

LYSAGHT'S REFEREE

A HANDBOOK OF USEFUL
INFORMATION



SEVENTEENTH EDITION
(WITH APPENDIX)

WITH THE COMPLIMENTS OF
JOHN LYSAGHT (AUSTRALIA) PTY. LTD

Wm. Garrison

For
Index
see
Pages 6 and 7

LYSAGHT



40
LYSAGHT'S

AUSTRALIA GALVANIZED IRON

Manufactured at Newcastle and Port Kembla (New South Wales)

Your attention is specially drawn to the fact that John Lysaght (Australia) Pty. Limited have been manufacturing "ORB" Galvanized Corrugated and "QUEEN'S HEAD" Galvanized Plain Iron at Newcastle (N.S.W.), since April, 1921, and at Port Kembla (N.S.W.), since April, 1936.

These works are 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 Australian 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" and "QUEEN'S HEAD" Iron is **BRANDED AND GUARANTEED**. If sheets of faulty manufacture are inadvertently delivered they will be replaced free of charge.

LYSAGHT'S

LYSAGHT



**QUEEN'S HEAD
AUSTRALIA**

“ORB” IRON—Over Eighty Years in use.

Lysaght's

Galvanized Corrugated and Plain 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 other special

Lysaght Brochures

on

“ZINCANEAL”

and

BLACK STEEL SHEETS

may be obtained free and post free, upon application to any of the Offices of JOHN LYSAGHT (Australia) PTY. LIMITED, Sydney, Melbourne, Brisbane, Adelaide, Fremantle.

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

LYSAGHT'S REFEREE

17th Edition

BEING

A GENERAL GUIDE FOR IRON-
WORKERS, STOREKEEPERS,
COUNTRY RESIDENTS, ETC.

CONTAINING

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

Revised June, 1938. 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 over 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 PTY. LTD.,
Printers ——— 117 Clarence Street.

LYSAGHT'S WORKS

The establishment of the steel works at Newcastle in 1915 gave a great stimulus to the establishment of secondary industries, and in 1921, Lysaght's Newcastle Works were opened as an initial unit of two manual rolling mills and one galvanizing pot.

Gradual additions were made to the plant during the next few years, and in 1928 there were eight manual rolling mills and four galvanizing units in operation, with a capacity of about 40,000 tons of sheets per annum.

By the beginning of 1930, further extensions were made of eight additional manual rolling mills and additional galvanizing plant, bringing the total capacity of the works to 80,000 tons of sheets per annum.

In 1934, a new type of mechanised rolling mill was installed, which was followed in 1936 by another unit of similar type (see page 31), which brought the total capacity of the Newcastle Works to about 125,000 tons of sheets per annum.

In 1936, the company purchased from Australian Iron & Steel Ltd. the Port Kembla mechanized rolling mills and galvanizing plant, with a total capacity of 25,000 tons of sheets per annum.

Extensive new works at Port Kembla, involving a capital outlay of approximately £600,000, will be completed in December, 1938 (see inset, back of book), and to these the plant purchased from the Australian Iron & Steel Ltd. is being transferred, which supplemented by some of the most modern type of mechanical plant in existence is expected, when in full operation to produce 40,000 tons of sheets per annum. The two works will then be capable of producing 140,000 tons of galvanized sheets per annum, which should be more than sufficient to supply Australia's needs for some years to come, besides having a further considerable tonnage available for sale, either as Black sheets or as Lysaght's new special heat-treated, rust-resisting, zinc-coated sheet known as "Zincaneal."

On the existing production basis the two works use, altogether, 165,000 tons of Australian steel, while directly and indirectly, 500,000 tons of Australian coal are used in their operations annually, as well as 13,500 tons of Australian zinc and 5,700 tons of Australian acid.

More than 2,000 men are at present employed directly in the various operations, and probably a further 3,500 men in producing the raw materials used. Wages directly paid amount to over £500,000 per annum, and at least a further £700,000 is paid indirectly as a result of this Company's operations. When both works are producing upon a maximum capacity basis, the present figures, both as regards number of men employed and raw materials used, will be substantially increased.

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 since elapsed, greatly improved methods for its production, and extreme care exercised 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.

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. and heavier, THE LIFE OF TANKS MADE FROM WHICH IS GUARANTEED.

Insist on your tanks being made from this guaranteed material, for further particulars of which see pages 36 and 37.

Zincanneal rust-resisting sheets in Corrugated and Plain Iron is the latest development (see inset and pages 2, 4 and 5).

INDEX

Barbed Wire	..
Black Steel Sheets	2, 28/35
Brass—Rolled: Weights and Gauges of	94
Brass Sections—Extruded Flats	89
Brass and Copper Rods and Bars	90, 91
Brickwork—Useful Information	114
Bolts and Nuts—Galvanized Roofing	73
By-Products	122
Calendars, 1939-42	151, 152
Chain—Sustaining Degree of Best Mining	68
„ Load and Strain of Best Mill proof	68
Chamber of Manufacturers—Objects of	100
Concrete—How to Make and How to Colour	114/116
Copper—Bars and Rods	90, 91
Copper Conductors	92
Copper Sheets—Weights and Gauges	88
Copper Tubes	93
Corrugating Machines	101/103
Costing System	97
Cotter Pins	75
Curving Rolls	42
Decimal Equivalents	82
Distances between Ports	126
Edge Roll	8
Fertilizers	138, 139
First Aid to the Injured	146/150
Fittings—Water and Steam: Trade Price List	104, 105
Galvanized Iron—Evolution, Manufacture and Uses of	1, 4, 5
Galvanized Sheets—Sections, Life & Inspection of	9, 21, 50, 51
Galvanizing—Good: What it Means; Process	38, 48, 49
—Gauges—Birmingham, Imperial, American	9, 27
Grain Silos and Fumigators	140/143
Ground Tanks—Area of	113
Guest, Keen & Nettlefolds Ltd.—Supplement	69/84
Haystacks—Contents of	113
Hints for the Handyman	43/45
Hints for Reckoning	46, 47
Hoop Iron	95
Iron—Black Sheet	2, 28/35
„ Galvanized, Evolution and Manufacture of	1, 4, 5, 8, 48, 49
„ „ Thickness and Sections of	9
„ „ Sheets and Weights per 100 sq. ft.	16
„ „ Corrugated, Covering Capacity	13
„ „ „ Counts and Weights	13
„ „ „ Price per Sheet	17/20
„ „ Plain, Counts and Weights	22
„ „ „ Price per Sheet	23/26
„ „ Fixing and Painting of	37, 43/45
Lead, Sheet—Weight per Roll and per Foot	96
Lifting Gear—Safe Working Loads	67
Loading Galvanized Iron	124, 125
Lysaght's Trade Marks	8, 12, 14, 15
„ Works	1, 4, 10, 11
Mensuration of Surfaces and Solids	112
—Monel Metal	87
Muntz Metal	87, 88

	PAGE
Nails—Approximate Number per lb.	96
„ „ Number required per Square of Roofing	13
Nettlefolds Pty. Ltd.—Plant and Products	69/84
Non-Ferrous Metals and Wires—Weights of, etc.	86/96
Nuts—Pressed and Forged	78
Painting—General Information	37, 45, 145
Pipes—Galvanized, Iron, Composition	108
„ „ Lead, Acetylene, Water	107
Postal Information	127/131
Price per Ton—How much per lb.	97
Price per cwt. at a given price per lb.	96
Railway Carriages and Waggon (Steel)	32, 125
Railways—Commonwealth and State	119
Rainfall Statistics	136, 137
Ratchet Braces	81
Research	120, 121, 123
Rivets	76, 77
Rolling Mills	30, 31
Rope—Manilla, Flax, Coir	66
„ „ Wire—Weights and Strength	58
Selling Price of Goods—How to Fix	46, 47
Screws—Guest, Keen & Nettlefolds	70, 71
„ „ Wood	71
„ „ Machine	72
„ „ Roofing	9, 73
„ „ Coach	74
Standards Association—Objects of	52
Statistics	118, 119
Steel Bars—Round and Square	65
„ „ Beams, Rolled	61
„ „ Flats	64
„ „ Plates	62, 63
„ „ Tubes	106
Tanks—Circular and Square, Capacity of	39
„ „ Galvanized Iron Required for	36/42
„ „ „ Recommendations for Care of	120, 121
Tank-Making Sheets—Guarantee	37
Thermometer Readings—Conversion Table	99
Timber	144
Tinplates—Standard Weights and Sizes	85
Trade Marks—Lysaght's	8, 12, 14, 15
Tubes—Solid Drawn Copper: Weight of	93
„ „ Gas, Water, Steam—Trade List	105
„ „ Iron and Steel	106
Useful Information	114
Wallpapers	117
Weight of Metals per Superficial Foot	98
„ „ „ Cubic Inch	98
Weights and Measures—British and Metric	109/111
What Good Galvanizing Means	38, 48, 49
Wire Netting	53/57
„ „ Steel	57/59
„ „ Copper and Brass	59, 92
„ „ Hooks and Eyes	79, 80
„ „ Electric Light	60
„ „ Non-Ferrous—Weight per 100ft.	95
Wunderlich Metal Ceilings and Products	34, 35
“Zincanneal” Sheets	2, 4, 5, 122
Zinc Sheets	86

LYSAGHT'S RED ORB



AUSTRALIA



When requiring Corrugated Iron for roofing specify —

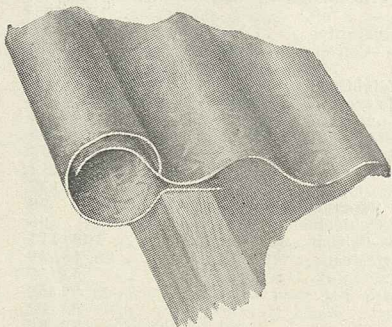
LYSAGHT'S RED ORB

The specially manufactured 26 gauge Roofing Sheet possessing the rigidity of 24 gauge.

Corrugated Roofing Iron is not usually called on to stand severe strains, but it is often necessary for tradesmen to walk over roofs, either during or after erection, and it is a common occurrence for the sheets so walked on to become dented, causing leaks and other troubles.

To overcome this, John Lysaght (Australia) Pty. Ltd. produce a rigid 26 gauge roofing quality. This iron is recommended for roofs and other uses when the sheets are not required to be curved.

Lysaght's 26g. Red Orb sheets are of the very highest quality and have the same standard corrugations and count and are sold at the same price as Lysaght's ordinary Blue Orb Galvanized Sheets, but being branded with a RED ORB device, are described as "Lysaght's RED ORB" and are fully guaranteed by the makers.



'EDGE-ROLL'

To make a perfect finish to a Corrugated Iron roof, it is advisable to use 'EDGE-ROLL,' which can be procured through any merchant.

'EDGE-ROLL' saves loss of time in rolling, makes a neater finish, and is more economical than hand rolling.

LYSAGHT'S "RED ORB" is the perfect Roofing Sheet.

SECTIONS OF LYSAGHT'S GALVANIZED SHEETS

Figure 1

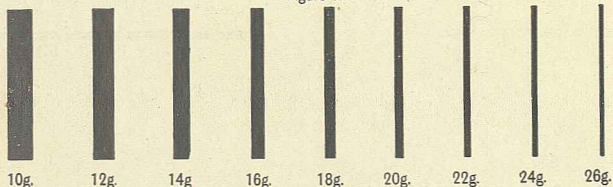
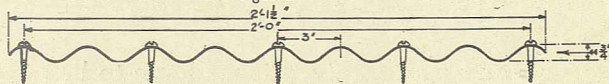


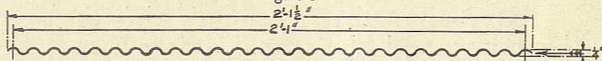
Illustration showing the approximate thickness of Sheets, according to the Birmingham Gauge. (See pages 27 and 43).

Figure 2



The "ORB" Standard for Roofing Sheets, eight 3-inch corrugations of $\frac{3}{4}$ -inch depth (See page 43).

Figure 3



The "ORB" Standard 1-inch corrugations of $\frac{1}{4}$ -inch depth, used extensively for Ceilings, Linings, Bath Screens, etc. (See page 44).

Figure 4



Figure 5



Fig. 6



Fig. 7



Fig. 8



Fig. 9



Fig. 10

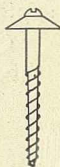
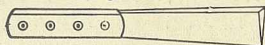


Figure 11



(See pages 43/45)

LYSAGHT



AUSTRALIA

LYSAGHT'S Newcastle Works

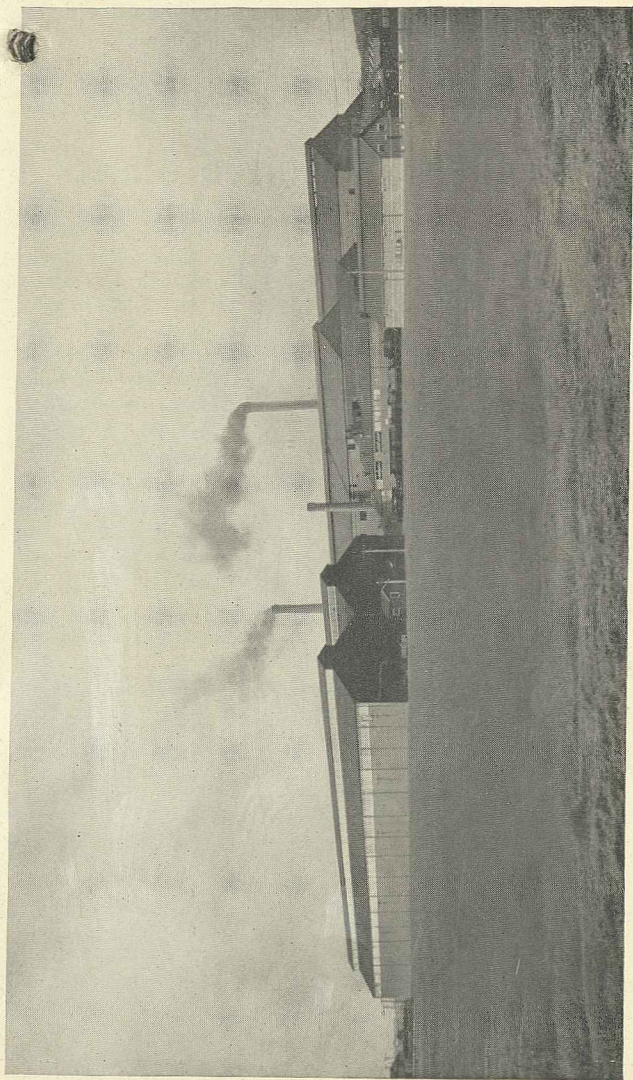
Many preconceived ideas have to be rapidly abandoned during a visit to Lysaght's Newcastle Works.

Externally, the magnitude of the buildings and their well-ordered environment and attractive appearance is a revelation.

Internally, the spaciousness, light and ventilation, combined with every reasonable convenience for the employees' safety and comfort, is a conspicuous feature in all departments.

Officially conducted inspections of the Works, commencing punctually at 10.30 a.m. and 2.30 p.m., are arranged daily, excepting Saturday, Sunday and Statutory Holidays.

Interested visitors to Newcastle are cordially invited to join these parties.



Explanatory Notes re Brands on Lysaght's Galvanized Sheets

For the information of users and to facilitate means of determining the life of Lysaght's Australian-made galvanized sheets, the year of manufacture has been incorporated in the Maltese Cross on the Orb brands and elsewhere on other brands (see pages 14 and 15).

Between the brand and the end of the sheet is stamped the identification number of the inspector who passed the sheet (see pages 50 and 51).

Below the brand on all sheets of 24 and 26 gauges in Plain Iron, and the standard 3in. corrugated sheets, is stamped the respective gauge figures, i.e., 24g. or 26g.

The guaranteed 24g. Tankmaking Sheets (see pages 36 to 42) are prominently branded on both sides; the ordinary 24g. roofing sheets are only branded on one side and have the following device stencilled on the reverse side. ☆

Sheets manufactured at Port Kembla Works have the letter "K" incorporated in all brands.

The packer's initials are stencilled on the sides of all cases, and a large paper packer's slip, giving the packer's name and date of packing is enclosed in all cases.

All of these measures are taken to protect our mutual interests, and should you find it necessary to make a complaint please endeavour to:—

- (1) Forward the packer's slip from the case;
 - (2) Quote the packer's initials on the case;
 - (3) Quote the inspector's number on the sheets;
 - (4) Quote the year of manufacture in the brand;
- and any other details that might assist our Research Department to thoroughly investigate your complaint and take any action necessary to remedy the causes.

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

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	—
12 feet	17	22	28	34	48	—

* Supplied in 1 inch Corrugations only. Not made in 11 or 12ft. lengths.

Cases of LYSAGHT'S Brands of Corrugated Iron usually contain sheets in excess of the numbers given in above table.

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	20½	23½	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	1,540 "	2,000 "	—	—
Double Lap	1,360 "	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.

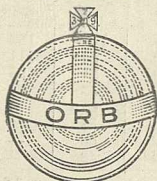
SPRING HEAD NAILS*

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

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

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'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.

LYSAGHT



AUSTRALIA

LYSAGHT



QUEEN'S HEAD
AUSTRALIA

LYSAGHT'S QUEEN'S HEAD

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

Commanding the universal confidence of sheet metal workers and fully guaranteed by the manufacturers.



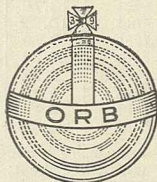
fully guaranteed by the Manufacturers.

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 36 to 42).

LYSAGHT



AUSTRALIA
TANK MAKING

LYSAGHT



GUINEA
AUSTRALIA

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'S FLEUR DE LIS

Galvanized 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'S ORB AND QUEEN'S HEAD BRANDS

have now been on the market for over 80 YEARS. Every sheet bearing a registered Lysaght brand carries the same UNCONDITIONAL GUARANTEE as to quality that has always been given by the makers.

LYSAGHT



AUSTRALIA

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	336.6	269.9	215.9	171.5	120.7	108.0
6 feet	10.39	332.5	264.9	213.0	168.8	119.5	103.9
7 feet	8.79	327.4	259.3	208.8	164.8	116.5	103.3
8 feet	7.62	327.7	259.1	207.6	165.7	116.2	102.9
9 feet	6.72	329.3	260.4	206.6	164.6	114.2	102.5
10 feet	6.02	319.1	258.9	207.7	162.5	115.9	102.3
11 feet	5.44	321.0	254.3	202.6	163.2	114.2	—
12 feet	4.97	328.0	253.5	198.8	161.5	114.3	—

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	251.8	201.5	160.0	112.6	100.7
6 feet	9.70	310.4	247.4	198.9	157.6	111.6	97.0
7 feet	8.21	305.8	242.2	195.0	153.9	108.8	96.5
8 feet	7.11	305.7	241.7	193.7	154.6	108.4	96.0
9 feet	6.27	307.2	243.0	192.8	153.6	106.6	95.6
10 feet	5.61	297.3	241.2	193.5	151.5	108.0	95.4
11 feet	5.08	299.7	237.5	189.2	152.4	106.7	—
12 feet	4.64	306.2	236.6	185.6	150.8	106.7	—

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	260.3	208.3	165.4	116.4	104.1
6 feet	10.08	322.6	257.0	206.6	163.8	115.9	100.8
7 feet	8.57	319.2	252.8	203.5	160.7	113.6	100.7
8 feet	7.45	320.4	253.3	203.0	162.0	113.6	100.6
9 feet	6.59	322.9	255.4	202.6	161.5	112.0	100.5
10 feet	5.91	313.2	254.1	203.9	159.6	113.8	100.5
11 feet	5.36	316.2	250.6	199.7	160.8	112.6	—
12 feet	4.90	323.4	250.0	196.0	159.3	112.7	—

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	11.43	302.9	242.9	194.3	154.3	108.6	97.2
6 feet	9.41	301.1	240.0	192.9	152.9	108.2	94.1
7 feet	8.00	298.0	236.0	190.0	150.0	106.0	94.0
8 feet	6.96	299.3	236.6	189.7	151.4	106.1	94.0
9 feet	6.15	301.4	238.3	189.1	150.7	104.6	93.8
10 feet	5.52	292.6	237.4	190.4	149.0	106.3	93.8
11 feet	5.00	295.0	233.8	186.3	150.0	105.0	—
12 feet	4.57	301.6	233.1	182.8	148.5	105.1	—

REMEMBERED long after Price is Forgotten.

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

Note.—16 and 18 gauge Corrugated Sheets are manufactured to order. (See pages 42 and 43).

