

THE
REFERENCE

A HANDBOOK OF USEFUL
INFORMATION



FOURTEENTH EDITION
(WITH APPENDIX)

With the Contributions of
JOHN L'EAGHT (A.M.) ETC.

Specify "QUEEN'S HEAD." It's bright and it lasts!

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.		
	24in.	30in.	36in.		24in.	30in.	36in.
14	30	23	19 shts.	14	37	$48\frac{2}{3}$	59 lbs
16	36	29	24 "	16	31	$38\frac{2}{3}$	$46\frac{2}{3}$ "
18	47	37	31 "	18	24	$30\frac{1}{4}$	36 "
20	57	45	38 "	20	$19\frac{1}{2}$	25	$29\frac{1}{2}$ "
22	74	59	49 "	22	15	19	23 "
24	86	69	57 "	24	13	$16\frac{1}{4}$	$19\frac{2}{3}$ "
26	120	97	80 "	26	$9\frac{1}{3}$	$11\frac{1}{2}$	14 "
28	140	112	92 "	28	8	10	$12\frac{1}{4}$ "
30	160	130	112 "	30	7	$8\frac{3}{4}$	10 "

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



"QUEEN'S HEAD"

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 Iron-workers everywhere.

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.



"FLEUR-DE-LIS"

LYSAGHT'S BRANDS of Plain Iron are obtainable to order in any gauge in sheets up to 12 feet long and 56 inches wide, subject to a maximum area of 48 square feet.

Ashtons

Donated by
Mr Tom Atkinson.
"Ashtons Steel"
Reekon.

PLEASE NOTE!
That Lysaght's Galvanised
Plain and Corrugated Iron, and Black
Sheets, are stocked by all the leading
Ironmongers, Timber Merchants and Storekeepers
throughout the Commonwealth, from whom
current prices can always be obtained
upon application.

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

MEMORANDA.

THE REFEREE

14TH EDITION

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

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

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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 more than half a century.

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, G.P.O., Sydney.

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The Best is the Cheapest. Quality is

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We specially draw your attention to

REMEMBERED long after Price is forgotten.

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

CALENDAR 1925

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

CALENDAR 1926

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

beautiful appearance. It's bright and it lasts!

The Evolution of Galvanised Iron

T 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 half-century which has since elapsed, greatly improved methods for its production, and extreme care displayed in its manufacture, have secured for **LYSAGHT'S GALVANIZED IRON** an unrivalled reputation throughout the world, and so universally has it been adopted to meet the needs of modern civilization, that it may with truth be said that the sun is always shining on "ORB" IRON.

We are pleased to record that the major portion of the heavy sheets of "Elephant Iron," and the more familiar corrugated curved sheets so extensively used for roofing Hutments and Dug-outs on the Western and other Fronts during the Great War were manufactured by Messrs. John Lysaght Limited, of Bristol, Newport and Scunthorpe (Eng.).

Whether made in England or Australia, "ORB" IRON

LYSAGHT'S TRADE MARKS.

"ORB" Galvanized



CORRUGATED IRON is favourably known and used throughout the world. Its uniformly reliable character is recognised by consumers everywhere. There are many imitations, but to those who compare its covering capacity with other nominally cheaper brands, its superiority in all respects is at once apparent.

LYSAGHT



Lysaght "ORB" Australia

The highest grade of galvanized corrugated sheet produced at Lysaght's Newcastle Works, and which will be found in every respect the equal of its English namesake.

AUSTRALIA



LYSAGHT "GUINEA."

A superior sheet of English Manufacture, second only to "Orb" in quality and appearance. Recommended for use when price is a consideration.



"QUEEN'S HEAD"

GALVANIZED TINNED SPECIAL FLAT SHEETS, manufactured in England and Australia.

This brand will stand the severest tests, and commands the confidence of iron-workers everywhere.

"QUEEN'S HEAD"



"FLEUR-DE-LIS"

GALVANIZED TINNED FLAT SHEETS, manufactured in England and Australia, enter largely into consumption in the lighter gauges, for that class of work in which a somewhat cheaper sheet is asked for. It will be found equal to all such requirements.

"FLEUR-DE-LIS"

is still the Best in the World.

Galvanized Iron—Corrugated.

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

Length.	Gauges.					
	18	20	22	24	26	28
5 feet	42	53	66	83	116	132
6 feet	35	44	55	69	98	111
7 feet	30	38	47	59	84	95
8 feet	26	33	41	51	73	82
9 feet	23	29	36	45	65	74
10 feet	21	26	33	41	58	66
11 feet	19	24	30	38	54	62
12 feet	17	22	28	35	49	56

NOTE:—2 cwt. bundles contain approximately one-fifth of the above number of sheets.

Approximate weight per sheet in lbs. (based on above table to nearest $\frac{1}{4}$ lb.)

Gauge	5 ft.	6 ft.	7 ft.	8 ft.	9 ft.	10 ft.	11 ft.	12 ft.
18	26 $\frac{1}{2}$	32	37 $\frac{1}{2}$	43	49	53	58 $\frac{1}{2}$	64 lbs.
20	21	25 $\frac{1}{2}$	29 $\frac{1}{2}$	34	38 $\frac{1}{2}$	43	46 $\frac{1}{2}$	51 "
22	17	20 $\frac{1}{4}$	24	27 $\frac{1}{2}$	31	34	37 $\frac{1}{2}$	40 $\frac{1}{2}$ "
24	13 $\frac{1}{2}$	16 $\frac{1}{4}$	19	22	25	27 $\frac{1}{4}$	29 $\frac{3}{4}$	32 $\frac{1}{2}$ "
26	9 $\frac{1}{2}$	11 $\frac{1}{2}$	13 $\frac{3}{4}$	15 $\frac{1}{2}$	17 $\frac{1}{2}$	19 $\frac{1}{4}$	20 $\frac{3}{4}$	23 "
28	8 $\frac{1}{2}$	10	11 $\frac{3}{4}$	13 $\frac{3}{4}$	15 $\frac{1}{2}$	17	18 $\frac{1}{4}$	20 "

Cases of Ly saght's Brands of Corrugated Iron usually contain sheets in excess of the numbers given in above tables.

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. 1in. Cor.	28g. 1in. Cor.
Single Lap	1,600 sq. ft.	2,200 sq. ft.	2,327 sq. ft.	2,645 sq. ft.
Lap and half	—	2,000 "	—	—
Double Lap	1,400 "	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.

Every sheet of "ORB" Iron is its own best advertisement.

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.	8 8 Sheets 6 ft.	76 Sheets 7 ft.	66 Sheets 8 ft.	58 Sheets 9 ft.	52 Sheets 10 ft.
£14/0/-	2/7½	3/2	3/8	4/3	4/10	5/5
£14/10/-	2/8½	3/3½	3/10	4/4½	5/-	5/7
£15/0/-	2/10	3/5	3/11	4/6½	5/2	5/9
£15/10/-	2/11	3/6	4/1	4/8	5/4	5/11½
£16/0/-	3/-	3/8	4/2½	4/10	5/6	6/2
£16/10/-	3/1	3/9	4/4	5/-	5/8	6/4
£17/0/-	3/2½	3/10	4/6	5/2	5/10	6/6½
£17/10/-	3/4	4/-	4/1	5/4	6/-	6/9
£18/0/-	3/5	4/1	4/9	5/5½	6/2½	6/11
£18/10/-	3/6	4/2	4/10	5/7	6/5	7/1
£19/0/-	3/7	4/4	5/-	5/9	6/7	7/4
£19/10/-	3/8	4/5	5/2	5/11	6/9	7/6
£20/0/-	3/9	4/6½	5/3	6/1	6/11	7/8

22 G.

Price per ton	132 Sheets 5 ft.	110 Sheets 6 ft.	94 Sheets 7 ft.	82 Sheets 8 ft.	72 Sheets 9 ft.	66 Sheets 10 ft.
£14/0/-	2/11½	2/6½	3/-	3/5	3/10½	4/3
£14/10/-	2/2	2/7½	3/1	3/6	4/-	4/4½
£15/0/-	2/3½	2/9	3/2	3/8	4/2	4/6
£15/10/-	2/4	2/10	3/3	3/9	4/4	4/8
£16/0/-	2/5	2/11	3/5	3/11	4/5	4/10
£16/10/-	2/6	3/-	3/6	4/-	4/7	5/-
£17/0/-	2/7	3/1	3/7	4/2	4/9	5/2
£17/10/-	2/8	3/2	3/9	4/3	4/10	5/4
£18/0/-	2/9	3/3	3/10	4/4½	5/-	5/5½
£18/10/-	2/10	3/4	3/11	4/6	5/2	5/7
£19/0/-	2/10½	3/5½	4/0½	4/8	5/3	5/9
£19/10/-	2/11½	3/6½	4/2	4/9	5/5	5/11
£20/0/-	3/-	3/8	4/3	4/10½	5/7	6/1

Galvanized Iron—Corrugated.

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

24 G.

Price per ton			166 Sheets 5 ft.	138 Sheets 6 ft.	119 Sheets 7 ft.	102 Sheets 8 ft.	90 Sheets 9 ft.	82 Sheets 10 ft.
£	s.	d.						
18	0	0	2/2	2/7	3/0 $\frac{1}{2}$	3/7	4/-	4/5
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
19	0	0	2/3 $\frac{1}{2}$	2/9	3/2 $\frac{1}{2}$	3/9	4/3	4/8
19	10	0	2/4	2/10	3/3 $\frac{1}{2}$	3/10	4/4	4/9
20	0	0	2/5	2/11	3/4 $\frac{1}{2}$	3/11	4/5 $\frac{1}{2}$	4/11
20	10	0	2/6	3/-	3/5 $\frac{1}{2}$	4/-	4/7	5/-
21	0	0	2/6 $\frac{1}{2}$	3/0 $\frac{1}{2}$	3/6 $\frac{1}{2}$	4/2	4/8	5/1 $\frac{1}{2}$
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
22	0	0	2/8	3/2	3/8 $\frac{1}{2}$	4/4	4/10 $\frac{1}{2}$	5/4 $\frac{1}{2}$
22	10	0	2/8 $\frac{1}{2}$	3/3	3/9 $\frac{1}{2}$	4/5	5/-	5/6
23	0	0	2/9	3/4	3/10 $\frac{1}{2}$	4/6	5/1 $\frac{1}{2}$	5/7 $\frac{1}{2}$
23	10	0	2/10	3/5	4/-	4/7	5/2 $\frac{1}{2}$	5/9
24	0	0	2/10 $\frac{1}{2}$	3/6	4/0 $\frac{1}{2}$	4/8 $\frac{1}{2}$	5/4	5/10
24	10	0	2/11 $\frac{1}{2}$	3/7	4/1	4/9 $\frac{1}{2}$	5/5	6/-
25	0	0	3/-	3/7 $\frac{1}{2}$	4/2 $\frac{1}{2}$	4/10 $\frac{1}{2}$	5/6 $\frac{1}{2}$	6/1
25	10	0	3/1	3/8 $\frac{1}{2}$	4/3 $\frac{1}{2}$	5/-	5/8	6/2 $\frac{1}{2}$
26	0	0	3/1 $\frac{1}{2}$	3/9	4/4 $\frac{1}{2}$	5/1	5/9	6/4
26	10	0	3/2	3/10	4/5 $\frac{1}{2}$	5/2	5/10 $\frac{1}{2}$	6/5 $\frac{1}{2}$
27	0	0	3/3	3/11	4/6 $\frac{1}{2}$	5/3 $\frac{1}{2}$	6/-	6/7
27	10	0	3/3 $\frac{1}{2}$	4/-	4/7 $\frac{1}{2}$	5/4 $\frac{1}{2}$	6/1	6/8 $\frac{1}{2}$
28	0	0	3/4 $\frac{1}{2}$	4/0 $\frac{1}{2}$	4/8 $\frac{1}{2}$	5/6	6/2 $\frac{1}{2}$	6/10
28	10	0	3/5	4/1 $\frac{1}{2}$	4/9 $\frac{1}{2}$	5/7	6/4	6/11
29	0	0	3/6	4/2 $\frac{1}{2}$	4/10 $\frac{1}{2}$	5/8	6/5	7/1
29	10	0	3/6 $\frac{1}{2}$	4/3	4/11 $\frac{1}{2}$	5/9	6/6 $\frac{1}{2}$	7/2
30	0	0	3/7 $\frac{1}{2}$	4/4	5/0 $\frac{1}{2}$	5/10 $\frac{1}{2}$	6/8	7/4
30	10	0	3/8	4/5	5/1 $\frac{1}{2}$	5/11 $\frac{1}{2}$	6/9	7/5
31	0	0	3/9	4/6	5/2 $\frac{1}{2}$	6/1	6/10 $\frac{1}{2}$	7/6 $\frac{1}{2}$
31	10	0	3/9 $\frac{1}{2}$	4/7	5/3 $\frac{1}{2}$	6/2	7/-	7/8
32	0	0	3/10	4/7 $\frac{1}{2}$	5/4 $\frac{1}{2}$	6/3	7/1	7/9 $\frac{1}{2}$
32	10	0	3/11	4/8 $\frac{1}{2}$	5/5 $\frac{1}{2}$	6/4	7/2 $\frac{1}{2}$	7/11
33	0	0	3/11 $\frac{1}{2}$	4/9 $\frac{1}{2}$	5/6 $\frac{1}{2}$	6/5 $\frac{1}{2}$	7/4	8/0 $\frac{1}{2}$
33	10	0	4/0 $\frac{1}{2}$	4/10	5/7 $\frac{1}{2}$	6/6 $\frac{1}{2}$	7/5	8/2
34	0	0	4/1	4/11	5/8 $\frac{1}{2}$	6/8	7/6 $\frac{1}{2}$	8/3 $\frac{1}{2}$
34	10	0	4/2	5/-	5/9 $\frac{1}{2}$	6/9	7/8	8/5
35	0	0	4/2 $\frac{1}{2}$	5/1	5/10 $\frac{1}{2}$	6/10	7/9	8/6 $\frac{1}{2}$
35	10	0	4/3	5/1 $\frac{1}{2}$	5/11 $\frac{1}{2}$	6/11	7/10 $\frac{1}{2}$	8/8
36	0	0	4/4	5/2 $\frac{1}{2}$	6/0 $\frac{1}{2}$	7/0 $\frac{1}{2}$	8/-	8/9
36	10	0	4/4 $\frac{1}{2}$	5/3 $\frac{1}{2}$	6/1 $\frac{1}{2}$	7/1 $\frac{1}{2}$	8/1	8/10 $\frac{1}{2}$
37	0	0	4/5 $\frac{1}{2}$	5/4 $\frac{1}{2}$	6/2 $\frac{1}{2}$	7/3	8/2 $\frac{1}{2}$	9/-
37	10	0	4/6	5/5	6/3 $\frac{1}{2}$	7/4	8/4	9/1 $\frac{1}{2}$
38	0	0	4/7	5/6	6/4 $\frac{1}{2}$	7/5	8/5	9/3
38	10	0	4/7 $\frac{1}{2}$	5/7	6/5 $\frac{1}{2}$	7/6 $\frac{1}{2}$	8/6 $\frac{1}{2}$	9/4 $\frac{1}{2}$
39	0	0	4/8 $\frac{1}{2}$	5/8	6/6 $\frac{1}{2}$	7/7 $\frac{1}{2}$	8/8	9/6
39	10	0	4/9	5/9	6/7 $\frac{1}{2}$	7/9	8/9	9/7 $\frac{1}{2}$
40	0	0	4/10	5/9 $\frac{1}{2}$	6/8 $\frac{1}{2}$	7/10	8/10 $\frac{1}{2}$	9/9

"ORB" IRON—Maximum Value—Minimum Cost.

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

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**.

