford protection against heavier game. …

This mixed mesh netting was first made by the late Mr. Charles Barnard, the founder of the present firm of Barnard, Bishop and Barnard Limited, Norfolk Iron Works, Norwich, and the originator of the wire netting industry, about fifty years ago. Owing to the inherent merits of the netting as a fence against rabbits, the question has had the most careful attention of Mr. J. G. Bowen jun., secretary and a managing director of the present company and he has successfully accomplished the task of designing and manufacturing special steam-power machinery for its production, and this machinery has been patented both at home and abroad so that the firm hold the exclusive right to the production of this netting.” (Anon 1895, p. 418.)

“Patent machine-made mixed mesh wire netting” advertised by Barnard, Bishop, and Barnards in Australia for the colonial market.  

**MOTOR BYPASS / MOTOR PASS**  
An obsolete name for grids or ramps dating from the period when vehicles were called “motors”.

Until the 1970s signs warning of “gate and motor bypass” could still be found on back roads, but very few remain today.
A home-made sign painted on the top of a 200 L drum warning motorists of a motor bypass ahead has been replaced by the official and Australia-wide standard sign. NW of Isabella NSW (33° 57.4’S 149° 39.9’E), 16 October 2008.

Other references: Advertisements for “motor passes” (Rylands Brothers (Australia) Limited 1937, pp. 59-62.)

MULGA BOUGHYARD FENCE

Synonym for *brush fence*.

1973 “The first rough fences, rudimentary deadwood or brush fences, in some areas called the Mulga boughyard fence, … .” (Walsh 1993, p. 9.)

MULGA WIRE(S)

A bush colloquialism for rumours. The derivation is more likely to be from “wire” being a colloquial term for telegram or other message sent by telegraph, rather than wire in a fence. The monthly newsletter of the Bush Music Club is appropriately called *The Mulga Wire*.

1893 “All sorts of rumours - commonly known as mulga wires - were prevalent.” (‘IC’ 1893, p. 326.)

Other references: Farwell (1950, p. 16).

NEPTUNE WIRE

A trademark of German wire manufacturers Felten & Guilleaume. (Anon 1894, p. 138).

NETTING

Although the term is applied to almost any form ofnetting or fabricated (woven) wire, it is more commonly applied to hexagonal netting.
Netting is traditionally described using three numbers stamped into a metal tag, and occasionally these labels are found on netting: e.g. 42 x 1¼ x 17. Decoding this, the netting is 42” wide with 1¼” mesh using 17G wire.

See also centre strand wire netting and mixed mesh netting.

**NETTING FENCE**

A fence of any form with at least one width of wire netting included. Netting fences are designed to exclude pest animals rather than domestic stock, and a range of designs has been developed to cope with rabbits, dingoes, and marsupials.

**NOTCHED STAR POSTS**

Star posts with a truncated triangular notch punched out of the primary web. Developed for the Australian military in World War 2 to facilitate erection of barbed wire entanglements. Many of these posts were subsequently released onto the civilian market in the late 1940s when there was a critical shortage of steel fencing materials.

**PADDOCK**

The basic unit of subdivision on a farm or station, varying in size from less than a hectare to many tens of thousands of hectares in area depending on the region and the enterprise.
The term is derived from Britain (Loudon 1822, p. 1455). The British term “field” is rarely used in Australia except in historical descriptions.

**PADDOCKING**

Allowing sheep or other stock to run loose within the confines of a paddock, as opposed to “shepherding” when sheep were supervised daily as individual flocks (Pickard 2007b, 2008).

1873 (SA) “In the district of which I am speaking the sheep are all ‘paddocked,’ - that is to say, kept in by fences, - so that shepherding is unnecessary.” (Trollope 1873, volume 2, p. 214.)

**Other references**: de Satgé (1901, p. 256); Gordon (1865, p. 3).

**PALE / PALING**

Split or sawn timber boards attached vertically to fences to increase security against certain animals, form yards, or to fence a homestead garden. Typically the pales are 100 mm or so wide and 10-20 mm thick. Around gardens, pales tend to be replaced by pickets with or without decorative tops. The distinction seems to be one of size (especially length), spacing and decoration rather than function.

1841 (NSW) “So often the words of a visitor to Boree in 1841 occurred to me. He wrote: ‘Captain Raine’s fields, enclosed as usual with pales, were as large as those in Scotland, and ... the clearing ground beyond was similarly enclosed, ...’” (MacSmith 1972, p. 2.)

“Pale”, derived from the Latin *palus* (a stake), is also an old word for a palisade, and is the basis for the expression “beyond the pale” for e.g. behaviour that is outside accepted bounds. I have not found any use of the term “pale” in Australia to refer to a fence, even a paling fence, or boundary.

**PALING FENCE**

A fence of varying construction, where the major barrier is formed by closely abutting vertical pales or palings attached to horizontal rails or wires.

Pales and paling fences have a long history in Britain (see e.g. Birrell 1992, pp. 119-120) but the name is also applied to what would be called “post-and-rail” fences in Australia (Low 1834, p. 671; Wilson 1851-52, volume II, p. 302). Paling fences were among the first fences built in the Australian colonies (Pickard 1999.) They remain the *de facto* standard fence for the side and rear boundaries of suburban blocks. Because of their cost, they do not seem to have been common as paddock fences until rabbits appeared, and then paling fences were unsuccessfully erected to stop the spread of rabbits (Pennycuick 1995, pp. 15, 36). Others were built in the New England region of NSW to exclude dingoes (Molony 2000, Watson & Wilson 2007). Paling fences were more commonly used to build yards to protect sheep from dingoes overnight, and more generally to build stockyards. Most of these dingo fences and yards are more strictly termed “paling-and-wire fences”.
PALING-AND-WIRE FENCE
A fence made with palings held to a line wire by wires woven around the palings and the line wires.

Pairs of horizontal wires are interwoven between the palings to hold them in this fence.

Source: Walsh (1993, Figure 1, p. 11.)

Detail of wire lacing used to tie split logs to the upper wire of a paling fence. Beni State Forest, E of Dubbo NSW (36° 16.7’S 148° 44.6’E), 27 December 2004. (This fence is also illustrated by Curby & Humphreys 2002, Figure 31, p. 104 as a “log fence”.)

**PALISADE [FENCE]**
A fence of closely abutting logs placed vertically in the ground.

Palisades have been used to fortify houses and villages since at least the Neolithic in Europe (see, e.g. Gibson 1998), and were commonly used in early colonial America (e.g. Levy 2004). However, such fortifications seem to have either extremely rare or never used in colonial Australia. One of the most famous forts - the stockade built at Fort Bourke (NSW) by explorer and Survey-General Thomas Livingstone Mitchell in 1835 - was not a palisade. Rather it was built using horizontal logs overlapping at the corners, and fastened with iron spikes (Dowd 1935, p. 257.)

Because of the enormous number of logs needed, palisades were rarely used in rural Australia, other than in yards and in specific situations (Pickard 2007a, p. 499.)

Synonyms Kangaroo fence, stub fence, sapling-and-wire fence (Peterson 1988, p. 11).

Historical note: the earliest fence recorded in the Australian colonies was a palisade depicted in a painting of Sydney Cove in 1788 (Pickard 1999, Figure 2).

![Derelict palisade fence built across an ephemeral lake to avoid problems of rusting wires every time the lake fills. S of Yantabulla NSW (29° 25.7’S 145° 38.0’E), 8 August 2007.](image)

**Other references**: Peterson (1988, p. 11).

**PANEL**
The basic unit in a fence. Here defined as the shortest repeating combination of vertical components (posts and droppers). Although superficially simple, panels can be quite complex and lengthy on fences with several different types of posts and droppers as shown by the diagrams below.

It is important to clearly define a panel in any study of fences to ensure that the same structures are being compared.
Diagram of panels showing progressive adding of additional types and numbers of posts. The panel is always bounded by posts P₁ (shown in red). When a second type of post is added, it is Post-2 (P₂), regardless of the number of these posts used. When a third type of post is added, it is Post-3 (P₃), again regardless of the numbers of these posts used. Wires are omitted for clarity.

Diagram of panels showing progressive adding of additional types and numbers of droppers and posts. The first type of dropper is Dropper-1 (d₁). When a second type is added, it is Dropper-2 (d₂), regardless of the number of these droppers used. If a third type of dropper is added, it is Dropper-3 (d₃). Droppers are numbered independently of posts. Wires are omitted for clarity.
PANNEL
Synonym for *panel*.

1819 (NSW) “Preparing and putting up morticed railing, five bars, with two pannels to a rod, and post sunk two feet in the ground …” (Wentworth 1819, p. 106.)

Other references: Armstrong & Campbell (1882, p. 198); Henderson (1851, p. 42).

PARIS GAUGE
A French system of specifying wire diameters. See table of sizes under *Gauge (1)*.

PATENTING (1) Protecting intellectual property
Protecting intellectual property in an invention by taking out a patent which allows monopoly use of the invention for some period of time specified in legislation.

Prior to federation in 1901, each colony had its own patent legislation, and thus any inventor would have to patent her invention in each colony to get full protection. After Federation, each state continued to administer patents until they were taken over by the Commonwealth in 1904. Unfortunately, not all Australian and colonial patents and patent applications are not held in a single archive at IP Australia. Rather they are scattered among various state libraries and various branches of the National Archives of Australia. Finding original documents or even copies can be extremely time-consuming and frustrating.

Although the term has two dissimilar meanings, it is usually clear from the context which meaning is being used. In general “patented wire” would refer to wire that has been heat-treated using the Horsfall process (meaning 2) rather than wire which is protected by a patent (meaning 1). See the example under *Patenting (2)* below.

PATENTING (2) Heat-treating steel
A manufacturing process of heat treating developed to “produce wires of high tensile strength, combined with ability to withstand a large amount of bending and working without breaking.” (Rylands Brothers (Australia) Limited 1937 p. 19.) The process was invented by English wiremaker James Horsfall in the 1850s. “Although Horsfall received a patent and the product is known as patented wire to this day, the true nature of his unique … methods were kept secret … [and] the Horsfall process remained a mystery for many years.” (Shemenski 2008, p. 924, *italics* in original.)

1979 (patent) “Claim 1. Barbed wire formed from wire having a carbon content of from 0.6 to 0.85% by weight which wire has been subjected to patenting by austenistising and quenching the wire after it has been drawn.” (Australian Wire Industries Pty. Ltd. 1979.)

PICKET (1) Wooden picket
A slat of wood attached vertically or obliquely to rails to form a decorative fence. Usually found in urban fences, but common around homesteads. The top may be cut into a variety of decorative shapes (see e.g. Peterson 1988 for numerous urban examples).
**PICKET (2) Picket wire in fabricated netting**
A vertical wire linking the horizontal (line) wires in woven or prefabricated fencing material such as Hinged joint or Ringlock.

**PICKET (3) Steel post**
A widespread and commonly used name for Star® posts. More generally, any steel post can be called a “picket”.

**PICKET (4) Wire dropper**
An alternative name for Cyclone crimped droppers, made from No. 4 or No. 6 galvanised wire, crimped into a regular wave pattern, and tied to line wires with a wire loop.