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	138 Sheets	118 Sheets	102 Sheets	90 Sheets	82 Sheets	74 Sheets	68 Sheets
			5 ft.	6 ft.	7 ft.	8 ft.	9 ft.	10 ft.	11 ft.	12 ft.
£	s.	d.								
18	0	0	2/2	2/7	3/0 $\frac{1}{2}$	3/7	4/-	4/5	4/10 $\frac{1}{2}$	5/3 $\frac{1}{2}$
18	10	0	2/3 $\frac{1}{2}$	2/8 $\frac{1}{2}$	3/1 $\frac{1}{2}$	3/7 $\frac{1}{2}$	4/1 $\frac{1}{2}$	4/6	5/-	5/5
19	0	0	2/3 $\frac{1}{2}$	2/9	3/2 $\frac{1}{2}$	3/9	4/3	4/8	5/1 $\frac{1}{2}$	5/7
19	10	0	2/4	2/10	3/3 $\frac{1}{2}$	3/10	4/4	4/9	5/3	5/9
20	0	0	2/5	2/11	3/4 $\frac{1}{2}$	3/11	4/5 $\frac{1}{2}$	4/11	5/5	5/10 $\frac{1}{2}$
20	10	0	2/6	3/-	3/5 $\frac{1}{2}$	4/-	4/7	5/-	5/6 $\frac{1}{2}$	6/0
21	0	0	2/6 $\frac{1}{2}$	3/0 $\frac{1}{2}$	3/6 $\frac{1}{2}$	4/2	4/8	5/1 $\frac{1}{2}$	5/8	6/2
21	10	0	2/7	3/1 $\frac{1}{2}$	3/7 $\frac{1}{2}$	4/2 $\frac{1}{2}$	4/9 $\frac{1}{2}$	5/3	5/10	6/4
22	0	0	2/8	3/2	3/8 $\frac{1}{2}$	4/4	4/10 $\frac{1}{2}$	5/4 $\frac{1}{2}$	5/11 $\frac{1}{2}$	6/6
22	10	0	2/8 $\frac{1}{2}$	3/3	3/10	4/5	5/-	5/6	6/1	6/7 $\frac{1}{2}$
23	0	0	2/9	3/4	3/11	4/6	5/1 $\frac{1}{2}$	5/7 $\frac{1}{2}$	6/2 $\frac{1}{2}$	6/9
23	10	0	2/10	3/5	4/-	4/7	5/2 $\frac{1}{2}$	5/9	6/4	6/11
24	0	0	2/10 $\frac{1}{2}$	3/6	4/1	4/8 $\frac{1}{2}$	5/4	5/10	6/6	7/0 $\frac{1}{2}$
24	10	0	2/11 $\frac{1}{2}$	3/7	4/2	4/9 $\frac{1}{2}$	5/5	6/-	6/7 $\frac{1}{2}$	7/2 $\frac{1}{2}$
25	0	0	3/-	3/7 $\frac{1}{2}$	4/3	4/10 $\frac{1}{2}$	5/6 $\frac{1}{2}$	6/1	6/9	7/4
25	10	0	3/1	3/8 $\frac{1}{2}$	4/4	5/-	5/8	6/2 $\frac{1}{2}$	6/10 $\frac{1}{2}$	7/6
26	0	0	3/1 $\frac{1}{2}$	3/9	4/5	5/1	5/9	6/4	7/0 $\frac{1}{2}$	7/8
26	10	0	3/2	3/10	4/6	5/2	5/10 $\frac{1}{2}$	6/5 $\frac{1}{2}$	7/2	7/9 $\frac{1}{2}$
27	0	0	3/3	3/11	4/7	5/2 $\frac{1}{2}$	6/-	6/7	7/3 $\frac{1}{2}$	7/11
27	10	0	3/3 $\frac{1}{2}$	4/-	4/8	5/4 $\frac{1}{2}$	6/1	6/8 $\frac{1}{2}$	7/5	8/1
28	0	0	3/4 $\frac{1}{2}$	4/0 $\frac{1}{2}$	4/9	5/6	6/2 $\frac{1}{2}$	6/10	7/7	8/3
28	10	0	3/5	4/1 $\frac{1}{2}$	4/10	5/7	6/4	6/11	7/8 $\frac{1}{2}$	8/4 $\frac{1}{2}$
29	0	0	3/6	4/2 $\frac{1}{2}$	4/11	5/8	6/5	7/1	7/10	8/6
29	10	0	3/6 $\frac{1}{2}$	4/3	5/-	5/9	6/6 $\frac{1}{2}$	7/2	8/-	8/8
30	0	0	3/7 $\frac{1}{2}$	4/4	5/1	5/10 $\frac{1}{2}$	6/8	7/4	8/1	8/10
30	10	0	3/8	4/5	5/2	5/11 $\frac{1}{2}$	6/9	7/5	8/3	8/11 $\frac{1}{2}$
31	0	0	3/9	4/6	5/3	6/1	6/10 $\frac{1}{2}$	7/6 $\frac{1}{2}$	8/4 $\frac{1}{2}$	9/1 $\frac{1}{2}$
31	10	0	3/9 $\frac{1}{2}$	4/7	5/4	6/2	7/-	7/8	8/6	9/3
32	0	0	3/10	4/7 $\frac{1}{2}$	5/5	6/3	7/1	7/9 $\frac{1}{2}$	8/8	9/5
32	10	0	3/11	4/8 $\frac{1}{2}$	5/6	6/4	7/2 $\frac{1}{2}$	7/11	8/9 $\frac{1}{2}$	9/6 $\frac{1}{2}$
33	0	0	3/11 $\frac{1}{2}$	4/9 $\frac{1}{2}$	5/7	6/5 $\frac{1}{2}$	7/4	8/0 $\frac{1}{2}$	8/11	9/8 $\frac{1}{2}$
33	10	0	4/0 $\frac{1}{2}$	4/10	5/8	6/6 $\frac{1}{2}$	7/5	8/2	9/0 $\frac{1}{2}$	9/10
34	0	0	4/1	4/11	5/9	6/8	7/6 $\frac{1}{2}$	8/3 $\frac{1}{2}$	9/2	10/-
34	10	0	4/2	5/-	5/10	6/9	7/8	8/5	9/4	10/2
35	0	0	4/2 $\frac{1}{2}$	5/1	5/11	6/10	7/9	8/6 $\frac{1}{2}$	9/5 $\frac{1}{2}$	10/3 $\frac{1}{2}$
35	10	0	4/3	5/1 $\frac{1}{2}$	6/-	6/11	7/10 $\frac{1}{2}$	8/8	9/7	10/5
36	0	0	4/4	5/2 $\frac{1}{2}$	6/1	7/0 $\frac{1}{2}$	8/-	8/9	9/9	10/7
36	10	0	4/4 $\frac{1}{2}$	5/3 $\frac{1}{2}$	6/2	7/1 $\frac{1}{2}$	8/1	8/10 $\frac{1}{2}$	9/10 $\frac{1}{2}$	10/9
37	0	0	4/5 $\frac{1}{2}$	5/4 $\frac{1}{2}$	6/3	7/3	8/2 $\frac{1}{2}$	9/-	10/-	10/10 $\frac{1}{2}$
37	10	0	4/6	5/5	6/4	7/4	8/4	9/1 $\frac{1}{2}$	10/1 $\frac{1}{2}$	11/-
38	0	0	4/7	5/6	6/5	7/5	8/5	9/3	10/3	11/2
38	10	0	4/7 $\frac{1}{2}$	5/7	6/6	7/6 $\frac{1}{2}$	8/6 $\frac{1}{2}$	9/4 $\frac{1}{2}$	10/5	11/4
39	0	0	4/8 $\frac{1}{2}$	5/8	6/7	7/7 $\frac{1}{2}$	8/8	9/6	10/6 $\frac{1}{2}$	11/5 $\frac{1}{2}$
39	10	0	4/9	5/9	6/8	7/9	8/9	9/7 $\frac{1}{2}$	10/8	11/7 $\frac{1}{2}$
40	0	0	4/10	5/9 $\frac{1}{2}$	6/9	7/10	8/10 $\frac{1}{2}$	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	3/11½
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	4/3
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

“ORB” IRON—Over Eighty Years in use.

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; maximum length 10ft.)

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

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

Specify "QUEEN'S HEAD" because of

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 $\frac{1}{2}$	40
22	74	59	50	37	22	15 $\frac{1}{4}$	19	22 $\frac{1}{2}$	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 $\frac{1}{4}$	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 $\frac{1}{4}$	—

Cases of Lysaght's Brands of Galvanized Plain Iron usually contain sheets in excess of the numbers given in above table.

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 $\frac{1}{4}$	16	41	52	62 $\frac{1}{2}$	82
18	35	28	23	17	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
Sheet Metal Workers 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.	70 Sheets	56 Sheets	46 Sheets	34 Sheets	94 Sheets	74 Sheets	62 Sheets	46 Sheets
£ s. d.	24 in.	30 in.	36 in.	48 in.	24 in.	30 in.	36 in.	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'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 Best is the Cheapest. Quality is

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	90 Sheets	76 Sheets	56 Sheets	148 Sheets	118 Sheets	100 Sheets	74 Sheets
		24 in.	30 in.	36 in.	48 in.	24 in.	30 in.	36 in.	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

REMEMBERED long after Price is Forgotten.

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

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	2/0½	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

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

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	Roebbling (Steel Wire)
4/0	$\frac{1}{2}$	.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	$\frac{1}{8}$	.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 $\frac{1}{8}$ in., 16 B.G. is $\frac{1}{16}$ in., and that for every addition of 6 to the gauge number, the thickness is halved.

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.

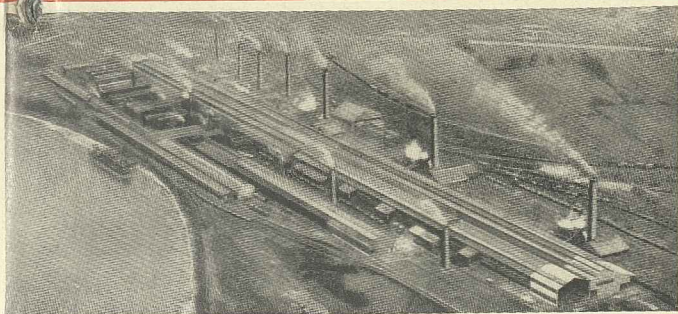
APPROXIMATE WEIGHT PER SHEET, IN LBS., OF LYSAGHT'S BLACK STEEL SHEETS.

Gauges	INCHES													
	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	48.33	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 33. 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.



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



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., NEWPORT, MON.,** depicted above, have for years devoted their resources to the manufacture of the highest quality sheets. Manufacturers are invited to submit their enquiries and specifications to the offices of

JOHN LYSAGHT (AUST.) PTY. LTD.

Sydney • Melbourne • Adelaide • Brisbane • Fremantle.

MECHANICAL ROLLING MILL

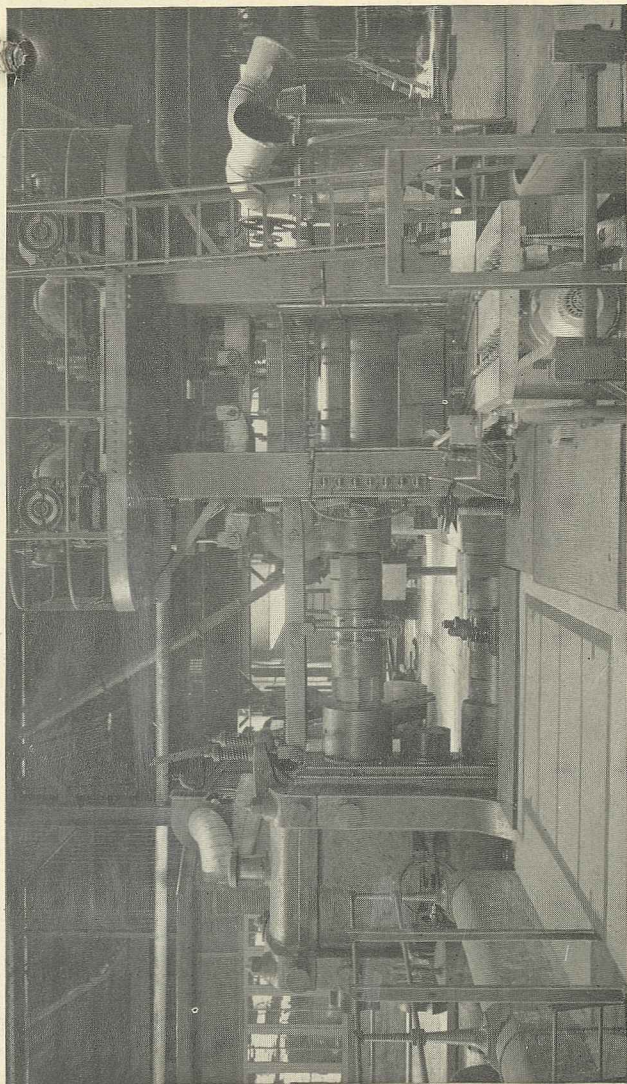
It is claimed that the first rolling of iron between two cylinders of hard metal occurred in England as long ago as 1778.

If any doubt exists on that point, there is no doubting the claim that the products of the hand, or manual rolling mills of Staffordshire and South Wales, created for England a world leadership in the rolling of iron and/or steel sheets.

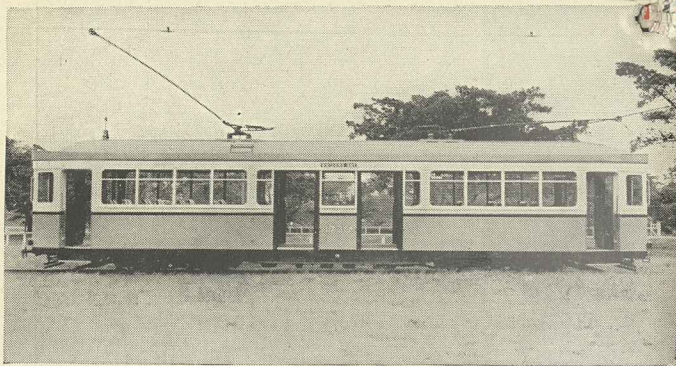
The ever extending uses of the present-day rolled steel sheet of various qualities and finishes have created a demand that can only be met by the increased production secured by mechanical rolling processes.

All modern plants engaged in the rolling of steel sheets are mechanically operated and are spoken of as 3, 4 or "cluster" mills, according to the number of rolls in the housings, or as Tandem mills when the arrangement of the rolls is in that sequence, as will be the case at Lysaght's new works at Port Kembla.

Our illustration is of a 3-high automatically operated mechanical mill at Lysaght's Newcastle Works, which is capable of producing over 40 tons of moulds per shift.



LYSAGHT'S IRON supplied to Commonwealth



All Steel

RAILWAY CARRIAGES & WAGGONS

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 tramcars 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

LYSAGHT'S BLACK SHEETS

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

Brimline Gauge	Lbs. per sq. ft.	Thickness in		Maximum		Area Sq. ft.
		Ins.	Mm.	Lgth. Ins.	Width. Ins.	
3/16"	7.65	.1875	4.762	78	48	16
8	6.41	.1570	3.988	96	48	24
9	5.70	.1398	3.551	96	48	24
10	5.10	.1250	3.175	120	48	32
11	4.54	.1113	2.827	120	48	32
12	4.04	.0991	2.517	120	48	32
13	3.59	.0882	2.240	120	48	32
14	3.20	.0785	1.994	144	48	35
15	2.85	.0699	1.775	144	48	35
16	2.55	.0625	1.587	192	48	48
17	2.26	.0556	1.412	168	48	40
18	2.02	.0495	1.257	168	48	40
19	1.79	.0440	1.118	144	48	42
20	1.59	.0392	.996	144	48	42
21	1.42	.0349	.886	144	48	42
22	1.27	.0312	.794	144	48	42
23	1.13	.0278	.707	144	48	42
24	1.01	.0247	.629	144	48	42
25	.89	.0220	.560	144	48	36
26	.79	.0196	.498	144	48	36
27	.70	.0174	.443	144	42	30
28	.63	.0156	.396	132	40	30
29	.56	.0139	.353	120	38	30
30	.50	.0123	.312	96	38	25

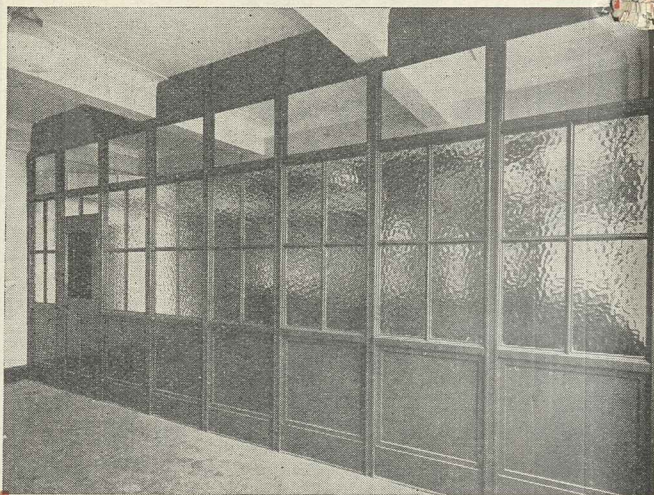
APPROXIMATE SHEETS PER TON									
Stock Sizes 72" x			84" x			Other Sizes 96" x			
24"	30"	36"	24"	30"	36"	24"	30"	36"	36"
10g.	37	29	24	32	26	21	27	22	18
12g.	47	37	31	41	34	27	35	29	23
14g.	59	47	39	51	42	34	44	36	29
16g.	74	59	49	65	54	43	55	46	37
18g.	94	75	62	82	68	55	70	58	47
20g.	119	95	79	104	86	69	89	74	59
22g.	149	119	99	130	108	86	111	92	74
24g.	188	150	125	165	137	110	141	117	94
26g.	239	191	159	209	174	139	179	149	119
28g.	301	241	200	263	219	175	225	187	150
30g.	373	298	248	336	276	217	279	232	186

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

The Best is the Cheapest. Quality is



WUNDERLICH PRESSED STEEL PARTITIONS and DOOR FRAMES

Manufactured from **LYSAGHT'S FURNITURE STEEL**
Other WUNDERLICH BUILDING MATERIALS

Manufactured from

LYSAGHT'S GALVANIZED and BLACK STEEL SHEETS

which for over forty years Wunderlich Limited have used, include:
Art Metal Ceilings, Art Metal Wall Linings, Awning Facias
and Ceilings, Galvanized Exterior Sheets, Window Hoods,
Skylights, Roof Cows, Ventilating Ridge, Wall Ventilators,
Perforated Sheets, Steel Skirtings and Picture Rails, Glazing
Bars, Steel Door Frames, Hollow Metal Doors, Drawn Steel
Mouldings, Steel Reflectors, Architectural Metal Work.

WUNDERLICH LIMITED

SYDNEY
ADELAIDE

MELBOURNE
HOBART

BRISBANE
LAUNCESTON

PERTH
NEWCASTLE

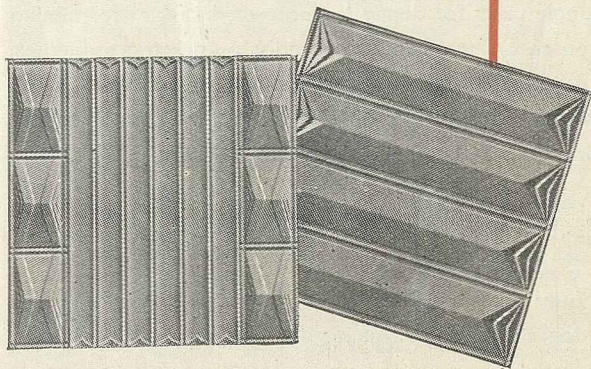
REMEMBERED long after Price is Forgotten.

Modern Decoration in LYSAGHT'S STEEL

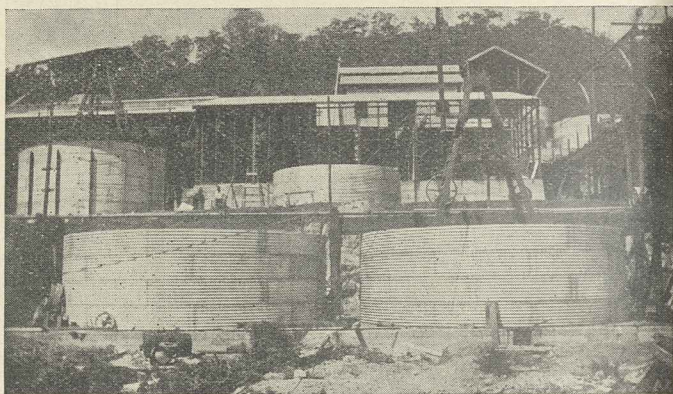
WUNDERLICH CEILINGS

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.



TANKS



Whether constructed in the workshop or on the site as single units for domestic purposes, batteries for mining purposes, or for water conservation on grazing properties, all corrugated iron tanks should, in the interests of the owner or proprietors, be made entirely from Lysaght's guaranteed Tankmaking materials (see pages 37 to 42).

All buildings should be roofed with

RED ORB

the fully guaranteed 26-gauge Corrugated Sheet possessing the rigidity of 24-gauge (see page 8).

LYSAGHT



AUSTRALIA TANK MAKING

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

TANK-MAKING SHEETS

JOHN LYSAGHT (AUSTRALIA) PTY. 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.

Scale of Guarantee

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

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

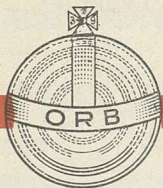
Over 10 years and up to 15 years John Lysaght (Australia) Pty. Ltd. will pay one-fifth of the cost of replacement.

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, to which has been added about 1oz. of gold size—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) Pty. Ltd., at their Sydney, Melbourne, Brisbane, Adelaide or Fremantle offices, will receive immediate attention.

INSIST ON HAVING YOUR TANKS MADE FROM GUARANTEED SHEETS.



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.



"ORB" IRON—Over Eighty Years in use.

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 6¼ (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.

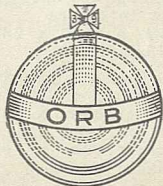
6 ft. x 6 ft. x 30 ft. = 1,080 gals. approximate capacity.

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.) PTY. LTD.** (See page 37).

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.) PTY. LTD. actually Guarantee the life of the tanks (see page 37).

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 24G. 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.

"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.	
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.

Every Sheet of "ORB" IRON is its own advertisement

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 one 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 each 6 x 3 x 24G. and 26G. "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; 30 sheets 36in. x 22G. "Queen's Head" Plain Iron.
20,000*		25 6	12 sheets 9ft., 15 sheets 10ft. x 20G.* Tankmaking Iron, curve $\frac{1}{9}$ circle; four 9ft., five 10ft. to 1 circle. 40 sheets 36in. x 20G. "Queen's Head" Plain Iron.
30,000*	6	32 6	33 sheets 10ft. x 20G.* Tankmaking Iron, curve $\frac{1}{11}$ circle, eleven 10ft. to 1 circle. 66 sheets 36in. x 20G. "Queen's Head" Plain Iron.

* When tanks of this capacity are built higher than "3 sheets" a gauge heavier of corrugated iron should be used to minimise the danger of the tank collapsing from outward pressure when filled.

As tanks of these capacities are not usually provided with tops no material is included in this data for same.

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).

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 (see page 49). 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 (see pages 21 and 38).

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, 18 and sometimes 16 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 15 and 37.

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 9, 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 $8/32$ in. corrugations to the sheet. A cross



section of such a sheet is shown in Fig. 2, page 9. The small fluted or lin. corrugated sheet which is used for ceilings, linings, bath screens, fences, etc., is shown in Fig. 3, page 9. With a single lap, quite enough for ordinary buildings (see Fig. 4, page 9), 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 16).

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, page 9).

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, page 9), 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 (see pages 8 and 14). When sheets are reversed do not forget to lap the one under the other before fastening.

and even quality, is a perfect Roofing Sheet.

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, page 9), 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 ends and side laps of sheets are painted before fixing, with zinc dust paint, red oxide or any good quality roof paint. These points of contact are where corrosion usually begins. Unless zinc dust paint is used 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.

The development of metallic zinc dust has made possible the painting of new galvanized sheets without weathering or priming. This paint is obtainable from leading manufacturers, and has a covering capacity of 420 square feet per gallon if sprayed and 445 square feet if brushed. It is highly protective and gives a warship-grey finish to which any second coat may be applied if desired.

SPECIFY LYSAGHT'S RED ORB

For Your Next Roofing Job.