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	72 Sheets 24 in.	58 Sheets 30 in.	48 Sheets 36 in.	94 Sheets 24 in.	74 Sheets 30 in.	62 Sheets 36 in.
£18 0 0	5/-	6/2½	7/6	3/10	4/10	5/10
18 10 0	5/2	6/4½	7/8	4/-	5/-	6/-
19 0 0	5/3	6/6½	7/11	4/0½	5/1½	6/1½
19 10 0	5/5	6/8½	8/1½	4/2	5/3	6/3
20 0 0	5/7	6/10½	8/4	4/3	5/5	6/5
20 10 0	5/8	7/0½	8/6½	4/4	5/6½	6/7
21 0 0	5/10	7/3	8/9	4/5½	5/8	6/9
21 10 0	5/11	7/5	8/11½	4/7	5/10	6/11
22 0 0	6/1	7/7	9/2	4/8	6/-	7/1
22 10 0	6/3	7/9	9/4	4/9	6/1	7/3
23 0 0	6/4½	7/11	9/7	4/10½	6/2½	7/5
23 10 0	6/6	8/1	9/9	5/-	6/4	7/7
24 0 0	6/8	8/3	10/-	5/1	6/6	7/9
24 10 0	6/10	8/5½	10/2½	5/2½	6/7½	7/11
25 0 0	6/11	8/7½	10/5	5/4	6/9	8/1
25 10 0	7/1	8/9½	10/7½	5/5	6/10½	8/3
26 0 0	7/2½	8/11½	10/10	5/6	7/-	8/5
26 10 0	7/4	9/1½	11/0½	5/7½	7/2	8/6½
27 0 0	7/6	9/3½	11/3	5/9	7/3½	8/8½
27 10 0	7/7½	9/6	11/5½	5/10	7/5	8/10
28 0 0	7/9	9/9	11/8	5/11½	7/7	9/0½
28 10 0	7/11	9/10	11/10½	6/1	7/8½	9/2
29 0 0	8/0½	10/-	12/1	6/2	7/10	9/4
29 10 0	8/2	10/2	12/3½	6/3	7/11½	9/6
30 0 0	8/4	10/4	12/6	6/4½	8/1	9/8
30 10 0	8/5½	10/6	12/8½	6/6	8/3	9/10
31 0 0	8/7	10/8	12/11	6/7	8/4½	10/-
31 10 0	8/9	10/10	13/1½	6/8½	8/6	10/2
32 0 0	8/10½	11/0½	13/4	6/9½	8/7½	10/4
32 10 0	9/-	11/2½	13/6½	6/11	8/9	10/6
33 0 0	9/2	11/4½	13/9	7/-	8/11	10/7½
33 10 0	9/3½	11/6½	13/11½	7/1½	9/0½	10/9
34 0 0	9/5	11/8½	14/2	7/3	9/2½	10/11½
34 10 0	9/7	11/10½	14/5½	7/4	9/4	11/1½
35 0 0	9/8½	12/1	14/7	7/5	9/5½	11/3
35 10 0	9/10	12/3	14/9½	7/6½	9/7	11/5
36 0 0	10/-	12/4½	15/-	7/8	9/8½	11/7
36 10 0	10/1½	12/7	15/2½	7/9	9/10	11/9
37 0 0	10/3½	12/9	15/5	7/10½	10/-	11/11
37 10 0	10/5	12/11	15/7½	8/-	10/1½	12/1
38 0 0	10/6½	13/1	15/10	8/1	10/3	12/3
38 10 0	10/8	13/3	16/0½	8/2	10/5	12/5
39 0 0	10/10	13/5	16/3	8/3½	10/6½	12/7
39 10 0	10/11½	13/7½	16/5½	8/5	10/8	12/9
40 0 0	11/1	13/9½	16/8	8/6	10/9½	12/10½

Galvanized Iron—Plain.

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

20 G.

22 G.

Price per ton.	114 Sheets 24 in.	90 Sheets 30 in.	76 Sheets 36 in.	148 Sheets 24 in.	118 Sheets 30 in.	98 Sheets 36 in.
£18 0 0	3/2	4/-	4/9	2/5	3/0½	3/8
18 10 0	3/3	4/1	4/10	2/6	3/1½	3/9
19 0 0	3/4	4/3	5/-	2/7	3/2½	3/10½
19 10 0	3/5	4/4	5/1½	2/7½	3/3½	4/-
20 0 0	3/6	4/5	5/3	2/8	3/4½	4/1
20 10 0	3/7	4/7	5/5	2/9	3/5½	4/2
21 0 0	3/8	4/8	5/6	2/10	3/6½	4/3
21 10 0	3/9	4/9	5/8	2/11	3/7½	4/4½
22 0 0	3/10	4/11	5/9½	2/11½	3/8½	4/6
22 10 0	3/11	5/-	5/11	3/0½	3/10	4/7
23 0 0	4/-	5/1	6/0½	3/1	3/11	4/8
23 10 0	4/1	5/3	6/2½	3/2	4/-	4/9½
24 0 0	4/2	5/4	6/4	3/3	4/1	4/10½
24 10 0	4/3½	5/5	6/5	3/4	4/2	5/-
25 0 0	4/4½	5/7	6/7	3/4½	4/3	5/1
25 10 0	4/5½	5/8	6/8½	3/5	4/4	5/2½
26 0 0	4/7	5/9	6/10	3/6	4/5	5/3½
26 10 0	4/8	5/11	7/-	3/7	4/6	5/5
27 0 0	4/9	6/-	7/1	3/8	4/7	5/6
27 10 0	4/10	6/1	7/2½	3/9	4/8	5/7
28 0 0	4/11	6/3	7/4½	3/9½	4/9	5/8
28 10 0	5/-	6/4	7/6	3/10	4/10	5/9½
29 0 0	5/1	6/5	7/7½	3/11	4/11	5/11
29 10 0	5/2	6/7	7/9	4/-	5/-	6/-
30 0 0	5/3	6/8	7/10	4/1	5/1	6/1½
30 10 0	5/4	6/9	8/-	4/1½	5/2	6/2½
31 0 0	5/5	6/11	8/2	4/2	5/3	6/4
31 10 0	5/6	7/-	8/3½	4/3	5/4	6/5
32 0 0	5/7	7/1	8/5	4/4	5/5	6/6½
32 10 0	5/8	7/3	8/6½	4/5	5/6	6/7½
33 0 0	5/9	7/4	8/8	4/5½	5/7	6/9
33 10 0	5/10	7/5	8/10	4/6	5/8	6/10
34 0 0	5/11	7/7	8/11	4/7	5/9	6/11
34 10 0	6/0½	7/8	9/1	4/8	5/10	7/0½
35 0 0	6/1½	7/9	9/2½	4/9	5/11	7/2
35 10 0	6/2½	7/11	9/4	4/9½	6/-	7/3
36 0 0	6/3½	8/-	9/5½	4/10	6/1	7/4
36 10 0	6/5	8/1	9/7	4/11	6/2	7/5½
37 0 0	6/6	8/3	9/9	5/-	6/3	7/6½
37 10 0	6/7	8/4	9/10½	5/1	6/4	7/8
38 0 0	6/8	8/5	10/-	5/1½	6/5	7/9
38 10 0	6/9	8/7	10/1½	5/2	6/6	7/10½
39 0 0	6/10	8/8	10/3	5/3	6/7	7/11
39 10 0	6/11	8/9	10/4½	5/4	6/8	8/1
40 0 0	7/-	8/11	10/6	5/5	6/9	8/2

the Confidence of Ironworkers everywhere.

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.	240 Sheets 24 in.	194 Sheets 30 in.	160 Sheets 36 in.
£18 0 0	2/1	2/7	3/2	1/6	1/10	2/3
18 10 0	2/2	2/8	3/3	1/6½	1/11	2/4
19 0 0	2/2½	2/9	3/4	1/7	1/11½	2/4½
19 10 0	2/3	2/10	3/5	1/7½	2/-	2/5
20 0 0	2/3½	2/11	3/6	1/8	2/1	2/6
20 10 0	2/4½	3/-	3/7	1/8½	2/1½	2/7
21 0 0	2/5	3/0½	3/8	1/9	2/2	2/7½
21 10 0	2/6	3/1½	3/9	1/9½	2/2½	2/8
22 0 0	2/7	3/2	3/10	1/10	2/3	2/9
22 10 0	2/7½	3/3	3/11	1/10½	2/4	2/10
23 0 0	2/8	3/4	4/-	1/11	2/4½	2/10½
23 10 0	2/9	3/5	4/1½	1/11½	2/5	2/11
24 0 0	2/9½	3/6	4/2½	2/-	2/6	3/-
24 10 0	2/10	3/6½	4/3½	2/0½	2/6	3/1
25 0 0	2/11	3/7½	4/4½	2/1	2/7	3/1½
25 10 0	3/-	3/8½	4/5½	2/1½	2/7½	3/2
26 0 0	3/0½	3/9½	4/7	2/2	2/8½	3/3
26 10 0	3/1	3/10	4/8	2/2½	2/9	3/4
27 0 0	3/2	3/11	4/9	2/3	2/9½	3/4½
27 10 0	3/2½	4/-	4/10	2/3½	2/10	3/5
28 0 0	3/3	4/1	4/11	2/4	2/11	3/6
28 10 0	3/4	4/1½	5/-	2/4½	2/11½	3/7
29 0 0	3/4½	4/2½	5/1	2/5	3/-	3/7½
29 10 0	3/5	4/3	5/2	2/5½	3/0½	3/8
30 0 0	3/6	4/4	5/3	2/6	3/1½	3/9
30 10 0	3/6½	4/5	5/4	2/6½	3/2	3/10
31 0 0	3/7½	4/6	5/5	2/7	3/2½	3/10½
31 10 0	3/8	4/6½	5/6	2/7½	3/3	3/11
32 0 0	3/9	4/7½	5/7	2/8	3/3½	4/-
32 10 0	3/9½	4/8½	5/8	2/8½	3/4	4/1
33 0 0	3/10	4/9½	5/9½	2/9	3/5	4/1½
33 10 0	3/11	4/10	5/10½	2/9½	3/5½	4/2
34 0 0	3/11½	4/11½	6/-	2/10	3/6	4/3
34 10 0	4/-	5/-	6/0½	2/10½	3/7	4/4
35 0 0	4/1	5/1	6/1½	2/11	3/7½	4/4½
35 10 0	4/1½	5/2	6/2½	2/11½	3/8	4/5
36 0 0	4/2½	5/3	6/4	3/-	3/8½	4/6
36 10 0	4/3	5/3½	6/5	3/0½	3/9	4/7
37 0 0	4/4	5/4	6/6	3/1	3/10	4/7½
37 10 0	4/4½	5/5	6/7	3/1½	3/10½	4/8
38 0 0	4/5	5/6½	6/8	3/2	3/11	4/9
38 10 0	4/6	5/7	6/9	3/2½	4/-	4/10
39 0 0	4/6½	5/8	6/10	3/3	4/0½	4/10½
39 10 0	4/7	5/9	6/11	3/3½	4/1	4/11
40 0 0	4/8	5/10	7/-	3/4	4/1½	5/-

Every Sheet of LYSAGHT'S "ORB" and

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	280 Sheets 24 in.	224 Sheets 30 in.	184 Sheets 36 in.	320 Sheets 24 in.	260 Sheets 30 in.	224 Sheets 36 in.
£18 0 0	1/3½	1/7	1/11½	1/1½	1/4½	1/7
18 10 0	1/4	1/7½	2/-	—	—	—
19 0 0	1/4	1/8	2/0½	1/2	1/5½	1/8
19 10 0	1/4½	1/8½	2/1	—	—	—
20 0 0	1/5	1/9	2/2	1/3	1/6½	1/9
20 10 0	1/5½	1/10	2/2½	—	—	—
21 0 0	1/6	1/10½	2/3	1/4	1/7½	1/10
21 10 0	1/6½	1/11	2/4	—	—	—
22 0 0	1/7	1/11½	2/4½	1/4½	1/8	1/11
22 10 0	1/7	2/-	2/5	—	—	—
23 0 0	1/7½	2/0½	2/6	1/5	1/9	2/0½
23 10 0	1/8	2/1	2/6½	—	—	—
24 0 0	1/8½	2/1½	2/7	1/6	1/10	2/1½
24 10 0	1/9	2/2	2/8	—	—	—
25 0 0	1/9½	2/2½	2/8½	1/6½	1/11	2/2½
25 10 0	1/10	2/3	2/9	—	—	—
26 0 0	1/10	2/3½	2/10	1/7½	2/-	2/3½
26 10 0	1/10½	2/4	2/10½	—	—	—
27 0 0	1/11	2/5	2/11	1/8	2/1	2/5
27 10 0	1/11½	2/5½	3/-	—	—	—
28 0 0	2/-	2/6	3/0½	1/8½	2/2	2/6
28 10 0	2/0½	2/6½	3/1	—	—	—
29 0 0	2/1	2/7	3/2	1/9½	2/3	2/7
29 10 0	2/1	2/7½	3/2½	—	—	—
30 0 0	2/1½	2/8	3/3	1/10½	2/4	2/8
30 10 0	2/2	2/8½	3/4	—	—	—
31 0 0	2/2½	2/9	3/4½	1/11	2/4½	2/9
31 10 0	2/3	2/9½	3/5	—	—	—
32 0 0	2/3½	2/10	3/6	2/-	2/5½	2/10
32 10 0	2/4	2/10½	3/6½	—	—	—
33 0 0	2/4	2/11	3/7	2/1	2/6½	2/11
33 10 0	2/4½	2/11½	3/7½	—	—	—
34 0 0	2/5	3/-	3/8	2/1½	2/7½	3/-
34 10 0	2/5½	3/1	3/9	—	—	—
35 0 0	2/6	3/1½	3/9½	2/2	2/8	3/1½
35 10 0	2/6½	3/2	3/10	—	—	—
36 0 0	2/7	3/2½	3/11	2/3	2/9	3/2½
36 10 0	2/7	3/3	3/11½	—	—	—
37 0 0	2/7½	3/3½	4/-	2/4	2/10	3/3½
37 10 0	2/8	3/4	4/1	—	—	—
38 0 0	2/8½	3/4½	4/1½	2/4½	2/11	3/4½
38 10 0	2/9	3/5	4/2	—	—	—
39 0 0	2/9½	3/5½	4/3	2/5	3/-	3/5½
39 10 0	2/10	3/6	4/3½	—	—	—
40 0 0	2/10	3/6½	4/4	2/6	3/1	3/7

"QUEEN'S HEAD" Iron branded BLUE.

Black Sheets

The uniform "Blued" finish and general excellence of quality of

LYSAGHT'S C.R.C.A. Patent Flattened "SOUTHERN CROSS" BLACK SHEETS

makes them particularly suitable for general manufacturing purposes and for work of a special nature.

For less important work, and when price is the primary consideration, we recommend

LYSAGHT'S "SUNSTAR" Brand

These Sheets are C.R.C.A., true to gauge and dead flat.

LYSAGHT'S NEWCASTLE C.R.C.A. BLACK SHEETS (manufactured in Australia)

will be found to give every satisfaction for general working-up purposes, and are also being successfully used for:—

**DEEP DRAWING, TINNING, VITREOUS ENAMELLING,
and MOTOR BODY WORK.**

The above qualities are rolled in 10 to 30 gauge, in lengths up to 12 feet, and in widths up to 56 inches (Newcastle sheets, 42 inches), and are stocked in sizes:—6ft. x 24in., 30in. and 36in. wide, in 10 to 30 gauge.

"ORB" IRON—Over fifty years in use.

Iron—Black Sheet.

Weight and Thickness.

