

LYSAGHT'S REFEREE

A HANDBOOK OF USEFUL
INFORMATION



SIXTEENTH EDITION
(WITH APPENDIX)

WITH THE COMPLIMENTS OF
JOHN LYSAGHT (AUST.) LTD.



PLEASE READ THIS

LYSAGHT'S GALVANIZED IRON

LYSAGHT



AUSTRALIA

LYSAGHT



QUEEN'S HEAD
AUSTRALIA

Manufactured at Newcastle (New South Wales)

Your attention is specially drawn to the fact that John Lysaght (Australia) Limited have been manufacturing "ORB" Galvanized Corrugated, "Queen's Head" and "Fleur-de-lis" Galvanized Plain Iron at Newcastle (N.S.W.) since April, 1921.

These works are of the most modern type, and equipped with the very best and latest Sheet Rolling and Galvanizing Machinery, whilst the same care and close attention are devoted to the manufacture of the locally made sheets as in the English works. The makers can, therefore, confidently guarantee that the quality of the Newcastle Sheets is equal to that of the same well-known brands of John Lysaght Ltd., Newport (Eng.), which are the standard for quality throughout the world.

Every sheet of LYSAGHT'S "ORB," "QUEEN'S HEAD" and "FLEUR-DE-LIS" Iron is **BRANDED AND GUARANTEED**. If sheets of faulty manufacture are inadvertently delivered they will be replaced free of charge.

LYSAGHT'S

Galvanized Plain and Corrugated Iron, and Black Sheets, are stocked by all the leading Ironmongers, Timber Merchants and Storekeepers throughout the Commonwealth, from whom current prices can always be obtained upon application.

Further copies of this Publication
and the special

LYSAGHT BROCHURE on

BLACK STEEL SHEETS

may be obtained post free, upon application at any of the Offices of JOHN LYSAGHT (Australia) LTD., in the various Capital Cities of the Commonwealth.

"ORB" IRON is still the Best in the World.

LYSAGHT'S REFEREE

16TH EDITION

BEING

A GENERAL GUIDE FOR IRONWORKERS,
STOREKEEPERS, COUNTRY RESIDENTS, &c.

CONTAINING

TABLES OF WEIGHTS, MEASUREMENTS,
AVERAGE RAINFALL, POSTAL AND
OTHER USEFUL INFORMATION

Revised May, 1934. Copyright.

Whether made in England or Australia, every detail of the manufacture of LYSAGHT'S SHEETS receives the same careful scrutiny as has served to gain world-wide recognition of their reliability for nearly Eighty years.

The various tables contained herein have been carefully compiled from existing sources of information. No responsibility is accepted, and no originality is claimed in respect thereof. They are intended to give closely approximate information which may not always be readily accessible elsewhere.

The Publisher will be thankful to receive suggestions for further improvements or to have pointed out any printer's or other errors which may have inadvertently crept in. Communications may be addressed to Box 196 D, G.P.O., Sydney.

Sydney:

WEBSDALE, SHOOSMITH LTD., Printers,
117 Clarence Street.

LYSAGHT'S NEWCASTLE WORKS LIMITED

The extensions made to these works, which were completed in 1934, have increased its maximum output to 100,000 tons of Galvanized Iron per annum on full production.

Upon this basis over 1,300 men would be continuously employed and £400,000 per annum distributed directly in wages.

In addition to this it is estimated that indirect employment would be given to a further 1,700 men and over £600,000 distributed annually in wages in the mining of 250,000 tons of coal directly and indirectly used, in the manufacture of the 100,000 tons of Australian Steel, 18,000 tons of Australian Zinc and 5,500 tons of Australian Acid used as raw materials in the production of Galvanized Sheets.

Practically the whole of the money received from sales of Australian Galvanized Iron is kept in the Commonwealth. If, on the other hand, this material were imported as is urged by low Tariff advocates, the wages distribution of over One Million pounds per annum would immediately cease, and the whole of the proceeds from sales would be sent out of the country, thus adding to local unemployment, and still further increasing the present problems of exchange.

Keep your money in the country and
Australians in employment by insisting
on having

LYSAGHT'S GALVANIZED IRON

The Evolution of Galvanized Iron



It is interesting to note at the present day, when the use of Galvanized Iron has become so widely extended, that its introduction dates back only to 1837. Although a plain sheet was exhibited at the Great Exhibition in 1851, it was not until the application of steam power for the purpose of corrugating was brought about in 1854, that Galvanized Iron really came into practical use.

In 1857 the celebrated "ORB" Brand was first manufactured by Mr. JOHN LYSAGHT.

During the four score years that have now almost elapsed, greatly improved methods for its production, and extreme care displayed in its manufacture, have secured for **LYSAGHT'S GALVANIZED IRON** an unrivalled reputation throughout the world, and so universally has it been adopted to meet the needs of modern civilization, that it may with truth be said that the sun is always shining on "ORB" IRON.

Two important developments of the past few years, so far as Australia is concerned, have been the manufacture of "RED ORB," a specially rigid roofing sheet for awnings, roofs, etc., likely to be walked on, or where long and various means of transport might damage the ordinary sheet.

Naturally such sheets cannot be curved and are branded distinctly in RED to distinguish them from the ordinary "Orb" sheets.

Specify "RED ORB" for your next roofing job.

The increasing use of water, other than rain water, for domestic and other purposes, has had a serious effect on the life of tanks in some country districts, and to minimise this disadvantage Lysaght's are now supplying super-coated sheets of 24g., **THE LIFE OF TANKS MADE FROM WHICH IS GUARANTEED.** These sheets are prominently branded on both sides—"LYSAGHT ORB TANKMAKING."

Insist on your tanks being made from this guaranteed material, for further particulars of which see pages 9 and 19.

INDEX

	PAGE
Barbed Wire	41
Beam Wireless Service	117, 118
Black Steel Sheets	2, 26/29
Brass Sections—Extruded Flats	86
Brass and Copper Rods and Bars	87
Brickwork—Useful Information	101
Bolts—Carriage	61
Calendars, 1935-8	127, 128
Chain—Sustaining Degree of Best Mining	78
„ Load and Strain of Best Mill Proof	78
Chamber of Manufacturers—Objects of	50
Concrete—How to Make	101, 102
Copper—Bars and Rods	87, 88
Copper Conductors	89
Copper Sheets—Weights and Gauges	85
Copper Tubes	90
Costing System	39, 40
Cotter Pins	69
Curving Rolls	37
Decimal Equivalents	72
Distances between Ports	116
Fertilizers	114, 115
First Aid to the Injured	119/123
Fittings—Water and Steam: Trade Price List	54
Galvanized Iron—Evolution and Manufacture of	1, 4, 5
Galvanized Sheets—Life of	22
Galvanizing—Good: What it Means	38
Gauges—Birmingham, Imperial, American	32
Ground Tanks—Area of	100
Guest, Keen & Nettlefolds Ltd.—Supplement	55/74
Haystacks—Contents of	100
Hints for the Handyman	124/126
Hints for Reckoning	94
Hoop Iron	83
Iron—Black Sheet	2, 26/29
„ Galvanized, Evolution and Manufacture of	1, 4, 5
„ „ Thicknesses and Sections of	12
„ „ Sheets and Weights per 100 sq. ft.	14
„ „ Corrugated, Covering Capacity	13
„ „ „ Counts and Weights	13
„ „ „ Price per Sheet	15/18
„ „ „ Plain, Count and Weight	20
„ „ „ Price per Sheet	21, 23/25
„ „ „ Fixing of	124/126
Lead, Sheet—Weight per Roll and per Foot	95
Lifting Gear—Safe Working Loads	77
Lysaght's Trade Marks	8, 9
Mensuration of Surfaces and Solids	99
Monel Metal	84
Muntz Metal	85
Nails—Number required per Square of Roofing	13

REMEMBERED long after Price is Forgotten.

	PAGE
Non-Ferrous Metals and Wires—Weights of, etc. . .	82/88
Nuts—Pressed and Forged	62
Painting—General Information	103
Pipes—Galvanized, Iron, Composition	81
„ Lead, Acetylene, Water	80
Postal Information	105/109
Price per ton—How much per lb.	94
Price per cwt. at a given price per lb.	95
Railway Carriages and Waggon (Steel)	29
Railways—Commonwealth and State	111
Rainfall Statistics	112, 113
Ratchet Braces	71
Rivets	70
Rope—Manila, Flax, Coir	76
„ Wire—Weights and Strength	52
Selling Price of Goods—How to Fix	39, 40
Screws—Guest, Keen & Nettlefolds	56, 63, 64, 66
„ Wood	57, 74
„ „ Weight per Gross	73
„ Machine	58
„ Roofing	59
„ Coach	60
Standards Association—Objects of	10
Statistics	110, 111
Steel Bars—Round and Square	51
„ Beams, Rolled	46
„ Flats „	47
„ Plates	48, 49
„ Tubes	75
Tanks—Circular and Square, Capacity of	33, 34
„ Galvanized Iron Required for	35/37
Tank-Making Sheets—Guarantee	19
Timber	93
Tinplates—Standard Weights and Sizes	79
Trade Marks—Lysaght's	8, 9
Tubes—Solid Drawn Copper: Weight of	90
„ Gas, Water, Steam—Trade List	54
„ Iron and Steel	75
Useful Information	100/103
Wallpapers—Effect of Colours on Light	104
„ Table of Measurements	104
Weight of Metals per Superficial Foot	91
„ „ Cubic Inch	91
Weights and Measures—British and Metric	96/98
What Good Galvanizing Means	38
Wire Netting	41/45
„ Steel	42, 53
„ Copper and Brass	53, 89
„ Hooks	67
„ Eyes	68
„ Electric Light	92
„ Non-Ferrous—Weight per 100 ft.	83
Wunderlich Metal Ceilings and Products	30, 31
Zinc Sheets	82

LYSAGHT'S

LYSAGHT



AUSTRALIA

LYSAGHT'S "ORB."

Galvanized Corrugated Iron is favourably known and used throughout the world.

Its perfection of Galvanizing and uniformity of corrugations is recognised by consumers everywhere. There are many imitations but to those who compare its quality with other nominally cheaper brands its superiority is at once apparent.

LYSAGHT



**QUEEN'S HEAD
AUSTRALIA**

LYSAGHT'S QUEEN'S HEAD.

Galvanized Tinned Special Flat Sheets. Best known, most uniform and reliable plain Galvanized Sheet on the market.

Commanding the universal confidence of ironworkers and fully guaranteed by the manufacturers.

LYSAGHT



AUSTRALIA

LYSAGHT'S RED ORB

So branded to distinguish it from the ordinary Orb sheet is a local production specially manufactured to withstand the roughest usage whether in transit or fixing. Its extreme rigidity and stiffness makes it unsuitable for curving but for roofing, fencing and similar work it is incomparable.



fully guaranteed by the Manufacturers.

TRADE MARKS

LYSAGHT'S TANKMAKING ORB.

The highest grade of super-coated Galvanized Sheet manufactured, and strongly recommended to be used for all Tank-making purposes for which it is specifically guaranteed by the makers. (See pages 33-37).

LYSAGHT



AUSTRALIA
TANK MAKING

LYSAGHT'S GUINEA.

A superior corrugated sheet available in both 24 and 26 gauges, second only to "Orb" in quality and appearance, and recommended for use when price is a consideration.

LYSAGHT



GUINEA
AUSTRALIA

LYSAGHT'S FLEUR DE LIS.

Galvanized Tinned Flat Sheets enter largely into consumption for that class of work in which a cheaper sheet is asked for. It will be found equal to all such requirements.

LYSAGHT



AUSTRALIA

LYSAGHT'S ORB AND QUEEN'S HEAD BRANDS have now been on the market for nearly 80 YEARS and every sheet bearing either of these brands carries the same
UNCONDITIONAL GUARANTEE
as to quality that has always been given by the makers.



TELEPHONE :
B 1714

—
TELEGRAMS :
"AUSTANDARD"
SYDNEY

ESTABLISHED UNDER THE AEGIS OF THE COMMONWEALTH AND
STATE GOVERNMENTS FOR THE PROMOTION OF STANDARDISATION
AND SIMPLIFIED PRACTICE

STANDARDS ASSOCIATION OF AUSTRALIA

HEADQUARTERS :
SCIENCE HOUSE
GLOUCESTER AND ESSEX STREETS
SYDNEY

The Standards Association of Australia is the national standardising body for Australia. It is an autonomous organisation governed by a Council comprising official representatives of each Government and of Scientific, Industrial and Commercial organisations. Its function is the formulation and promulgation of Australian Standard Specifications and Codes which are drafted by fully representative Committees. The work is broadly divided into two divisions—Technical and Commercial Standards. The Association collaborates with the national standards associations of 21 other countries and a system of especially close co-operation between those of the British Empire has been established. The Association's Power Survey Committee is the Australian National Committee of the World Power Conference, and its Electrical Committee is the Australian Committee of the International Electrotechnical Commission.

As a result of representations made by the Primary Producers' Organisation of N.S.W., the Standards Association of Australia, early in 1933, decided to appoint a special committee on Galvanizing and Galvanized Products, with the object of establishing Australian Standards for such galvanized materials as Fencing Wire, Barbed Wire, Wire Netting for Rabbit Proof and other Fences, and Galvanized Iron both Corrugated and Plain.

This Special Committee is nearing the end of its deliberation and it is hoped that these new standards will be made available in the near future.

In every instance a Draft Specification is first prepared, which is not only distributed broadcast throughout Australia, but is also forwarded to each of the Empire Standardising Bodies in Great Britain, New Zealand, Canada and South Africa.

The comments and criticisms received from these sources are carefully considered by the Standards Association, and the Draft Specification finalised on this basis.

The value of the work of the Standards Association of Australia as a safeguard to the purchasing public, can therefore be appreciated.

REMEMBERED long after Price is Forgotten.

When Requiring Corrugated Iron, ask for—

LYSAGHT'S ORB

IT IS EQUAL to the best imported Brands of English Manufacture.

IT IS made in AUSTRALIA from Australian Raw Materials.

IT IS true to gauge and contains the standard number of sheets per case.

EVERY SHEET GUARANTEED

Registered
Trade
Mark.



Branded in
Blue on every
Sheet.

EVERY SHEET GUARANTEED

IT IS packed in 10-cwt. felt-lined cases.

IT IS Standard 3in. corrugations of $\frac{3}{4}$ in. depth, and corrugates evenly throughout.

IT IS approved and specified by leading Architects.

ASK FOR

LYSAGHT'S ORB

AND ASSIST LOCAL INDUSTRY

SECTIONS OF LYSAGHT'S GALVANIZED SHEETS

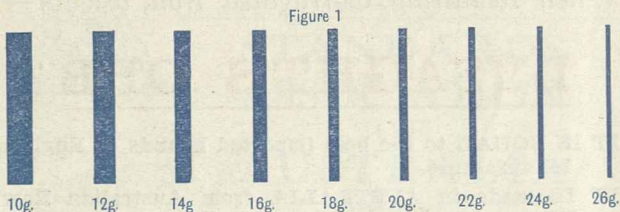
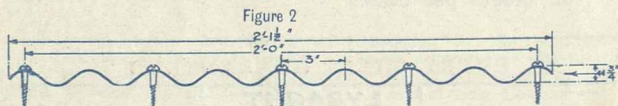
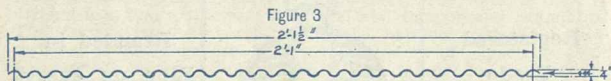


Illustration showing the approximate thickness of Sheets, according to the Birmingham Gauge. [See p. 32]



The "ORB" Standard for Roofing Sheets, eight 3-inch corrugations of $\frac{3}{4}$ -inch depth



The "ORB" Standard 1-inch corrugations of $\frac{1}{4}$ -inch depth, used extensively for Ceilings, Linings, Bath Screens, etc.



Fig. 6



Fig. 7



Fig. 8



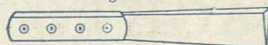
Fig. 9



Fig. 10



Figure 11



LYSAGHT'S GALVANIZED IRON—CORRUGATED.

Approximate number of sheets to a case (ordinary Corrugations) weighing about 10 cwt.

Length	Birmingham Gauge.					
	18	20	22	24	26	28*
5 feet	42	53	65	83	118	132
6 feet	35	44	54	69	98	111
7 feet	30	38	47	59	84	95
8 feet	26	33	41	51	73	83
9 feet	23	29	36	45	65	74
10 feet	21	26	32	41	58	66
11 feet	19	24	30	37	53	62
12 feet	17	22	28	34	48	56

*Supplied in 1 inch Corrugations, only.

Approximate weight per sheet in lbs. (based on above table to nearest ¼lb).

Gauge	5 ft.	6 ft.	7 ft.	8 ft.	9 ft.	10 ft.	11 ft.	12 ft.
18	26½	32	37½	43	49	53	58½	64 lbs.
20	21½	25½	29½	34	38½	43	46½	51 "
22	17½	20¾	23¾	27½	31	35	37½	40½ "
24	13½	16½	19	22	25	27½	30½	33 "
26	9½	11½	13½	15½	17½	19½	21½	23½ "
28	8½	10	11½	13½	15½	17	18½	20 "

Covering Capacity of Galvanized Corrugated Iron.

One Ton of Galvanized Corrugated Iron has the following approximate covering capacity:—

	24g. 3in. Cor.	26g. 3in. Cor.	26g. 1 in. Cor.	28g. 1 in. Cor.
Single Lap	1,600 sq. ft.	2,200 sq. ft.	2,327 sq. ft.	2,645 sq. ft.
Lap and half	—	2,000 "	—	—
Double Lap	1,540 "	1,900 "	2,230 "	2,535 "

NOTE.—To ascertain the number of squares (10 ft. x 10 ft.) divide by 100.
To ascertain cost per square divide price per ton by number of squares.

SPRING HEAD NAILS.

One packet (100 nails) is usually allowed to one square of roofing.

**For a good satisfactory roofing job specify
LYSAGHT'S RED ORB.**

No. of Sheets in 100 sq. ft. of all sizes and gauges Galvanized Corrugated Iron

ROOFING. Slope not less than 25° (Standard Roof Slope 30°).
Double Side Lap, 6in. End Lap. 1ft. 9in. covering width of Sheet.

Length of Sheet	No. of Sh'ts per 100 sq. ft.	Weight required of various gauges in lbs.					
		18G	20G	22G	24G	26G	28G
5 feet	12.70	336.5	266.7	215.9	171.5	120.7	107.9
6 feet	10.38	332.2	264.7	210.2	168.7	119.4	103.8
7 feet	8.79	327.4	259.3	210.9	167.0	118.6	103.3
8 feet	7.62	327.7	259.1	207.6	167.6	118.1	102.9
9 feet	6.72	329.3	258.7	208.3	168.0	115.9	102.5
10 feet	6.00	318.0	258.0	204.0	163.5	115.5	102.0
11 feet	5.44	318.2	253.0	202.6	161.8	112.9	99.3
12 feet	4.97	318.0	253.5	201.3	161.2	114.1	99.2

One and a Half Side Lap, 6in. End Lap. 1ft. 10½in. covering width of Sheet. Not recommended for water-tight work.

Length of Sheet	No. of Sh'ts per 100 sq. ft.	Weight required of various gauges in lbs.					
		18G	20G	22G	24G	26G	28G
5 feet	11.85	314.0	249.0	200.0	160.0	112.6	100.7
6 feet	9.7	310.4	247.3	196.4	157.6	111.5	97.0
7 feet	8.2	305.5	241.9	196.8	155.8	110.7	96.35
8 feet	7.11	305.7	241.7	193.7	156.4	110.2	95.9
9 feet	6.27	307.2	241.4	194.4	156.8	108.2	95.6
10 feet	5.61	297.3	241.2	190.7	152.9	108.1	95.37
11 feet	5.08	297.2	236.2	189.2	151.1	105.4	92.7
12 feet	4.64	296.9	236.6	187.9	150.8	106.7	92.8

SIDE WALL AND VERTICAL SHEETING.

Double Side Lap, 4in. End Lap. 1ft. 9in. covering width of Sheet.

Length of Sheet	No. of Sh'ts per 100 sq. ft.	Weight required of various gauges in lbs.					
		18G	20G	22G	24G	26G	28G
5 feet	12.25	324.6	257.3	208.3	165.4	116.4	104.1
6 feet	10.10	323.2	257.6	204.5	164.1	116.1	101.0
7 feet	8.57	319.2	252.8	205.7	162.8	115.7	100.7
8 feet	7.45	320.4	253.3	203.1	163.9	115.5	100.6
9 feet	6.59	323.1	253.7	204.3	164.8	113.7	100.5
10 feet	5.91	313.2	254.1	200.9	161.1	113.8	100.5
11 feet	5.36	313.6	249.3	199.6	159.5	111.2	97.8
12 feet	4.9	313.6	249.9	198.5	159.3	112.7	98.0

One and a Half Side Lap, 4in. End Lap. 1ft. 10½in. covering width of Sheet.

Length of Sheet	No. of Sh'ts per 100 sq. ft.	Weight required of various gauges in lbs.					
		18G	20G	22G	24G	26G	28G
5 feet	11.42	302.6	239.8	194.1	154.2	108.5	97.1
6 feet	9.41	301.1	240.0	190.6	152.9	108.2	94.1
7 feet	8.00	298.0	236.0	192.0	152.0	108.0	94.0
8 feet	6.96	299.3	236.6	189.6	153.1	107.8	93.9
9 feet	6.15	301.4	236.8	190.7	153.8	106.1	93.8
10 feet	5.52	292.6	237.4	187.7	150.4	106.2	93.8
11 feet	5.00	292.5	232.5	186.3	148.8	103.8	91.3
12 feet	4.57	292.5	233.1	185.1	148.5	105.1	91.4

LYSAGHT'S

Galvanized Iron — Corrugated

Approximate price per sheet (to nearest half-penny) based on given rates per ton. This table is not a price list.

20 G

Price per Ton.	106 Sheets 5 ft.	88 Sheets 6 ft.	76 Sheets 7 ft.	66 Sheets 8 ft.	58 Sheets 9 ft.	52 Sheets 10 ft.
£22/-/-	4/1½	5/-	5/9	6/8	7/7	8/5½
£22/10/-	4/2½	5/1	5/11	6/9½	7/9	8/7½
£23/-/-	4/4	5/2½	6/0½	6/11½	7/11	8/10
£23/10/-	4/5	5/4	6/2	7/1	8/1	9/0½
£24/-/-	4/6	5/5	6/3½	7/3	8/3	9/3
£24/10/-	4/7	5/6½	6/5	7/5	8/5	9/5
£25/-/-	4/8½	5/8	6/6½	7/6½	8/7	9/7
£25/10/-	4/9½	5/9½	6/8	7/8½	8/9½	9/9½
£26/-/-	4/11	5/10½	6/10	7/10½	8/11½	10/-
£26/10/-	5/-	6/-	6/11½	8/-	9/1½	10/2
£27/-/-	5/1	6/1½	7/1	8/2	9/3½	10/4½
£27/10/-	5/2	6/3	7/2½	8/4	9/5½	10/6½
£28/-/-	5/3	6/4	7/4	8/5½	9/7½	10/9

22 G

Price per ton	130 Sheets 5 ft.	108 Sheets 6 ft.	94 Sheets 7 ft.	82 Sheets 8 ft.	72 Sheets 9 ft.	64 Sheets 10 ft.
£22/-/-	3/4½	4/1	4/8	5/4½	6/1	6/10½
£22/10/-	3/5	4/2	4/9½	5/6	6/3	7/0½
£23/-/-	3/6½	4/3	4/10½	5/7	6/4½	7/2
£23/10/-	3/7½	4/4	5/-	5/8½	6/6	7/4
£24/-/-	3/8	4/5	5/1	5/10	6/8	7/6
£24/10/-	3/9	4/6½	5/2½	5/11½	6/9½	7/8
£25/-/-	3/10	4/7½	5/4	6/1	6/11	7/10
£25/10/-	3/11	4/8½	5/5	6/2½	7/1	7/11½
£26/-/-	4/-	4/9½	5/6	6/4	7/2½	8/1½
£26/10/-	4/1	4/11	5/7½	6/5½	7/4	8/3½
£27/-/-	4/2	5/-	5/9	6/7	7/6	8/5
£27/10/-	4/3	5/1	5/10	6/8½	7/7½	8/7
£28/-/-	4/4	5/2	5/11½	6/10	7/9	8/9

LYSAGHT'S GALVANIZED IRON—Corrugated

Approximate price per sheet (to nearest half-penny) based on given rates per ton. This table is not a price list.

24 G

Price per Ton.	166 Sheets 5 ft.	138 Sheets 6 ft.	118 Sheets 7 ft.	102 Sheets 8 ft.	90 Sheets 9 ft.	82 Sheets 10 ft.	74 Sheets 11 ft.	68 Sheets 12 ft.
£ s. d.								
18 0 0	2/2	2/7	3/0½	3/7	4/-	4/5	4/10½	5/3½
18 10 0	2/3½	2/8½	3/1½	3/7½	4/1½	4/6	5/-	5/5
19 0 0	2/3½	2/9	3/2½	3/9	4/3	4/8	5/1½	5/7
19 10 0	2/4	2/10	3/3½	3/10	4/4	4/9	5/3	5/9
20 0 0	2/5	2/11	3/4½	3/11	4/5½	4/11	5/5	5/10½
20 10 0	2/6	3/-	3/5½	4/-	4/7	5/-	5/6½	6/0
21 0 0	2/6½	3/0½	3/6½	4/2	4/8	5/1½	5/8	6/2
21 10 0	2/7	3/1½	3/7½	4/2½	4/9½	5/3	5/10	6/4
22 0 0	2/8	3/2	3/8½	4/4	4/10½	5/4½	5/11½	6/6
22 10 0	2/8½	3/3	3/10	4/5	5/-	5/6	6/1	6/7½
23 0 0	2/9	3/4	3/11	4/6	5/1½	5/7½	6/2½	6/9
23 10 0	2/10	3/5	4/-	4/7	5/2½	5/9	6/4	6/11
24 0 0	2/10½	3/6	4/1	4/8½	5/4	5/10	6/6	7/0½
24 10 0	2/11½	3/7	4/2	4/9½	5/5	6/-	6/7½	7/2½
25 0 0	3/-	3/7½	4/3	4/10½	5/6½	6/1	6/9	7/4
25 10 0	3/1	3/8½	4/4	5/-	5/8	6/2½	6/10½	7/6
26 0 0	3/1½	3/9	4/5	5/1	5/9	6/4	7/0½	7/8
26 10 0	3/2	3/10	4/6	5/2	5/10½	6/5½	7/2	7/9½
27 0 0	3/3	3/11	4/7	5/3½	6/-	6/7	7/3½	7/11
27 10 0	3/3½	4/-	4/8	5/4½	6/1	6/8½	7/5	8/1
28 0 0	3/4½	4/0½	4/9	5/6	6/2½	6/10	7/7	8/3
28 10 0	3/5	4/1½	4/10	5/7	6/4	6/11	7/8½	8/4½
29 0 0	3/6	4/2½	4/11	5/8	6/5	7/1	7/10	8/6
29 10 0	3/6½	4/3	5/-	5/9	6/6½	7/2	8/-	8/8
30 0 0	3/7½	4/4	5/1	5/10½	6/8	7/4	8/1	8/10
30 10 0	3/8	4/5	5/2	5/11½	6/9	7/5	8/3	8/11½
31 0 0	3/9	4/6	5/3	6/1	6/10½	7/6½	8/4½	9/1½
31 10 0	3/9½	4/7	5/4	6/2	7/-	7/8	8/6	9/3
32 0 0	3/10	4/7½	5/5	6/3	7/1	7/9½	8/8	9/5
32 10 0	3/11	4/8½	5/6	6/4	7/2½	7/11	8/9½	9/6½
33 0 0	3/11½	4/9½	5/7	6/5½	7/4	8/0½	8/11	9/8½
33 10 0	4/0½	4/10	5/8	6/6½	7/5	8/2	9/0½	9/10
34 0 0	4/1	4/11	5/9	6/8	7/6½	8/3½	9/2	10/-
34 10 0	4/2	5/-	5/10	6/9	7/8	8/5	9/4	10/2
35 0 0	4/2½	5/1	5/11	6/10	7/9	8/6½	9/5½	10/3½
35 10 0	4/3	5/1½	6/-	6/11	7/10½	8/8	9/7	10/5
36 0 0	4/4	5/2½	6/1	7/0½	8/-	8/9	9/9	10/7
36 10 0	4/4½	5/3½	6/2	7/1½	8/1	8/10½	9/10½	10/9
37 0 0	4/5½	5/4½	6/3	7/3	8/2½	9/-	10/-	10/10½
37 10 0	4/6	5/5	6/4	7/4	8/4	9/1½	10/1½	11/-
38 0 0	4/7	5/6	6/5	7/5	8/5	9/3	10/3	11/2
38 10 0	4/7½	5/7	6/6	7/6½	8/6½	9/4½	10/5	11/4
39 0 0	4/8½	5/8	6/7	7/7½	8/8	9/6	10/6½	11/5½
39 10 0	4/9	5/9	6/8	7/9	8/9	9/7½	10/8	11/7½
40 0 0	4/10	5/9½	6/9	7/10	8/10½	9/9	10/10	11/9

fully guaranteed by the Manufacturers.

LYSAGHT'S GALVANIZED IRON—Corrugated

Approximate price per sheet (to nearest half-penny) based on given rates per ton. This table is not a price list.

26 G

Price per ton.	236 Sheets 5 ft.	196 Sheets 6 ft.	168 Sheets 7 ft.	146 Sheets 8 ft.	130 Sheets 9 ft.	116 Sheets 10 ft.	106 Sheets 11 ft.	96 Sheets 12 ft.
£ s. d.								
18 0 0	1/6	1/10	2/2	2/6	2/9	3/1	3/5	3/9
18 10 0	1/7	1/11	2/2	2/6½	2/10	3/2	3/6	3/10
19 0 0	1/7	1/11	2/3	2/7	2/11	3/3	3/7	3/11
19 10 0	1/8	2/-	2/4	2/8	3/-	3/4	3/8	4/1
20 0 0	1/8	2/0½	2/5	2/9	3/1	3/5	3/9	4/2
20 10 0	1/9	2/1	2/5	2/10	3/2	3/6	3/10½	4/2½
21 0 0	1/9	2/1½	2/6	2/10½	3/3	3/7	3/11½	4/4½
21 10 0	1/10	2/2½	2/7	2/11	3/4	3/8	4/0½	4/6
22 0 0	1/10½	2/3	2/7½	3/-	3/5	3/9½	4/2	4/7
22 10 0	1/11	2/4	2/8	3/1	3/6	3/10½	4/3	4/8
23 0 0	1/11½	2/4½	2/9	3/2	3/6	4/-	4/4	4/9½
23 10 0	2/-	2/5	2/10	3/3	3/7	4/1	4/5	4/11
24 0 0	2/0½	2/5½	2/10	3/3	3/8	4/2	4/6	5/-
24 10 0	2/1	2/6	2/11	3/4	3/9	4/3	4/7½	5/1
25 0 0	2/1½	2/6½	3/-	3/5	3/10	4/4	4/8½	5/2½
25 10 0	2/2	2/7	3/0½	3/6	3/11	4/5	4/10	5/4
26 0 0	2/2½	2/8	3/1	3/7	4/-	4/6	4/11	5/5
26 10 0	2/3	2/8½	3/2	3/7½	4/1	4/7	5/-	5/6
27 0 0	2/3½	2/9	3/2½	3/8	4/2	4/8	5/1	5/7½
27 10 0	2/4	2/9½	3/3	3/9	4/3	4/9	5/2	5/9
28 0 0	2/4½	2/10½	3/4	3/10	4/3½	4/10	5/3½	5/10
28 10 0	2/5	2/11	3/5	3/11	4/5	4/11	5/4½	5/11
29 0 0	2/5½	2/11½	3/5½	4/-	4/5½	5/-	5/6	6/0½
29 10 0	2/6	3/-	3/6	4/0½	4/6½	5/1	5/7	6/2
30 0 0	2/6½	3/1	3/7	4/1	4/7½	5/2	5/8	6/3
30 10 0	2/7	3/1½	3/8	4/2	4/8	5/3	5/9	6/4
31 0 0	2/7½	3/2	3/8½	4/3	4/9	5/4	5/10	6/5½
31 10 0	2/8	3/2½	3/9	4/4	4/10	5/5	5/11	6/7
32 0 0	2/8½	3/3	3/10	4/4½	4/11	5/6	6/0½	6/8
32 10 0	2/9	3/4	3/10½	4/5	5/-	5/7	6/1½	6/9
33 0 0	2/9½	3/4½	3/11	4/6	5/1	5/8	6/3	6/10½
33 10 0	2/10	3/5	4/-	4/7	5/2	5/9	6/4	7/-
34 0 0	2/10½	3/5½	4/0½	4/8	5/3	5/10½	6/5	7/1
34 10 0	2/11	3/6	4/1	4/9	5/4	5/11	6/6	7/2
35 0 0	2/11½	3/7	4/2	4/9½	5/4½	6/0½	6/7	7/3½
35 10 0	3/-	3/7½	4/3	4/10	5/5½	6/1½	6/8½	7/5
36 0 0	3/0½	3/8	4/3½	4/11	5/6½	6/2½	6/9½	7/6
36 10 0	3/1	3/8½	4/4	5/-	5/7½	6/3½	6/10½	7/7
37 0 0	3/1½	3/9½	4/5	5/1	5/8½	6/4½	7/-	7/8½
37 10 0	3/2	3/10	4/5½	5/1½	5/9	6/5½	7/1	7/10
38 0 0	3/2½	3/10½	4/6½	5/2½	5/10½	6/6½	7/2	7/11
38 10 0	3/3	3/11	4/7	5/3	5/11	6/7½	7/3	8/-
39 0 0	3/3½	4/-	4/8	5/4	6/-	6/8½	7/4	8/1½
39 10 0	3/4	4/0½	4/8½	5/5	6/1	6/10	7/5½	8/3
40 0 0	3/4½	4/1	4/9½	5/6	6/2	6/10½	7/6½	8/4

LYSAGHT'S GALVANIZED IRON—Corrugated

Approximate price per sheet (to nearest half-penny) based on given rates per ton. This table is not a price list.

28 G

(Supplied in One Inch Corrugations only).

Price per Ton	264 Sheets 5 ft.	222 Sheets 6 ft.	190 Sheets 7 ft.	166 Sheets 8 ft.	148 Sheets 9 ft.	132 Sheets 10 ft.
£ s. d.						
18 0 0	1/4½	1/7½	1/11	2/2	2/5	2/9
18 10 0	1/5	1/8	1/11½	2/3½	2/6	2/9½
19 0 0	1/5	1/8½	2/-	2/3½	2/7	2/10½
19 10 0	1/5½	1/9	2/0½	2/4	2/7½	2/11½
20 0 0	1/6	1/9½	2/1	2/5	2/8½	3/-
20 10 0	1/6½	1/10	2/2	2/5½	2/9	3/1
21 0 0	1/7	1/10½	2/2½	2/6½	2/10	3/2
21 10 0	1/7½	1/11	2/3	2/7	2/10½	3/3
22 0 0	1/8	1/11½	2/3½	2/8	2/11½	3/4
22 10 0	1/8½	2/-	2/4	2/8½	3/0½	3/5
23 0 0	1/9	2/0½	2/5	2/9	3/1	3/6
23 10 0	1/9½	2/1	2/5½	2/10	3/2	3/7
24 0 0	1/10	2/2	2/6	2/10½	3/3	3/8
24 10 0	1/10	2/2½	2/6½	2/11½	3/3½	3/8½
25 0 0	1/10½	2/3	2/7½	3/-	3/4½	3/9½
25 10 0	1/11	2/3½	2/8	3/1	3/5	3/10
26 0 0	1/11	2/4	2/8½	3/1½	3/6	3/11
26 10 0	2/-	2/4½	2/9	3/2	3/7	4/-
27 0 0	2/0½	2/5	2/10	3/3	3/7½	4/1
27 10 0	2/1	2/6	2/10½	3/3½	3/8½	4/2
28 0 0	2/1½	2/6	2/11	3/4½	3/9	4/3
28 10 0	2/2	2/6½	3/-	3/5	3/10	4/3
29 0 0	2/2	2/7½	3/0½	3/6	3/11	4/4½
29 10 0	2/2½	2/8	3/1	3/6½	3/11½	4/5½
30 0 0	2/3	2/8	3/2	3/7½	4/0½	4/6½
30 10 0	2/3½	2/8½	3/3	3/8	4/1½	4/7½
31 0 0	2/4	2/9½	3/3	3/9	4/2	4/8
31 10 0	2/4½	2/10	3/3½	3/9½	4/3	4/9
32 0 0	2/5	2/10½	3/4½	3/10	4/4	4/10
32 10 0	2/5½	2/11	3/5	3/11	4/4½	4/11
33 0 0	2/6	2/11½	3/5½	3/11½	4/5½	5/-
33 10 0	2/6½	3/-	3/6	4/0½	4/6	5/1
34 0 0	2/7	3/0½	3/7	4/1	4/7	5/2
34 10 0	2/7	3/1	3/7½	4/2	4/8	5/2½
35 0 0	2/8	3/1½	3/8	4/2½	4/9	5/3½
35 10 0	2/8	3/2	3/8½	4/3	4/9½	5/4½
36 0 0	2/9	3/2½	3/9½	4/4	4/10½	5/5½
36 10 0	2/9	3/3½	3/10	4/4½	4/11	5/6
37 0 0	2/9½	3/4	3/10½	4/5½	5/-	5/7
37 10 0	2/10	3/4½	3/11	4/6	5/0½	5/8
38 0 0	2/10½	3/5	4/-	4/7	5/1	5/9
38 10 0	2/11	3/5½	4/0½	4/7½	5/2½	5/10
39 0 0	2/11½	3/6	4/1	4/8½	5/3	5/11
39 10 0	3/-	3/6½	4/1½	4/9	5/4	6/-
40 0 0	3/-	3/7	4/2½	4/10	5/5	6/0½

entirely from Australian Raw Materials.

TANK-MAKING SHEETS

JOHN LYSAGHT (AUSTRALIA) LIMITED
guarantee the life of tanks made from their
SPECIAL TANK-MAKING SHEETS

**for the undermentioned periods, provided
the conditions under which such tanks are
used are normal, i.e.:**

Used for the storage of rain water or such other classes of water that do not affect Zinc Coated Sheets; and in such circumstances as will prevent the entry into or contact with the tank, of any substances which are known to be deleterious to the life of Zinc Coated Sheets.