**Cyclone Crimped Pickets and Loops**
Commonly known as Cyclone Droppers and Loops

Cyclone crimped pickets and loops.
*Source: Cyclone Fence & Gate Co. Pty Ltd (no date p. 8.)*

**PICKET FENCE**
A fence, most commonly found around homes and small yards, using pickets (meaning 1 above) fastened to rails. Picket fences around homesteads and gardens have more in common with urban picket fences, and the pickets frequently have decorated tops. The description below is essentially identical to a paling-and-wire fence.

Late 19th C. (Vic)  “… pigs were confined to a paddock surrounded by a fence of pickets held top and bottom by pairs of wires twisted between pickets, the wires being supported by posts about nine feet apart. A new picket fence looked a formidable barrier, but pigs became adepts at pushing the pickets up with their snouts until they were clear of the bottom wires. When two or three adjoining pickets were thus displaced, escape was easy.” (Sillcock 1972, p. 47.)

**PIESSE FENCE**
Synonym for *suspension fence* (2) (Brain 1976, p. 1).

Named after Robert L. Piesse, a Victorian fencing contractor who was heavily involved in developing several new designs of fences in the 1960s and 1970s.
PIG FENCE
A common colloquial name for any fence with woven wire (Hinged joint or Ringlock) even though pigs may never have been restrained by the fence.

PIG WIRE
A common colloquial name for any form of fabricated fencing (Hinged joint or Ringlock).

PILLAR
Synonym for post.

1909 (patent) “When a drover is driving animals and wishes to camp for the night, …, three or more pillars are driven into the ground …” and wire netting fixed to form a temporary pen. (Martin 1909).

PIN-AND-LOOP KNOT
See knot.

PINNING
Synonym for plugging in a dry stone wall (Vines 1990, p. 37.)

PISÉ (PISE) FENCE
A fence in the form of a low wall (~1.5 m high) made of pisé or rammed earth.

The name is derived from the French, and has been used in English since the late 18th century (Simpson & Weiner 1989, volume 11, p. 903).

1872 Cunninghams Plain Station (near Murrumburrah NSW) had a pisé fence on the boundary (Anon 1872, p. 178.) This fence is illustrated below using a photograph from the late 1970s. Unfortunately the fence no longer exists (Pickard 2007a, p. 495.)

Pisé fences (foreground and left background) at Cunninghams Plains Station, Harden, NSW. These fences no longer exist.

Other references: Anon (1861, p. 17). Clarke (1911, pp. 204-217) and Edwards (1975, pp. 28-29) both have detailed descriptions of building with pisé.
**PLAIN WIRE**

Round (or rarely, oval) wire without barbs. Triangular wire is considered a form of barbed wire because of the relatively sharp edges.

**PLUG / FENCING PLUG**

A tapered round iron bar used to lock wires in holes when using a forked stick wire strainer.

1955 (Qld) “We’ve wound our straining agent: we have the wire taut We have to have something to hold it like that so we may tie it and thus retain its rigidity. Don’t worry: there are things made especially for that purpose. Go to the store and ask for a ‘plug’. If you’re met with an empty look and a blank expression then expatiate a bit: Call it a ‘fencing plug.’ If they haven’t got one, go home and make your own. The average fencing hole in a post used to be five-eights of an inch. You get a lump of round iron, up to about 9 inches long and with a diameter of something over 5/8. You heat that sufficiently. When its more or less right, you taper one end off, drawing it out to less than half an inch. Some elaborationists put a shoulder on it as offering you something to hit when knocking it out. There’s no law against it. I never saw a real fencer use that shoulder. When he wanted to knock the plug out, after his wires were tied, he just rapped it with the back of the tommyhawk - any knock at all at right angles to the run of the wire and the direction of the hole. It will fall out. When that is driven in it will jam the wire and hold it in a vise till you tie it.” (Lamond 1955b, p. 39.)

Fencing plug made by forging, in a station blacksmith’s shop, a round iron bar into a taper. *Holowillena* E of Hawker SA (31° 52.5’S 138° 50.1’E), 12 December 2005.

Other references: Anon (1945, p. 946); Gennys (1905, p. 960).

PLUGGING
Small stones, sometimes deliberately broken to fill the gaps in the outside surface of a dry stone wall (Vines 1990, p. 37.)

Also known as pinning.

POKE
A rather strange device alleged to stop cattle from jumping fences.

1879 (NSW) ... a poke for preventing breachy cattle from jumping fences. It consists of an inverted bow fastened, as shown in fig. 7, into a heavy bar of wood, by which it is secured around the neck. A second bow is fixed to the bar at such an angle that it remains suspended over the nose. This bow is provided with a few short, sharp spikes.” (‘J.D.W.’ 1879, p. 21.)

There is no information as to JDW’s location, indeed, if he even lived in Australia. Like other magazines of the time, The Illustrated Sydney News often reprinted articles from other sources, but without attribution. As this is the only instance that I have found of the use of the term in Australia, I believe that it is probably an American rather than an Australian term.

See also spelt.


POST [LINE POST]
A vertical rigid fence component used to support fence wires, rails, woven wire or netting etc. The dimensions, spacing, material (wood, iron, steel, fibreglass, concrete) and cross-section may vary widely, but the essential features are rigidity, verticality, and
being firmly embedded in the ground. Of course, with age, these properties degrade as posts rot, lean, and fall over.

*Synonyms*  Picket, Dropper, Waratah (Brain 1976, p. 5.)

See also  *dummy post, prop post, strainer.*

**POST AND RAIL(S)**

A common early derisive name given to poor quality tea, which was more stick than leaf, provided in rations to shepherds and other station workers in the 19th century.

1846 (NSW)  “a hot beverage in a tin pot which richly deserved the epithet of ‘post and rail’ tea; it might well have been a decoction of ‘split stuff’ or ‘iron bark shingles,’ for any resemblance it bore to the Chinese plant.” (Mundy 1852, volume 1, p. 329.)

**Other references:** Hamilton (1880, pp. 3-4).

**POST-AND-RAIL FENCE**

A fence using two to four (split) rails fitted into mortises in (split) posts with the ends of adjacent rails overlapping in the mortises.

Although post-and-rail fences are the most iconic of Australian rural fences, they were expensive and required some skill to build successfully. It is likely that they were less common than the simpler brush fences. See Pickard (2005) for a more complete discussion of post-and-rail fences.

Erecting a two-rail post-and-rail fence. Note the pegs in the ground marking locations of the post holes, and the nails in the tops of the posts used for sighting and aligning the fence.

*Source:* Clarke (1900, Figure 11.)

1882 “THREE AND FOUR-RAIL FENCES. These fences, except for small paddocks and yards, are very seldom used on stations, .... No rail fence should have more than 9 feet 6 in. panels, and unless they are well and substantially constructed, it is
better that they were not erected at all. The posts should be, if split, least 8 x 4 in. in size, and sunk into the ground a depth of 2 feet. The rails, if split, should be from 9 x 3 to 7 x 3 in., and, if round, 4 inches in diameter at the small end. The mortises depend somewhat upon the manner employed in fitting in the rails, which is sometimes done by cutting the rails in a slanting direction, the cut being the length of the width of the post, and placing one upon the top of the other, which necessarily requires a wider mortise, to give the requisite strength, than the old and time-honoured plan of shouldering the rails and placing them side by side in the mortise, fitting tightly and completely filling every crevice. In the making this, or any other kind of fence, neatness may as well be studied, and this cannot be done where the mortises are chopped out with a mortising axe; therefore, the use of a two-inch auger is recommended. Although the former process may be somewhat quicker, it is not nearly so strong or neat. The distances between the mortises depend entirely upon the height of the fence required, and the taste of the person erecting it.” (Armstrong & Campbell 1882, pp. 189-190.)

Other references: Atkinson (1826, p. 92).

**POST-AND-RAIL-AND-BANK FENCE**
A post-and-rail fence built along the top of a bank to increase security.

1851 (Vic) Letter from George Russell (in Scotland) to William Lewis 6 Aug 1851: “When in the [Scottish] Highlands the other day I saw some fencing for sheep wh. I think wd. suit well for P.P. [Port Phillip] It consists of a turf wall or bank about 2 feet high or upwards, wooden stakes drove into the bank at distances about 10 feet apart, & two wires, the lower about 9 in. above the bank, the upper about a foot above the lower wire; These wires were attached to the stakes by staples: let me know how you think such a fence would answer, & I could send out a lot of wire; it I beleive [sic] can be got cheap. Such a fence might do for paddocks, or even for boundary lines by & bye.” (Brown 1963, p. 117.)

Other references: Kerr (1987, p. 33) describes a variant where sods are used to fill half the gap below the bottom rail in a two-rail fence.

**POST-AND-RAIL-AND-WALL FENCE**
A combination of a post-and-rail fence built along the top of a wall, or a combination of a wall built under a post-and-rail fence.

1851 (Vic) Letter John Learmonth to William Lewis 2 July 1851: “Will you be good enough to let me know … if you have any objections to a low stone dyke being substituted for the lowest rails, if practicable? It appears to me that is some part this would add little to the expense, & at the same time would add to the durability and safety from fires.” (Brown 1963, p. 117.)

**POST-AND-RAIL-AND-WIRE FENCE**
A post-and-rail fence where wire substitutes for one or more of the rails. Typically the top-most rail is retained, and some or all of the lower rails are replaced with wires.

Technologically, these “hybrid” fences were a dead-end. They were not a necessary intermediate step in the evolution of fences from post-and-rail to post-and-wire (Pickard
2005). Indeed, they negated the primary advantage of wire - cost-savings by using longer panels, fewer posts, and simpler and faster erection. (Fetherstonhaugh 1917, p. 74.)

Also known as *cap and wire*.

Kangaroos jumping over and going through the wires of a post-and-rail-and 6-wire fence along the western railway near Lithgow NSW.

*Source: The Illustrated Sydney News and New South Wales Agriculturalist and Grazier*  
24 October 1885, detail from cover.

1882 *“Two-rail and four wire fence. …* The posts should be sunk to a depth of not less than 2 feet in the ground, and, if of tough timber, should have a length of 4 inches above the top rail, which by the following gauge will be seen to be 4 feet 6 in. from the ground. Should the timber not be of tough quality, the distance may be increased to 6 inches. They should be bored at distances of 6, 5, 5, and 5 inches, starting from the ground; from the top wire to the top of bottom rail, 16 inches, and from the top of bottom rail to top of top rail, 17 inches. Care must be taken in the boring, and the exercise of a very little forethought will show that the posts must be bored before the rails are placed. The change of work which must take place in the erection of this fence increases the liability of irregular boring more than in the wire fence, where the boring is straight ahead work. Staples are sometimes used to fasten the wires on either the inside or outside of the posts, but we cannot recommend them as being either more secure or less costly than the boring. To render this description of fence, if possible, more cattle-proof, the bottom rail may be lowered a few inches and the fourth wire removed and placed midway between the top and second rails. (Armstrong & Campbell 1882, pp. 187-189.)