Gauge	Lbs. per square foot	Thickness inches	Thickness mm	Gauge	Lbs. per square foot	Thickness inches	Thickness mm
3/16	7.50	.1874	4.770	19	1.76	.0440	1.118
8	6.28	.1570	3.988	20	1.56	.0392	.996
9	5.59	.1398	3.551	21	1.39	.0349	.886
10	5.00	.1250	3.175	22	1.25	.0312	.794
11	4.45	.1113	2.827	23	1.11	.0278	.707
12	3.96	.0991	2.517	24	.99	.0247	.629
13	3.52	.0882	2.240	25	.88	.0220	.560
14	3.14	.0785	1.994	26	.78	.0196	.498
15	2.79	.0699	1.775	27	.69	.0174	.443
16	2.50	.0625	1.587	28	.62	.0156	.396
17	2.22	.0556	1.412	29	.55	.0139	.353
18	1.98	.0495	1.257	30	.50	.0124	.315

On the above basis, the approximate Number of Sheets 6ft. long in One Ton of Black Sheet Iron is as follows:—

Gauge	WIDTH		
	24in.	30in.	36in.
10g	37	29	24
12	47	37	31
14	59	47	39
16	74	59	49
18	94	75	62
20	119	95	79
22	149	119	99
24	188	150	125
26	239	191	159
27	270	216	180
28	301	241	200
30	373	298	248

Weight of Steel is about 2 per cent. more than Iron.

Lysaght's Black Sheets.

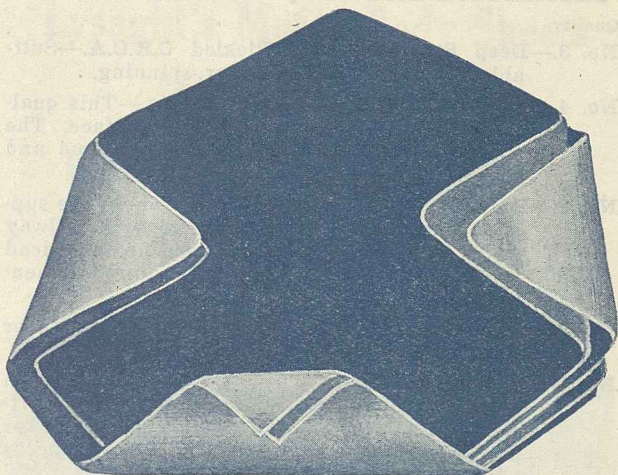


Illustration showing the working quality of our Sheets.

Descriptive List of Qualities in most General Use.

For Newcastle Works Qualities, see page 19.

Quality.

No. A1.—"Queen's Head."—A high-grade quality of C.R.C.A. Sheets, extensively used for special work.

No. 1.—"Southern Cross."—An excellent quality of C.R.C.A. Mild Steel Sheets, suitable for all ordinary working-up purposes, well and favourably known by sheet-metal workers throughout the Commonwealth.

NOTE.—"Southern Cross" Black Sheets are suitable for corrugating, and when protected by painting are found to be very durable. Rolled in lengths 5 to 10 feet.

No. 1a.—"Sunstar."—A good C.R.C.A. Sheet, dead flat and specially manufactured for those purposes where price prevents our higher grade sheets being used.

DESCRIPTIVE LIST OF QUALITIES.—Continued.

Quality.

- No. 3.—Deep Stamping Best Pickled C.R.C.A.**—Suitable for severe stamping or spinning.
- No. 4.—Best Bright Polished Steel Sheets.**—This quality has a smooth, polished, bright surface. The sheets are flattened and re-sheared true and square.
- No. 9.—Railway Waggon Body Sheets.**—These are supplied very largely for making covered railway goods waggons. The sheets are finished dead flat, and re-sheared exact to required dimensions.
- No. 11.—Superior Charcoal Finish Panel Plates for Railway Carriages, etc.** (see page 89).
- No. 13.—Copper Soft Steel Sheets C.R.C.A.**—This is an extra soft quality, specially prepared for beating and stamping. It is very suitable for blocking for ships' ventilators or any similar purpose.
- No. 14.—Enamelling Quality.**—Special pickled steel sheets for vitreous enamelling.
- No. 21a.—Best Bright Tinning Finish.**—For making large tinned sheets, special articles and hollow-ware that require tinning after manufacture.
- No. 25.—Special Motor Body Sheets,** of superior finish, with smooth, clean surface, silver-bright, and with good working-up capability. Used by leading motor body builders on the Continent, Great Britain and Australia.

ELECTRICAL SHEETS.—The manufacture of these sheets is carried out on the most highly developed lines. The Department is equipped with all necessary apparatus for the production of the best qualities, and for carrying out tests. All sheets are supplied to definite guarantees as to Watts' Loss.

"Stalloy" High Resistance Transformer Sheets and "Lohy's" Special Dynamo Sheets can be supplied to special order.

All the above qualities are obtainable in all gauges from 10-g. to 30-g. and in widths up to 56 inches.

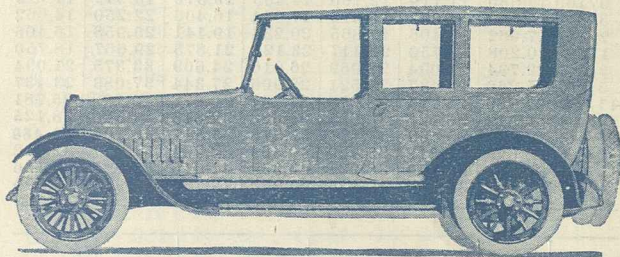
Commonwealth and State Governments.

Lysaght's Motor Body Sheets

SILVER BRIGHT FINISH.

Used exclusively by

**Leading Continental & Australian
Body Builders**



Factory Costs show that the extra price
of these Sheets is recouped by the
economy effected in

"WORKING-UP" and "FILLING"

**Stocked in 20 and 22 gauge, 6, 7, and 8 feet long
24, 30 and 36 inches wide.**

OTHER GAUGES & SIZES ROLLED TO ORDER.

“ORB” IRON, the Universal Standard of

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	35.365	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.	Iron, cast	equals	.263	lbs.
Copper, sheet	"	.3225	"	Tin	"	.2636	"
Brass,	"	.3037	"	Zinc	"	.26	"
Iron	"	.279	"	Water	"	.03617	"

ZINC SHEETS.

Gauge No.	Approximate weight per sq. ft.	Thousands of an inch.	7' x 2' 8"		7' x 3'		8' x 3'		Nearest Wire Gauge.
			Approximate		Approximate		Approximate		
			Weight per sht.	No. of shts. in 10 cwt.	Weight per sht.	No. of shts. in 10 cwt.	Weight per sht.	No. of shts. in 10 cwt.	
	oz.		lb. oz.		lb. oz.		lb. oz.		
1	2 $\frac{1}{4}$	.004	2 10	427	—	—	—	—	41
2	3 $\frac{1}{4}$	.006	3 13	294	—	—	—	—	38
3	3 $\frac{3}{4}$	.007	—	—	4 15	227	—	—	37
4	4 $\frac{3}{4}$	.008	—	—	6 4	180	—	—	34
5	5 $\frac{3}{4}$	.010	—	—	7 9	148	—	—	31
6	6 $\frac{3}{4}$	.011	7 14	142	8 14	126	10 2	111	30
7	7 $\frac{3}{4}$	.013	9 1	124	10 3	110	11 10	96	29
8	9	.015	10 8	107	11 13	95	13 8	83	28
9	10	.017	11 11	96	13 2	85	15 0	75	27
10	11 $\frac{1}{2}$	.019	13 7	83	15 2	74	17 4	65	25
11	13	.021	15 3	74	17 1	66	19 8	57	24
12	15	.025	17 8	64	19 11	57	22 8	50	23
13	17	.028	—	—	22 5	50	25 8	44	22
14	19	.031	—	—	24 15	45	28 8	39	21
15	22	.036	—	—	28 14	39	33 0	34	20
16	25	.041	—	—	32 13	34	37 8	30	19
17	28	.046	—	—	36 12	30	42 0	27	18
18	31	.051	—	—	40 11	28	46 8	24	—
19	35	.059	—	—	45 15	24	52 8	21	17
20	39	.065	—	—	51 3	22	58 8	19	16
21	43	.072	—	—	56 7	20	64 8	17	15

SOLDERS.

For Lead	..	..	..	1 part Tin, 2 parts Lead.
For Brass	..	..	..	2 parts Brass, 1 part Zinc.
Hard Solder	..	..	..	2 parts Copper, 1 part Zinc.
Soft Solder	..	..	..	2 parts Tin, 1 part Lead.
Ordinary Solder	..	..	..	1 part Tin, 1 part Lead.

FLUXES—for Soldering.

Tinned Iron	..	..	..	Resin or Spirits of Salts.
Copper and Brass	..	..	..	Sal-Ammoniac or Spirits of Salts.
Zinc	..	..	..	Spirits of Salts.
Lead	..	..	..	Resin.

CHARCOAL TIN PLATE LIST.

Size & Number of Sheets in Box.		Weight.		Thickness in
		cwt. qrs. lbs.		Wire Gauge.
1C	{ 14 x 10 ins., 225 Sheets } or 14 x 20 ins., 112 Sheets }	1	0 0	30
1x	" "	1	1 0	28
1xx	" "	1	1 21	26 Easy
1xxx	" "	1	2 14	25
1xxxx	" "	1	3 7	25 Full
1xxxxx	" "	2	0 0	24
1xxxxxx	" "	2	0 21	23 Easy
SDC	{ 15 x 11 ins., 200 Sheets } or 15 x 22 ins., 100 Sheets }	1	1 27	26 Easy
SDx	" "	1	2 20	25 Easy
SDxx	" "	1	3 13	25 Full
SDxxx	" "	2	0 6	24
SDxxxx	" "	2	0 27	24 Full
SDxxxxx	" "	2	1 20	22 Easy
SDxxxxxx	" "	2	2 13	22 Full
DC	{ 16 $\frac{3}{4}$ x 12 $\frac{1}{2}$ ins., 100 Sheets } or 16 $\frac{3}{4}$ x 25 ins., 50 Sheets }	0	3 14	28 Full
Dx	" "	1	0 14	25 Easy
Dxx	" "	1	1 7	24
Dxxx	" "	1	2 0	23
Dxxxx	" "	1	2 21	22
Dxxxxx	" "	1	3 14	21
Dxxxxxx	" "	2	0 7	20

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—30 feet x 7 feet 9 inches.

	C.	Q.	L.		C.	Q.	L.
3 lbs...	6	0	14	5 lbs...	10	1	14
3 $\frac{1}{2}$ " ..	7	0	20	6 " ..	12	1	0
4 " ..	8	1	0	7 " ..	14	2	0
4 $\frac{1}{2}$ " ..	9	1	0				

APPROXIMATE WEIGHTS OF SHEET COPPER.

Wire Gauge	Weight per sq. ft.	Weight per sheet 4ft. x 2ft.	Wire Gauge	Weight per sq. ft.	Weight per sheet 4ft. x 2ft.
No.	Lbs. Oz.	Lbs.	No.	Lbs. Oz.	Lbs.
30	0 8	4	15	3 8	28
29	0 9	—	14	4 0	32
28	0 10	5	13	4 8	36
27	0 11 $\frac{1}{2}$	6	12	5 0	40
26	0 13	—	11	5 8	44
25	0 14	7	10	6 4	50
24	1 0	8	9	7 0	—
23	1 3	9	8	7 10	—
22	1 6	11	7	8 8	—
21	1 8	12	6	9 8	—
20	1 12	14	5	10 2	—
19	2 0	16	4	11 0	—
18	2 4	18	3	12 0	—
17	2 12	22	2	13 0	—
16	3 0	24	1	14 0	—

Approximate Quantity of Nettlefold's Galvanised Roofing Screws to the lb.

1 $\frac{1}{2}$ x 12	..	..	..	..	56
2 x 12	..	..	..	..	48
2 $\frac{1}{2}$ x 14	..	..	..	..	31
3 x 14	..	..	..	..	27
Lead Washers	..	..	..	..	57

Evenden Spring-Head Nails—

1 $\frac{1}{2}$ in.	1 $\frac{3}{4}$ in.	2in.	2 $\frac{1}{4}$ in.	2 $\frac{1}{2}$ in.
105	88	80	75	70

EXPANSION OF METAL.

A comparison between the common metals at 32 degrees Fahr. and 212 degrees Fahr. showed the following results:—

Lead expands 1 part in 349	Block Tin expands 1 part in 403
Zinc " 1 " 322	Cast Iron " 1 " 901
Copper " 1 " 581	Wrought Iron " 1 " 846
	Brass " 1 " 584

It will be observed that in expansiveness lead is only beaten by zinc.

Fusing Temperature of Metals.

	Degrees Fahr.		
Solder	..	Brass	.. 1650
Tin	..	Silver	.. 1830
Lead	..	Copper	.. 2192
Zinc	..	Gold	.. 2280
	..	Cast Iron	.. 2912

WEIGHTS PER LINEAL FOOT OF SOLID DRAWN COPPER TUBES.

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

'Imperial' Wire Gauge Thickness.

Outside Diameter.		6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
	lbs.	.192	.176	.160	.144	.128	.116	.104	.092	.080	.072	.064	.056	.048	.040	.036
	lbs.	—	—	—	—	—	—	—	—	—	—	0.14	0.13	lbs.	lbs.	lbs.
	—	—	—	—	—	—	—	—	—	—	0.26	0.24	0.22	0.19	0.16	0.15
	—	—	—	—	—	—	—	—	—	0.41	0.37	0.34	0.30	0.26	0.22	0.20
	—	—	—	—	—	—	—	0.66	0.60	0.53	0.48	0.44	0.39	0.33	0.28	0.26
	—	—	—	—	—	0.97	0.89	0.82	0.74	0.65	0.59	0.53	0.47	0.41	0.34	0.31
	—	—	—	1.39	1.28	1.16	1.07	0.97	0.87	0.77	0.70	0.63	0.56	0.48	0.40	0.37
1	1.89	1.76	1.64	1.50	1.36	1.25	1.13	1.01	0.89	0.81	0.73	0.64	0.55	0.47	0.40	0.42
	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	0.47
	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	0.53
	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	0.58
	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	0.64
	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	—	—
	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	—	—
	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	—	—
	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	—	—	—
	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	—	—	—
	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	—	—	—
	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	—	—	—

Years in Use, and still the Best.

Composition Pipe

(INSIDE DIAMETER).

Inch	lbs.	oz.		Inch	lbs.	oz.
1/4	0	13	per yard	5/8	3	4 per yard
5/16	1	0	"	3/4	4	4 "
3/8	1	5	"	7/8	4	12 "
7/16	1	10	"	1	5	8 "
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.		
	Cwts.	Qrs.	Lbs.		Cwts.	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				

The "ORB" Brand on a Sheet of

SIZES of PIPES for WATER.

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

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

ACETYLENE PIPE SERVICE.

Number of half-foot Burners or equivalent of other sizes, to burn at $2\frac{1}{2}$ inches or higher pressure at the burners	Distance from Gener- ating 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 "

Consumers of Galvanised Iron should note that every sheet of **LYSAGHT'S "ORB" IRON** has the Trade Mark stencilled thereon in blue, and is guaranteed. Beware of Imitations.

GALVANIZED IRON stands for Perfection.

LEAD PIPE—Water and Gas.