Every sheet of Tank-making Iron has this device branded in Blue on both sides.

LYSAGHT



**AUSTRALIA
TANK MAKING**

Scale of Guarantee

Up to 4 years life John Lysaght (Australia) Ltd. will pay the whole cost of replacement.

Over 4 years and up to 10 years John Lysaght (Australia) Ltd. will pay one-third of the cost of replacement.

Over 10 years and up to 15 years John Lysaght (Australia) Ltd. will pay one-fifth of the cost of replacement.

Where tanks are used for the storage of waters that are known to contain mineral salts or other injurious matter and cannot therefore come under the protection of Lysaght's Guarantee, it is recommended that such tanks be given an interior coating of cement and linseed oil mixed to the following proportions:—

2½ lbs. of cement to 1 pint boiled linseed oil—stirring the mixture well all the time it is being applied. The covering capacity of this mixture is approximately 45 sq. yds. per gallon. It is also recommended that this internal treatment be renewed periodically.

Any complaints, upon being notified direct to John Lysaght (Australia) Ltd., at their Sydney, Melbourne, Brisbane, Adelaide or Fremantle offices, will receive immediate attention.

INSIST ON HAVING YOUR TANKS MADE FROM THE PROPER MATERIALS

Specify "QUEEN'S HEAD" because

Lysaght's Galvanized Iron—Plain

Approximate number of 6ft. sheets to a case of plain iron averaging about 10 cwt.

Approximate weight per sheet 6ft. long, in lbs., based on foregoing list.

Gauge	Width				Gauge	Width			
	24 in.	30 in.	36 in.	48 in.		24 in.	30 in.	36 in.	48 in.
14	30	23	19	15	14	37 $\frac{1}{4}$	48 $\frac{3}{4}$	59	74 $\frac{3}{4}$
16	35	28	23	17	16	32	40	48 $\frac{3}{4}$	66
18	47	37	31	23	18	23 $\frac{3}{4}$	30 $\frac{1}{4}$	36 $\frac{1}{4}$	48 $\frac{3}{4}$
20	57	45	38	28	20	19 $\frac{3}{4}$	25	29 $\frac{1}{4}$	40
22	74	59	50	37	22	15 $\frac{1}{4}$	19	22 $\frac{1}{4}$	30 $\frac{1}{4}$
24	86	69	57	43	24	13	16 $\frac{1}{4}$	19 $\frac{3}{4}$	26
26	123	98	82	61	26	9	11 $\frac{1}{2}$	13 $\frac{3}{4}$	18 $\frac{1}{4}$
28	143	114	95	—	28	7 $\frac{3}{4}$	9 $\frac{3}{4}$	11 $\frac{3}{4}$	—
30	163	133	110	—	30	6 $\frac{3}{4}$	8 $\frac{1}{2}$	10 $\frac{1}{4}$	—

Approximate number of 8ft. sheets to a case of plain iron averaging about 10 cwt.

Approximate weight per sheet 8ft. long, in lbs., based on foregoing list.

Gauge	Width				Gauge	Width			
	24 in.	30 in.	36 in.	48 in.		24 in.	30 in.	36 in.	48 in.
16	26	21	17	13	16	41	52	62 $\frac{1}{2}$	82
18	35	28	23	14	18	32	40	48	64
20	43	34	28	21	20	26	33	40	53
22	55	44	37	28	22	20 $\frac{1}{2}$	25 $\frac{1}{2}$	30 $\frac{1}{4}$	40
24	65	52	43	32	24	17 $\frac{1}{4}$	21 $\frac{1}{2}$	26	35
26	91	73	61	46	26	12 $\frac{1}{4}$	15 $\frac{1}{4}$	18 $\frac{1}{4}$	24 $\frac{1}{2}$
28	103	82	68	—	28	10 $\frac{1}{2}$	13 $\frac{1}{4}$	16 $\frac{1}{2}$	—
30	120	97	84	—	30	9 $\frac{1}{2}$	12	13 $\frac{1}{2}$	—

LYSAGHT



**QUEEN'S HEAD
AUSTRALIA**

LYSAGHT'S "Queen's Head"
Special Flat Plain Galvanized
Iron is a High-grade Sheet of
exceptional finish.

It will stand the severest tests,
and commands the confidence of
Ironworkers everywhere.

the perfection of its Galvanizing.

LYSAGHT'S GALVANIZED IRON—Plain

Approximate price per sheet (to nearest half-penny) based on given rates per ton. This table is not a price list.

16 G

18 G

Price per Ton. £ s. d.	70 Sheets 24 in.	56 Sheets 30 in.	46 Sheets 36 in.	34 Sheets 48 in.	94 Sheets 24 in.	74 Sheets 30 in.	62 Sheets 36 in.	46 Sheets 48 in.
20 0 0	5/8½	7/2	8/8	11/9	4/3	5/5	6/5	8/8½
20 10 0	5/10	7/4	8/11	12/0½	4/4	5/6½	6/7	8/11
21 0 0	6/-	7/6	9/1½	12/4	4/5½	5/8	6/9	9/1½
21 10 0	6/2	7/8	9/4	12/7½	4/7	5/10	6/11	9/4
22 0 0	6/3½	7/10	9/7	12/11	4/8	6/-	7/1	9/7
22 10 0	6/5	8/-	9/9½	13/3	4/9	6/1	7/3	9/9½
23 0 0	6/7	8/2½	10/-	13/6½	4/10½	6/2½	7/5	10/-
23 10 0	6/8½	8/4½	10/2½	13/10	5/-	6/4	7/7	10/2½
24 0 0	6/10	8/7	10/5	14/1½	5/1	6/6	7/9	10/5½
24 10 0	7/-	8/9	10/8	14/5	5/2½	6/7½	7/11	10/8
25 0 0	7/2	8/11	10/10½	14/8½	5/4	6/9	8/1	10/10½
25 10 0	7/3½	9/1	11/1	15/-	5/5	6/10½	8/3	11/1
26 0 0	7/5	9/3	11/3½	15/3½	5/6	7/-	8/5	11/3½
26 10 0	7/7	9/5½	11/6	15/7	5/7½	7/2	8/6½	11/6½
27 0 0	7/8½	9/7½	11/9	15/10½	5/9	7/3½	8/8½	11/9
27 10 0	7/10	9/10	12/-	16/2	5/10	7/5	8/10	11/11½
28 0 0	8/-	10/-	12/2	16/5½	5/11½	7/7	9/0½	12/2
28 10 0	8/2	10/2	12/4½	16/9	6/1	7/8½	9/2	12/4½
29 0 0	8/3½	10/4	12/7	17/0½	6/2	7/10	9/4	12/7½
29 10 0	8/5	10/6	12/10	17/4	6/3	7/11½	9/6	12/10
30 0 0	8/7	10/8½	13/0½	17/7½	6/4½	8/1	9/8	13/0½
30 10 0	8/8½	10/10½	13/3	17/11	6/6	8/3	9/10	13/3
31 0 0	8/10	11/1	13/6	18/2½	6/7	8/4½	10/-	13/6
31 10 0	9/-	11/3	13/8½	18/6½	6/8½	8/6	10/2	13/8½
32 0 0	9/2	11/5	13/11	18/10	6/9½	8/7½	10/4	13/11
32 10 0	9/3½	11/7	14/1½	19/1½	6/11	8/9	10/6	14/1½
33 0 0	9/5	11/9	14/4	19/5	7/-	8/11	10/7½	14/4
33 10 0	9/7	11/11½	14/7	19/8½	7/1½	9/0½	10/9	14/7
34 0 0	9/8½	12/1½	14/9½	20/-	7/3	9/2½	10/11½	14/9½
34 10 0	9/10	12/4	15/-	20/3½	7/4	9/4	11/1½	15/-
35 0 0	10/-	12/6	15/2½	20/7	7/5	9/5½	11/3	15/2½

LYSAGHT

LYSAGHT'S "Fleur-de-Lis"

Plain Iron is largely used for the manufacture of lighter classes of guttering, down pipe, ridging, etc., its smoothness of surface and freedom from buckle being conspicuous features.



The Life of a Galvanized Sheet is Dependent

upon the weight and perfection of its *Zinc Coating*. This fact is universally acknowledged by scientists, and is not controvertible.

Claims have been advanced that the life of a galvanized sheet is affected by the material upon which the zinc coating is deposited. These claims cannot be sustained. So long as the coating remains unimpaired, *corrosion cannot take place*.

LYSAGHT'S

Orb and Queen's Head Brands hold the premier position for *perfection of galvanizing*, and the *life* of these sheets is *guaranteed*.

"ORB" IRON is still the Best in the World.

LYSAGHT'S GALVANIZED IRON—Plain

Approximate price per sheet (to nearest half-penny) based on given rates per ton. This table is not a price list.

20 G

22 G

Price per Ton.	114 Sheets 24 in.	90 Sheets 30 in.	76 Sheets 36 in.	56 Sheets 48 in.	148 Sheets 24 in.	118 Sheets 30 in.	100 Sheets 36 in.	74 Sheets 48 in.
£ s. d.								
18 0 0	3/2	4/-	4/9	6/5	2/5	3/0½	3/7	4/10
18 10 0	3/3	4/1	4/10	6/7½	2/6	3/1½	3/8½	5/-
19 0 0	3/4	4/3	5/-	6/9½	2/7	3/2½	3/9½	5/1½
19 10 0	3/5	4/4	5/1½	6/11½	2/7½	3/3½	3/11	5/3½
20 0 0	3/6	4/5	5/3	7/2	2/8	3/4½	4/-	5/5
20 10 0	3/7	4/7	5/5	7/4	2/9	3/5½	4/1	5/6½
21 0 0	3/8	4/8	5/6	7/6	2/10	3/6½	4/2½	5/8
21 10 0	3/9	4/9	5/8	7/8	2/11	3/7½	4/3½	5/10
22 0 0	3/10	4/11	5/9½	7/10½	2/11½	3/8½	4/5	5/11½
22 10 0	3/11	5/-	5/11	8/0½	3/0½	3/10	4/6	6/1
23 0 0	4/-	5/1	6/0½	8/2½	3/1	3/11	4/7	6/2½
23 10 0	4/1	5/3	6/2½	8/5	3/2	4/-	4/8½	6/4½
24 0 0	4/2	5/4	6/4	8/7	3/3	4/1	4/9½	6/6
24 10 0	4/3½	5/5	6/5	8/9	3/4	4/2	4/11	6/7½
25 0 0	4/4½	5/7	6/7	8/11	3/4½	4/3	5/-	6/9
25 10 0	4/5½	5/8	6/8½	9/1½	3/5	4/4	5/1	6/11
26 0 0	4/7	5/9	6/10	9/3½	3/6	4/5	5/2½	7/0½
26 10 0	4/8	5/11	7/-	9/5½	3/7	4/6	5/3½	7/2
27 0 0	4/9	6/-	7/1	9/8	3/8	4/7	5/5	7/3½
27 10 0	4/10	6/1	7/2½	9/10	3/9	4/8	5/6	7/5
28 0 0	4/11	6/3	7/4½	10/-	3/9½	4/9	5/7	7/7
28 10 0	5/-	6/4	7/6	10/2	3/10	4/10	5/8½	7/8½
29 0 0	5/1	6/5	7/7½	10/4½	3/11	4/11	5/9½	7/10
29 10 0	5/2	6/7	7/9	10/6½	4/-	5/-	5/11	8/-
30 0 0	5/3	6/8	7/10	10/8½	4/1	5/1	6/-	8/1½
30 10 0	5/4	6/9	8/-	10/11	4/1½	5/2	6/1	8/3
31 0 0	5/5	6/11	8/2	11/1	4/2	5/3	6/2½	8/4½
31 10 0	5/6	7/-	8/3½	11/3	4/3	5/4	6/3½	8/6½
32 0 0	5/7	7/1	8/5	11/5	4/4	5/5	6/5	8/8
32 10 0	5/8	7/3	8/6½	11/7½	4/5	5/6	6/6	8/9½
33 0 0	5/9	7/4	8/8	11/9½	4/5½	5/7	6/7	8/11
33 10 0	5/10	7/5	8/10	11/11½	4/6	5/8	6/8½	9/0½
34 0 0	5/11	7/7	8/11	12/1½	4/7	5/9	6/9½	9/2½
34 10 0	6/0½	7/8	9/1	12/4	4/8	5/10	6/11	9/4
35 0 0	6/1½	7/9	9/2½	12/6	4/9	5/11	7/-	9/5½
35 10 0	6/2½	7/11	9/4	12/8	4/9½	6/-	7/1	9/7
36 0 0	6/3½	8/-	9/5½	12/10½	4/10	6/1	7/2½	9/9
36 10 0	6/5	8/1	9/7	13/0½	4/11	6/2	7/3½	9/10½
37 0 0	6/6	8/3	9/9	13/2½	5/-	6/3	7/5	10/-
37 10 0	6/7	8/4	9/10½	13/4½	5/1	6/4	7/6	10/1½
38 0 0	6/8	8/5	10/-	13/7	5/1½	6/5	7/7	10/3½
38 10 0	6/9	8/7	10/1½	13/9	5/2	6/6	7/8½	10/5
39 0 0	6/10	8/8	10/3	13/11	5/3	6/7	7/9½	10/6½
39 10 0	6/11	8/9	10/4½	14/1½	5/4	6/8	7/11	10/8
40 0 0	7/-	8/11	10/6	14/3½	5/5	6/9	8/-	10/10

LYSAGHT'S GALVANIZED IRON—Plain

Approximate price per sheet (to nearest half-penny) based on given rates per ton. This table is not a price list.

24 G

26 G

Price per Ton.	172 Sheets 24 in.	138 Sheets 30 in.	114 Sheets 36 in.	86 Sheets 48 in.	246 Sheets 24 in.	196 Sheets 30 in.	164 Sheets 36 in.	122 Sheets 48 in.
£ s. d.								
18 0 0	2/1	2/7	3/2	4/2	1/5½	1/10	2/2½	2/11
18 10 0	2/2	2/8	3/3	4/4	1/6	1/10½	2/3	3/0½
19 0 0	2/2½	2/9	3/4	4/5	1/6½	1/11½	2/4	3/1½
19 10 0	2/3	2/10	3/5	4/6½	1/7	2/-	2/4½	3/2½
20 0 0	2/3½	2/11	3/6	4/8	1/7½	2/0½	2/5½	3/3½
20 10 0	2/4½	3/-	3/7	4/9½	1/8	2/1	2/6	3/4½
21 0 0	2/5	3/0½	3/8	4/11	1/8½	2/1½	2/6½	3/5½
21 10 0	2/6	3/1½	3/9	5/-	1/9	2/2½	2/7½	3/6½
22 0 0	2/7	3/2	3/10	5/1½	1/9½	2/3	2/8	3/7½
22 10 0	2/7½	3/3	3/11	5/3	1/10	2/3½	2/9	3/8½
23 0 0	2/8	3/4	4/-	5/4½	1/10½	2/4	2/9½	3/9½
23 10 0	2/9	3/5	4/1½	5/6	1/11	2/5	2/10½	3/10½
24 0 0	2/9½	3/6	4/2½	5/7	1/11½	2/5½	2/11	3/11½
24 10 0	2/10	3/6½	4/3½	5/8½	2/-	2/6	3/-	4/0½
25 0 0	2/11	3/7½	4/4½	5/10	2/0½	2/6½	3/0½	4/1½
25 10 0	3/-	3/8½	4/5½	5/11½	2/1	2/7	3/1½	4/2
26 0 0	3/0½	3/9½	4/7	6/1	2/1½	2/8	3/2	4/3
26 10 0	3/1	3/10	4/8	6/2	2/2	2/8½	3/3	4/4
27 0 0	3/2	3/11	4/9	6/3½	2/2½	2/9	3/3½	4/5
27 10 0	3/2½	4/-	4/10	6/5	2/3	2/9½	3/4	4/6
28 0 0	3/3	4/1	4/11	6/6	2/3½	2/10½	3/5	4/7
28 10 0	3/4	4/1½	5/-	6/7½	2/4	2/11	3/5½	4/8
29 0 0	3/4½	4/2½	5/1	6/9	2/4½	2/11½	3/6½	4/9
29 10 0	3/5	4/3	5/2	6/10½	2/5	3/-	3/7	4/10
30 0 0	3/6	4/4	5/3	6/11½	2/5½	3/0½	3/8	4/11
30 10 0	3/6½	4/5	5/4	7/1	2/6	3/1½	3/8½	5/-
31 0 0	3/7½	4/6	5/5	7/2½	2/6	3/2	3/9½	5/1
31 10 0	3/8	4/6½	5/6	7/4	2/6½	3/2½	3/10	5/2
32 0 0	3/9	4/7½	5/7	7/5½	2/7	3/3	3/11	5/3
32 10 0	3/9½	4/8½	5/8	7/7	2/7½	3/4	3/11½	5/4
33 0 0	3/10	4/9½	5/9½	7/8½	2/8	3/4½	4/0½	5/5
33 10 0	3/11	4/10	5/10½	7/9½	2/8½	3/5	4/1	5/6
34 0 0	3/11½	4/11½	6/-	7/11	2/9	3/5½	4/2	5/7
34 10 0	4/-	5/-	6/0½	8/0½	2/9½	3/6	4/2½	5/8
35 0 0	4/1	5/1	6/1½	8/2	2/10	3/7	4/3	5/9
35 10 0	4/1½	5/2	6/2½	8/3½	2/10½	3/7½	4/4	5/10
36 0 0	4/2½	5/3	6/4	8/4½	2/11	3/8	4/4½	5/11
36 10 0	4/3	5/3½	6/5	8/6	2/11½	3/8½	4/5½	6/-
37 0 0	4/4	5/4	6/6	8/7½	3/-	3/9½	4/6	6/1
37 10 0	4/4½	5/5	6/7	8/9	3/0½	3/10	4/7	6/2
38 0 0	4/5	5/6½	6/8	8/10	3/1	3/10½	4/7½	6/2½
38 10 0	4/6	5/7	6/9	8/11½	3/1½	3/11	4/8½	6/3½
39 0 0	4/6½	5/8	6/10	9/1	3/2	4/-	4/9	6/4½
39 10 0	4/7	5/9	6/11	9/2½	3/2½	4/0½	4/10	6/5½
40 0 0	4/8	5/10	7/-	9/4	3/3	4/1	4/10½	6/6½

fully guaranteed by the Manufacturers.

LYSAGHT'S GALVANIZED IRON—Plain

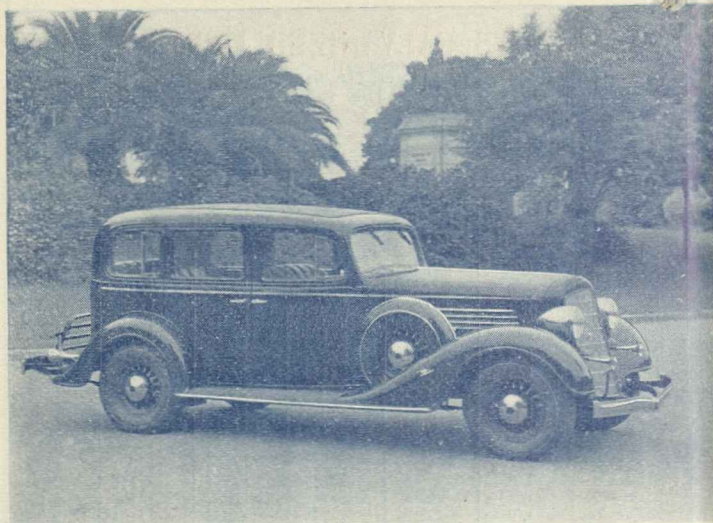
Approximate price per sheet (to nearest half-penny) based on given rates per ton. This table is not a price list.

28 G.

30 G.

Price per Ton.	286 Sheets. 24 in.	228 Sheets. 30 in.	190 Sheets. 36 in.	326 Sheets. 24 in.	266 Sheets. 30 in.	220 Sheets. 36 in.
£18 0 0	1/3	1/7	1/10½	1/1½	1/4	1/7½
18 10 0	1/3½	1/7½	1/11½	1/1½	1/4½	1/8
19 0 0	1/4	1/8	2/-	1/2	1/5	1/8½
19 10 0	1/4½	1/8½	2/0½	1/2½	1/5½	1/9½
20 0 0	1/5	1/9	2/1½	1/2½	1/6	1/10
20 10 0	1/5	1/9½	2/2	1/3	1/6½	1/10½
21 0 0	1/5½	1/10	2/2½	1/3½	1/7	1/11
21 10 0	1/6	1/10½	2/3	1/4	1/7½	1/11½
22 0 0	1/6½	1/11	2/4	1/4	1/8	2/-
22 10 0	1/7	1/11½	2/4½	1/4½	1/8½	2/0½
23 0 0	1/7½	2/-	2/5	1/5	1/9	2/1
23 10 0	1/7½	2/0½	2/5½	1/5½	1/9	2/1½
24 0 0	1/8	2/1½	2/6½	1/5½	1/9½	2/2
24 10 0	1/8½	2/2	2/7	1/6	1/10	2/2½
25 0 0	1/9	2/2½	2/7½	1/6½	1/10½	2/3½
25 10 0	1/9½	2/3	2/8	1/7	1/11	2/4
26 0 0	1/10	2/3½	2/9	1/7	1/11½	2/4½
26 10 0	1/10	2/4	2/9½	1/7½	2/-	2/5
27 0 0	1/10½	2/4½	2/10	1/8	2/0½	2/5½
27 10 0	1/11	2/5	2/10½	1/8	2/1	2/6
28 0 0	1/11½	2/5½	2/11½	1/8½	2/1½	2/6½
28 10 0	2/-	2/6	3/-	1/9	2/1½	2/7
29 0 0	2/0½	2/6½	3/0½	1/9½	2/2	2/7½
29 10 0	2/1	2/7	3/1½	1/9½	2/2½	2/8
30 0 0	2/1	2/7½	3/2	1/10	2/3	2/8½
30 10 0	2/1½	2/8	3/2½	1/10½	2/3½	2/9½
31 0 0	2/2	2/8½	3/3	1/11	2/4	2/10
31 10 0	2/2½	2/9	3/4	1/11	2/4½	2/10½
32 0 0	2/3	2/9½	3/4½	1/11½	2/5	2/11
32 10 0	2/3½	2/10	3/5	2/-	2/5½	2/11½
33 0 0	2/3½	2/10½	3/5½	2/6½	2/6	3/-
33 10 0	2/4	2/11½	3/6½	2/0½	2/6	3/0½
34 0 0	2/4½	3/-	3/7	2/1	2/6½	3/1
34 10 0	2/5	3/0½	3/7½	2/1½	2/7	3/1½
35 0 0	2/5½	3/1	3/8	2/2	2/7½	3/2
35 10 0	2/6	3/1½	3/9	2/2	2/8	3/2½
36 0 0	2/6	3/2	3/9½	2/2½	2/8½	3/3½
36 10 0	2/6½	3/2½	3/10	2/3	2/9	3/4
37 0 0	2/7	3/3	3/10½	2/3	2/9½	3/4½
37 10 0	2/7½	3/3½	3/11½	2/3½	2/10	3/5
38 0 0	2/8	3/4	4/-	2/4	2/10½	3/5½
38 10 0	2/8½	3/4½	4/0½	2/4½	2/10½	3/6
39 0 0	2/8½	3/5	4/1½	2/4½	2/11	3/6½
39 10 0	2/9	3/5½	4/2	2/5	2/11½	3/7
40 0 0	2/9½	3/6	4/2½	2/5½	3/-	3/7½

The Best is the Cheapest. Quality is



LYSAGHT'S SHEET STEEL SPECIALTIES

The extraordinary progress that has been made in the adaption of

BLACK STEEL SHEETS

to so many and varied of our present-day requirements has only been possible by the scientific production of

Special Quality Sheets for particular purposes.

In this direction the "ORB" Iron Works of

JOHN LYSAGHT LTD.

have for years devoted their resources to the manufacture of the highest quality sheets for—

The Automobile Industry
The Pressed Metal Industry
The Enamelling Industry
The Tinning & Plating Industry

The Steel Furniture Industry
The Electrical Industry
The Rail. Roll'g Stock Industry
Etc., Etc.

Manufacturers are invited to submit their enquiries and specifications to the offices of

JOHN LYSAGHT (AUST.) LTD.

Sydney - Melbourne - Adelaide - Brisbane - Fremantle.

REMEMBERED long after Price is Forgotten.

LYSAGHT'S BLACK SHEETS

GAUGE LIST—Showing Maximum Lengths, Widths and Areas rolled at Lysaght's Newcastle Works.

Burning Gauge	Thickness in		Maximum		Area Sq. Ft.	APPROXIMATE SHEETS PER TON										
	Ins.	Mm.	Lgth. Ins.	Width. Ins.		Stock Sizes 7 3/4" x		84" x				96" x				
				24"		30"	36"	24"	30"	36"	24"	30"	36"			
3/16"	7.65	.1875	4.762	48	16	10g.	37	29	24	32	26	21	27	22	18	
8	6.41	.1570	3.988	48	24	12g.	47	37	31	41	34	27	35	29	23	
9	5.70	.1398	3.551	48	24	14g.	59	47	39	51	42	34	44	36	29	
10	5.10	.1250	3.175	48	32	16g.	74	59	49	65	54	43	55	46	37	
11	4.54	.1113	2.827	48	32	18g.	94	75	62	82	68	55	70	58	47	
12	4.04	.0991	2.517	48	32	20g.	119	95	79	104	86	69	89	74	59	
13	3.59	.0882	2.240	48	35	22g.	149	119	99	130	108	86	111	92	74	
14	3.20	.0785	1.994	48	35	24g.	188	150	125	165	137	110	141	117	94	
15	2.85	.0699	1.775	48	40	26g.	239	191	159	209	174	139	179	149	119	
16	2.55	.0625	1.587	48	40	28g.	301	241	200	263	219	175	225	187	150	
17	2.26	.0556	1.412	48	42	30g.	373	298	248	336	276	217	279	232	186	
18	2.02	.0495	1.257	48	42											
19	1.79	.0440	1.118	48	42											
20	1.59	.0392	.996	48	42											
21	1.42	.0349	.886	48	42											
22	1.27	.0312	.794	48	42											
23	1.13	.0278	.707	48	42											
24	1.01	.0247	.629	48	42											
25	.89	.0220	.560	48	42											
26	.79	.0196	.498	48	36											
27	.70	.0174	.443	48	36											
28	.63	.0156	.396	42	30											
29	.56	.0139	.353	40	30											
30	.50	.0123	.312	38	25											

Full stocks are available throughout Australia of the following world-wide known and used qualities:—Lysaght Southern Cross, Lysaght Sunstar, Lysaght Lyco, Lysaght Auto, Lysaght Electrical Sheets. The last two qualities being of English manufacture.

Full stocks are available throughout Australia of the following world-wide known and used qualities:—Lysaght Southern Cross, Lysaght Sunstar, Lysaght Lyco, Lysaght Auto, Lysaght Electrical Sheets. The last two qualities being of English manufacture.

NOTE.—The maximum length and width cannot be supplied in the same sheet, only the maximum area. The latter divided by the length will give the maximum width for that length, and vice versa. For more detailed and technical information write for LYSAGHT'S BLACK SHEET BROCHURE.

LYSAGHT'S BLACK SHEETS

A specially illustrated and descriptive Brochure is available containing most of the technical and commercial information that Engineers, Draftsmen and Sheet Metal Works are likely to require in relation to Black Steel Sheets.

A copy will be forwarded post free on application to Box 196D, G.P.O., Sydney.

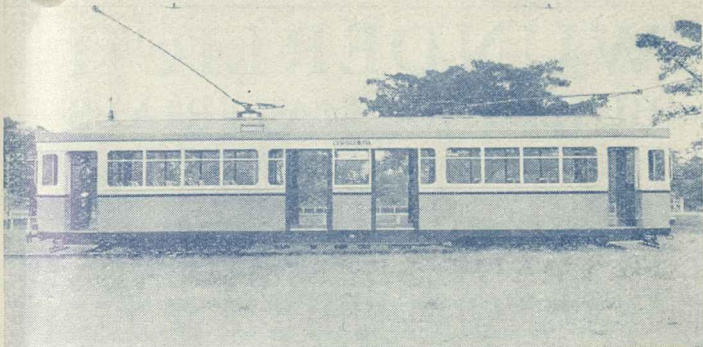
APPROXIMATE WEIGHT PER SHEET, IN LBS., OF LYSAGHT'S BLACK STEEL SHEETS.

INCHES

Gauges	72 x 24	72 x 30	72 x 36	84 x 24	84 x 30	84 x 36	96 x 24	96 x 30	96 x 36	108 x 24	108 x 30	108 x 36	120 x 36
3/16in.	91.80	114.75	137.70	107.10	133.88	160.65	122.40	153.00	183.60	137.70	172.13	206.55	229.50
10	61.20	76.50	91.80	71.40	89.25	107.10	81.60	102.00	122.40	91.80	114.75	137.70	153.00
11	54.48	68.10	81.72	63.56	79.45	95.34	72.64	90.80	108.96	81.72	102.15	122.58	136.20
12	48.48	60.60	72.72	56.56	70.70	84.84	64.64	80.80	96.96	72.72	90.90	109.08	121.20
13	43.08	53.85	64.62	50.26	62.83	75.39	57.44	71.80	86.16	64.62	80.78	96.93	107.70
14	38.40	48.00	57.60	44.80	56.00	67.20	51.20	64.00	76.80	57.60	72.00	86.40	96.00
15	34.20	42.75	51.30	39.90	49.88	59.85	45.60	57.00	68.40	51.30	64.13	76.95	85.50
16	30.60	38.25	45.90	35.70	44.63	53.55	40.80	51.00	61.20	45.90	57.38	68.85	76.50
17	27.12	33.90	40.68	31.64	39.55	47.46	36.16	45.20	54.24	40.68	50.85	61.02	67.80
18	24.24	30.30	36.36	28.28	35.35	42.42	32.32	40.40	48.48	36.36	45.45	54.54	60.60
19	21.48	26.85	32.22	25.06	31.33	37.59	28.64	35.80	42.96	32.22	40.28	48.38	53.70
20	19.08	23.85	28.62	22.26	27.83	33.39	25.44	31.80	38.16	28.62	35.78	42.93	47.70
21	17.04	21.30	25.56	19.88	24.85	29.82	22.72	28.40	34.08	25.56	31.95	38.34	42.60
22	15.24	19.05	22.86	17.78	22.23	26.67	20.32	25.40	30.48	22.86	28.58	34.29	38.10
23	13.56	16.95	20.34	15.82	19.78	23.73	18.08	22.60	27.12	20.34	25.43	30.51	33.90
24	12.12	15.15	18.18	14.14	17.68	21.21	16.16	20.20	24.24	18.18	22.73	27.27	30.30
25	10.68	13.35	16.02	12.46	15.58	18.69	14.24	17.80	21.36	16.02	20.03	24.03	26.70
26	9.48	11.85	14.22	11.06	13.83	16.59	12.64	15.80	18.96	14.22	17.78	21.33	23.70
27	8.40	10.50	12.60	9.80	12.25	14.70	11.20	14.00	16.80	12.60	15.75	18.90	21.00
28	7.56	9.45	11.34	8.82	11.03	13.23	10.08	12.60	15.12	11.34	14.18	17.01	18.90
29	6.72	8.40	10.08	7.84	9.80	11.76	8.96	11.20	13.44	10.08	12.60	15.12	16.80
30	6.00	7.50	9.00	7.00	8.75	10.50	8.00	10.00	12.00	9.00	11.25	13.50	15.00

This table must be read in conjunction with the table of maximum sizes which will be found on page 27. A number of sizes and gauges whose weights are shown above, are outside the manufacturing range of our Newcastle Works, and are only included for the convenience of clients.

"QUEEN'S HEAD" IRON is branded and guaranteed.



ALL STEEL Railway Carriages and Waggon

In all the progressive countries of the world it is becoming increasingly noticeable that the Railway Authorities are building new rolling stock entirely of steel.

Every collision or accident points to the fact that wooden railway carriages are most dangerous to passengers, from the point of view of splintering and their liability to ignite, and it has been proved in accidents that passengers have a better chance of escape from injury or death in all-steel vehicles than in the old-fashioned wooden carriages.

For years past, John Lysaght Limited, of Newport (Eng.), have specialized in the manufacture of steel panelling for carriages, and steel sheeting for waggons, all qualities being prepared dead flat, square, and exact to any specified size.

Thousands of tons of such panels are in use in various countries.

Railway engineers in Australia are profiting from the experiments made overseas, and the local construction of all-steel carriages for both rail and tramway purposes is proceeding rapidly.

The illustration above is the first of 200 all-steel tram-cars built to the design and order of the N.S.W. Government. The whole of the panels and steel sheeting in these cars was rolled at

LYSAGHT'S NEWCASTLE WORKS.

WUNDERLICH BUILDING MATERIALS

Manufactured from

LYSAGHT'S GALVANIZED and BLACK STEEL SHEETS

For over forty years Wunderlich Limited have used Lysaght's Galvanized and Black Steel Sheets in the manufacture of their—

Art Metal Ceilings
Art Metal Wall Linings
Awning Fascias and Ceilings
Galvanized Exterior Sheets
Window Hoods
Skylights, Roof Cows
Ventilating Ridge
Wall Ventilators, Perforated Sheets
Steel Skirting and Picture Rails
Glazing Bars
Steel Door Frames
Hollow Metal Doors
Drawn Steel Mouldings
Steel Reflectors
Architectural Metal Work

WUNDERLICH LIMITED

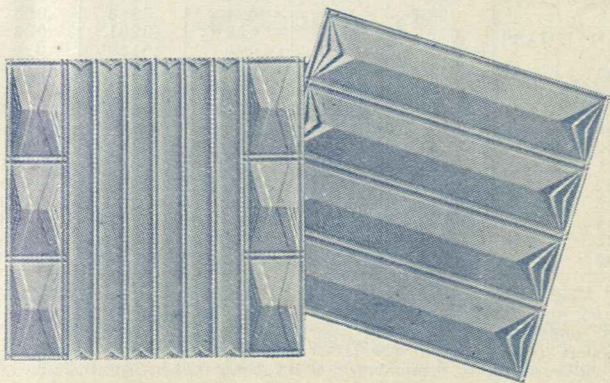
Head Office: BAPTIST ST., REDFERN, N.S.W.

BRANCHES IN EVERY STATE

MODERN DECORATION IN LYSAGHT'S STEEL

WUNDERLICH CEILINGS

The popular application of metal to modern interior decoration has inspired these new ceiling patterns in Wunderlich Art Metal. The crisp planes and angles of the new ceilings are in keeping with the present-day vogue for geometrical design—the general use of indirect lighting enhances the patterns. Lysaght's Steel is the ideal ceiling material for it is fire-resisting, proof against white ants and vermin, will not crack, flake, rot or fall and will last a lifetime.



COMPARISON OF WIRE AND SHEET GAUGES

Gauge	Approx. thickness in inches	Thickness or Diameter in Inches.				
		Birming- ham Sheet*	Stubbs (Birming- ham Wire)	Imperial standard (British)	Brown & Sharp American Standard	Roebling (Steel Wire)
4/0	$\frac{1}{8}$	.542	.454	.400	.4600	.393
3/0		.500	.425	.372	.4096	.362
2/0		.445	.380	.348	.3648	.331
0		.400	.340	.324	.3249	.307
1		.353	.300	.300	.2893	.283
2		.315	.284	.276	.2576	.263
3		.280	.259	.252	.2294	.244
4	$\frac{1}{4}$	.250	.238	.232	.2043	.225
5		.222	.220	.212	.1819	.207
6		.198	.203	.192	.1620	.192
7		.176	.180	.176	.1443	.177
8		.157	.165	.160	.1285	.162
9		.140	.148	.144	.1144	.148
10	$\frac{1}{2}$	.125	.134	.128	.1019	.135
11	7/64	.111	.120	.116	.0907	.120
12	3/32	.099	.109	.104	.0808	.105
13		.088	.095	.092	.0720	.092
14	5/64	.078	.083	.080	.0641	.080
15		.070	.072	.072	.0571	.072
16	1/16	.062	.065	.064	.0508	.063
17		.056	.058	.056	.0453	.054
18	1/20	.050	.049	.048	.0403	.047
19		.044	.042	.040	.0359	.041
20		.039	.035	.036	.0320	.035
21		.035	.032	.032	.0285	.032
22	1/32	.031	.028	.028	.0253	.028
23		.028	.025	.024	.0226	.025
24	1/40	.025	.022	.022	.0201	.023
25		.022	.020	.020	.0179	.020
26		.020	.018	.018	.0159	.018
27		.017	.016	.0164	.0142	.017
28	1/64	.016	.014	.0148	.0126	.016
29		.014	.013	.0136	.0113	.015
30	1/80	.012	.012	.0124	.0100	.014
31		.011	.010	.0116	.00893	.0135
32		.0098	.009	.0108	.00795	.0130
33		.0087	.008	.0100	.00708	.0110
34	1/128	.0077	.007	.0092	.00630	.0100
35		.0069	.005	.0084	.00561	.0095
36		.0061	.004	.0076	.00500	.0090

*This Gauge (B.G.) is the customary commercial gauge for Iron and Steel Sheets, whether Black, Galvanized or tinned. It is sometimes erroneously referred to as the Birmingham Wire Gauge (B.W.G.), but the latter is a different gauge.

It is useful to remember that 10 B.G. is $\frac{1}{4}$ in., 16 B.G. is $\frac{1}{16}$ in., and that for every addition of 6 to the gauge number, the thickness is halved.

"QUEEN'S HEAD" IRON is branded and guaranteed.

LYSAGHT'S TANK-MAKING IRON



This huge tank is made from
18 Gauge Orb

Manufactured at

LYSAGHT'S NEWCASTLE (N.S.W.) WORKS

Dimensions:—

HEIGHT OVERALL		22 feet
(Wall 18ft. 6in., Cone 3ft. 6in.)		
CIRCUMFERENCE		50 feet
DIAMETER		15ft. 6in.
CAPACITY { WATER		24,000 gallons
WHEAT		3,000 bushels
WEIGHT (approx.)		2 tons

WHERE LONG LIFE IS DESIRED FROM A TANK

whether intended for the storage of water or grain, only LYSAGHT'S supercoated tank-making quality sheets should be used.