Every sheet of this strong rigid roofing sheet is definitely guaranteed by the manufacturers and branded in Red with this registered trade mark. (See pages 8 and 14).

LYSAGHT



AUSTRALIA



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
Selling price	..	£114	0 0	Selling price	..	£116	6 8
Deduct cost	..	100	0 0	Deduct cost	..	100	0 0
Gross profit	..	£14	0 0	Gross profit	..	£16	6 8

£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.

entirely from Australian Raw Materials.

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 Cost of Goods costing £1		
5 per cent.	5½ per cent.	£	s.	d.
7½ "	8½ "	1	1	1
10 "	11¼ "	1	1	8
12½ "	14½ "	1	2	3
14 "	16½ "	1	2	11
15 "	17¾ "	1	3	3
16 "	19¼ "	1	3	7
17½ "	21¼ "	1	3	10
18 "	22 "	1	4	3
19 "	23½ "	1	4	5
20 "	25 "	1	4	8
21 "	26¾ "	1	5	0
22½ "	29 "	1	5	4
25 "	33½ "	1	5	10
27½ "	38 "	1	6	8
30 "	43 "	1	7	7
32½ "	48¼ "	1	8	7
35 "	50 "	1	9	8
37½ "	54 "	1	10	0
40 "	60 "	1	10	10
45 "	66⅔ "	1	12	0
50 "	82 "	1	13	4
	100 "	1	16	5
		2	0	0

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

GALVANIZING

The illustration shows one of ten galvanizing pots at Lysaght's Newcastle Works.

Three more pots of comparatively similar design are in operation at the Port Kembla Works.

The "pots," constructed of Mild Steel plates one inch thick, are 6ft. 4in. square and 50 inches deep (portion of which is below floor level).

A frame carries three pairs of electrically-driven mild steel rolls, the "intake" pair at the back of the pot, the "exit" pair at the front of the pot, the third pair, or centre rolls, being fully submerged in the molten metal.

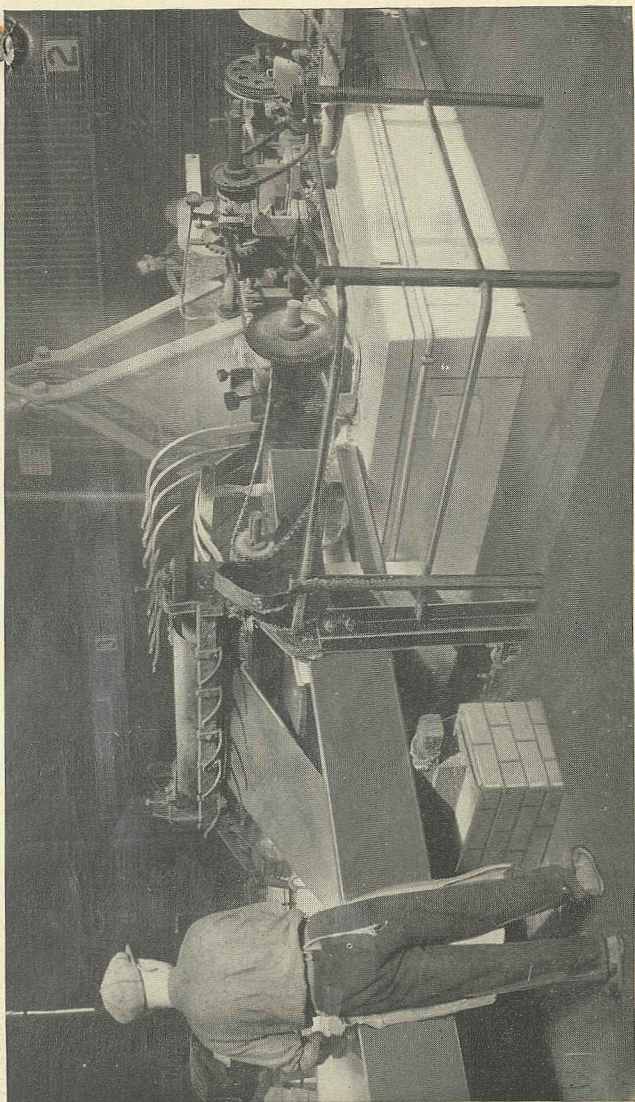
The pots are filled with zinc to which a small quantity of tin and lead has been added. The surface of the molten metal is covered with flux, and the desired working temperature is maintained by gas-firing around the pot beneath the protective outside plating, which shows white in the picture.

Using metal tongs the "feeder" (who is seen in the picture) passes the sheets from the acid wash tank through a pair of rubber squeegee rolls, which passes them over a drying flue through guides to the back rolls of the pot.

Drawn by the back rolls down into the pot, the sheets passing through guides are caught by the centre rolls which propel them upward, still through guides, until the front exit rolls discharge them from the pot.

The exit rolls are adjusted to give the required coating weight of spelter to the sheets in accordance with the Australian Standards Association's classification (see page 12).

Carried by a traversing chain or net the sheets are successively air- and water-cooled before inspection (see pages 50 and 51).



LYSAGHT



AUSTRALIA

INSPECTION OF SHEETS after Galvanizing

The Galvanized Iron sheets on the left of the illustration are emerging from the water-cooling bosh.

Specially trained inspectors, wearing gloves as a protection from the heat of the sheets and the risk of cuts from their ends and edges, draw the sheets in front of them.

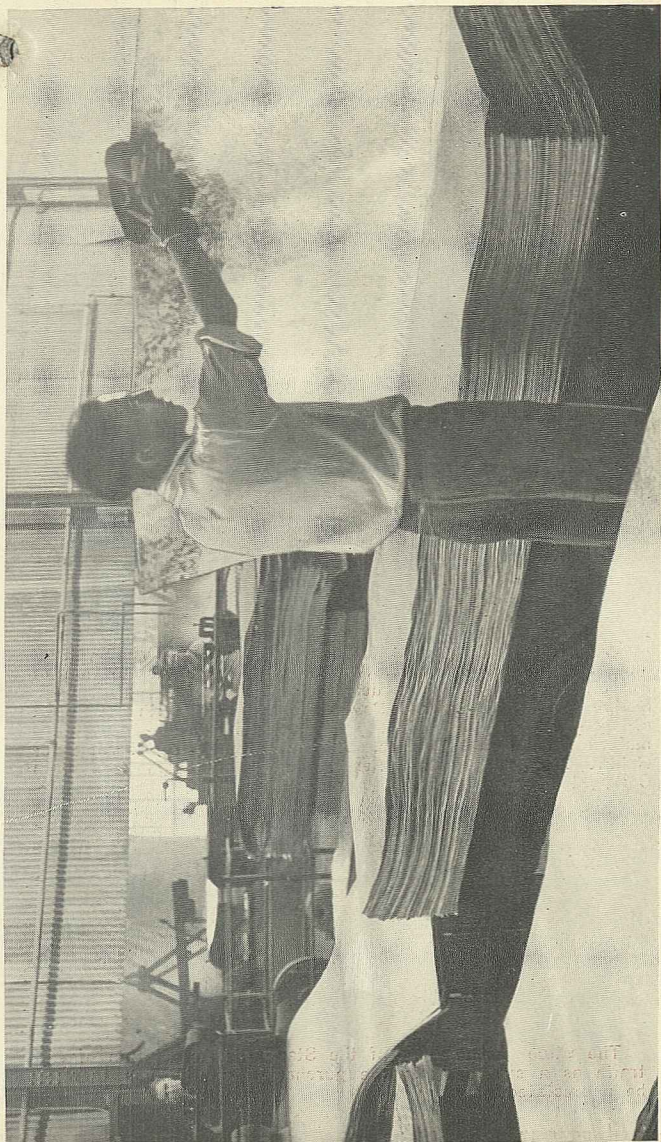
The upper side of the sheet is examined for defects, then the sheet is lifted, as shown in the photograph, and the reverse side is closely examined.

Should the sheet pass this rigid inspection it retains its place in front of the inspector, subsequently passing into the Galvanized Sheet Warehouse for further processing and packing.

Every sheet passed by the inspector is stamped with his identification number between the brand and the end of the sheet.

Sheets rejected by the inspector are placed behind him and are either regalanised or classified into cheaper qualities than those for which they were originally manufactured (see page 51).

Incidentally, it is mentioned that at no stage of the manufacture and/or packing of Lysaght's Black or Galvanized Sheets are the operators allowed to handle same with unprotected hands.





STANDARDS ASSOCIATION

OF AUSTRALIA

TELEPHONE : B 1714

TELEGRAMS :

"AUSTANDARD"

SYDNEY

HEADQUARTERS: SCIENCE HOUSE
GLOUCESTER AND ESSEX STREETS
SYDNEY

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

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 Producer's 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 has completed Standard Specifications for Galvanized Sheets, Fencing Wire and Wire Netting, and Standard Methods for testing Galvanized Sheets and Wires. It is now nearing the end of its deliberations on a specification for Barbed Wire.

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.

GALVANIZED WIRE NETTING

TABLE OF GROSS PRICES at per Roll of 50 Yards.

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.
$\frac{3}{8}$ inch	22	£ s. d. 0 19 3	£ s. d. 1 7 9	£ s. d. 1 16 0	£ s. d. 2 3 9	£ s. d. 2 12 6	£ s. d. 3 1 3	£ s. d. 3 10 0	£ s. d. 4 7 6	£ s. d. 5 5 0	22	$\frac{3}{8}$ inch
"	20	£ s. d. 1 15 9	£ s. d. 1 16 9	£ s. d. 2 8 3	£ s. d. 2 18 6	£ s. d. 3 10 0	£ s. d. 4 1 8	£ s. d. 4 13 4	£ s. d. 5 16 8	£ s. d. 7 0 0	20	"
$\frac{1}{2}$ inch	19	£ s. d. 1 11 3	£ s. d. 2 4 9	£ s. d. 2 18 3	£ s. d. 3 11 0	£ s. d. 4 5 0	£ s. d. 4 19 2	£ s. d. 5 13 4	£ s. d. 7 1 8	£ s. d. 8 10 0	19	"
"	22	£ s. d. 0 11 6	£ s. d. 0 16 6	£ s. d. 1 1 0	£ s. d. 1 5 9	£ s. d. 1 10 0	£ s. d. 1 15 0	£ s. d. 2 0 0	£ s. d. 2 10 0	£ s. d. 3 0 0	22	$\frac{1}{2}$ inch
"	20	£ s. d. 0 14 9	£ s. d. 1 1 0	£ s. d. 1 6 9	£ s. d. 1 12 6	£ s. d. 1 18 0	£ s. d. 2 4 4	£ s. d. 2 10 8	£ s. d. 3 3 4	£ s. d. 3 16 0	20	"
"	19	£ s. d. 0 17 3	£ s. d. 1 1 0	£ s. d. 1 11 6	£ s. d. 1 18 6	£ s. d. 2 5 0	£ s. d. 2 12 6	£ s. d. 3 0 0	£ s. d. 3 15 0	£ s. d. 4 10 0	19	"
1 inch	18	£ s. d. 1 3 0	£ s. d. 1 13 0	£ s. d. 2 2 0	£ s. d. 2 11 3	£ s. d. 3 0 0	£ s. d. 3 10 0	£ s. d. 4 0 0	£ s. d. 5 0 0	£ s. d. 6 0 0	18	1 inch
"	20	£ s. d. 0 10 9	£ s. d. 0 15 6	£ s. d. 0 19 9	£ s. d. 1 4 0	£ s. d. 1 8 0	£ s. d. 1 12 8	£ s. d. 1 17 4	£ s. d. 2 6 8	£ s. d. 2 16 0	20	"
"	19	£ s. d. 0 12 6	£ s. d. 0 17 9	£ s. d. 1 2 6	£ s. d. 1 7 6	£ s. d. 1 12 0	£ s. d. 1 17 4	£ s. d. 2 2 8	£ s. d. 2 13 4	£ s. d. 3 4 0	19	"
"	18	£ s. d. 0 15 9	£ s. d. 1 2 9	£ s. d. 1 8 9	£ s. d. 1 15 3	£ s. d. 2 1 0	£ s. d. 2 7 10	£ s. d. 3 13 4	£ s. d. 4 11 8	£ s. d. 5 10 0	18	"
$1\frac{1}{4}$ inch	17	£ s. d. 1 1 3	£ s. d. 1 10 3	£ s. d. 1 18 6	£ s. d. 2 7 0	£ s. d. 2 15 0	£ s. d. 3 4 2	£ s. d. 4 11 8	£ s. d. 5 10 0	£ s. d. 6 10 0	17	$1\frac{1}{4}$ inch
"	19	£ s. d. 0 10 9	£ s. d. 0 14 3	£ s. d. 0 18 0	£ s. d. 1 1 9	£ s. d. 1 5 0	£ s. d. 1 9 2	£ s. d. 1 13 4	£ s. d. 2 1 8	£ s. d. 3 4 0	19	"
"	18	£ s. d. 0 12 9	£ s. d. 0 18 0	£ s. d. 1 3 0	£ s. d. 1 7 9	£ s. d. 1 12 0	£ s. d. 1 17 4	£ s. d. 2 2 8	£ s. d. 3 4 0	£ s. d. 4 4 0	18	"
"	17	£ s. d. 0 16 6	£ s. d. 1 3 9	£ s. d. 1 10 3	£ s. d. 1 16 6	£ s. d. 2 2 0	£ s. d. 2 6 6	£ s. d. 3 16 0	£ s. d. 4 15 0	£ s. d. 5 14 0	17	"
$1\frac{1}{2}$ inch	16	£ s. d. 1 2 6	£ s. d. 1 12 3	£ s. d. 2 1 0	£ s. d. 2 9 3	£ s. d. 2 17 0	£ s. d. 3 6 8	£ s. d. 4 16 8	£ s. d. 5 16 8	£ s. d. 6 14 0	16	$1\frac{1}{2}$ inch
"	19	£ s. d. 0 8 9	£ s. d. 0 12 6	£ s. d. 0 15 9	£ s. d. 0 19 0	£ s. d. 1 2 0	£ s. d. 1 5 8	£ s. d. 1 9 4	£ s. d. 2 5 10	£ s. d. 3 4 0	19	"
"	18	£ s. d. 0 10 9	£ s. d. 0 15 6	£ s. d. 0 19 9	£ s. d. 1 3 9	£ s. d. 1 7 6	£ s. d. 1 12 1	£ s. d. 1 16 8	£ s. d. 2 5 8	£ s. d. 3 8 0	18	"
"	17	£ s. d. 0 13 6	£ s. d. 0 19 3	£ s. d. 1 4 6	£ s. d. 2 0 3	£ s. d. 2 14 0	£ s. d. 3 4 4	£ s. d. 4 6 8	£ s. d. 5 13 4	£ s. d. 6 13 0	17	"
$1\frac{3}{8}$ inch	16	£ s. d. 0 18 3	£ s. d. 1 6 3	£ s. d. 1 13 6	£ s. d. 2 0 3	£ s. d. 2 14 6	£ s. d. 3 4 1	£ s. d. 4 6 8	£ s. d. 5 13 4	£ s. d. 6 13 0	16	$1\frac{3}{8}$ inch
"	19	£ s. d. 0 8 0	£ s. d. 0 11 3	£ s. d. 0 14 6	£ s. d. 0 17 3	£ s. d. 1 0 0	£ s. d. 1 3 4	£ s. d. 1 6 8	£ s. d. 2 0 0	£ s. d. 3 0 0	19	"
"	18	£ s. d. 0 9 6	£ s. d. 0 13 6	£ s. d. 0 17 3	£ s. d. 1 0 9	£ s. d. 1 4 0	£ s. d. 1 8 0	£ s. d. 1 12 0	£ s. d. 2 0 0	£ s. d. 3 0 0	18	"
"	17	£ s. d. 0 11 9	£ s. d. 0 17 0	£ s. d. 1 1 6	£ s. d. 1 6 0	£ s. d. 1 10 0	£ s. d. 1 15 0	£ s. d. 2 0 0	£ s. d. 2 10 0	£ s. d. 3 0 0	17	"
"	16	£ s. d. 0 16 3	£ s. d. 1 3 3	£ s. d. 1 9 6	£ s. d. 1 15 6	£ s. d. 2 1 0	£ s. d. 2 7 10	£ s. d. 3 8 4	£ s. d. 4 13 4	£ s. d. 5 13 0	16	"
2 inch	19	£ s. d. 0 6 9	£ s. d. 0 9 6	£ s. d. 0 12 3	£ s. d. 0 14 6	£ s. d. 0 16 6	£ s. d. 0 19 3	£ s. d. 1 2 0	£ s. d. 1 7 6	£ s. d. 2 2 0	19	2 inch
"	18	£ s. d. 0 8 6	£ s. d. 0 12 3	£ s. d. 0 15 6	£ s. d. 0 18 6	£ s. d. 1 1 0	£ s. d. 1 4 6	£ s. d. 1 8 0	£ s. d. 2 3 4	£ s. d. 3 8 0	18	"
"	17	£ s. d. 0 10 6	£ s. d. 0 15 0	£ s. d. 0 19 3	£ s. d. 1 3 0	£ s. d. 1 6 0	£ s. d. 1 10 4	£ s. d. 1 14 8	£ s. d. 2 3 4	£ s. d. 3 8 0	17	"
"	16	£ s. d. 0 13 9	£ s. d. 0 19 9	£ s. d. 1 5 0	£ s. d. 1 10 0	£ s. d. 1 14 0	£ s. d. 1 19 8	£ s. d. 2 5 4	£ s. d. 3 16 8	£ s. d. 4 8 0	16	"
"	15	£ s. d. 0 17 9	£ s. d. 1 5 6	£ s. d. 1 12 6	£ s. d. 1 18 9	£ s. d. 2 4 0	£ s. d. 2 11 4	£ s. d. 3 18 8	£ s. d. 4 13 4	£ s. d. 5 8 0	15	"
"	14	£ s. d. 1 1 3	£ s. d. 1 10 6	£ s. d. 1 19 0	£ s. d. 2 6 6	£ s. d. 3 13 0	£ s. d. 4 1 10	£ s. d. 5 10 8	£ s. d. 6 4 8	£ s. d. 7 6 0	14	"

Continued over leaf

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

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.
3 inch	17	£ s. d. 0 10 3	£ s. d. 0 13 0	£ s. d. 0 16 3	£ s. d. 0 19 3	£ s. d. 1 1 6	£ s. d. 1 4 10	£ s. d. 1 8 2	£ s. d. 1 14 10	£ s. d. 2 1 6	17	3 inch
"	16	0 12 0	0 15 3	0 19 3	0 23 0	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 0	1 6 3	1 11 0	1 15 0	2 0 6	2 4 0	3 17 0	4 8 0	14	"
"	13	1 0 6	1 6 3	1 12 9	1 18 3	2 3 6	2 10 4	2 17 2	4 13 4	5 11 6	13	"
4 inch	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 17 6	12	"
"	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 16 0	0 20 3	0 23 0	1 1 6	1 10 0	1 14 0	2 2 0	2 10 0	16	"
"	15	0 14 0	0 18 3	1 2 9	1 6 6	1 10 0	1 14 8	1 19 4	2 8 8	2 18 0	15	"
"	14	0 16 0	0 20 3	1 2 9	1 12 6	1 16 6	2 2 2	2 7 10	3 15 0	3 10 6	14	"
"	13	—	1 2 0	1 7 6	2 0 6	2 6 0	2 13 3	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	17	—	—	—	1 2 0	1 4 6	1 7 10	1 11 2	1 17 10	2 2 4 6
	16	—	—	—	1 5 6	1 8 6	1 12 6	1 16 6	2 2 4 6	2 12 6 6
	15	—	—	—	1 9 3	1 12 6	1 17 0	2 1 6	2 10 6	2 19 6 6
	14	—	—	—	1 14 6	1 18 6	2 4 0	2 9 6	3 11 6	3 11 6 6
	13	—	—	—	2 2 6	2 7 6	2 14 4	3 1 2	3 14 10	4 8 6 6
4	12	—	—	—	2 14 3	3 1 0	3 10 1	3 19 4	4 17 4	5 15 6 6
	17	—	—	—	0 18 6	1 0 6	1 3 2	1 5 10	1 11 2	1 16 6 6
	16	—	—	—	1 2 0	1 4 6	1 7 10	1 11 2	1 17 10	2 2 4 6 6
	15	—	—	—	1 6 6	1 9 6	1 13 6	1 17 6	2 2 5 6	2 13 6 6
	14	—	—	—	1 10 0	1 13 6	1 18 2	2 10 2	2 12 2	2 3 1 6 6
5	13	—	—	—	1 16 6	2 0 6	2 6 2	2 11 10	3 3 2	3 14 6 6
	12	—	—	—	2 4 4	2 10 0	2 17 3	3 4 6	3 19 0	4 13 6 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	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 0
	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 3
	17	0 11 0	0 15 9	1 0 3	1 4 3	1 7 6	1 12 0	1 16 6	2 2 5 6	2 14 9 9
	16	0 14 6	1 0 9	1 6 3	1 11 6	1 15 9	2 1 9	2 7 9	2 19 9	3 11 6 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 0
3	14	1 2 6	1 12 0	2 1 0	2 9 0	2 16 0	3 5 0	3 14 3	4 13 0	5 12 0 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.

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.

Galvanized Barb Wire Fencing

Approximate Weight.

Points	Pattern	Gauge	100 Yards	1 Mile	Length of 112 lbs. in Yards.
4	IOWA	12	24 lbs.	429 lbs.	460
4	"	14	17 "	294 "	670
4	SPECIAL	12 $\frac{1}{2}$	18 "	318 "	620
4	"	14	13 "	229 "	860
4	Long Distance	14	12 "	212 "	930
Description.			Weight		Length of 112 lbs.
			100 yds.	1 mile	
4-point 12g. "Iowa" 3 $\frac{1}{2}$ in. spaces			Lbs. 24	Lbs. 429	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.	Approx. Weight of Roll 50 yds.	Size.	Approx. Weight of Roll 50 yds.
Inches.	lbs.	Inches.	lbs.
24 x $\frac{1}{2}$ x 20	65	24 x 2 x 17	37
24 x $\frac{1}{2}$ x 19	77	24 x 2 x 18	26
24 x $\frac{3}{4}$ x 20	45	24 x 2 x 19	21
24 x 1 x 19	40	24 x 2 $\frac{1}{2}$ x 15	50
24 x 1 x 20	33	24 x 2 $\frac{1}{2}$ x 16	42
24 x 1 $\frac{1}{4}$ x 19	33	24 x 3 x 14	52
24 x 1 $\frac{1}{4}$ x 18	43	24 x 3 x 15	43
24 x 1 $\frac{1}{4}$ x 17	59	24 x 3 x 16	32
24 x 1 $\frac{1}{2}$ x 19	28	24 x 3 x 17	25
24 x 1 $\frac{1}{2}$ x 18	36	24 x 4 x 14	43
24 x 1 $\frac{1}{2}$ x 17	50	24 x 4 x 15	35
24 x 2 x 14	77	24 x 4 x 16	26
24 x 2 x 15	57	24 x 4 x 17	21
24 x 2 x 16	48	24 x 4 x 18	16

Imitations. There's nothing quite so good.