Inside Dia.	Strength	Weight per Yard	Average Length	Inside Dia.	Strength	Weight per Yard	Average Length
Inch		Lbs.	Yards.	Inch		Lbs.	Yards.
$\frac{3}{8}$	Thin	$3\frac{1}{2}$	35	$1\frac{1}{4}$	Thin	10	17
"	Middle	4	32	"	Thin	11	16
"	Strong	$4\frac{1}{2}$	28	"	Middle	12	14
"	Strong	5	24 or 48	"	Middle	$12\frac{1}{2}$	13
"	Strong	$5\frac{1}{2}$	22 or 44	"	Strong	14	12
$\frac{1}{2}$	Thin	3	39	"	Strong	16	11
"	Thin	$3\frac{1}{2}$	35	$1\frac{1}{2}$	Thin	12	14
"	Middle	4	32	"	Thin	14	12
"	Strong	$4\frac{1}{2}$	28	"	Middle	$15\frac{1}{2}$	11
"	Strong	5	48	"	Strong	$17\frac{1}{2}$	9
"	Strong	6	38	"	Strong	21	8
"	Strong	7	33	$1\frac{3}{4}$	Thin	15	11
"	Strong	8	29	"	Middle	17	10
$\frac{5}{8}$	Thin	$4\frac{1}{2}$	28	"	Strong	19	9
"	Middle	5	24 or 48	2	Thin	19	9
"	Strong	6	38	"	Middle	23	7
"	Strong	7	33	"	Strong	26	7
"	Strong	8	29	"	Thin	19	12-foot Lengths.
$\frac{3}{4}$	Thin	5	24	"	Middle	23	
"	Thin	6	20	"	Strong	26	
"	Middle	7	25	"	Strong	30	
"	Strong	8	22	$2\frac{1}{2}$	Thin	26	
"	Strong	$8\frac{1}{2}$	20	"	Thin	27	
"	Strong	9	19	"	Middle	30	
"	Strong	10	17	"	Strong	33	
"	Strong	11	16	3	Thin	36	
"	Strong	12	14	"	Middle	42	
1	Thin	7	25	"	Strong	44	
"	Thin	8	22	$3\frac{1}{2}$	Thin	45	
"	Middle	9	19	"	Middle	49	
"	Middle	$9\frac{1}{2}$	18	"	Strong	52	
"	Strong	10	17	4	Thin	48	
"	Strong	11	16	"	Middle	57	
"	Strong	12	14	"	Strong	61	
"	Strong	14	12	5	Thin	73	
"	Strong	15	11	"	Strong	84	
				6		68	

TRADE PRICE LIST OF GAS, WATER & STEAM TUBES.

TUBES (Current at January 1st, 1923).

Internal Diam. in Inches .. $\frac{1}{8}$ & $\frac{1}{4}$	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{5}{8}$	1	$1\frac{1}{8}$	$1\frac{1}{2}$	$1\frac{3}{4}$	2	$2\frac{1}{4}$	$2\frac{1}{2}$	3	$3\frac{1}{2}$	4	$4\frac{1}{2}$	5	6	
Tubes 2 feet long and over, per foot	-/4	-/4 $\frac{1}{2}$	-/5 $\frac{1}{2}$	-/6 $\frac{3}{4}$	-/9 $\frac{1}{4}$	1/1	1/4 $\frac{1}{2}$	1/8	1/10	2/6	2/10	3/3	4/-	4/5	5/6	6/-	7/6
Pieces 12 to 23 $\frac{1}{2}$ ins. long (each)	-/10	-/11	1/1	1/5	1/11	2/8	3/4	4/6	4/9	6/9	8/-	10/6	13/6	15/6	21/-	24/-	32/6
Pieces 4 to 11 $\frac{1}{2}$ ins. long (each)	-/7	-/8	-/9	-/11	1/3	1/8	2/2	2/10	3/-	4/3	5/3	6/9	9/3	10/9	15/6	18/-	25/3
Long Screws, 12 to 23 $\frac{1}{2}$ ins. long (each)	-/11	1/-	1/3	1/7	2/2	2/10	3/9	5/-	5/3	7/6	9/-	12/-	15/6	17/-	23/-	26/6	35/6
Long Screws, 3 to 11 $\frac{1}{2}$ ins. long (each)	-/8	-/9	-/10	1/1	1/5	1/11	2/6	3/3	3/6	5/-	6/6	8/6	11/6	13/-	17/-	20/-	28/-
Barrel Nipples (each)	-/5	-/5	-/6	-/7	-/9	1/-	1/4	1/8	1/9	2/6	3/-	4/-	6/-	7/-	10/-	12/6	20/-
Bends (each)	-/8	-/9	-/11	1/2	1/7 $\frac{1}{2}$	2/7 $\frac{1}{2}$	3/2	4/2	5/2	8/6	12/-	13/-	25/-	32/6	80/-	105/-	150/-
Springs, not Socketed (each)	-/5	-/6	-/7	-/9	1/1 $\frac{1}{2}$	1/11 $\frac{1}{2}$	2/3 $\frac{1}{2}$	3/1	3/11	6/9	9/6	14/6	20/-	26/6	70/-	93/-	132/-

and even quality is a Perfect Roofing Sheet.

TRADE PRICE LIST OF WATER & STEAM FITTINGS.

FITTINGS (Current at January 1st, 1923).

Internal Diam. in inches ...	$\frac{1}{8}$ & $\frac{1}{4}$	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{5}{8}$	1	1 $\frac{1}{4}$	1 $\frac{1}{2}$	2	2 $\frac{1}{4}$	2 $\frac{1}{2}$	3	3 $\frac{1}{2}$	4	4 $\frac{1}{2}$	5	6		
Pipe Union ..	each	2/-	2/6	3/-	4/-	5/6	6/9	8/-	9/-	10/-	15/-	17/6	22/6	27/6	35/-	48/-	66/-	105/-
Elbows, square	"	-10	-11	1/1	1/3	1/6	2/2	2/7	3/4	4/3	6/9	9/6	14/-	22/-	28/-	35/-	45/-	75/-
Elbows, round	"	-11	1/-	1/2	1/5	1/8	2/4	2/10	3/9	4/8	7/3	10/6	16/-	24/-	30/-	37/-	45/-	75/-
Tees ..	"	1/-	1/1	1/3	1/7	1/10	2/6	3/1	4/2	5/1	7/9	11/6	18/-	26/-	32/-	39/-	48/-	75/-
Crosses ..	"	2/2	2/4	2/9	3/3	4/1	5/6	6/7	8/6	10/6	17/-	22/-	40/-	56/-	66/3	75/-	92/-	155/-
Sockets, plain	"	-3	-3	-4	-5	-6	-8	-10	1/1	1/3	1/9	2/6	3/6	5/-	6/-	10/-	12/-	18/-
Sockets, diminished	"	-4	-5	-6	-7	-9	1/-	1/4	1/9	2/-	4/-	5/-	7/-	9/-	11/-	15/-	18/-	27/-
Flanges ..	"	-9	-10	1/-	1/2	1/4	1/9	2/-	2/3	2/9	4/-	5/-	8/6	10/-	11/6	16/-	18/-	27/-
Caps ..	"	-3 $\frac{1}{2}$	-3 $\frac{1}{2}$	-5	-6	-8	1/-	1/3	1/7	2/-	3/-	4/4	6/-	9/9	10/6	25/-	30/-	45/-
Plugs ..	"	-3	-3	-4	-5	-6	-8	-10	1/-	1/3	2/-	2/6	4/9	7/-	10/-	22/-	30/-	48/-
Backnuts ..	"	-2	-2	-3	-4	-5	-6	-8	-10	1/1	1/9	2/3	3/6	4/6	5/6	14/-	18/-	26/-
Nipples ..	"	-2	-2	-3	-4	-5	-6	-8	-10	1/-	1/9	2/3	3/6	4/6	5/6	14/-	18/-	26/-

MALLEABLE PIPE FITTINGS.—BLACK AND GALVANIZED. TRADE PRICE LIST.

Sizes ..	$\frac{1}{8}$	$\frac{3}{8}$	1	1 $\frac{1}{4}$	1 $\frac{1}{2}$	2	Sizes ..	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{5}{8}$	1	1 $\frac{1}{4}$	1 $\frac{1}{2}$	2
Bends, male and female	-8	-10	1/1	1/8	2/10	4/-	Bushes	..	..	..	-8	-11	1/2	2/2
Bends, female ..	-8	-10	1/3	1/10	3/-	4/6	Nipples, hexagonal	..	..	..	-6	-7 $\frac{1}{2}$	1/8	2/6
Elbows, male and female	-7	-9	1/1	1/6	2/1	2/7	(even only)	..	..	..	-7 $\frac{1}{2}$	-7 $\frac{1}{2}$	-10	1/2
Elbows, female ..	-6	-8	1/1	1/4	1/10	2/3	Plugs	..	..	..	-4	-5 $\frac{1}{2}$	1/3	1/1
Tees ..	-7	-9	1/1	1/6	2/1	2/7	Caps ..	..	..	..	-6	-7 $\frac{1}{2}$	1/3	1/1
Sockets ..	-3 $\frac{1}{2}$	-4 $\frac{1}{2}$	-6 $\frac{1}{2}$	-8 $\frac{1}{2}$	-11 $\frac{1}{2}$	1/3 $\frac{1}{2}$	Back Nuts ..	..	..	..	-4	-5 $\frac{1}{2}$	-7 $\frac{1}{2}$	-11 $\frac{1}{2}$
Sockets, reducing	-4	-5 $\frac{1}{2}$	-7 $\frac{1}{2}$	-10	1/2	1/6	Flanges	..	..	..	1/4	2/-	2/4	3/1

"ORB" IRON—Maximum Value—Minimum Cost.

SOMETHING ABOUT TANKS.

CIRCULAR

CORRUGATED IRON.

Reputed Capacity.

Dia.	Height of Tank.			
	4ft.	5ft.	6ft.	8ft.
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

SQUARE IRON.

Capacity.

2 ft. 8 in. sq.	100 gall.
3 " 3 " "	200 "
3 " 8 " "	300 "
4 " 0 " "	400 "

WATER.

- 1 pint pure water weighs $1\frac{1}{2}$ 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 $\frac{1}{2}$ 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 $6\frac{1}{4}$ (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 conditions of the locality in which it is to be used.

Thousands of **TANKS** are made every year from **Lysaght's Corrugated "ORB" Sheets**, the durable properties of which, in a pure dry atmosphere remote from the sea, are almost unlimited.

In tropical countries and other localities in which the water possesses mineral properties, the result is, however, less satisfactory, and in such cases Tanks should be made from **Lysaght's Special Blue Tank-Making Sheets**, which are largely used for this purpose in India and other tropical countries.

Stocks of these Sheets are again available throughout Australia.

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 heavily coated sheets manufactured, and will therefore outlast any other make.

Useful Information for Plumbers and Tankmakers.

GALVANIZED IRON REQUIRED FOR THE MANUFACTURE OF CIRCULAR CORRUGATED IRON TANKS OF VARIOUS CAPACITIES.

Capa'ty of Tank. Gals.	H'ght ft.	Diam. ft n	Iron Required
200	4	3 3	2 sheets 10ft. x 24G. Galv. Corrugated Iron, curve each to a full circle. 1 sheet each 72in. x 36in. x 24G. P.G. Iron 72in. x 36in. x 26G. "
400	6	3 9	6 sheets 6ft. x 24G. Galv. Corrugated Iron, curve each to half circle. 1 sheet each 72in. x 36in. x 24G. P.G. Iron 72in. x 36in. x 26G. "
500	4	5 0	4 sheets 8ft. x 24G. Galv. Corrugated Iron, curve each to half circle. 2 sheets each 72in. x 30in. x 24G. P.G. Iron 72in. x 30in. x 26G. "
600	6	4 4	6 sheets 7ft. x 24G. Galv. Corrugated Iron, curve each to half circle. 2 sheets each 72in. x 24in. x 26G. P.G. Iron 72in. x 24in. x 24G. "
800	6	5 3	3 sheets each 8ft. & 9ft. x 24G. Galv. C. Iron, curve 1/8 & 1/9 to circle. 1 sheet each 72in. x 30in. x 24G. P.G. Iron 72in. x 36in. x 24G. " 72in. x 30in. x 26G. " 72in. x 36in. x 26G. "
1000	6	6 0	3 sheets each 9ft. & 10ft. x 24G. Galv. C. Iron, curve 1/9 & 1/10 to circle. 2 sheets each 72in. x 36in. x 24G. P.G. Iron 72in. x 36in. x 26G. "
1000	8	5 0	8 sheets 8ft. x 24G. Galv. Corrugated Iron, curve each to half circle. 2 sheets each 72in. x 36in. x 24G. P.G. Iron 72in. x 36in. x 26G. "
1200	6	6 3	6 sheets 10ft. x 24G. Galv. Corrugated Iron, curve each to 1/2 circle. 2 sheets each 72in. x 36in. x 24G. P.G. Iron 72in. x 36in. x 26G. "
2000	6	8 3	9 sheets 9ft. x 24G. Galv. Corrugated Iron, curve each to 1/3 circle. 5 sheets each 72in. x 36in. x 24G. P.G. Iron 72in. x 36in. x 26G. "
2500	6	9 3	9 sheets 10ft. x 24G. Galv. Corrugated Iron, curve three to circle. 5 sheets each 72in. x 36in. x 24G. P.G. Iron 72in. x 36in. x 26G. "

Useful Information for Plumbers and Tankmakers.—Continued.

GALVANIZED IRON REQUIRED FOR THE MANUFACTURE OF CIRCULAR CORRUGATED IRON TANKS OF VARIOUS CAPACITIES.

Capa'ty of Tank Gals.	Height	Diam.	Iron Required
	ft.	ft. in.	
3,000	6	10 0	6 sheets each 8ft., 9ft. x 24 gauge Corr. Iron. Curve $\frac{1}{2}$ circle. 2/8 ft., 2/9 ft. to 1 circle. 7 sheets 36in. x 24 gauge, 7 sheets 36in. x 26 gauge Plain Galvd. Iron.
4,000	6	11 6	6 sheets each 9ft., 10ft. x 24 gauge Corr. Iron. Curve $\frac{1}{2}$ circle. 2/9 ft., 2/10 ft. to 1 circle. 8 sheets 36in. x 24 gauge, 8 sheets 36in. x 26 gauge Plain Galvd. Iron.
5,000	6	13 0	12 sheets 9ft., 3 sheets 8ft. x 24 gauge Corr. Iron. Curve 1/5 circle. 2/9 ft., 2/8 feet to 1 circle. 10 sheets 36in. x 22 gauge. 10 sheets 36in. x 26 gauge Galvd. Plain Iron.
6,000	6	14 4	9 sheets 10ft., 6 sheets 9ft. x 24 gauge Corr. Iron. Curve 1/5 circle. 3/10 ft., 2/9 ft. to 1 circle. 15 sheets 36in. x 22 gauge, 36in. x 26 gauge Plain Galvd. Iron.
8,000	6	16 6	12 sheets 9ft., 6 sheets 10ft. x 24 gauge Corr. Iron. Curve 1/6 circle. 4/9 ft., 2/10 ft. to 1 circle. 18 sheets 36in. x 22 gauge, 18 sheets 36in. x 26 gauge Plain Galvd. Iron.
10,000	6	18 0	18 sheets 10ft. x 24 gauge Corr. Iron. Curve 1/6 circle. 6/10 ft. to 1 circle. 20 sheets 36in. x 22 gauge Plain Galvd. Iron.
15,000	6	22 6	12 sheets 9ft., 12 sheets 10ft. x 24 gauge Corr. Iron. Curve $\frac{1}{2}$ circle. 4/9 ft., 4/10 ft. to 1 circle. 32 sheets 36in. x 22 gauge Plain Galvd. Iron.
20,000.	6	25 6	12 sheets 9ft., 15 sheets 10ft. x 24 gauge Corr. Iron. Curve 1/9 circle. 4/9 ft., 5/10 ft. to 1 circle. 45 sheets 36in. x 22 gauge Plain Galvd. Iron.
30,000	6	32 6	33 sheets 10ft. x 24 gauge Corr. Iron. Curve 1/11 circle. 11/10 ft. to 1 circle. 66 sheets 36in. x 22 gauge Plain Galvd. Iron.

COMPARISON OF WIRE AND SHEET GAUGES.

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

LYSAGHT'S "ORB" is a Perfect Roofing Sheet.

SIZES AND WEIGHTS OF ALUMINIUM SHEETS.