Under certain circumstances the life of such tanks is actually guaranteed. (See page 19).

"ORB" IRON is still the Best in the World.

Something About Tanks

**CIRCULAR
CORRUGATED IRON.
REPUTED CAPACITY.**

Diam.	Height of Tank.			
	4 ft.	5 ft.	6 ft.	8 ft.
ft. in.	gall.	gall.	gall.	gall.
3 3	200	250	300	400
3 6	240	300	360	480
3 9	280	350	420	560
4 0	310	390	470	620
4 4	—	—	540	720
4 6	—	—	590	787
5 0	—	—	720	960
6 0	—	—	1,050	1,400

WATER.

- 1 pint pure water weighs 1½ lb.
- 1 gallon pure water contains 277·274 cubic ins.
- 1 cubic ft. distilled water, 62 deg. Fahr., weighs 62·321 lbs.
- 1 cubic yard distilled water, 62 deg. Fahr., weighs ¾ ton.
- 1 cubic fathom distilled water, 62 deg. Fahr., weighs 6 tons.

To Compute the Capacity of a Tank

SQUARE OR RECTANGULAR.—Multiply the length by the breadth and the product by the depth; the result multiplied by 6½ (6.2321) will give the base and contents in gallons.

CIRCULAR.—Rule A—Multiply the circumference by itself and the product by half the height.

Example:—Circumference 20 ft., height 6 ft.

20 ft. x 20 ft. x 3 ft. 1,200 gals. approximate capacity.

Rule B.—Multiply the diameter by itself and the product by five times the height.

Example:—Diameter 6 ft., height 6 ft.

6 ft. x 6 ft. x 30 ft. = 1,080 gals. approximate capacity.

A GOOD TANK

It is highly necessary that a Corrugated Iron Tank should possess lasting properties, and adaptability to withstand the climatic and special water conditions of the locality in which it is to be used.

Discriminating buyers are now insisting that their tanks be made from LYSAGHT'S TANK-MAKING SHEETS because the life of such tanks is actually guaranteed by JOHN LYSAGHT (AUST.) LTD. (See page 19).

LYSAGHT



**AUSTRALIA
TANK MAKING**

The durable properties of LYSAGHT'S SPECIAL TANK-MAKING SHEETS lie in the super-coating of Zinc that is evenly and perfectly distributed over both sides.

For the protection of buyers these sheets are prominently and distinctively branded in blue on both sides.

If you are buying a tank, insist on it being made with the Guaranteed material—

LYSAGHT'S TANK-MAKING SHEETS

Lysaght's Galvanized Iron required for manufacture of circular corrugated tanks of various capacities.

It cannot be too strongly emphasised that only the correct grade of sheets should be used for Tankmaking purposes, and when this is done JOHN LYSAGHT (Aust.) LTD. actually Guarantee the life of the tanks (see page 19).

Capacity of Tank Gals.	Height	Diam.	Iron Required
	ft.	ft. in.	
100	2	3 2	1 sheet 10ft. x 24G. Tankmaking Iron, curved full circle. 1 sheet each 24 x 24G. and 24 x 26G., "Queen's Head" Plain Iron.
200	4	3 2	2 sheets 10ft. x 24G. Tankmaking Iron, each curved full circle. 1 sheet each 24 x 24G. and 24 x 26G. "Queen's Head" Plain Iron.
300	6	3 2	3 sheets 10ft. x 24G. Tankmaking Iron, each curved full circle. 1 sheet each 24 x 24G. and 24 x 26G. "Queen's Head" Plain Iron.
300 (squat)	4	4 0	2 sheets 6ft. and 2 sheets 7ft. x 24G. Tankmaking, curved one 6ft. and one 7ft. to circle. 1 sheet each 36 x 24G. and 36 x 26G. "Queen's Head" Plain Iron.
400	6	3 8	6 sheets 6ft. x 24G. Tankmaking Iron, each curved half circle. 1 sheet each 30 x 24G. and 30 x 26G. "Queen's Head" Plain Iron.
400 (squat)	4	4 6	4 sheets 7ft. x 24G. Tankmaking Iron, each curved half circle. 2 sheets each 24 x 24G. and 24 x 26G. "Queen's Head" Plain Iron.
500	6	4 2	3 sheets 6ft. and 3 sheets 7ft. x 24G. Tankmaking iron, curved one 6ft. and one 7ft. sheet to circle. 1 sheet each 36 x 24 G. and 36 x 26G. "Queen's Head" Plain Iron.
500 (squat)	4	5 0	4 sheets 8ft. x 24G. Tankmaking Iron, each curved half circle. 1 sheet 30in. and 1 sheet 33in. x 24G. "Queen's Head" Plain Iron; and 1 sheet 30in. and 1 sheet 33in. x 26G. "Queen's Head" Plain Iron.
600	6	4 6	6 sheets 7ft. x 24G. Tankmaking Iron, each curved half circle. 2 sheets each 24in. x 24G. and 24in. x 26G. "Queen's Head" Plain Iron.

**Lysaght's Galvanized Iron required for the
manufacture of tanks—Continued.**

Capacity of Tank Gals.	Height	Diam.	Iron Required
	ft.	ft. in.	
600 (squat)	4	5 3	2 sheets 8ft. and 2 sheets 9ft. x 24G. Tankmaking Iron, curved one 8ft. and one 9ft. to circle. 1 sheet each 30in. and 36in. x 24G. "Queen's Head" Plain Iron; and 1 sheet each 30in. and 36in. x 26G. "Queen's Head" Plain Iron.
800	6	5 2	6 sheets 8ft. x 24G. Tankmaking Iron, each curved half circle. 2 sheets each 30 x 24G. and 30 x 26G. "Queen's Head" Plain Iron.
800 (squat)	4	6 3	4 sheets 10ft. x 24G. Tankmaking Iron, each curved half circle. 2 sheets 24in. and 1 sheet 30in. x 24G. "Queen's Head" Plain Iron. 2 sheets 24in. and 1 sheet 30in. x 26G. "Queen's Head" Plain Iron.
1000 Two 9' sheets to circle	6	5 8	6 sheets 9ft. x 24G. Tankmaking Iron, each curved half circle. 2 sheets each 36 x 24G. and 2 sheets 36in. x 26G. "Queen's Head" Plain Iron.
1000 (Full size)	6	5 10	3 sheets each 9ft. and 3 sheets 10ft. x 24G. Tankmaking Iron, curved one 9ft. and one 10ft. sheet to circle. 2 sheets each 36 x 24G. and 36 x 26G. "Queen's Head" Plain Iron.
1000 (squat)	4	7 0	4 sheets 11ft. x 24G. Tankmaking Iron, each curved half circle. 2 sheets 30 x 24G. and 1 sheet 36in. x 24G. "Queen's Head" Plain Iron. 2 sheets 30 x 26G. and 1 sheet 36in. x 26G. "Queen's Head" Plain Iron.
1200	6	6 4	6 sheets 10ft. x 24G. Tankmaking Iron, each curved half circle. 1 sheet 24in. and 2 sheets 30in. x 24G. 1 sheet 24in. and 2 sheets 30in. x 26G. "Queen's Head" Plain Iron.
1500	6	7 1	3 sheets 7ft. and 6 sheets 8ft. x 24G. Tankmaking Iron, curved, two 8ft. and one 7ft. sheet to circle. 3 sheets each 36 x 24G. and 36 x 26G. "Queen's Head" Plain Iron.
2000	6	8 2	9 sheets 9ft. x 24G. Tankmaking Iron, curved, three 9ft. sheets to circle. 4 sheets each 36 x 24G. and 36 x 26G. "Queen's Head" Plain Iron.

"QUEEN'S HEAD" IRON is branded and guaranteed.

**Lysaght's Galvanized Iron required for the
manufacture of tanks—Continued.**

Capacity of Tank Gals.	Height	Diam.	Iron Required
	ft.	ft. in.	
3000	6	10 0	9 sheets 8ft. and 3 sheets 9ft. x 24G. Tankmaking Iron, curved three 8ft. and 1 9ft. to circle. 6 sheets each 36 x 24G. and 36in. x 26G. "Queen's Head" Plain Iron.
4000	6	11 6	6 sheets 9ft. and 6 sheets 10 x 24G. Tankmaking Iron, curved, two 9ft. and two 10ft. to circle. 8 sheets each 36 x 24 and 36 x 26. "Queen's Head" Plain Iron.
5000	6	13 3	6 sheets 8ft. and 9 sheets 9ft. x 24G. Tankmaking Iron, curved, three 9ft. and two 8ft. to circle. 10 sheets 6 x 3 x 24G. "Queen's Head" Plain Iron.
10,000	6	18 0	18 sheets 10ft. x 22G. Tankmaking Iron, curved, 6 sheets to circle. 18 sheets 6 x 3 x 22G. "Queen's Head" Plain Iron.
15,000	6	22 6	12 sheets each 9ft. and 10ft. x 22G. Tankmaking Iron, curve $\frac{1}{8}$ circle, four 9ft., four 10ft. to 1 circle; 32 sheets 36in. x 22G. "Queen's Head" Plain Iron.
20,000	6	25 6	12 sheets 9ft., 15 sheets 10ft. x 22G. Tankmaking Iron, curve $\frac{1}{8}$ circle; four 9ft., five 10ft. to 1 circle. 45 sheets 36in. x 22G. "Queen's Head" Plain Iron.
30,000	6	32 6	33 sheets 10ft. x 22G. Tankmaking Iron, curve $\frac{1}{11}$ circle, eleven 10ft. to 1 circle. 66 sheets 36in. x 22G. "Queen's Head" Plain Iron.

CURVING ROLLS.

Experience indicates that a better and more even grip of the sheets is obtained if the flutes of the rolls are slightly shallower than the flutes of the sheet. The reason for this is that the standard $\frac{3}{4}$ in. depth of corrugation includes twice the thickness of metal in the sheet. As curving is applied principally to 24g. the recommended depth of flute for the curving rolls is 11/16in. bare (actually 43/64).

What Good Galvanizing Means

As the strength of a chain is that of its weakest link, so the life of a *galvanized sheet* depends upon the uniformity of its *zinc coating*; the smallest ungalvanized spot weakens the life of the whole sheet.

So far as durability is concerned, the base of the galvanized sheet is immaterial. *Pure Iron, Charcoal Iron or Steel* will all perish quickly when the coating is destroyed.

LYSAGHT'S

Orb and Queen's Head Brands are by common consent the *most perfect and evenly coated sheets manufactured*, and will therefore outlast any other make.

The life of LYSAGHT'S Brands of Galvanized Sheets is Guaranteed.

To Fix Selling Price of Goods

Useful Information for Small Traders and others whose business does not justify the installation of a Special Costing System.

The Costing of goods upon a scientific basis is highly necessary in any business, large or small, and many instances have been known of business failure through lack of knowledge upon this vital point.

In fixing price to be charged for the goods sold, the first step to be taken is to ascertain the overhead expenses (i.e., rent, rates and taxes, wages, salaries and all expenses, except the cost of the goods), and when this amount has been ascertained see what percentage it bears to the annual turnover, then add to this the amount of nett profit desired to be made and the combined total is the gross profit on sales that should be secured.

Take, for instance, the case of a Country Storekeeper who has a capital of £6,000 invested in a business, with a turnover of £30,000 per annum. If, for instance, he desires to make 20 per cent. on his capital, say £1,200 per annum, and has overhead expenses amounting to £3,000 per annum, he requires to make a gross profit of £4,200 per annum upon a turnover of £30,000 to provide all his expenses and to give the desired return upon his capital.

The proportion that £4,200 bears to turnover £30,000 is exactly 14 per cent., which is the required amount of gross profit to be made on sales.

The amount, however, to be added to the cost price of the goods is not 14 per cent., but $16\frac{1}{3}$ per cent., i.e.,

for example:—

Adding 14 per cent.				Adding $16\frac{1}{3}$ per cent.			
Cost price	..	£100	0 0	Cost price	..	£100	0 0
Add 14 per cent.		14	0 0	Add $16\frac{1}{3}$ per cent.		16	6 8
<hr/>				<hr/>			
Selling price	..	£114	0 0	Selling price	..	£116	6 8
Deduct cost	..	100	0 0	Deduct cost	..	100	0 0
<hr/>				<hr/>			
Gross profit	..	£14	0 0	Gross profit	..	£16	6 8
<hr/>				<hr/>			

£14 profit on selling price £114 gives gross profit of 12.29 per cent., but £16/6/8 profit on selling price £116/6/8 gives gross profit 14.01 per cent.

The 14 per cent. gross profit is merely given as an illustration of the working of the system, the actual amount required to be added is, of course, a matter for each individual trader to determine, and would be dependent upon the following considerations:—

- (1) Volume of Annual Turnover.
- (2) Cash or "Credit" Sales.
- (3) Nature of business, where located, whether a luxury trade on which good profits might be expected or whether dealing with the supply of necessary commodities on which the profits would naturally be upon a much smaller scale.
- (4) Local competition.
- (5) The existence of any price fixing regulations or price maintenance conditions of sale on the part of manufacturers of proprietary lines, etc.

The following table will show the amount to be added to the cost price of goods to secure the percentage of gross profit required, viz:—

Gross Profit Required.	Add to Cost Price.	Selling Price of Goods costing £1.
		£ s. d.
5 per cent.	5½ per cent.	1 1 1
7½ "	8½ "	1 1 8
10 "	11½ "	1 2 3
12½ "	14½ "	1 2 11
14 "	16½ "	1 3 3
15 "	17½ "	1 3 7
16 "	19½ "	1 3 10
17½ "	21½ "	1 4 3
18 "	22 "	1 4 5
19 "	23½ "	1 4 8
20 "	25 "	1 5 0
21 "	26½ "	1 5 4
22½ "	29 "	1 5 10
25 "	33½ "	1 6 8
27½ "	38 "	1 7 7
30 "	43 "	1 8 7
32½ "	48½ "	1 9 8
33½ "	50 "	1 10 0
35 "	54 "	1 10 10
37½ "	60 "	1 12 0
40 "	66½ "	1 13 4
45 "	82 "	1 16 5
50 "	100 "	2 0 0

Stock Lysaght's Galvanized Iron and ensure your profits by creating more satisfied customers.

REMEMBERED long after Price is Forgotten.

Galvanized Barb Wire Fencing

Approximate Weight.

Points	Pattern	Gauge	100 Yards	1 Mile	Length of 112 lbs. in Yards.
4	IOWA	12	25 lbs.	438 lbs.	460
4	"	14	14 "	281 "	670
4	SPECIAL	12	16 "	303 "	620
4	"	14	12 "	211 "	860
4	Long Distance	14	9 "	175 "	930

Description.	Weight		Length of 112 lbs.
	100 yds.	1 mile	
4-point 12g. "Iowa" 3 $\frac{1}{2}$ in. spaces	Lbs. 25	Lbs. 438	Yards 460
4-point 12g. "Iowa" 5 $\frac{1}{2}$ in. spaces	20	352	560

WIRE NETTING

Estimated Weight, 24 inches wide.

(Other Widths may be estimated *pro rata*.)

The following is not to be regarded as a Standard, but is merely an approximate guide.

Size.	Weight per Mile.			Weight of Roll 50 yds.	Size.	Weight per Mile.			Weight of Roll 50 yds.
Inches.	cwt.	qr.	lb.	lbs.	Inches.	cwt.	qr.	lb.	lbs.
24 x $\frac{1}{2}$ x 20	16	1	10	52	24 x 2 x 19	6	2	11	21
24 x $\frac{3}{4}$ x 19	17	1	4	55	24 x 2 x 18	8	1	26	27
24 x $\frac{7}{8}$ x 20	11	1	7	36	24 x 2 x 17	10	2	21	34
24 x 1 x 19	12	2	8	40	24 x 2 x 16	14	3	2	47
24 x 1 x 20	9	0	13	29	24 x 2 $\frac{1}{2}$ x 18	6	2	18	22
24 x 1 $\frac{1}{4}$ x 19	10	0	6	32	24 x 2 $\frac{1}{2}$ x 17	8	3	6	28
24 x 1 $\frac{1}{2}$ x 18	12	2	8	40	24 x 2 $\frac{1}{2}$ x 16	11	3	22	38
24 x 1 $\frac{1}{4}$ x 17	17	3	18	57	24 x 3 x 18	5	2	18	18
24 x 1 $\frac{1}{2}$ x 19	9	1	20	30	24 x 3 x 17	7	2	5	24
24 x 1 $\frac{1}{2}$ x 18	11	1	7	36	24 x 3 x 16	9	2	27	31
24 x 1 $\frac{1}{2}$ x 17	14	3	2	47	24 x 3 x 15	11	3	22	38
24 x 1 $\frac{5}{8}$ x 19	7	2	5	24	24 x 3 x 14	15	0	10	48
24 x 1 $\frac{5}{8}$ x 18	9	1	20	30	24 x 4 x 16	8	0	19	26
24 x 1 $\frac{5}{8}$ x 17	12	3	15	41	24 x 4 x 15	10	0	6	32
					24 x 4 x 14	12	2	8	40

Rabbit-proof Wire Netting Weights

Size	Grade	Approx. Weight per 100 yds.	Size	Grade	Approx. Weight per 100 yds.
		lbs.			lbs.
42 x 1 $\frac{1}{4}$ x 17	A	206	36 x 1 $\frac{1}{4}$ x 17	A	181
42 x 1 $\frac{1}{2}$ x 17	B	188	36 x 1 $\frac{1}{2}$ x 17	B	166
42 x 1 $\frac{1}{4}$ x 18	A	150	36 x 1 $\frac{1}{4}$ x 18	A	130
42 x 1 $\frac{1}{2}$ x 18	B	134	36 x 1 $\frac{1}{2}$ x 18	B	118
42 x 1 $\frac{3}{4}$ x 17	A	183	36 x 1 $\frac{3}{4}$ x 17	A	158
42 x 1 $\frac{3}{8}$ x 17	B	167	36 x 1 $\frac{3}{8}$ x 17	B	144
42 x 1 $\frac{1}{2}$ x 18	A	132	36 x 1 $\frac{1}{2}$ x 18	A	115
42 x 1 $\frac{3}{8}$ x 18	B	118	36 x 1 $\frac{3}{8}$ x 18	B	103

RELATIVE VALUE BASED ON 1800 YARDS MEASUREMENTS.

Per 100 yds.	Per 1800 yds.	Per 100 yds.	Per 1800 yds.	Per 100 yds.	Per 1800 yds.
10/-	£ 9 0 0	13/6	£ 12 3 0	17/-	£ 15 6 0
10/3	9 4 6	13/9	12 7 6	17/3	15 10 6
10/6	9 9 0	14/-	12 12 0	17/6	15 15 0
10/9	9 13 6	14/3	12 16 6	17/9	15 19 6
11/-	9 18 0	14/6	13 1 0	18/-	16 4 0
11/3	10 2 6	14/9	13 5 6	18/3	16 8 6
11/6	10 7 0	15/-	13 10 0	18/6	16 13 0
11/9	10 11 6	15/3	13 14 6	18/9	16 17 6
12/-	10 16 0	15/6	13 19 0	19/-	17 2 0
12/3	11 0 6	15/9	14 3 6	19/3	17 6 6
12/6	11 5 0	16/-	14 8 0	19/6	17 11 0
12/9	11 9 6	16/3	14 12 6	19/9	17 15 6
13/-	11 14 0	16/6	14 17 0	20/-	18 0 0
13/3	11 18 6	16/9	15 1 6		

Steel Wire.

Table showing quantity required per mile of fencing.

Gauge	Length per cwt.	Weight required per mile.				
		1 wire	2 wires	3 wires	4 wires	5 wires
No.	yds.	C. Q. L.	C. Q. L.	C. Q. L.	C. Q. L.	C. Q. L.
4	260	6 3 2	13 2 4	20 1 6	27 0 8	33 3 10
5	311	5 2 17	11 1 6	16 3 23	22 2 12	28 1 1
6	380	4 2 14	9 1 0	13 3 14	18 2 0	23 0 14
7	452	3 3 16	7 3 4	11 2 20	15 2 8	19 1 24
8	546	3 0 24	6 1 20	9 2 16	12 3 12	16 0 8
9	675	2 2 12	5 0 24	7 3 8	10 1 20	13 0 4
10	854	2 0 7	4 0 14	6 0 21	8 1 0	10 1 7
11	1040	1 2 22	3 1 16	5 0 10	6 3 4	8 1 26
12	1293	1 1 12	2 2 24	4 0 8	5 1 20	6 3 4
12 $\frac{1}{2}$ *	1500	1 0 20	2 1 12	3 2 4	4 2 24	5 3 14

* High Tensile.

GALVANIZED WIRE NETTING

TABLE OF GROSS PRICES at per Roll of 50 Yards.

Mesh.	12 inches wide.	18 inches wide.	24 inches wide.	30 inches wide.	36 inches wide.	42 inches wide.	48 inches wide.	60 inches wide.	72 inches wide.	G.	Mesh.
$\frac{1}{4}$ inch	22 0 19 3	1 7 9	1 16 0	2 3 9	2 12 6	3 1 3	3 10 0	4 7 6	5 5 0	22	$\frac{1}{4}$ inch
"	20 1 5 9	1 16 9	2 8 0	2 18 6	3 10 0	4 1 8	4 13 4	5 16 8	7 0 0	20	"
$\frac{1}{2}$ inch	19 1 11 3	2 4 9	2 18 3	3 11 0	4 5 0	4 19 2	5 13 4	7 1 8	8 10 0	19	$\frac{1}{2}$ inch
"	22 0 11 6	0 16 6	1 1 0	1 5 9	1 10 0	1 15 0	2 0 0	2 10 0	3 0 0	22	"
"	20 0 14 9	1 1 0	1 6 9	1 12 6	1 18 0	2 4 4	2 10 8	3 3 4	3 16 0	20	"
"	19 0 17 3	1 4 9	1 11 6	1 18 6	2 5 0	2 12 6	3 0 0	3 15 0	4 10 0	19	"
1 inch	18 1 3 0	1 13 0	2 2 0	2 11 3	3 0 0	3 10 0	4 0 0	5 0 0	6 0 0	18	1 inch
"	20 0 10 9	0 15 6	0 19 9	1 4 0	1 12 0	1 12 8	1 17 4	2 6 8	2 16 0	20	"
"	19 0 12 6	0 17 9	1 2 6	1 7 6	1 12 0	1 17 4	2 2 8	2 13 4	3 4 0	19	"
"	18 0 15 9	1 2 9	1 8 9	1 15 3	2 1 0	2 7 10	2 14 8	3 8 4	4 2 0	18	"
$1\frac{1}{4}$ inch	17 1 1 3	1 10 3	1 18 6	2 1 0	2 15 0	3 4 2	3 13 4	4 11 8	5 10 0	17	$1\frac{1}{4}$ inch
"	19 0 10 0	0 14 3	0 18 0	1 1 9	1 15 0	1 9 2	1 13 4	2 1 8	3 4 0	19	"
"	18 0 12 9	0 18 0	1 3 0	1 7 9	1 12 0	1 17 4	2 2 8	2 13 4	3 4 0	18	"
"	17 0 16 6	1 3 9	1 10 3	1 16 6	2 2 0	2 9 0	2 16 0	3 10 0	4 4 0	17	"
$1\frac{1}{2}$ inch	16 1 2 6	1 12 6	2 1 0	2 9 3	2 17 0	3 6 6	3 16 0	4 15 0	5 14 0	16	$1\frac{1}{2}$ inch
"	19 0 8 9	0 12 6	0 15 9	0 19 0	1 2 0	1 5 8	1 9 8	2 5 4	3 8 0	19	"
"	18 0 10 9	0 15 6	0 19 9	1 3 9	1 17 6	1 12 1	1 16 8	2 5 10	2 15 0	18	"
"	17 0 13 6	0 19 3	1 4 6	1 9 6	1 14 0	1 19 8	2 5 4	2 16 8	3 8 0	17	"
$1\frac{3}{4}$ inch	16 0 18 3	1 6 3	1 13 6	2 0 3	2 6 6	2 14 3	3 2 8	3 17 6	4 13 0	16	$1\frac{3}{4}$ inch
"	19 0 8 0	0 11 3	0 14 6	0 17 3	1 0 0	1 3 4	1 12 0	2 0 0	2 8 0	19	"
"	18 0 9 6	0 13 6	0 17 3	1 0 9	1 4 0	1 8 0	1 12 0	2 0 0	2 8 0	18	"
"	17 0 11 9	0 17 0	1 1 6	1 6 0	1 10 0	1 15 0	2 0 0	2 10 0	3 0 0	17	"
$2\frac{1}{2}$ inch	16 0 16 3	1 3 3	1 9 6	0 12 3	0 16 6	0 19 3	1 2 8	3 8 4	4 2 0	16	$2\frac{1}{2}$ inch
"	19 0 6 9	0 9 6	0 12 3	0 14 6	0 18 6	1 1 0	1 8 0	1 15 0	1 13 0	19	"
"	18 0 8 6	0 12 3	0 15 6	0 18 6	1 1 0	1 4 6	1 8 0	1 15 0	2 2 0	18	"
"	17 0 10 6	0 15 0	0 19 3	1 3 0	1 6 0	1 10 4	1 14 8	2 3 4	2 12 0	17	"
"	16 0 13 9	0 19 9	1 5 0	1 10 0	1 14 0	1 19 8	2 5 8	3 16 8	3 8 0	16	"
"	15 0 17 9	1 5 6	1 12 6	1 18 9	2 4 0	2 11 4	3 18 0	4 13 8	4 8 0	15	"
"	14 1 1 3	1 10 6	1 19 0	2 6 6	2 13 0	3 1 10	3 10 8	4 8 4	5 6 0	14	"

GALVANIZED WIRE NETTING—Continued.

Mesh.	G.	12 inches wide.	18 inches wide.	24 inches wide.	30 inches wide.	36 inches wide.	42 inches wide.	48 inches wide.	60 inches wide.	72 inches wide.	G.	Mesh.
2½ inch	19	£ s. d. 0 6 3	£ s. d. 0 9 0	£ s. d. 0 11 3	£ s. d. 0 13 3	£ s. d. 0 15 0	£ s. d. 0 17 6	£ s. d. 1 0 0	£ s. d. 1 5 0	£ s. d. 1 10 0	19	2½ inch
"	18	0 8 0	0 11 3	0 14 6	0 17 3	0 19 6	1 2 9	1 6 0	1 12 6	1 19 0	18	"
"	17	0 9 9	0 13 6	0 17 3	1 0 6	1 3 6	1 7 5	1 11 4	1 19 2	2 7 0	17	"
"	16	0 12 0	0 17 3	1 2 0	1 6 3	1 10 0	1 5 0	2 0 0	2 10 0	3 0 0	16	"
"	15	0 15 9	1 2 6	1 8 9	1 14 3	1 19 0	2 12 6	3 0 0	3 15 0	4 10 0	15	"
"	14	0 18 0	1 6 0	1 13 0	1 19 6	2 5 0	2 12 6	3 0 0	3 15 0	4 10 0	14	"
3 inch	19	0 5 0	0 7 0	0 9 0	0 10 6	0 12 0	0 17 6	0 16 0	1 0 0	1 4 0	19	3 inch
"	18	0 6 3	0 8 9	0 11 0	0 13 3	0 15 0	0 17 6	1 0 0	1 5 0	1 10 0	18	"
"	17	0 8 9	0 11 6	0 14 9	0 17 9	1 0 0	1 3 4	1 6 8	1 13 4	2 0 0	17	"
"	16	0 10 6	0 13 9	0 17 9	1 1 0	1 4 0	1 8 0	1 12 0	2 0 0	2 8 0	16	"
"	15	0 12 6	0 15 6	1 0 0	1 3 9	1 7 0	1 11 6	1 16 0	2 5 0	3 14 0	15	"
"	14	0 14 9	0 19 0	1 4 3	1 9 0	1 13 0	1 18 6	2 4 0	2 15 0	3 6 0	14	"
"	13	0 18 0	1 3 9	1 10 3	1 16 0	2 1 0	2 7 10	2 14 8	3 8 4	4 2 0	13	"
4 inch	18	0 5 0	0 7 3	0 9 1	0 11 1	0 12 7	0 14 7	0 16 9	1 1 0	1 5 3	18	4 inch
"	17	0 8 6	0 9 3	0 11 9	0 14 9	0 16 0	0 18 8	1 1 4	1 6 8	1 12 0	17	"
"	16	0 10 0	0 11 6	0 14 9	0 17 6	1 0 0	1 3 4	1 6 8	1 13 4	2 0 0	16	"
"	15	0 12 0	0 14 0	0 17 9	1 1 0	1 4 0	1 8 0	1 12 0	2 0 0	2 8 0	15	"
"	14	0 14 0	0 16 3	1 0 9	1 4 6	1 8 0	1 12 8	1 17 4	2 6 8	3 16 0	14	"

SHEEP, DOG AND PIG NETTING—Made with 3-ply strand wire selvages and 3 twist or 2 twist meshes

3 inch	17	0 10 3	0 13 0	0 16 3	0 19 0	1 1 6	1 4 10	1 8 2	1 14 10	2 1 6	17	3 inch
"	16	0 12 0	0 15 3	0 19 3	1 2 6	1 5 6	1 9 6	1 13 6	2 1 6	2 9 6	16	"
"	15	0 14 6	0 17 6	1 2 0	1 5 9	1 9 0	1 13 6	1 18 0	2 7 0	3 6 0	15	"
"	14	0 16 9	1 1 6	1 6 3	1 11 0	1 15 0	2 0 0	2 6 0	3 10 10	4 4 6	14	"
"	13	1 0 6	1 6 3	1 12 9	1 18 6	2 3 6	2 10 4	2 17 2	4 13 4	5 11 6	13	"
"	12	1 6 3	1 14 0	2 3 0	2 10 3	2 17 0	3 6 1	3 15 2	5 18 2	6 16 12	12	"
4 inch	17	0 10 0	0 13 0	0 16 3	0 19 0	1 1 6	1 4 10	1 8 2	1 14 10	2 1 6	17	4 inch
"	16	0 11 6	0 13 0	0 16 3	0 19 0	1 6 0	1 10 0	1 14 0	2 2 0	2 10 0	16	"
"	15	0 14 0	0 16 0	0 19 9	1 3 0	1 6 0	1 14 8	1 19 4	2 8 8	3 18 0	15	"
"	14	0 16 0	0 18 3	1 2 9	1 6 6	1 10 0	1 14 8	2 7 10	3 19 2	4 10 6	14	"
"	13	—	1 2 0	1 7 6	1 12 6	1 16 6	2 2 2	3 0 6	3 15 0	4 9 6	13	"
"	12	—	1 7 6	1 14 6	2 0 6	2 6 0	2 13 3	3 0 6	3 15 0	4 9 6	12	"

SHEEP, DOG AND PIG NETTING

WITH CENTRE STRAND AND 3-PLY SELVEDGES AND 3 TWIST OR 2 TWIST MESHERS.

WIDTH		12 in.	18 in.	24 in.	30 in.	36 in.	42 in.	48 in.	60 in.	72 in.
Mesh	Gauge	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
3 INCH	17	—	—	—	1 2 0	1 4 6	1 7 10	1 11 2	1 17 10	2 4 6
	16	—	—	—	1 5 6	1 8 6	1 12 6	1 16 6	2 4 6	2 12 6
	15	—	—	—	1 9 3	1 12 6	1 17 0	2 1 6	2 10 6	2 19 6
	14	—	—	—	1 14 6	1 18 6	2 4 0	2 9 6	3 0 6	3 11 6
	13	—	—	—	2 2 6	2 7 6	2 14 4	3 1 2	3 14 10	4 8 6
4 INCH	12	—	—	—	2 14 3	3 1 0	3 10 1	3 19 2	4 17 4	5 15 6
	17	—	—	—	0 18 6	1 0 6	1 3 2	1 5 10	1 11 2	1 16 6
	16	—	—	—	1 2 0	1 4 6	1 7 10	1 11 2	1 17 10	2 4 6
	15	—	—	—	1 6 6	1 9 6	1 13 6	1 17 6	2 5 6	2 13 6
	14	—	—	—	1 10 0	1 13 6	1 18 2	2 2 10	2 12 2	3 1 6
2 INCH	13	—	—	—	1 16 6	2 0 6	2 6 2	2 11 10	3 3 3	3 14 6
	12	—	—	—	2 4 4	2 10 0	2 17 3	3 4 6	3 19 0	4 13 6

SPECIAL 2 inch NETTING MADE WITH 3 TWIST MESHERS.

WIDTH		12 in.	18 in.	24 in.	30 in.	36 in.	42 in.	48 in.	60 in.	72 in.
Mesh	Gauge	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.
2 INCH	19	0 7 1	0 10 0	0 13 6	0 15 3	0 17 6	1 0 3	1 3 0	1 9 0	1 14 9
	18	0 9 0	0 12 6	0 16 3	0 19 6	1 2 3	1 5 9	1 9 6	1 17 0	2 4 3
	17	0 11 0	0 15 9	1 0 3	1 4 3	1 7 6	1 12 0	1 16 6	2 5 6	2 14 9
	16	0 14 6	1 0 9	1 6 3	1 11 6	1 15 9	2 1 9	2 7 9	3 19 9	3 11 6
	15	0 18 9	1 6 9	1 14 3	2 0 9	2 6 3	2 14 0	3 1 9	3 17 0	4 12 6
2 INCH	14	1 2 6	1 12 0	2 1 1	2 9 0	2 16 0	3 5 0	3 14 3	4 13 0	5 12 0

DIPPING IN SPECIAL TAR PREPARATION—

Up to 12 inches, 5d. per 50-yard Roll.
 Over 12 inches, 7d. per 50-yard Roll.
WIDTHS UNDER 12 inch are charged as 12 inch.
 Intermediate widths are charged the same rate
 as the next greater width up to 4 feet wide.
WIDTHS OVER 12 inch are charged as 12 inch.
 Intermediate widths over 4 feet are charged by
 steps of 6 inches, viz.:—54 inch as the mean of 48 inch and 60 inch, 56 inches would be
 charged as 60 inches.

ROLLED STEEL I BEAMS AS GIRDERS.
SAFE DISTRIBUTED LOAD IN TONS, ABOUT AXIS X-X.

Size Inches.	Weight per ft. lbs.	SPAN IN FEET.																		Size Inches.
		2	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	36	40	
24 x 7 1/2 *	100				129.9	114.7	95.6	81.9	71.7	63.7	57.4	52.1	47.8	44.1	41.0	38.2	35.8	31.9	28.7	24 x 7 1/2 *
24 x 7 1/2	90					98.3	90.5	77.5	67.8	60.3	54.3	49.4	45.2	41.7	38.7	36.2	33.9	30.1	27.1	24 x 7 1/2
22 x 7	75				88.2	81.2	67.7	58.0	50.7	45.1	40.6	36.9	33.8	31.2	29.0	27.0	25.4	22.5	20.3	
20 x 6 1/2	65					72.2	65.4	54.5	46.7	40.8	36.3	32.7	29.7	27.2	25.1	23.3	21.8	20.4	18.2	16.3
18 x 6	55					61.5	49.9	41.6	35.6	31.2	27.6	24.9	22.7	20.8	19.2	17.8	16.6	15.6	13.8	12.4
16 x 6	50				53.64	51.5	41.2	34.3	29.4	25.7	22.8	20.6	18.7	17.2	15.8	14.7	13.7	12.9	11.4	10.3
15 x 6	45				48.0	43.7	35.0	29.1	25.0	21.8	19.4	17.4	16.0	14.5	13.4	12.5	11.6	10.9	9.7	8.7
14 x 5 1/2	40				44.24	35.9	28.6	23.9	20.5	17.9	15.9	14.3	13.0	11.9	11.0	10.2	9.5	8.9	7.9	7.1
13 x 5	35			39.12	38.7	29.1	23.3	19.3	16.6	14.5	12.9	11.6	10.5	9.6	8.9	8.3	7.8	7.2	6.4	5.8
12 x 8	65					46.4	43.4	36.1	30.9	27.1	24.1	21.7	19.7	18.1	16.7	15.5	14.6	13.5	12.0	10.9
12 x 5	30			34.2	30.6	22.9	18.4	15.3	13.1	11.5	10.2	9.2	8.3	7.7	7.1	6.5	6.1	5.7	5.1	4.6
10 x 8	55					36.0	30.8	25.6	21.9	19.2	17.1	15.4	14.0	12.8	11.8	10.9	10.2	9.6		
10 x 4 1/2	25			26.7	21.7	16.3	13.0	10.9	9.3	8.1	7.2	6.5	6.0	5.4	5.0	4.6	4.3	4.1		
9 x 4	21			24.3	24.0	16.0	12.0	9.6	8.0	6.8	6.0	5.3	4.8	4.3	4.0	3.7	3.4			
8 x 6	35					25.2	19.2	15.3	12.8	10.9	9.6	8.5	7.7	6.9	6.4	5.9	5.5			
8 x 4	18			20.2	18.5	12.4	9.3	7.4	6.2	5.3	4.6	4.1	3.7	3.4	3.1	2.8	2.6			
7 x 3 1/2	15			15.7	13.7	9.1	6.8	5.5	4.6	3.9	3.4	3.0	2.7	2.5	2.3	2.1				
6 x 5	25			17.8	13.4	10.0	8.0	6.7	5.7	5.0	4.5	4.0	3.6							
6 x 3	12			12.2	9.3	6.2	4.7	3.7	3.1	2.7	2.3	2.1	1.9							
5 x 2 1/2	9			9.0	5.8	3.9	2.9	2.3	1.9	1.6	1.4									
4 x 3	10			8.6	5.2	3.5	2.6	2.1	1.7	1.5	1.3									

*Nominal Size. Width about 7 1/8".

Girders to have usual side supports as in building work.

WEIGHTS OF FLAT ROLLED STEEL.

POUNDS PER LINEAL FOOT.

Thickness in Inches.