There is a distinct and very rare form of post-and-rail-and-wire fence with the rail at the bottom and the wires above. I know of only one example, south of Grafton NSW.
Despite extensive local investigation, the purpose of the fence, and the reason for placing the rail at the bottom are unknown. Although Anon (1893, p. 482) suggests that posts in some post-and-rail fences were dug up after a decade or so, reversed and set back in the ground, the posts in this fence show no signs of in-ground decay on the upper ends. With no direct evidence, but by comparison with descriptions of hog-proof fences in the USA, I believe that the Grafton fence was built to restrain free-range pigs. The lower rail was to stop pigs lifting the lower wire and escaping the paddock. However, the gap between the top of the rail and the lowest wire would appear to be too large to restrain pigs.

![Inverse post-and-rail-and-wire fence showing rail at bottom. S of Grafton NSW (29° 42.7’S 152° 56.8’E), 6 December 2006.](image)

Other references: Bruce (1875-76, p. 722); NSW (1887b, p. 471).

**POST-AND-WIRE FENCE**
A fence where the dominant horizontal components are wire (either plain or barbed), but not netting or prefabricated / fabricated / woven fencing. The wires may run through holes in the posts or be attached using a range of staples and ties. These have been the de facto standard fences across most of Australia since about the 1880s (Pickard 2007c). Because of the relative cost, many modern fences use fabricated fencing to replace individual wires.

More commonly known as “wire fence”.

**POST HEAD**
Synonym for *head*.

**PREFABRICATED FENCING**
Synonym for *fabricated fencing*.

**PROP / PROP POST**
A post set beside and tied to a rotting or broken post to support it and extend the useful life of a fence, or a post / log / etc. leaning against an old post to provide additional support.
See also dummy post.

Wooden props against the posts and netting provide a few extra years of life to a rabbit-proof fence. SW of Lockhart NSW (35° 15.8'S 146° 35.3'E), 1 July 2008.

Q, q, Qr, qr
Abbreviations for quarter.

QUARTER
An imperial unit of mass (28 lb = ¼ of a hundred weight, ~ 12.7 kg), commonly used in describing amounts of wire used for a fence.

Abbreviations: q, qr, Q, Qr.

QUICK / QUICK SET / QUICKTHORN
The most common and widespread plant used for hedges in Britain was White Hawthorn (*Crataegus monogyna*), also known as quick, quickthorn, quick set and white thorn (Loder 1620, p. 15; Wright 1911, volume 5, p. 198).

1851 (Tas) At Circular Head and Stanley, headquarters of the Van Diemen's Land Company: “… the Resident's house ... is surrounded by a well-fenced deer park ... we got a glimpse of the surrounding farm, divided into regular enclosures, neatly fenced with the English quickset, ... and traversed by English-looking lanes sheltered with hawthorn hedges." (Mundy 1852, volume 3, pp. 268-269.)

Other references: almost every British agricultural book of the 19th century.

RAIDISSEUR
Synonym for a particular form of wire strainer. I have not found any use of the term in Australia.

A ratchet wire strainer invented by French vigneron M. Collignon in the mid-19th century. Raidisseurs are the forerunners of a suite of ratchet wire strainers permanently left on the fence. Although these wire strainers are commonly seen in the relatively
short fences around peri-urban blocks, they are less frequent in rural fences. It is interesting that they were invented, not for wire fences, but in the wine industry to use the new technology of wire to support grape vines.

Plan and elevation of Collignon’s raidisseur and the key used to operate it. Source: Robinson (1869, pp. 577-578.)

1869 (France) The raidisseur is “the little wire-straining implement which plays such a very important part in the wiring of garden walls, or erecting of trellises for fruit growing in France. … D shows the point of insertion of the wire that has to be tightened, B the fastening of the other end of the wire; and A the head on which the key is placed.” (Robinson 1869, pp. 577-578.)

**RAMP**

A form of gate made by constructing a ramp on either side of the fence opening, and setting the grid over the gap between the two ramps so that the grid is above the general land surface rather than level with it.

Originally developed before modern front-end loaders etc. and designed to avoid the need to excavate a trench under the grid. Today “ramp” and “grid” are used almost interchangeably in rural areas.

See also grid
Ramp at a property entrance showing the built-up approaches retained by wood and concrete walls. The grid is supported by the concrete walls. Adjacent on the right is the gate which is always near a ramp, to allow passage of stock or vehicles which are too heavy for the ramp. SE of Tallimba NSW (34°03.1’S 146°56.4’E), 3 October 2008.

An unusual but very practical variant on ramps is used locally in northern South Australia. This is a narrow opening in a fence, with an arch-shaped ramp of pipe, angle steel or fence posts, for riding a motor bike through the fence, but still stopping domestic stock. According to local informants, bike ramps have been used near Glendambo for nearly 20 y, and were invented by Darren Wilson (Bimbowrie Station) and Mick Wandel (Plumbago Station). Some bike ramps have a narrow gate to block the opening, but most do not.

Bike ramp made entirely of welded Waratah star posts. E of Kalabity, Olary SA (31°55.3’S 140°20.0’E), 13 December 2005.

**RAZOR WIRE**

A generic term for forms of barbed wire designed specifically to restrict human movement. Typically manufactured of stainless steel strip, often reinforced with a thick stainless steel wire, razor wires are characterised by extremely sharp points on the barbs which are designed to penetrate clothes and skin, causing considerable painful
wounding. Razor wire is usually deployed in spiral cylinders or over-lapping circles to enhance its impenetrability. It is used around security installations, prisons and by the military. It is probably illegal to use these forms of barbed wire to restrain animals.

**READ / REID LIFT GATE**

An opening in a fence created by lifting the fence itself using a jib or boom, rather than a more conventional gate.

![Illustration of Reid lift gate](image)

*Source: Anon (1994c, p. 196.)*

Despite considerable effort I have been unable to determine the origin of the name, but presumably it is named after a man named Read or Reid who invented the first form of lift gate.

**Other references:** Buxton (1981, pp. 54-55).

**REEVING**

Threading and pulling wire through holes in posts.

1900 (NSW) “Reeving and straining 2 miles …” (McLeod 1900, p. 165.)

**RIDING LAP**

The less common of the two methods of fitting rails into the mortises of posts in the various post-and-rail and post-and-rail-and-wire fences. The tenon ends of the rails are cur so that one rests on top of the other. See diagram by Peterson under post-and-rail-and-wire fence.
1902 “The mortises depend somewhat upon the manner employed in fitting the rails. The mortises for a riding lap need to be much wider than those where the rails are placed side by side. But as this kind of fence (riding lap) has been discarded, it is unnecessary to dwell upon the subject.” (‘Crossbred’ 1902b, p. 243.)

The angled ends of the rails (riding lap) in this sketch are uncommon in Australian fences. Usually the tenons are cut square and thinned down laterally so that two tenons from adjoining rails will fit side-by-side and overlap in the mortises in the posts. Angle-cut rails seem to have been more common in Britain.


**RING FENCE**

Depending on the context, either a boundary fence around one property, or a fence / series of fences surrounding a group of properties. In the early days of the unsuccessful fight against rabbits, groups of properties would pool their resources to enclose the group in a ring fence of rabbit-proof netting. This was considerably cheaper than fencing each property individually. The term is derived from Britain (Stephens 1844, volume 1, p. 357).

1860s (Vic) “The ring fences of Bringalbert and Ozenkadnook would measure seventy miles, …” (Hamilton 1923, p. 37.)

Other references: Booth (1873, p. 68).

**RINGLOCK**

A trade name for a form of fabricated fence manufactured by One Steel Ltd (and its precursor companies) where the pickets are held to the line wires by circular rings of wire.
ROCK FENCE

Any of a number of structures designed to keep rocks and other debris from falling onto highways. Not strictly a rural fence, but commonly seen in cuttings along highways. The structures are highly variable: concrete barriers, chain wire, and special netting.

Rock net draped over a cliff to protect the access road to Ord River Dam (WA) from falling rocks. (16° 07.4’S 128° 44.3’E), 13 July 2006.
**ROD**
An imperial unit of length used in some early descriptions of Australian fences when total lengths were relatively small. Rarely used after the introduction of wire fences. Defined in English law as 5½ yards, 16½’ (5.03 m). There are 4 rods per chain.

See also *rood (2).*

**ROLLED (WIRE)**
Wire made by rolling rod to form a strand of the desired diameter. The resulting wire would be more irregular and have a poor surface finish compared with drawn wire. Any iron wire with distinct longitudinal ridges could be rolled rather than drawn, but distinguishing this in the field is difficult.

1840 (UK) “Large quantities of simply rolled fencing wire are sold annually - more especially by German and American manufacturers - although annealed wire that has been drawn [through] one hole or so to improve its surface and symmetry are [sic] preferred in most markets. … Probably in about 1840 plain solid rolled wire was first used for fencing purposes, …” (Smith 1891, p. 330.)

**ROLL-OVER FENCE**
A variant of brush fences.

1882 “The only difference existing, of any consequence, between the roll-over and brush fences is in the fact that the latter can be constructed where the former would be found impracticable, owing to the difference in the timber required. The roll-over requires straight, ‘umbrella-shaped’ timber; by this we mean that kind of tree which, after rising straightly [sic] to a certain height, branches outwards, with somewhat straight limbs, in almost every direction, like the wires of a half-closed umbrella. After a tree of this description has been brought to the line, always by bullock-teams, a man with an axe half cuts through those of the limbs which protrude the most. When this is done, a chain is fastened to the undermost limb, and carried over or round the tree; the bullocks are then fastened to it, and the tree rolled on to the line - hence the name ‘roll-over.’ As the tree rolls, those limbs which have been nicked, or half cut through, break with the pressure upon them, and fall into place, thereby forming a close, compact, and secure fence. The second tree is treated in the same manner, and rolled on to one-half of the trunk of the first tree - thus making a double foundation, formed by one-half of the trunk of the first and the whole of the trunk of the second tree, the limbs of the last tree always covering up the butt of the second preceding one.” (Armstrong & Campbell 1882, pp. 193-194.)

**ROOD (1) Area**
A traditional imperial measure of area equivalent to ¼ acre (approximately 1011.7 m², or 0.10117 ha).

**ROOD (2) Length**
An old imperial measure of length, which has varied over time, but was generally 5½ yards, 16½’ (5.03 m). There are 4 roods per chain.
See also *rod*.

1823 (NSW) Evidence of George Best: “I pay the Freemen 2s.6d. per rood for posts and Three rails, & 3s.6d. per rood for posts and Five rails.” (Ritchie 1971, p. 83.)

1891 (SA) “A strainer costs 9d. and will tighten a wire 60 to 80 roods (or 15 to 20 chains) in length …” (Wallace 1891, p. 110.)

**ROUGH-AND-TUMBLE FENCE**
Probably a synonym for *brush fence*.

1875-76 (NSW) No details other than being listed under “Irregular Wooden Fences”. (Bruce 1875-76, p. 722.)

**RUN**
Synonym for *strain*.

**RUNNING POST**
Synonym for [line] post.

1893 (patent) “In a running or ordinary standard for wire fencing purposes, …” (Wratten 1893) (Note that Wratten was from New Zealand, and thus this usage may have been peculiar to that colony.)