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	204	36 x 1 $\frac{1}{4}$ x 17	A	179
42 x 1 $\frac{1}{4}$ x 17	B	189	36 x 1 $\frac{1}{4}$ x 17	B	164
42 x 1 $\frac{1}{4}$ x 18	A	147	36 x 1 $\frac{1}{4}$ x 18	A	130
42 x 1 $\frac{1}{4}$ x 18	B	135	36 x 1 $\frac{1}{4}$ x 18	B	119
42 x 1 $\frac{1}{2}$ x 17	A	183	36 x 1 $\frac{1}{2}$ x 17	A	158
42 x 1 $\frac{1}{2}$ x 17	B	168	36 x 1 $\frac{1}{2}$ x 17	B	144
42 x 1 $\frac{1}{2}$ x 18	A	132	36 x 1 $\frac{1}{2}$ x 18	A	113
42 x 1 $\frac{1}{2}$ x 18	B	120	36 x 1 $\frac{1}{2}$ x 18	B	104

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
12½*	1500	1	0	20	2	1	12	3	2	4	4	2	24	5	3	14

* High Tensile.

"ORB" IRON. You know it at once by its appearance.

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	2.9
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 $\frac{1}{4}$	—	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	16.3	16.2
2 $\frac{3}{4}$	$\frac{7}{8}$	132	123	113	123	24.9	20.5	19.3	19.9
3	$\frac{15}{16}$	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 $\frac{3}{4}$	$1\frac{1}{2}$	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 $\frac{1}{4}$	$1\frac{3}{4}$	—	523	450	493	—	86.4	75.8	79.9
6	$1\frac{7}{8}$	—	626	527	590	—	103.3	91.0	96.3

NOTE—Above breaking strains are for best patent 50/90 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	..	..

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
2 6	17 $\frac{1}{2}$	0 13 9	0 0 10 $\frac{1}{4}$		19 0 0	1 3 9	0 2 $\frac{3}{4}$
3 0	21 $\frac{1}{4}$	0 14 0	0 0 10 $\frac{3}{4}$		20 0 0	1 5 0	0 2 $\frac{3}{4}$
3 4	22 $\frac{1}{2}$	0 14 3	0 0 10 $\frac{3}{4}$		21 0 0	1 6 3	0 3
3 9	23 $\frac{1}{4}$	0 14 6	0 0 11		22 0 0	1 7 6	0 3 $\frac{1}{4}$
4 0	3	0 14 9	0 0 11		23 0 0	1 8 9	0 3 $\frac{1}{4}$
4 3	3 $\frac{1}{4}$	0 15 0	0 0 11 $\frac{1}{4}$		24 0 0	1 10 0	0 3 $\frac{1}{2}$
4 6	3 $\frac{1}{2}$	0 15 3	0 0 11 $\frac{1}{2}$		25 0 0	1 11 3	0 3 $\frac{1}{2}$
4 9	3 $\frac{3}{4}$	0 15 6	0 0 11 $\frac{3}{4}$		26 0 0	1 12 6	0 3 $\frac{3}{4}$
5 0	3 $\frac{3}{4}$	0 15 9	0 0 11 $\frac{3}{4}$		27 0 0	1 13 9	0 3 $\frac{3}{4}$
5 3	4	0 16 0	0 1 0		28 0 0	1 15 0	0 4
5 6	4 $\frac{1}{4}$	0 16 3	0 1 0 $\frac{1}{4}$		29 0 0	1 16 3	0 4
5 9	4 $\frac{1}{2}$	0 16 6	0 1 0 $\frac{1}{2}$		30 0 0	1 17 6	0 4 $\frac{1}{4}$
6 0	4 $\frac{1}{2}$	0 16 9	0 1 0 $\frac{1}{2}$		31 0 0	1 18 9	0 4 $\frac{1}{4}$
6 3	4 $\frac{3}{4}$	0 17 0	0 1 0 $\frac{3}{4}$		32 0 0	2 0 0	0 4 $\frac{1}{2}$
6 6	5	0 17 3	0 1 1		33 0 0	2 1 3	0 4 $\frac{1}{2}$
6 9	5	0 17 6	0 1 1 $\frac{1}{4}$		34 0 0	2 2 6	0 4 $\frac{3}{4}$
7 0	5 $\frac{1}{4}$	0 17 9	0 1 1 $\frac{1}{4}$		35 0 0	2 3 9	0 5
7 3	5 $\frac{1}{2}$	0 18 0	0 1 1 $\frac{1}{2}$		36 0 0	2 5 0	0 5
7 6	5 $\frac{3}{4}$	0 18 3	0 1 1 $\frac{3}{4}$	0 $\frac{1}{8}$	37 0 0	2 6 3	0 5 $\frac{1}{4}$
7 9	5 $\frac{3}{4}$	0 18 6	0 1 2		38 0 0	2 7 6	0 5 $\frac{1}{4}$
8 0	6	0 18 9	0 1 2		39 0 0	2 8 9	0 5 $\frac{1}{4}$
8 3	6 $\frac{1}{4}$	0 19 0	0 1 2 $\frac{1}{4}$		40 0 0	2 10 0	0 5 $\frac{1}{2}$
8 6	6 $\frac{1}{2}$	0 19 3	0 1 2 $\frac{1}{2}$		41 0 0	2 11 3	0 5 $\frac{1}{2}$
8 9	6 $\frac{3}{4}$	0 19 6	0 1 2 $\frac{3}{4}$		42 0 0	2 12 6	0 5 $\frac{1}{2}$
9 0	6 $\frac{3}{4}$	0 19 9	0 1 2 $\frac{3}{4}$		43 0 0	2 13 9	0 6
9 3	7	1 0 0	0 1 3	0 $\frac{1}{4}$	44 0 0	2 15 0	0 6
9 6	7 $\frac{1}{4}$	2 0 0	0 2 6	0 $\frac{1}{2}$	45 0 0	2 16 3	0 6 $\frac{1}{4}$
9 9	7 $\frac{1}{4}$	3 0 0	0 3 9	0 $\frac{3}{4}$	46 0 0	2 17 6	0 6 $\frac{1}{4}$
10 0	7 $\frac{1}{2}$	4 0 0	0 5 0	0 $\frac{3}{4}$	47 0 0	2 18 9	0 6 $\frac{1}{2}$
10 3	7 $\frac{3}{4}$	5 0 0	0 6 3	0 $\frac{3}{4}$	48 0 0	3 0 0	0 6 $\frac{3}{4}$
10 6	8	6 0 0	0 7 6	1	49 0 0	3 1 3	0 6 $\frac{3}{4}$
10 9	8	7 0 0	0 8 9	1	50 0 0	3 2 6	0 7
11 0	8 $\frac{1}{4}$	8 0 0	0 10 0	1 $\frac{1}{4}$	55 0 0	3 8 9	0 7 $\frac{1}{4}$
11 3	8 $\frac{1}{2}$	9 0 0	0 11 3	1 $\frac{1}{2}$	60 0 0	3 15 0	0 8 $\frac{1}{4}$
11 6	8 $\frac{3}{4}$	10 0 0	0 12 6	1 $\frac{3}{4}$	65 0 0	4 1 3	0 9
11 9	8 $\frac{3}{4}$	11 0 0	0 13 9	1 $\frac{3}{4}$	70 0 0	4 7 6	0 9 $\frac{1}{4}$
12 0	9	12 0 0	0 15 0	1 $\frac{3}{4}$	75 0 0	4 13 9	0 10 $\frac{1}{4}$
12 3	9 $\frac{1}{4}$	13 0 0	0 16 3	1 $\frac{3}{4}$	80 0 0	5 0 0	0 11
12 6	9 $\frac{1}{2}$	14 0 0	0 17 6	2	85 0 0	5 6 3	0 11 $\frac{1}{4}$
12 9	9 $\frac{1}{2}$	15 0 0	0 18 9	2 $\frac{1}{4}$	90 0 0	5 12 6	1 0 $\frac{1}{4}$
13 0	9 $\frac{3}{4}$	16 0 0	1 0 0	2 $\frac{1}{4}$	95 0 0	5 18 9	1 1
13 3	10	17 0 0	1 1 3	2 $\frac{1}{2}$	100 0 0	6 5 0	1 1 $\frac{1}{2}$
13 6	10 $\frac{1}{4}$	18 0 0	1 2 6	2 $\frac{1}{2}$			

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.

ROLLED STEEL I BEAMS AS GIRDERS
SAFE DISTRIBUTED LOAD IN TONS, ABOUT AXIS XX

Size Ins.	Weight per ft. Lbs.	SPAN IN FEET.																Size Ins.	
		4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	36	40	
24 x 7½*	100		165.0	143.6	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 7½*
24 x 7½	95		146.6	141.0	112.8	94.0	80.6	70.5	62.7	56.4	51.3	47.0	43.4	40.3	37.6	35.3	31.4	28.2	24 x 7½
24 x 7½	90			133.8	108.9	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 7½
22 x 7	75		118.0	102.0	81.6	68.0	58.3	51.0	45.3	40.8	37.1	34.0	31.4	29.2	27.2	25.5	22.7	20.4	22 x 7
22 x 6½	65		96.4	81.7	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	22 x 6½
18 x 6	55		81.0	62.4	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	18 x 6
16 x 8†	75		82.4	81.3	65.1	54.2	46.5	40.6	36.1	32.5	29.6	27.1	25.0	23.2	21.7	20.3	18.1	16.3	16 x 8†
16 x 6	50	68.6	68.7	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	16 x 6
15 x 6	45	61.0	58.4	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	15 x 6
14 x 5½	40	55.6	47.7	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	14 x 5½
13 x 5	35	48.8	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 5
12 x 8	65		55.2	54.2	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 8
12 x 5	30	42.4	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	12 x 5
10 x 8	70	64.2	61.5	46.2	36.9	30.8	26.4	23.1	20.5	18.5	16.8	15.4	14.2	13.2	12.3	11.5			10 x 8
10 x 8	55		42.8	38.5	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 8
10 x 6	40	38.6	36.5	27.4	21.9	18.3	15.6	13.7	12.2	10.9	10.0	9.1	8.4	7.8	7.3	6.9			10 x 6
10 x 4½	25	32.5	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			10 x 4½
9 x 7	50		38.6	30.9	24.7	20.6	17.6	15.4	13.7	12.4	11.2	10.3	9.5	8.8	8.2				9 x 7
9 x 4	21	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					9 x 4
8 x 6	35	30.0	25.5	19.2	15.3	12.8	10.9	9.6	8.5	7.7	6.9	6.4	5.9	5.5					8 x 6
8 x 4	18	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					8 x 4
7 x 3½	15	13.7	9.1	6.8	5.5	4.6	3.9	3.4	3.0	2.7	2.5	2.3	2.1						7 x 3½
6 x 5	25	20.0	13.4	10.0	8.0	6.7	5.7	5.0	4.5	4.0	3.6								6 x 5
6 x 3	12	9.3	6.2	4.7	3.7	3.1	2.7	2.3	2.1	1.9									6 x 3
5 x 2½	9	5.8	3.9	2.9	2.3	1.9	1.6	1.4											5 x 2½
4 x 3	10	5.2	3.5	2.6	2.1	1.7	1.5	1.3											4 x 3
4 x 1½	5	2.4	1.6	1.2	1.0	.8	.7	.6											4 x 1½

* Nominal size. Width about 7½ in. † Not at present available.
Girders to have usual side supports as in building work.

The Best is the Cheapest. Quality is

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	2.93	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	$\frac{1}{16}$	$\frac{5}{8}$	$\frac{11}{16}$	$\frac{3}{4}$	$\frac{13}{16}$	$\frac{7}{8}$	$\frac{15}{16}$	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

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
$\frac{1}{4}$	.053	.106	.213	.27	.32	.37	.43	.48	.53	.58	.64	.69	.74	.80	.85
$\frac{1}{2}$	.106	.213	.425	.53	.64	.74	.85	.96	1.06	1.17	1.28	1.38	1.49	1.59	1.70
$\frac{3}{4}$	.159	.319	.638	.80	.96	1.12	1.28	1.43	1.59	1.75	1.91	2.07	2.23	2.39	2.55
1	.213	.425	.850	1.06	1.28	1.49	1.70	1.91	2.13	2.34	2.55	2.76	2.98	3.19	3.40
$1\frac{1}{4}$	.266	.531	1.063	1.33	1.59	1.86	2.13	2.39	2.66	2.92	3.19	3.45	3.72	3.98	4.25
$1\frac{1}{2}$	.319	.638	1.275	1.59	1.91	2.23	2.55	2.87	3.19	3.51	3.83	4.14	4.46	4.78	5.10
$1\frac{3}{4}$	.372	.744	1.488	1.86	2.23	2.60	2.98	3.35	3.72	4.09	4.46	4.83	5.21	5.58	5.95
2	.425	.850	1.700	2.13	2.55	2.98	3.40	3.83	4.25	4.68	5.10	5.53	5.95	6.38	6.80
$2\frac{1}{4}$	.478	.956	1.913	2.39	2.87	3.35	3.83	4.30	4.78	5.26	5.74	6.22	6.69	7.17	7.65
$2\frac{1}{2}$	.531	1.063	2.125	2.66	3.19	3.72	4.25	4.78	5.31	5.84	6.38	6.91	7.44	7.97	8.50
$2\frac{3}{4}$	.584	1.169	2.338	2.92	3.51	4.09	4.68	5.26	5.84	6.43	7.01	7.60	8.18	8.77	9.35
3	.638	1.275	2.550	3.19	3.83	4.46	5.10	5.74	6.38	7.01	7.65	8.29	8.93	9.56	10.20
$3\frac{1}{4}$	.691	1.381	2.763	3.45	4.14	4.83	5.53	6.22	6.91	7.60	8.29	8.98	9.67	10.36	11.05
$3\frac{1}{2}$	.744	1.488	2.975	3.72	4.46	5.21	5.95	6.69	7.44	8.18	8.93	9.67	10.41	11.16	11.90
$3\frac{3}{4}$	.797	1.594	3.188	3.98	4.78	5.58	6.38	7.17	7.97	8.77	9.56	10.36	11.16	11.95	12.75
4	.850	1.700	3.400	4.25	5.10	5.95	6.80	7.65	8.50	9.35	10.20	11.05	11.90	12.75	13.60
$4\frac{1}{4}$	.903	1.806	3.613	4.52	5.42	6.32	7.23	8.13	9.03	9.93	10.84	11.74	12.64	13.55	14.45
$4\frac{1}{2}$	.956	1.913	3.825	4.78	5.74	6.69	7.65	8.61	9.56	10.52	11.48	12.43	13.39	14.34	15.30
$4\frac{3}{4}$	1.009	2.019	4.038	5.05	6.06	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	4.250	5.31	6.38	7.44	8.50	9.56	10.63	11.69	12.75	13.81	14.88	15.94	17.00
$5\frac{1}{4}$	1.116	2.231	4.463	5.58	6.69	7.81	8.93	10.04	11.16	12.27	13.39	14.50	15.62	16.73	17.85
$5\frac{1}{2}$	1.169	2.338	4.675	5.84	7.01	8.18	9.35	10.52	11.69	12.86	14.03	15.19	16.36	17.53	18.70
$5\frac{3}{4}$	1.222	2.444	4.888	6.11	7.33	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	5.100	6.38	7.65	8.93	10.20	11.48	12.75	14.03	15.30	16.58	17.85	19.13	20.40

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 3/8	6.428	5.049	1.8906	1.4849	4.3197
1 1/2	7.650	6.008	2.2500	1.7671	4.7124
1 5/8	8.978	7.051	2.6406	2.0739	5.1051
1 3/4	10.41	8.178	3.0625	2.4053	5.4978
1 7/8	11.95	9.388	3.5156	2.7612	5.8905
2	13.60	10.68	4.0000	3.1416	6.2832
2 1/8	15.35	12.06	4.5156	3.5466	6.6759
2 1/4	17.21	13.52	5.0625	3.9761	7.0686
2 3/8	19.18	15.06	5.6406	4.4301	7.4613
2 1/2	21.25	16.69	6.2500	4.9087	7.8540
2 5/8	23.43	18.40	6.8906	5.4119	8.2467
2 3/4	25.71	20.19	7.5625	5.9396	8.6394
2 7/8	28.10	22.07	8.2656	6.4918	9.0321
3	30.60	24.03	9.0000	7.0686	9.4248
3 1/8	35.92	28.21	10.563	8.2958	10.210
3 1/4	41.65	32.71	12.250	9.6211	10.996
3 3/8	47.82	37.55	14.063	11.045	11.781
3 1/2	54.40	42.73	16.000	12.566	12.566
4	61.41	48.24	18.063	14.186	13.352
4 1/8	68.85	54.07	20.250	15.904	14.137
4 1/4	76.71	60.25	22.563	17.721	14.923
4 3/8	85.00	66.76	25.000	19.635	15.708
5	102.9	80.78	30.250	23.758	17.279
5 1/2	122.4	96.13	36.000	28.274	18.850

One cubic foot of steel weighs 489.6 lbs.

**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.
1"	180	—	—	12	—	—	1
1 1/4"	180	—	—	20	—	—	2
1 1/2"	180	—	1	4	—	—	3
1 3/4"	180	—	1	20	—	—	4 1/2
2"	125	—	2	4	—	—	8
2 1/4"	125	—	2	10	—	—	9
2 1/2"	125	—	3	2	—	—	11 1/2
2 3/4"	125	—	3	25	—	—	14 1/2
3"	120	1	0	17	—	—	18
3 1/4"	120	1	1	16	—	—	21 1/2
3 1/2"	120	1	2	25	—	—	27
3 3/4"	120	1	3	20	—	1	2
4"	120	2	1	0	—	1	7
4 1/4"	120	2	2	10	—	1	12
4 1/2"	120	3	0	10	—	1	20
4 3/4"	120	3	1	14	—	1	24 1/2
5"	120	3	2	18	—	2	1
5 1/4"	120	4	0	18	—	2	9
5 1/2"	120	4	3	10	—	2	19
5 3/4"	115	5	2	5	—	3	6
6"	115	7	0	0	1	0	2
6 1/4"	115	7	3	5	1	0	15
6 1/2"	115	9	2	0	1	1	14
6 3/4"	115	10	3	14	1	2	9
7"	115	12	0	0	1	2	27
7 1/4"	115	15	1	0	2	0	24
7 1/2"	115	15	1	0	2	0	24
7 3/4"	115	15	1	0	2	0	24
8"	115	15	1	0	2	0	24
8 1/4"	115	15	1	0	2	0	24
8 1/2"	115	15	1	0	2	0	24
8 3/4"	115	15	1	0	2	0	24
9"	115	15	1	0	2	0	24

COIR ROPE.

1"	150	—	—	7	—	—	3 1/4
1 1/4"	100	—	—	8	—	—	1 3/4
1 1/2"	150	—	—	12	—	—	1 3/4
1 3/4"	150	—	—	22	—	—	2 1/2
2"	150	—	1	1	—	—	3 1/4
2 1/4"	150	—	1	7	—	—	4
2 1/2"	125	—	1	14	—	—	5 1/2
2 3/4"	120	—	1	20	—	—	6 3/4
3"	120	—	2	5	—	—	8 1/2
3 1/4"	120	—	2	9	—	—	9
3 1/2"	120	—	3	3	—	—	12
3 3/4"	120	—	3	24	—	—	15
4"	120	1	0	25	—	—	19
4 1/4"	120	1	3	4	—	1	0
4 1/2"	120	2	0	25	—	1	6 1/2
4 3/4"	120	2	2	12	—	1	12 1/2
5"	115	3	3	3	—	2	5
5 1/4"	115	5	0	17	—	2	27 1/2
5 1/2"	115	7	2	0	1	0	9 3/4
5 3/4"	115	10	2	0	1	2	2 1/2

"ORB" IRON. You know it at once by its appearance.

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 proportionately.

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.
	1 1/4	6	5	4	3
	1 1/2	14	12	10	8
	1 3/4	23	20	17	12
	2	41	35	30	23
	2 1/4	56	47	39	26 3/4
	2 1/2	82	71	60	46
	1	100	86	77	54 1/2
	1 1/8	130	110	92	68
	1 1/4	170	142	120	92
	1 1/2	190	164	136	105
	1 3/4	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.

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

MANILA ROPE.

This table gives a factor of safety of 8.

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

“ORB” IRON—Over 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	5¼ ”	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.

CASTLE

BRAND



THE GUARANTEE OF QUALITY

NETTLEFOLDS PTY. LTD.

SUNSHINE — VICTORIA



REPRESENTATIVES

in Australia

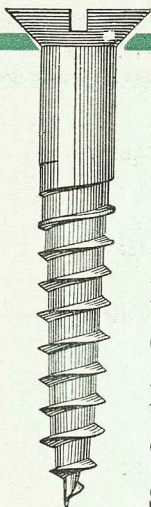
for

GUEST, KEEN &
NETTLEFOLDS LTD.

BIRMINGHAM — ENGLAND



Specify



NETTLEFOLD

ON ALL YOUR ORDERS

for

WOOD SCREWS

METAL THREAD SCREWS

COTTER PINS

RIVETS & WASHERS

COPPER RIVETS & WASHERS

SCREW HOOKS, Etc.