Width, Inches	$\frac{1}{16}$	$\frac{3}{16}$	$\frac{1}{4}$	$\frac{5}{16}$	$\frac{3}{8}$	$\frac{7}{16}$	$\frac{1}{2}$	$\frac{9}{16}$	$\frac{5}{8}$	$\frac{11}{16}$	$\frac{3}{4}$	$\frac{13}{16}$	$\frac{7}{8}$	$\frac{15}{16}$	I
$\frac{1}{8}$	.053	.106	.159	.213	.27	.37	.43	.48	.53	.58	.64	.69	.74	.80	.85
$\frac{1}{4}$	.106	.213	.319	.425	.53	.74	.85	.96	1.06	1.17	1.28	1.38	1.49	1.59	1.70
$\frac{3}{8}$	.159	.319	.478	.638	.80	1.12	1.28	1.43	1.59	1.75	1.91	2.07	2.23	2.39	2.55
1	.213	.425	.638	.850	1.06	1.49	1.70	1.91	2.13	2.34	2.55	2.76	2.98	3.19	3.40
$1\frac{1}{8}$	.266	.531	.797	1.063	1.33	1.86	2.13	2.39	2.66	2.92	3.19	3.45	3.72	3.98	4.25
$1\frac{1}{4}$	.319	.638	.956	1.275	1.59	2.23	2.55	2.87	3.19	3.51	3.83	4.14	4.46	4.78	5.10
$1\frac{3}{8}$	.372	.744	1.116	1.488	1.86	2.60	2.98	3.35	3.72	4.09	4.46	4.83	5.21	5.58	5.95
2	.425	.850	1.275	1.700	2.13	2.98	3.40	3.83	4.25	4.68	5.10	5.53	5.95	6.38	6.80
$2\frac{1}{8}$	.478	.956	1.434	1.913	2.39	3.35	3.83	4.30	4.78	5.26	5.74	6.22	6.69	7.17	7.65
$2\frac{1}{4}$	.531	1.063	1.594	2.125	2.66	3.72	4.25	4.78	5.31	5.84	6.38	6.91	7.44	7.97	8.50
$2\frac{3}{8}$	.584	1.169	1.753	2.338	2.92	4.09	4.68	5.26	5.84	6.43	7.01	7.60	8.18	8.77	9.35
3	.638	1.275	1.913	2.550	3.19	4.46	5.10	5.74	6.38	7.01	7.65	8.29	8.93	9.56	10.20
$3\frac{1}{8}$	.691	1.381	2.072	2.763	3.45	4.83	5.53	6.22	6.91	7.60	8.29	8.98	9.67	10.36	11.05
$3\frac{1}{4}$	.744	1.488	2.231	2.975	3.72	5.21	5.95	6.69	7.44	8.18	8.93	9.67	10.41	11.16	11.90
$3\frac{3}{8}$	.797	1.594	2.391	3.188	3.98	5.58	6.38	7.17	7.97	8.77	9.56	10.36	11.16	11.95	12.75
4	.850	1.700	2.550	3.400	4.25	5.95	6.80	7.65	8.50	9.35	10.20	11.05	11.90	12.75	13.60
$4\frac{1}{8}$	.903	1.806	2.709	3.613	4.52	6.32	7.23	8.13	9.03	9.93	10.84	11.74	12.64	13.55	14.45
$4\frac{1}{4}$	.956	1.913	2.869	3.825	4.78	6.69	7.65	8.61	9.56	10.52	11.48	12.43	13.39	14.34	15.30
$4\frac{3}{8}$	1.009	2.019	3.028	4.038	5.05	7.07	8.08	9.08	10.09	11.10	12.11	13.12	14.13	15.14	16.15
5	1.063	2.125	3.188	4.250	5.31	7.44	8.50	9.56	10.63	11.69	12.75	13.81	14.88	15.94	17.00
$5\frac{1}{8}$	1.116	2.231	3.347	4.463	5.58	7.81	8.93	10.04	11.16	12.27	13.39	14.50	15.62	16.73	17.85
$5\frac{1}{4}$	1.169	2.338	3.506	4.675	5.84	8.18	9.35	10.52	11.69	12.86	14.03	15.19	16.36	17.53	18.70
$5\frac{3}{8}$	1.222	2.444	3.668	4.888	6.11	8.55	9.78	11.00	12.22	13.44	14.66	15.88	17.11	18.33	19.55
6	1.275	2.550	3.825	5.100	6.38	8.93	10.20	11.48	12.75	14.03	15.30	16.58	17.85	19.13	20.40

Weights of Steel Plates

POUNDS PER LINEAL FOOT.

THICKNESS IN INCHES.

Width Inches	$\frac{1}{16}$	$\frac{1}{8}$	$\frac{3}{16}$	$\frac{1}{4}$	$\frac{5}{16}$	$\frac{3}{8}$	$\frac{7}{16}$	$\frac{1}{2}$
12	2.55	5.10	7.65	10.20	12.75	15.30	17.85	20.40
13	2.76	5.53	8.29	11.05	13.81	16.58	19.34	22.10
14	2.98	5.95	8.93	11.90	14.88	17.85	20.83	23.80
15	3.19	6.38	9.56	12.75	15.94	19.13	22.31	25.50
16	3.40	6.80	10.20	13.60	17.00	20.40	23.80	27.20
17	3.61	7.23	10.84	14.45	18.06	21.68	25.29	28.90
18	3.83	7.65	11.48	15.30	19.13	22.95	26.78	30.60
19	4.04	8.08	12.11	16.15	20.19	24.23	28.26	32.30
20	4.25	8.50	12.75	17.00	21.25	25.50	29.75	34.00
21	4.46	8.93	13.39	17.85	22.31	26.78	31.24	35.70
22	4.68	9.35	14.03	18.70	23.38	28.05	32.73	37.40
23	4.89	9.78	14.66	19.55	24.44	29.33	34.21	39.10
24	5.10	10.20	15.30	20.40	25.50	30.60	35.70	40.80
26	5.53	11.05	16.58	22.10	27.63	33.15	38.68	44.20
28	5.95	11.90	17.85	23.80	29.75	35.70	41.65	47.60
30	6.38	12.75	19.13	25.50	31.88	38.25	44.63	51.00
32	6.80	13.60	20.40	27.20	34.00	40.80	47.60	54.40
34	7.23	14.45	21.68	28.90	36.13	43.35	50.58	57.80
36	7.65	15.30	22.95	30.60	38.25	45.90	53.55	61.20
38	8.08	16.15	24.23	32.30	40.38	48.45	56.53	64.60
40	8.50	17.00	25.50	34.00	42.50	51.00	59.50	68.00
42	8.93	17.85	26.78	35.70	44.63	53.55	62.48	71.40
44	9.35	18.70	28.05	37.40	46.75	56.10	65.45	74.80
46	9.78	19.55	29.33	39.10	48.88	58.65	68.43	78.20
48	10.20	20.40	30.60	40.80	51.00	61.20	71.40	81.60
50	10.6	21.3	31.9	42.5	53.1	63.8	74.40	85.0
52	11.1	22.1	33.2	44.2	55.3	66.3	77.4	88.4
54	11.5	23.0	34.4	45.9	57.4	68.9	80.3	91.8
56	11.9	23.8	35.7	47.6	59.5	71.4	83.3	95.2
58	12.3	24.7	37.0	49.3	61.6	74.0	86.3	98.6
60	12.8	25.5	38.3	51.0	63.8	76.5	89.3	102.0
62	13.2	26.4	39.5	52.7	65.9	79.1	92.2	105.4
64	13.6	27.2	40.8	54.4	68.0	81.6	95.2	108.8
66	14.0	28.1	42.1	56.1	70.1	84.2	98.2	112.2
68	14.5	28.9	43.4	57.8	72.3	86.7	101.2	115.6
70	14.9	29.8	44.6	59.5	74.4	89.3	104.1	119.0
72	15.3	30.6	45.9	61.2	76.5	91.8	107.1	122.4
74	15.7	31.5	47.2	62.9	78.6	94.4	110.1	125.8
76	16.2	32.3	48.5	64.6	80.8	96.9	113.1	129.2
78	16.6	33.2	49.7	66.3	82.9	99.5	116.0	132.6
80	17.0	34.0	51.0	68.0	85.0	102.0	119.0	136.0
82	17.4	34.9	52.3	69.7	87.1	104.6	122.0	139.4
84	17.9	35.7	53.6	71.4	89.3	107.1	125.0	142.8

Weights of Steel Plates—Continued

POUNDS PER LINEAL FOOT.

THICKNESS IN INCHES.

Width Inches	$\frac{3}{16}$	$\frac{5}{8}$	$\frac{11}{16}$	$\frac{3}{4}$	$\frac{13}{16}$	$\frac{7}{8}$	$\frac{15}{16}$	1
12	22.95	25.50	28.05	30.60	33.15	35.70	38.25	40.80
13	24.86	27.63	30.4	33.2	35.9	38.7	41.4	44.2
14	26.78	29.75	32.7	35.7	38.7	41.7	44.6	47.6
15	28.69	31.88	35.1	38.3	41.4	44.6	47.8	51.0
16	30.60	34.00	37.4	40.8	44.2	47.6	51.0	54.4
17	32.51	36.13	39.7	43.4	47.0	50.6	54.2	57.8
18	34.43	38.25	42.1	45.9	49.7	53.6	57.4	61.2
19	36.34	40.38	44.4	48.5	52.5	56.5	60.6	64.6
20	38.25	42.50	46.8	51.0	55.3	59.5	63.8	68.0
21	40.16	44.63	49.1	53.6	58.0	62.5	66.9	71.4
22	42.08	46.75	51.4	56.1	60.8	65.5	70.1	74.8
23	43.99	48.88	53.8	58.7	63.5	68.4	73.3	78.2
24	45.90	51.00	56.1	61.2	66.3	71.4	76.5	81.6
26	49.73	55.25	60.8	66.3	71.8	77.4	82.9	88.4
28	53.55	59.50	65.5	71.4	77.4	83.3	89.3	95.2
30	57.38	63.75	70.1	76.5	82.9	89.3	95.6	102.0
32	61.20	68.00	74.8	81.6	88.4	95.2	102.0	108.8
34	65.03	72.25	79.5	86.7	93.9	101.2	108.4	115.6
36	68.85	76.50	84.2	91.8	99.5	107.1	114.8	122.4
38	72.68	80.75	88.8	96.9	105.0	113.1	121.1	129.2
40	76.50	85.00	93.5	102.0	110.5	119.0	127.5	136.0
42	80.33	89.25	98.2	107.1	116.0	125.0	133.9	142.8
44	84.15	93.50	102.9	112.2	121.6	130.9	140.3	149.6
46	87.98	97.75	107.5	117.3	127.1	136.9	146.6	156.4
48	91.80	102.0	112.2	122.4	132.6	142.8	153.0	163.2
50	95.6	106.3	116.9	127.5	138.1	148.8	159.4	170.0
52	99.5	110.5	121.6	132.6	143.7	154.7	165.8	176.8
54	103.3	114.8	126.2	137.7	149.2	160.7	172.1	183.6
56	107.1	119.0	130.9	142.8	154.7	166.6	178.5	190.4
58	110.9	123.3	135.6	147.9	160.2	172.6	184.9	197.2
60	114.8	127.5	140.3	153.0	165.8	178.5	191.3	204.0
62	118.6	131.8	144.9	158.1	171.3	184.5	197.6	210.8
64	122.4	136.0	149.6	163.2	176.8	190.4	204.0	217.6
66	126.2	140.3	154.3	168.3	182.3	196.4	210.4	224.4
68	130.1	144.5	159.0	173.4	187.9	202.3	216.8	231.2
70	133.9	148.8	163.6	178.5	193.4	208.3	223.1	238.0
72	137.7	153.0	168.3	183.6	198.9	214.2	229.5	244.8
74	141.5	157.3	173.0	188.7	204.4	220.2	235.9	251.6
76	145.4	161.5	177.7	193.8	210.0	226.1	242.3	258.4
78	149.2	165.8	182.3	198.9	215.5	232.1	248.6	265.2
80	153.0	170.0	187.0	204.0	221.0	238.0	255.0	272.0
82	156.8	174.3	191.7	209.1	226.5	244.0	261.4	278.8
84	160.7	178.5	196.4	214.2	232.1	249.9	267.8	285.6

THE CHAMBER OF MANUFACTURES OF N.S.W.

MANUFACTURERS HOUSE
26 O'CONNELL STREET
—SYDNEY—

The Chamber of Manufactures represents the manufacturing industries of N.S.W.—its objects are the development and advancement of all Australian manufacturing and other producing industries.

There are approximately 21,657 factories in Australia which employ about 350,000 workers. During 1931/32 the output was valued at £281,645,785. The wages paid totalled £55,931,818. Materials used—the greater proportion of which were Australian primary products—were valued at £161,199,245.

Australian manufacturers wherever possible use Australian primary products as raw materials. As a market to the primary producers their value is illustrated by citation of figures for only a few industries, viz.:—

Value of materials used 1931/2.

Tanning and leather dressing	..	£2,359,842
Soap and candles		1,486,457
Timber—Sawmilling		2,651,895
Agricultural implements		506,074
Engineering works		1,799,341
Iron and steel		5,529,725

The last figures include the value of raw material used by Lysaght's Newcastle Works Ltd.—a wholly Australian enterprise, which has established a new industry in the Commonwealth—the production, from Australian raw materials of Galvanized Iron and Black Sheets of a quality not surpassed in any other country in the world.

The policy of Australian Manufacturers is to support Australian industries—to buy, wherever possible from Australian producers. A policy which should be adopted by all Australians.

and even quality, is a perfect Roofing Sheet.

Weight and Areas of Square and Round Steel Bars.

Thickness or Diam. in Inches	Weight in lbs. of Square Bar one foot long	Weight in lbs. of Round Bar one foot long	Area of Square Bar in Inches	Area of Round Bar in Inches	Circumfer- ence of Round Bar in Inches
3/16	.120	.094	.0352	.0276	.5891
1/4	.212	.167	.0625	.0491	.7854
5/16	.332	.261	.0977	.0767	.9818
3/8	.478	.376	.1406	.1104	1.1781
7/16	.651	.511	.1914	.1503	1.3745
1/2	.850	.668	.2500	.1963	1.5708
9/16	1.076	.845	.3164	.2485	1.7672
5/8	1.328	1.043	.3906	.3068	1.9635
11/16	1.607	1.262	.4727	.3712	2.1599
3/4	1.913	1.502	.5625	.4418	2.3562
13/16	2.245	1.763	.6602	.5185	2.5526
7/8	2.603	2.044	.7656	.6013	2.7489
15/16	2.988	2.347	.8789	.6903	2.9453
1	3.400	2.670	1.0000	.7854	3.1416
1 1/8	4.303	3.380	1.2656	.9940	3.5343
1 1/4	5.313	4.172	1.5625	1.2272	3.9270
1 1/2	6.428	5.049	1.8906	1.4849	4.3197
1 3/4	7.650	6.008	2.2500	1.7671	4.7124
2	8.978	7.051	2.6406	2.0739	5.1051
2 1/8	10.41	8.178	3.0625	2.4053	5.4978
2 1/4	11.95	9.388	3.5156	2.7612	5.8905
2 1/2	13.60	10.68	4.0000	3.1416	6.2832
2 3/4	15.35	12.06	4.5156	3.5466	6.6759
3	17.21	13.52	5.0625	3.9761	7.0686
3 1/8	19.18	15.06	5.6406	4.4301	7.4613
3 1/4	21.25	16.69	6.2500	4.9087	7.8540
3 1/2	23.43	18.40	6.8906	5.4119	8.2467
3 3/4	25.71	20.19	7.5625	5.9396	8.6394
4	28.10	22.07	8.2656	6.4918	9.0321
4 1/8	30.60	24.03	9.0000	7.0686	9.4248
4 1/4	35.92	28.21	10.563	8.2958	10.210
4 1/2	41.65	32.71	12.250	9.6211	10.996
4 3/4	47.82	37.55	14.063	11.045	11.781
5	54.40	42.73	16.000	12.566	12.566
5 1/8	61.41	48.24	18.063	14.186	13.352
5 1/4	68.85	54.07	20.250	15.904	14.137
5 1/2	76.71	60.25	22.563	17.721	14.923
5 3/4	85.00	66.76	25.000	19.635	15.708
6	102.9	80.78	30.250	23.758	17.279
6 1/2	122.4	96.13	36.000	28.274	18.850

One cubic foot of steel weighs 489.6 lbs.

Steel Wire Ropes of Australian Manufacture

Circumference in inches	Diameter in inches	Weight in lbs. per 100 feet.				Guaranteed Breaking Strains in tons of 2,240 lbs.			
		6 x 7 Semi-Flexible	6 x 19 Flexible	6 x 24 Extra Flexible	6 x 37 Special Extra Flexible	6 x 7 Semi-Flexible	6 x 19 Flexible	6 x 24 Extra Flexible	6 x 37 Special Extra Flexible
1	$\frac{5}{16}$	19	18	16	18	3.3	2.8	2.4	2.6
1 $\frac{1}{4}$	—	27	25	24	25	5.0	4.3	4.0	3.9
1 $\frac{1}{2}$	—	40	36	33	36	7.3	6.0	5.7	5.8
1 $\frac{3}{4}$	$\frac{9}{16}$	54	50	47	50	10.0	8.1	7.5	8.0
2	$\frac{5}{8}$	72	66	60	66	13.0	11.1	10.3	10.7
2 $\frac{1}{4}$	$\frac{11}{16}$	87	84	78	84	16.2	13.9	12.8	13.8
2 $\frac{1}{2}$	$\frac{13}{16}$	107	102	95	102	20.1	17.0	15.5	16.2
2 $\frac{3}{4}$	$\frac{15}{16}$	132	123	113	123	24.9	20.5	19.3	19.9
3	$\frac{17}{16}$	154	154	134	145	29.1	25.8	22.7	24.1
3 $\frac{1}{4}$	$1\frac{1}{8}$	217	217	188	198	39.8	35.5	31.3	32.2
4	—	275	275	239	263	51.5	45.6	41.2	42.8
4 $\frac{1}{4}$	—	308	308	275	295	58.3	51.1	46.0	48.7
4 $\frac{1}{2}$	$1\frac{1}{4}$	392	392	344	369	73.1	64.3	57.9	60.0
5	—	420	420	378	409	80.3	70.9	63.6	66.9
5 $\frac{1}{4}$	$1\frac{3}{8}$	—	523	450	493	—	86.4	75.8	79.9
6	$1\frac{1}{2}$	—	626	527	590	—	103.3	91.0	96.3

NOTE—Above breaking strains are for best patent 80/90 tons tensile steel. Breaking strains for higher tensile steel are increased proportionately.

Every Sheet of "ORB" IRON is its own advertisement.

Steel, Copper and Brass Wires

STEEL Imperial Standard Wire Gauge.				100 FEET.	
S.W.G. No.	Approx. Length of 1 cwt. in Yards.	Weight of 1 Mile in Avoir. lbs.	Approx. Breaking Load, 25 tons to sq. inch (Lbs.)	Copper Wire in Lbs.	Brass Wire in Lbs.
7/0	56	3,522	10,995	76.576	72.006
6/0	65	3,033	9,469	65.947	62.010
5/0	75	2,629	8,208	57.104	53.752
4/0	87.5	2,254	7,035	49.009	46.083
3/0	101	1,950	6,086	42.388	39.858
2/0	115	1,706	5,326	37.095	34.88
0	133	1,479	4,616	32.155	30.235
1	155	1,268	3,958	27.5445	25.922
2	183	1,073	3,350	23.333	21.940
3	220	895	2,792	19.451	18.290
4	260	758	2,366	16.486	15.502
5	311	633	1,977	13.768	12.940
6	380	518	1,621	11.792	10.617
7	452	436	1,362	9.4882	8.921
8	546	360	1,125	7.8414	7.373
9	675	292	911	6.3516	5.972
10	854	231	720	5.0185	4.7189
11	1,040	190	592	4.1217	3.8756
12	1,293	152	475	3.313	3.1153
13	1,653	119	373	2.5926	2.4378
14	2,186	90	281	1.9603	1.8433
15	2,699	73	227	1.5879	1.4931
16	3,416	58	180	1.2546	1.1767
17	4,462	44	138	0.96058	0.9324
18	6,073	32.5	101	0.70573	0.6636
19	8,745	22.54	70	0.49000	0.46083
20	10,796	18.25	57	0.39698	0.37328
21	13,663	14.42	45	0.21366	0.29493
22	17,846	11.04	34.4	0.24014	0.22529
23	24,290	8.11	25.2	0.17643	0.1659
24	28,908	6.82	21.2	0.14826	0.1394
25	34,978	5.63	17.6	0.12252	0.1152
26	43,184	4.56	14.2	0.099243	0.093318
27	52,021	3.79	11.8	..	..
28	63,877	3.09	9.6	..	..
29	75,646	2.61	8.1	..	..
30	90,996	2.17	6.8	..	..

TRADE PRICE LIST OF WROUGHT IRON, GAS, WATER, STEAM TUBES & FITTINGS

Internal Diam. in inches.		1 1/4	1 1/2	2	2 1/2	3	3 1/2	4	5	6
Tubes 2ft long and over ..	per ft									
Pieces 12 to 23 1/2 in. long ..	each	-10	-14	-15 1/2	-16 1/2	-17 1/2	-18 1/2	-19 1/2	-20 1/2	-21 1/2
Pieces 4 to 11 1/2 in. long ..	"	-7	-11	-12 1/2	-13 1/2	-14 1/2	-15 1/2	-16 1/2	-17 1/2	-18 1/2
Long Screws, 12 to 23 1/2 in. long ..	"	-11	-13	-14 1/2	-15 1/2	-16 1/2	-17 1/2	-18 1/2	-19 1/2	-20 1/2
Long Screws, 3 to 11 1/2 in. long ..	"	-8	-9	-10	-11	-12	-13	-14	-15	-16
Barrel nipples ..	"	-5	-6	-7	-8	-9	-10	-11	-12	-13
Bends ..	"	-8	-9	-10	-11	-12	-13	-14	-15	-16
Springs, not socketed ..	"	-5	-6	-7	-8	-9	-10	-11	-12	-13
Socket or Pipe Union ..	"	-2	-3	-4	-5	-6	-7	-8	-9	-10
Elbows, square ..	"	-10	-11	-12	-13	-14	-15	-16	-17	-18
Elbows, round ..	"	-11	-12	-13	-14	-15	-16	-17	-18	-19
Tees ..	"	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1
Crosses ..	"	2/2	2/4	2/9	2/9	2/9	2/9	2/9	2/9	2/9
Sockets, plain ..	"	-3	-4	-5	-6	-7	-8	-9	-10	-11
Sockets, diminished ..	"	-4	-5	-6	-7	-8	-9	-10	-11	-12
Flanges ..	"	-9	-10	-11	-12	-13	-14	-15	-16	-17
Caps ..	"	-3 1/2	-4 1/2	-5 1/2	-6 1/2	-7 1/2	-8 1/2	-9 1/2	-10 1/2	-11 1/2
Plugs ..	"	-3 1/2	-4 1/2	-5 1/2	-6 1/2	-7 1/2	-8 1/2	-9 1/2	-10 1/2	-11 1/2
Backnuts ..	"	-2	-3	-4	-5	-6	-7	-8	-9	-10
Nipples ..	"	-2	-3	-4	-5	-6	-7	-8	-9	-10
Union Bends ..	"	-2 1/2	-3 1/2	-4 1/2	-5 1/2	-6 1/2	-7 1/2	-8 1/2	-9 1/2	-10 1/2
Main Cocks ..	"	1/6	1/9	2/3	2/10	2/10	2/10	2/10	2/10	2/10
Main Cocks, with Brass Plugs ..	"	—	3/4	4/1	5/4	7/6	7/6	7/6	7/6	7/6
Round Way Cocks ..	"	—	2 7/8	3 1/2	4 1/2	5 1/2	5 1/2	5 1/2	5 1/2	5 1/2
Round Way Cocks, Brass Plugs ..	"	—	7 10/16	9 1/16	10 1/16	11 1/16	12 1/16	13 1/16	14 1/16	15 1/16
Cock Spanners, Wrought ..	"	—	1 1/16	1 1/8	1 1/4	1 1/2	1 3/4	1 7/8	2	2 1/8
Cock Spanners, Malleable Cast ..	"	—	—	—	—	—	—	—	—	—
Syphon Boxes, 1 quart ..	"	—	—	—	—	—	—	—	—	—
Syphon Boxes, 2 quarts ..	"	—	—	—	—	—	—	—	—	—
Syphon Boxes, 3 quarts ..	"	—	—	—	—	—	—	—	—	—
Syphon Boxes, 4 quarts ..	"	—	—	—	—	—	—	—	—	—

NOTE— Sizes 1 1/4 and 2 1/4 are charged at the list prices of 2 inches and 2 1/2 inches respectively

“QUEEN’S HEAD” IRON is branded and guaranteed.

GUEST, KEEN & NETTLEFOLDS, LTD.

BIRMINGHAM, ENGLAND.

WITH WHOM

JOHN LYSAGHT LTD.

HAVE BEEN AMALGAMATED SINCE 1920

CASTLE



BRAND

The Trade Mark that makes Satisfied Customers

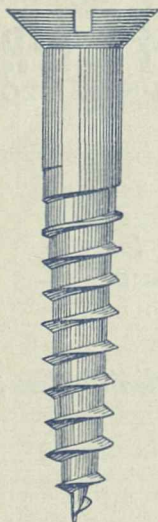
REPRESENTATIVES FOR AUSTRALIA

FOR SCREWS, NUTS, BOLTS
AND ACCESSORIES

NETTLEFOLDS PTY. LTD.

SUNSHINE
VICTORIA

Specify **NETTLEFOLDS**



*on all your
indents
for :—*

**WOOD SCREWS
METAL THREAD SCREWS
COACH SCREWS
BOLTS & NUTS
SCREW HOOKS. ETC.
COTTER PINS
RIVETS AND
WASHERS. &c.&c.&c**

**THE STANDARD QUALITY ALL OVER
THE WORLD AND RENOWNED FOR
EFFICIENCY AND RELIABILITY**

Stocks are carried by all the leading Hardware Merchants
and Storekeepers throughout the Commonwealth and
New Zealand.

**ENQUIRIES & INDENTS THROUGH
BRITISH MERCHANTS & SHIPPERS**

AUSTRALIAN REPRESENTATIVES

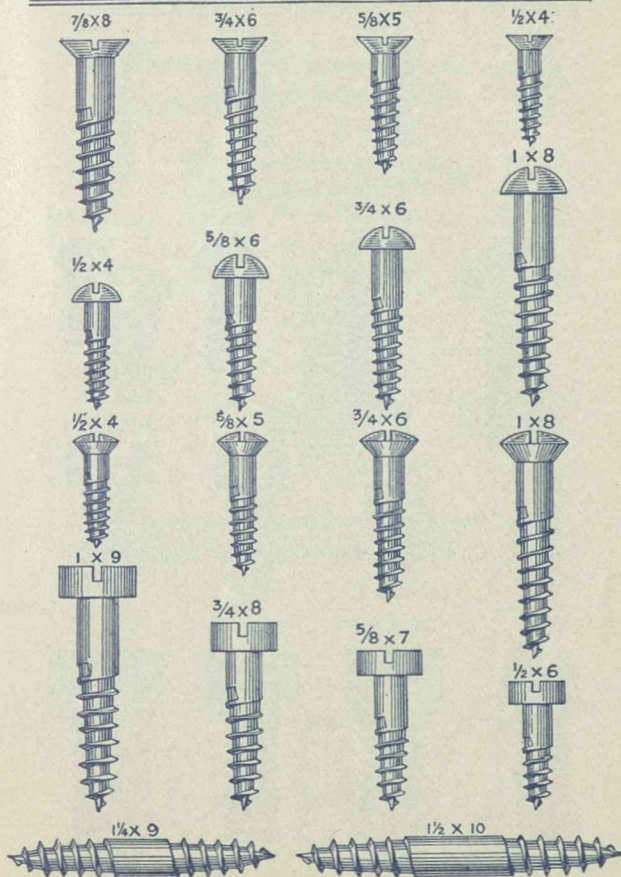
NETTLEFOLDS PTY. LTD., SUNSHINE, VIC.

Every Sheet of "ORB" IRON is its own advertisement.

NETTLEFOLDS

— RENOWNED —

WOOD SCREWS



"ORB" IRON—Nearly Eighty Years in use.

NETTLEFOLDS

RENOWNED

MACHINE SCREWS

$\frac{3}{8}$ " x $\frac{1}{8}$ "



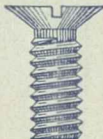
$\frac{1}{2}$ " x $\frac{5}{32}$ "



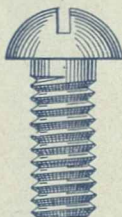
$\frac{1}{2}$ " x $\frac{3}{16}$ "



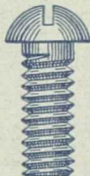
$\frac{5}{8}$ " x $\frac{1}{4}$ "



$\frac{3}{4}$ " x $\frac{5}{16}$ "



$\frac{5}{8}$ " x $\frac{1}{4}$ "



$\frac{1}{2}$ " x $\frac{3}{16}$ "



$\frac{3}{8}$ " x $\frac{5}{32}$ "



$\frac{3}{8}$ " x $\frac{5}{32}$ "



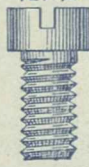
$\frac{3}{8}$ " x $\frac{3}{16}$ "



$\frac{1}{2}$ " x $\frac{7}{32}$ "



$\frac{1}{2}$ " x $\frac{1}{4}$ "



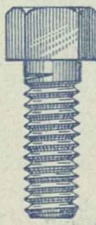
$\frac{3}{4}$ " x $\frac{1}{4}$ "



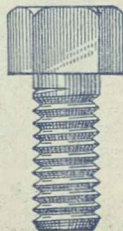
$\frac{3}{4}$ " x $\frac{5}{16}$ "



$\frac{3}{4}$ " x $\frac{1}{4}$ "



$\frac{3}{4}$ " x $\frac{5}{16}$ "

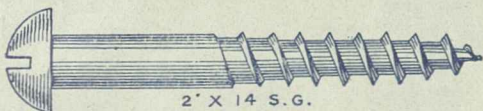


"ORB" IRON is still the Best in the World.

NETTLEFOLDS

RENOWNED

ROOFING FITTINGS



2" X 14 S.G.



1 1/4" X 10 S.G.



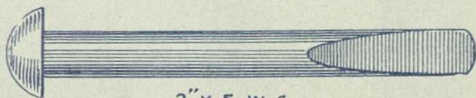
1/2" X 7/32"



3/4" X 1/4"



3/4" X 9/32"



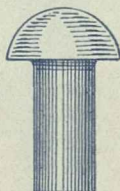
2" X 5 W.G.



3/8" X 3/16"



1/2" X 1/4"



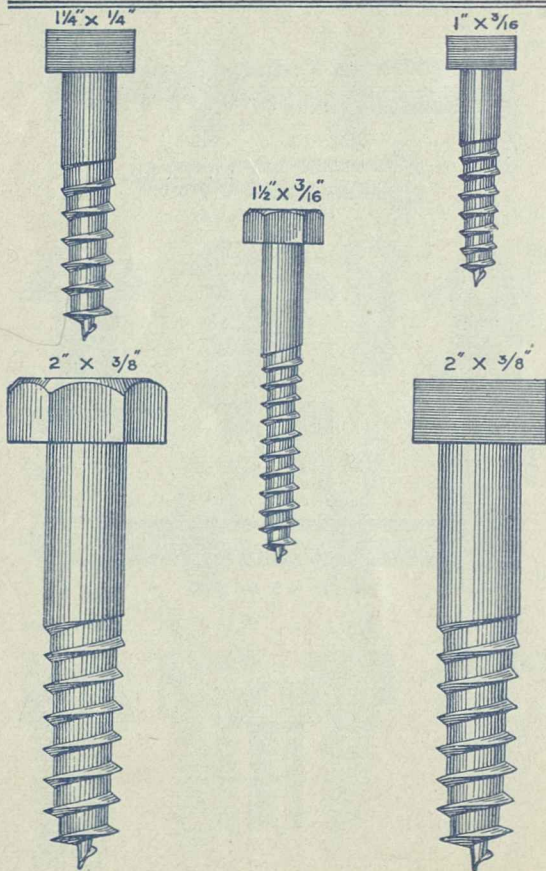
5/8" X 9/32"

"ORB" IRON is unrivalled for Quality,

NETTLEFOLDS

PATENT

COACH SCREWS

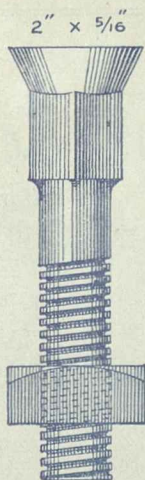
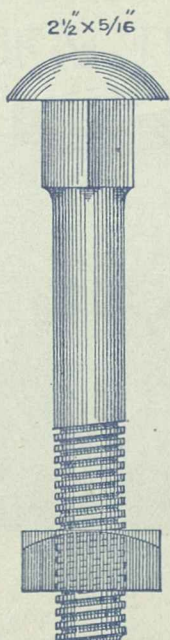
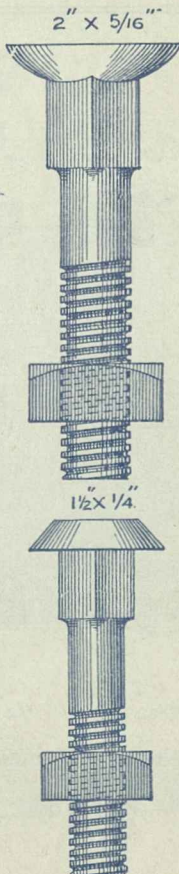
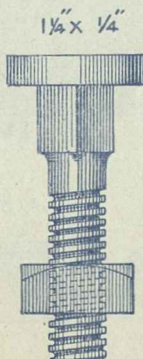


Durability, Uniformity and finish.

NETTLEFOLDS

RENOWNED

CARRIAGE BOLTS



NETTLEFOLDS

PRESSED AND

FORGED NUTS

$\frac{1}{4}$ "



$\frac{5}{16}$ "



$\frac{3}{8}$ "



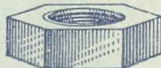
$\frac{1}{4}$ "



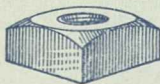
$\frac{5}{16}$ "



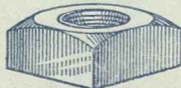
$\frac{3}{8}$ "



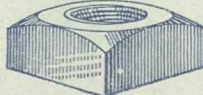
$\frac{1}{4}$ "



$\frac{5}{16}$ "



$\frac{3}{8}$ "



$\frac{7}{32}$ "



$\frac{1}{4}$ "



$\frac{5}{16}$ "



$\frac{3}{8}$ "

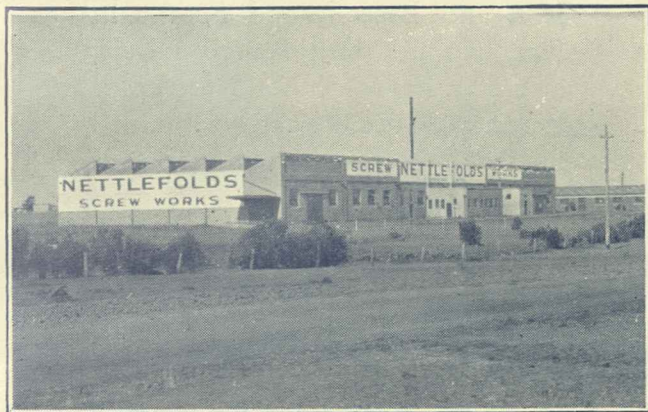


world, and Universally admitted to be THE BEST.

NETTLEFOLDS PTY. LTD.

SUNSHINE, VIC.

SCREW MANUFACTURERS



Registered Office:

SUNSHINE, VICTORIA

NETTLEFOLDS Pty. Ltd.

SUNSHINE, VIC.

HAVE pleasure in announcing that they are now making Iron and Brass Wood Screws in Flat, Round, and Raised Heads, also a variety of other Nettlefolds Products. Supplies can be obtained immediately from their works at Sunshine.

Substantial stocks are also kept of Messrs. Guest, Keen and Nettlefolds Screw Department Products, and general orders can be executed ex stock. Prices on application.

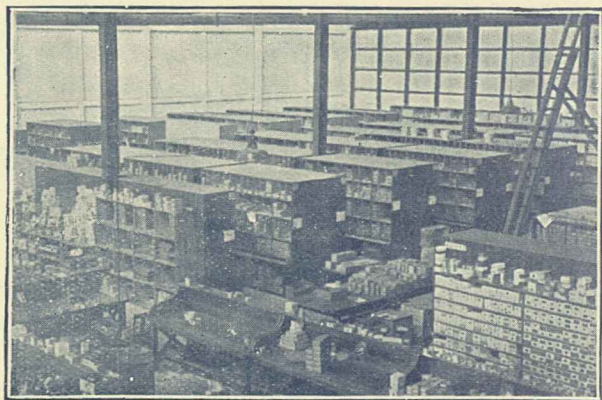
Please address all enquiries, etc., to Sunshine Works.

Stocks Include—

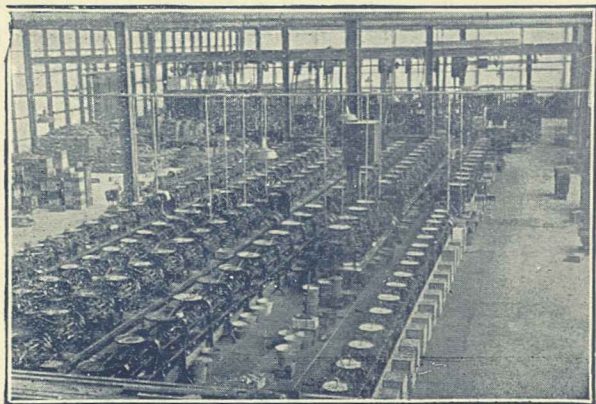
Wood Screws of all Classes and all Finishes
Galvanised Gutter Screws
 " Cone Head Screws
 " Mushroom Head Bolts and Nuts
Metal Thread Screws, Whitworth Threads
 " " " and Nuts Assorted
Step Bolts
Coach Screws
Handrail Screws
Washers and Brass Screw Cups
Nuts—Square and Hexagon
Gate Hooks
Screw Hooks
Shouldered Cup and Square Hooks
Cup and Jug Hooks, Household Assortment
Screw Eyes
Tinned S. Hooks
Cotter Pins
Cotter Pins (assorted) for Agricultural Implements
 " " " " Motor Cars
 " " " " Ford Cars
Rivets—Pan Heads
 " Tinmen's
Other Rivets to order
Countersunk Head Clout Nails
Ratchet Braces
Spindle Screws (assorted)
Copper Nails
 " Cut Tacks
 " Hose Rivets and Washers
 " Roves
Cricket Spikes
Cap Lifters
Tinned Skewers (assorted)
Boss Pig Rings and Ringers
Netting Staples
Brass Escutcheon Pins
Special or Pattern Screws, Rivets, etc., can be
 manufactured.