Size	Thickness		Aluminum	Size	Thickness		Aluminum
	S.W.G.	Inches	Mm.		S.W.G.	Inches	Mm.
		.375	9.53			.078	1.98
		.372	9.45			.077	1.96
		.353	8.96			.072	1.83
		.348	8.84			.070	1.78
		.324	8.23			.068	1.73
		.315	8.00			.065	1.65
		.312	7.93			.064	1.63
		.300	7.62			.063	1.60
		.289	7.34			.062	1.58
		.280	7.11			.060	1.53
		.278	7.06			.056	1.42
		.276	7.01			.055	1.40
		.270	6.86			.051	1.30
		.252	6.40			.050	1.27
		.250	6.35			.048	1.22
		.238	6.05			.047	1.19
		.232	5.89			.044	1.12
		.223	5.66			.042	1.07
		.216	5.49			.040	1.02
		.212	5.38			.039	0.991
		.200	5.08			.038	0.965
		.198	5.03			.036	0.914
		.192	4.88			.035	0.899
		.187	4.75			.032	0.813
		.182	4.62			.031	0.793
		.176	4.47			.028	0.711
		.166	4.22			.027	0.686
		.160	4.06			.025	0.635
		.157	3.99			.024	0.610
		.150	3.81			.023	0.584
		.144	3.66			.022	0.559
		.140	3.56			.021	0.533
		.136	3.45			.020	0.508
		.128	3.25			.019	0.483
		.125	3.18			.018	0.457
		.124	3.15			.017	0.432
		.116	2.95			.0164	0.417
		.112	2.85			.0160	0.406
		.111	2.82			.0156	0.397
		.104	2.64			.0148	0.376
		.100	2.54			.0140	0.356
		.099	2.51			.0139	0.353
		.092	2.34			.0136	0.346
		.090	2.29			.0124	0.315
		.088	2.24			.0123	0.312
		.082	2.08			.0120	0.305
		.080	2.03			.0116	0.294

The above weights are subject to a variation of 2 per cent.

HOOPS.

Weights of a Ten-foot length in Pounds.

Width	16 WG	18 WG	19 WG	20 WG	21 WG	22 WG
$\frac{1}{2}$	1.10	.83	.71	.60	.54	.48
$\frac{5}{8}$	1.38	1.04	.89	.74	.68	.60
$\frac{3}{4}$	1.66	1.25	1.07	.89	.82	.71
$\frac{7}{8}$	1.80	1.35	1.16	.97	.88	.77
	10 WG	12 WG	14 WG	16 WG	17 WG	18 WG
1	4.68	3.65	2.60	2.08	1.81	1.55
$1\frac{1}{8}$	5.26	4.10	2.92	2.34	2.04	1.75
$1\frac{1}{4}$	5.85	4.56	3.25	2.60	2.27	1.93
$1\frac{3}{8}$	6.43	5.01	3.57	2.86	2.49	2.13
$1\frac{1}{2}$	7.02	5.47	3.90	3.12	2.72	2.32
$1\frac{3}{4}$	8.15	6.35	4.55	3.60	3.15	2.70
2	9.36	7.30	5.20	4.16	3.63	3.10
$2\frac{1}{4}$	10.53	8.20	5.85	4.68	4.08	3.50
$2\frac{1}{2}$	11.71	9.12	6.50	5.20	4.54	3.87
$2\frac{3}{4}$	12.87	10.03	7.15	5.72	4.99	4.26
3	14.05	10.95	7.80	6.25	5.45	4.65
$3\frac{1}{4}$	15.10	11.80	8.40	6.70	5.80	5.00
$3\frac{1}{2}$	16.30	12.70	9.10	7.20	6.30	5.40
$3\frac{3}{4}$	17.50	13.60	9.70	7.70	6.70	5.80
4	18.73	14.60	10.40	8.33	7.26	6.20
$4\frac{1}{4}$	19.19	15.50	11.05	8.84	7.70	6.60
$4\frac{1}{2}$	21.07	16.40	11.70	9.36	8.17	7.00
$4\frac{3}{4}$	22.23	17.33	12.35	9.88	8.62	7.36
5	23.42	18.25	13.00	10.41	9.08	7.75
$5\frac{1}{2}$	25.75	20.07	14.30	11.45	9.98	8.22
6	28.10	21.90	15.60	12.50	10.90	9.30

(Galvanized Hoops slightly exceed these weights.)

the world, universally admitted to be THE BEST.

Wire Ropes—Weights and Strength.

Circumference.	Diameter.	Weights in lbs. per fathom.				Breaking Strain in gross tons.					Circumference.
		Patent Steel Hoisting Ropes.	B.B. Wire Rigg'g.	Flexible Hawseers.	Patent Cast Steel.	Plough Quality Cast Steel.	Galv'd B.B. Rigg'g.	Galv'd C.S. Hawseers.			
6	1 1/2	34 1/2	32	30	115	170	55	88	6		
5 1/2	1 1/4	29	26	26	95	142	42	74	5 1/2		
5	1 1/4	24	22	21	80	120	34	59	5		
4 3/4	1 1/4	21 3/4	20	17	71	107	32	47	4 3/4		
4 1/4	1 1/4	17 1/2	16	12 1/2	57	85	26	36	4 1/4		
4	1 1/4	15 1/2	14	11	51	75	22	33	4		
3 1/2	1 1/4	12	11	8	39	58	16	26	3 1/2		
3	1 1/4	8 3/4	8	6	28	42	11	18	3		
2 3/4	1 1/4	7	7	5	24	36	8.55	15 1/2	2 3/4		
2 1/4	1 1/4	6	6	4	20	29	7.4	12	2 1/4		
2 1/2	1 1/4	5	5	3	15 1/2	23	6.35	9 1/2	2 1/2		
2	1 1/4	4	4	2 1/2	12 1/2	18 1/2	4.3	7	2		
1 3/4	1 1/4	3	3	2	9 1/2	14 1/2	3.25	5 1/2	1 3/4		
1 1/4	1 1/4	2	2	1 1/2	7	10 1/2	2.25	4	1 1/4		
1 1/2	1 1/4	1 1/2	1 1/2	1 1/2	4 1/2	7	1.75	3	1 1/2		
1	1 1/4	1	1	1 1/2	3	4 1/2	1	1 1/2	1		

Average Weight and Lengths of Coils of "Forsyth's" Manila & N.Z. Flax Ropes.

SIZE Inches	WEIGHT.			LENGTH Fathoms	BREAKING STRAIN	
	Cwt.	Qrs.	Lbs.		Tons	Cwt.
$\frac{1}{2}$..	0	0	12	180	—	3
$\frac{3}{4}$..	0	0	20	180	—	7
1 ..	0	1	4	180	—	10
$1\frac{1}{4}$..	0	1	20	180	—	12
$1\frac{1}{2}$..	0	2	4	125	—	18
$1\frac{3}{4}$..	0	2	10	125	1	5
2 ..	0	3	2	125	1	10
$2\frac{1}{4}$..	0	3	25	125	2	0
$2\frac{1}{2}$..	1	0	17	120	2	10
$2\frac{3}{4}$..	1	1	16	120	3	0
3 ..	1	2	25	120	3	10
$3\frac{1}{4}$..	1	3	20	120		
$3\frac{1}{2}$..	2	1	0	120	4	10
$3\frac{3}{4}$..	2	2	10	120		
4 ..	3	0	10	120	6	0
$4\frac{1}{4}$..	3	1	14	120		
$4\frac{1}{2}$..	3	2	18	120	8	0
$4\frac{3}{4}$..	4	0	18	120		
5 ..	4	3	10	120	9	10
$5\frac{1}{2}$..	5	2	5	115	12	0
6 ..	7	0	0	115	14	0
$6\frac{1}{2}$..	7	3	5	115	16	10
7 ..	9	2	0	115	18	10
$7\frac{1}{2}$..	10	3	14	115		
8 ..	12	0	0	115		
9 ..	15	1	0	115	30	0

TO BUILDERS AND CONTRACTORS.

BRICKWORK.

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 " " }

272 " " " 14 " " }

204 " " " 18 " " }

163 " " " $22\frac{1}{2}$ " " }

Will make a rod of
Brickwork.

A rod of Brickwork contains 306 cubic feet.

1000 Fire Bricks weigh 3 tons 5 cwt. to 3 tons 7 cwt.

1000 Ordinary Bricks weigh 3 tons 15 cwt. to 4 tons.

About 5 casks Cement are required to build a rod of Brickwork,
3 parts of Sand to 1 of Cement; 7 casks if 2 of Sand to
1 of Cement.

About $3\frac{1}{2}$ bags of Lime will build 1 rod of Brickwork.

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.

the world, universally admitted to be **THE BEST.**

GUEST, KEEN & NETTLEFOLDS, LTD.

BIRMINGHAM. ENGLAND.

WITH WHOM

JOHN LYSAGHT LTD.

HAVE BEEN AMALGAMATED SINCE 1920

CASTLE



BRAND

The Trade Mark that makes Satisfied Customers

Representative for Australia and New Zealand
for **SCREWS, BOLTS, NUTS and ACCESSORIES**

J. K. MERRITT

258a LITTLE COLLINS STREET, MELBOURNE
BOX 182, G.P.O.

418 GEORGE STREET, SYDNEY
BOX 792 G.P.O.

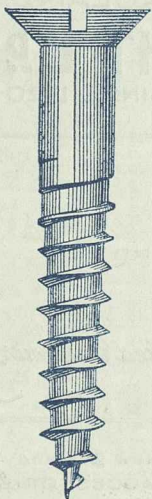
Representative for Australia
for **PLATES, BARS, PIG IRON, etc.**

JOHN LYSAGHT (AUSTRALIA) LTD.

SYDNEY - MELBOURNE - BRISBANE
ADELAIDE - PERTH

Every sheet of Orb Iron is its own best advertisement.

Specify **NETTLEFOLDS**



*on all your
indents
for :—*

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

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

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

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

AUSTRALIAN REPRESENTATIVE.

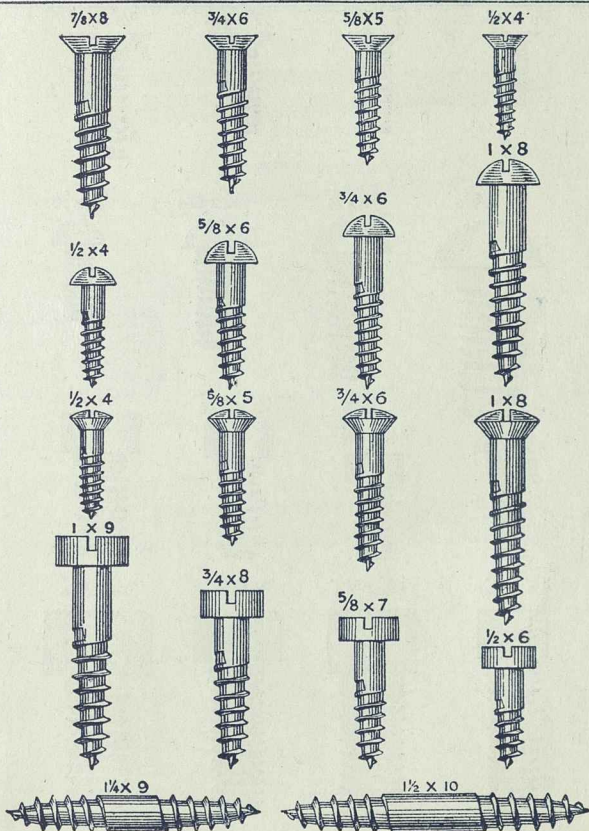
J.K. MERRITT, 285A. LITTLE COLLINS ST. MELBOURNE.

LYSAGHT'S IRON supplied to H.M. Admiralty.

NETTLEFOLDS

— RENOWNED —

WOOD SCREWS



All round the world you will find

NETTLEFOLDS

— RENOWNED —

MACHINE SCREWS

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



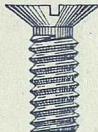
$\frac{1}{2}$ " x $\frac{5}{32}$ "



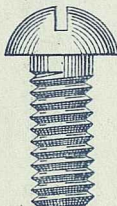
$\frac{1}{2}$ " x $\frac{3}{16}$ "



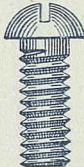
$\frac{5}{8}$ " x $\frac{1}{4}$ "



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



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



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



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



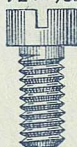
$\frac{3}{8}$ " x $\frac{5}{32}$ "



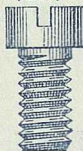
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$\frac{1}{2}$ " x $\frac{7}{32}$ "



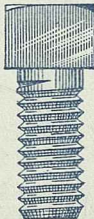
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$\frac{3}{4}$ " x $\frac{1}{4}$ "



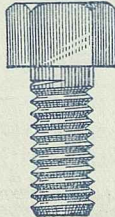
$\frac{3}{4}$ " x $\frac{5}{16}$ "



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



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

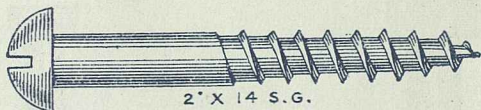
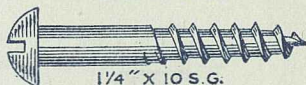
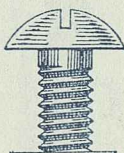
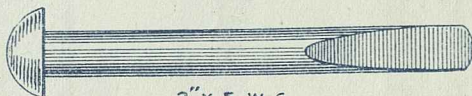
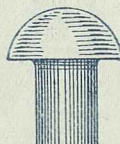


LYSAGHT'S "ORB" Galvanized Iron.

NETTLEFOLDS

— RENOWNED —

ROOFING FITTINGS

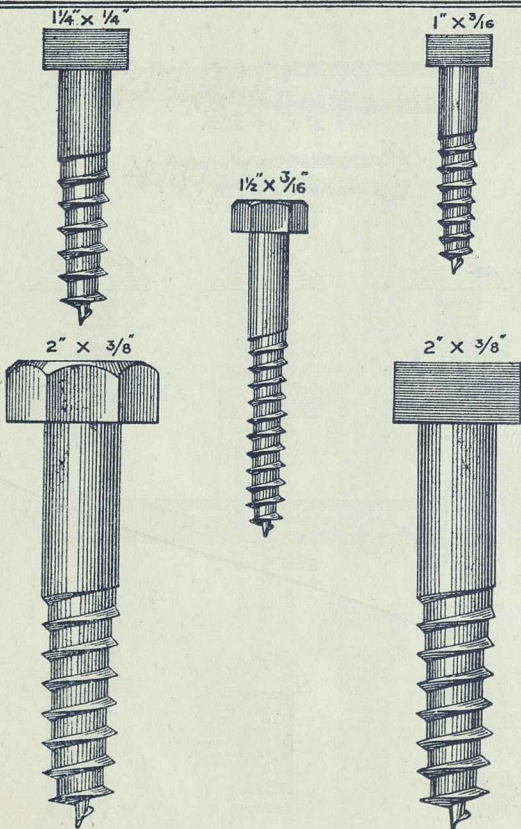


"ORB" IRON. You know it

NETTLEFOLDS

PATENT

COACH SCREWS



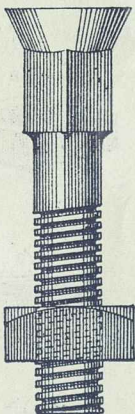
at once by its appearance.