THE STANDARD QUALITY ALL
OVER THE WORLD AND
RENOWNED FOR

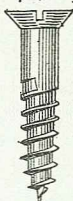
EFFICIENCY & RELIABILITY

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

NETTLEFOLDS

Renowned WOOD SCREWS

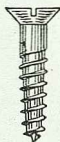
$\frac{7}{8} \times 8$



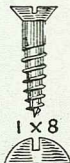
$\frac{3}{4} \times 6$



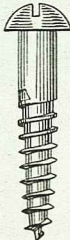
$\frac{5}{8} \times 5$



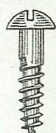
$\frac{1}{2} \times 4$



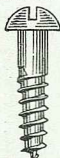
1×8



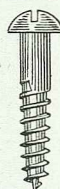
$\frac{1}{2} \times 4$



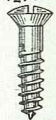
$\frac{5}{8} \times 6$



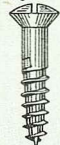
$\frac{3}{4} \times 6$



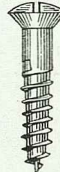
$\frac{1}{2} \times 4$



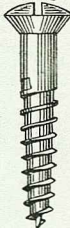
$\frac{5}{8} \times 5$



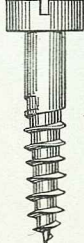
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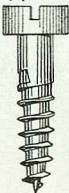
1×8



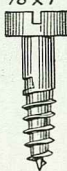
1×9



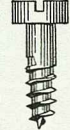
$\frac{3}{4} \times 8$



$\frac{5}{8} \times 7$



$\frac{1}{2} \times 6$



$1\frac{1}{4} \times 9$



$1\frac{1}{2} \times 10$



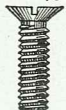
NETTLEFOLDS

Renowned
MACHINE SCREWS

$\frac{3}{8}'' \times \frac{1}{8}''$



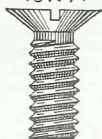
$\frac{1}{2}'' \times \frac{5}{32}''$



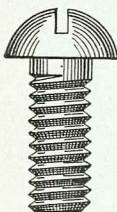
$\frac{1}{2}'' \times \frac{3}{16}''$



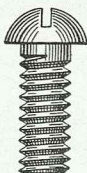
$\frac{5}{8}'' \times \frac{1}{4}''$



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



$\frac{5}{8}'' \times \frac{1}{4}''$



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



$\frac{3}{8}'' \times \frac{5}{32}''$



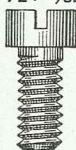
$\frac{3}{8}'' \times \frac{5}{32}''$



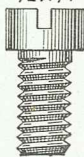
$\frac{3}{8}'' \times \frac{3}{16}''$



$\frac{1}{2}'' \times \frac{7}{32}''$



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

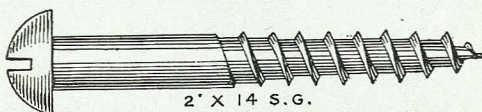


Nettlefolds Whitworth Thread Machine Screws have
FULL Sized Standard Heads and are True to Gauge.

ASK YOUR LOCAL STOREKEEPER FOR PRICES,
Etc.

NETTLEFOLDS

Renowned ROOFING FITTINGS

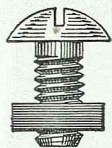


2' X 14 S.G.

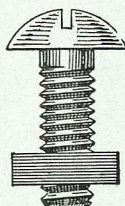


1 1/4" X 10 S.G.

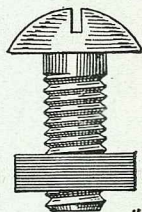
Nettlefolds Heavily Galvanized Roofing Screws will Hold Securely in all Weathers.



1/2" X 7/32"



3/4" X 1/4"

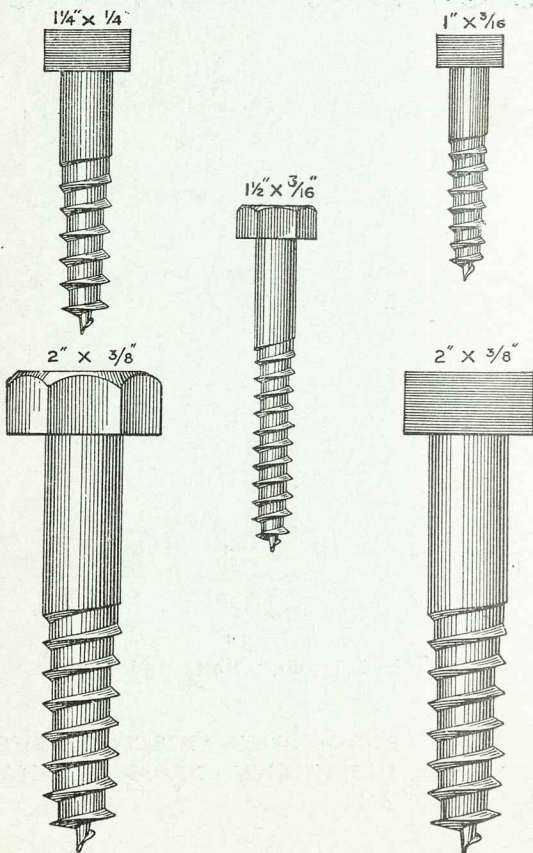


3/4" X 9/32"

Galvanized Roofing Bolts and Nuts.

USE NETTLEFOLDS GALVANIZED WASHERS, WHICH ARE OBTAINABLE FROM ALL HARDWARE MERCHANTS.

Patent **COACH SCREWS**



NETTLEFOLDS

Patent COTTER PINS

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

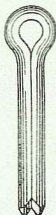
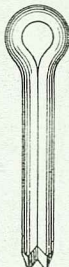
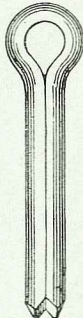
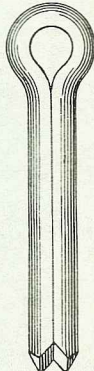
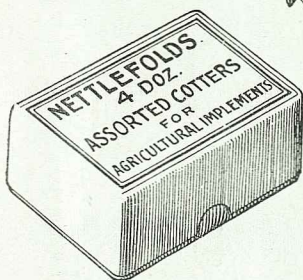
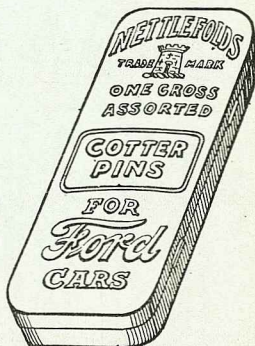
$\frac{3}{4}'' \times \frac{3}{32}''$

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

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

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

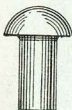
$1\frac{3}{4}'' \times \frac{7}{32}''$



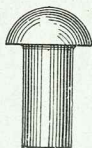
NETTLEFOLDS

Renowned **MILD STEEL RIVETS**

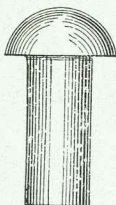
$\frac{3}{8}'' \times \frac{3}{16}''$



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



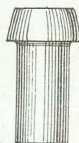
$\frac{3}{4}'' \times \frac{5}{16}''$



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



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



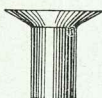
Round Head.

Pan Head.

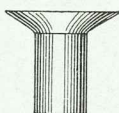
$\frac{3}{8}'' \times \frac{3}{16}''$



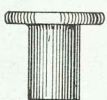
$\frac{7}{16}'' \times \frac{7}{32}''$



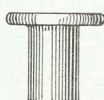
$\frac{1}{2}'' \times \frac{1}{4}''$



8



9



Countersunk Head.

Cooper's.

1



2



3



4



5



6



7



8

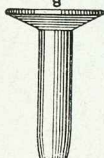


9

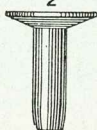


Black Tinmen's.

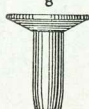
$\frac{5}{8}''$



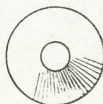
$\frac{1}{2}''$



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



8



Iron Hose Rivets and Washers.

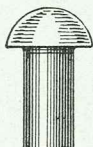
NETTLEFOLDS

Renowned **RIVETS**

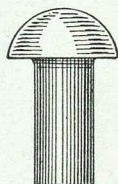
Galvanized Tank Rivets.



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

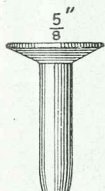


$\frac{1}{2} \times \frac{1}{4}$ "

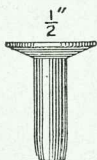


$\frac{5}{8} \times \frac{9}{32}$ "

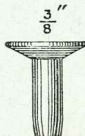
Copper Rivets and Washers.



$\frac{5}{8}$ "

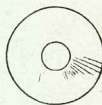


$\frac{1}{2}$ "

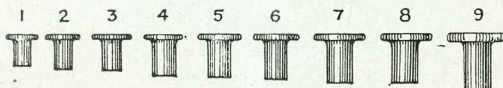


$\frac{3}{8}$ "

8



Tinned Tinmen's Rivets.



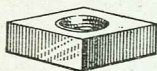
Evenly Coated with Pure Tin.

NETTLEFOLDS

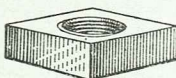
Pressed and **FORGED NUTS**

All Nuts made by Nettlefolds are of Full Standard Thickness.

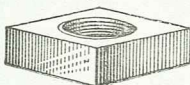
$\frac{1}{4}''$



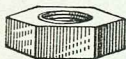
$\frac{5}{16}''$



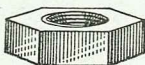
$\frac{3}{8}''$



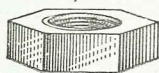
$\frac{1}{4}''$



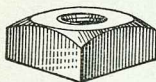
$\frac{5}{16}''$



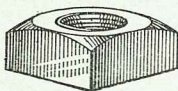
$\frac{3}{8}''$



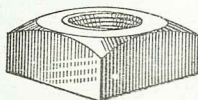
$\frac{1}{4}''$



$\frac{5}{16}''$



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



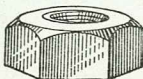
$\frac{7}{32}''$



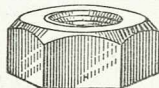
$\frac{1}{4}''$



$\frac{5}{16}''$

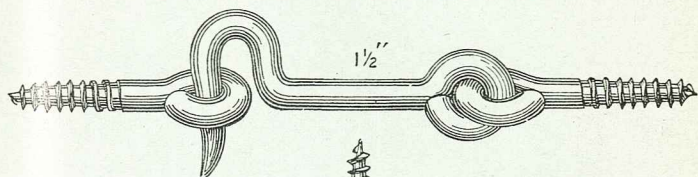
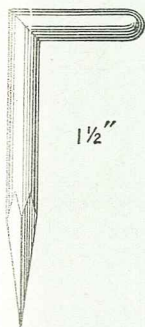
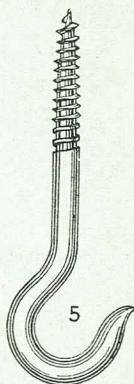
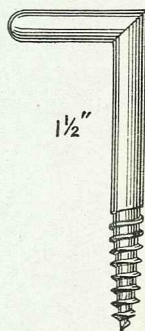
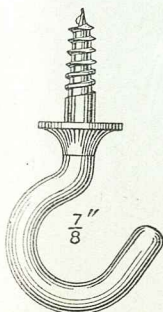
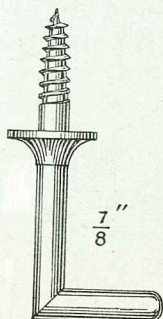
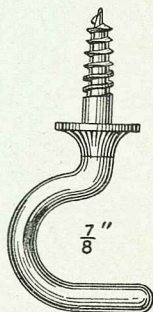


$\frac{3}{8}''$



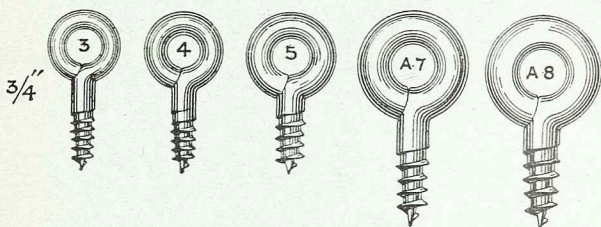
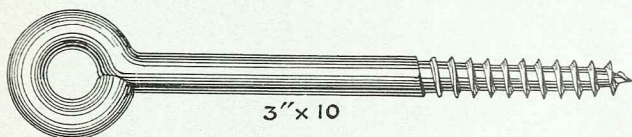
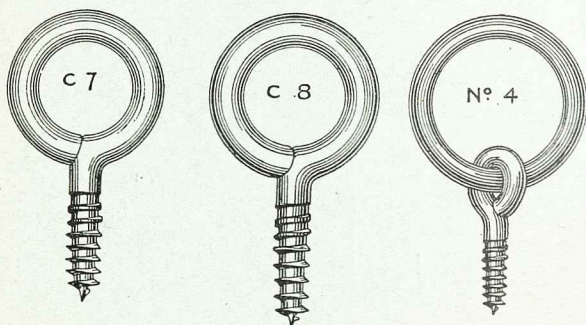
NETTLEFOLDS

Patent **WIRE HOOKS**

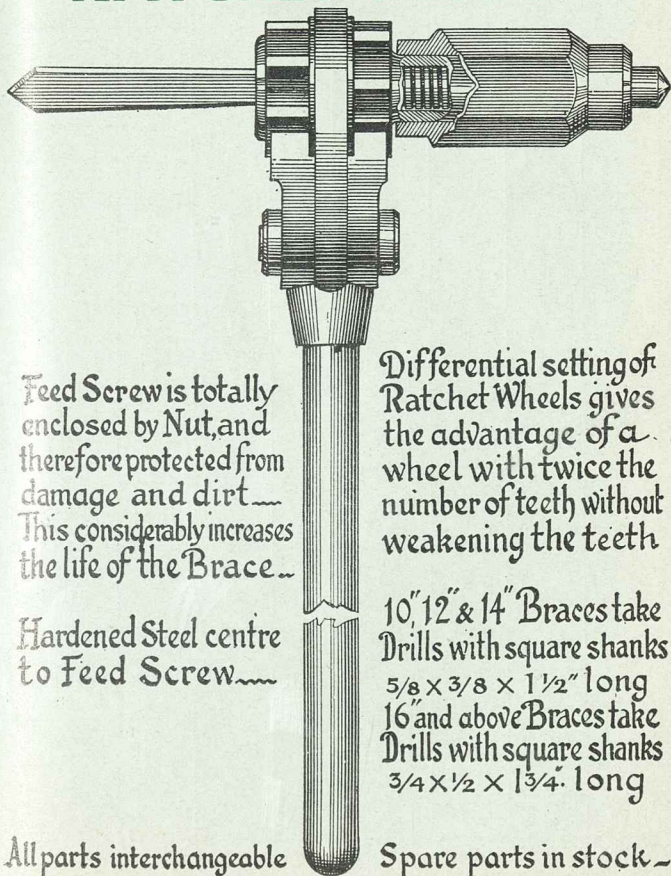


NETTLEFOLDS

Patent **WIRE EYES**



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

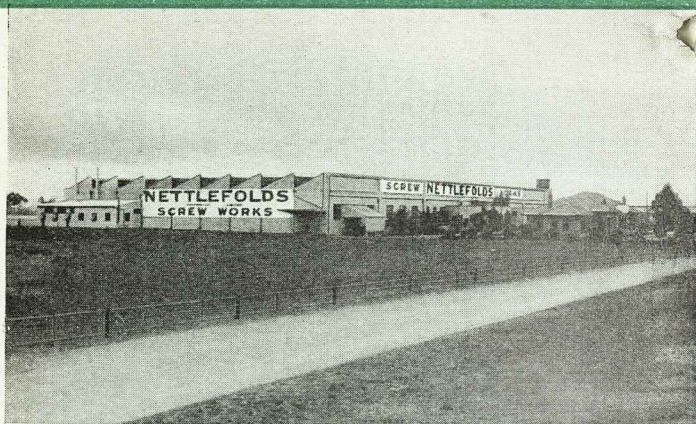
SCREW GAUGE	IMPERIAL STANDARD WIRE GAUGE	FRACTIONS OF AN INCH	EQUIVALENTS IN DECIMALS OF AN INCH	SCREW GAUGE	IMPERIAL STANDARD WIRE GAUGE	FRACTIONS OF AN INCH	EQUIVALENTS IN DECIMALS OF AN INCH
(S.G.)	(W.G.)	INCHES	INCHES	(S.G.)	(W.G.)	INCHES	INCHES
	30		.0124"	10	6		.192"
	29		.0136"			13/64"	.203125"
	28	1/64"	.0148"	11	5		.206"
			.015625			7/32"	.212"
	27		.0164"				.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"			13/32"	.40625"
3			.094"	26			.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"				

Nettlefolds Products are all available from your local storekeeper.

NETTLEFOLDS

STOCKS INCLUDE

Wood Screws of all classes and finishes
Galvanized Cone Head Screws
Galvanized Gutter Screws
Galvanized Mushroom Head Bolts and Nuts
Galvanized and Black Washers
Metal Thread Screws—Whitworth Threads
Square and Hexagon Pressed Nuts
Cotter Pins
 " " Agricultural Assortment
 " " Motor Car Assortment
 " " Ford Motor Assortment
Gate Hooks
Screw Hooks
Shouldered Cup and Square Hooks
Screw Eyes
Tinned S. Hooks
Tinned Skewers (assorted)
Mild Steel Rivets (all classes)
Tinmen's Rivets
Copper Rivets and Washers
Copper Nails and Cut Tacks
Copper Roves
Handrail Screws
Spindle Screws (assorted)
Ratchet Braces
Countersunk Head Clout Nails
Brass Screw Cups
Brass Escutcheon Pins
Cricket Spikes. Netting Staples
Boss Pig Rings and Ringers



General View of Sunshine Works.

NETTLEFOLDS PTY. LTD.

S U N S H I N E • V I C T O R I A

Australian materials are used throughout at the Sunshine Works in the manufacture of Iron and Brass Wood Screws, Metal Thread Screws, Pressed Nuts, Cotter Pins, Rivets and Washers, and Galvanized Roofing Fittings.

Stocks of these articles in bright or any desired finish are always on hand. A comprehensive range of Messrs. Guest, Keen and Nettlefolds' Screw Department Goods is also stocked at the works.

LYSAGHT'S Corrugated Iron—"The World's Roof."

STANDARD WEIGHTS and SIZES of TINPLATES

Birmingham Gauge	Substance		Size		No. of Sheets Per Box	Net Weight Per Box		Gross Weight 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
30.1IC	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

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
			Inches	I.S.W.G.		
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

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 1/2	37.291	47.481	41.113
7/8	2.331	2.968	2.570	3 3/4	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 1/4	54.985	70.010	60.621
1-1/16	3.436	4.376	3.778	4 1/2	61.644	78.489	67.963
1 1/8	3.853	4.906	4.248	4 3/4	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 1/2	5.756	7.328	6.346	5 3/4	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 3/4	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 1/4	160.009	203.733	176.410
1-13/16	10.001	12.733	11.026	7 1/2	171.238	218.025	188.790
1 7/8	10.702	13.627	11.799	7 3/4	182.843	232.802	201.584
1-15/16	11.428	14.550	12.599	8	194.827	248.064	214.797

Approximate Weight of 48in. x 14in.

Muntz Metal Sheathing per Sheet

Subst. per sq. ft.	Approx. weight per sheet	Subst. per sq. ft.	Approx. weight per sheet
8 ounce	2 lbs. 5 ozs.	18 ounce	5 lbs. 4 ozs.
10 "	2 " 15 "	20 "	5 " 13 "
12 "	3 " 8 "	22 "	6 " 7 "
14 "	4 " 1 "	24 "	7 " 0 "
16 "	4 " 10 "	26 "	7 " 9 "

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 44½lbs., it is customary to adopt the approximate Imperial Standard Wire Gauge Equivalent 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.
1 in.	..	46.50	7/16 in.	(.437)	20.34
15/16 in.	(.937)	43.59	3/8 in.	(.375)	17.44
7/8 in.	(.875)	40.69	5/16 in.	(.312)	14.53
13/16 in.	(.812)	37.78	1/4 in.	(.250)	11.63
3/4 in.	(.750)	34.88	3/16 in.	(.187)	8.72
11/16 in.	(.687)	31.97	1/8 in.	(.125)	5.81
5/8 in.	(.625)	29.06	1/16 in.	(.062)	2.91
9/16 in.	(.562)	26.16	1/32 in.	(.031)	1.45
1/2 in.	(.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.

world, and Universally admitted to be THE BEST.

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

Weight of Brass and Copper Rods and Bars

Pounds per Lineal Foot.