“RED ORB” IRON, owing to its extreme rigidity

NETTLEFOLDS Pty. Ltd.



VIEW OF WAREHOUSE



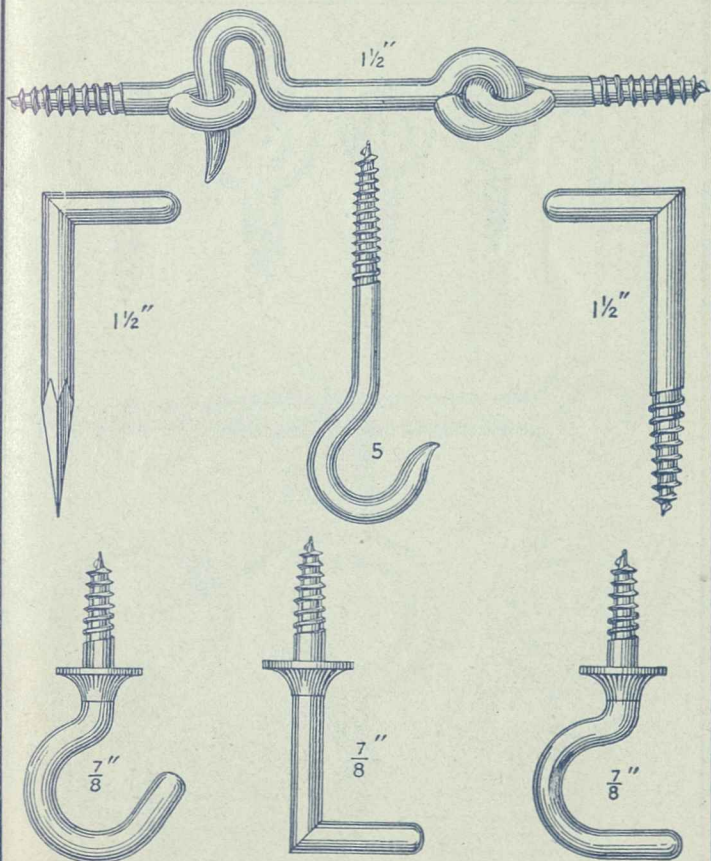
VIEW OF SCREW MILL

and even quality, is a perfect Roofing Sheet.

NETTLEFOLDS

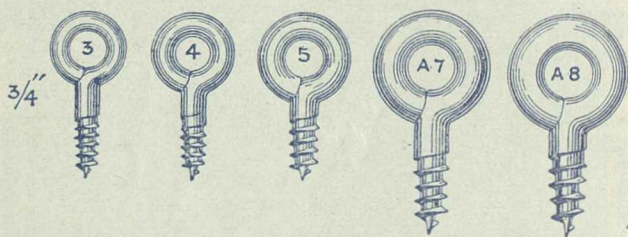
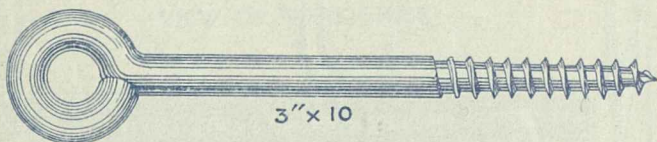
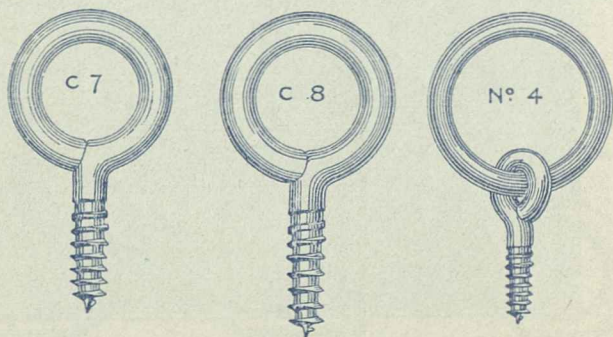
PATENT

WIRE HOOKS



"ORB" IRON—Nearly Eighty Years in use.

NETTLEFOLDS PATENT WIRE EYES



"ORB" IRON is still the Best in the World.

NETTLEFOLDS

PATENT

COTTER PINS

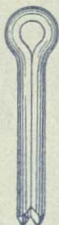
$\frac{1}{2}'' \times \frac{1}{16}''$



$\frac{3}{4}'' \times \frac{3}{32}''$



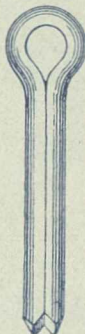
$1'' \times \frac{1}{8}''$



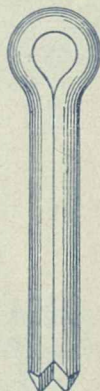
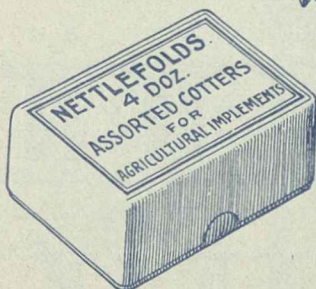
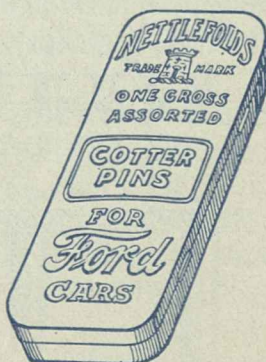
$1\frac{1}{4}'' \times \frac{5}{32}''$



$1\frac{1}{2}'' \times \frac{3}{16}''$



$1\frac{3}{4}'' \times \frac{7}{32}''$



Specify LYSAGHT'S Galvanized Iron, and

NETTLEFOLDS

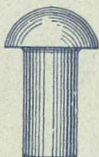
RENOWNED

RIVETS

$\frac{3}{8}'' \times \frac{3}{16}''$



$\frac{1}{2}'' \times \frac{1}{4}''$



$\frac{3}{4}'' \times \frac{5}{16}''$



$\frac{3}{8}'' \times \frac{3}{16}''$



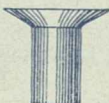
$\frac{1}{2}'' \times \frac{1}{4}''$



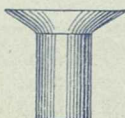
$\frac{3}{8}'' \times \frac{3}{16}''$



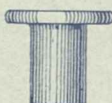
$\frac{7}{16}'' \times \frac{7}{32}''$



$\frac{1}{2}'' \times \frac{1}{4}''$



8 LBS



9 LBS



1



2



3



4



5



6



7



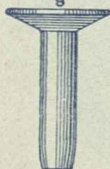
8



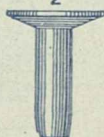
9



$\frac{5}{8}''$



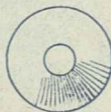
$\frac{1}{2}''$



$\frac{3}{8}''$



8

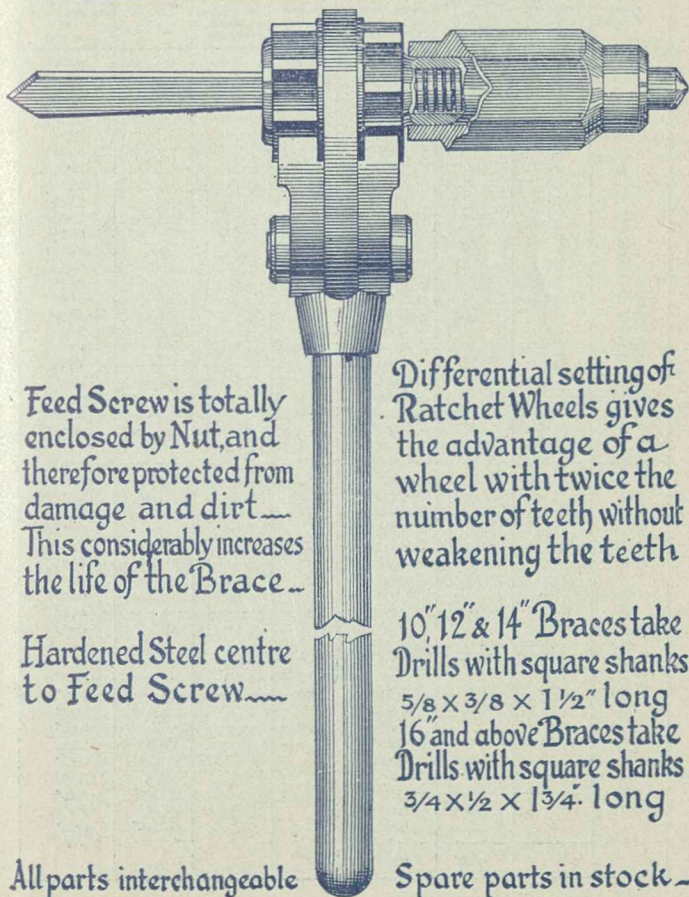


provide employment for Australian workmen.

NETTLEFOLDS

PATENT

RATCHET BRACES



Feed Screw is totally enclosed by Nut, and therefore protected from damage and dirt. This considerably increases the life of the Brace.

Hardened Steel centre to Feed Screw.

Differential setting of Ratchet Wheels gives the advantage of a wheel with twice the number of teeth without weakening the teeth.

10", 12" & 14" Braces take Drills with square shanks $\frac{5}{8} \times \frac{3}{8} \times 1\frac{1}{2}$ " long
16" and above Braces take Drills with square shanks $\frac{3}{4} \times \frac{1}{2} \times 1\frac{3}{4}$ " long

All parts interchangeable

Spare parts in stock.

DECIMAL EQUIVALENTS. SCREW GAUGE, IMPERIAL STANDARD WIRE GAUGE AND FRACTIONS OF AN INCH

SCREW GAUGE	IMPERIAL STANDARD WIRE GAUGE	FRACTIONS OF AN INCH	EQUIVALENTS IN DECIMALS OF AN INCH	SCREW GAUGE	IMPERIAL STANDARD WIRE GAUGE	FRACTIONS OF AN INCH	EQUIVALENTS IN DECIMALS OF AN INCH
(S.G.)	(W.G.)	INCHES	INCHES	(S.G.)	(W.G.)	INCHES	INCHES
	30		.0124"	10	6		.192"
	29		.0136"			13/64"	.203125"
	28		.0148"	11			.206"
		1/64"	.015625"		5		.212"
	27		.0164"			7/32"	.21875"
	26		.018"	12			.220"
	25		.020"		4		.232"
	24		.022"	13			.234"
	23		.024"			15/64"	.234375"
	22		.028"	14			.248"
		1/32"	.03125"			1/4"	.250"
	21		.032"		3		.252"
	20		.036"	15			.262"
	19		.040"	16	2		.276"
		3/64"	.046875"			9/32"	.28125"
	18		.048"	17			.290"
4/0			.054"		1		.300"
	17		.056"	18			.304"
3/0			.057"			5/16"	.3125"
2/0			.060"		0		.324"
		1/16"	.0625"	20			.332"
0			.063"			11/32"	.34375"
	16		.064"		2/0		.348"
1			.066"	22			.360"
	15		.072"		3/0		.372"
		5/64"	.078125"			3/8"	.375"
2	14		.080"	24			.388"
	13		.092"		4/0		.400"
		3/32"	.09375"	26		13/32"	.40625"
3			.094"				.416"
	12		.104"		5/0		.432"
4			.108"			7/16"	.4375"
		7/64"	.109375"	28			.444"
	11		.116"		6/0		.464"
5			.122"			15/32"	.46875"
		1/8"	.125"	30			.472"
	10		.128"	32	7/0	1/2"	.500"
6			.136"	36			.556"
		9/64"	.140625"			9/16"	.5625"
	9		.144"	40			.612"
7			.150"			5/8"	.625"
		5/32"	.15625"			11/16"	.6875"
	8		.160"			3/4"	.750"
8			.164"			13/16"	.8125"
		11/64"	.171875"			7/8"	.875"
	7		.176"			15/16"	.9375"
9			.178"			1"	1.000"
		3/16"	.1875"				



MILD STEEL COUNTERSUNK HEAD WOOD SCREWS

APPROX. WEIGHTS IN LBS. PER GROSS

ART. NO. 1

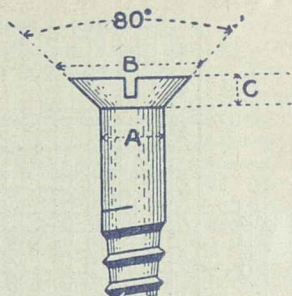
DIA.	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	20	22	24	26	28	30	32	36
LOTH.																											
1"	-027	-033	-044	-062	-082	-117	-151	-180	-220																		
1 1/8"	-040	-050	-050	-080	-100	-105	-190																				
1 1/4"	-038	-046	-065	-088	-123	-159	-202	-254	-300	-380	-440																
1 1/2"			-076	-100	-130	-190	-240	-290	-360																		
1 3/8"	-050	-060	-086	-125	-155	-200	-267	-295	-373	-457	-515	-640	-700		-930												
1 1/2"	-071	-073	-108	-141	-190	-250	-315	-382	-467	-552	-638	-707	-838		-1060		1-440										
1 3/4"	-077	-088	-125	-161	-221	-295	-381	-458	-540	-600	-747	-840	-985	-1095	-1235	-1420	1-700		2-030								
1 7/8"	-103	-143	-190	-252	-332	-412	-505	-598	-730	-855	-952	-1115	-1235	-1482	-1580	1-780		2-300									
2"	-110	-160	-220	-292	-375	-468	-575	-701	-818	-975	-1072	-1230	-1420	-1600	-1880	2-100	2-480	2-570	2-930	3-451	4-120						
2 1/8"					-330	-410	-530	-650	-780	-940	-1090	-1220	-1400		1-780		2-400										
2 1/4"	-210	-270	-370	-447	-607	-735	-880	-1030	-1230	-1300	-1492	-1745	-1960	-2290	2-470	2-770	3-090	3-710	4-290	5-070	6-270						
2 1/2"	-230	-320	-430	-650	-700	-825	-1055	-1185	-1410	-1600	-1810	-2060	-2360	2-640	2-890	3-330	3-475	4-280	5-060	6-000	7-020	8-480	10-000	10-695			
2 3/4"	-270	-370	-490	-650	-810	-947	-1180	-1435	-1690	-1790	-2100	-2490	-2770	3-000	3-350	3-980	4-090	4-940	5-880	6-870	8-000	9-760	11-060	12-900			
3"	-330	-430	-570	-730	-920	-1090	-1383	-1590	-1815	-2053	-2340	-2700	-3080	3-500	3-750	4-440	4-740	5-680	6-490	7-590	9-260	10-440	12-840	13-800			
3 1/8"	-500	-640	-790	-1030	-1220	-1400	-1740	-2065	-2290	-2625	-3060	-3415	-3815	4-045	4-750	5-325	6-265	6-950	8-700	10-170	11-980	14-020	16-330				
3 1/4"	-570	-720	-920	-1100	-1430	-1630	-1930	-2290	-2670	-2900	-3365	-3740	-4200	4-490	5-200	5-700	6-240	6-720	7-640	9-300	11-280	12-760	14-560	17-200			
3 1/2"	-670	-1070	-1420	-1620	-2060	-2350	-2750	-3100	-3510	-4110	-4550	-5095	5-540	6-390	6-900	8-290	9-765	10-920	13-440	14-580	16-860	19-680	22-910				
3 3/4"					-2100	-2500	-2900	-3300	-3700																		
4"					-1-690	-2-300	-2-740	-3-200	-3-520	-4-500	-5-210	-5-860	6-600	7-120	7-740	9-430	11-250	12-890	15-030	16-320	19-680	22-280					
4 1/8"					-2-550	-3-150	-3-850	-4-050	-4-500	-5-350	-5-500	6-600	7-640	8-490	8-840	10-770	12-490	15-000	17-060	19-440	21-960	24-690	34-360				
4 1/4"					-2-700	-3-050	-3-950	-4-500	-5-070	-6-200	-7-150	8-450	10-310	11-980	13-580	16-620	20-040	21-150	25-440	27-780							
4 1/2"							-4-550	-5-160	-6-600	-7-300	8-000	9-220	10-250	11-430	13-470	15-000	18-180	22-080	23-680	27-360	31-290						
5"											6-400	7-100	8-100	9-550													
5 1/8"																											
5 1/4"																											
5 1/2"																											
6"																											
7"																											

THE ABOVE ARE NET NAKED WEIGHTS

BRASS SCREWS. FOR WEIGHTS OF THE ABOVE SCREWS IN BRASS ADD 7 1/2% TO THE WEIGHTS AS SHOWN ABOVE IN MILD STEEL

Standard Wood Screws

A Useful Table.



No. of Screw Gauge:	Diameter Dec.	“A” Inches Approx. Fraction.	“B” Inches Approx. Fraction.	“C” Inches Approx. Fraction.	SLOT.	
					Width.	Depth.
0	.05784	1/16	7/64	1/32	1/64	1/64
1	.07100	5/64	9/64	3/64	1/64	1/32
2	.08416	5/64	11/64	3/64	1/64	1/32
3	.09732	3/32	3/16	3/64	1/64	1/32
4	.11048	7/64	7/32	1/16	1/32	1/32
5	.12364	1/8	15/64	1/16	1/32	1/32
6	.13680	9/64	17/64	5/64	1/32	3/64
7	.14996	5/32	19/64	5/64	1/32	3/64
8	.16312	5/32	21/64	3/32	3/64	3/64
9	.17628	11/64	23/64	3/32	3/64	3/64
10	.18944	3/16	3/8	7/64	3/64	1/16
11	.20260	13/64	13/32	7/64	3/64	1/16
12	.21576	7/32	7/16	1/8	3/64	1/16
13	.22892	15/64	29/64	1/8	1/16	1/16
14	.24208	1/4	31/64	9/64	1/16	1/16
15	.25524	1/4	33/64	9/64	1/16	1/16
16	.26840	17/64	17/32	5/32	1/16	5/64
17	.28156	9/32	9/16	5/32	1/16	5/64
18	.29472	19/64	19/32	11/64	5/64	5/64
19	.30788	5/16	39/64	11/64	5/64	5/64
20	.32104	21/64	41/64	11/64	5/64	5/64
21	.33420	21/64	43/64	3/16	5/64	3/32
22	.34736	11/32	11/16	3/16	3/32	3/32
23	.36052	23/64	23/32	13/64	3/32	3/32
24	.37368	3/8	3/4	13/64	3/32	3/32

and even quality, is a perfect Roofing Sheet.

WROUGHT IRON AND STEEL TUBES.

FROM 1/8" TO 6".

FOR GAS, WATER, AND STEAM.

AUSTRALIAN AND BRITISH TUBE TRADE STANDARD.

AUSTRALIAN AND BRITISH STANDARD DIAMETERS.		GAS TUBES			WATER TUBES.			STEAM TUBES.		
		Thickness		Weight per foot	Thickness		Weight per foot	Thickness		Weight per foot
		I.W. Gauge	Decimal ins.		I.W. Gauge	Decimal ins.		I.W. Gauge	Decimal ins.	
1/8	15/32	14	.080	.278	13	.092	306	12	.104	.337
1/4	17/32	14	.080	.385	13	.092	.428	12	.104	.472
3/8	11/16	13	.092	.582	12	.104	.644	11	.116	.703
1/2	27/32	12	.104	.818	11	.116	.896	10	.128	.973
5/8	11/16	11	.116	1.165	10	.128	1.268	9	.144	1.403
1	11/16	10	.128	1.653	9	.144	1.833	8	.160	2.008
1 1/4	11/16	9	.144	2.367	8	.160	2.598	7	.176	2.827
1 1/2	13/16	8	.160	2.973	7	.176	3.237	6	.192	3.500
1 3/4	23/32	8	.160	3.406	7	.176	3.710	6	.192	4.019
2	2 5/32	8	.176	3.786	7	.192	4.128	6	.212	4.473
2 1/4	2 5/8	7	.176	4.602	6	.192	4.980	5	.212	5.447
2 1/2	3	7	.176	5.338	6	.192	5.779	5	.212	6.323
3	3 1/3	7	.176	6.309	6	.192	6.834	5	.212	7.483
3 1/2	4	7	.176	7.265	6	.192	7.873	5	.212	8.627
4	4 1/3	7	.176	8.253	6	.192	8.945	5	.212	9.803
4 1/2	5	7	.176	9.230	6	.192	10.006	5	.212	10.969
5	5 1/2	7	.176	10.232	6	.192	11.091	5	.212	12.159
6	6 1/3	7	.176	12.305	6	.192	13.332	5	.212	14.509
TEST PRESSURES.		500 lbs. per sq. in.			600 lbs. per sq. in.			up to 2" -- 700 lbs. per sq. in. over 2" -- 1000 "		

**Approximate Lengths and Weights of
FORSYTH'S MANILA, N.Z. FLAX and COIR ROPE**
MANILA AND N.Z. FLAX ROPE.

Size Inches Circum- ference	Length Per Coil Fathoms	Weight Per Coil		Weight Per 100 feet		Approximate Breaking Strain of Best Manila Rope.	
		Cwts.	Qrs. Lbs.	Cwts.	Qrs. Lbs.	Tons	Cwts.
1"	180	—	—	12	—	—	3
1 $\frac{1}{4}$ "	180	—	—	20	—	—	7
1 $\frac{1}{2}$ "	180	—	1	4	—	—	10
1 $\frac{3}{4}$ "	180	—	1	20	—	—	12
1 $\frac{1}{2}$ "	125	—	2	4	—	—	18
1 $\frac{3}{4}$ "	125	—	2	10	—	1	5
2"	125	—	3	2	—	1 $\frac{1}{2}$	10
2 $\frac{1}{4}$ "	125	—	3	25	—	14 $\frac{1}{2}$	0
2 $\frac{1}{2}$ "	120	1	0	17	—	18	10
2 $\frac{3}{4}$ "	120	1	1	16	—	21 $\frac{1}{2}$	0
3"	120	1	2	25	—	27	10
3 $\frac{1}{4}$ "	120	1	3	20	—	1	—
3 $\frac{1}{2}$ "	120	2	1	0	—	1	10
3 $\frac{3}{4}$ "	120	2	2	10	—	1	—
4"	120	3	0	10	—	1	20
4 $\frac{1}{4}$ "	120	3	1	14	—	1	24 $\frac{1}{2}$
4 $\frac{1}{2}$ "	120	3	2	18	—	2	1
4 $\frac{3}{4}$ "	120	4	0	18	—	2	9
5"	120	4	3	10	—	2	19
5 $\frac{1}{2}$ "	115	5	2	5	—	3	6
6"	115	7	0	0	1	0	2
6 $\frac{1}{2}$ "	115	7	3	5	1	0	15
7"	115	9	2	0	1	1	14
7 $\frac{1}{2}$ "	115	10	3	14	1	2	9
8"	115	12	0	0	1	2	27
9"	115	15	1	0	2	0	24

COIR ROPE.

Size Inches Circum- ference	Length Per Coil Fathoms	Weight Per Coil		Weight Per 100 feet		Approximate Breaking Strain of Best Manila Rope.	
		Cwts.	Qrs. Lbs.	Cwts.	Qrs. Lbs.	Tons	Cwts.
1"	150	—	—	7	—	—	3 $\frac{1}{4}$
1 $\frac{1}{4}$ "	100	—	—	8	—	—	1 $\frac{1}{4}$
1 $\frac{1}{2}$ "	150	—	—	12	—	—	1 $\frac{1}{2}$
1 $\frac{3}{4}$ "	150	—	—	22	—	—	2 $\frac{1}{4}$
1 $\frac{1}{2}$ "	150	—	1	1	—	—	3 $\frac{1}{4}$
1 $\frac{3}{4}$ "	150	—	1	7	—	—	4
1 $\frac{1}{2}$ "	125	—	1	14	—	—	5 $\frac{1}{2}$
2"	120	—	1	20	—	—	6 $\frac{3}{4}$
2 $\frac{1}{4}$ "	120	—	2	5	—	—	8 $\frac{1}{2}$
2 $\frac{1}{2}$ "	120	—	2	9	—	—	9
2 $\frac{3}{4}$ "	120	—	3	3	—	—	12
3"	120	—	3	24	—	—	15
3 $\frac{1}{2}$ "	120	1	0	25	—	—	19
4"	120	1	3	4	—	1	0
4 $\frac{1}{2}$ "	120	2	0	25	—	1	6 $\frac{1}{2}$
5"	120	2	2	12	—	1	12 $\frac{1}{2}$
6"	115	3	3	3	—	2	5
7"	115	5	0	17	—	2	27 $\frac{1}{2}$
8"	115	7	2	0	1	0	9 $\frac{1}{2}$
9"	115	10	2	0	1	2	2 $\frac{1}{2}$

Safe Working Loads for Lifting Gear

NOTE.—Be sure of your weight and sling before you lift, take careful notice that the greater angle of your sling from the vertical the more load you are putting on it. The safe loads given are for each single leg of rope or chain. When used double or in any other multiple, the loads may be increased proportionally.

ROUGH STEEL WIRE ROPE.

6 x 37

If 6 x 24 is used, reduce load by 1/10.

If Crucible Wire Rope is used, reduce load by 1/5.

This table gives a factor of safety of 6.

		When used straight	When used at 60° angle	When used at 45° angle	When used at 30° angle
Circ.	Dia.	Cwts.	Cwts.	Cwts.	Cwts.
	$\frac{1}{4}$	6	5	4	3
	$\frac{3}{8}$	14	12	10	8
	$\frac{1}{2}$	23	20	17	12
	$\frac{5}{8}$	41	35	30	23
	$\frac{3}{4}$	56	47	39	26 $\frac{3}{4}$
	$\frac{7}{8}$	82	71	60	46
1	1	100	86	77	54 $\frac{1}{2}$
$1\frac{1}{8}$	$1\frac{1}{8}$	130	110	92	68
$1\frac{1}{4}$	$1\frac{1}{4}$	170	142	120	92
$1\frac{3}{8}$	$1\frac{3}{8}$	190	164	136	105
$1\frac{1}{2}$	$1\frac{1}{2}$	217	185	160	112

BEST B.B.B. SHORT LINK IRON CHAIN.

This table gives a safe load of 1/6 of actual breaking load.

	$\frac{1}{4}$	5 $\frac{1}{2}$	4 $\frac{1}{2}$	4	3 $\frac{3}{4}$
	$\frac{3}{8}$	11	9	7 $\frac{3}{4}$	5 $\frac{1}{2}$
	$\frac{1}{2}$	21	18	15	11
	$\frac{5}{8}$	36	30 $\frac{1}{2}$	25	18
	$\frac{3}{4}$	49	42	34 $\frac{3}{4}$	24 $\frac{1}{2}$
	$\frac{7}{8}$	67	57 $\frac{1}{2}$	46 $\frac{1}{2}$	32
1	1	85	72	59	42
$1\frac{1}{8}$	$1\frac{1}{8}$	107	91	75	53 $\frac{1}{2}$
$1\frac{1}{4}$	$1\frac{1}{4}$	134	114	94	67
$1\frac{3}{8}$	$1\frac{3}{8}$	170	139	112	89
$1\frac{1}{2}$	$1\frac{1}{2}$	214	188	160	116

MANILA ROPE.

This table gives a factor of safety of 8.

1	$\frac{3}{8}$	1.6	1.4	1.2	1.0
$1\frac{1}{2}$	$\frac{1}{2}$	2.75	2.4	2.0	1.5
2	$\frac{5}{8}$	4.5	3.2	2.6	2.25
$2\frac{1}{4}$	$\frac{3}{4}$	5.5	4.5	4.0	3.0
$2\frac{3}{4}$	$\frac{7}{8}$	7.8	7.0	6.0	5.1
3	1	9.1	8.1	7.1	6.8
$3\frac{1}{2}$	$1\frac{1}{8}$	12.25	11.0	9.75	7.75
$3\frac{3}{4}$	$1\frac{1}{4}$	14.0	12.0	10.75	8.5
$4\frac{1}{2}$	$1\frac{3}{8}$	19.6	17.0	15.0	12.0
$5\frac{1}{2}$	$1\frac{3}{4}$	28.5	25.5	22.5	17.5
6	2	33.5	30.5	26.5	20.5
$7\frac{1}{2}$	$2\frac{1}{2}$	48.5	42.5	37.0	30.0
9	3	68.0	60.0	52.0	41.0

"ORB" IRON—Nearly Eighty Years in use.

Table Showing Sustaining Degree of Best Mining Chain.

Size.	Weight per Fathom	Length in Cask.	Sustaining Degree			
			T.	c.	q.	lbs.
1/4	6½ lbs.	641 feet	0	18	0	0
5/16	7½ "	463 "	1	7	0	0
3/8	9 "	343 "	1	19	0	0
7/16	11 "	250 "	2	14	0	0
1/2	15 "	197 "	3	12	0	0
9/16	20 "	162 "	4	10	0	0
5/8	24 "	133 "	5	11	0	0
3/4	35 "	93 "	8	2	0	0
7/8	46 "	71 "	10	19	0	0
1	60 "	55 "	14	8	0	0

Table Showing Working Load and Tensile Strain of Best Mill Proof Chain.

Size.	Working Load				Weight per Fathom.	Admiralty Tensile Strain.			
	T.	c.	q.	lbs.		T.	c.	q.	lbs.
1/8	0	2	2	0	2½ lbs.	0	5	0	0
5/32	0	3	0	0	3 "	0	6	0	0
3/16	0	4	0	7	3½ "	0	8	0	14
1/4	0	7	2	0	5½ "	0	15	0	0
5/16	0	11	1	0	7 "	1	2	2	0
3/8	0	16	1	0	10 "	1	12	2	0
7/16	1	2	2	0	13 "	2	5	0	0
1/2	1	10	0	0	17 "	3	0	0	0
9/16	1	17	2	0	21 "	3	15	0	0
5/8	2	6	1	0	26 "	4	12	2	0
11/16	2	16	1	0	31 "	5	12	0	0
3/4	3	7	2	0	37 "	6	15	0	0
7/8	4	11	1	0	50 "	9	2	0	0
1	6	0	0	0	64 "	12	0	0	0

For a good strong roofing job, specify Lysaght's Red Orb.

STANDARD WEIGHTS and SIZES of TINPLATES

Birmingham Gauge	Substance		Size		No. of Sheets Per Box	Net Weight Per Box		Gross Weight Per Box	
	Lb.	m m	Inches	m/m	Per Box	Lb.	Kilos	Lb.	Kilos
35.7	55	.160	20x14	355x508	112	55	25	60	27
35.0	60	.175	"	"	"	60	27	65	30
34.2	65	.191	"	"	"	65	30	70	32
33.7	70	.203	"	"	"	70	32	75	34
33.1	75	.218	"	"	"	75	34	80	36
32.5	80	.234	"	"	"	80	36	85	39
32.0	85	.249	"	"	"	85	39	90	41
31.6	90	.262	"	"	"	90	41	95	43
31.1	95	.277	"	"	"	95	43	100	45
30.6	100	.290	"	"	"	100	45	105	47
29.9IC	108	.315	"	"	"	108	49	113	51
28.0IX	136	.397	"	"	"	136	62	141	64
26.8IXX	156	.454	"	"	"	156	71	161	73
25.8IXXX	176	.511	"	"	"	176	80	181	82
24.8XXXX	196	.574	"	"	"	196	89	201	91
35.7	55	.160	28x20	710x510	"	110	50	120	54
35.0	60	.175	"	"	"	120	54	130	59
34.2	65	.191	"	"	"	130	60	140	64
33.7	70	.203	"	"	"	140	64	150	68
33.1	75	.218	"	"	"	150	68	160	72
32.5	80	.234	"	"	"	160	72	170	78
32.0	85	.249	"	"	"	170	78	180	82
31.6	90	.262	"	"	"	180	82	190	86
31.1	95	.277	"	"	"	190	86	200	90
30.6	100	.290	"	"	"	200	90	210	96
29.9IC	108	.315	"	"	"	216	98	226	103
28.0IX	136	.397	"	"	56	136	62	146	66
26.8IXX	156	.454	"	"	"	156	71	166	75
25.8IXXX	176	.511	"	"	"	176	80	186	84
24.8XXXX	196	.574	"	"	"	196	89	206	94
33.9	68	.198	30x21	760x530	112	153	70	165	75
33.0	76	.221	"	"	"	171	78	183	83
32.3	83	.241	"	"	"	184	84	196	89
31.0	96	.279	"	"	"	214	97	226	102
29.9IC	108	.315	"	"	"	243	110	255	116
28.0IX	136	.397	"	"	56	153	70	165	75
26.8IXX	156	.454	"	"	"	176	80	188	85
25.8IXXX	177	.511	"	"	"	198	90	210	95
24.8XXXX	195/6	.574	"	"	"	220	100	232	105
31.8	87	.254	18½x14	355x476	124	90	41	96	44
31.5	91	.264	"	"	"	95	43	101	46
31.0	96/97	.279	"	"	"	100	45	106	48
30.11C	106	.310	"	"	"	110	50	116	53
28.0IX	135	.394	"	"	"	140	64	146	67
31.6	89½	.262	20x10	254x508	225	128	58	134	61
30.6	100	.290	"	"	"	143	65	149	68
31.1	95	.277	"	"	"	136	62	142	65
29.0IXL	121	.353	"	"	"	174	79	180	82
28.0IX	136	.397	"	"	"	195	89	201	92
29.9IC	108	.315	"	"	"	156	71	163	74

SIZES OF PIPES FOR WATER

The table below gives approximately suitable diameters of pipes for passing different quantities of water. For short mains up to 200 yards long, the diameter of same, if smaller than the figures given, is not of much importance, but when they exceed 200 yds. in length the diameters given in this table are desirable.

Gallons per minute	Diameter of pipe in inches	Gallons per minute	Diameter of pipe in inches
$\frac{1}{2}$	$\frac{1}{2}$	60	4
$\frac{3}{4}$	$\frac{3}{4}$	100	5
1 $\frac{1}{2}$	1	160	6
3	1 $\frac{1}{4}$	220	7
5	1 $\frac{1}{2}$	300	8
10	2	400	9
15	2 $\frac{1}{2}$	500	10
20	3	800	12
40	3 $\frac{1}{2}$	1000	14

ACETYLENE PIPE SERVICE

Number of half-foot Burners or equivalent of other sizes, to burn at 2 $\frac{1}{2}$ inches or higher pressure at the burners.	Distance from Generating apparatus if a main pipe, or distance from main pipe if a branch.	Sizes of Pipes
2	15 feet	$\frac{1}{2}$ inch
5	30 "	$\frac{3}{4}$ "
10	40 "	$\frac{1}{2}$ "
20	50 "	$\frac{3}{4}$ "
50	100 "	$\frac{1}{2}$ "
70	130 "	1 "
100	150 "	1 $\frac{1}{4}$ "
150	180 "	1 $\frac{1}{2}$ "
270	250 "	2 "

WEIGHT OF LEAD PIPES

Sizes and Weights usually manufactured

Bore	Length	Weight and Thickness of each Length					
		Common		Middling		Strong	
		Thick.	Weight	Thick.	Weight	Thick.	Weight
Ins.	Ft.	In.	Lbs.	In.	Lbs.	In.	Lbs.
$\frac{1}{2}$	15	.11	16	.15	22	.17	26
$\frac{3}{4}$	15	.12	24	.13	27	.15	30
1	15	.12	30	.15	39	.16	42
1 $\frac{1}{4}$	12	.14	36	.16	44	.20	53
1 $\frac{1}{2}$	12	.16	48	.18	56	.21	67
2	10	.15	50	.18	60	.21	70
2 $\frac{1}{2}$	10	.17	70	.21	86	.24	100

Composition Pipe

(INSIDE DIAMETER).

Inch	lbs.	oz.		Inch	lbs.	oz.
$\frac{1}{4}$	0	13	per yard	$\frac{5}{8}$	3	4 per yard
$\frac{5}{16}$	1	0	"	$\frac{3}{4}$	4	4 "
$\frac{3}{8}$	1	5	"	$\frac{7}{8}$	4	12 "
$\frac{7}{16}$	1	10	"	1	5	8 "
$\frac{1}{2}$	2	2	"			

Length of Coils up to $\frac{1}{2}$ inch, usually 50 yards.

$\frac{5}{8}$ inch	$\frac{3}{4}$ inch	$\frac{7}{8}$ inch	1 inch
40 yards	30 yards	25 yards	20 yards

Pipes—Cast Iron (Water)

Spigot and Faucet
NINE FEET LENGTHS

Diam.	Cwts.	Qrs.	Lbs.	Diam.	Cwts.	Qrs.	Lbs.
$2\frac{1}{2}$	0	3	2	14	9	1	26
3	1	0	10	15	9	3	26
4	1	1	16	16	10	3	6
5	2	0	14	18	14	0	25
6	2	2	0	20	16	1	20
7	3	0	20	22	17	3	2
8	3	2	14	24	22	0	0
9	4	2	10	27	24	0	21
10	5	1	0	30	27	0	0
12	7	0	0	33	32	0	0

Galvanized Piping—(Iron)

Weight per 100 feet.