1965: “Generally speaking, 22-ft. panels with one dropper between running posts will do for boundary fences, …” (Pearse 1965, p. 62.)

**RUST**
Oxides of iron formed on the surface of iron and steel as a result of corrosion.

See also *white rust*.

**S-HOOKS**
Short lengths of re-used wire with a loop at each end used to link and support line wires and netting in rabbit- and dingo-proof fences built by Peter Waite. They are generally typically 100 - 150 mm long overall. Anon (1897, p. 476) gives a detailed description of the tool used to make them.

1893 (SA): Evidence of George Woodroffe Goyder (Surveyor-General) 24 February 1893: “Question 32. What fencing would be required for the country referred to? ... Mr. Waite has designed a fence which is quite effectual in stopping vermin, and will only cost £40 instead of £70 a mile. Instead of the five wires which have been used heretofore, only two barbed wires are used, the netting being fixed in the ground at the bottom and suspended to the second wire by an S hook attached to the top selvedge of the netting.” (South Australia Vermin-proof Fencing Commission 1893, p. 2.)
S-hooks linking wires #2 and 3 and netting in a vermin-proof fence on Polpah Station E of White Cliffs NSW (30° 51.4’S 143° 08.3’E), 1 January 2009. (See below for a measured diagram of this fence.)

Measured vermin-proof fence on Polpah Station E of White Cliffs NSW (30° 51.4’S 143° 08.3’E), showing the repeated pattern of S-hooks in each panel. This fence, dating from the late 19th century was probably built to the design of Peter Waite who believed that low fences would exclude dingoes. (See above for an image of this fence.)

**SAMSON WIRE**

Trade name for a form of patented oval cross-section plain wire. Although rare in Australia, oval wire is the most widespread and common plain wire used in Patagonia (southern Argentina) in 2008.

1874 (patent) “The weight of the wire is reduced by making it of finer quality iron that that generally used. It is made of an oval shape in section. This is set with the larger axis perpendicular [sic vertical]”. (Rigg 1874.)
**Other references**: Armstrong & Campbell (1882, pp. 199-200); Franklyn (1881, p. xvii); Walsh (1993, p. 14).

**SAPLING FENCE**

1875-76 (NSW) No details other than being listed under “Irregular Wooden Fences”. (Bruce 1875-76, p. 722)


**SAPLING-AND-WIRE FENCE**

Synonym for *palisade fence* (Peterson 1988, p. 11).

**SEDIMENT FENCE**

Not strictly a rural fence, but commonly seen in drains along roadsides. A low fence, generally less than 0.5 m high, to hold and retain sediment to prevent it running off-site. Usually found in roadside drains, downslope from construction sites, etc. The material may vary considerably: plastic mesh (“shade-cloth”-like material) supported on wooden or steel posts, rectangular straw bales, chunks of rock or wood chips.

Sediment fences stapled to sawn wooden posts. S of Trunkey, NSW (33° 55.8’S 149° 21.0’E), 16 October 2008.

**SHACKLE**

Wire loop used to prevent spreading of posts in double-post-and-rail fences. Originally made of bark, vines or rawhide thongs.

1868 (Qld) “The posts are kept together by a “shackle” or ring of twisted vines round the top of both posts.” ‘Jumbuck’ (1868a, p. 6).
Wire shackle used to tighten the tops of a pair of posts in a derelict double post-and-rail fence around yards. The small loop in the centre is formed by a lever twisting the multiple strands of wire to tighten them. These wire loops are an almost invariable indicator of the existence of a double-post-and-rail fence, even when all the posts and logs have been removed. Polpah Station, E of White Cliffs NSW (30° 54.0’S 143° 13.3’E), 28 April 2004.

**SHELTER BELT**
Synonym for *windbreak*.

**SHEPHERD’S BOX**
Synonym for *watch box / watchbox*.

**SILL (1) Base for a post in rocky ground**
A wooden block or plate laid horizontally on very rocky ground, and with a mortise into which is fitted a tenon at the foot of a post. The sill is usually weighted down with large rocks to increase stability, or a pair of props, one from each side, brace the post against the sill. Sills were used on rock outcrops or where rock was shallow, and digging post holes for wooden posts without explosives was almost impossible.
Other references: Mais (1877, p. 1); Pennycuick (1995, p. 28, and photo on p. 42).

**SILL (2) Flat log under a gate**

A flat-topped log or concrete strip across a gateway to reduce the gap between the gate and the ground to prevent escape of lambs, or entry of rabbits.

1934 “It is desirable to have a wooden sill let in flush with the ground.” (Rylands Brothers (Australia) Limited 1934, p. 48.)

**SLIP RAILS**

A form of gate using several rails or poles that are easily removed from the mortises or wire loops supporting them at the gate posts. A variant is *American slip rails*.

1840 (NSW) “Another universal inconvenience is, that you never see a gate; or so rarely as only to be the exception to the rule. “Slip-rails” are the substitute; five or six heavy long poles loosely inserted in sockets made in two upright posts. They may be stepped over by a horse if only lowered at one end, but to allow any vehicle to enter, each one has to be lifted out and put aside;…” (Meredith 1861, p. 130.)


Other references: Cunningham (1827, p. 178).
SLUNG FENCE
A form of board fence using wire ties to hold the rails or boards against the posts. Although patented in Victoria in 1883 by Martin Lyons, fences like this had been built in Queensland since the 1860s (Foot 1894, p. 555).

*Synonym:* swing fence

1883 (patent) “Arranging each panel or set of rails between the posts by fixing the one end at the front of one post and the other end at the back of the adjoining post in combination with the before-mentioned means of binding them together with a wire, …” (Lyons 1883.)

*Other references:* Anon (1893, p. 482); Walsh (1993, p. 10).

SMOOT
A hole left in a dry stone wall for the passage of stock, drainage, etc. There are many regional variations in Britain for this term. (Vines 1990, p. 37.)

SNAKE FENCE
Synonym for zig-zag fence.

1867 “… the Virginian Snake, or zigzag fence - has been extensively used in some parts of Victoria, and when constructed of heavy timber is a substantial fence. It is made by embedding the but [sic] end of one tree in a notch cut for the purpose in the top end of another, laying them along the ground in a zigzag form, so that each log intersects the centre line at an angle of forty-five degrees. When the logs have been piled up to the desired height, cross legs and a heavy top rail are then put up as in the “Billabong” fence, …, so as to bind the whole …” (Gordon 1867, p. 33).

SNOW FENCE
A fence, usually made of spaced slats, designed to keep snow off infrastructure - roads, railways and buildings; or to increase the depth of snow in e.g. water catchment areas.
Snow fences are extensively used in the Northern Hemisphere, and may take a wide range of forms. Although Australia has relatively small areas of snow, a few snow fences could be expected in alpine areas where drifting snow could be a road hazard in winter. I know of no Australian references to them, but for an international review, see Brown (1983).

**SOLE PLATE**

A plate attached to the bottom or lower section of a post to increase stability. Sole (or *ground plates*) were commonly fitted to iron posts in Britain in the late 19th and early 20th centuries. See image under *ground plate*.

1907 (Vic) “... Messrs. Pettitt Bros., of Geelong, have designed and patented a new fence, which not only consists of metal droppers, but the whole fence, including droppers, standards, straining posts and stays are made of H rolled girder steel. ...The straining posts and stays have sole plates bolted to them, which prevents any chance of their being displaced by the straining of the wires.” (Anon 1907, p. 659.)

**SPANISH WINDLASS**

A method of increasing mechanical advantage by turning a lever around a (usually) vertical pole, thus applying increased force to the short end of the lever.

![Spanish windlass being used to strain a broken wire.](Source: Rien (1900, p. 411.)]

1900 (NSW) “A B is forked sapling, a hole is dug in the ground as small as possible, about 9 inches deep in centre of line, and small end placed therein on a level with wire ; a ¾” hole C is bored, if sapling is long enough to reach to top rail so much the better, but it is not necessary. Through the hole C two short pieces of plain wire, about 9 inches long are run thus, E F ; get as near the centre of slack wire as possible and lay strainer alongside, then turn wire E up out of road and wire F, turn round the barb wire on each side securing both sides of each wire, two or three turns will be sufficient. Now place a stick in fork D and turn up, being careful not to get the loose wire E caught in coils; when the wire is taut enough hold in position and turn the wire E a few turns round the tight wire on each side of strainer, this will hold it in position. Should the wire get slack all that is required is to undo wire E, take a few more turns with lever and tie again, and so on. Never undo wire E unless you have a lever tight up in fork D. This strainer is always left on wire. A forked stick may be used, but it must have three prongs or it is very difficult to turn up tight enough and hold. After tying it may be cut off 3 inches wide either side of wire and thus will not look unsightly, or it may be left
on the same as other strainer. A separate strainer is required for each wire by either of these methods, and require to be placed far enough apart to work lever freely.” (Rien 1900, pp. 411-412.)

Other references Anon (1946, p. 300).

SPEAR POINT
A cast iron point fitted to the base of an iron post.

Spear points are restricted to the massive fences built by the South Australian Railways from the 1870s (Pickard 2007c). These fences were more typical of British practice at the time than Australian. The top of the spear point has a T-shaped socket into which the T post is fitted and secured with a tapered iron wedge. The posts and points were probably assembled before being placed in the ground. As many are found in very rocky soil, it is unlikely that they were hammered into the ground. Each spear point has several abbreviations cast into it: e.g. SAR (= South Australian Railways); 1881 (= date of manufacture); and an abbreviation for the foundry and the name of the patent holder (?).
A pair of excavated spear points from South Australian Railways fences showing dates and makers’ abbreviations cast into the flanges. The lower example retains the original bitumen coating.

**SPEAR POINT GATE**
A one-way gate where stock have to push past sharpened metal or (less commonly) wooden bars, but cannot return. Used extensively in western Queensland and the Northern Territory in fences around watering points for self-mustering of stock. Normally the pointed bars are left open, by tying them back, to provide free access in and out of the fenced area around a watering point. When it is necessary to muster the stock, the gate is “closed” so that it become one-way into the enclosure. Such gates save large amounts of labour. Also used in yards to trap feral animals such as goats, or on the boundaries of some national parks.

Looking outwards into a spear point gate designed to allow goats to move out of but not back into Gunderbooka National Park S of Bourke NSW. The sloping bars at the far end are pivotted so that they always hang down and block the return passage of the goats. (30° 38.6’S 145° 47.4’E), 30 September 2001.
**SPELT**
A forked stick placed over the neck of cows and held on with a rope or wire loop, to stop the cow reaching between the wires of a fence for the greener grass on the other side.

1871 (SA) “Wire fences are much used by the small farmers, and cattle in the grass paddocks are kept out of the adjoining wheat-fields by forked sticks fixed on their heads [sic necks]. These are like a Y, and are called ‘spelts’. With such on their heads cattle cannot even reach through between the wires.” (Randell 1978, pp. 260-261.)

See also poke. Also known as “yoke”.

**Other references**: Although Wallace (1891, p. 17) does not name them, he describes a spelt perfectly.

**SPELTER**
Molten zinc used to galvanise wire.

**SPINNER**
Synonym for jenny.

**SPLICE**
In the context of fencing, a synonym for knot.

**SPREADER**
Synonym for dropper (rarely used in Australia, but this is the most common name used for droppers in the USA).