HEXAGON.					Side or Diam. in inches		SQUARE.		ROUND.		Side or Diam.in inches
Association.		Across Flats Min to Max.		Ins.	lbs. per lin. ft.	Brass	Copper	Brass	Copper		
No. 3		.279	.282							.251	
No. 2		.321	.324	.322							
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 Min to Max.		Ins.	lbs. per lin. ft.	Brass	Copper	Brass	Copper		
Whit.	Pine										
Ins.	Ins.	7/32	.410	.413	.539	.057	.06	.045	.047	1/8	
	1/4	.440	.445	.626	3/16	.128	.135	.101	.106	3/16	
1/4	5/16	.520	.525	.871	1/4	.228	.240	.179	.189	1/4	
5/16	3/8	.595	.600	1.14	5/16	.357	.376	.280	.294	5/16	
3/8	7/16	.705	.710	1.59	7/8	.513	.541	.403	.424	3/8	
7/16	1/2	.815	.820	2.13	15/16	.699	.736	.549	.578	7/16	
1/2	9/16	.915	.920	2.68	1	.913	.962	.717	.755	1/2	
9/16	5/8	1.002	1.016	3.22	1	1.15	1.21	.91	.955	9/16	
5/8	11/16	1.092	1.100	3.82	1	1.43	1.51	1.12	1.18	5/8	
11/16	3/4	1.192	1.200	4.55	13/16	1.73	1.82	1.35	1.43	11/16	
3/4	7/8	1.292	1.300	5.34	7/8	2.05	2.16	1.61	1.70	3/4	
7/8	1	1.468	1.480	6.92	15/16	2.41	2.54	1.89	1.99	13/16	
1	1-1/8	1.658	1.670	8.81	1	2.80	2.95	2.19	2.31	7/8	
1-1/8	1-1/4	1.845	1.860	10.94	1	3.21	3.38	2.52	2.65	15/16	
1-1/4	1-3/8	2.035	2.050	13.29	1	3.65	3.86	2.87	3.02	1	
1-3/8	1-1/2	2.200	2.220	15.58	1-1/8	4.62	4.87	3.63	3.83	1-1/8	
1-1/2	1-5/8	2.390	2.410	18.36	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	11.47	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
1 — x 16	$\frac{1}{8}$.1206 $\frac{3}{16}$.1507 $\frac{1}{2}$.1809 $\frac{5}{8}$.2110 1 .2412 $1\frac{1}{4}$.3014 $1\frac{1}{2}$.3617	3 — x 8	1 1.447 $1\frac{1}{4}$ 1.809 $1\frac{1}{2}$ 2.170 $1\frac{3}{4}$ 2.532 2 2.894 $2\frac{1}{4}$ 3.256 $2\frac{1}{2}$ 3.617 $2\frac{3}{4}$ 3.979 3 4.341 $3\frac{1}{4}$ 4.702 $3\frac{1}{2}$ 5.064 $3\frac{3}{4}$ 5.426 4 5.788 $4\frac{1}{4}$ 6.149 $4\frac{1}{2}$ 6.511 $4\frac{3}{4}$ 6.873 5 7.235	3 — x 4	1 2.894 $1\frac{1}{4}$ 3.617 $1\frac{1}{2}$ 4.341 $1\frac{3}{4}$ 5.064 2 5.788 $2\frac{1}{4}$ 6.511 $2\frac{1}{2}$ 7.235 $2\frac{3}{4}$ 7.958 3 8.681 $3\frac{1}{4}$ 9.405 $3\frac{1}{2}$ 10.13 $3\frac{3}{4}$ 10.85 4 11.58 $4\frac{1}{4}$ 12.30 $4\frac{1}{2}$ 13.02 $4\frac{3}{4}$ 13.75 5 14.47 $5\frac{1}{4}$ 15.19 $5\frac{1}{2}$ 15.92 $5\frac{3}{4}$ 16.64 6 17.36
1 — x 8	$\frac{1}{8}$.2412 $\frac{3}{16}$.3014 $\frac{1}{2}$.3617 $\frac{5}{8}$.4220 1 .4823 $1\frac{1}{4}$.6029 $1\frac{1}{2}$.7235 $1\frac{3}{4}$.8440 2 .9646 $2\frac{1}{4}$ 1.085 $2\frac{1}{2}$ 1.206 $2\frac{3}{4}$ 1.326 3 1.447	1 — x 2	1 1.929 $1\frac{1}{4}$ 2.412 $1\frac{1}{2}$ 2.894 $1\frac{3}{4}$ 3.376 2 3.858 $2\frac{1}{4}$ 4.341 $2\frac{1}{2}$ 4.823 $2\frac{3}{4}$ 5.305 3 5.788 $3\frac{1}{4}$ 6.270 $3\frac{1}{2}$ 6.752 $3\frac{3}{4}$ 7.235 4 7.717 $4\frac{1}{4}$ 8.199 $4\frac{1}{2}$ 8.681 $4\frac{3}{4}$ 9.164 5 9.646 $5\frac{1}{4}$ 10.13 $5\frac{1}{2}$ 10.61 $5\frac{3}{4}$ 11.09 6 11.58	1 — x 6	1 3.858 $1\frac{1}{4}$ 4.823 $1\frac{1}{2}$ 5.788 $1\frac{3}{4}$ 6.752 2 7.717 $2\frac{1}{4}$ 8.681 $2\frac{1}{2}$ 9.646 $2\frac{3}{4}$ 10.61 3 11.58 $3\frac{1}{4}$ 12.54 $3\frac{1}{2}$ 13.50 $3\frac{3}{4}$ 14.47 4 15.43 $4\frac{1}{4}$ 16.40 $4\frac{1}{2}$ 17.36 $4\frac{3}{4}$ 18.33 5 19.29 $5\frac{1}{4}$ 20.26 $5\frac{1}{2}$ 21.22 $5\frac{3}{4}$ 22.19 6 23.15
3 — x 16	$\frac{1}{8}$.3617 $\frac{3}{16}$.4522 $\frac{1}{2}$.5426 $\frac{5}{8}$.6330 1 .7235 $1\frac{1}{4}$.9043 $1\frac{1}{2}$ 1.085 $1\frac{3}{4}$ 1.266 2 1.447 $2\frac{1}{4}$ 1.628 $2\frac{1}{2}$ 1.809 $2\frac{3}{4}$ 1.989 3 2.170	1 — x 4	1 .4823 $\frac{3}{16}$.6029 $\frac{1}{2}$.7235 $\frac{5}{8}$.8440 1 .9646 $1\frac{1}{4}$ 1.206 $1\frac{1}{2}$ 1.447 $1\frac{3}{4}$ 1.688 2 1.929 $2\frac{1}{4}$ 2.170 $2\frac{1}{2}$ 2.412 $2\frac{3}{4}$ 2.653 3 2.894		
1 — x 4	$\frac{1}{8}$.4823 $\frac{3}{16}$.6029 $\frac{1}{2}$.7235 $\frac{5}{8}$.8440 1 .9646 $1\frac{1}{4}$ 1.206 $1\frac{1}{2}$ 1.447 $1\frac{3}{4}$ 1.688 2 1.929 $2\frac{1}{4}$ 2.170 $2\frac{1}{2}$ 2.412 $2\frac{3}{4}$ 2.653 3 2.894				

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.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.
1	1.92	1.76	1.60	1.44	1.28	1.16	1.04	.092	.080	.072	.064	.056	.048	.040	.036
1 1/2	2.18	2.03	1.88	1.72	1.55	1.42	1.29	1.15	1.01	0.92	0.83	0.73	0.63	0.53	0.47
1 1/4	2.47	2.30	2.12	1.94	1.75	1.60	1.45	1.29	1.14	1.03	0.92	0.81	0.70	0.59	0.53
1 1/2	2.77	2.57	2.36	2.16	1.94	1.78	1.61	1.43	1.26	1.14	1.02	0.90	0.77	0.65	0.58
1 3/4	3.06	2.84	2.61	2.38	2.14	1.95	1.77	1.57	1.38	1.25	1.12	0.98	0.85	0.71	0.64
1 1/2	3.35	3.10	2.85	2.59	2.33	2.13	1.92	1.71	1.50	1.36	1.22	1.07	0.92	0.77	—
1 1/4	3.64	3.37	3.09	2.81	2.53	2.30	2.08	1.85	1.62	1.47	1.31	1.15	0.99	0.83	—
1 1/2	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	0.89	—
2	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	0.95	—
2 1/2	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	—	—
2 1/4	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	—	—
2 3/4	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	—	—
2 1/2	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.

Table of Gauges and Approximate Weights for Rolled Brass

Although text books and tables vary slightly as to the weight of rolled brass per square or cubic foot, the leading British brass rollers have adopted as a basis of calculation **ONE SQUARE FOOT OF ROLLED BRASS ONE INCH IN THICKNESS WEIGHS 44½ LBS.**, and the weights of the rolled brass detailed in this table have been calculated accordingly.

It being customary to order brass sheets by the Imperial Standard Wire Gauge and occasionally by the weight in pounds and ounces per square foot, a table showing the weight per square foot equivalent to the various gauge numbers calculated on one square foot of rolled brass 1 inch in thickness weighs 44½ lbs. is detailed below.

I.S.W.G. No.	Decimal of an Inch	Weight per Sq. Ft. in Lbs. and Decimals of a Lb.	I.S.W.G. No.	Decimal of an Inch	Weight per Sq. Ft. in Lbs. and Decimals of a Lb.
7/0	.500	22.250	23	.024	1.068
6/0	.464	20.648	24	.022	.979
5/0	.432	19.224	25	.020	.890
4/0	.400	17.800	26	.018	.801
3/0	.372	16.540	27	.0164	.729
2/0	.348	15.486	28	.0148	.658
0	.324	14.418	29	.0136	.605
1	.300	13.350	30	.0124	.551
2	.276	12.282	31	.0116	.516
3	.252	11.214	32	.0108	.480
4	.232	10.324	33	.0100	.445
5	.212	9.434	34	.0092	.409
6	.192	8.544	35	.0084	.373
7	.176	7.832	36	.0076	.338
8	.160	7.120	37	.0068	.302
9	.144	6.408	38	.0060	.267
10	.128	5.696	39	.0052	.231
11	.116	5.162	40	.0048	.213
12	.104	4.628	41	.0044	.195
13	.092	4.094	42	.0040	.178
14	.080	3.560	43	.0036	.160
15	.072	3.204	44	.0032	.142
16	.064	2.848	45	.0028	.124
17	.056	2.492	46	.0024	.106
18	.048	2.136	47	.0020	.089
19	.040	1.780	48	.0016	.071
20	.036	1.602	49	.0012	.053
21	.032	1.424	50	.0010	.044
22	.028	1.246			

confidence of Ironworkers everywhere.

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	7/8	.1237
14	1 $\frac{3}{4}$	.4715	20	3/4	.0884
14	1 $\frac{1}{2}$	.4042	21	3/8	.0694
15	1 $\frac{1}{2}$	.3637			

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 2G	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 1¾ 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				

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.

4 $\frac{3}{4}$ d. per lb.—how much per ton?

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

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

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

Also the reverse:—

£48/15/- per ton, how much per lb.?

$48.75 \times 3 = 146.25 \div 7 = 20.892 \div 4 = 5.223$ d. 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. 3d.,		
	and for every 9lbs. 1d., equals—				
	£2 10	5	multiplied by the price		
per ton =		5 $\frac{1}{2}$	pounds sterling.		

£12	12	1
1	5	2 $\frac{1}{2}$

£13 17 3 $\frac{1}{2}$ Answer.

TO FIND THE PREMIUM OR DISCOUNT OF ANY SUM.

Example—£24/10/6 at 3 $\frac{1}{2}$ per cent.

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

Double 3 $\frac{1}{2}$ per cent. =	£24	10	6
			7

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

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 "

THERMOMETER READINGS

FAHRENHEIT AND CENTIGRADE CONVERSION TABLE

°F	°C	°F	°C	°F	°C	°F	°C	°F	°C
-459.4	-273	66	18.9	110	43.3	154	67.8	198	92.2
-50	-45.6	67	19.4	111	43.9	155	68.3	199	92.8
-40	-40	68	20	112	44.4	156	68.9	200	93.3
-30	-34.4	69	20.6	113	45	157	69.4	201	93.9
-20	-23.9	70	21.1	114	45.6	158	70	202	94.4
-10	-28.3	71	21.7	115	46.1	159	70.6	203	95
0	-17.8	72	22.2	116	46.7	160	71.1	204	95.6
10	-12.2	73	22.8	117	47.2	161	71.7	205	96.1
20	-6.7	74	23.3	118	47.8	162	72.2	206	96.7
30	-1.1	75	23.9	119	48.3	163	72.8	207	97.2
32	0	76	24.4	120	48.9	164	73.3	208	97.8
33	0.6	77	25	121	49.4	165	73.9	209	98.3
34	1.1	78	25.6	122	50	166	74.4	210	98.9
35	1.7	79	26.1	123	50.6	167	75	211	99.4
36	2.2	80	26.7	124	51.1	168	75.6	212	100
37	2.8	81	27.2	125	51.7	169	76.1		
38	3.3	82	27.8	126	52.2	170	76.7		
39	3.9	83	28.3	127	52.8	171	77.2		
40	4.4	84	28.9	128	53.3	172	77.8		
41	5	85	29.4	129	53.9	173	78.3		
42	5.6	86	30	130	54.4	174	78.9		
43	6.1	87	30.6	131	55	175	79.4		
44	6.7	88	31.1	132	55.6	176	80		
45	7.2	89	31.7	133	56.1	177	80.6		
46	7.8	90	32.2	134	56.7	178	81.1		
47	8.3	91	32.8	135	57.2	179	81.7		
48	8.9	92	33.3	136	57.8	180	82.2		
49	9.4	93	33.9	137	58.3	181	82.8		
50	10	94	34.4	138	58.9	182	83.3		
51	10.6	95	35	139	59.4	183	83.9		
52	11.1	96	35.6	140	60	184	84.4		
53	11.7	97	36.1	141	60.6	185	85		
54	12.2	98	36.7	142	61.1	186	85.6		
55	12.8	99	37.2	143	61.7	187	86.1		
56	13.3	100	37.8	144	62.2	188	86.7		
57	13.9	101	38.3	145	62.8	189	87.2		
58	14.4	102	38.9	146	63.3	190	87.8		
59	15	103	39.4	147	63.9	191	88.3		
60	15.6	104	40	148	64.4	192	88.9		
61	16.1	105	40.6	149	65	193	89.4		
62	16.7	106	41.1	150	65.6	194	90		
63	17.2	107	41.7	151	66.1	195	90.6		
64	17.8	108	42.2	152	66.7	196	91.1		
65	18.3	109	42.8	153	67.2	197	91.7		

C. to F.
 Multi. by 9, divide by 5, add 32.
 F. to C.
 Subtract 32, Multi. by 5, divide by 9.

CHAMBER OF MANUFACTURES OF N.S.W.

MANUFACTURERS HOUSE
12-14 O'CONNELL STREET
—SYDNEY—

The Chamber of Manufactures of New South Wales represents the manufacturing industries of New South Wales, and as one of the constituent bodies of Associated Chambers of Manufactures of Australia, with its Secretariat at Canberra, F.C.T., has national contacts in its work in the interests of Australian manufacturing industry.

The rapid growth, expansion and development of manufacturing industries in Australia in recent years is one of the highlights of Australian national economy.

The Commonwealth Statistician's figures for the year 1935/36 show approximately 25,000 factories in Australia employing 492,000 workers. The present estimate for the number employed in manufacturing industry exceeds the half million mark.

For the same year, the output was valued at £414,688,455, and the wages paid £82,098,288. Materials used, the greater proportion of which were Australian primary products, were valued at £238,974,797.

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

Value of Materials used 1935/36.			
Tanning, currying and leather dressing	..	..	£3,041,227
Soap and candles	..	..	1,415,901
Agricultural implements	..	..	1,071,519
Engineering	..	..	5,160,407
Timber—Sawmilling	..	..	6,421,173
Iron and steel	..	..	13,564,978

The last figures include the value of raw materials used by Lysaght's Newcastle and Port Kembla Works.

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.

LYSAGHT



AUSTRALIA

CORRUGATING MACHINE at work

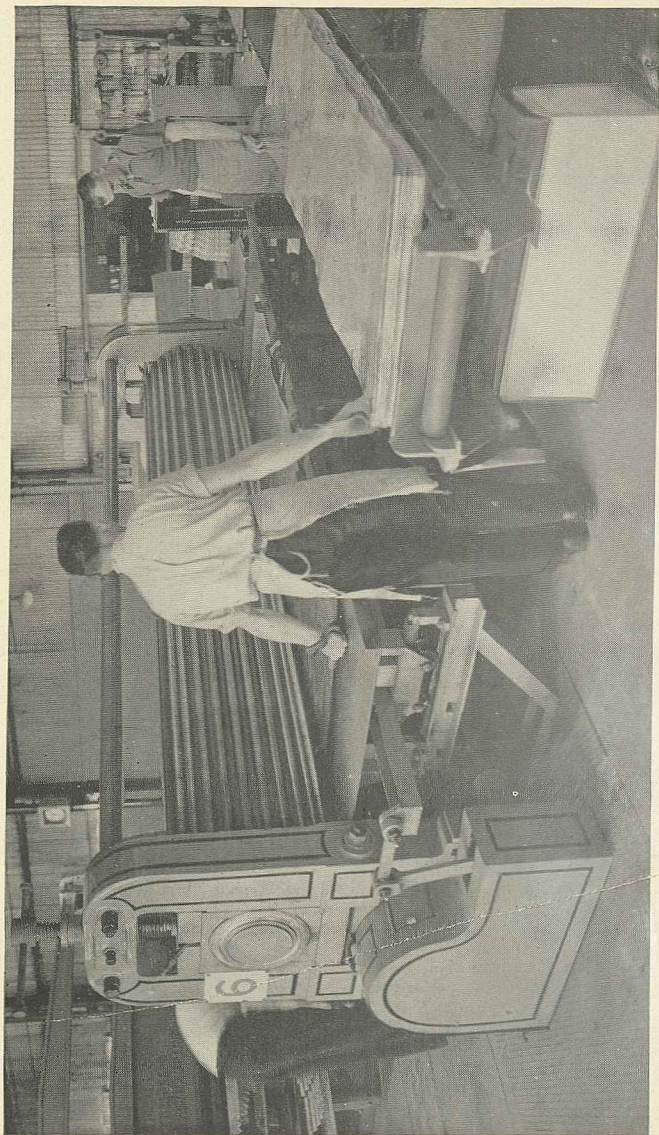
Corrugating is the final manufacturing process applied to the galvanized roofing sheet.

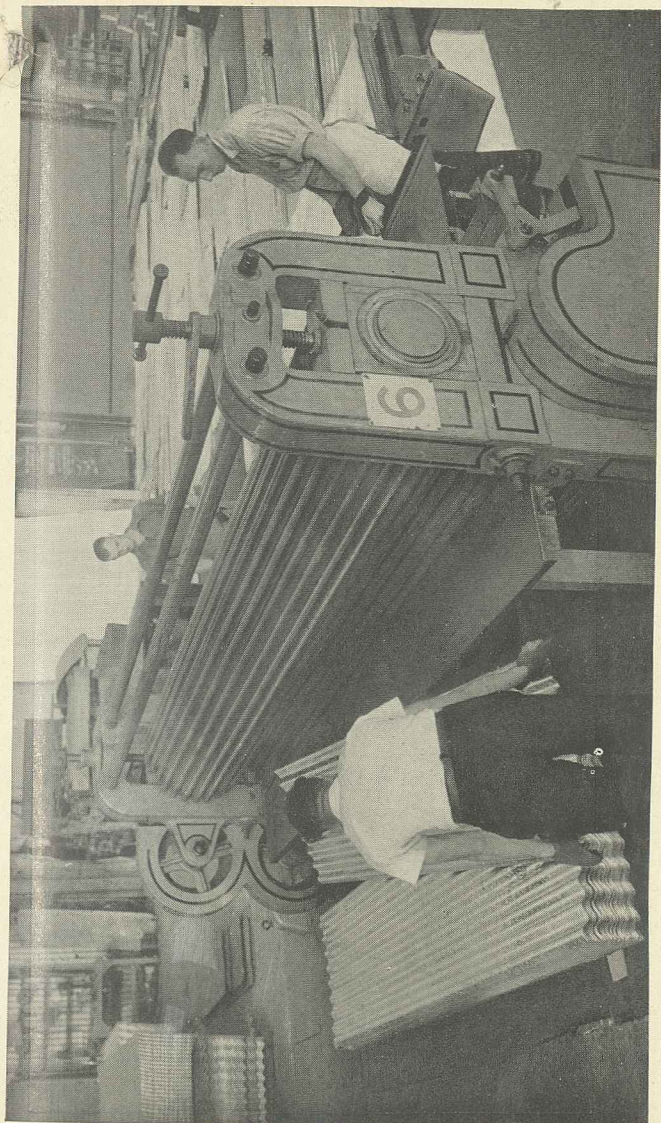
Loads of sheets are moved along gravity roller tracks from the inspectors in the galvanizing department (see page 51) to the front of the machines, and are then placed by two operators onto an automatic feeding table which moves forward and allows the sheets to be engaged by the huge rotary corrugators.

Incidentally the machine illustrated is entirely of Australian design and manufacture, and is actually employed corrugating "Red Orb" sheets, the use of which quality for roofing is strongly recommended to all builders.

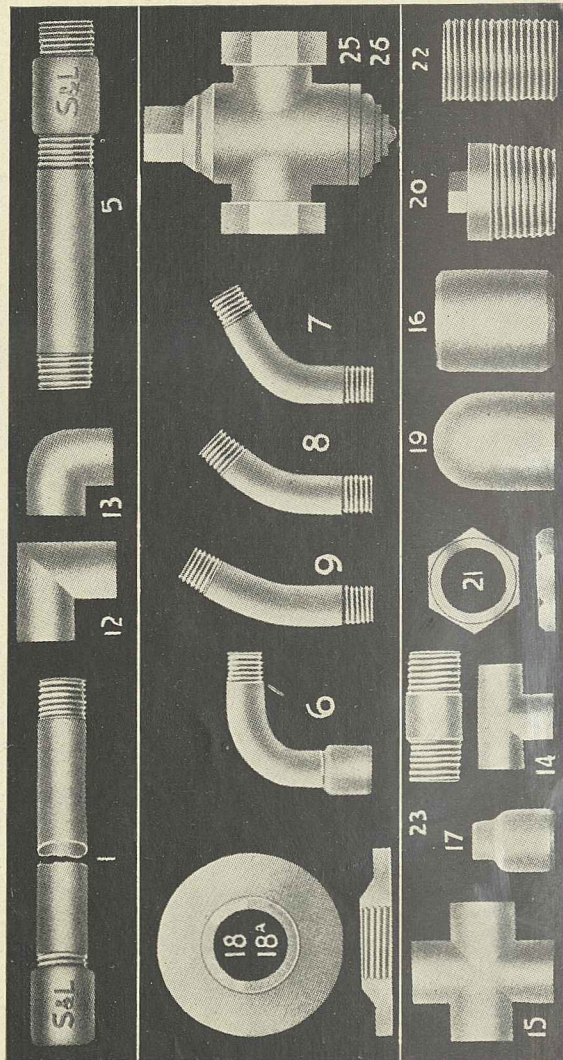
The sheets emerge from the back of the rolls impressed with the familiar eight three-inch corrugations and perfect side laps (see page 9). Note the uniformity of the corrugations from the compactness of the stacks of sheets seen in the illustration.

In the extreme left-hand corner of No. 2 illustration is a stack of "one-inch" sheets (see page 9), which are also corrugated through a rotary machine.