Size	Per 100 Feet.			Size	Per 100 Feet.		
	Cwt.	Qrs.	Lbs.		Cwt.	Qrs.	Lbs.
$\frac{1}{2}$	0	3	0	$1\frac{1}{2}$	2	3	2
$\frac{3}{4}$	1	0	5	2	4	0	6
1	1	1	22	3	6	0	8
$1\frac{1}{4}$	2	1	10				

WEIGHT OF SHEET ZINC

Gauge No.	Approximate Thickness		Approx. weight per square foot			Approximate Weight of Sheets								
						6 ft. x 3 ft.			7 ft. x 3 ft.			8 ft. x 3 ft.		
	In.	Mm.	lbs.	oz.	drms.	lbs.	oz.	drms.	lbs.	oz.	drms.	lbs.	oz.	drms.
3	.007	.171	—	3	15	4	6	14	5	2	11	5	14	8
4	.008	.209	—	4	13	5	6	10	6	5	1	7	3	8
5	.010	.247	—	5	11	6	6	6	7	7	7	8	8	8
6	.011	.291	—	6	11	7	8	6	8	12	7	10	0	8
7	.013	.337	—	7	12	8	11	8	10	2	12	12	10	0
8	.015	.386	—	8	14	9	15	12	11	10	6	13	5	0
9	.018	.450	—	10	5	11	9	10	13	8	9	15	7	8
10	.020	.500	—	11	7	12	13	14	15	0	3	17	2	8
12	.026	.660	—	15	2	17	0	4	19	13	10	22	11	0
14	.032	.820	1	2	12	21	1	8	24	9	12	28	2	0
16	.043	1.080	1	8	12	27	13	8	32	7	12	37	2	0
18	.053	1.340	1	14	11	34	8	6	40	4	7	46	0	8
20	.063	1.600	2	4	10	41	3	4	48	1	2	54	15	0
22	.077	1.960	2	12	14	50	7	12	58	14	6	67	5	0
24	.091	2.320	3	5	3	59	13	6	69	12	15	79	12	8
26	.105	2.680	3	13	7	69	1	14	80	10	3	92	2	8

WEIGHTS OF NON-FERROUS SHEET METALS IN POUNDS PER SQUARE FOOT

Copper or Bronze	Brass or Muntz	Aluminium	Thickness		Nickel Silver	Monel Metal, or Nickel
			I.S.W.G.	Inches		
23	21.7	7.03	0.500	7/0	22.6	23.00
17.165	16.3	5.29	0.372	3/0	16.8	17.112
14.95	14.39	4.61	0.324	0	14.7	14.904
12.834	12.282	3.92	0.276	2	12.5	13.996
11.718	11.214	3.58	0.252	3	11.4	11.592
10.788	10.324	3.29	0.232	4	10.5	10.672
8.928	8.544	2.72	0.192	6	8.69	8.742
7.440	7.120	2.27	0.160	8	7.24	7.360
5.952	5.696	1.82	0.128	10	5.79	5.888
4.836	4.628	1.48	0.104	12	4.7	4.784
3.720	3.560	1.14	0.080	14	3.62	3.68
2.976	2.848	0.911	0.064	16	2.90	2.944
2.232	2.136	0.682	0.048	18	2.17	2.208
1.674	1.602	0.511	0.036	20	1.63	1.656
1.302	1.246	0.398	0.028	22	1.27	1.288
1.023	0.979	0.313	0.022	24	0.996	1.012
0.837	0.801	0.256	0.018	26	0.815	0.828
0.688	0.658	0.210	0.0148	28	0.670	0.6808
0.576	0.551	0.176	0.0124	30	0.561	0.5704
0.502	0.480	0.154	0.0108	32	0.489	0.4968
0.427	0.409	0.131	0.0092	34	0.453	0.4232
0.353	0.338	0.108	0.0076	36	0.344	0.3496

Weights of Non-Ferrous Wire in lbs. per 100 feet.

Copper or Bronze	Brass or Muntz	Aluminium	Thickness Inches I.S. W.G.		Nickel Silver	Monel Metal or Nickel
75.7	71.9	22.93	0.5	7/0	74.1	76.1
41.9	39.8	12.77	0.372	3/0	41	42.76
31.8	30.2	7.63	0.324	0	31.1	31.9
23.1	21.9	7.00	0.276	2	22.6	23.16
19.2	18.3	5.83	0.252	3	18.8	19.20
16.3	15.5	4.96	0.232	4	15.9	16.37
11.2	10.6	3.4	0.192	6	10.9	11.18
7.75	7.36	2.35	0.160	8	7.58	7.77
4.96	4.71	1.53	0.128	10	4.85	4.98
3.27	3.11	0.99	0.104	12	3.20	3.28
1.94	1.84	0.66	0.080	14	1.9	1.93
1.24	1.18	0.377	0.064	16	1.21	1.25
0.698	0.663	0.212	0.048	18	0.682	0.695
0.392	0.373	0.119	0.036	20	0.384	0.387
0.237	0.226	0.072	0.028	22	0.232	0.238
0.146	0.139	0.044	0.022	24	0.143	0.147
0.0981	0.0932	0.0297	0.018	26	0.096	0.098
0.0663	0.0630	0.0201	0.0148	28	0.0649	0.066
0.0465	0.0442	0.0141	0.0124	30	0.0455	0.046
0.0353	0.0336	0.0108	0.0108	32	0.0345	0.035
0.0256	0.0243	0.0077	0.0092	34	0.0250	0.025
0.0175	0.0166	0.0053	0.0076	36	0.0171	0.017

Weight and Dimensions of Hoop- Iron per Foot Run.

B. W. Gauge	Width	Weight	B. W. Gauge	Width	Weight
11	2 $\frac{3}{4}$	1.1577	15	1 $\frac{3}{8}$	.3334
12	2 $\frac{1}{2}$	.9178	16	1 $\frac{1}{2}$	.3120
12	2	.7342	16	1 $\frac{1}{4}$	.2652
13	2 $\frac{1}{4}$	.7123	17	1 $\frac{1}{8}$	.2084
13	2	.6332	18	1	.1616
13	1 $\frac{3}{4}$	.5540	19	$\frac{7}{8}$	.1237
14	1 $\frac{3}{4}$	.4715	20	$\frac{3}{4}$	.0884
14	1 $\frac{1}{2}$	.4042	21	$\frac{5}{8}$	.0694
15	1 $\frac{1}{2}$	.3637			

Table of Weights— Monel Metal and Nickel

ROUNDS, SQUARES AND HEXAGONS.

Size in inches	Rounds	Squares	Hexa- gons	Size in inches	Rounds	Squares	Hexa- gons
	Lbs. per foot				Lbs. per foot		
7/32	.146	—	—	2	12.178	15.504	13.426
1/4	.190	—	.209	2 1/8	13.747	17.503	15.156
5/16	.297	.379	.327	2 1/4	15.411	19.622	16.991
3/8	.428	.545	.472	2 3/8	17.171	21.863	18.921
7/16	.583	.742	.643	2 1/2	19.027	24.225	20.977
1/2	.761	.969	.839	2 3/4	20.977	26.708	23.127
9/16	.963	1.226	1.062	2 7/8	23.022	29.312	25.382
5/8	1.189	1.514	1.311	3	25.162	32.038	27.741
11/16	1.439	1.832	1.586	3 1/8	27.399	34.884	30.207
3/4	1.712	2.180	1.887	3 1/4	32.155	40.940	35.451
13/16	2.010	2.559	2.216	3 3/8	37.291	47.481	41.113
7/8	2.331	2.968	2.570	3 1/2	42.810	54.506	47.198
15/16	2.766	3.407	2.940	4	48.706	62.016	53.698
1	3.044	3.876	3.356	4 1/8	54.985	70.010	60.621
1-1/16	3.436	4.376	3.778	4 1/4	61.644	78.489	67.963
1 1/8	3.853	4.906	4.248	4 3/8	68.714	87.452	75.757
1-3/16	4.293	5.466	4.733	5	76.105	96.900	83.906
1 1/4	4.756	6.056	5.243	5 1/8	83.908	106.832	92.509
1-5/16	5.244	6.677	5.782	5 1/4	92.086	117.249	101.525
1 3/8	5.756	7.328	6.346	5 3/8	100.648	128.150	110.964
1-7/16	6.291	8.009	6.934	6	109.590	139.536	120.823
1 1/2	6.849	8.721	7.551	6 1/8	118.916	151.406	131.105
1-9/16	7.432	9.463	8.194	6 1/4	128.617	163.761	141.800
1 5/8	8.039	10.235	8.863	6 3/8	138.703	176.600	152.910
1-11/16	8.669	11.038	9.558	7	149.168	189.924	164.458
1 3/4	9.321	11.870	10.276	7 1/8	160.009	203.733	176.410
1-13/16	10.001	12.733	11.026	7 1/4	171.238	218.025	188.790
1 7/8	10.702	13.627	11.799	7 3/8	182.843	232.802	201.584
1-15/16	11.428	14.550	12.599	8	194.827	248.064	214.797

LYSAGHT



AUSTRALIA



LYSAGHT'S RED ORB.

So branded to distinguish it from the ordinary Orb sheet is a local production specially manufactured to withstand the roughest usage whether in transit or fixing. Its extreme rigidity and stiffness makes it unsuitable for curving but for roofing, fencing and similar work it is incomparable.

itations. There's nothing quite so good.

WEIGHT OF MUNTZ'S METAL SHEETS

Although it is generally accepted in the Metal Trade that one square foot of Rolled Muntz's Metal one inch in thickness weighs 44½ lbs., it is customary to adopt the approximate Imperial Standard Wire Gauge Equivalents to weight per square foot of Muntz's Metal as detailed below for most practical purposes, and for trading transactions.

Weight per square foot	Nearest Imperial Standard Wire Gauge	Weight per square foot	Nearest Imperial Standard Wire Gauge
8 ozs.	32	2 lbs.	19
9 " " " " " "	30	2¼ " " " " " "	18
10 " " " " " "	28	2½ " " " " " "	17
12 " " " " " "	27	3 " " " " " "	16
13 " " " " " "	26	3¼ " " " " " "	15
14 " " " " " "	25	3½ " " " " " "	14
16 " " " " " "	24	4¼ " " " " " "	13
18 " " " " " "	23	5 " " " " " "	12
1¼ lbs.	22	5½ " " " " " "	11
1½ " " " " " "	21	6 " " " " " "	10
1¾ " " " " " "	20	6½ " " " " " "	9

Subject to a Rolling Tolerance of from 2 to 5 per cent. above or below.

Approximate Weight of Rolled Copper 1 in. Thick and under.

Subject to a Rolling Tolerance of from 2 to 5 per cent. above or below.

Thickness	Inch	Lbs. per Sq. Ft.	Thickness	Inch	Lbs. per Sq. Ft.
1in.	..	46.50	7/16in.	(.437)	20.34
15/16in.	(.937)	43.59	3/8in.	(.375)	17.44
7/8in.	(.875)	40.69	5/16in.	(.312)	14.53
13/16in.	(.812)	37.78	1/4in.	(.250)	11.63
3/4in.	(.750)	34.88	3/16in.	(.187)	8.72
11/16in.	(.687)	31.97	1/8in.	(.125)	5.81
5/8in.	(.625)	29.06	1/16in.	(.062)	2.91
9/16in.	(.562)	26.16	1/32in.	(.031)	1.45
1/2in.	(.500)	23.25			

WEIGHT OF ROLLED COPPER AND BRASS.

Although text books and tables vary slightly as to the weight of rolled copper and brass per square or cubic foot, the leading British copper and brass rollers have adopted as a basis of calculation one square foot of rolled copper one inch in thickness, weighs 46½lbs., and one square foot of rolled brass (which varies slightly according to the proportions of the alloy) weighs 44½lbs. per square foot one inch in thickness.

Extruded Flat Brass Sections

Dimensions		Est. Weight per ft. in lbs.	Dimensions		Est. Weight per ft. in lbs.	Dimensions		Est. Weight per ft. in lbs.
A	B		A	B		A	B	
Ins.	Ins.		Ins.	Ins.		Ins.	Ins.	
3.3/4	3/4	10.268	1.1/2	1/16	.342	3/4	5/8	1.71
						3/4	1/2	1.368
3.9/16	.35	4.549	1.3/8	7/8	4.389	3/4	3/8	1.026
						3/4	5/16	.855
3.1/2	1/2	6.384	1.3/8	1/2	2.508	3/4	1/4	.684
			1.3/8	3/8	1.881	3/4	3/16	.513
3	3/4	8.216				3/4	1/8	.342
			1.3/8	3/16	.94	3/4	1/16	.171
3	1/4	2.736	1.3/8	1/8	.627			
						11/16	1/8	.314
2.13/16	.95	9.747	1.5/16	9/16	2.692			
						5/8	1/2	1.14
2.3/4	5/16	3.135				5/8	3/8	.855
			1.1/4	1	4.561			
			1.1/4	3/4	3.421			
2.1/2	3/8	3.42	1.1/4	5/8	2.85	5/8	1/4	.57
			1.1/4	1/2	2.281	5/8	3/16	.427
			1.1/4	3/8	1.71	5/8	1/8	.285
2.3/8	1/2	4.332	1.1/4	1/4	1.14			
			1.1/4	3/16	.855			
2.1/4	7/8	7.182	1.1/4	1/8	.57	9/16	5/16	.64
2.1/4	1/4	2.052	1.1/4	1/16	.285			
						1/2	3/8	.684
2.1/8	1/2	3.876	1.1/8	1/2	2.052	1/2	5/16	.570
			1.1/8	1/4	1.026	1/2	1/4	.456
2	1	7.296	1.1/8	7/32	.898	1/2	3/16	.342
			1.1/8	3/16	.77	1/2	1/8	.228
2	1/2	3.648				1/2	1/16	.114
2	7/16	3.192						
2	3/8	2.736	1	7/8	3.192	7/16	3/8	.599
			1	3/4	2.736			
2	1/4	1.824	1	5/8	2.28	3/8	5/16	.428
2	3/16	1.368	1	1/2	1.824	3/8	1/4	.342
2	1/8	.912	1	3/8	1.368	3/8	3/16	.256
						3/8	1/8	.171
1.3/4	1.1/8	7.182	1	1/4	.912	3/8	7/64	.149
1.3/4	1	6.384	1	3/16	.684	3/8	1/16	.085
			1	1/8	.456			
1.3/4	1/4	1.596	1	1/16	.228			
1.3/4	1/8	.798				11/32	17/64	.334
			7/8	3/4	2.394			
1.1/2	1.1/4	6.840	7/8	5/8	1.995	5/16	1/4	.285
1.1/2	1	5.472	7/8	1/2	1.596			
1.1/2	3/4	4.108				5/16	3/32	.107
1.1/2	1/2	2.736	7/8	1/8	.399	.285	5/64	.081
1.1/2	3/8	2.052						
1.1/2	1/4	1.368	13/16	1/2	1.482	1/4	1/8	.114
1.1/2	3/16	1.026						
1.1/2	1/8	.684						

Weight of Brass and Copper Rods and Bars

Pounds per Lineal Foot.

HEXAGON.

Association.	Across Flats		Lbs. per lin. ft.
	Min. to Max.	Ins.	
No. 3	.279	.282	.251
No. 2	.321	.324	.332
No. 1	.362	.365	.421
No. 0	.410	.413	.539

Weights are calculated for extrusion
brass alloy rods, the specific gravity
being 8.444 or 0.304lbs. per cubic in.

Standard.	Across Flats		Lbs. per lin. ft.
	Min to Max.	Ins.	
Whit.			
Ins.			
1/4	.410	.413	.539
5/16	.440	.445	.626
3/8	.520	.525	.871
7/16	.595	.600	1.14
1/2	.705	.710	1.59
9/16	.815	.820	2.13
5/8	.915	.920	2.68
11/16	1.002	1.010	3.22
3/4	1.092	1.100	3.82
7/8	1.192	1.200	4.55
1	1.292	1.300	5.34
1-1/8	1.468	1.480	6.92
1-1/4	1.658	1.670	8.81
1-3/8	1.845	1.860	10.94
1-1/2	2.035	2.050	13.29
1-3/4	2.200	2.220	15.58
1-5/8	2.390	2.410	18.36

Side or Diam. in inches	SQUARE.		ROUND.		Side or Diam. in inches
	Brass	Copper	Brass	Copper	
1/8	.057	.06	.045	.047	1/8
3/16	.128	.135	.101	.106	3/16
1/4	.228	.240	.179	.189	1/4
5/16	.357	.376	.280	.294	5/16
3/8	.513	.541	.403	.424	3/8
7/16	.699	.736	.549	.578	7/16
1/2	.913	.962	.717	.755	1/2
9/16	1.15	1.21	.91	.955	9/16
5/8	1.43	1.51	1.12	1.18	5/8
11/16	1.73	1.82	1.35	1.43	11/16
3/4	2.05	2.16	1.61	1.70	3/4
13/16	2.41	2.54	1.89	1.99	13/16
7/8	2.80	2.95	2.19	2.31	7/8
15/16	3.21	3.38	2.52	2.65	15/16
1	3.65	3.85	2.87	3.02	1
1-1/8	4.62	4.87	3.63	3.83	1-1/8
1-1/4	5.70	6.01	4.48	4.73	1-1/4
1-3/8	6.90	7.27	5.42	5.72	1-3/8
1-1/2	8.21	8.65	6.45	6.80	1-1/2
1-5/8	9.64	10.16	7.57	7.99	1-5/8
1-3/4	11.18	11.78	8.78	9.26	1-3/4
1-7/8	12.83	13.52	10.08	10.63	1-7/8
2	14.60	15.39	12.10	12.10	2
2-1/8			12.94	13.66	2-1/8
2-1/4			14.51	15.31	2-1/4
2-3/8			16.17	17.06	2-3/8
2-1/2			17.92	18.90	2-1/2

Weight of Drawn Copper Bars

STANDARD RECTANGULAR SIZES.

Pounds per Lineal Foot.

Size—ins.	Pounds	Size—ins.	Pounds	Size—ins.	Pounds
$\frac{1}{16}$ x 1	.1206	1	1.447	1	2.894
$\frac{1}{8}$ x 1	.1507	$1\frac{1}{4}$	1.809	$1\frac{1}{4}$	3.617
$\frac{3}{16}$ x 1	.1809	$1\frac{1}{2}$	2.170	$1\frac{1}{2}$	4.341
$\frac{1}{4}$ x 1	.2110	$1\frac{3}{4}$	2.532	$1\frac{3}{4}$	5.064
$\frac{5}{16}$ x 1	.2412	2	2.894	2	5.788
$\frac{3}{8}$ x 1	.3014	$2\frac{1}{4}$	3.256	$2\frac{1}{4}$	6.511
$\frac{1}{2}$ x 1	.3617	$2\frac{1}{2}$	3.617	$2\frac{1}{2}$	7.235
$\frac{5}{8}$ x 1	.4220	$2\frac{3}{4}$	3.979	$2\frac{3}{4}$	7.958
$\frac{3}{4}$ x 1	.4823	3	4.341	3	8.681
$\frac{7}{8}$ x 1	.6029	$3\frac{1}{4}$	4.702	$3\frac{1}{4}$	9.405
1 x 1	.7235	$3\frac{1}{2}$	5.064	$3\frac{1}{2}$	10.13
1 x $1\frac{1}{4}$	.8440	$3\frac{3}{4}$	5.426	$3\frac{3}{4}$	10.85
1 x $1\frac{1}{2}$	.9646	4	5.788	4	11.58
1 x $1\frac{3}{4}$	1.085	$4\frac{1}{4}$	6.149	$4\frac{1}{4}$	12.30
1 x 2	1.206	$4\frac{1}{2}$	6.511	$4\frac{1}{2}$	13.02
1 x $2\frac{1}{4}$	1.326	$4\frac{3}{4}$	6.873	$4\frac{3}{4}$	13.75
1 x $2\frac{1}{2}$	1.447	5	7.235	5	14.47
1 x $2\frac{3}{4}$				$5\frac{1}{4}$	15.19
1 x 3				$5\frac{1}{2}$	15.92
$\frac{1}{16}$ x 3	.3617	1	1.929	$5\frac{3}{4}$	16.64
$\frac{1}{8}$ x 3	.4522	$1\frac{1}{4}$	2.412	6	17.36
$\frac{3}{16}$ x 3	.5426	$1\frac{1}{2}$	2.894		
$\frac{1}{4}$ x 3	.6330	$1\frac{3}{4}$	3.376		
$\frac{5}{16}$ x 3	.7235	2	3.858	1	3.858
$\frac{3}{8}$ x 3	.9043	$2\frac{1}{4}$	4.341	$1\frac{1}{4}$	4.823
$\frac{1}{2}$ x 3	1.085	$2\frac{1}{2}$	4.823	$1\frac{1}{2}$	5.788
$\frac{5}{8}$ x 3	1.266	$2\frac{3}{4}$	5.305	$1\frac{3}{4}$	6.752
$\frac{3}{4}$ x 3	1.447	3	5.788	2	7.717
$\frac{7}{8}$ x 3	1.628	$3\frac{1}{4}$	6.270	$2\frac{1}{4}$	8.681
1 x 3	1.809	$3\frac{1}{2}$	6.752	$2\frac{1}{2}$	9.646
1 x $3\frac{1}{4}$	1.989	$3\frac{3}{4}$	7.235	$2\frac{3}{4}$	10.61
1 x $3\frac{1}{2}$	2.170	4	7.717	3	11.58
$\frac{1}{16}$ x 4	.4823	$4\frac{1}{4}$	8.199	$3\frac{1}{2}$	12.54
$\frac{1}{8}$ x 4	.6029	$4\frac{1}{2}$	8.681	1 x $3\frac{3}{4}$	13.50
$\frac{3}{16}$ x 4	.7235	$4\frac{3}{4}$	9.164	$3\frac{3}{4}$	14.47
$\frac{1}{4}$ x 4	.8440	5	9.646	4	15.43
$\frac{5}{16}$ x 4	.9646	$5\frac{1}{4}$	10.13	$4\frac{1}{4}$	16.40
$\frac{3}{8}$ x 4	1.206	$5\frac{1}{2}$	10.61	$4\frac{1}{2}$	17.36
$\frac{1}{2}$ x 4	1.447	$5\frac{3}{4}$	11.09	$4\frac{3}{4}$	18.33
$\frac{5}{8}$ x 4	1.688	6	11.58	5	19.29
$\frac{3}{4}$ x 4	1.929			$5\frac{1}{4}$	20.26
$\frac{7}{8}$ x 4	2.170			$5\frac{1}{2}$	21.22
1 x 4	2.412			$5\frac{3}{4}$	22.19
$1\frac{1}{4}$ x 4	2.653			6	23.15
$1\frac{1}{2}$ x 4	2.894				

World, and Universally admitted to be THE BEST.

Standard Hard Drawn Copper Wire

Standard Nominal area. Sq. inches	Calculated Area. Sq. inches	Diam- eter. Inches	Weight per 1000 yds. Lbs.	Resist per 1000 yds. at 20° C	Breaking Load of Con- ductor. Lbs.
0.001811	0.00180956	0.048	20.93	13.898	120
0.003217	0.00321699	0.064	37.20	7.820	213
0.005027	0.00502655	0.080	58.12	5.004	330
0.005411	0.00541062	0.083	62.57	4.649	354
0.006648	0.00664761	0.092	76.86	3.783	434
0.006793	0.00679292	0.093	78.56	3.705	442
0.007391	0.00738982	0.097	85.46	3.404	480
0.008012	0.00801185	0.101	92.63	3.138	520
0.008332	0.00833230	0.103	96.32	3.020	540
0.00850	0.00849487	0.104	98.22	2.959	550
0.00933	0.00933132	0.109	107.9	2.694	602
0.01057	0.01056832	0.116	122.2	2.378	676
0.01094	0.01093590	0.118	126.51	2.299	698
0.01208	0.01207628	0.124	139.6	2.081	769

Standard Stranded Copper Conductors

Nominal Area in sq. inches.	Stranded Conductors	Diam. in inches	Weight per 1000 yds. Lbs.	Breaking Load of Con- ductor. Lbs.	Std. Resistance (ohms) per 1000 yds. at 60° Fahr.
.0125	7/.048	.144	149	766	1.984
.0225	7/.064	.192	264.8	1372	1.116
.035	7/.080	.240	413.8	2125	0.7143
.050	7/.097	.291	608.5	3104	0.4860
.060	7/.104	.312	699.3	3542	0.4225
.075	7/.118	.354	901	4521	0.3282
.100	19/.083	.415	1211	6020	0.2449
.125	19/.092	.460	1488	7421	0.1993
.150	19/.101	.505	1793	8892	0.1654
.175	19/.109	.545	2089	10294	0.1419
.200	19/.116	.580	2366	11559	0.1253
.225	19/.124	.620	2703	13150	0.1096
.250	37/.093	.651	2963	14650	0.1003
.300	37/.103	.721	3635	17810	0.08175
.400	37/.118	.826	4772	23376	0.06224
.500	61/.103	.927	5994	29370	0.04959
.600	91/.093	1.023	7290	36030	0.04079
.750	91/.103	1.133	8942	43820	0.03325
1.000	127/.103	1.339	12481	61150	0.02383

WEIGHTS PER LINEAL FOOT OF SOLID DRAWN COPPER TUBES

Calculated on Basis of Copper at 558 lbs. per cubic foot

"Imperial" Wire Gauge Thickness

Outside Diameter	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
lbs.	.192	.176	.160	.144	.128	.116	.104	.092	.080	.072	.064	.056	.048	.040	.036
lbs.	—	—	—	—	—	—	—	—	—	—	.014	.013	.012	.010	.009
lbs.	—	—	—	—	—	—	—	—	—	.026	.024	.022	.019	.016	.015
lbs.	—	—	—	—	—	—	—	—	.041	.037	.034	.030	.026	.022	.020
lbs.	—	—	—	—	—	—	.066	.060	.053	.048	.044	.039	.033	.028	.026
lbs.	—	—	—	—	.097	.089	.082	.074	.065	.059	.053	.047	.041	.034	.031
lbs.	—	—	1.39	1.28	1.16	1.07	.97	.87	.77	.70	.63	.56	.48	.40	.37
lbs.	1.89	1.76	1.64	1.50	1.36	1.25	1.13	1.01	.89	.81	.73	.64	.55	.47	.42
lbs.	2.18	2.03	1.88	1.72	1.55	1.42	1.29	1.15	1.01	.92	.83	.73	.63	.53	.47
lbs.	2.47	2.30	2.12	1.94	1.75	1.60	1.45	1.29	1.14	1.03	.92	.81	.70	.59	.53
lbs.	2.77	2.57	2.36	2.16	1.94	1.78	1.61	1.43	1.26	1.14	1.02	.90	.77	.65	.58
lbs.	3.06	2.84	2.61	2.38	2.14	1.95	1.77	1.57	1.38	1.25	1.12	.98	.85	.71	.64
lbs.	3.35	3.10	2.85	2.59	2.33	2.13	1.92	1.71	1.50	1.36	1.22	1.07	.92	.77	—
lbs.	3.64	3.37	3.09	2.81	2.53	2.30	2.08	1.85	1.62	1.47	1.31	1.15	.99	.83	—
lbs.	3.93	3.64	3.34	3.03	2.72	2.48	2.24	1.99	1.75	1.58	1.41	1.24	1.07	.89	—
lbs.	4.22	3.91	3.58	3.25	2.92	2.66	2.40	2.13	1.87	1.69	1.51	1.32	1.14	.95	—
lbs.	4.52	4.17	3.82	3.47	3.11	2.84	2.56	2.27	1.99	1.80	1.60	1.41	1.21	—	—
lbs.	4.81	4.44	4.07	3.69	3.31	3.01	2.72	2.41	2.11	1.91	1.70	1.49	1.28	—	—
lbs.	5.10	4.71	4.31	3.91	3.50	3.19	2.87	2.55	2.23	2.02	1.80	1.58	1.36	—	—
lbs.	5.39	4.98	4.56	4.13	3.69	3.37	3.03	2.69	2.35	2.13	1.89	1.66	1.43	—	—

To find the weight of tubes composed of the following metals, multiply the weights of the equivalent copper tubes by the constants shown:—60/40 brass, 0.96; 70/30 brass, 0.97; aluminium, 0.303.

REMEMBERED long after Price is Forgotten.

VARIOUS METALS

The Comparative Weight of a Superficial Foot.

Thickness in inches.	Wrought Iron.	Cast Iron.	Steel.	Copper.	Brass.	Lead.	Zinc.
	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.
1/16	2.526	2.344	2.552	2.891	2.734	3.708	2.344
1/8	5.052	4.687	5.104	5.781	5.469	7.417	4.687
3/16	7.578	7.031	7.656	8.672	8.303	11.125	7.031
1/4	10.104	9.375	10.208	11.563	10.938	14.833	9.375
5/16	12.630	11.719	12.760	14.453	13.672	18.542	11.719
3/8	15.156	14.062	15.312	17.344	16.406	22.250	14.062
7/16	17.682	16.406	17.865	20.234	19.141	25.958	16.406
1/2	20.208	18.750	20.417	23.125	21.875	29.667	18.750
9/16	22.734	21.094	22.969	26.016	24.609	33.375	21.094
5/8	25.260	23.437	25.521	28.906	27.344	37.083	23.437
11/16	27.786	25.781	28.073	31.797	30.078	40.792	25.781
3/4	30.312	28.125	30.625	34.688	32.813	44.500	28.125
13/16	32.839	30.469	33.177	37.578	35.547	48.208	30.469
7/8	35.635	32.812	35.729	40.469	38.281	51.917	32.812
15/16	37.801	35.156	38.281	43.359	41.016	55.625	35.156
1	40.417	37.500	40.833	46.250	43.750	59.333	37.500

Gauge.	Iron.	Copper.	Brass.	Gauge.	Iron.	Copper.	Brass.
30	.48	.550	.527	15	2.88	3.298	3.161
29	.52	.595	.579	14	3.32	3.801	3.644
28	.56	.641	.615	13	3.80	4.351	4.170
27	.64	.733	.702	12	4.36	4.992	4.785
26	.72	.824	.790	11	4.80	5.496	5.268
25	.80	.916	.878	10	5.36	6.137	5.883
24	.88	1.008	.966	9	5.92	6.778	6.497
23	1.00	1.145	1.097	8	6.60	7.557	7.248
22	1.12	1.282	1.229	7	7.20	8.244	7.902
21	1.28	1.466	1.405	6	8.12	9.297	8.912
20	1.40	1.603	1.536	5	8.80	10.076	9.658
19	1.68	1.924	1.844	4	9.52	10.900	10.448
18	1.96	2.244	2.151	3	10.36	11.862	11.370
17	2.32	2.656	2.546	2	11.36	13.007	12.468
16	2.60	2.977	2.853	1	12.00	13.740	13.170

Weight of a Cubic Inch of

Lead	equals	.4103 lbs.	Tin	equals	2636 lbs.
Copper, sheet	"	.3225 "	Zinc	"	26 "
Brass	"	.3037 "	Water	"	03617 "
Iron	"	.279 "	Monel Metal	"	318 "
Iron, cast	equals	263 "	Nickel	"	319 "

“ORB” IRON—Nearly Eighty Years in use.

READY RECKONER for Calculating the Cost of Electric Light Wire.

From 2/6 to £100 per mile, at per 110 yards and per single yard.

Per mile	Per 110 yds	Per mile	Per 110 yds	Per sgl. yd	Per mile	Per 110 yds	Per sgl. yd
s. d	£ s d	£ s d	£ s d		£ s d	£ s d	s. d
2 6	1 7 1/2	0 13 9	0 0 10 1/2		19 0 0	1 3 9	0 2 3/4
3 0	2 1/4	0 14 0	0 0 10 1/2		20 0 0	1 5 0	0 2 3/4
3 4	2 1/2	0 14 3	0 0 10 3/4		21 0 0	1 6 3	0 3
3 9	2 3/4	0 14 6	0 0 11		22 0 0	1 7 6	0 3 1/4
4 0	3	0 14 9	0 0 11		23 0 0	1 8 9	0 3 1/4
4 3	3 1/4	0 15 0	0 0 11 1/4		24 0 0	1 10 0	0 3 1/2
4 6	3 1/2	0 15 3	0 0 11 1/2		25 0 0	1 11 3	0 3 1/2
4 9	3 3/4	0 15 6	0 0 11 3/4		26 0 0	1 12 6	0 3 3/4
5 0	3 1/2	0 15 9	0 0 11 3/4		27 0 0	1 13 9	0 3 3/4
5 3	4	0 16 0	0 1 0		28 0 0	1 15 0	0 4
5 6	4 1/4	0 16 3	0 1 0 1/4		29 0 0	1 16 3	0 4
5 9	4 1/2	0 16 6	0 1 0 1/2		30 0 0	1 17 6	0 4 1/4
6 0	4 3/4	0 16 9	0 1 0 3/4		31 0 0	1 18 9	0 4 1/4
6 3	4 1/2	0 17 0	0 1 0 3/4		32 0 0	2 0 0	0 4 1/2
6 6	5	0 17 3	0 1 1		33 0 0	2 1 3	0 4 1/2
6 9	5	0 17 6	0 1 1 1/4		34 0 0	2 2 6	0 4 3/4
7 0	5 1/4	0 17 9	0 1 1 1/4		35 0 0	2 3 9	0 5
7 3	5 1/2	0 18 0	0 1 1 1/2		36 0 0	2 5 0	0 5
7 6	5 3/4	0 18 3	0 1 1 1/2	0 1/2	37 0 0	2 6 3	0 5 1/4
7 9	5 1/2	0 18 6	0 1 2		38 0 0	2 7 6	0 5 1/4
8 0	6	0 18 9	0 1 2		39 0 0	2 8 9	0 5 1/2
8 3	6 1/4	0 19 0	0 1 2 1/4		40 0 0	2 10 0	0 5 1/2
8 6	6 1/2	0 19 3	0 1 2 1/2		41 0 0	2 11 3	0 5 3/4
8 9	6 3/4	0 19 6	0 1 2 3/4		42 0 0	2 12 6	0 5 3/4
9 0	6 1/2	0 19 9	0 1 2 3/4		43 0 0	2 13 9	0 6
9 3	7	1 0 0	0 1 3	0 1/4	44 0 0	2 15 0	0 6
9 6	7 1/4	2 0 0	0 2 6	0 1/4	45 0 0	2 16 3	0 6 1/4
9 9	7 1/2	3 0 0	0 3 9	0 1/2	46 0 0	2 17 6	0 6 1/2
10 0	7 3/4	4 0 0	0 5 0	0 3/4	47 0 0	2 18 9	0 6 3/4
10 3	7 1/2	5 0 0	0 6 3	0 1/2	48 0 0	3 0 0	0 6 3/4
10 6	8	6 0 0	0 7 6	1	49 0 0	3 1 3	0 6 3/4
10 9	8	7 0 0	0 8 9	1	50 0 0	3 2 6	0 7
11 0	8 1/4	8 0 0	0 10 0	1 1/4	55 0 0	3 8 9	0 7 1/2
11 3	8 1/2	9 0 0	0 11 3	1 1/2	60 0 0	3 15 0	0 8 1/4
11 6	8 3/4	10 0 0	0 12 6	1 3/4	65 0 0	4 1 3	0 9
11 9	8 1/2	11 0 0	0 13 9	1 1/2	70 0 0	4 7 6	0 9 3/4
12 0	9	12 0 0	0 15 0	1 1/2	75 0 0	4 13 9	0 10 1/4
12 3	9 1/4	13 0 0	0 16 3	1 3/4	80 0 0	5 0 0	0 11
12 6	9 1/2	14 0 0	0 17 6	2	85 0 0	5 6 3	0 11 3/4
12 9	9 3/4	15 0 0	0 18 9	2 1/4	90 0 0	5 12 6	1 0 1/4
13 0	9 1/2	16 0 0	1 0 0	2 1/2	95 0 0	5 18 9	1 1
13 3	10	17 0 0	1 1 3	2 3/4	100 0 0	6 5 0	1 1 1/4
13 6	10 1/4	18 0 0	1 2 6	2 1/2			

Any odd fraction of a penny is here expressed by the nearest farthing above such an amount

Coils of 100 yards would be 1/11th less than above.

TIMBER, Etc.

Approx.
Quantities
or Num-
bers only

Deals—

as 9 x 3 No. of running feet to ton (20 cwt.) 350

Flooring—

6 x 1½	"	"	"	1557
6 x 1	"	"	"	1750
6 x ¾	"	"	"	2000
6 x ¾	"	"	"	2330

Matchboards—

6 x ⅝	"	"	"	2800
6 x ½	"	"	"	3400
6 x ¾	"	"	"	4800

Weatherboards, single

	"	"	"	3100
--	---	---	---	------

Oregon	No. of Super. feet	"	"	790
--------	--------------------	---	---	-----

V.D.L. Hardwood	"	"	"	450
-----------------	---	---	---	-----

Jarrah	"	"	"	360
--------	---	---	---	-----

Iron Bark	"	"	"	310
-----------	---	---	---	-----

Black Butt	"	"	"	333
------------	---	---	---	-----

Shelving (American) 12 x ⅞	"	"	"	1050
----------------------------	---	---	---	------

6-feet Tasmanian Palings (Hobart) No. to	"	"	"	650
--	---	---	---	-----

5-feet Tasmanian Palings	"	"	"	800
--------------------------	---	---	---	-----

6-feet Tasmanian Palings (Launceston)	"	"	"	400
---------------------------------------	---	---	---	-----

5-feet Tasmanian Palings	"	"	"	500
--------------------------	---	---	---	-----

Spruce Deals as 9 x 3 No. of running feet to	"	"	"	400
--	---	---	---	-----

Kauri	No. of super feet to	"	"	600
-------	----------------------	---	---	-----

Cedar	"	"	"	600
-------	---	---	---	-----

Clear Pine	"	"	"	900
------------	---	---	---	-----

Doors 6ft. 8in. x 2ft. 8in. x 1½in.	No. to ton	"	"	55
-------------------------------------	------------	---	---	----

Doors 6ft. 8in. x 2ft. 8in. x 1¼in.	"	"	"	70
-------------------------------------	---	---	---	----

Doors 6ft. 6in. x 2ft. 6in. x 1½in.	"	"	"	58
-------------------------------------	---	---	---	----

Doors 6ft. 6in. x 2ft. 6in. x 1¼in.	"	"	"	75
-------------------------------------	---	---	---	----

SUPERFICIAL FEET IN A BOARD OR PLANK

is known by multiplying the length by the breadth by the thickness in inches. If the board be tapering, add the breadth of the two ends together, and take half their sum for the mean breadth and multiply the length by this mean breadth.

Price per ton—how much per lb?

A SIMPLE METHOD OF ARRIVING AT THIS.

EXAMPLE—1 ton	..	..	..	£ 28
Divided by 7	..	..	..	4
„ „ 4	..	..	..	1
				<hr/>
Deduct last two numbers	..	..		3 pence per lb.
Or—1 ton	..	..	..	£ 100
Divided by 7	..	..	..	14.285
„ „ 4	..	..	..	3.571
				<hr/>
Deduct last two numbers	..	..		10.714 pence per lb.
Or conversely—Price per lb., 3d.—how much per ton?				
				3
Multiplied by	..	..	..	9 1/3rd
				<hr/>
				£ 28 per ton

ANOTHER VERY SIMPLE METHOD.

4½d. per lb.—how much per ton?

Bring to farthings, and multiply by 7 and divide by 3.

$$19 \times 7 = 133 \div 3 = £44/6/8 \text{ per ton.}$$

This applies to any sum, providing it is brought to farthings.