NETTLEFOLDS

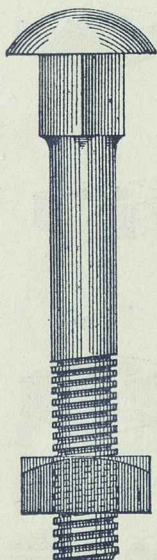
— RENOWNED —

CARRIAGE BOLTS

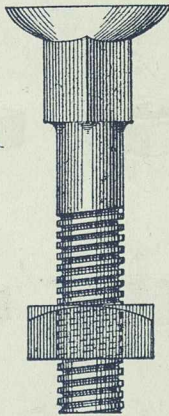
2" x 5/16"



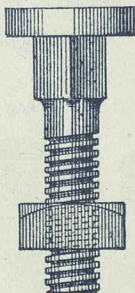
2 1/2" x 5/16"



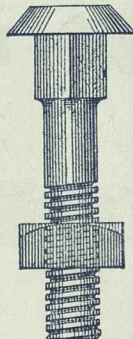
2" x 5/16"



1 1/4" x 1/4"



1 1/2" x 1/4"



LYSAGHT'S GALVANIZED IRON used throughout

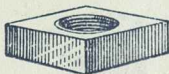
NETTLEFOLDS

PRESSED AND
FORGED NUTS

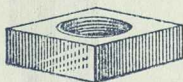
$\frac{1}{4}$ "



$\frac{5}{16}$ "



$\frac{3}{8}$ "



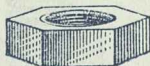
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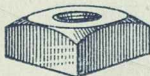
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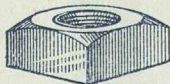
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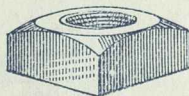
$\frac{1}{4}$ "



$\frac{5}{16}$



$\frac{3}{8}$ "



$\frac{7}{32}$ "



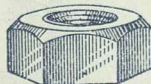
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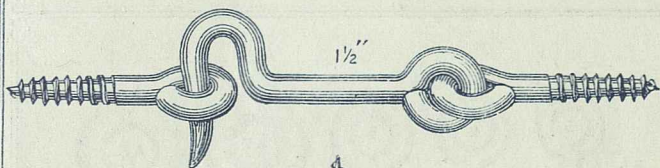
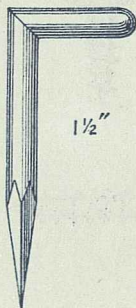
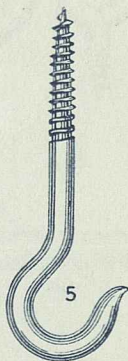
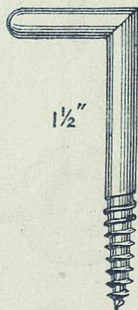
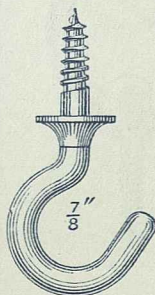
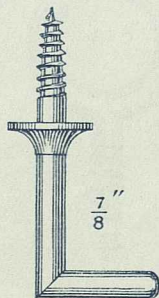
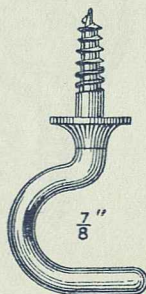


$\frac{3}{8}$ "



the world, universally admitted to be THE BEST.

NETTLEFOLDS PATENT WIRE HOOKS

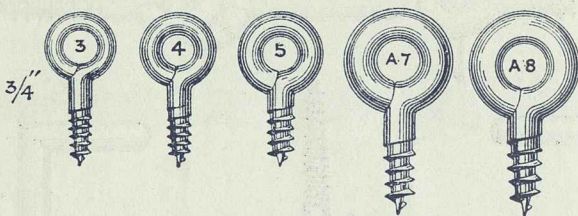
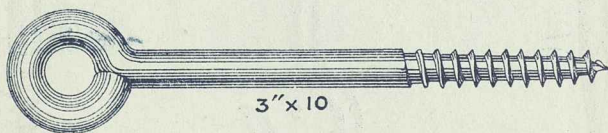
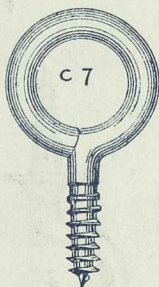
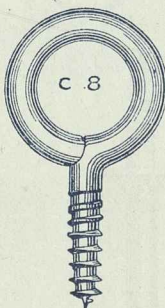
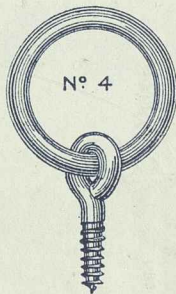


LYSAGHT'S "ORB" IRON—Beware of

NETTLEFOLDS

PATENT

WIRE EYES



Imitations. There is nothing "just as good."

NETTLEFOLDS PATENT COTTER PINS

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



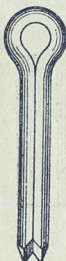
$\frac{3}{4}'' \times \frac{3}{32}''$



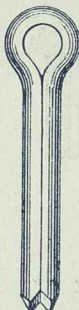
$1'' \times \frac{1}{8}''$



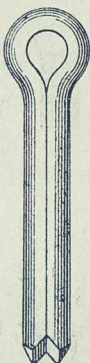
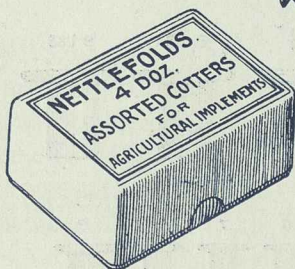
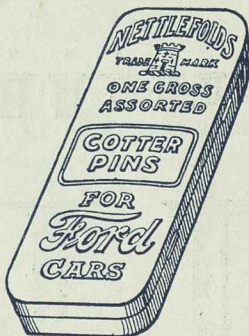
$1\frac{1}{4}'' \times \frac{5}{32}''$



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



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



"ORB" IRON—Over fifty years in use.

NETTLEFOLDS

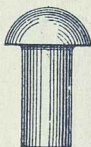
— RENOWNED —

RIVETS

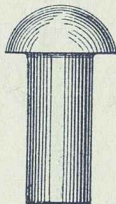
$\frac{3}{8}'' \times \frac{3}{16}''$



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



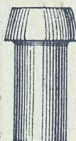
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$\frac{3}{8}'' \times \frac{3}{16}''$



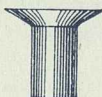
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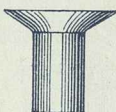
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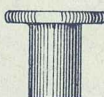
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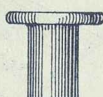
$\frac{1}{2}'' \times \frac{1}{4}''$



8 LBS



9 LBS



1



2



3



4



5



6



7



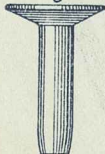
8



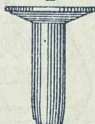
9



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



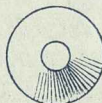
$\frac{1}{2}''$



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



8

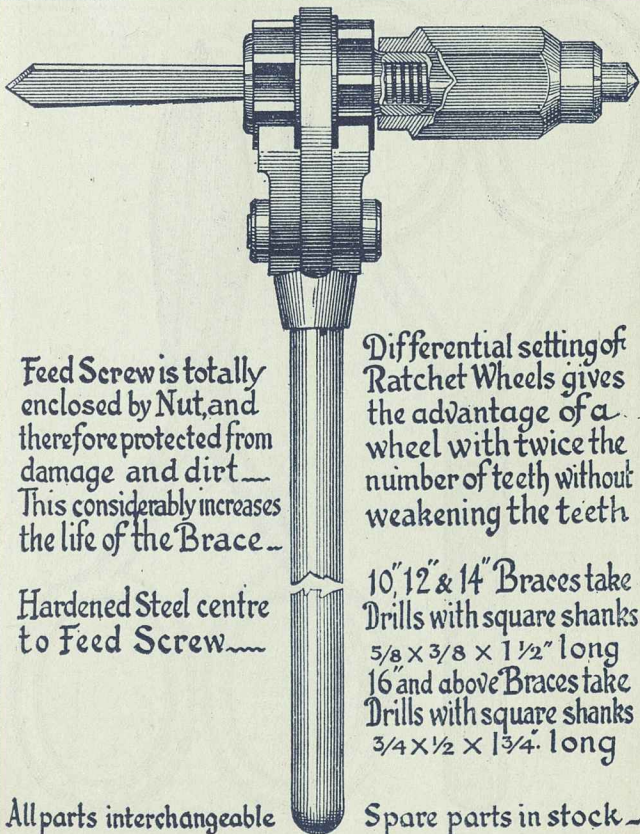


"QUEEN'S HEAD" IRON branded Blue.

NETTLEFOLDS

PATENT

RATCHET BRACES



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

Hardened Steel centre to Feed Screw ~

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

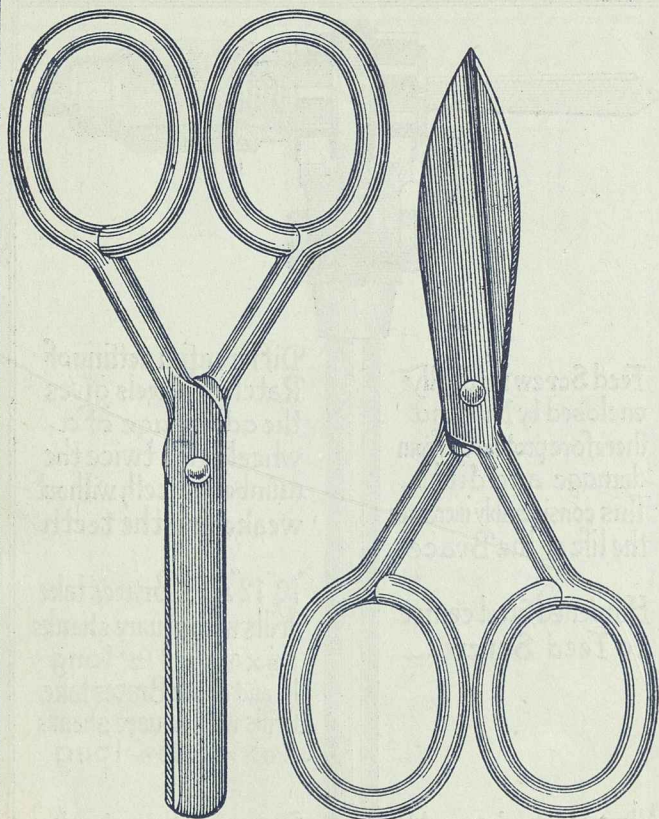
10", 12" & 14" Braces take Drills with square shanks $\frac{5}{8} \times \frac{3}{8} \times 1\frac{1}{2}$ " long
16" and above Braces take Drills with square shanks $\frac{3}{4} \times \frac{1}{2} \times 1\frac{3}{4}$ " long

All parts interchangeable

Spare parts in stock ~

LYSAGHT'S GALVANIZED IRON used throughout

NETTLEFOLDS SCISSORS



the world, universally admitted to be "The Best."

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			·206"
			·015625		5		·212"
	27		·0164"			7/32"	·21875"
	26		·018"	12			·220"
	25		·020"		4		·232"
	24		·022"	13			·234"
	23		·024"			15/64"	·234375"
	22	1/32"	·028"	14			·248"
			·03125"			1/4"	·250"
	21		·032"		3		·252"
	20		·036"	15			·262"
	19	3/64"	·040"	16	2		·276"
			·046875"			9/32"	·28125"
	18		·048"	17			·290"
4/0			·054"		1		·300"
	17		·056"	18		5/16"	·304"
3/0			·057"		0		·3125"
2/0		1/16"	·060"				·324"
			·0625"	20		11/32"	·332"
0			·063"				·34375"
	16		·064"		2/0		·348"
1			·066"	22			·360"
	15	5/64"	·072"		3/0		·372"
			·078125"			3/8"	·375"
2	14		·080"	24			·388"
	13	3/32"	·092"		4/0		·400"
			·09375"			13/32"	·40625"
3			·094"	26			·416"
	12		·104"		5/0		·432"
4		7/64"	·108"			7/16"	·4375"
			·109375"	28			·444"
	11		·116"		6/0		·464"
5			·122"			15/32"	·46875"
		1/8"	·125"	30			·472"
	10		·128"	32	7/0	1/2"	·500"
6			·136"	36			·556"
		9/64"	·140625"			9/16"	·5625"
	9		·144"	40			·612"
7			·150"			5/8"	·625"
		5/32"	·15625"			11/16"	·6875"
	8		·160"			3/4"	·750"
8			·164"			13/16"	·8125"
		11/64"	·171875"			7/8"	·875"
	7		·176"			15/16"	·9375"
9			·178"			1"	1·000"
		3/16"	·1875"				



MILD STEEL COUNTERSUNK HEAD WOOD SCREWS

APPROX. WEIGHTS IN LBS. PER GROSS

ART. NO. 1

DIA.	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	20	22	24	26	28	30	32	36
LGTH.																											
1/8"																											
3/16"																											
1/4"																											
5/16"																											
3/8"																											
1/2"																											
5/8"																											
3/4"																											
7/8"																											
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6"																											
6 1/8"																											
6 1/4"																											
6 3/8"																											
6 1/2"																											
6 3/4"																											
6 7/8"																											
7"																											

THE ABOVE ARE NET NAKED WEIGHTS

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

**GUEST, KEEN & NETTLEFOLDS
LTD.
CARDIFF WORKS.**

**MANUFACTURERS OF
STEEL PLATES, ETC.**

The finished products of these works are Steel Plates of every description, $\frac{1}{4}$ in. TO 2in. THICK, from

**OPEN HEARTH STEEL
ACID AND BASIC**

of Boiler, Tank, Bridge and Ship Quality.

All Plates supplied to meet the requirements of
British Standard Specifications,

and subject to the tests of

Lloyd's Registry

British Corporation

Board of Trade

Bureau Veritas

British Admiralty

Boiler Insurance Corporation

Sole Distributing Agents throughout Australia:

John Lysaght (Australia) Ltd.

SYDNEY, MELBOURNE, ADELAIDE, BRISBANE, PERTH.

"ORB" IRON is unrivalled for

PRICES.

JOHN LYSAGHT (Australia) LIMITED will be pleased to quote upon application for any specifications on—

(a) C.I.F.E. BASIS,

(b) F.O.B. ENGLISH PORT,

subject to the usual extras, and will also, if desired, quote on OVERHEAD PRICE.

Maximum Dimension of Steel Plates that can be rolled, subject to Special Arrangements, and to Extras as per our List.

Thickness of Plate (Inches).	Length (Feet).	Width (Inches).	Area (Sq. Feet).	Remarks.
.25 to under .30	33	72	145	
.30 .. .35	33	76	160	
.35 .. .40	36	70	185	
.40 .. .45	40	90	210	
.45 .. .50	50	90	230	
.50 .. .60	50	96	250	
.60 .. .75	45	96	250	
.75 .. .85	45	96	240	
.85 .. 1.00	45	96	220	
1.00 .. 1.125	45	96	210	
1.125 to 1.25	40	96	200	
1.25 .. 2.00				

May be rolled up to 96"
wide; weight of sheared
plate not to exceed 80 cwts.
If 90" wide or under, the
weight of sheared plate
may be 95 cwts.

No boiler plates rolled over 1" thick.

Maximum Dimensions of Circular Plates.

Thickness of Plate (Inches).	Diameter of Plate. (Inches).
.25 and under .30	75
.30 .. .375	79
.375 .. .45	93
.45 .. .50	93
.50 .. .625	99
.625 .. 1.25	99
1.25 .. 2.00	99

Quality, Durability, Uniformity, and Finish.

PIG IRON.

Guest, Keen & Nettlefolds Ltd.

manufacture Hematite Pig Iron and Foundry Pig Iron
to the following approximate analysis:—

HEMATITE PIG IRON.

	No. 1 %	No. 2 %	No. 3 %	No. 4 %	No. 5 %	Mottled %	White %
Combined Carbon (about)	0.30	0.32	0.42	0.54	1.90	1.90	2.88
Graphite (about)	3.75	3.50	3.20	2.84	2.52	1.0	0.20
	2.00	1.75	1.50	1.25	0.95	0.60	0.50
Silicon	to 3.00	to 2.25	to 1.85	to 1.60	to 1.40	to 1.00	to 0.75
		.040	.045	.050	.080	.090	.100
Sulphur	.040 max.	to .055	to .065	to .080	to .10	to .120	to .140
		max.	max.	max.	max.	max.	max.
Phosphorous	.070 max.	.070 max.	.070 max.	.070 max.	.070 max.	.070 max.	.070 max.
	.80	.80	.70	.70	.60	.40	.30
Manganese	to 1.2	to 1.2	to 1.0	to 1.0	to .90	to .70	to .50

FOUNDRY PIG IRON.

	Special Low Phosphorous %	Special Medium Phosphorous %	Ordinary %
Silicon	2½ to 3½	2½ to 3½	2½ to 3½
Sulphur	.050 max.	.040 max.	.050
Phosphorous	.2 to .4	.5 to .7	.6 to .1
Manganese	.90 max.	.1 approx.	.1 approx.
This is approximately the same as Scotch Iron.			