S & L SCREWED AND SOCKETED WROUGHT TUBES & FITTINGS



S & L SCREWED AND SOCKETED WROUGHT TUBES & FITTINGS

PRICE LIST

No.	Nominal meter in inches	Internal Dia. inches	$\frac{1}{8}$ & $\frac{1}{4}$	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{3}{4}$	1	1 $\frac{1}{4}$	1 $\frac{1}{2}$	2	2 $\frac{1}{2}$	3	3 $\frac{1}{2}$	4	5	6
TUBES and TUBULARS																
1	Tubes, 2 ft. long and over per ft.		-4	-4 $\frac{1}{2}$	-5 $\frac{1}{2}$	-6 $\frac{1}{2}$	-9 $\frac{1}{2}$	1/1	1 $\frac{1}{4}$	1 $\frac{1}{2}$	2 $\frac{1}{2}$	3/3	4/-	4/5	6/-	7/6
5	Longscrews, 5 to 11 $\frac{1}{2}$ inches each		-8	-9	-10	1/1	1/5	1/11	2/6	3/6	6/6	8/6	11/6	13/-	20/-	28/-
23	Barrel Nipples "		-5	-5	-6	-7	-9	1/-	1/4	1/9	3/-	4/-	6/-	7/-	12/6	20/-
6	Bends "		-8	-9	-11	1/2	1/7 $\frac{1}{2}$	2/7 $\frac{1}{2}$	3/2	5/2	12/-	18/-	25/-	32/6	105/-	150/-
7, 8, 9	Springs, not socketed "		-5	-6	-7	-9	1/1 $\frac{1}{2}$	1/11 $\frac{1}{2}$	2/3 $\frac{1}{2}$	3/11	9/6	14/6	20/-	26/6	93/-	132/-
FITTINGS																
12	Elbows, Square "		-10	-11	1/1	1/3	1/6	2/2	2/7	4/3	9/6	14/-	22/-	28/-	95/-	150/-
13	Elbows, Round "		-11	1/-	1/2	1/5	1/8	2/4	2/10	4/8	10/6	16/-	24/-	30/-	95/-	150/-
14	Tees "		1/-	1/1	1/3	1/7	1/10	2/6	3/1	5/1	11/6	18/-	26/-	32/-	98/-	155/-
15	Crosses "		2/2	2/4	2/9	3/3	4/1	5/6	6/7	10/6	22/-	40/-	56/-	66/8	220/-	350/-
16	Sockets, Plain "		-3	-3	-4	-5	-6	-8	-10 $\frac{1}{2}$	1/3	2/6	3/6	5/-	6/-	12/-	18/-
17	Sockets, Diminished "		-4	-5	-6	-7	-9	1/-	1/4	2/-	5/-	7/-	9/-	11/-	35/-	55/-
18	Flanges "		-9	-10	1/-	1/2	1/4	1/9	2/-	2/9	5/-	8/6	10/-	11/6	18/-	27/-
18a	Flanges, Table H "		1/6	1/8	2/-	2/4	2/8	3/6	4/-	5/6	10/-	17/-	20/-	23/-	36/-	54/-
19	Caps "		-3 $\frac{1}{2}$	-3 $\frac{1}{2}$	-5	-6	-8	1/-	1/3	2/-	4/4	6/-	9/9	10/6	30/-	45/-
20	Plugs "		-3	-3	-4	-5	-6	-8	-10	1/3	2/6	4/9	7/-	10/-	30/-	48/-
21	Backnuts "		-2	-2	-3	-3 $\frac{1}{2}$	-5	-6	-8	1/1	2/3	3/6	4/6	5/6	18/-	26/-
22	Nipples "		-2	-2	-3	-3 $\frac{1}{2}$	-4	-6	-8	1/-	2/3	3/6	4/6	5/6	18/-	26/-
25	Main Cocks "		1/6	1/9	2/3	2/10	4/2	5/4	7/-	11/6	17/6	26/-	40/-	47/9	125/-	165/-
26	Main Cocks, with Brass Plugs "		—	3/4	4/-	5/4	7/6	10/-	13/-	21/-	40/-	50/-	75/-	100/-	225/-	325/-

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.		
Nominal Bore inches.	External Diameter inches.	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	13/32	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	.806	10	.128	.973
5/8	1 1/16	11	.116	1.165	10	.128	1.268	9	.144	1.403
1	1 11/32	10	.128	1.653	9	.144	1.833	8	.160	2.008
1 1/4	1 11/16	9	.144	2.367	8	.160	2.598	7	.176	2.827
1 1/2	1 29/32	8	.160	2.973	7	.176	3.237	6	.192	3.500
1 3/4	2 5/32	8	.160	3.406	7	.176	3.710	6	.192	4.019
2	2 3/8	8	.160	3.786	7	.176	4.128	6	.192	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 1/8	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 1/8	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 1/8	7	.176	10.232	6	.192	11.091	5	.212	12.159
6	6 1/8	7	.176	12.305	6	.192	13.332	5	.212	14.609

TEST PRESSURES. 500 lbs. per sq. in. 600 lbs. per sq. in.

up to 2"---700 lbs. per sq. in.
over 2"---1000 "

Note.—Boiler Tubes, Casing and special tubes are all ordered from the external diameter. Screwed and Socketed Tubes are ordered on the Nominal Bore.

"ORB" IRON—Over Eighty Years in use

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 yards 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 $\frac{1}{2}$ 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	$\frac{1}{8}$ inch
5	30 "	$\frac{1}{4}$ "
10	40 "	$\frac{3}{8}$ "
20	50 "	$\frac{1}{2}$ "
50	100 "	$\frac{3}{4}$ "
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.
$\frac{1}{8}$	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				

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

British Weights and Measures

One ton of square timber = 50 cubic feet.

The English shipping ton = 40 cubic feet. (Merchantable timber 42 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 $\frac{1}{4}$ Stones	1	Pig of Iron.
8 Pigs	1	Fother.
28 lbs. of Wool	1	Tod.
2 Weyes (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.

British Weights and Measures—Continued

MEASURE OF CAPACITY.

4 Gills	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	"	1 Furl'g
12 Inches	"	1 Foot	40 Rods	} "	1 Mile
18 Inches	"	1 Cubit	8 Furlongs		
36 In. or 3 Ft.	"	1 Yard	80 Chains		
5½ Yards	"	1 Rod,	320 Rods, or	} "	1 Mile
		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		" The earth's circumference.
60 nautical miles	}	
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		"	1 Common Year
365 $\frac{1}{4}$ Days		"	1 Leap Year
366 Days		"	1 Tropical Year
365d. 5h. 48m. 46s.		"	

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.

1 Millimetre=	1/25 of an Inch.
2 $\frac{1}{2}$ Centimetres =	1 Inch.
1 Metre =	39 $\frac{3}{8}$ Ins. (3ft. 3 $\frac{3}{8}$ in.)
1 Kilometre =	5 Furlongs.
1 $\frac{1}{2}$ Kilometre =	1 Mile.

AVOIRDUPOIS MEASURE.

1 Kilogramme =	2 $\frac{1}{2}$ lbs.
1000 Kilogrammes =	1 ton.

SQUARE MEASURE.

6 $\frac{1}{2}$ sq. Centimetres=	1 sq. in.
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 Centigramme.
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.

WEIGHTS AND MEASURES OF COINS.

Weights and Measures:—A penny weighs $\frac{1}{3}$ oz. or 10 grammes and measures 1/10th foot in diameter.

A halfpenny weighs $\frac{1}{6}$ oz. and measures 1in. in diameter.

A French centime weighs a gramme; its diameter equals a centimetre and 100 in a row equal a metre.

One centimetre = 10 millimetres = 4/10th of an inch; or 2 $\frac{1}{2}$ centimetres = 1 inch.

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 trapezoid = $\frac{1}{2}$ 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 parallelopipedon — 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.

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

6ft. 9in. depth.

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

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

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

76ft. + 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 + 7,296 sum of top and bottom areas = 20,040ft.

20,040 x 6.9 depth $\div 6$ ft., 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 x $4\frac{1}{2}$ x 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 $1\frac{1}{4}$ 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.

and even quality, is a perfect Roofing Sheet.

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 mixer, 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	$7\frac{3}{8}$	$11\frac{3}{8}$	$22\frac{3}{8}$
1, 2, 4	$5\frac{1}{4}$	$11\frac{1}{4}$	24
1, $2\frac{1}{2}$, 5	$4\frac{3}{4}$	$12\frac{3}{4}$	$24\frac{1}{2}$
1, 3, 6	4	$12\frac{3}{4}$	$24\frac{1}{2}$

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

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.

LYSAGHT



AUSTRALIA



“ORB” IRON is still the Best in the World.

Colouring of Cement Mortar

For concrete restoration of footpaths, walls, fish ponds, etc.

As Portland cement is strongly basic in character and contains free lime, the range of pigments is confined to basic oxides and some of the ochres which are unaffected by lime known as “Lime-proof.”

Ochre is usually a clayey earth impregnated with an oxide, and should be used with caution, as an excess of ochre will seriously reduce strength.

A pure white is only obtained by use of white Portland cement mixed with either white sand, crushed white quartz, ground marble or ground white limestone.

Following are pigments most suitable for use:—

Colour.	Pigment.	Lbs. colour per bag cement (94 lbs.)
Black	Germanton black or Manganese di-oxide Note.—Ordinary lamp black is unsatisfactory.	10-12
Blue	Ultramarine blue	5-6
Green	Light—Ultramarine green Medium—Lime green Dark—Chromium oxide	5-6 7-9 8-10
Red	Iron oxide or crimson lake with alumina base	4-6
Bright Red	Pompeian or English red	6-7
Sandstone	Red-purple—oxide of iron	4-6
Brown	Roasted iron oxide or brown ochre	6-8
Yellow or Buff	Yellow ochre or barium chromate	6-8

A steel floating trowel gives a darker colour than a wooden float.

A concrete cured in sunlight will give a lighter colour than one cured in the shade.

Trowelling on partly hardened surfaces causes colour blotches.

Every sheet of LYSAGHT'S “ORB” and “QUEEN'S HEAD” Iron is BRANDED AND GUARANTEED. If sheets of faulty manufacture are inadvertently delivered they will be replaced free of charge.

“ORB” IRON. You know it at once by its appearance.

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.

DISCRIMINATING BUYERS INSIST THAT THEIR TANKS BE MADE FROM LYSAGHT'S “TANK-MAKING” SHEETS BECAUSE THE LIFE OF SUCH TANKS IS GUARANTEED BY JOHN LYSAGHT (AUSTRALIA) PTY. LIMITED. (See page 37).

AREA AND POPULATION

State or Territory	Year of Formation into Separate Colony or Territory	Present Area in Square Miles	Population 1933 and 1937	
			Census 1933	Estimated 31/3/37
N.S.W.	1786	309,432	2,600,847	2,689,222
Vic.	1851	87,884	1,820,261	1,856,096
Q'ld.	1859	670,500	947,534	984,824
S.A.	1834	380,070	580,949	588,395
W.A.	1829	975,920	438,852	452,580
Tas.	1825	26,215	227,599	233,191
N. Ter.	1863	523,620	4,850	5,258
F.C.T.	1911	940	8,947	10,145
Total ..	—	2,974,581	6,629,839	6,819,711

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

POPULATION AND VITAL STATISTICS

AUSTRALIA, 1921 to 1936

Heading.		1921	1931	1936
Population at 31st Dec. (,000 omitted)	Males ..	2,799	3,332	3,446
	Females .	2,711	3,220	3,360
	Total ..	5,510	6,552	6,806
Births	Males ..	70,039	61,021	
	Females .	66,159	57,488	
	Total ..	136,198	118,509	116,073
	Rate ..	25.0	18.2	17.1
Marriages	No.	46,869	38,882	58,709
	Rate ..	8.6	6.0	8.7
Deaths	Males ..	30,652	31,796	
	Females .	23,424	24,764	
	Total ..	54,076	56,560	63,932
	Rate ..	9.9	8.70	9.4
Deaths of children under one Year	Males ..	5,111	2,889	
	Females .	3,841	2,103	
	Total ..	8,952	4,994	4,778
	Rate ..	65.7	42.1	41.2
Natural Increase ..		82,122	61,949	
Rate of Natural Increase ..		15.05	9.53	

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..

provide employment for Australian workmen.

Government Railways Mileage as at 30/6/36

Government	Gauge			2ft. 6in. and under Miles	Total Mileage all Gauges	Cost of Construct'n & Equip-ment 1935-36
	5ft. 3in. Miles	4ft. 8½in. Miles	3ft. 6in. Miles			
Federal .	—	1,056.79	1,087.91	—	2,144.70	£,000 15,900
N.S.W. .	—	6,124.19	—	—	6,124.19	143,843
Vic. . .	4,599.00	—	—	121.77	4,720.77	76,534
Q'land .	—	68.82	6,467.57	†30.26	6,566.65	36,265
S.A. . .	1,451.24	—	1,078.11	—	2,529.35	29,066
W.A. . .	—	—	4,358.34	—	4,358.34	25,298
Tas. . .	—	—	633.56	†11.33	644.89	6,672
Total .	6,050.24	7,249.80	13,625.49	163.36	27,088.89	337,941*

* Includes £4,362,500 cost of Grafton-South Brisbane line, not apportioned to States. † 2ft. gauge.

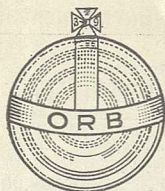
OCCUPATION OF THE POPULATION—AUSTRALIA, CENSUS OF 1921 AND 1933.

(Exclusive of full-blood Aborigines.)

Class of Occupation	Census, 1921	Census, 1933	Increase* during 12 Years 1921-1933
Fishing and Trapping ..	10,752	14,611	3,859
Agricultural and Pastoral, &c.	481,355	547,787	66,432
Forestry	30,280	26,133	— 4,147
Mining, &c.	66,766	68,520	1,754
Industrial—			
Manufacturing	445,574	511,511	65,937
Building	95,274	107,446	12,172
Roads, Earthworks, &c. ..	137,106	217,656	80,550
Other	39,852	29,558	—10,294
Total Industrial ..	717,806	866,171	148,365
Transport and Communication	207,737	223,893	16,156
Commerce, &c.	330,678	451,172	120,494
Public Administration, &c. ..	215,229	232,212	16,983
Entertainment, &c.	17,830	24,250	6,420
Domestic Service	209,814	242,378	32,564
No Industry, &c.	61,414	619,430	134,016
Pensioners	(c)	263,064	(c)
Dependants	3,086,073	3,474,218	388,145
Total	5,435,734	6,629,839	1,194,105

(a) Minus sign (—) denotes decrease. (b) Includes unemployed persons for whom industry was not stated; also a number who were described as independent and who have been included tentatively pending further analysis. (c) Comparable figures not available.

LYSAGHT



GALVANIZED **CORRUGATED TANKS**

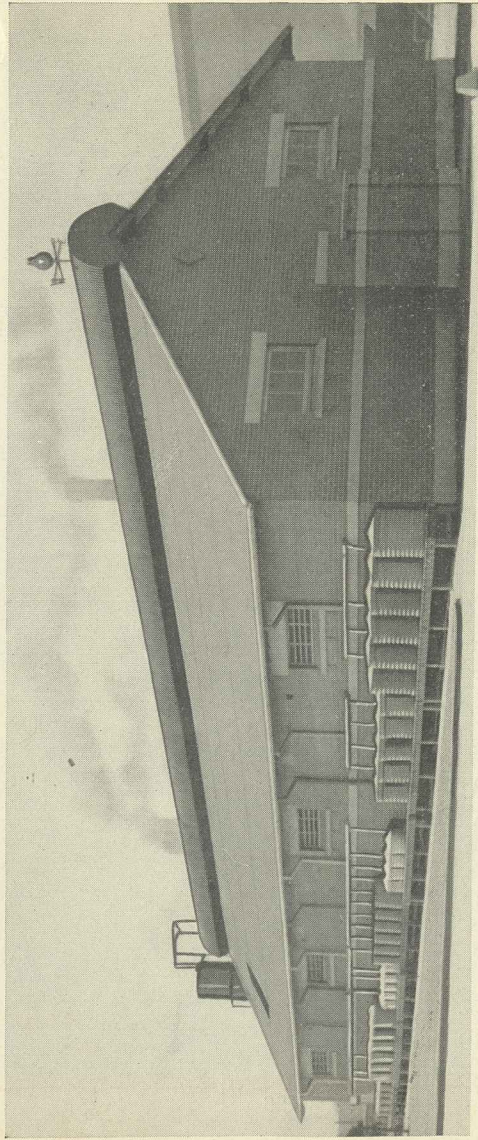
RECOMMENDATIONS

**AUSTRALIA
TANK MAKING**

1. Use only LYSAGHT'S GUARANTEED "ORB" TANKMAKING SHEETS (see pages 36 to 42).
2. To preserve the heavy coating of Zinc, curve sheets gently and gradually.
3. Coat the inside before using, with a paint made of $2\frac{1}{2}$ lbs. of Cement to one pint of Boiled Linseed Oil, to which has been added 1 oz. of Gold Size.
4. Where practicable, install in shade.
5. Provide Strainers to prevent contamination by leaves.
6. Where covered tops are desired, these should be conical in form and removable, *with ample ventilation at apex.*
7. All Tanks should be fed direct from the supply, and not from connected tanks. If connection is essential, direct feeding to each tank should be provided as well.
8. In case of early failure of tank, advise the nearest office of John Lysaght (Australia) Pty. Ltd., because renewal in the same form may give a repetition of the first experience. In very few cases has early failure been entirely due to any fault in the galvanized sheet.

JOHN LYSAGHT (Australia) PTY. LIMITED

Sydney - Melbourne - Brisbane - Adelaide - Fremantle



Batteries of experimental tanks under control of the Research Department, Lysaght's Newcastle Works.

The
LYSAGHT GUARANTEE
of
QUALITY

is maintained by the closest care and attention to every manufacturing detail throughout all departments, and both

BLACK AND GALVANIZED SHEETS

on which the slightest faults are detected, are rejected and sold as

"BY-PRODUCTS"

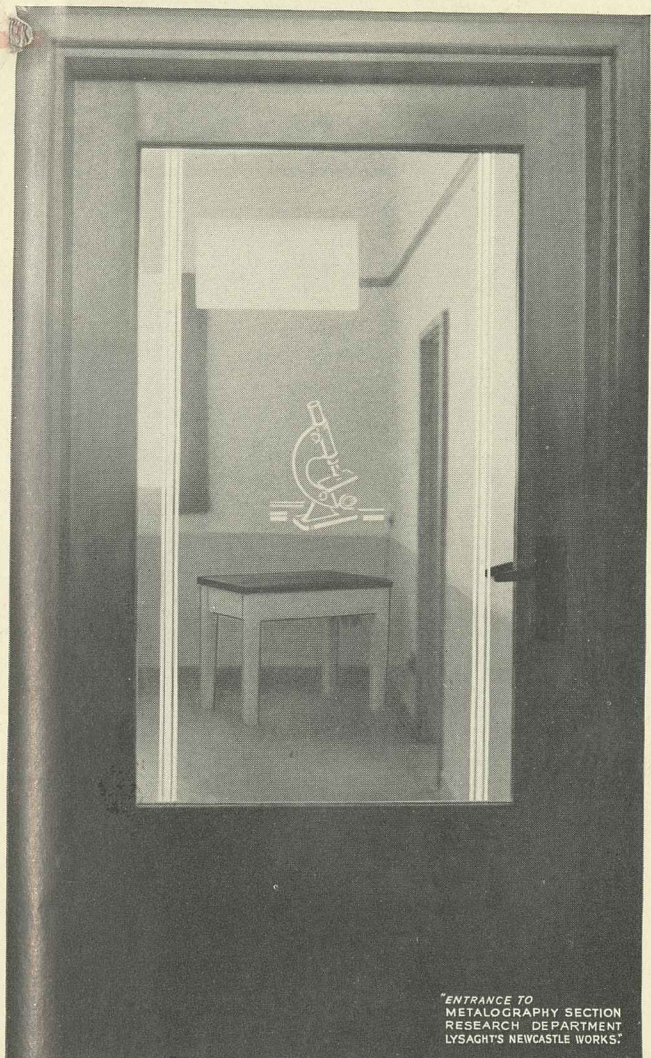
The planned use of **LYSAGHT'S BY-PRODUCT QUALITIES** of Black and Galvanized Sheets will considerably reduce the "costs" in sheet metal factories and on construction work (see inset at back of book).

Write for quotations for Corrugated or Plain Sheets and special cut sizes in strip, rectangles or circles in

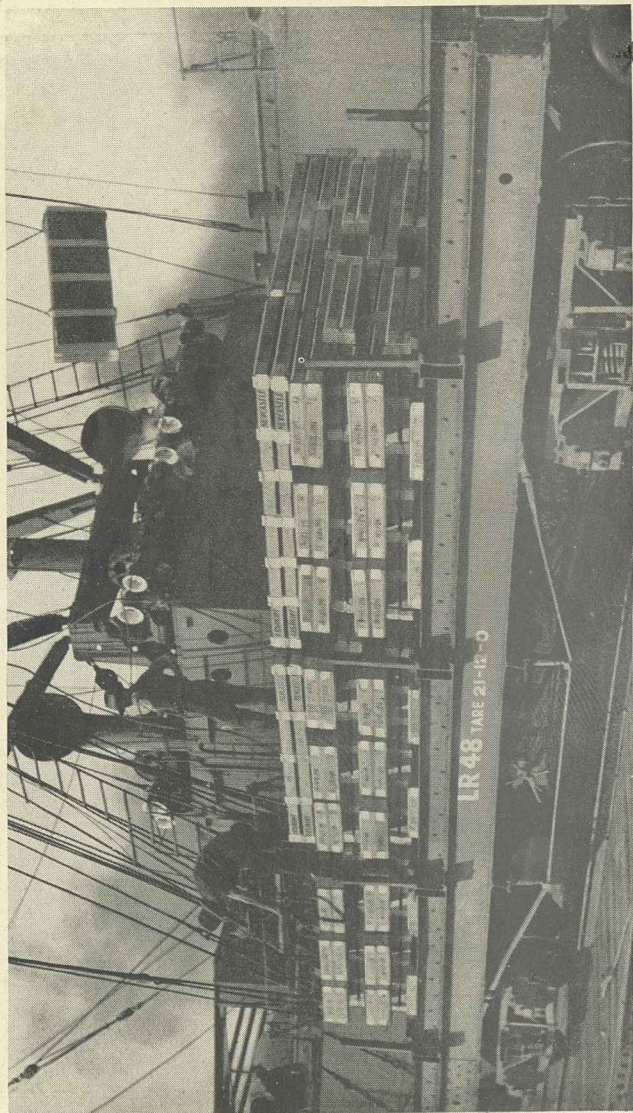
BLACK, GALVANIZED or the new Lysaght Rust Resisting Sheet Metal **"ZINCANNEAL."**

JOHN LYSAGHT (Australia) PTY. LIMITED

Sydney - Melbourne - Adelaide - Brisbane - Fremantle



"ENTRANCE TO
METALOGRAPHY SECTION
RESEARCH DEPARTMENT
LYSAGHT'S NEWCASTLE WORKS."



LYSAGHT



AUSTRALIA

Loading Galvanized Iron at the B.H.P. Wharf, Newcastle, for shipment to interstate ports.

Note the extreme care taken in slinging the cases, which have been pre-arranged in one-ton lifts.

The rail trucks employed are privately-owned by and were expressly designed and built in Australia for Lysaght's Newcastle Works.



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

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. only, 5 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. ..	1 lb. 2 lb.
Newspapers ..	To N.Z.* and Fiji.	To U.K. and Irish Free State.	To all other places beyond the Commonwealth.	Maximum Weight.
	1d. per 6oz. ..	Via France or America, 1d. per 4oz.	Printed Matter rates apply.	4½ lb.
		Via all-sea route, 1d. per 6oz.		5 lb.
Parcels ..	Enquire at Post Office.			

* 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.

entirely from Australian Raw Materials.

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, 1½d.; 5/-, 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.

“ORB” IRON is unrivalled for

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.
- (5) Social greeting telegrams.
- (6) Easter 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.