Also the reverse:—

£ 48/15 per ton, how much per lb.?

$$48.75 \times 3 = 146.25 \div 7 = 20.892 \div 4 = 5.223d. \text{ per lb.}$$

TO FIND THE VALUE OF A GIVEN WEIGHT AT A GIVEN PRICE PER TON.

	Tons	Cwt.	Qr.	Lbs.
Example—2	10	1		18 at £ 5/10/- per ton.

Reckon the tons as pounds; cwts. as shillings; each qr. 8d., and for every 9lbs. 1d., equals—

per ton = £ 2 10 5 multiplied by the price
5½ pounds sterling.

$$\begin{array}{r} £ 12 \ 12 \ 1 \\ 1 \ 5 \ 2\frac{1}{2} \end{array}$$

£ 13 17 3½ Answer.

TO FIND THE PREMIUM OR DISCOUNT OF ANY SUM.

Example—£ 24/10/6 at 3½ per cent.

Multiply the sum named by double the rate per cent., and point off the product one to the right.

$$\begin{array}{r} £ 24 \ 10 \ 6 \\ \times 7 \\ \hline \end{array}$$

Double 3½ per cent. =

£ 17.1 13 6 Answer, 17 1/10th of a Shilling, say, 17/2.

fully guaranteed by the Manufacturers.

Approximate No. of Nails per lb.

Size.	Nails per lb.	Size.	Nails per lb.	Size.	Nails per lb.
1 in. x 16G	1080	2 in. x 11G	158	3 in. x 9G	67
1 x 15G	840	2 x 10G	120	3 x 8G	60
1 x 14G	723	2 x 9G	100	3 x 7G	48
1½ x 14G	460	2½ x 13G	200	3 x 6G	39
1½ x 13G	340	2½ x 12G	150	3½ x 8G	44
1½ x 12G	240	2½ x 11G	130	3½ x 7G	40
1½ x 11G	206	2½ x 10G	100	4 x 7G	35
2 x 14G	280	2½ x 9G	80	4 x 6G	30
2 x 13G	230	2½ x 8G	65	5 x 5G	21
2 x 12G	190	3 x 10G	81	6 x 4G	13

1 Gross 1½ in. Galvd. Screws = 2½ lbs. 1 Gross Lead Washers = 3 lbs.

The price per cwt. at a given price per lb.

Price per lb. in pence.	Price per cwt.	Price per lb. in pence.	Price per cwt.	Price per lb. in pence.	Price per cwt.	Price per lb. in pence.	Price per cwt.
¼	2/4	3¼	30/4	6¼	58/4	9¼	86/4
½	4/8	3½	32/8	6½	60/8	9½	88/8
¾	7/-	3¾	35/-	6¾	63/-	9¾	91/-
1	9/4	4	37/4	7	65/4	10	93/4
1¼	11/8	4¼	39/8	7¼	67/8	10¼	95/8
1½	14/-	4½	42/-	7½	70/-	10½	98/-
1¾	16/4	4¾	44/4	7¾	72/4	10¾	100/4
2	18/8	5	46/8	8	74/8	11	102/8
2¼	21/-	5¼	49/-	8¼	77/-	11¼	105/-
2½	23/4	5½	51/4	8½	78/4	11½	107/4
2¾	25/8	5¾	53/8	8¾	81/8	11¾	109/8
3	28/-	6	56/-	9	84/-	12	112/-

For every ¼ d. per lb. increase add 2/4 per cwt.

LEAD Weight per Super Foot.

Inch.	Lbs.	Inch.	Lbs.	Inch.	Lbs.
1/16	3.7	7/16	25.9	3/4	44.7
1/8	7.4	1/2	29.5	13/16	48.3
3/16	11.1	9/16	33.2	7/8	51.0
1/4	14.8	5/8	36.9	15/16	55.1
5/16	18.5	11/16	40.6	1	59.4
3/8	22.2				

LEAD SHEET Weight per Roll—30ft. x 7ft. x 9in.

		C.	Q.	L.			C.	Q.	L.
3 lbs. ..	..	6	0	14	5 lbs. ..	..	10	1	14
3½ " ..	..	7	0	20	6 " ..	..	12	1	0
4 " ..	..	8	1	0	7 " ..	..	14	2	0
4½ " ..	..	9	1	0					

British Weights and Measures.

One ton of square timber = 50 cubic feet.

The English shipping ton = 40 cubic feet.

The register ton = 100 cubic feet.

A cord of wood is a pile 4 feet high, 4 feet wide and 8 feet long.

A cord foot is 1 foot in length of such a pile.

A cubic yard of common earth is called a load.

In board measure all boards are assumed to be 1 inch thick.

A board foot is 1 foot long, 1 foot wide, and 1 inch thick ;
hence 12 board feet make 1 cubic foot.

Board feet are changed to cubic feet by dividing by 12.

Cubic feet are changed to board feet by multiplying by 12.

Masonry is estimated by the cubic foot and perch; also by the
square foot and square yard.

CUBIC FEET x 4 divided by 99 equals PERCHES.

A fathom of lathwood—6 x 6 x 6 = 216 cubic feet.

The St. Petersburg standard—5 x 3 x 11 = 165 cubic feet.

Cubic feet x .00606 = St. Petersburg standard.

In board and lumber measure, estimates are made on 1 inch in
thickness; one-fourth the price is added for every $\frac{1}{4}$ inch in
thickness over one inch.

MISCELLANEOUS WEIGHTS AND MEASURES.

12 Units	1 Dozen.
12 Dozen	1 Gross.
12 Gross	1 Great Gross.
20 Things	1 Score.
196 lbs.	1 Barrel of Flour.
200 „	1 Barrel Beef, Pork, Fish.
56 „	1 Firkin of Butter.
14 „	1 Stone, Avoir.
28 „	1 Quarter.
21 $\frac{1}{2}$ Stones	1 Pig of Iron.
8 Pigs	1 Fother.
28 lbs. of Wool	1 Tod.
2 Weys (364lbs.)	1 Sack of Wool.
12 Sacks (4,368lbs.)	1 Last.
240 Yards	A Cable's Length.
18 Inches	1 Anglo-Saxon Cubit.
1/12 Inches	1 Line.
2 $\frac{1}{4}$ Inches	1 Nail.
3 „	1 Palm.
4 „	1 Hand.
9 „	1 Span.
3 Feet	1 Common Pace.
6 „	1 Fathom.
3 Miles	1 League.

"ORB" IRON—Nearly Eighty Years in use.

British Weights and Measures—Continued

MEASURE OF CAPACITY.

4 Gals	equal	1 Pint	4 Pecks	equal	1 Bushel
2 Pints	"	1 Quart	3 Bushels	"	1 Bag
4 Quarts	"	1 Gallon	8 Bushels	"	1 Quarter
2 Gallons	"	1 Peck	5 Quarters	"	1 Load

MEASURE OF LENGTH.

12 Lines	equal	1 Inch	4 Poles,	} equal 1 Chain
7.92 Inches	"	1 Link	22 Yards, or	
9 Inches	"	1 Span	100 Links	
12 Inches	"	1 Foot	40 Rods	
18 Inches	"	1 Cubit	8 Furlongs	" 1 Furl'g
36 In. or 3 Ft.	"	1 Yard	80 Chains	" 1 Mile
5½ Yards	"	1 Rod,	320 Rods, or	
		Pole or Perch	1760 Yards	

SQUARE MEASURE.

Sq. Inches	Sq. Feet	Sq. Yards	Sq. Rods	Sq. Roods	Acres	
144	1	...	...	...	...	1 Sq. Foot
1,296	9	1	...	...	...	1 Sq. Yard
39,204	272½	30¼	1	...	...	1 Sq. Rod
1,568,160	10,890	1,210	40	1	...	1 Rood
6,272,640	43,560	4,840	160	4	1	1 Acre
4,014,489,600	27,878,400	3,097,600	102,400	2,560	640	1 Sq. Mile

CUBIC MEASURE.

Cubic Inches	Cubic Feet	Cord Feet	Cord	Perch	
1,728	1	..	..	..	1 Sq. Foot
46,656	27	..	..	..	1 Sq. Yard
27,648	16	1	..	..	1 Cord Foot
221,184	128	8	1	..	1 Cord of Wood
42,768	24¾	..	..	1	1 Perch of Stone
69,120	40	..	..	..	1 Ton Ship Cargo

GEOGRAPHICAL AND NAUTICAL MEASURE.

6 feet	}	equal	1 fathom
100 fathoms or		"	1 cable
600 feet		"	1 nautical mile
6,080 feet	}	"	1 league
3 nautical miles		"	1 degree of latitude
20 leagues or		"	
60 nautical miles	}	"	The earth's circumference.
360 degrees or			
21,600 nautical miles			

British Weights and Measures—Continued**MEASURE OF TIME.**

60 Seconds equal 1 Minute	7 Days equal 1 Week
60 Minutes " 1 Hour	28 Days " 1 Lunar Month
24 Hours " 1 Day	
(23h. 56m. 4s. equal 1 Sidereal Day)	
28, 29, 30, or 31 days	equal 1 Calendar Month
12 Calendar Months	} " 1 Year
52 Weeks	
365 $\frac{1}{4}$ Days	
366 Days	" 1 Common Year
365d. 5h. 48m. 46s.	" 1 Leap Year
	" 1 Tropical Year

BRITISH EQUIVALENTS OF FOREIGN WEIGHTS & MEASURES.

For the purpose of easy and rapid calculations, the following may be regarded as the approximate equivalents:—

LINEAL MEASURE.**AVOIRDUPOIS MEASURE.**

1 Millimetre = $\frac{1}{25}$ of an Inch.	1 Kilogramme = 2 $\frac{1}{2}$ lbs.
2 $\frac{1}{2}$ Centimetres = 1 Inch.	1000 Kilogrammes = 1 ton.
1 Metre = 39 $\frac{3}{8}$ Ins. (3ft. 3 $\frac{3}{8}$ in.)	SQUARE MEASURE.
1 Kilometre = 5 Furlongs.	6 $\frac{1}{4}$ sq. Centimetres = 1 sq. in.
1 $\frac{3}{8}$ Kilometre = 1 Mile.	1 sq. Metre = 10 $\frac{3}{4}$ sq. feet.

METRIC WEIGHTS AND MEASURES.**Lineal Measures.**

The unit for length is the Metre.

	Yds.	Ft.	In.		
10 Millimetres or	0	0	0.3937	equal	1 Centimetre
10 Centimetres or	0	0	3.9370	"	1 Decimetre
10 Decimetres or	1	0	3.3708	"	1 METRE
10 Metres or	10	2	9.7079	"	1 Decametre
10 Decametres or	109	1	1.079	"	1 Hectometre
10 Hectometres or	1093	1	10.79	"	1 Kilometre

Weight.

The unit for weight is the Gramme.

	Lb.	Oz.	Drams.		
10 Milligrammes or	0	0	0.0056438	equal	1 Centigram.
10 Centigrammes or	0	0	0.056438	equal	1 Decigramme.
10 Decigrammes or	0	0	0.56438	equal	1 Gramme.
10 Grammes or	0	0	5.6438	equal	1 Decagramme.
10 Decagrammes or	0	3	6.438	equal	1 Hectogramme.
10 Hectogrammes or	2	3	4.38	equal	1 Kilogramme.

A Milligramme measures .01543 of a Grain.

LYSAGHT



AUSTRALIA



LYSAGHT'S RED ORB

So branded to distinguish it from the ordinary Orb sheet is a local production specially manufactured to withstand the roughest usage whether in transit or fixing. Its extreme rigidity and stiffness makes it unsuitable for curving but for roofing, fencing and similar work it is incomparable.

MENSURATION OF SURFACES AND SOLIDS.

The circumference of a circle = diameter $\times \frac{22}{7}$ (or 3.1416);

area of circle = square of the diameter $\times 0.7854$.

The area of a square, rhombus, or rhomboid = base $\times$ height.

The area of a triangle = $\frac{1}{2}$ base $\times$ perpendicular height.

Area of trapezium = $\frac{1}{2}$ sum of two parallel sides $\times$ height.

Area of any right-lined figure of four or more unequal sides is found by dividing it into triangles, finding area of each, and adding together.

For any regular polygon, inscribe a circle; then $\frac{1}{2}$ radius of that circle $\times$ length of one side $\times$ number of sides = area.

The area of a parabola = base $\times$ height $\times \frac{2}{3}$ rds.

The area of an ellipse = long axis $\times$ short axis $\times 0.7854$.

Surface and cubic content of prism or cylinder—1st (area of two ends) + (length $\times$ perimeter) = surface; 2nd, area of base $\times$ height = content.

For a cone or pyramid—1st, $\frac{1}{2}$ (slant height $\times$ perimeter of base) $\times$ area of base = surface; 2nd, $\frac{1}{3}$ rd (area of base $\times$ perpendicular height) = content.

For a cube or parallelepipedon—1st, sum of areas of all the sides = surface; 2nd, length $\times$ breadth $\times$ depth = content.

For a sphere—1st, square of diameter $\times 3.1416$ = surface; 2nd, cube of diameter $\times 0.5236$ = content.

Area of sector of circle = length of arc $\times \frac{1}{2}$ radius.

Area of segment of circle = area of sector, less area of triangle.

Side of square of area equal circle = diameter $\times 0.8852$.

Diameter of circle equal in area to square = side $\times 1.1284$.

Useful Information

TO ASCERTAIN EXCAVATED AREA OF GROUND TANK.

Sum of top area x sum of bottom area.

Add top and bottom lengths $\div 2$.

Add top and bottom breadths $\div 2$.

Multiply sum of length and breadth = Area half way.

Multiply area half way by 4 = four times area half way.

Sum of top and bottom area x sum of 4 times area half way.

Multiply by depth.

Divide by 6 = cubic feet.

Divide by 27 = cubic yards.

Example:—

Tank 80 x 76 top area.

38 x 32 bottom area.

6ft. 9in. depth.

80ft. x 76ft. = 6,080ft. top area.

38ft. x 32ft. = 1,216ft. bottom area.

7,296ft. sum of top and bottom area.

80ft. x 38ft. $\div 2$ = 59ft. top and bottom lengths.

76ft. x 32ft. $\div 2$ = 54ft. top and bottom breadths.

59 x 54, 3,186 = area half way.

Area half way 3,186ft. x 4 = 12,744, 4 times area half way.

12,744 x 7,296 sum of top and bottom areas = 20,040ft.

20,040 x 6 depth $\div$ 6ft. 9in., 22,545 cubic feet.

22,545 cubic feet $\div$ 27 = 835 cubic yards.

FORMULA FOR ASCERTAINING CONTENTS OF HAYSTACKS IN TONS.

To ascertain the number of cubic feet contained in each stack, multiply the length, breadth, and height $\dagger$; or if the stack is round, multiply half circumference, half diameter, and height together, which will give the desired result. Having ascertained the number of cubic feet, it remains to find their equivalent in tons, which is done by dividing the number of cubic feet by the number of cubic feet in a ton, according to the following table—

It will be borne in mind that the longer hay is stacked the more compact it becomes; hence more feet to the ton are allowed to a new stack than to one three months old, and so on.

Table showing number of cubic feet per ton to be allowed according to age of haystack.

	OATEN HAY		WHEATEN HAY	
	Sheaf	Loose	Sheaf	Loose
Immediately on completion of stack	350	400	400	500
One week after completion ..	325	375	375	450
One month after completion ..	300	350	350	400
Twelve months after completion ..	250	325	350	350

$\dagger$ As a portion of the stack is in the sloping top it is accounted for by adding one-third of the height from the eaves to the ridge or pinnacle if stack is round, to the measurement from the ground to the eaves, thus:—Height to eaves, 8 feet; height from eaves to the ridge, or pinnacle, 6 feet; add one-third of 6 feet, viz., 2 feet; total height for calculating contents, 10 feet.

Useful Information

BRICKS:—

1000 common bricks weigh about $3\frac{1}{2}$ tons.
 325/330 bricks, allowing for joints, in 1 cubic yard.
 62 " " " " laid on edge = 1 sq. yd.
 48 " " " " laid on flat = 1 sq. yd.
 3800 $9 \times 4\frac{1}{2} \times 3$ bricks will build a rod of brickwork.
 816 sup. ft. of a $4\frac{1}{2}$ in. brick
 408 " " 9 " " } Will make a rod of
 272 " " 14 " " } Brickwork.
 204 " " 18 " "
 163 " " $22\frac{1}{2}$ " "

A rod of brickwork contains 306 cubic feet.

1,000 fire bricks weigh 3 tons 5 cwt. to 3 tons 7 cwt.

A cubic yard of Sydney sand weighs about 1 ton 10 cwt.

A cubic yard of sandstone weighs about 2 tons 5 cwt.

A cubic yard of trachite weighs about 2 tons 10 cwt.

LIME MORTAR:—Lime Mortar of good quality will result from mixing one bag or 2 cwt. of fresh burnt lime with 25 cubic feet sand and will lay about 1,000 bricks. If additional stability is required it is advisable to add 10 per cent. of cement, which will more than repay its cost in the robustness of the job.

LABOUR:—A good tradesman should lay, per day of eight hours: 600/700 bricks of 9in. work in cement struck joint; 700/1,000 bricks of 14in. work in mortar; 500 bricks in selected face work.

HOW TO MAKE CONCRETE.

MATERIALS REQUIRED:—Portland Cement, Sand, Crushed Stone or Gravel, Water.

EQUIPMENT REQUIRED:—Shovel, Mixing Board, Measuring Box, Watering Can.

1. **Sand or Fine Aggregate:**—Clean sand is measured in the measuring box and spread on the mixing platform. The platform should be substantially made of tongued and grooved boards or heavy sheets of Plain Galvanized Iron.
2. **Portland Cement:**—A paper bag contains one cubic foot. A jute bag $1\frac{1}{2}$ cubic feet. The right amount of cement is spread over the fine aggregate. Don't guess at quantities.
3. **Mixing:**—Fine aggregate and cement are thoroughly mixed by turning over with shovels until the colour is uniform before adding coarse aggregate and water.
4. **Stone or Coarse Aggregate:**—Pebbles or broken stone are measured in the same way, spread on top, and the mixing process repeated until the colour is again uniform.
5. **Water:**—Water is added slowly in a depression in the centre of the pile and mixed as it is added until the mixture is a quaky, jelly-like consistency. **Don't use too much water.**
6. **Place at Once:**—When the concrete is thoroughly mixed, place it at once in the forms. The hardening process begins soon after the addition of the water and the concrete must not be disturbed once it is well under way.

HOW TO MAKE CONCRETE.—Continued.

7. **Curing:**—As soon as it is placed, protect the concrete against drying out by covering. When hard enough to resist finger impressions, sprinkle with water and keep it moist for several days.

NOTE:—All materials, especially sand, must be clean. Any water that is fit to drink is suitable for use.

Concrete:—Portland Cement, 24 paper bags to the ton.

Rich Mixture:—1 cement, $1\frac{1}{2}$ sand, 3 metal. For columns, structural parts subject to high stresses, also water-tight work.

Standard Mixture:—1 cement, 2 sand, 4 metal. For piers, reinforced floors, machine foundations, subject to vibration.

Medium Mixture:—1 cement, $2\frac{1}{2}$ sand, 5 metal. Ordinary machine foundations, retaining walls; ordinary floors.

Lean Mixture:—1 cement, 3 sand, 6 metal. Unimportant masses for heavy walls, large foundations, supporting stationary loads.

If using a concrete mixture, add ingredients as follows:—

1st—Water	3rd—Sand
2nd—Metal	4th—Cement.

Revolve at about 20 r.p.m. after last ingredient has been added, for at least $1\frac{1}{2}$ minutes, and 2 minutes for important work.

For good work carefully avoid excess water, a wet or sloppy mixture may result in a percentage of the cement being lost.

Colouring:—Add 1lb. of best English oxide to each cubic yard cement. Colour may be varied by adding vegetable black or yellow ochre.

Adhesive strength of steel to concrete is 570/670lbs. per square inch over surface area.

Materials for 1 cubic yard cement:—1 paper bag cement—1 cubic foot.

Mixture	Bags Cement	Cub. Ft. Sand	Cub. Ft. Metal
1, $1\frac{1}{2}$, 3	$7\frac{3}{8}$	$11\frac{23}{32}$	$22\frac{5}{8}$
1, 2, 4	$5\frac{7}{8}$	$11\frac{1}{2}$	24
1, $2\frac{1}{2}$, 5	$4\frac{1}{2}$	$12\frac{3}{8}$	$24\frac{1}{2}$
1, 3, 6	4	$12\frac{3}{8}$	$24\frac{7}{8}$

Full information on the advantages and use of cement may be obtained from The Australian Cement Manufacturers' Association, 43 Margaret Street, Sydney.

LYSAGHT



AUSTRALIA



LYSAGHT'S RED ORB.

So branded to distinguish it from the ordinary Orb sheet is a local production specially manufactured to withstand the roughest usage whether in transit or fixing. Its extreme rigidity and stiffness makes it unsuitable for curving but for roofing, fencing and similar work it is incomparable.

General Instructions for Painting

Contrary to the common belief, the most important coat of paint on any job is the first or priming coat. It is to the finish what the foundation is to a building. If this foundation breaks down the building goes with it and the same is true of a painting job.

Especially on wood, the first coat of paint should be rubbed well in and allowed to thoroughly dry before the succeeding coats are applied, each of which should be brushed out thoroughly and be quite dry before the application of another coat.

Two even coats, thoroughly dry, will give much better results than one heavy coat.

See that the surface is free from grease and dirt. If the job has been previously painted and is peeling, scaling off or cracking, burn off all the old paint.

See that the surface is perfectly dry. Moisture causes blistering, cracking, scaling and light troubles.

A pitchy surface should be treated either by burning or sealing with orange shellac. All knots should be carefully shellaced.

Paint should always be well stirred before being used, and should be kept covered when not in use.

To secure best results from any good prepared paint it must be properly mixed. First, shake the package violently. Secondly, remove the lid. Thirdly, pour off into another clean package all the liquid which has come to the surface. Fourthly, stir the pigment and the remaining oil with a strong, smooth paddle, the shape of which permits getting round the edges and bringing up the pigment. Stir until the mass is smooth and entirely uniform throughout. Fifthly, add the liquid, a little at a time, stirring constantly until all the liquid has been returned. Sixthly, then "box" the paint, pouring it back and forth from one pail to another half a dozen to a dozen times, each time leaving about a quarter of the paint in the pail which is being emptied.

Brushes should never be put into water. Those used for house painting should be kept in raw Linseed Oil and varnishing brushes should be left in varnish and before using should be thoroughly washed out in pure Turpentine.

APPROXIMATE COVERING CAPACITIES OF FIRST QUALITY PAINT PRODUCTS.

Type of Product.	Square feet per gall. (1 coat).
Exterior House Paint.....	850 (on wood)
Oil Wall Paint (Matt Finish)	880 on rough surface } Reduced
	1,150 on smooth wall } 5% Turps
Cold Water Paint.....	800/850 sq. yards per cwt.
Kalsomine	350/500 (5-lb. packet)
Cement Sealer	300/320 (on cement)
	500/600 (on plaster)
Galvanized Iron Primer	900/1,000
Roof Paint	900/1,000
Silver Paint	900/1,000
Flat Oil Stain.....	500/600
Varnish Stain	500/600
Varnishes	550/600
Cement Paint	800 (on sealer)
	420 (on old bare cement)

Something About Wallpapers

EFFECT OF COLOUR ON LIGHT.

The question is often asked "What is the best colour for Wallpapers or Hangings?" The following Table will give the fullest particulars. Common Wallpapers tested in an Illuminating Laboratory for the light-absorbing qualities have given the following results:—

Colour of Wallpaper.	Percentage of Light absorbed.	Colour of Wallpaper.	Percentage of Light absorbed.
White ..	30	Emerald Green ..	82
Chrome Yellow ..	38	Dark Brown ..	87
Orange ..	50	Vermilion ..	88
Plain Deal ..	55	Blue-green ..	88
Yellow ..	60	Cobalt Blue ..	88
Light Pink ..	64	Deep Chocolate ..	96

This Table shows that if a room papered with dark green be repapered with Chrome Yellow, it will be four times as light with the same lamps and windows. In many cases householders pay too much for electricity and gas lighting because their light-absorbing wall coverings destroy the light rays.

Wallpaper is made in rolls 12-yards long, 21 inches wide.

APPROXIMATE SCALE FOR CALCULATING THE MEASUREMENT OF A WALL FOR WALL COVERINGS.

Quantity Guide for Wallpapers.

Measurement Around the Room.	Height of Picture Rail or Ceiling.					
	7ft. Rolls	8ft. Rolls	9ft. Rolls	10ft. Rolls	11ft. Rolls	12ft. Rolls
36ft. =	5	6	6	6	7	8
44ft. =	6	7	7	8	8	9
52ft. =	7	8	8	9	10	11
60ft. =	8	9	9	10	11	12
68ft. =	9	10	11	12	13	14
76ft. =	10	11	12	13	14	16
84ft. =	10	12	13	14	16	17
92ft. =	11	13	14	16	17	19
100ft. =	12	14	15	17	19	20

EXAMPLE—Room 14ft. x 12ft. x 10ft. high, measurement around room = 52ft., height 10ft. Quantity required, 9 Rolls Wallpaper and 18 yards Frieze.

Every sheet of **LYSAGHT'S "ORB," "QUEEN'S HEAD"** and **"FLEUR-DE-LIS"** Iron is **BRANDED AND GUARANTEED**. If sheets of faulty manufacture are inadvertently delivered they will be replaced free of charge.

"ORB" IRON—Nearly Eighty Years in use.

COMMONWEALTH POSTAGE RATES

WITHIN THE COMMONWEALTH.

(Including Lord Howe Island, Norfolk Island, Papua, New Guinea, and the following Islands:—New Britain, New Ireland, New Hanover, Admiralty, Nauru, Bougainville and Buka).

	Rate of Postage.	Maximum Weight.
First Class Mail—		
Letters and Letter Cards ..	2d. per oz.	—
Post Cards	1½d. each	—
Second Class Mail—		
Commercial Papers	1d. per 2oz.	5 lbs.
Printed Matter (comprising printed papers, circulars and catalogues and books, periodicals and newspapers not bearing an imprint of registration at a General Post Office in the Commonwealth)	1d. per 4oz.	5 lbs.
Patterns, Samples and Merchandise	1d. per 2oz.	1 lb.
Third Class Mail—		
Books, Periodicals and Newspapers bearing imprint of registration at a General Post Office within the Commonwealth	1d. per 6oz.	5 lbs.

PARCELS POST. Maximum Weight 11 lb.

Scale.	Destination.	PARCELS NOT EXCEEDING					
		1lb. s. d.	2lb. s. d.	3lb. s. d.	5lb. s. d.	8lb. s. d.	11lb. s. d.
1.	Within 30 miles of office of posting.	0 6	0 9	1 0	1 3	1 6	1 9
2.	Within State but beyond 30 miles.	0 9	1 0	1 3	1 6	2 0	2 9
3.	Adjoining State (Special conditions, enquire at Post Office)	1 0	1 6	2 0	2 6	3 6	5 0
4.	Elsewhere within Commonwealth, including certain portions of adjoining States. (Enquire at Post Office)	1 3	2 0	2 9	3 6	5 0	7 3

Scale 4 rates apply also to parcels for Papua and New Guinea and the following islands:—New Britain, New Ireland, New Hanover, Admiralty, Bougainville and Buka.

BEYOND THE COMMONWEALTH.

Classification.	RATES OF POSTAGE.			Maximum Weight.
	To N.Z.* and Fiji.	To places within the British Empire.†	To all other places beyond the Commonwealth.	
Letters and Letter Cards	2d. per oz. ..	2d. per oz. ..	3d. first oz. and 2d. each additional oz...	4½ lb.
Post Cards	1½d. each ..	1½d. each ..	2d. each	—
Commercial Papers ..	1d. per 2oz. ..	1d. per 2oz., with min. of 3d.	1d. per 2oz. with minimum of 3d. ..	4½ lb.
Printed Matter ..	1d. per 4oz. ..	1d. per 4oz. ..	1d. per 2oz. ..	4½ lb.
Samples	1d. per 2oz. ..	1d. per 2oz. ..	1d. per 2oz. with a minimum of 2d. ..	Single Volume, 6½ lb.
Merchandise	1d. per 2oz. ..	No rate	No rate	1 lb.
Small Packets (certain countries only, enquire at Post Office)	No rate	2½d. per 2 oz. with min. of 6d.	2½d. per 2oz. with minimum of 6d. ..	U.K. only, 5 lb.
	To N.Z.* and Fiji.	To U.K. and Irish Free State.	To all other places beyond the Commonwealth.	1 lb.
Newspapers	1d. per 6oz. ..	Via France or America, 1d. per 4oz.	Printed Matter rates apply.	2 lb.
		Via all-sea route, 1d. per 6oz.		Maximum Weight.
Parcels	Enquire at Post Office.			4½ lb.
				5 lb.

* Including Islands annexed to New Zealand.

† British Empire Rates apply to New Hebrides, Banks and Torres Islands.

ALWAYS—Address fully and plainly; Pack securely; Prepay correct postage.

REMEMBERED long after Price is Forgotten.

Commonwealth Postal Rates

For MONEY ORDERS payable in:—

The Commonwealth.

6d. for each £5 or fraction of £5.

New Zealand, Papua, Rabaul, Nauru and New Caledonia, Fiji.

3d. for each £1 or fraction of £1, with a minimum of 6d.

Note.—In addition to the Commission orders issued on Fiji are subject to exchange at the rate of 2/8 in the £1, with a minimum of 2d. for 1/-.

Gilbert and Ellice Islands, North Borneo, Solomon Islands and Tonga.

4d. for each £1 or fraction of £1 for the first £6 and 3d. for each additional £1 or fraction of £1 with a minimum of 9d.

United Kingdom. All other Countries.

4d. for each £1 or fraction of £1 for the first £6 and 3d. for each additional £1 or fraction of £1 with a minimum of 9d.

In addition, orders payable in the United Kingdom and Foreign Countries, exchange is also payable at the rate of 3d. for each 1/- or fraction of 1/-, with the exception of Philippine Islands, which is at the rate of 2d. for each 1/- or fraction of 1/-.

POSTAL NOTES.

Payable throughout the Commonwealth: 1/-, 1/6, 2/-, 2/6, 1d.; 3/-, 3/6, 4/-, 4/6, 5/-, 1½d.; 5/6, 6/-, 7/6, 2d.; 10/-, 11/-, 15/-, 20/-, 3d.

LYSAGHT



AUSTRALIA



LYSAGHT'S RED ORB.

So branded to distinguish it from the ordinary Orb sheet is a local production specially manufactured to withstand the roughest usage whether in transit or fixing. Its extreme rigidity and stiffness makes it unsuitable for curving but for roofing, fencing and similar work it is incomparable.

RATES AND STANDARD SPEED OF SERVICE.

Telegrams within the Commonwealth.

Ordinary Telegrams.	Town and Suburban, or within 15 miles radius.	Other places within the State.	Interstate.
Not exceeding 16 words	9d.	1/-	1/4
Each additional word	1d.	1d.	1d.
Normal transit time*	10 minutes	15 to 20 minutes	All States, excepting Tasmania, 15 minutes. Tasmania, 30 minutes.

* **Transit Time** is the time that elapses between lodgment by the sender of the telegram, and reception at the office of destination, where one transmission only is involved. It does not include delivery time. Direct transmission is employed between the Capital Cities, and in each State, between the Capital City and most of the larger country towns.

SPECIAL FORMS AND ENVELOPES FOR GREETING, Etc., TELEGRAMS.

Special forms and envelopes attractively printed in colours are available without extra charge for the following classes of messages:—

- (1) Congratulatory telegrams.
- (2) Birthday greeting telegrams.
- (3) Xmas and New Year greeting telegrams.
- (4) Mothers' Day greeting telegrams.

Senders desiring the issue of telegrams on the special forms should write their telegrams on the ordinary form, but write the words "Congratulatory Message," "Birthday Greeting," "Xmas Greeting," etc., as required, immediately before the name of the addressee. When making lodgment by telephone the phonogram attendant should be informed that the telegram is a congratulatory message, birthday greeting, etc., as the case may be. No extra charge is made for these indicators.

RADIO TELEGRAMS TO AND FROM THE PACIFIC ISLANDS, Etc.

Radio telegrams may be exchanged between Australia and Islands in the Pacific Ocean such as Fiji, Caroline Islands, Cook Islands, Friendly Islands, Gilbert and Ellice Islands, Lord Howe Island, New Caledonia, New Hebrides, Samoa, Society Islands, Solomon Islands, Union Island, Willis Island, New Guinea, Papua, and many other islands adjacent to those mentioned.

Reliability, Uniformity and finish.

INTERNATIONAL TELEGRAMS.

International telegrams are accepted for transmission via Beam Wireless, or the Imperial Cable route.

RATES FOR PLACES WITHIN GREAT BRITAIN AND NORTHERN IRELAND.

Route	Plain or secret language. Ordinary rate per word*	Plain language Deferred rate per word	Plain language. Daily Letter	
			25 wds. or less	Extra words
Via Beam	1/8	10d.	13/11	6 $\frac{3}{4}$ d.
Via Imperial (cable)	2/-	1/-	16/8	8d.
Speed of Service	Immediate	Despatched after ordinary rate traffic	Subject to a transmission time of 48 hours	

* Telegrams, the text of which contain code words of not more than five letters, cost three-fifths of the full ordinary rate. For urgent overseas telegrams double the ordinary rates apply.

NEW ZEALAND TELEGRAMS.

Telegrams are accepted for transmission to places in New Zealand via Cable.

Route.	Ord. rate per word.	Night letter telegrams in plain language.
Cable	4 $\frac{1}{2}$ d.	25 words or less, 3/9; each additional word, 2d.
Speed of Service	Immediate	Delivery effected by post on morning following date of lodgment.

Detailed information regarding overseas telegraph rates may be obtained promptly by calling the Cable Clerk, G.P.O. Country residents should inquire at the local Post Office.

Every sheet of LYSAGHT'S "ORB," "QUEEN'S HEAD" and "FLEUR-DE-LIS" Iron is BRANDED AND GUARANTEED. If sheets of faulty manufacture are inadvertently delivered they will be replaced free of charge.

AREA AND POPULATION

Note.—Population figures for years following the Census year of 1921 are substantially correct for Commonwealth and State totals, but figures for divisions of States, distribution by age, etc., should be interpreted with a fairly wide margin for error.

State or Territory	Year of Formation into Separate Colony or Territory	Present Area in Square Miles	Population 30th June, 1933*	
			Pre-censal Estimate	Prelim. Census Count
N.S.W.	1786	309,432	2,546,400	2,600,428
Vic.	1851	87,884	1,817,800	1,818,080
Q'ld	1859	670,500	986,000	945,565
S.A.	1834	380,070	589,100	580,849
W.A.	1829	975,920	425,200	438,113
Tas.	1825	26,215	222,300	227,473
N. Ter.	1863	523,620	4,300	4,300
F.C.T.	1911	940	8,900	8,946
Total ..	—	2,974,581	6,600,000	6,623,754

Note.—The six States with their included Territories were federated under the name "Commonwealth of Australia" on the 1st January, 1901.

* Exclusive of full-blood Aborigines.

POPULATION AND VITAL STATISTICS — AUSTRALIA, 1921 to 1932

(Exclusive of full-blood Aborigines.)

Heading.		1921	1931	1932
Population at 31st Dec. (,000 omitted)	Males ..	2,799	3,324	3,347
	Females ..	2,710	3,202	3,228
	Total ..	5,509	6,526	6,575
Births	Males ..	70,039	61,021	56,975
	Females ..	66,159	57,488	53,958
	Total ..	136,198	118,509	110,933
	Rate ...	24.95	18.23	16.94
Marriages	No.	46,869	38,882	43,634
	Rate ...	8.59	5.98	6.66
Deaths	Males ..	30,652	31,796	31,860
	Females ..	23,424	24,764	24,897
	Total ..	54,076	56,560	56,757
	Rate ...	9.91	8.70	8.66
Deaths of children under one Year	Males ..	5,111	2,889	2,619
	Females ..	3,841	2,103	1,962
	Total ..	8,952	4,992	4,581
	Rate ...	65.73	42.12	41.30
Natural Increase		82,122	61,949	54,176
Rate of Natural Increase ..		15.05	9.53	8.28

Note.—In the case of Births, Marriages and Deaths, the "Rate" is the number per 1,000 of mean population; in the case of Deaths of Children under one year, it is the number per 1,000 births.

GOVERNMENT RAILWAYS

Government	Gauge			2ft. 6in. and under Miles	Total Mileage all Gauges	Cost of Con- struct'n & Equip- ment 1931 32
	5ft. 3in. Miles.	4ft 8½in Miles.	3ft. 6in. Miles.			
Federal .	—	1,056.79	1,087.91	—	2,144.70	£,000 15,489
N.S.W. .	—	6,086.09	39.51	—	6,125.60	137,792
Vic. . .	4,599.00	—	—	121.77	4,720.77	74,416
Q'land .	—	68.82	6,459.01	‡30.26	6,558.09	†33,884
S.A. . .	1,451.24	—	1,078.02	—	2,529.26	27,203
W.A. . .	—	—	4,235.07	—	4,235.07	23,649
Tas. . .	—	—	633.56	‡11.33	644.89	6,562
Total .	6,050.24	7,211.70	13,533.08	163.36	26,958.38	323,365*

* Includes cost of Grafton-South Brisbane line, not apportioned to States. † The Capital Account was reduced by £28,000,000. ‡ 2ft. gauge.

OCCUPATION OF THE POPULATION—AUSTRALIA, CENSUS OF 1911 AND 1921.

(Exclusive of full-blood Aborigines.)

Class of Occupation				Census, 3/4/1911	Census, 4/4/1921	Increase* during Ten Years 1911-1921
Professional	..	..	..	144,611	201,319	56,708
Domestic	..	..	..	201,366	209,971	8,605
Commercial	..	..	..	286,687	355,009	68,322
Transport and Communication				157,391	207,737	50,346
Industrial—						
Manufacturing	..	..	..	363,805	441,284	77,479
Building, &c.	..	..	..	111,810	122,902	11,092
Others	..	..	..	86,722	159,373	72,651
Total	..	..	..	562,337	723,559	161,222
Primary Producers—						
Agricultural	..	..	..	284,700	337,494	52,794
Pastoral	..	..	..	151,861	142,094	— 9,767
Mining and Quarrying	..	..	..	105,804	66,766	—39,038
Others	..	..	..	43,783	52,341	8,558
Total	..	..	..	586,148	598,695	12,547
Independent	..	..	..	23,055	20,426	— 2,629
Dependents	..	..	..	2,449,986	3,094,523	644,537
Unspecified	..	..	..	43,424	24,495	—18,929
Total	..	..	..	4,455,005	5,435,734	980,729

* Minus sign (—) denotes decrease.