1891 (SA) Evidence of Francis J. Bradford in reply to Question 167: “I reckoned 176 posts to the mile, at 1s. per post, £8 16s.; 176 stakes or spreaders at 3d. each, £2 4s.; and so made total cost £24 12s.” (South Australia Royal Commission on the Valuation of Pastoral Improvements 1892, p. 22.)

**SPREADING DROPPER**
Synonym for dropper.

1888 (patent) “…for taking up the slack in the top and bottom wires of a wire fence the top wire is strained above its level and the bottom wire below its level either by means of what are called spreading droppers or by posts.” (Webster & Echlin 1888.)

**STAKE**
Synonym for dropper.

1892 (SA) Evidence of Francis J. Bradford in response to Question 167: “…fence No. 1 … erected in 1878, with 200 myall posts to the mile, 3ft. 6in. high, with one 2in. bored stake between; …” (South Australia Royal Commission on the Valuation of Pastoral Improvements 1892, pp. 6-7.)
**STAKE FENCE**
A form of palisade made using relatively small diameter poles.

19th C (WA) In the early settlement of York, “… fences were made of stakes which were cut and stood upright side by side in a trench.” (Underwood 2004, p. 28.)

1880s (SA) “The wallabies that had threatened their early crops were beaten by stake fences and constant destruction, …” (Masters 1974, p. 106.)

The lower image is more like a wattled fence rather than a stake fence.

**STANCHION**
Synonym for [line] post. (Triggs & Graff 1888)

**STANDARD**
Synonym for [line] post or dropper depending on the context.

1893 (patent) “In a running or ordinary standard for wire fencing purposes, … “ (Wratten 1893) (Note that Wratten was from New Zealand, and thus this usage may be peculiar to that country.)

1955 (Qld) “I don’t think they were called ‘droppers’ at the start. I’ve an idea that they were termed braces and standards. … A ‘standard’ has since altered its definition. Once it was a light batten of split wood with a holes bored through it to correspond to the gauge of the wires. A staple of U-bent wire did the rest …” (Lamond 1955c, p. 5.)
STANDARD WIRE GAUGE
The most commonly used system of specifying wire diameters from the mid-20th century in Britain and Australia. See under Gauge (1) for more details.

Also known as Imperial (Standard) Wire Gauge.

STAPLE
A generic term describing one of several devices - usually short lengths of wire - to hold line wires to posts and droppers. The exact form of the staple may be clear from the context, but some care is needed to avoid concluding that the staple being used is the now-common U-shaped hammer staple. The quote below, where the wires are “stapled” using ties, demonstrates this:

1908 “The droppers should be stapled on to the wire by means of wire ties.” (Anon 1908, p. 38.)

STAPLE (1) U-shaped hammer staple
A pointed U-shaped length of metal or wire used to hold wire against a wooden post or dropper by hammering the staple into the wood. The cut point may be on the inside or outside of the legs of the staple. U-shaped hammer staples are now widely used to hold wires to posts made from plantation-grown Eucalyptus and Pinus species. Early staples were iron, and not strong enough to penetrate Australian hardwood posts (Charles D. Young & Co. post-1851, p. 7).

STAPLE (2) Spike hammer staple
The U-shaped staples (shown above) were not suitable for old-growth hard woods (especially timber from the harder Eucalyptus and Acacia species) used in Australian fence posts, so pastoral supply houses imported staples of different designs that allowed their use in hardwoods.

A much heavier staple of different design was developed in Britain for hard wood such as oak. These were imported into Australia and may be found today in many old government dog and railway fences. Somewhat similar staples were stamped out of sheet metal.

Source: Welch, Perrin & Co., Pty Ltd (1925, p. 58.)

Source: Bayliss, Jones, & Bayliss Ltd. (1922, p. 18.)
STAPLE (3) Gatenby staple
A form of omega staple (see below) where the legs of the staple are bent across one another rather than being spread outwards. This staple was part of Gatenby’s patent for “Simplex Droppers”, and is commonly found on old railway fences in the eastern states (Pickard 2007a, c).

Source: detail from Gatenby (1888).

STAPLE (4) Omega staple
A looped length of wire passed over a line wire, and the legs threaded through a hole in the post or dropper, and the legs bent outward to retain the line wire. Commonly used to attach line wires to dummy posts during maintenance.

Cross-section of a wooden dummy post showing an omega staple fastening a line wire to the post.

STAPLE (5) (Half omega staple)
A loop of wire with unequal legs passed over a line wire, and through a hole in the post, leaving the short end fully within the post. The longer leg is bent around the post, retaining the line wire.
Cross-section of a wooden dummy post showing a half omega staple. Note how one end of the staple is fully enclosed in the hole, and only one end is used to form the omega bend thus retaining the line wire. The length of the inside leg varies, but is usually about half the diameter of the post.

1898 (SA) “Staples are used to fix the wires to the post. These staples are No. 10 plain wire, about 2½ in. x 8 in., and are pushed through a ¾ in. bored hole so that the loop of the staples encircles the barb and plain wires which go from post to post. The short side of the staple is put well inside the post. The long side goes right through the posts and is then twisted by a small pair of tongs tight against the post, so that the loop of the staple draws the wire fast against the post. This staple is then firm.” (Anon 1898, p. 476.)

**STAPLE (6) Pigtail staple**

A specific form of staple characterised by a coiled “pigtail” that tightened the line wire against the post.

Pigtail staples are a relic from late 19th and early 20th century fences, and would be difficult to make using a pair of pliers. Through experimentation, I designed a small tool that would fit into a brace and make exact replicas of the pigtails. However, I do not know if such tools were used originally.

**STAPLE (7) Tie**

Synonym *tie*.

A length of wire used as a tie to retain wire against a dropper or post. This appears to be a less common usage of the term.
1915 “The size of the auger used for boring droppers depends whether they are to be threaded on or stapled. In the former case ½-in. auger is the usual thing, while for stapling a ¾-in. auger is quite large enough.” (‘Crossbred’ 1902a, p. 167.)

As ‘Crossbred’ is describing drilling holes for the staples, they are not conventional hammer staples, but some form of tie.

Cross-section of a wooden dummy post showing one common form of tie. The number of twitches holding the tie to the line wire varies enormously.

Other references: Moffett (1933).

STAR ® POST / PICKET / DROPPER

The most common steel post used in Australia. Patented in 1926, the key feature is the 120° separation of the three webs, giving a star-like cross section. Although the basic design has remained unchanged, several variations occur in rural fences. Two are adaptations for military use in quickly erecting barbed wire defences.

See also notched star post and tagged star post.

Source: Pickard (1992, p. 199.)
STAY (1) Brace for strainer post

A strut running at an angle from a strainer post to increase the stability and security of the strainer.

Stays may be fitted close to the top of the strainer, or about mid-way down the post. Tests appear to indicate that the lower position is stronger. Although prefabricated stays are available commercially, many farmers show considerable ingenuity in using a range of material for stays: dray axles, steel pipe, logs, edges of grader blades, etc.

1900 (NSW)  “The strainers be thoroughly secured, rammed, and double-stayed with stays mortised at the top end into the post, and set at the bottom end under the surface of the ground against a good, solid block; …” (McLeod 1900, p. 165.)

A stay made using an old dray axle resting against a disc from a plough. E of Tallygaroopna Vic (36° 14.5’S 145° 27.9’E), 21 September 2008.

Two stays support the strainer post. The older log stay is in the line of the fence, the newer reinforced concrete stay is butted hard against a concrete slab for security. SE of Shepparton Vic (36° 26.4’S 145° 31.1’E), 21 September 2008.
**STAY (2) Dropper or lace**

Synonym for *dropper* or *lace*.

This is an unusual use of the term in Australia, and may never have been used other than in patents. Both the examples are patent applications from Britain / USA and Ireland, so the usage may be peculiar to those countries.

1904 (patent) “In the construction of a fence employing my improved stay or dropper …” (Sutherland 1904).

**Other references:** Purser (1911).

**STEEL**

The common name for a large group of ferrous alloys differing widely in chemical composition and physical properties. The ingredient that exerts the most influence on steel is carbon, and in the context of rural fences, most steel wires and fence posts etc. contain less than 1%.

Prior to Henry Bessemer’s 1855 patent of his process of converting iron to steel by blowing hot air into a converter of molten iron, steel was expensive to produce, and virtually all wire was various forms of iron.

**STILE (1) A form of fence crossing**

A traditional means of facilitating crossing fences, usually with some arrangement of steps. Although generally home-made, commercial forms have been available in England since the 19th century (Barnard, Bishop, and Barnards 1875, p. 147.)

Usually only found in Australia in fences between e.g. homesteads and water pumps etc. where regular access for maintenance is required, and a conventional gate is not wanted.
STILE (2) Log under a gate

A log with a flat upper surface, place under a gate to ensure that there is no gap between the gate and the ground to allow rabbits to cross.

Although this may appear to be an mistake for “sill”, in carpentry a “stile” is one of the vertical components of a door or other such frame.

1887 (NSW) Evidence of Henry Charles Taylor: Question 98. “How do they guard the openings? There is a stile put at the bottom of the different gates, and when the gates are closed no aperture exists between the bottom of the gate and the surface of the ground. The gate is covered with wire-netting.” (New South Wales Select Committee on Rabbit Nuisance Act 1887, p. 476.)

STOCK RACE

A form of gate, usually found on major roads, designed to allow rapid passage of vehicular traffic along the road while maintaining the stock-proof integrity of the cross fence. More specifically, an opening in a fence at a road crossing where stock are deflected from the opening by perpendicular wing fences parallel to the road, and typically extending 30 - 50 m from the fence.

1867 Gordon (1867, p. 10) describes what is currently called a “stock race” but does not actually use the term. “On a station intersected by a public road, if gates cannot be
convinently [sic] used, the hut for the shepherd in charge of the paddock should, if possible, be placed at one point of entrance of the road; and if a fence is run along each side of the road at the other point of entrance, commencing at the gateway, running parallel, and, forming a lane say one-eighth of a mile in length inside the paddock, the sheep will not try to escape through it, so that no gate is necessary in such cases.”

The wing fences on this stock race are shorter than normal, and the grazier has added painted tyres to dissuade stock from passing through. S of Bourke NSW (30° 31.1’S 145° 54.7’E), 2 October 2001.

STONE FENCE
Synonym for dry stone wall.

STONE WALL
Synonym for dry stone wall.

STRANDED WIRE
Wire in the form of wire rope, typically with six wires wound helically around a core wire (see image under gauge (1). Although rarely used in Australia, stranded wire was very common in Britain in the 19th and early 20th centuries. It is illustrated in numerous catalogues, e.g. Barnard, Bishop, and Barnards (1875); Hill & Smith Brierley Hill Ironworks (1876). I know of only recorded instance in Australia - alongside the first railway in Queensland from Ipswich to Bigges Camp (now known as Grandchester).

1865 (Qld) “… the fencing, which was formed of four twisted galvanised wires running through staples driven into iron bark posts …” (‘Our own reporter’ 1865, p. 2.)