Quotations and further particulars obtainable from

JOHN LYSAGHT (Australia) LIMITED

Sydney, Melbourne, Adelaide, Brisbane, Perth.

TABLE

Showing Weight in Pounds

OF VARIOUS AREAS OF

Iron Plates of Different Thicknesses.

Area in Feet.	Thickness in Fractions of an Inch									
	$\frac{1}{8}$	$\frac{1}{4}$	$\frac{5}{16}$	$\frac{3}{8}$	$\frac{7}{16}$	$\frac{1}{2}$	$\frac{5}{8}$	$\frac{3}{4}$	$\frac{7}{8}$	1
1	5	10	12.5	15	17.5	20	25	30	35	40
2	10	20	25.0	30	35.0	40	50	60	70	80
3	15	30	37.5	45	52.5	60	75	90	105	120
4	20	40	50.0	60	70.0	80	100	120	140	160
5	25	50	62.5	75	87.5	100	125	150	175	200
6	30	60	75.0	90	105.0	120	150	180	210	240
7	35	70	87.5	105	122.5	140	175	210	245	280
8	40	80	100.0	120	140.0	160	200	240	280	320
9	45	90	112.5	135	157.5	180	225	270	315	360
10	50	100	125.0	150	175.0	200	250	300	350	400
11	55	110	137.5	165	192.5	220	275	330	385	440
12	60	120	150.0	180	210.0	240	300	360	420	480
13	65	130	162.5	195	227.5	260	325	390	455	520
14	70	140	175.0	210	245.0	280	350	420	490	560
15	75	150	187.5	225	262.5	300	375	450	525	600
16	80	160	200.0	240	280.0	320	400	480	560	640
17	85	170	212.5	255	297.5	340	425	510	595	680
18	90	180	225.0	270	315.0	360	450	540	630	720
19	95	190	237.5	285	332.5	380	475	570	665	760
20	100	200	250.0	300	350.0	400	500	600	700	800
30	150	300	375.0	450	525.0	600	750	900	1050	1200
40	200	400	500.0	600	700.0	800	1000	1200	1400	1600
50	250	500	625.0	750	875.0	1000	1250	1500	1750	2000
60	300	600	750.0	900	1050	1200	1500	1800	2100	2400
70	350	700	875.0	1050	1225	1400	1750	2100	2450	2800
80	400	800	1000	1200	1400	1600	2000	2400	2800	3200
90	450	900	1087	1350	1575	1800	2250	2700	3150	3600
100	500	1000	1250	1500	1750	2000	2500	3000	3500	4000

the world, universally admitted to be THE BEST.

Weight of Round and Square Iron and Steel.

Size (dia.)	IRON		STEEL	
	Round Weight per lineal foot	Square Weight per lineal foot	Round Weight per lineal foot	Square Weight per lineal foot
1/4	0.164	0.208	0.167	0.213
5/16	0.256	0.326	0.261	0.332
3/8	0.368	0.469	0.376	0.478
7/16	0.501	0.638	0.511	0.651
1/2	0.654	0.833	0.668	0.849
9/16	0.828	1.062	0.845	1.076
5/8	1.023	1.302	1.043	1.328
11/16	1.237	1.576	1.262	1.607
3/4	1.473	1.875	1.502	1.912
13/16	1.728	2.201	1.763	2.245
7/8	2.004	2.552	2.044	2.603
15/16	2.301	2.930	2.347	2.988
3/16	0.092	0.117	0.094	0.120
1	2.618	3.333	2.670	3.400
1 1/8	3.313	4.219	3.380	4.303
1 1/4	4.091	5.208	4.172	5.312
1 1/2	4.950	6.302	5.049	6.428
1 3/4	5.890	7.500	6.008	7.750
2	6.913	8.802	7.051	8.978
2 1/8	8.018	10.208	8.178	10.412
2 1/4	9.204	11.719	9.388	11.953
2 1/2	10.472	13.333	10.681	13.600
2 3/4	11.82	15.05	12.06	15.35
3	13.25	16.87	13.52	17.21
3 1/8	14.77	18.80	15.06	19.18
3 1/4	16.36	20.83	16.69	21.25
3 1/2	18.04	22.97	18.40	23.43
3 3/4	19.80	25.21	20.19	25.71
4	21.64	27.55	22.07	28.10
4 1/8	23.56	30.00	24.03	30.60
4 1/4	27.65	35.21	28.21	35.91
4 1/2	32.07	40.83	32.71	41.65
4 3/4	36.82	46.87	37.55	47.81
5	41.89	53.33	42.73	54.40
5 1/8	47.29	60.21	48.23	61.41
5 1/4	53.01	67.50	54.07	68.85
5 1/2	59.07	75.21	60.25	76.71
5 3/4	65.45	83.33	66.76	85.00
6	79.19	100.83	80.78	102.85
6 1/2	94.25	120.00	96.13	122.40

The Best is the Cheapest. Quality is

Bar Iron—Flat.

Approximate Weight per Lineal Foot.

	$\frac{1}{4}$	$\frac{5}{16}$	$\frac{3}{8}$	$\frac{7}{16}$	$\frac{1}{2}$	$\frac{5}{8}$	$\frac{3}{4}$	$\frac{7}{8}$	1
In.	Lb.	Lb.	Lb.	Lb.	Lb.	Lb.	Lb.	Lb.	Lb.
1	.83	1.04	1.25	1.45	1.66	2.08	2.50	2.91	3.33
1 $\frac{1}{8}$	.94	1.17	1.40	1.64	1.87	2.34	2.81	3.28	3.75
1 $\frac{1}{4}$	1.04	1.30	1.56	1.82	2.08	2.60	3.12	3.64	4.16
1 $\frac{3}{8}$	1.14	1.43	1.71	2.	2.29	2.86	3.43	4.01	4.58
1 $\frac{1}{2}$	1.25	1.56	1.87	2.18	2.50	3.12	3.75	4.37	5.
1 $\frac{5}{8}$	1.35	1.69	2.03	2.36	2.70	3.38	4.06	4.73	5.41
1 $\frac{3}{4}$	1.45	1.82	2.18	2.55	2.91	3.64	4.37	5.10	5.83
1 $\frac{7}{8}$	1.56	1.95	2.34	2.73	3.12	3.90	4.68	5.46	6.25
2	1.66	2.08	2.50	2.91	3.33	4.16	5.	5.83	6.66
2 $\frac{1}{8}$	1.77	2.21	2.65	3.09	3.54	4.42	5.31	6.19	7.08
2 $\frac{1}{4}$	1.87	2.34	2.81	3.28	3.75	4.68	5.62	6.56	7.50
2 $\frac{3}{8}$	1.97	2.47	2.96	3.46	3.95	4.94	5.93	6.92	7.91
2 $\frac{1}{2}$	2.08	2.60	3.12	3.64	4.16	5.20	6.25	7.29	8.33
2 $\frac{5}{8}$	2.18	2.73	3.28	3.82	4.37	5.46	6.56	7.65	8.75
2 $\frac{3}{4}$	2.29	2.86	3.43	4.01	4.58	5.72	6.87	8.02	9.16
2 $\frac{7}{8}$	2.39	2.99	3.59	4.19	4.79	5.98	7.18	8.38	9.58
3	2.50	3.12	3.75	4.37	5.	6.25	7.50	8.75	10.
3 $\frac{1}{4}$	2.70	3.38	4.06	4.73	5.41	6.77	8.12	9.47	10.83
3 $\frac{1}{2}$	2.91	3.64	4.37	5.10	5.83	7.29	8.75	10.20	11.66
3 $\frac{3}{4}$	3.12	3.90	4.68	5.46	6.25	7.81	9.37	10.93	12.50
4	3.33	4.16	5.	5.83	6.66	8.33	10.	11.66	13.33
4 $\frac{1}{4}$	3.54	4.42	5.31	6.19	7.08	8.85	10.62	12.39	14.16
4 $\frac{1}{2}$	3.75	4.68	5.62	6.56	7.50	9.37	11.25	13.12	15.
4 $\frac{3}{4}$	3.95	4.94	5.93	6.92	7.91	9.89	11.87	13.85	15.83
5	4.17	5.20	6.25	7.29	8.33	10.41	12.50	14.58	16.66
5 $\frac{1}{4}$	4.37	5.46	6.56	7.65	8.75	10.93	13.12	15.31	17.50
5 $\frac{1}{2}$	4.58	5.72	6.87	8.02	9.16	11.45	13.75	16.04	18.33
5 $\frac{3}{4}$	4.79	5.98	7.18	8.38	9.58	11.97	14.37	16.77	19.16
6	5.	6.26	7.50	8.75	10.	12.50	15.	17.50	20.

Weight of Steel is about 2 per cent more than Iron.

REMEMBERED long after Price is forgotten.

STEEL JOISTS.—British Standard Sections.

A=Depth. C=Thickness of Web.
B=Width of Flange. D=Thickness of Flange.

Dimensions in Inches.				Weight lbs. per foot-run	Safe load Tons distributed for Spans of					
A	B	C	D		6 ft.	10 ft.	12 ft.	16 ft.	20 ft.	30 ft
3	1½	0.16	0.248	4.0	0.92	0.55	0.46	—	—	—
3	3	0.20	0.332	3.5	2.0	1.2	1.0	—	—	—
4	1½	0.17	0.24	5.0	1.5	0.91	0.76	—	—	—
4	3	0.22	0.336	9.5	3.1	1.9	1.6	—	—	—
4½	1½	0.18	0.325	6.5	2.4	1.4	1.2	—	—	—
5	3	0.22	0.376	11.0	4.5	2.7	2.3	1.7	—	—
5	4½	0.29	0.448	18.0	7.6	4.5	3.8	2.8	—	—
6	3	0.26	0.348	12.0	5.6	3.4	2.8	2.1	—	—
6	4½	0.37	0.431	20.0	9.6	5.8	4.8	3.6	—	—
6	5	0.41	0.520	25.0	12.0	7.3	6.0	4.5	—	—
7	4	0.25	0.387	16.0	9.4	5.6	4.7	3.5	2.8	—
8	4	0.28	0.402	18.0	11.0	7.0	5.8	4.3	3.5	—
8	5	0.35	0.575	28.0	18.0	11.0	9.9	7.0	5.5	—
8	6	0.44	0.597	35.0	23.0	14.0	11.0	8.6	7.0	—
9	4	0.30	0.460	21.0	15.0	9.0	7.5	5.6	4.5	—
9	7	0.55	0.924	58.0	42.0	25.0	21.0	16.0	12.0	—
10	5	0.36	0.552	30.0	24.0	14.0	12.0	9.0	7.2	—
10	6	0.40	0.736	42.0	35.0	21.0	17.0	13.0	10.0	—
10	8	0.60	0.970	70.0	53.0	34.0	28.0	21.0	17.0	—
12	5	0.35	0.550	32.0	30.0	18.0	15.0	11.0	9.0	—
12	6	0.40	0.717	44.0	40.0	26.0	22.0	16.0	13.0	—
12	6	0.50	0.883	54.0	52.0	31.0	26.0	19.0	15.0	10.0
14	6	0.40	0.698	46.0	43.0	31.0	26.0	19.0	15.0	10.0
14	6	0.50	0.873	57.0	59.0	38.0	31.0	24.0	19.0	12.0
15	5	0.42	0.647	42.0	47.0	28.0	24.0	18.0	14.0	9.5
15	6	0.50	0.880	59.0	62.0	42.0	35.0	26.0	21.0	15.0
16	6	0.55	0.847	62.0	73.0	45.0	38.0	28.0	22.0	14.0
18	7	0.55	0.928	75.0	—	64.0	53.0	40.0	32.0	21.0
20	7½	0.60	1.01	89.0	—	83.0	69.0	52.0	41.0	27.0
24	7½	0.60	1.07	100.0	—	102.0	92.0	69.0	55.0	36.0

Span should not exceed 20 x A, or deflection will be excessive.

Galvanized Barb Wire Fencing.

Approximate Weight.

Points	Marks	Gauge	100 Yards	1 Mile	Length of 112 lbs. in Yards
4	IOWA	12	25 lbs.	438 lbs.	450
4	"	14	16 "	281 "	730
4	SPECIAL	12½	17 "	303 "	650
4	"	14	12 "	211 "	890
2	GLIDDEN	12	21 "	375 "	525
2	"	14	13 "	225 "	875

Description.	Weight		Length of 112 lbs.
	100yds.	1 mile	
2-point ordinary round, one wire only, 5in. apart ..	Lbs. 19	Lbs. 335	Yds. 598
2-point thick set, 2½in. apart ..	21	370	533
4-point ordinary, 6in. apart ..	20	352	560
4-point thick set, 3in. apart ..	25	440	448
4-point ordinary round, both wires, 6in. apart ..	20	352	560
4-point thick set, round, both wires 3in. apart ..	25	440	448

WIRE NETTING.

Estimated Weight, 24 inches wide.

(Other Widths may be estimated pro rata.)

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

Size	Weight per Mile	Weight of Roll 50 yds.	Size	Weight per Mile	Weight of Roll 50 yds.
inches	cwt. qr. lb.	lbs.	inches	cwt. qr. lb.	lbs.
24 x 2	18 0 26	57	24 x 2 x 19	6 1 21	19
24 x 2 x 13	16 3 25	53	24 x 2 x 18	8 1 12	25
24 x 2 x 19	12 2 12	41	24 x 2 x 17	12 0 14	35
24 x 1	12 2 8	36	24 x 2 x 16	14 0 25	45
24 x 1 x 13	9 3 17	28	24 x 2½ x 18	6 3 8	22
24 x 1 x 19	9 3 8	32	24 x 2½ x 17	9 3 17	30
24 x 1½ x 18	12 0 10	42	24 x 2½ x 16	11 2 15	35
24 x 1½ x 17	16 2 19	54	24 x 3 x 18	5 1 8	16
24 x 1½ x 19	8 2 14	26	24 x 3 x 17	7 2 16	22
24 x 1½ x 18	11 1 1	33	24 x 3 x 16	9 2 18	30
24 x 1½ x 17	14 1 10	46	24 x 3 x 15	13 0 14	38
24 x 1½ x 19	7 0 17	21	24 x 3 x 14	15 0 12	47
24 x 1½ x 18	8 2 7	31	24 x 4 x 16	7 2 22	24
24 x 1½ x 17	13 1 6	42	24 x 4 x 15	9 2 6	30
			24 x 4 x 14	11 0 26	35

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

Rabbit-proof Wire Netting Weights.

Size	Grade	Approximate Weight per mile			
		Tons	Cwts	Qrs.	Lbs.
42 x $1\frac{1}{4}$ x 17	A	1	12	0	0
42 x $1\frac{1}{4}$ x 17	B	1	9	0	0
42 x $1\frac{1}{4}$ x 18	A	1	3	0	0
42 x $1\frac{1}{4}$ x 18	B	1	1	1	0
42 x $1\frac{1}{2}$ x 17	A	1	7	2	0
42 x $1\frac{1}{2}$ x 17	B	1	4	2	0
42 x $1\frac{1}{2}$ x 18	A	1	0	1	0
42 x $1\frac{1}{2}$ x 18	B		18	2	0
36 x $1\frac{1}{4}$ x 17	A	1	7	2	0
36 x $1\frac{1}{4}$ x 17	B	1	5	0	0
36 x $1\frac{1}{4}$ x 18	A	1	0	1	0
36 x $1\frac{1}{4}$ x 18	B		18	2	0
36 x $1\frac{1}{2}$ x 17	A	1	4	2	0
36 x $1\frac{1}{2}$ x 17	B	1	2	0	0
36 x $1\frac{1}{2}$ x 18	A		17	2	0
36 x $1\frac{1}{2}$ x 18	B		16	0	0

Relative Value Based on Mile Measurements.