AVERAGE DISTRICT RAINFALL THROUGHOUT AUSTRALIA

(100 points = 1 inch)

WESTERN AUSTRALIA

DISTRICT	Normal fall in points.	DISTRICT	Normal fall in points.
North Kimberley ..	2704	N. Coastal } South- 1831	
East Kimberley ..	2570	S. Coastal } West 3627	
West Kimberley ..	2326	Central	1761
De Grey	1359	Eucla	1435
Fortescue	944	South-East	996
West Gascoyne ...	912	North-East	1023
East Gascoyne ...	939	Perth	3335

NORTHERN TERRITORY

Northern Rivers ..	4442	Northern Plateau .	1238
Port Darwin	6156		

SOUTH AUSTRALIA

North-West Interior	845	Central West	1707
Far North Interior	718	Central East	2377
Western	1317	Murray Valley ...	1308
Upper North	1330	South-East—Upper	1661
North-East	848	South-East—Lower	2551
Lower North	1753	Adelaide	2032

QUEENSLAND

Peninsula North ..	5780	Upper Western ..	1546
Peninsula South ..	3940	Lower Western ..	1346
Carpentaria—Lower	2761	Port Curtis	3699
Carpentaria—Upper	2626	Moreton	4969
Barron	6371	Brisbane	4836
Herbert	7701	East Darling Downs	2835
East Central Coast	4195	West Darling Downs	2482
West Central Coast	2433	Maranoa	2370
Central Highlands	2519	Warrego	1795
Central Lowlands .	1974	Far South-West ..	1402

NEW SOUTH WALES

DISTRICT	Normal fall in points	DISTRICT	Normal fall in points
Trans-Darling North	916	Central Plateau ..	3475
Trans-Darling Sth.	1018	Warrumbungles	
Cis-Darling North .	1384	Highlands	2750
Cis-Darling South .	1254	Warrumbungles	
Upper Bogan	1764	Lowlands	2202
Lower Macquarie .	1794	Sydney	4812
West Gwydir	2020	Nepean	3187
East Gwydir	2356	Illawarra	3989
Nandewars	2846	South Coast	3590
Liverpool Plains ..	2709	Upper Murrumbid-	
West New England	3133	gee	2531
East New England	3754	Snowy Mountains .	4060
Clarence	5373	Jugiong	3031
Orara	5177	Tumut	2169
Manning	4909	East Riverina	1790
Hunter	3529	West Riverina	1379
Cudgong	2632		

VICTORIA

Malee North	1275	Upper North-East	4329
Malee South	1385	East Gippsland ..	3021
Wimmera North ..	1626	West Gippsland ..	3415
Wimmera South ..	1986	East Central	3392
Lower North	1697	West Central	2536
Melbourne	2543	North Central	2615
Upper North	1996	Volcanic Plains ..	2381
Lower North-East	2866	West Coast	2953

TASMANIA

Northern	4115	West Coast—	
East Coast	3226	Mountain Region .	8512
Midland	2163	King Island	3717
South-Eastern ...	2798	Flinders Island ...	2769
Derwent	2551	Maria Island	2493
Central Plateau ..	3154	Hobart	2329

ANALYSES OF

Fertilizers.	Phosphoric Acid.			
	Water Soluble	Citric Sol.	As Blood & Bone	Total
22 % Superphosphate — 48 % Phos. of Lime (including 1 % citrate insoluble)	20.5 %	.5 %	—	22 %
Basic Super	—	17 %	—	17 %
No. 2—Super-Ammonia (6:1)	17.6 %	.4 %	—	18 %
No. 3—Complete Fertilizer ..	5 %	10 %	—	15 %
No. 5	13.75 %	.35 %	—	14.10 %
No. 6	12 %	.3 %	—	12.3 %
No. 7	6 %	.15 %	5.5 %	11.65 %
No. 8—Super-Ammonia (4:1)	16.4 %	.4 %	—	16.8 %
No. 9—Super-Ammonia (2:1)	13.6 %	.3 %	—	13.9 %
No. 11—Complete	15.5 %	.4 %	—	15.9 %
No. 12	5 %	.15 %	8.5 %	13.65 %
No. 13—Super-Ammonia (3:1)	15.3 %	.4 %	—	15.7 %
No. 14—Complete	4 %	.1 %	8 %	12.1 %
No. 15 .. (6:1:1) ..	15.37 %	.38 %	—	15.75 %
No. 16 .. (5:2:1) ..	12.81 %	.31 %	—	13.12 %
No. 18 .. (2:2:1) ..	8.20 %	.20 %	—	8.40 %
"777"	7 %	.17 %	—	7.17 %

FERTILIZERS

Nitrogen.			Potash	General Recommendations for Use.
As Sulph. of Amin.	Organic	Total		
—	—	—	—	Wheat and other cereals for grain; lucerne when planting; top-dressing of pasture land. Substitute for Superphosphate on soils deficient in lime.
3 %	—	3 %	—	Hay crops, turnips, rape, green manure crops.
3.5 %	—	3.5 %	2 %	Maize (cob) on heavy soils; cabbages, cauliflowers on soils rich in humus.
4 %	—	4 %	7 %	Citrus fruits on soils rich in humus, pip fruits—grapes, potatoes, tomatoes; peas and beans on light soils.
4 %	—	4 %	4 %	Melons, pumpkins and onions.
1 %	2 %	3 %	7 %	Substitute for No. 5 mixture on light and sandy soils deficient in humus.
4.1 %	—	4.1 %	—	Grass, green fodder; potatoes, as recommended by Department of Agriculture.
7 %	—	7 %	—	Special Pasture Fertilizer, Coastal Districts—Autumn application.
2 %	—	2 %	4 %	Peas, beans and other legumes.
3 %	2.5 %	5.5 %	5 %	Substitute for No. 4 mixture on heavy soils.
5.1 %	—	5.1 %	—	Pastures, autumn application on first-class country. Potatoes, as recommended by New Zealand and Victorian growers.
1.5 %	2 %	3.5 %	12 %	Bananas.
2.57 %	—	2.57 %	6.06 %	Vineyards—Manured in spring.
5.25 %	—	5.25 %	6 %	Orchards—Manured in spring.
8.24 %	—	8.24 %	10 %	Citrus—Manured in spring and autumn.
7 %	—	7 %	7 %	Orchards—Manured in spring and autumn. Vegetables.
7 %	—	7 %	7 %	Sugar Cane.

Tables of Distances between Ports

Fremantle to Burketown

Fremantle.
1378 Adelaide
1886 508 Melbourne
22450 1072 564 Sydney
2960 1582 1074 510 Brisbane
33310 1933 1424 860 350 Keppel Bay
3500 2122 1614 1050 540 190 Mackay
3605 2227 1719 1155 645 295 105 Bowen
3708 2330 1822 1258 748 398 208 103 Townsville
3868 2490 1982 1418 908 558 368 263 160 Cairns
3903 2525 2017 1453 943 593 403 298 195 35 Port Douglas
3968 2590 2082 1518 1008 658 468 363 260 100 65 Cooktown
4408 3030 2522 1958 1448 1098 908 803 700 540 505 440 Thursday Island
4908 3530 3022 2458 1948 1598 1408 1303 1200 1040 1005 940 500 Normanton
5040 3668 3160 2596 2086 1736 1546 1441 1338 1178 1143 1078 638 138 Burketown

WIRELESS IN AUSTRALIA

Wireless activities fall naturally into sections—commercial and broadcasting. The commercial wireless services are operated by Amalgamated Wireless (A'sia) Ltd., in which company the Federal Government is holding half the shares plus one.

Beam Wireless.—The most notable wireless activities, perhaps, are the Beam wireless telegraph between Australia and England, and Australia and Canada and the Radio-telephone service between Australia and England, Australia-New Zealand and Australia-Java.

The Beam is the longest and fastest telegraph service in the world. It operates at a speed of up to 250 words a minute. The messages are flashed from Fiskville, 50 miles west of Melbourne, across the sea over the Great Circle, either in a north-westerly direction passing over India or by the directly opposite route via South America. The receiving station for the Beam is at Rockbank, 15 miles from Melbourne. The actual operating of this service, however, is carried out from the Melbourne and Sydney offices of A.W.A. where the messages are received.

By means of a machine resembling a typewriter, they are transcribed upon a tape in perforations corresponding to Morse characters. The tape then passes through an automatic instrument which actuates the Beam transmitter at Fiskville where the signals go out over the ether. Simultaneously—or within one-fourteenth of a second—the signals are received in London or Montreal.

The Beam Wireless Service was opened for traffic on April 8th, 1927. The introduction of Beam Wireless has had the effect of reducing substantially the oversea telegraphic rates and it is estimated that in the first seven years of the Beam's operation the public of Australia has been saved more than £800,000 by this means.

Pictures by Wireless.—At the date of writing (May, 1934), Amalgamated Wireless is installing, in association with the Beam Wireless Stations, equipment for receiving and transmitting pictures by wireless from and to Great Britain. This will be used for photographs, press illustrations, reproductions of documents, plans, cheques, fingerprints—indeed for any pictorial representation whatever.

Overseas Wireless Telephones.—On April 30th, 1930, a series of several years' experiments and tests by Amalgamated Wireless culminated in the opening of the Anglo-Australian Wireless Telephone Service. A fortnight later the New Zealand Government took steps to establish a similar link between the Dominion and Australia. Later a wireless telephone service was extended from Sydney to Java. The terminal points of the Radio-Telephone channel connect with other wireless telephone circuits and cables giving communication across the Atlantic to North and South America, to European countries and even to South Africa, so that any telephone subscriber in Australia can, at suitable times of the day, ring up from his home or any Post Office about 33 million other subscribers in various parts of the world—95 per cent. of the total.

General Commercial Wireless.—Other services operated by Amalgamated Wireless are the 19 Coastal Radio Stations stretching in a chain around Australia, the two commercial stations in

Papua, the eight in the Mandated Territory of New Guinea and five in Fiji. About 90 vessels of the Australian Mercantile Marine are equipped with A.W.A. wireless apparatus operated by officials of the A.W.A. organisation. The Company's main listening station is at La Perouse, which is the terminal point for the incoming conversations by wireless telephony from overseas and where the Company's staff maintains a constant vigil over the ether for the signals of the great commercial and broadcasting radio stations of the world and aircraft in flight. From La Perouse also, conversations are carried out daily with the N.S.W. trawling fleet, each ship of which carries its own A.W.A. wireless telephone equipment.

Radio Centre, Pennant Hills.—The principal radio activities of Australia are concentrated upon Pennant Hills, the Sydney Radio Centre of A.W.A.

From this site no fewer than fifteen services are operated, being as follows:—

1. Overseas Wireless Telephony Service, by means of which Australian residents can speak to friends and business connections in Britain, Europe, North and South America, and parts of North Africa.
2. World-wide Short-wave Broadcasting Service which is heard in every civilised country.
3. Telephony Service to Java, establishing relations with the great Dutch community to the North-west of Australia.
4. Telephony Service to New Zealand, enabling practically any telephone subscriber in Australia to talk to citizens of both islands of the Dominion.
5. Beam Feeder to Melbourne, connecting the great Beam transmitter at Fiskville, Victoria, which despatches messages direct to England and Canada.
6. 600, 700, 800 metres and long-wave VIS, communicating with ships in Australian and New Zealand waters.
7. 2FC Broadcasting Service.
8. VIS Long Distance Service to ships.
9. Trawler Service, by means of which the captains of the trawling fleets are kept in constant touch with their owners.
10. Police Service, enabling the crews of the police patrol cars to receive instructions from the Police Department at any moment.
11. Ships' Press, providing for despatch of news for publication in daily papers printed on vessels at sea.
12. Noumea Service.
13. Rabaul, Suva and Port Moresby Service.
14. Adelaide, Perth, Brisbane, Townsville.
15. Station 2SM Broadcasting Service.

Broadcasting.—Broadcasting in Australia commenced in earnest at the end of 1923, the first licence for a broadcasting station being granted to Farmer & Co., Sydney, with the call sign 2FC. Farmer's service commenced on December 5th, 1923. The first station on the air, however was 2SB (afterwards 2BL), which commenced on November 13th, 1923. Immediately after, broadcasting services were opened by Station 3AR Melbourne and 6WF Perth, and quickly broadcasting stations sprang up in the other capitals also.

FIRST AID

TO THE

—INJURED—

The following Appendix (for which the Publisher accepts no responsibility) has been compiled from standard sources of information, and will, it is hoped, prove of value to residents in country districts who may be remote from medical aid.

The saving of valuable life in remote country districts may often depend upon an adequate supply of fresh water.

Galvanized iron tanks in many places are the only medium of water storage for domestic purposes, and these tanks should, therefore, only be made from the best and most reliable materials.

Lysaght's Tank-making Sheets are actually guaranteed by the makers, and for the protection of buyers such sheets are prominently branded on both sides.

Insist on your house or hospital tanks being made from these guaranteed sheets (see pages 33-37).

Country residents desirous of forming a First-Aid Class in their district are invited to correspond with the Secretary, St. John Ambulance.

WOUNDS.

Bleeding from Arteries.

Head.—Pad and bandage the wound.

Neck.—Place thumb in wound and press backward against spine.

ARMPIT.—Press thumb into wound, second person to press main artery behind middle of collar bone.

UPPER AND FOREARM.—Press with fingers, or apply tourniquet to inside of upper arm where pulsating. When below elbow, place pad in hollow or bend of elbow, and bend forearm against upper arm.

PALM OF HAND.—Bandage hand, closed over a piece of stick, or press arteries at front of wrist.

THIGH.—Hand pressure at centre of fold of groin, or by tourniquet on inside of thigh.

HAM OR BACK OF KNEE-JOINT.—Same as for a thigh, or press by hand or tourniquet in ham above wound.

FRONT OR BACK OF LEG.—Press by hand or tourniquet at back of knee-joint, or double the leg up against a pad placed in the ham.

A tourniquet can be made by placing a stone over the main artery, tying a handkerchief loosely over it, and then twisting it tight with a stick.

Blood from an artery is bright red and flows in jets.

Blood from a vein is dark bluish, and flows slowly.

The flow of arteries is from heart to head, hands to feet.

The flow in veins is just the reverse.

INSTEP.—Pressure to the middle of front of ankle.

SOLE OF FOOT.—Bandage with pads behind inner ankle bones and middle of instep.

FOR ALL SITUATIONS.—Elevate the part and apply pad and bandages.

FLESH WOUNDS.—Wash, stop bleeding, fix parts in natural position without delay.

GUNSHOT WOUNDS OF CHEST OR BELLY.—Place patient on wounded side with knees drawn up; give complete rest; no stimulants.

BRUISED WOUNDS.—Wash, apply wet cloths; if about head, poultices.

SPECIAL NOTE.—VALUE OF IODINE AS A FIRST-AID DRESSING.—It is stated that, in the Franco-Prussian War, out of every 100 men wounded and operated upon, 75 died of blood-poisoning. In the South African War and in the Russo-Japanese War, only 2 per cent. died from this cause. The explanation of this marvellous improvement is cleanliness. In the intervening period Scientists had discovered that an immediate application of Iodine to the wound removed all danger of septicaemia or blood-poisoning, so that unless a vital part was struck, the chances of recovery were greatly enhanced. Special phials of Iodine are now prepared, and the method of application is to break off the end of the phial, pour a little Iodine in and about the wound, and on the pad of lint, binding it closely together with a bandage.

Imitations. There's nothing quite so good.

BROKEN BONES.

LOWER JAW.—Bandage the lower to upper jaw with handkerchief.

COLLAR BONE.—Place pad in armpit, bandage elbow to side, sling forearm.

RIBS.—Apply bandage 6 inches wide, 8 yards long, round chest.

UPPER ARM.—Bend arm and apply roller bandage to hand and forearm, splints to back and front, and sling forearm.

FOREARM.—Apply padded splints to back and front from hand to elbow, holding the arm extended with thumb pointing upwards.

HAND.—Apply splint bandage, and support in sling.

THIGH.—Apply a long splint from armpit to outside of heel, and short one from fork to knee on inside, and bandage.

LEG.—Apply splints inside and outside and bandage.

STRETCHER DRILL.

1. Three men fall in, facing feet of injured man, and are numbered off from the right.
2. Place foot of stretcher at patient's head in a line continuous with the body.
3. Nos. 1 and 2 one at either side—locking hands underneath the shoulders and hips, raise the patient, carry him forward over the stretcher, and then lower him on it.
4. No. 3 takes charge of the injured portion (limb or head) and steadies it with a hand on either side of the wound.
5. Nos. 1 and 2 then take their places at the head and foot of the stretcher, lift, and carry off, while No. 3 walks at side of stretcher.

SIGNS OF BROKEN BONES.

Motion at the part; crackling sensation on moving broken ends; alteration in shape; often shortening. Always apply splints before lifting or carrying. Dangers are of pushing the end through flesh, blood vessels, nerves, or internal organs (lungs).

Splints may be formed of soldiers' weapons—rifles, swords and scabbards—umbrellas, walking-sticks, broom handles, folded newspapers, etc. Bandages from handkerchiefs, sheets and shirts. Stretchers from doors, ladders, or two rifles and a blanket.

GENERAL.

AGUE.—As a preventive, give five grains of quinine every morning. As a cure, act on the bowels, give ten grains of quinine three times a day, and a vapour bath every evening.

APPENDICITIS.—Pain and tenderness in lower right front of abdomen, often beginning in pit of stomach, accompanied at times by vomiting and fever. For temporary relief, apply hot fomentations. No purgatives. Slight sips of water may be taken. Await medical advice.

APOPLEXY.—Act on the bowels, apply wet cloths to the head, undo collar.

BITES.—Of snakes, mad dogs: Apply a ligature (a cord) on the side nearest the heart; suck the wound, scratch the edges with a penknife, and apply caustic or carbolic acid to the wound.

BURNS.—Place the part in a natural position, and apply cloths soaked in oil.

COLIC AND DIARRHOEA.—Give 20 drops of chlorodyne in a little brandy and water.

DYSENTERY.—A small teaspoonful of Ipecacuanha, and a powder every two hours.

DELIRIUM TREMENS.—Act on the bowels, beef-tea every half-hour, 20 grains of chloral in water as a sleeping draught.

DROWNING.—Also for Mild Asphyxiation, Electric Shock, etc. (Supplied by the Royal Life-Saving Society, N.S.W. Head Centre).—SEND FOR MEDICAL ASSISTANCE, IF POSSIBLE. Place the patient face downward, with left side of the face resting on the ground or floor. If no blanket or mat available, put a piece of paper under the face near mouth and nose. Examine the mouth for, and remove any foreign substance. Extend the arms sideways and upwards. Kneel beside and close to the thighs, place the hands just above the small of the back, little finger on lowest rib, others spread out, thumbs an inch apart parallel to one another and pointing to the head. Carry the body steadily forward until its weight is on both hands, thus compressing the patient's body towards the floor, then carry the body back again, releasing the pressure, but not removing the hands. Continue the movement fifteen times to the minute, or once every four seconds for an hour or two, or until the patient starts to breathe. Then remove any wet clothing, cover with blankets, and apply warmth by rubbing the body and insides of limbs, always towards the heart. Place hot-water bottles or bricks to soles of feet, inside thighs or armpits. Watch carefully for any cessation of breathing, and if such occur proceed as before.

EMETICS.—Substances which cause vomiting. A tablespoonful of salt, or mustard and water, an ounce of Ipecacuanha wine; 15 grains of sulphate of zinc in water.

FAINTING.—From loss of blood, weakness, or shock. Keep the body in the lying position, undo the dress, give plenty of air, sprinkle the face and chest with cold water; smelling salts to nostrils.

FITS.—Loosen the clothing about the neck; fresh air, and prevent patient from injuring himself.

MENINGITIS.—Violent headache, unusual irritability or drowsiness, frequent vomiting, tendency to curl up in bed on side, resisting interference, feverish tendencies. Keep in dark room until doctor comes.

POISONS.—1. Give an emetic in the case of poisons which do not stain the mouth, such as Arsenic, Phosphorus, Strychnine, Prussic Acid, Belladonna, and also in the case of Ptomaine Poisoning, Alcoholic Poisoning, Opium, Morphia, Laudanum, Paregoric, Chlorodyne, Syrup of Poppies, etc. (See Emetics above.)

2. DO NOT give an emetic for the following poisons, which burn or stain the mouth, viz.—

- (a) Acids, i.e., Nitric Acid, Sulphuric Acid, Hydrochloric Acid, Muriatic Acid (Spirits of Salt), Carbolic Acid, Oxalic Acid, etc.
- (b) Alkalies, i.e., Caustic Potash, Caustic Soda, and Ammonia, etc.

TREATMENT—

- (a) Acid Poisoning: Give an alkali, i.e., Lime Water, Magnesia, Chalk, Whiting (and soda, except in the case of Oxalic Acid poisoning); also Oil (Olive, Salad, Cod Liver or Castor).
- (b) Alkali Poisoning: Give an acid, i.e., Lemon Juice or Vinegar, diluted with an equal quantity of water, also Oil (Olive, Salad, Cod Liver or Castor).

NOTE.—STRONG TEA is a direct neutralizer of many poisons, and is always safe to take.

RHEUMATISM.—This painful malady is generally due to errors of diet or other causes, such as damp ground, wet clothes, or excess of alcohol, and before any cure can be attempted the cause must first be removed. **TREATMENT**—any good saline preparation, mineral water, etc., while for external application Eucalyptus or other warming and stimulating embrocation will be found to give good results.

RUPTURE.—The escape of a portion of the bowel from the belly at the groin. To return it, place the patient on his back, with the knees drawn up, and apply pressure to the swelling in an upward and outward direction.

SORE FEET.—Anoint with oil or soap before marching, and harden the skin at night by washing with salt and water, or spirits.

SCALDS.—Smear with a solution of lime oil, and envelop in cotton wool.

SPRAINS.—Elevate and rest limbs, apply cold water cloths.

SUNSTROKE.—Loosen dress at neck, act on bowels, cold water at head.

Every sheet of LYSAGHT'S "ORB," "QUEEN'S HEAD" and "FLEUR-DE-LIS" Iron is BRANDED AND GUARANTEED. If sheets of faulty manufacture are inadvertently delivered they will be replaced free of charge.

Hints for the Handyman—Fixing Galvanized Corrugated Iron

Of all building materials in common use, LYSAGHT'S GALVANIZED CORRUGATED IRON is one of the most popular, being adaptable for roofs, side walls and vertical sheeting of all descriptions. The fixing is very simple, yet there are many points, especially in regard to cutting and fitting, which the amateur generally has to puzzle out for himself. The following hints should help him greatly.

Galvanized corrugated iron is, strictly speaking, not iron at all, but mild steel, coated with zinc by a hot dipping process. The perfection of the zinc coating on the sheet determines its lasting qualities. Cheap irons have light deposits irregularly distributed over the sheet.

LYSAGHT'S ORB BRAND

has a heavy coating evenly distributed over the whole surface of the sheet on both sides.

Pure iron is sometimes recommended in place of mild steel, on the supposition that pure iron lasts longer than mild steel. Experience, however, supports the theory that the perfect coating of the metal base is the all-important consideration.

The usual gauge of Roofing iron is 26 gauge,

LYSAGHT'S RED ORB

brand being recommended. A heavier gauge, used for tank-making, bullnosed and verandah awnings, etc., is 24 gauge; 22, 20 and sometimes 18 gauge is employed for large tanks, grain silos, etc. LYSAGHT'S manufacture a specially super coated sheet in 24 gauge and heavier for tank-making purposes. For further information re these sheets see pages 9 and 19.

One often hears to-day that galvanized iron is getting lighter in gauge. This, of course, is erroneous. Any sheet can be tested by its weight or by a Birmingham gauge (not a Birmingham wire gauge, which is slightly different), see Fig. 1, page 12, and if not up to gauge the retailer is liable to prosecution. No reputable maker would take this risk.

LYSAGHT'S Corrugated Iron is mainly sold to a standard of 8/3in. corrugations to the sheet. A cross

section of such a sheet is shown in Fig. 2, page 12. The small fluted or lin. corrugated sheet which is used for ceilings, linings, bath screens, fences, etc., is shown in Fig. 3, page 12. With a single lap, quite enough for ordinary buildings (see Fig. 4), an 8/3in. sheet will cover 2 feet exactly. For more important work a lap and a-half is allowed when every other sheet is reversed (see Fig. 5). Each sheet covers 1ft. 10½in.

For easy calculation it is usual to divide the length to be covered by 2, and add one sheet in 12 for lap. Thus:—Length of roof, 48ft. Number of sheets required 24, plus 2, say, 26 sheets. This is on the safe side, and no extra need be allowed. (For exact tables, see page 14).

MEANS OF FASTENING.

The safest and most effective way of fastening corrugated iron is by means of Nettlefold's roofing screws and washers (Fig. 7).

Cheaper fixing methods are the spring-headed plain nail (Fig. 8), the twisted shank nail (Fig. 9), or the spring-headed screw (Fig. 10). The first is for use in hardwood, the second and third in soft woods. As the name implies, the washer is welded on to the screw of nail. The usual length of these nails is 2½in.

To ensure tight waterproof fixing, irrespective of whether screws or nails are used, the holes should first be made (not too large) by means of a "prick punch" (Fig. 6), which must be kept sharp to prevent denting the corrugations.

Sheets should be fixed through every other corrugation at least (see Figs. 2, 4 and 5), on end supports, and on every intermediate support. One pound of nails should be allowed for every 100 square feet of roofing.

When fixing, both edges of the sheet should be secured first to prevent the sheet spreading or becoming fan-shaped, which trouble will become more pronounced as the job progresses.

The use of LYSAGHT'S RED ORB rigid roofing sheets will obviate this trouble. When sheets are reversed do not forget to lap the one under the other before nailing.

For either roofs or walls if the sheets of iron are put on in threes, the two outer sheets placed either under or over the middle sheet for one and half corrugations, the building will be quite proof against rain, wind and sunlight.

Cutting of a sheet across the flutes may be done with ordinary tinsmith's snips, bending one part up out of the way of the hand, but diagonally across the flutes or lengthways the cutting is best done with a hacking knife (Fig. 11), which is really a painter's tool, and bought in the paint department. In use, the point is laid on the iron, and the back struck with the hammer, and repeated all along the line.

After cutting, dress up the flutes and leave them neat, and see that the iron has not been spread in the process.

A galvanized iron roof will last longer if the end and side laps of sheets are painted before fixing with red oxide or some paint of a similar nature. These points of contact are where corrosion usually begins. The whole roof should not be painted until the iron has "weathered"—say six (6) months after erecting. These precautions have been proved to be most effective in prolonging the life of the roof.

SPECIFY LYSAGHT'S RED ORB

For Your Next Roofing Job.

Every sheet of this strong rigid roofing sheet is definitely guaranteed by the manufactures and branded in Red with the following registered trade mark.

LYSAGHT



AUSTRALIA



So branded to distinguish it from the ordinary Orb sheet is a local production specially manufactured to withstand the roughest usage whether in transit or fixing. Its extreme rigidity and stiffness makes it unsuitable for curving but for roofing, fencing and similar work it is incomparable.

"ORB" IRON—Nearly Eighty Years in use.

CALENDAR 1935

JANUARY.			FEBRUARY.			MARCH.			APRIL.		
S	6	13 20 27	..	3	10 17 24	..	3	10 17 24 31	..	7	14 21 28
M	7	14 21 28	..	4	11 18 25	..	4	11 18 25	1	8	15 22 29
T	1	8 15 22 29	..	5	12 19 26	..	5	12 19 26	2	9	16 23 30
W	2	9 16 23 30	..	6	13 20 27	..	6	13 20 27	3	10	17 24 ..
T	3	10 17 24 31	..	7	14 21 28	..	7	14 21 28	4	11	18 25 ..
F	4	11 18 25	..	1	8 15 22	..	1	8 15 22 29	5	12	19 26 ..
S	5	12 19 26	..	2	9 16 23	..	2	9 16 23 30	6	13	20 27 ..
MAY.			JUNE.			JULY.			AUGUST.		
S	5	12 19 26	..	2	9 16 23 30	..	7	14 21 28	..	4	11 18 25
M	6	13 20 27	..	3	10 17 24	..	1	8 15 22 29	..	5	12 19 26
T	7	14 21 28	..	4	11 18 25	..	2	9 16 23 30	..	6	13 20 27
W	1	8 15 22 29	..	5	12 19 26	..	3	10 17 24 31	..	7	14 21 28
T	2	9 16 23 30	..	6	13 20 27	..	4	11 18 25	1	8	15 22 29
F	3	10 17 24 31	..	7	14 21 28	..	5	12 19 26	2	9	16 23 30
S	4	11 18 25	..	1	8 15 22 29	..	6	13 20 27	3	10	17 24 31
SEPTEMBER.			OCTOBER.			NOVEMBER.			DECEMBER.		
S	1	8 15 22 29	..	6	13 20 27	..	3	10 17 24	1	8	15 22 29
M	2	9 16 23 30	..	7	14 21 28	..	4	11 18 25	2	9	16 23 30
T	3	10 17 24	..	1	8 15 22 29	..	5	12 19 26	3	10	17 24 31
W	4	11 18 25	..	2	9 16 23 30	..	6	13 20 27	4	11	18 25 ..
T	5	12 19 26	..	3	10 17 24 31	..	7	14 21 28	5	12	19 26 ..
F	6	13 20 27	..	4	11 18 25	..	1	8 15 22 29	6	13	20 27 ..
S	7	14 21 28	..	5	12 19 26	..	2	9 16 23 30	7	14	21 28 ..

CALENDAR 1936

JANUARY.			FEBRUARY.			MARCH.			APRIL.		
S	5	12 19 26	..	2	9 16 23	1	8	15 22 29	..	5	12 19 26
M	6	13 20 27	..	3	10 17 24	2	9	16 23 30	..	6	13 20 27
T	7	14 21 28	..	4	11 18 25	3	10	17 24 31	..	7	14 21 28
W	1	8 15 22 29	..	5	12 19 26	4	11	18 25	1	8	15 22 29
T	2	9 16 23 30	..	6	13 20 27	5	12	19 26	2	9	16 23 30
F	3	10 17 24 31	..	7	14 21 28	6	13	20 27	3	10	17 24
S	4	11 18 25	..	1	8 15 22 29	7	14	21 28	4	11	18 25
MAY.			JUNE.			JULY.			AUGUST.		
S	3	10 17 24 31	..	7	14 21 28	..	5	12 19 26	..	2	9 16 23 30
M	4	11 18 25	..	1	8 15 22 29	..	6	13 20 27	..	3	10 17 24 31
T	5	12 19 26	..	2	9 16 23 30	..	7	14 21 28	..	4	11 18 25
W	6	13 20 27	..	3	10 17 24	1	8	15 22 29	..	5	12 19 26
T	7	14 21 28	..	4	11 18 25	2	9	16 23 30	..	6	13 20 27
F	1	8 15 22 29	..	5	12 19 26	3	10	17 24 31	..	7	14 21 28
S	2	9 16 23 30	..	6	13 20 27	4	11	18 25	1	8	15 22 29
SEPTEMBER.			OCTOBER.			NOVEMBER.			DECEMBER.		
S	6	13 20 27	..	4	11 18 25	1	8	15 22 29	..	6	13 20 27
M	7	14 21 28	..	5	12 19 26	2	9	16 23 30	..	7	14 21 28
T	1	8 15 22 29	..	6	13 20 27	3	10	17 24	1	8	15 22 29
W	2	9 16 23 30	..	7	14 21 28	4	11	18 25	2	9	16 23 30
T	3	10 17 24	..	1	8 15 22 29	5	12	19 26	3	10	17 24 31
F	4	11 18 25	..	2	9 16 23 30	6	13	20 27	4	11	18 25
S	5	12 19 26	..	3	10 17 24 31	7	14	21 28	5	12	19 26

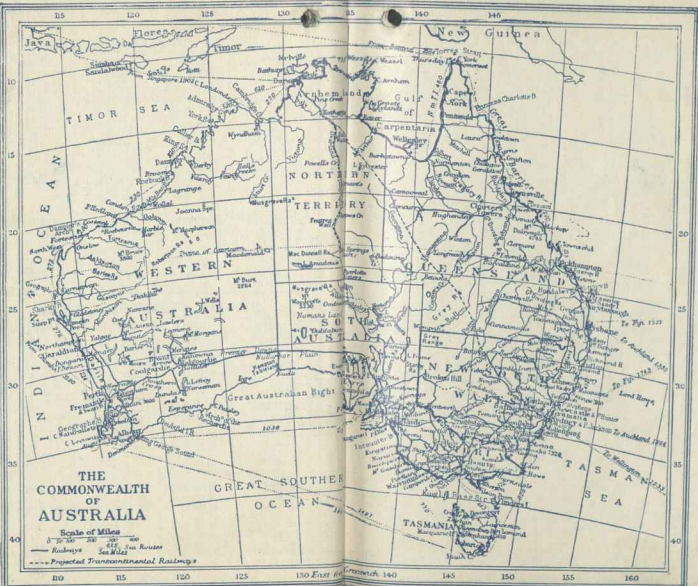
CALENDAR 1937

JANUARY.		FEBRUARY.		MARCH.		APRIL.	
S	3 10 17 24 31	..	7 14 21 28	..	7 14 21 28	..	4 11 18 25
M	4 11 18 25	..	1 8 15 22	..	1 8 15 22 29	..	5 12 19 26
T	5 12 19 26	..	2 9 16 23	..	2 9 16 23 30	..	6 13 20 27
W	6 13 20 27	..	3 10 17 24	..	3 10 17 24 31	..	7 14 21 28
T	7 14 21 28	..	4 11 18 25	..	4 11 18 25	..	1 8 15 22 29
F	1 8 15 22 29	..	5 12 19 26	..	5 12 19 26	..	2 9 16 23 30
S	2 9 16 23 30	..	6 13 20 27	..	6 13 20 27	..	3 10 17 24
MAY.		JUNE.		JULY.		AUGUST.	
S	2 9 16 23 30	..	6 13 20 27	..	4 11 18 25	..	1 8 15 22 29
M	3 10 17 24 31	..	7 14 21 28	..	5 12 19 26	..	2 9 16 23 30
T	4 11 18 25	..	1 8 15 22 29	..	6 13 20 27	..	3 10 17 24 31
W	5 12 19 26	..	2 9 16 23 30	..	7 14 21 28	..	4 11 18 25
T	6 13 20 27	..	3 10 17 24	..	1 8 15 22 29	..	5 12 19 26
F	7 14 21 28	..	4 11 18 25	..	2 9 16 23 30	..	6 13 20 27
S	1 8 15 22 29	..	5 12 19 26	..	3 10 17 24 31	..	7 14 21 28
SEPTEMBER.		OCTOBER.		NOVEMBER.		DECEMBER.	
S	5 12 19 26	..	3 10 17 24 31	..	7 14 21 28	..	5 12 19 26
M	6 13 20 27	..	4 11 18 25	..	1 8 15 22 29	..	6 13 20 27
T	7 14 21 28	..	5 12 19 26	..	2 9 16 23 30	..	7 14 21 28
W	1 8 15 22 29	..	6 13 20 27	..	3 10 17 24	..	1 8 15 22 29
T	2 9 16 23 30	..	7 14 21 28	..	4 11 18 25	..	2 9 16 23 30
F	3 10 17 24	..	1 8 15 22 29	..	5 12 19 26	..	3 10 17 24 31
S	4 11 18 25	..	2 9 16 23 30	..	6 13 20 27	..	4 11 18 25

CALENDAR 1938

JANUARY.		FEBRUARY.		MARCH.		APRIL.	
S	2 9 16 23 30	..	6 13 20 27	..	6 13 20 27	..	3 10 17 24
M	3 10 17 24 31	..	7 14 21 28	..	7 14 21 28	..	4 11 18 25
T	4 11 18 25	..	1 8 15 22	..	1 8 15 22 29	..	5 12 19 26
W	5 12 19 26	..	2 9 16 23	..	2 9 16 23 30	..	6 13 20 27
T	6 13 20 27	..	3 10 17 24	..	3 10 17 24 31	..	7 14 21 28
F	7 14 21 28	..	4 11 18 25	..	4 11 18 25	..	1 8 15 22 29
S	1 8 15 22 29	..	5 12 19 26	..	5 12 19 26	..	2 9 16 23 30
MAY.		JUNE.		JULY.		AUGUST.	
S	1 8 15 22 29	..	5 12 19 26	..	3 10 17 24 31	..	7 14 21 28
M	2 9 16 23 30	..	6 13 20 27	..	4 11 18 25	..	1 8 15 22 29
T	3 10 17 24 31	..	7 14 21 28	..	5 12 19 26	..	2 9 16 23 30
W	4 11 18 25	..	1 8 15 22 29	..	6 13 20 27	..	3 10 17 24 31
T	5 12 19 26	..	2 9 16 23 30	..	7 14 21 28	..	4 11 18 25
F	6 13 20 27	..	3 10 17 24	..	1 8 15 22 29	..	5 12 19 26
S	7 14 21 28	..	4 11 18 25	..	2 9 16 23 30	..	6 13 20 27
SEPTEMBER.		OCTOBER.		NOVEMBER.		DECEMBER.	
S	4 11 18 25	..	2 9 16 23 30	..	6 13 20 27	..	4 11 18 25
M	5 12 19 26	..	3 10 17 24 31	..	7 14 21 28	..	5 12 19 26
T	6 13 20 27	..	4 11 18 25	..	1 8 15 22 29	..	6 13 20 27
W	7 14 21 28	..	5 12 19 26	..	2 9 16 23 30	..	7 14 21 28
T	1 8 15 22 29	..	6 13 20 27	..	3 10 17 24	..	1 8 15 22 29
F	2 9 16 23 30	..	7 14 21 28	..	4 11 18 25	..	2 9 16 23 30
S	3 10 17 24	..	1 8 15 22 29	..	5 12 19 26	..	3 10 17 24 31







Further copies of this Publication may be
obtained post free, upon application at
any of the offices of

JOHN LYSAGHT (Australia) LTD.,
in the various Capital Cities of the
Commonwealth.