STRAIN
Also known as run.
The length of fence between adjacent strainers. Depending on the type of fence, and its age, the strain may vary from 20 m to more than 3 km. Most modern fences using high tensile wire have strains at least 500 m long, and up to 1 km. (Brain 1976, pp. 15-16.)

Diagram illustrating the definition of a “strain” or “run” as the interval between adjacent strainers. The “panel” is the interval between posts, but is complicated by the occurrence in many fences of several forms of posts. See the diagrams under panel for more details.

1900 (NSW) “The strain discovers a length of 176 yards, and allows for the interposition between strainers of seven posts, placed at intervals of 22 yards, such intervals or panels being in turn braced by two battens, distant 22 feet from the posts and from one another.” (McLeod 1900, p. 165.)

McLeod’s description makes a clear distinction between a “strain” a “panel”, but it is important to realise that panels are more complex in fences using more than one form of (line) post (see panel.)

**STRAINER (1) Strainer post**
Synonym for strainer post.

1900 (NSW) “The strainers [must be] be thoroughly secured, rammed, and double-stayed …” (McLeod 1900, p. 165.)

**STRAINER (2) Wire strainer**
Synonym for wire strainer.

A generic name for a very wide range of devices used to strain fence wires.

**STRAINER POST**
A large post deeply embedded in the ground to which the wires are anchored. When the fence is trained, most of the tension is taken by the strainer post. Generally replaced with end assemblies in modern fences.

**STRAINING ASSEMBLY**
Synonym for end assembly.

**STRAINING POST**
Synonym for strainer (1) and strainer post.
1893 (patent) “In a straining post for wire fencing purposes, … with the ratchet wheel and pin …” (Wratten 1893). Note that Wratten was from New Zealand, and this usage may have be peculiar to that colony.

**STRAINING FORK**

An improvised portable wire strainer made from a forked stick with or without a hole drilled through the main stem.

*Also known as:* boundary rider, burrawong, forked stick wire strainer.

1925 “Cut a forked stick of hard wood, about three inches thick at the biggest end. Char it over a fire to toughen it, and bore a hole large enough to insert the wire. It is then ready for use. Run the wire through the post, make fast one end, and insert the other end in the hole of the strainer, then turn downwards with both hands at the handles until the wire is tight enough, then plug the hole in the post with the plug which holds the wire, and untwist the strainer. Bring the end of the wire round the post and make fast.” (Richard Johnson & Nephew Limited 1925, p. 29.)

Small straining fork made from steel rod brazed into a short length of cross-drilled steel pipe. *Holowiliena* E of Hawker SA (31° 52.5'S 138° 50.1’E), 12 December 2005.

**Other references:** Edwards (1987, p. 17); Gennys (1905, p. 960); Sorenson (1984, p. 80).

**STRETCHER (1) Dropper**

An apparently obsolete synonym for *dropper*.

1888 (patent) “This invention relates to an improvement in the construction of droppers or stretchers to be placed on wire fences at intervals between the posts of the fence for the purpose of keeping the wires of the fence in position.” (Gatenby 1888).

**Other references:** Brown (1963, p. 527); Rigg (1874).
STRETCHER (2) Wire strainer
Synonym for wire strainer.

1889 (Vic) “On the property of Mr. J. P. Lethbridge a most ingenious method of straining fence-wire was exhibited, viz., that belonging to Reid’s patent ‘Triplex Permanent Wire Stretcher,’ which is equally applicable to the straining of wire in fences, in vineyards, or in hop-gardens.” (Wallace 1891, p. 110.)

In advertisements from 1935-1936, the strainer is called “Reid’s ‘Improved’ Triplex Wire Strainers”. The change in name probably reflects the negative feelings of farmers towards the name because of the dangers in stretching wire, especially iron or poor quality steel wire, rather than straining it. Stretched wire loses elasticity and subsequently loses its strain very quickly.

Other references: Advertisements in The Pastoralists’ Review e.g. 15 November 1909, Advertising supplement, p. 3; 15 February 1919, p. 21.

STRINGER
Obsolete synonym for dropper.

1864 (SA) “6 wire post & stringer fence” (McArthur 2007, p. 44).

STUB / STUBB FENCE (1)
Synonym for palisade [fence].

“Stub”, “stubb” and “stob” are very old English words, dating from at least the 10th century, meaning “A stump of a tree or, more rarely, of a shrub or smaller plant; the portion left fixed in the ground when a tree has been felled; …” (Simpson & Weiner 1989, volume 16, p. 967). Presumably the name is applied to fences because of the stump-like appearance of the logs standing vertically.

1880s (Vic) “The contractors’ specifications were that the fence [a rabbit-proof fence being built at Tyntyndyer near Swan Hill] should be rabbit proof. 4ft6in
high, and that the stubbs (posts) of a minimum diameter of four inches at the small end, and 6 ft long. A trench was dug eighteen inches deep and five miles long. Posts were cut along the fence line and placed vertically in the trench, so close together that a rabbit couldn't get through. It was known as the ‘Stubb Fence’.” Cerutty (1977, pp. 70-71.)

Although eroded stumps are all that remain of the Tyntyndyer stubb fence, the closely set logs are readily apparent. N of Swan Hill Vic (35° 13.1’S 143° 26.4’E), 4 July 2008.

Other references: Armstrong & Campbell (1882, p. 194); Parr (1977, p. 112); Vernon (1909, p. 166); Walker (1978, p. 23 and image on p. 22). Although NSW (1887b, p. 471) describes a “drop” or “stub” fence, the description is of a double post-and-rail fence.

STUBB FENCE (2)

Synonym: Tasmanian fence (Walsh 1993, Figure 1, p. 11.)

1867 (NSW) “The … ‘stubb fence’ - is a favorite [sic] fence with sheep owners, … It is formed thus: - Blocks or chocks about a foot in diameter are laid along the ground, across which two heavy logs, each not less than one foot in diameter, are laid along parallel to each other, and from one to two feet apart. The tops of the trees, cut down for the purpose of procuring these logs, are then cut in lengths of four or five feet, and planted between those parallel logs, slanting at an angle of about twenty degrees. This is a most substantial fence, both sheep and cattle proof, and excepting casualties in the shape of fire, will stand a number of years without repair. Another and cheaper variety of this fence is made by allowing the leaves to remain on the uprights, and it then takes the name of ‘Log and brush.’” (Gordon 1867, p. 33.)

Source: Walsh (1993, Figure 1, p. 11.)
Other references: ‘Jumbuck’ (1865c, p. 7).

**STUMP FENCE**
A fence made by piling tree stumps into a line. Stump fences were used in the mallee country of Victoria, but I do not know if original examples survive. Stump fences were frequent in forested areas of eastern Canada and the USA when land was being cleared (US Department of Agriculture 1871.)

1978 (Vic) “The Mallee was poor country, lacking, at least above the ground, suitably sized trees for fencing material. What trees did exist were rolled over, slashed and burnt and their durable, roughly textured root was pulled up; these were carefully packed, stacked in the same way as a dry stone wall, from a broad base to a tapering top. Mallee root fences were built around the homestead and had another advantage - they helped prevent the shifting sands from engulfing the domestic shelter.” (Walker 1978, p. 28.)

**SUBDIVISION**
Depending on the context, either dividing a property into a series of paddocks, or (less commonly) dividing the land into one or more separate parcels of land.

1918 (NSW) “A topic which is always of interest to the man on the land is that which relates to the construction of cheap and effectively stock-proof boundary and subdivisional fencing.” (Gilder 1918, p. 177.)

**SUFFICIENT FENCE**
A legal term describing a boundary fence that is adequate for the intended purpose, and appropriate for the terrain, stock being carried on both sides, and other factors. As this is a relative rather than an absolute definition, it is clear that when the farm on one side changes from raising sheep to e.g. raising goats or deer, a sheep-proof boundary fence may no longer be sufficient as it is not the best design to stop these animals escaping. There is abundant case-law on sufficient fences.

“4 Determination as to ‘sufficient dividing fence’
In any proceedings under this Act, a Local Court or local land board is to consider all the circumstances of the case when determining the standard for a sufficient dividing fence for the purposes of this Act, including the following:

(a) the existing dividing fence (if any),
(b) the purposes for which the adjoining lands are used or intended to be used,
(c) the privacy or other concerns of the adjoining land owners,
(d) the kind of dividing fence usual in the locality,
(e) any policy or code relating to dividing fences adopted by the council of the local government area in which the adjoining lands are situated,
(f) any relevant environmental planning instrument relating to the adjoining lands or to the locality in which they are situated.” (Section 4, Dividing Fences Act 1991 NSW).
**SUPPORT**
Synonym for line post.

1888 (patent) “The usual method of supporting the wires of the fencing has hitherto been either in holes made through one of the webs of the iron standards or supports…” (Keep & Zaubert 1888.)

**SUSPENDER**
Synonym for dropper.

1886 (patent) “I also use suspenders of steel, or other material, having transverse indentations in which the wires pass freely, retaining the horizontal wires in position by a wire dropped vertically through a series of holes.” (Evans 1886).

**Other references**: Evans (1888).

**SUSPENSION FENCE (1)** Suspension fence with catenary wire
A fence using a suspension wire in a catenary between widely-spaced tall posts. Wires hanging vertically down from the catenary wire are tied to the fence and support it off the ground.

1994 (Tas) “The fence consists of 4m poles at about 63m spacings, although this spacing is not critical and they can be placed wherever it is possible to dig a hole.

The body of the fence consists of 70cm high Ringlock set 15cm off the ground. Above the Ringlock are three 2.5mm high tensile wires at 10cm spacings. These line wires were originally tied to the Ringlock using wire hooks; later [the owner] added steel droppers to give the fence structural support. Droppers are at 3.5m intervals along the fence and there are 17 droppers between each pole.

A 2mm high tensile suspension wire runs along the top of the poles. The fence is held up by the suspension wire and at 105m [sic 10.5 m] intervals or every third steel dropper the fence is tied to the suspension wire, in contrast to the posts in a conventional fence.

In the centre of the span the suspension wire actually touches the top of the fence and to either side it is tied at an increasing distance above the fence.” (Anon 1994d, p. 220.)
Catenary suspension fence.  

**SUSPENSION FENCE (2) High tensile fence**

Modern fences made using high tensile wires, very strong end assemblies, widely spaced posts and long strains. Designed to flex when hit by stock. This is the less common use of the term.

*Synonyms*  
Elastic fence, Fowlers Gap fence, high tensile fence, low-cost fence, Piesse fence. (Brain 1976, p. 1.)

1976 (NSW) “The basic characteristics of this fence are:  
(a) greater attention to design and construction of end assemblies  
(b) long strains with few or no intermediate strainer posts  
(c) widely spaced posts  
(d) high tensile wire  
(e) wires attached to posts and droppers rather than threaded through bored holes  
(f) measured tension on wires.

The essential difference between the suspension fence and the conventional fence is that loads imposed on the suspension fence are absorbed mainly by the wires and end assemblies, whilst those on the conventional fences are borne mainly by the posts.” (Brain 1976, p. 1.)