Quality, Durability 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	Delivery effected on the morning of the second day following that of lodgment.	

* 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.

AIR MAIL SERVICES.

An extensive network of air mail services to overseas countries, including Papua and New Guinea and within the Commonwealth and the various States thereof, likewise to New Zealand, is now available, full details of which may be obtained at all official Post Offices.

Postal articles (except parcels) for despatch by air mail must bear the blue air mail label in the top left-hand corner of address side, or be prominently endorsed "By Air Mail" (preferably in red ink) and prepaid at the prescribed rates of postage.

GRAIN SILOS

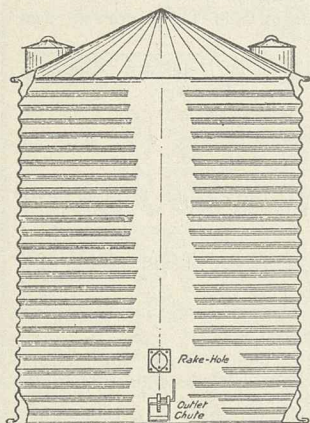
ORDINARY TYPE (Tank Construction)

GRAIN SILOS styled "Ordinary Type" are constructed in a manner similar to an ordinary Corrugated Iron Water Tank.

As in Water Tank construction, there are two methods of fabrication, one being for the Soldered Type and the other the Bolted Type. For the larger size Silos (say from 800 bushel capacity and upwards) the Bolted method is recommended, as the difficulties of soldering increase with the size of the Silo because of the awkwardness in handling. For the smaller sizes, the type is best determined by the builder.

Consistent with the size of the Silo, the corrugated curved iron for the sides and the plain iron for the top and bottom is increased in weight and thickness, calculated to provide the necessary strength and stability.

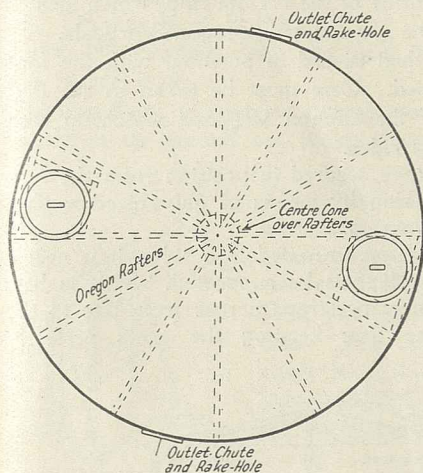
The makers supply the Corrugated Iron already curved, and the materials include plain iron for the top and bottom, solder, rivets, packing for joints, bolts and nuts, etc.



For further information apply to
JOHN LYSAGHT (AUST.) PTY. LTD., SYDNEY.

GRAIN SILOS

N.S.W. AGRICULTURAL DEPARTMENT'S SPECIAL DESIGN



The Department of Agriculture has interested itself in the conservation of grain by the use of Galvanized Iron Grain Silos, and in January, 1937, the Department published in the Agricultural Gazette, under the name of Mr. L. N. Jones, A.R.A.I.A., a de-

tailed explanation of the construction of this specially-designed Silo.

The illustration reproduced here shows the construction, which consists of Oregon Verticals, having one edge corrugated to fit the corrugated iron, designed to support the body of the Silo and to prevent the iron "concentinering." Oregon Roof Rafters to carry the roof, Airtight Manholes, Rake-hole Fittings and Outlet Chutes are provided.

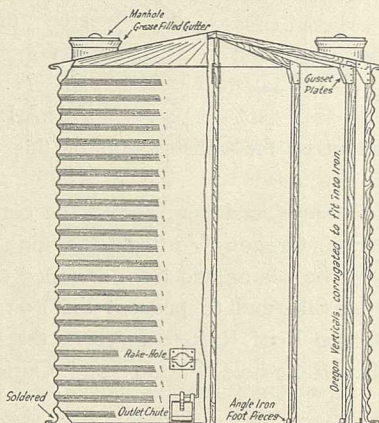
GRAIN SILOS (continued)

CONSTRUCTION.—The procedure of construction follows the completion of the bottom ring, to which is fixed the Silo bottom (as in ordinary tank building practice) by marking off the required number of equal spaces around the inside of the bottom ring, which locates the positions for the Corrugated Oregon Verticals.

The Verticals are then placed in position, with the foot angle pieces attached. Care must be taken to see that the corrugations of the Oregon Verticals match up with the corrugated iron sides.

The Verticals are then secured in position from the outside of the bottom ring by means of galvanized roofing screws and lead washers.

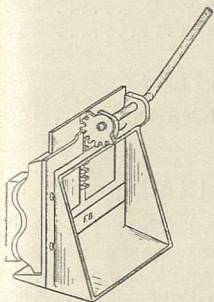
Before building up the corrugated iron sides, it is necessary that the vertical posts be supported. This is best done by using temporary straps across from one to the other, at the same time keeping the posts perfectly vertical all ways.



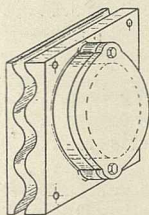
GRAIN SILOS (continued)

The Silo body is then built up and the curved sheets fixed to the Oregon Verticals with screws and lead washers, as one would fix an iron roof. Joint compound is provided for use between the sheets at the laps, which are drawn tightly together by galvanized bolts and nuts. The Oregon Roof Rafter is cut to an apex at the centre (10 degrees rise) and held in position by the iron centre cone.

The Iron Roof is made in one or two sections (as preferred) on the ground, and fixed in position as illustrated.



OUTLET CHUTE



RAKE-HOLE FITTING

The Outlet Chute, made of cast iron, is a good strong job. The Chutes are fixed in position by means of bolts and corrugated back plates, which fit inside the Silo. The flow of grain can easily be regulated by the sliding gate. Two Chutes are supplied for each Silo.

The Rake-hole Fitting is also of cast iron, and made in two halves. It is fixed in a position just above the Outlet Chute, with bolts and packing, in which respect it resembles an ordinary corrugated tank flange. Two Fittings are supplied for each Silo.

For further information apply to
JOHN LYSAGHT (AUST.) PTY. LTD., SYDNEY.

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
Trans-Darling North	916
Trans-Darling Sth.	1018
Cis-Darling North	1384
Cis-Darling South	1254
Upper Bogan	1764
Lower Macquarie	1794
West Gwydir	2020
East Gwydir	2356
Nandewars	2846
Liverpool Plains	2709
West New England	3133
East New England	3754
Clarence	5373
Orara	5177
Manning	4909
Hunter	3529
Cudgegong	2632

DISTRICT	Normal fall in points
Central Plateau	3475
Warrumbungles	
Highlands	2750
Warrumbungles	
Lowlands	2202
Sydney	4812
Nepean	3187
Illawarra	3989
South Coast	3590
Upper Murrumbidgee	2531
Snowy Mountains	4060
Jugiong	3031
Tumut	2169
East Riverina	1790
West Riverina	1379

VICTORIA

Malee North	1275
Malee South	1385
Wimmera North	1626
Wimmera South	1986
Lower North	1697
Melbourne	2543
Upper North	1996
Lower North-East	2866

Upper North-East	4329
East Gippsland	3021
West Gippsland	3415
East Central	3392
West Central	2536
North Central	2615
Volcanic Plains	2381
West Coast	2953

TASMANIA

Northern	4115
East Coast	3226
Midland	2163
South-Eastern	2798
Derwent	2551
Central Plateau	3154

West Coast—	
Mountain Region	8512
King Island	3717
Flinders Island	2769
Maria Island	2493
Hobart	2329

ANALYSES OF

FERTILIZERS

Fertilizers	Phosphoric Acid				Nitrogen			Potash	General Recommendations for Use
	Water Soluble	Citric Soluble	Citric Insol.	Total	As Sulp. of Amm.	Organic	Total		
22 % Superphosphate — 48 % Phos. of Lime	20.50	.50	1.00	22.00	—	—	—	—	Wheat and other cereals for grain; lucerne when planting; top-dressing of pasture land.
Basic Phosphate	—	17.00	—	17.00	—	—	—	—	Substitute for Superphosphate on soils deficient in lime.
No. 2—Super-Ammonia (6:1)	17.60	.40	—	18.00	3.00	—	3.00	—	Hay crops, turnips, rape, green manure crops.
No. 3—Complete Fertilizer ..	5.00	9.50	—	14.50	3.50	—	3.50	2.00	Maize (cob) on heavy soils; cabbages, cauliflowers on soils rich in humus.
No. 5	13.75	.35	—	14.10	4.00	—	4.00	7.00	Citrus fruits on soils rich in humus, pip fruits—grapes, potatoes, tomatoes and passion fruit, peas and beans on light soils.
No. 6	14.75	.25	—	15.00	4.00	—	4.00	4.00	Melons, pumpkins and onions.
No. 7	6.00	3.10	3.00	12.10	1.00	2.00	3.00	7.00	Substitute for No. 5 mixture on light and sandy soils deficient in humus.
No. 8—Super-Ammonia (4:1)	16.40	.40	—	16.80	4.10	—	4.10	—	Grass, green fodder; potatoes as recommended by Department of Agriculture.
No. 9 (2:1)	13.60	.30	—	13.90	7.00	—	7.00	—	Special Pasture Fertilizer, Coastal Districts—Autumn application.
No. 11—Complete	15.50	.40	—	15.90	2.00	—	2.00	4.00	Peas, beans and other legumes.
No. 12	5.00	4.40	4.20	13.60	3.00	2.50	5.50	5.00	Substitute for Nos. 3 and 6 mixtures on light and sandy soils.
No. 13—Super-Ammonia (3:1)	15.30	.40	—	15.70	5.10	—	5.10	—	Pastures, autumn application on first-class country. Potatoes as recommended by New Zealand and Victorian growers.
No. 14—Complete	4.00	4.10	4.00	12.10	1.50	2.00	3.50	12.00	Bananas.
No. 15 .. (6:1:1) ..	15.30	.30	—	15.60	2.50	—	2.50	6.10	{ Vineyards—Manured in spring. Orchards—Manured in spring.
No. 16 .. (5:2:1) ..	12.80	.30	—	13.10	5.25	—	5.25	6.10	Vineyards—Manured in spring.
No. 18 .. (2:2:1) ..	8.20	.20	—	8.40	8.20	—	8.20	10.40	{ Citrus—Manured in spring and autumn. Orchards—Manured in spring and autumn. Vegetables.
No. 19—Super-Ammonia (1:1)	10.25	.20	—	10.45	10.50	—	10.50	—	Pastures, fodder crops, stubblesown oats.
7-7-7—Complete	7.00	—	—	7.00	7.00	—	7.00	7.00	Sugar cane.
B.3	3.00	3.50	3.50	10.00	4.75	2.25	7.00	10.00	Sugar cane and bananas.

LYSAGHT'S GALVANIZED IRON

whether plain or corrugated is undoubtedly one of the greatest contributions made by secondary industry toward improving the conditions of primary producers.

As a building material for roofing and siding galvanized iron is incomparable.

As a water conservation factor galvanized iron tanks have stood the test of time, and under certain conditions are guaranteed by the makers (see page 37).

As a fodder conservation factor galvanized iron is becoming more widely used every day.

Our illustration is of an Orb Corrugated Iron Vermin-proof Grain Silo on the property of A. H. Nixon, Oakhampton, Upper Manilla, N.S.W., constructed by J. Milne-Olley, Yarrowonga, Victoria, by whom the following data is supplied:—

Height 18ft; diameter 24ft. 3in.

Bottom row of "Orb" Corrugated Sheets—
22 gauge.

Top row of "Orb" Corrugated Sheets—24 gauge.
Binders and all internal struts of Angle Iron.

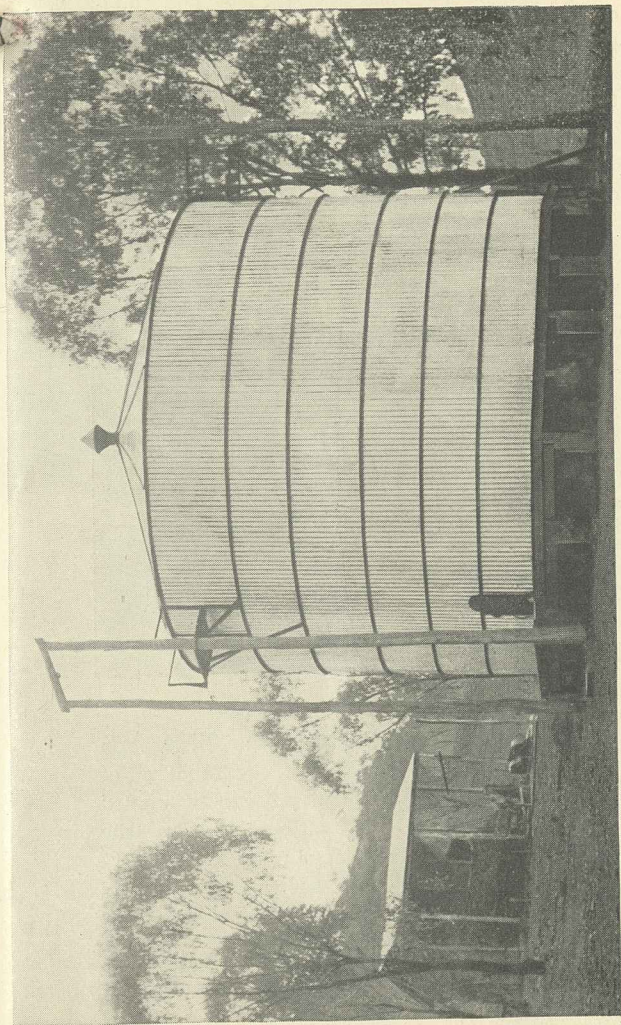
Internal dividing walls provide three compartments for separate storage of different types of grain, each compartment naturally having its own inlet in the roof and draw-off schutes at the bottom.

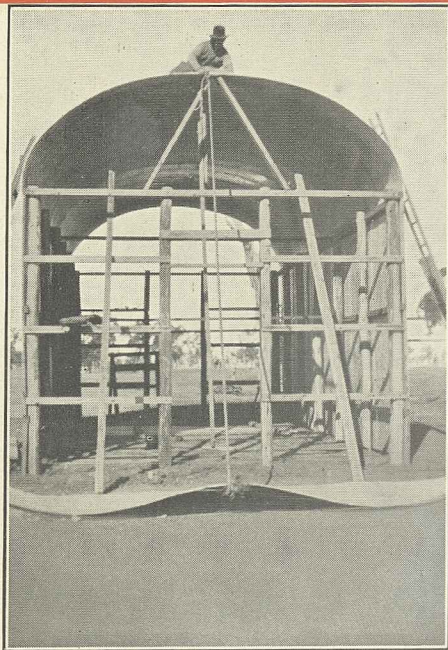
Capacity—6,000 bushels.

For whatever purpose it is recommended

LYSAGHT'S GALVANIZED IRON

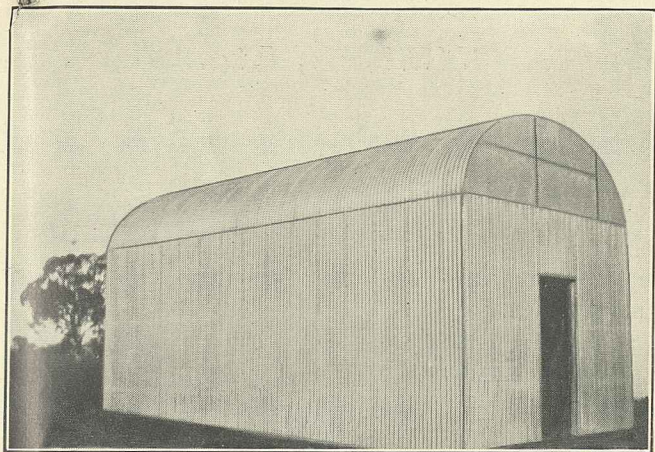
is dependable, durable and economical, and is fully guaranteed by the makers.





This useful and unique illustration of the extraordinary adaptability of Lysaght's "ORB" Galvanized Corrugated Iron to meet the various needs of the man on the land is supplied by courtesy of the constructors, Messrs. R. Nowland and R. Aitken and The Frogmore Park Pastoral Company.

Imitations. There's nothing quite so good.



A new type of grain shed, specially designed and built to be :—

- (a) Water-tight
- (b) Air-tight

to provide economical fumigation for weevil in bagged grain.

The ground dimensions are 30ft. x 15ft.

Material used is Lysaght's 26g. Orb Corrugated Iron.

The walls being 11ft. x 26g. Red Orb.

The roof being two sheets 11ft. x 26g. Orb, curved elliptically.

The estimated capacity is 950 three-bushel bags of wheat.

The elliptical construction of the roof makes it self-supporting and obviated the use of cross beams except at the end of the shed.

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 5/8	..	..	..	2800
6 x ½	..	..	..	3400
6 x ¾	..	..	..	4800

Weatherboards, single.

..	..	..	..	3100
----	----	----	----	------

Oregon No. of super. feet

..	..	..	..	790
----	----	----	----	-----

V.D.L. Hardwood

..	..	..	..	450
----	----	----	----	-----

Jarra

..	..	..	..	360
----	----	----	----	-----

Iron Bark

..	..	..	..	310
----	----	----	----	-----

Black Butt

..	..	..	..	333
----	----	----	----	-----

Shelving (American) 12 x 7/8

..	..	..	..	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 1½ in.

No. to ton	..	..	..	55
------------	----	----	----	----

Doors 6ft. 8in. x 2ft. 8in. x 1¼ in.

..	..	..	..	70
----	----	----	----	----

Doors 6ft. 6in. x 2ft. 6in. x 1½ in.

..	..	..	..	58
----	----	----	----	----

Doors 6ft. 6in. x 2ft. 6in. x 1¼ in.

..	..	..	..	75
----	----	----	----	----

SUPERFICIAL FEET IN A BOARD OR PLANK

is known by multiplying the length in feet by the breadth in feet 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.

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

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)
Zinc Dust Paint.....	420/445 (see page 45)

“ORB” IRON is still the Best in the World.

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 36 to 42).

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.

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 inside 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).

"ORB" IRON. You know it at once by its appearance.

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"** and **"QUEEN'S HEAD"** Iron is **BRANDED AND GUARANTEED**. If sheets of faulty manufacture are inadvertently delivered they will be replaced free of charge.

CALENDAR 1939

JANUARY.		FEBRUARY.		MARCH.		APRIL.	
S	1 8 15 22 29 ..	..	5 12 19 26 ..	..	5 12 19 26 ..	..	2 9 16 23 30
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T	5 12 19 26 ..	..	2 9 16 23 ..	..	2 9 16 23 30 ..	..	6 13 20 27 ..
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MAY.		JUNE.		JULY.		AUGUST.	
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CALENDAR 1940

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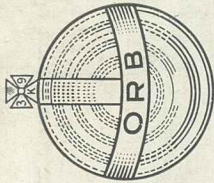
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LYSAGHT



AUSTRALIA

Lysaght's

PORT KEMBLA
WORKS



PORT KEMBLA WORKS

The establishment of even one large industrial enterprise in a district brings many advantages to and causes many changes in its locality.

These effects are correspondingly increased, when around the original works subsidiary enterprises are created.

As the Steel Works at Newcastle have practically changed the whole perspective of that town and district, so also in due course will the Steel Works at Port Kembla completely change the rural environment of that area to one of a nationally important industrial nature.

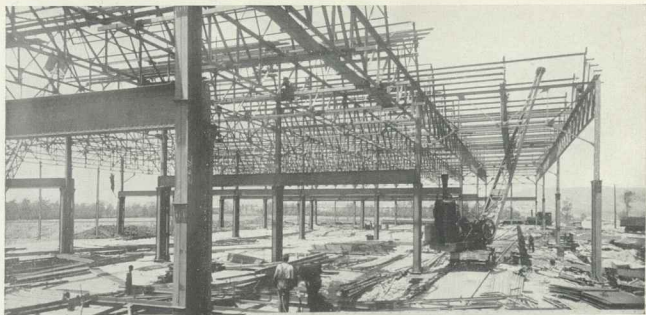
While space does not permit of a general review of all the industrial enterprises now in course of establishment at Port Kembla, we hope that the illustrations herein will help to convey to our readers some idea of the gigantic proportions of our own new works at Port Kembla, the capital outlay on which will be approximately £600,000.



By November, 1937, indications of things to come were evident—foundations, filling and fabrication all going ahead simultaneously.



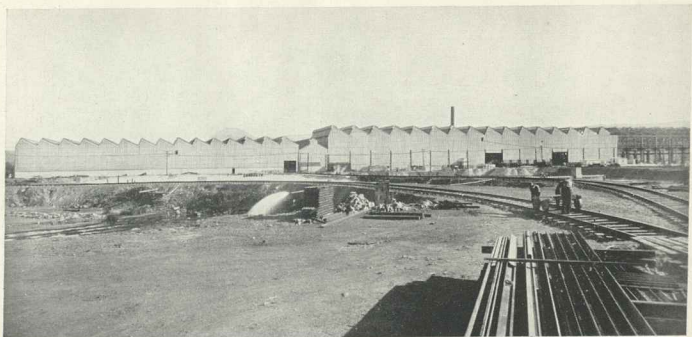
The site of Lysaght's Port Kembla Works, April, 1937, showing the pile driver at work on the foundations, and the encroachment of the filling, which was carried right across the site to the top level of the piles. Approximately 310,000 cubic yards of filling were used, raising the original ground level an average of 10 feet. The Australian Iron and Steel Works are seen in the background.



January, 1938, sees a "tangled web" of steel work being woven into shape by skilled riggers. Nearly 3,000 tons of structural steel were used in the construction of the works.



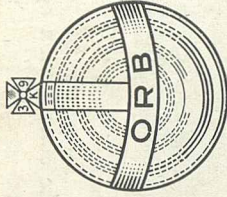
Three months later shows the construction department's store almost completed, and hundreds of reinforced concrete piles ready for driving. Over 1,500 of these piles were driven for foundations, each pile weighing approximately two tons and measuring 40 feet in length by 12 inches square, in addition to which over 9,000 cubic yards of concrete foundation were poured. Note the height to which the floor level has been raised.



Progress as at 10th March, 1938. These buildings alone cover an area of over 23,000 square yards, and required 100 tons of 24g. "Unbranded" corrugated iron for roofing and siding (see page 22).

There are also over 34,000 square feet of glazing in the roof. Three miles of N.S.W. standard gauge railway track are required to service the internal transport requirements of the works.

LYSAGHT



AUSTRALIA

Lysaght's

PORT KEMBLA
WORKS





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