**SWING FENCE**

Synonym for *slung fence* (Walsh 1993, p. 10.)

**SWINGER (1) Dropper**

Synonym for *dropper*.

The only examples that I know are in patent applications from New Zealanders, thus the usage may be peculiar to that country.

1904 (patent) “A fencing dropper or swinger made of bent metal …” (Bursill 1904).

*Other references*: Wratten (1893).
**SWINGER (2) Top and bottom arms of wire Lightning droppers**

1909 (patent) “The dropper has a top fastening means or grip B and a bottom fastening means or grip C … These grips may vary in shape, but when long they form useful levers to swing the dropper into position; they may then be termed swingers.” (Cowell & Phillips 1909)

Source: detail from Cowell & Phillips (1909.)

**TAGGED (STAR) POSTS**

A standard Waratah® Star post modified by the partial punching out of a tag at intervals along one web of the post.

In 1939-1940, Captain T.H.B. Foott in collaboration with Rylands Brothers (Australia) Limited modified the star post to allow rapid deployment of barbed wire entanglements. Over 12 million “star shaped pickets tag type which ‘are a special type for military
purposes, containing slots for insertion of wire”” were supplied to the Army from 1940 - 1942. (National Archives of Australia file: Star picket claim by Lt. Col. THB Foott Series MP 742/1 General and civil correspondence files and Army personnel files, multiple number series. Department of the Army, Central Office. Item 177 / 2 / 68.) After the end of World War 2, many surplus posts were sold on the civilian market, particularly during the late 1940s when steel fencing material was in critically short supply.

The military purchased three lengths of tagged posts: 8’, 5’ 6”, and 2’ long. Enterprising impecunious farmers needing steel posts occasionally welded the short posts end-to-end making a post long enough for a normal fence.

**TASMANIAN FENCE**
Synonym for stub / stub fence (Walsh 1993, Figure 1, p. 11.)

**TELEGRAPH SPLICE / HITCH**
A knot used to join iron wire. See illustration under knots.

**TENSIONER**
Synonym for wire strainer.

**TERMINAL**
Synonym for strainer post.

1889 (patent) “The object is to provide a mechanism…[for regulating the tension of fencing wire]…applicable … to the … system of very long equal wires or joined wires, without winding pillars, having the strain carried through to the terminals.” (Evans 1889.)

**THIRDS**
A very old system dating from at least Biblical times, of paying wages in the form of one-third of the increase in stock. Some generous employers paid their shepherds half the increase (hence the term “halves”). See extended discussion in Pickard (2008, pp. 63-64.)

**THROUGHSTONE**
A long stone placed through a dry stone wall from one side to the other to tie the sides together (Vines 1990, p. 37.)

**TIGHT GRIP**
A form of fabricated (woven) wire characterised by a particular knot joining the vertical picket wires and the horizontal line wires.
TIGHTLOCK™
A form of fabricated fencing made by Wiremakers (New Zealand) and imported into Australia. (Casey 1994, p. 198).

TRIP WIRE
An electric wire running parallel to and about 20 cm from an electric fence, designed to discourage digging under the fence by animals. (Queensland Department of Primary Industries and Fisheries 2007 b)

TWISTER
A rectangular flat piece of steel with one or more pairs of holes of suitable size to take wires, and a pair of handles projecting from the ends. Used to twist ties into a secure and neat knot with no jutting ends. Typical applications include attaching rails to posts, palings to rails around yards, battens or boards to the frames of floodgates, and any other application where two pieces of sawn wood have to be secure at a crossing. James Escreet’s (1905) patent application for an essentially similar device does not show the neat knot that is possible with the twister.

1912 (SA) “These illustrations show the system adopted some years ago by a firm of stock agents for the erection of sheep, cattle, and pig yards at their various branches throughout South Australia. It will be seen that no mortising is required, hence there is no weakening of the timber. No bolts and nuts are used - the rails are simply fastened on to the posts by means of the wire. The twister is made of steel or an old flat file or horse rasp, the holes in it being bored in pairs to carry various sizes of wire, say, Nos. 6, 8, and 10. A couple of ties for round or square timber respectively are also shown. It will be readily recognised that this method is particularly suited for work with bush timber of varying sizes, as each tie is made the requisite size and shape for the post or rail it is to fit.” (Anon 1912, p. 23.)
**TWISTER**

A length of wire attached to another by a complete loop or circle around the second wire. Often used to tie objects together or to make a dropper (lace / brace) in a wire fence. The term also refers to the loop made around a line wire by a twitch.

**VERANDAH FENCE**

A fence incorporating an overhang at the top to increase security against climbing animals, e.g. dingoes, possums, cats and foxes. Although superficially similar, verandah fences are not the same as floppy top fences where the overhanging netting is deliberately left loose.

1943: “There is another method of attaching the top netting to the fence, and while it is rather expensive it makes perhaps the most efficient job of the lot, though of course it is not permissible along roads or where the netting is attached on the road side of the fence. Put the long posts, i.e., those carrying the top netting, about 15 yards apart, and attach a short arm to the top of the netting, projecting about 15 in. at right angles from the top of the post. Then strain a 12½ gauge high tension wire through the outer end of the crosspiece and attach the top of the netting to the wire, so that the netting will lean out from the fence at such an angle that dogs will not be able to climb over. A wire should be run through the high posts about the height of the middle of the top netting, so that the latter will be rigid and turn
out from the fence at a fairly acute angle, thus forming a ‘verandah,’ by which name this type of fence is known.” (‘7VY’ 1943, p. 28.)

Other references: Anon (1930, p. 1095); Arthur (1914, p. 454).

A pronounced overhang or verandah such as on this rabbit- and dingo-proof fence is unusual. S of Eurelia SA (32° 35.7'S 138° 33.4'E), 30 September 2008.
VIRGINIA FENCE

Synonym for zig-zag fence.

Presumably the name is based on the widespread early use of zig-zag fences in colonial America.

1867 (NSW) “the Virginian Snake, or zigzag fence - has been extensively used in some parts of Victoria, and when constructed of heavy timber is a substantial fence. It is made by embedding the but [sic] end of one tree in a notch cut for the purpose in the top end of another, laying them along the ground in a zigzag form, so that each log intersects the centre line at an angle of forty-five degrees. When the logs have been piled up to the desired height, cross legs and a heavy top rail are then put up as in the ‘‘Billabong’ fence, No. 2, so as to bind the whole.” (Gordon 1867, p. 33.)

1868 (NSW, Vic) “The snake fence is extensively used in those portions of Victoria and Riverina, where the forest oak or pine abounds; but where box, gum, or stringy bark saplings can only be procured, it has been found more advantageous to adopt the New Zealand modification, which enables it to be made in a straight line, and therefore the more sightly; and it then takes the name of double post-and-rail fence.” (‘Jumbuck’ 1868a, 6.)
These two quotations demonstrate the variations in names, and the way that structures may vary until they are given a new name. They also demonstrate how the same author - Gordon used the pseudonym ‘Jumbuck’ in many articles - can use terms slightly differently, adding to the confusion.

**VIRTUAL FENCE**

“… a method of controlling animals without ground-based fencing. Control occurs by altering an animal’s behaviour through one or more sensory cues administered to the animal after it has attempted to penetrate an electronically-generated boundary. … The most recent autonomous programmable systems use radio frequency (RF) signals, emanating from global positioning system (GPS) satellites to generate boundaries.”

(Anderson 2007, p. 65.)

Virtual fencing is still in the prototype stages but appears to have considerable potential in many intensively farmed areas

**WAITE’S (SPECIAL) WIRE**

An early galvanised high-tensile wire imported by prominent South Australian pastoralist Peter Waite in the early 20th century to use in his lightning fences. Later the wire was made by local wire manufacturers and sold as “Waite’s Special”. A considerable amount of this wire still occurs in fences in the rangelands of western New South Wales and northern South Australia. Most graziers loathe this wire in old fences as it is very brittle, and almost impossible to join when it breaks.

1900 (SA) “Some strains of this [lightning] fence are of No. 10 and some of No. 12 ‘Waite's special wire.’ The whole secret of the success of this fence is the description of wire Mr. Waite uses, which is manufactured for this special purpose, and is especially stiff and strong.” (R.E.N.T. 1900, p. 96.)

1903 (SA) “To make a lasting and serviceable fence …, a special make of wire is necessary. This wire, known as ‘Waite's Special,’ is manufactured under letters patent. The chief feature of this wire is that it expands and contracts equally in all weathers.” (Anon 1903, p. 286.)

1929 (SA) Letter from Essington Lewis (Chairman of The Broken Hill Proprietary Company Limited) to J.K. (Kenneth) MacDougall, chairman of Rylands Brothers (Australia) Ltd] 20 November 1929: “you also supply Elder Smith and Company with High Tensile Wire which is labelled ‘Waite’s Special’ …” (Lewis 1929.)

Although Waite and others persistently extolled the benefits of Waite’s Special Wire, it seems that Waite purchased wire to his specifications from various manufacturers. Paradoxically, a detailed diagram of a rabbit-proof fence converted by Waite to a 6’ high dingo-proof fence shows plain wire labelled “No 11½ Galvd Neptune Wire” rather than his own brand (Waite 1917, p. 46.) The 1929 letter demonstrates the sale of identical wire under different names. This makes identification of a particular wire very difficult.

**WALL**

Synonym for *dry stone wall*
WALL HEAD
Vertical end of a dry stone wall where large stones are alternated into and along the wall to provide stability (Vines 1990, p. 37.)

WARATAH
A common name in New Zealand for steel posts, but rarely used in Australia. The name is derived from the trade mark of BHP (now OneSteel Ltd) for their fencing products.

Pre-World War 2 (NZ) “Fencing posts were of local timber, but in some areas posts and battens were difficult to obtain and prices were tending to rise. The large sheep runs used steel ‘waratahs’ imported from Australia for fencing in the rougher areas; in fact, some runs could use only these because timber was too expensive and difficult to obtain, besides being too heavy and bulky to transport on pack horses. Waratahs were pieces of steel, either flat or T-shaped and often drilled to carry fencing wire, which were used instead of battens (fence droppers).” (Crawford et al. 1954, p. 252.)

This description suggests that the name was applied not only to the ubiquitous star post patented and manufactured by Waratah, but also to other sections. Apparently the trade name has been expanded to apply to all steel posts, regardless of cross-section or manufacturer.

WATCHBOX / WATCH-BOX
A portable roofed rectangular box with an opening in one side for entry. Used as sleeping quarters by hut keepers to keep watch over folded sheep at night and guard against attacks by dingoes.

1839 (SA) “The wild dogs were very troublesome, and the sheep had to be shepherded at night. This early squatter had a portable hut on wheels built for this purpose and drawn by a pair of bullocks. The contrivance proved most serviceable.” (Cockburn 1925, p. 97.)

Watchbox showing carrying handles and legs to keep it off the ground.

Source: detail from von Steiglitz (1964, Plate 30 “Shepherd’s watchbox, Villamanatta, 23d March, 1854.”)
1843 (SA) John Howard Angas went to his father's “Barossa estate, making Tarrawatta his headquarters, where he first camped with a shepherd in a portable box, measuring 6 ft. by 3 ft., ...” (Cockburn 1925, p. 10.)

**WATTLED FENCE**

A fence made by weaving saplings between closely spaced posts.

Wattled fences and folds date back to at least mediaeval times, but in the Australian colonies they seem to have been rare except around small paddocks, gardens, etc.

1861 “A wattled fence is a good one while it lasts; but it is not very durable; yet it would be a very good kind to protect a young hedge. This fence is made after the fashion of the hurdles in England, which serve the same purpose as our sheep gates do here.

It is made by driving stakes into the ground, along where you wish your fence to be, and weaving green boughs in and out like basket work. These boughs and stakes soon die, and then become brittle, and break away by degrees, but there are live wattled fences, which are durable, and make a kind of hedge. These are made of willow, by driving cuttings about two inches in diameter along the line of the fence, and about eighteen inches apart. They should then be bound together along the top by small twigs of willow, twisted around them.” (Anon 1861, p. 16.)

![WATTLED FENCE](image1.png)

This image is problematic, and does not appear to represent traditional wattling.

*Source: Anon (1861, p. 13.)*

**WAUKEGAN BARBED WIRE**

Barbed wire with two line wires, and a four-point barb attached to only one of the line wires. An 1890 trademark of the US wire giant Washburn & Moen for two- and four-point barbed wire initially made at a new purpose-built factory in Waukegan, Illinois (Krell 2002, p. 39).

![WAUKEGAN BARBED WIRE](image2.png)

*Source: Rylands Brothers (Australia) Limited (1937, p. 27.)*
**WELDMESH**
A generic term that was originally a trade name for rectangular or square mesh manufactured by spot welding perpendicular wires at crossing points. Occasionally used in rural fences as a form of fabricated fencing. Weldmesh is used extensively on re-built sections of the South Australian Dog Fence (Don Nicolson, member South Australian Dog Fence Board, personal communication, 29 September 2008).

**WHITE RUST**
A dull grey coating on galvanised wire caused by oxidation of the zinc coating. “Bulky white corrosion product (white rust) forms on unprotected zinc coatings in warm, humid, sheltered locations where condensation occurs frequently in the surface.” (Shemenski 2008, p. 673.) Thus white rust is mostly due to poor storage of galvanised wire rather than exposure in a fence.

See also *rust*.

**WIND BREAK**
A single or multiple line of trees and shrubs planted and managed to act as a wind break. There is essentially no difference between a windbreak and a shelter belt.

**WIND FENCE / WINDBREAK FENCE**
A fence of closely spaced wooden slats or palings designed to form a windbreak around buildings and work areas. Typically quite tall, up to 4 m, and braced or guyed for additional support.

The only example I know of in Australia was at the convict settlement on Sarah Island, Macquarie Harbour (Tas). Wind fences are common in Patagonia (southern Argentina) to protect estancias from constant, often violent, winds blowing from the Andes.

Tall wind fences shelter buildings and work areas on Sarah Island convict settlement (Tas).

These stumps are part of the remains of the extensive wind fences on Sarah Island Tas. (42° 23.6’S 145° 26.7’E), 4 January 2004.

WINDER
Synonym for *winding pillar*, a particular form of *strainer post*.

1886 (patent) “This invention relates to droppers, standards and strainers or winders for metal fencing …’ (Orr 1886).

WINDING PILLAR
Synonym for a particular form of *strainer post*.

A strainer post made from cast iron, either in one piece or bolted together, and having windlasses mounted on axles running through the sides. Each windlass is fitted with a ratchet which is locked with a pawl, and a square extension or socket for the handle used to strain the wires.

These posts are uncommon in Australia, the most extensive examples with a range of variations from different manufacturers, occur in the late 19th century fences built by the South Australian Railways (Pickard 2007c). A very few examples are known on farms away from railways (e.g. south of Cooma, NSW).

1888 (patent) “The object is to provide a mechanism…[for regulating the tension of fencing wire]…applicable alike to the usual short-wire system, from winding pillar to winding pillar, …” (Evans 1889.)
WIRE
Thin elongate metal rod produced by drawing, generally less than 4 mm diameter.

See also: barbed wire, belly wire, black wire, brace (2), bull wire, centre strand wire netting, chain wire, galvanised wire, gauge (1), high tensile barbed wire, high tensile wire, horse wire, Iowa barbed wire, iron wire, line wire, mulga wire, plain wire, razor wire, Sampson wire, steel wire, stranded wire, Waite wire, Waukegan barbed wire, wire netting, woven wire.

Various names were applied to wire of different grades manufactured in the 19th and early 20th centuries, but the terms do not appear to have been consistently applied by different manufacturers, or in advertisements. The differences are a consequence of the refining of the iron, whether the wire was rolled or drawn, variation in the carbon content, and heat treatment after manufacture. The following is summarised from Stephens (1855, p. 595).

Common wire: apparently rolled wire, of low quality and low breaking strain. “This is the ordinary wire of commerce, and is the kind which has hitherto been mostly employed in wire fences. It is made from the coarser sorts of iron, and, as its name indicates, bears a corresponding relation both as regards quality and price.”
Prepared wire: “is made from a finer description of iron, is more carefully manufactured, comes out in longer lengths, is consistently superior in quality, and bears a higher price in the market.”

Charcoal wire: “is the best and strongest of any of the qualities made. It is drawn from charcoal iron, … which is freer from the impurities known to deteriorate the quality of iron, …”

Annealed wire: “is the common wire softened in the furnace. … It is, however, the very worst that can be put into a fence, and ought always to be rejected. It easily bends, and remains so from want of elasticity; …”

Manufacturers used terms in their catalogues and advertisements that are similar, but are not clearly defined, and as the following two examples show, it may difficult to distinguish between them.

Boulton & Paul (1874, p. 55) sold three grades of wire:

Black Annealed Fencing Wire. This article is rolled, and is not so well suited for general purposes and the next qualities.

Best Black Drawn & Annealed Wire. This is a good article, and can be worked easily. It is very pliable.

Best Bright Hard-drawn Fencing Wire. This article is in very long lengths, and makes by far the best Fence when properly fixed by an experienced man.” (italics added for clarity.

Barnard, Bishop, and Barnards (1875, p. 140) sold a similar range of wire:

Black Fencing Wire is used on account of its cheapness, but cannot be recommended.

Best Prepared Drawn Black Fencing Wire can be fixed by inexperienced hands; it is very tough and works easily.

Best Long Bright Fencing Wire makes the strongest and best Fence, but cannot be properly fixed, excepting by experienced hands.

Drawn Galvanized Fencing Wire is difficult to work, …” (italics added for clarity.)

Identifying these different qualities of wire in an historic fence would be extremely difficult.

**WIRE FENCE**

A fence where the horizontal components are wires - either plain or barbed - but not netting or woven wire. Wire fences have been the *de facto* standard since about the 1880s (Pickard 2007b). A contraction of “post-and-wire fence”. 
1865 (SA) Submission by D. MacLean: “Up to this date I have expended £12,730 in improvements …. This includes 120 miles of wire fencing and bush ditto, …” (South Australia Northern Runs Commission 1865, p. 15.)

Other references: Anon (1872, p. 178).

WIRE GATE

A gate made using wire and posts or droppers, with a post at one end. The gate is closed by putting the bottom end of the post into a wire loop tied around the post of the fence, and the gate is then closed using any one of many variations on toggles.

Also known as Bogan gate, cocky's gate, and mallee gate.

Wire gate showing elaborate toggle on right-hand side. The lever pivots on an iron or steel peg at its base, and is fixed by pushing a peg through a hole in the lever and a corresponding hole in the strut.

Source: Anon 1897, p. 295.)

Wire gate of three doubled plain wires and two droppers, with a steel post fixed to end assembly on left-hand side, and toggle closure (sloping log) on right-hand side of opening. SW of Winton Qld (23° 10.4’S 141° 43.8’E), 14 June 2007.
**[WIRE] HOLDING MEANS**

A legal obfuscation frequently used in patent specifications to include various holes, notches, slots, grooves, etc. in posts and droppers to hold or support wires.

1988 (patent) “2. A fence clip formed from wire or the like elongated material, … comprising … and holding means to hold a wire, tape or the like, …” (Techlink Developments Limited 1988.)

**WIRE KEY**

Synonym for *fencing key*.

1905 (NSW) Sketch of “Forked wire-strainer, wire key, and plug” (Gennys 1905, p. 960.)

**WIRE STRAINER**

A device for straining wire in fences.

Strainers may be either permanent (left on the wire, or attached to the strainer post), or removable (taken away after the wire is strained and tied). Permanent wire strainers tend to be more common in peri-urban areas than in true rural fences. There is a wide range of different types of strainers, both home-made and manufactured (Walsh 1993, pp. 9-24). Gavin O’Brien (Design Studies Department, University of Otago, Dunedin, New Zealand) is currently (2009) analysing the evolution of wire strainers in New Zealand which was the international centre of development of wire strainers in the late 19th and early 20th centuries.

See also *raidisseur*.

**WORM FENCE**

Synonym for *zig-zag fence*.

**WOVEN FENCE**

A fence made using woven or fabricated wire.

**WOVEN WIRE**

Synonym for *fabricated fencing*.

**Y-BAR**

Trade name of steel bar with a Y-cross section used as the primary material to manufacture star posts.

1988 “Since the 1920s BHP has manufactured Y-bar, a product which acquires its name from the appearance of its cross-section. BHP is the only manufacturer of Y-bar in Australia and no significant quantities have been imported. …

Y-bar is used in the manufacture of ‘star picket posts’. The manufacturing process is quite simple. It involves cutting the Y-bar at fence post lengths, putting in holes through which wire will ultimately pass, trimming one end of the post to a point so that the post can be hammered into the ground, and coating the posts with an
anti-corrosive. These posts are then used in what is by far the most popular kind of rural fencing in Australia. …” (Anon 1988, p. 183.)

**YARDS**

Small structures, rarely >100 m across, designed to retain livestock for various management operations. The structures used are as variable as those found in fences, but are typically stronger and more robust to withstand the pressure from confined and often agitated stock.

**YOKE**

Alternative name for *spelt*, a forked stick attached to the neck of some cows to inhibit their efforts of pushing their heads between line wires to graze on the other side of the fence.

**ZIG-ZAG FENCE**

*Synonyms* American fence, Snake fence, Virginia fence, worm fence, crinkle crankle fence (Kerr 1987, Figure 9.)

1867 (Vic) “The … Virginian Snake, or zigzag fence has been extensively used in some parts of Victoria, and when constructed of heavy timber is a substantial fence. It is made by embedding the but [sic] end of one tree in a notch cut for the purpose in the top end of another, laying them along the ground in a zigzag form, so that each log intersects the centre line at an angle of forty-five degrees. When the logs have been piled up to the desired height, cross legs and a heavy top rail are then put up as in the “Billabong” fence, … , so as to bind the whole.” (Gordon 1867, p. 33).

*Other references*: Armstrong & Campbell (1882, pp. 194-195); Peterson (1988, p. 10).
Part 3: References

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Illustrated glossary of Australian rural fence terms


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