Per Mile	Per 100 Yards	Per Mile	Per 100 Yards
£40 0 0	£2 5 5	£22 0 0	£1 5 0
39 0 0	2 4 4	21 0 0	1 3 10
38 0 0	2 3 2	20 0 0	1 2 9
37 0 0	2 2 1	19 0 0	1 1 7
36 0 0	2 0 11	18 0 0	1 0 5
35 0 0	1 19 9	17 0 0	0 19 4
34 0 0	1 18 8	16 0 0	0 18 2
33 0 0	1 17 6	15 0 0	0 17 1
32 0 0	1 16 4	14 0 0	0 15 11
31 0 0	1 15 3	13 0 0	0 14 9
30 0 0	1 14 1	12 0 0	0 13 8
29 0 0	1 12 11	11 0 0	0 12 6
28 0 0	1 11 10	10 0 0	0 11 4
27 0 0	1 10 8	9 0 0	0 10 3
26 0 0	1 9 7	8 0 0	0 9 1
25 0 0	1 8 5	7 0 0	0 7 11
24 0 0	1 7 3	6 0 0	0 6 10
23 0 0	1 6 2	5 0 0	0 5 8

GALVANIZED WIRE NETTING.

TABLE OF GROSS PRICES at per Roll of 50 Yards.

Mesh	G.	12 ins. wide	18 ins. wide	24 ins. wide	30 ins. wide	36 ins. wide	42 ins. wide	48 ins. wide	50 ins. wide	72 ins. wide	G.	Mesh	
$\frac{1}{2}$ in.	22	1 16	3 2	6 3	8	0 4	19	65	16	1	6 12	8	$\frac{1}{2}$ in.
"	20	2 4	0 3	3 4	0 5	0 6	0 7	0 8	0 9	0 10	8 0	19	"
$\frac{3}{4}$ in.	19	2 18	4 4	0 5	6 6	13	0	0 9	6	8 16	4 13	20	"
"	22	1 1	3 1	10 3	18	0 2	15	0 3	4	5 10	4 11	19	"
"	20	1 6	3 1	17 6	22 18	6 3	8	3 3	4	8 5	5 13	22	"
"	19	1 12	3 2	0 2	18 17	6 4	3	9 4	7	9 7	6 16	20	"
1 in.	18	2 2	3 3	0 6	23 14	0 5	10	0 6	8	7 8	6 19	18	"
"	20	0 19	9 1	1 16	0 2	3 9	11	3 2	19	4 11	0	20	1 in.
"	19	1 2	0 1	11 9	0 3	3 2	17	6 3	7	—	—	19	"
"	18	1 7	0 1	18 11	0 3	0 3	10	0 4	1	—	—	18	"
$1\frac{1}{4}$ in.	17	0 16	0 2	11 9	0 4	0 4	13	9 5	9	—	—	17	"
"	18	1 2	0 1	11 9	0 2	0 2	16	0 2	14	—	—	16	$1\frac{1}{4}$ in.
"	17	1 8	6 2	1 1	0 2	8 8	9	3 3	5	4 18	3 18	19	"
"	16	1 18	3 2	1 1	0 3	9 3	12	6 4	4	5 12	4 13	17	"
$1\frac{1}{2}$ in.	19	0 15	6 1	2 2	0 4	2 4	17	6 5	13	9 10	8 6	16	"
"	18	0 18	9 1	3 1	0 6	14 3	19	6 2	16	10 15	9 8	19	"
"	17	1 3	6 1	1 3	1 1	3 2	7	6 2	15	12 2	10 3	18	"
"	16	1 12	5 0	2 5	12 10	0 3	10	0 3	10	15 0	12 4	17	"
$1\frac{3}{4}$ in.	19	0 14	0 1	9 9	0 3	1 1	15	3 2	8	18 2	15 5	16	"
"	18	0 16	3 1	3 3	1 15	6 2	13	3 2	14	20 6	18 8	19	"
"	17	1 1	0 2	1 18	0 3	3 4	11	3 3	1	22 7	20 3	17	"
"	16	1 8	0 2	1 18	0 3	6 2	11	3 4	2	24 8	22 4	16	"
2 in.	19	0 12	0 1	3 1	1 6	9 3	11	3 3	1	26 9	24 5	19	"
"	18	0 14	0 1	3 1	1 10	6 2	15	3 4	2	28 10	26 6	18	"
"	17	1 3	3 1	0 1	3 19	3 1	15	3 4	3	30 11	28 7	17	"
"	16	1 10	6 2	1 13	6 11	9 1	15	3 4	4	32 12	30 8	16	"
$2\frac{1}{4}$ in.	15	1 3	1 13	0 2	3 6	6 2	16	3 4	5	34 13	32 9	15	"
"	19	0 11	0 0	1 15	0 3	9 1	17	0 1	11	36 14	34 10	19	"
"	18	0 12	0 0	1 15	0 3	6 1	18	0 1	12	38 15	36 11	18	"
"	17	1 0	6 1	1 13	3 3	9 1	18	0 1	13	40 16	38 12	17	"
"	16	1 15	9 1	1 18	6 1	11 7	20	0 1	14	42 17	40 13	16	"
"	15	1 10	6 1	1 13	3 6	9 1	18	0 1	15	44 18	42 14	15	"
"	19	0 11	0 0	1 15	0 3	9 1	17	0 1	16	46 19	44 15	19	"
"	18	0 12	0 0	1 15	0 3	6 1	18	0 1	17	48 20	46 16	18	"
"	17	1 0	6 1	1 13	3 3	9 1	18	0 1	18	50 21	48 17	17	"
"	16	1 15	9 1	1 18	6 1	11 7	20	0 1	19	52 22	50 18	16	"
"	15	1 10	6 1	1 13	3 6	9 1	18	0 1	20	54 23	52 19	15	"

GALVANIZED WIRE NETTING—Continued.

Mesh	G	12 ins. wide	18 ins. wide	24 ins. wide	30 ins. wide	36 ins. wide	42 ins. wide	48 ins. wide	60 ins. wide	72 ins. wide	G.	Mesh.
3 in.	19	0 8	9 0	12 60	15 90	0 1	1 9	1 5	1 16	3 3	19	3 in.
"	18	0 10	3 0	14 90	18 91	2 6	1 5	1 9	2 2	6 2	18	"
"	17	0 14	6 0	19 01	4 31	9 0	1 13	0 18	0 2	11 0	17	"
"	16	0 17	6 1	3 91	10 31	16 3	2 1	2 15	0 3	6 6	16	"
"	15	1 0	6 1	8 31	16 02	2 9	2 8	2 11	0 4	17 4	15	"
"	14	—	1 14	32 3	22 62	8 2	9 2	16 11	0 4	18 5	14	"
4 in.	18	0 8	9 0	12 60	15 100	0 1	1 8	1 5	0 1	18 6	18	4 in.
"	17	0 15	0 0	16 01	0 61	4 0	1 7	1 12	0 1	2 3	17	"
"	16	0 17	0 0	19 61	1 4	8 6	1 13	0 18	0 2	15 0	16	"
"	15	—	1 4	6 11	11 01	16 2	2 0	2 16	0 3	4 0	15	"
"	14	—	1 8	0 1	16 02	2 0	2 8	6 7	0 4	17 0	14	"

For Prices of Intermediate Widths, see Note below.

SHEEP NETTING, WITH 3-PLY STRAND WIRE SELVAGES.

Mesh	G	12 ins. wide	18 ins. wide	24 ins. wide	30 ins. wide	36 ins. wide	42 ins. wide	48 ins. wide	60 ins. wide	72 ins. wide	G.	Mesh.
3 in.	16	0 17	6 1	11 6	1 17	6 2	2 6	2 9	3 10	4 5	16	3 in.
"	15	1 1	6 1	10 01	17 92	5 0	2 11	3 2	4 4	5 2	15	"
"	14	1 6	6 1	16 02	2 6	0 3	2 6	12 11	4 3	6 5	14	"
"	13	1 12	6 2	4 9	2 17	0 3	3 17	6 4	6 2	7 15	13	"
4 in.	16	0 19	0 1	1 6	3 10	0 6	1 14	9 2	4 2	9 0	16	4 in.
"	15	—	1 6	9 1	13 61	19 02	4 6	12 11	4 3	9 0	15	"
"	14	—	1 10	6 1	18 62	4 6	2 11	0 2	4 5	2 0	14	"
"	13	—	1 15	0 2	4 0	2 12	6 3	0 0	0 5	0 0	13	"
"	12	—	2 7	0 3	0 0	4 1	3 4	14 10	5 8	2 6	12	"

3 and 4 inch only Centre Strands—17, 16 gauges, 4/3; 15 gauge, 4/6; 14 and 13 gauges, 5/-; 12 gauge, 6/3 each extra per roll gross.

WIDTHS UNDER 12 inch are charged as 12 inch, and 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 at the mean between 48 inch and 60 inch, 56 inches would be charged as 60 inches. This applies to both Ordinary and Sheep Netting.

NOTE.—A Special Tariff is issued from time to time for Rabbit-proof Sizes.

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 1-3 per cent., i.e.,
for example:—

Adding 14 per cent.				Adding 16 1-3 per cent.			
Cost price	..	£100	0 0	Cost price	..	£100	0 0
Add 14 per cent.		14	0 0	Add 16 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 12.29 per cent., but £16/6/8 profit on selling price £116/6/8 gives gross profit 14.01 per cent.

"QUEEN'S HEAD" IRON branded Blue.

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

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

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

Gross Profit Required.		Add to Cost Price.		Selling Price of Goods costing £1.		
	per cent.		per cent.	£	s.	d.
5		5 $\frac{1}{3}$		1	1	1
7 $\frac{1}{2}$	"	8 $\frac{1}{4}$	"	1	1	8
10	"	11 $\frac{1}{4}$	"	1	2	3
12 $\frac{1}{2}$	"	14 $\frac{1}{2}$	"	1	2	11
14	"	16 $\frac{1}{3}$	"	1	3	3
15	"	17 $\frac{3}{4}$	"	1	3	7
16	"	19 $\frac{1}{4}$	"	1	3	10
17 $\frac{1}{2}$	"	21 $\frac{1}{4}$	"	1	4	3
18	"	22	"	1	4	5
19	"	23 $\frac{1}{2}$	"	1	4	8
20	"	25	"	1	5	0
21	"	26 $\frac{3}{4}$	"	1	5	4
22 $\frac{1}{2}$	"	29	"	1	5	10
25	"	33 $\frac{1}{3}$	"	1	6	8
27 $\frac{1}{2}$	"	38	"	1	7	7
30	"	43	"	1	8	7
32 $\frac{1}{2}$	"	48 $\frac{1}{4}$	"	1	9	8
35 $\frac{1}{3}$	"	50	"	1	10	0
35	"	54	"	1	10	10
37 $\frac{1}{2}$	"	60	"	1	12	0
40	"	66 $\frac{2}{3}$	"	1	13	4
45	"	82	"	1	16	5
50	"	100	"	2	0	0

"ORB" IRON, the Universal Standard of

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.

SLATES (ROOFING). Approximate.

Actual number of Slates required to cover one square (100 square feet).

Description	Size	2 in. Lap	3 in. Lap.	4 in. Lap
Duchess	24 x 12	109	115	120
Countess	20 x 10	160	169	180
Vis-Countess	18 x 10	180	192	205
Ladies	16 x 8	257	277	300

Value for Corrugated Sheets.

Covering Capacity and Weight of Rosehill Tiles.

131 Tiles cover 100 super feet of roof.

100 super feet of Tiling weighs 7 cwt.

95 lineal feet of 1½ in. x 1 in. battens to one square of roofing.

Half-pound of 19 gauge copper wire to one square of roofing.

Half-pound of 2 in. x 12g. D.H. nails to one square of roofing.

CORRECT RAFTER MEASUREMENTS FOR ROSEHILL TILE ROOFS.

If rafters are cut to any of the following measurements it will not be necessary to cut Rosehill Tiles at the ridge.

Length of rafter.	Number of Tile courses.	Length of rafter.	Number of Tile courses.
1ft. 3 in.	1	14ft. 9 in.	13
2ft. 4½ in.	2	15ft. 10½ in.	14
3ft. 6 in.	3	17ft. 0 in.	15
4ft. 7½ in.	4	18ft. 1½ in.	16
5ft. 9 in.	5	19ft. 3 in.	17
6ft. 10½ in.	6	20ft. 4½ in.	18
8ft. 0 in.	7	21ft. 6 in.	19
9ft. 1½ in.	8	22ft. 7½ in.	20
10ft. 3 in.	9	23ft. 9 in.	21
11ft. 4½ in.	10	24ft. 10½ in.	22
12ft. 6 in.	11	26ft. 0 in.	23
13ft. 7½ in.	12	27ft. 1½ in.	24

ASBESTOS-CEMENT (DURABESTOS) BUILDING SHEETS.

STOCK SIZES AND WEIGHTS.

Thickness and Stock Width	Stock Length	Weight per Sheet	Thickness and Stock Width	Stock Length	Weight per Sheet
3-16in. x 4ft.	12ft.	96 lbs.	5-32in. x 4ft.	8ft.	50 lbs.
do.	10ft.	80 "	do.	7ft.	44 "
do.	9ft.	70 "	do.	6ft.	38 "
do.	8ft.	60 "	do.	5ft.	31 "
do.	7ft.	52 "	do.	4ft.	25 "
do.	6ft.	45 "	do.	3ft.	19 "
do.	5ft.	37 "	5-32in. x 3ft.	8ft.	38 "
do.	4ft.	30 "	do.	7ft.	33 "
do.	3ft.	23 "	do.	6ft.	28 "
3-16in. x 3ft.	10ft.	60 "	do.	5ft.	23 "
do.	9ft.	52 "	do.	4ft.	19 "
do.	8ft.	45 "	½ in. x 4ft.	8ft.	80 "
do.	7ft.	39 "	5-16in. x 4ft.	8ft.	100 "
do.	6ft.	34 "	¾ in. x 4ft.	8ft.	120 "
do.	5ft.	28 "	1 in. x 4ft.	8ft.	168 "
do.	4ft.	23 "			

The above particulars apply to Durabestos (Australian-made) Sheets and Slates.

ASBESTOS—CEMENT SLATES AND SHINGLES.

Materials Required per Square.

	Slate, 16 x 16 inches	Shingle 24 x 12 inches	Shingle, 20 x 10 inches	Shingle, 16 x 8 inches.	Shingle, 12 x 6 inches.
Net Weight per Slate or Single ..	2 $\frac{3}{4}$ lbs.	3 lbs.	2 $\frac{1}{2}$ lbs.	1 $\frac{3}{8}$ lbs.	$\frac{3}{4}$ lbs.
Quantity to one Square	100	115	170	280	535
Nail holes punched in each	2	nil	nil	nil	nil
1 $\frac{1}{2}$ in. x 13-g. galvd. slate nails, per square	1 lb.	1 $\frac{1}{4}$ lbs.	1 $\frac{3}{4}$ lbs.	2 $\frac{3}{4}$ lbs.	5 $\frac{1}{4}$ lbs.
Crampon Holes punched in each ..	1	1	1	nil	nil
Crampons required, per square	100	115	170	280	nil
2 in. x 1 in. oregon battens, per sq.	170 ft.	125 ft.	150 ft.	200 ft.	280 ft.
2 $\frac{1}{2}$ in. x 12-g. D.H. batten nails, per square	1 lb	$\frac{3}{4}$ lb.	1 lb.	1 lb.	1 $\frac{1}{2}$ lbs.
Weight of one square of roof..	360 lbs.	400 lbs.	500 lbs.	485 lbs.	510 lbs.

The above particulars apply to Durabestos (Australian-Made), and is supplied by courtesy of Messrs. Wunderlich Ltd., Sydney.

Tank Makers should specify LYSAGHT'S
“ORB” Brand Corrugated Iron—it will stand
any and every possible test in curving or
otherwise, being almost as tough as copper.
It is obtainable up to 12 feet in length.

USEFUL INFORMATION.

BRICKS.—About 1,000 bricks, with two bags of lime and one load of sand, are required for an ordinary Cottage Chimney; and 2,000 bricks, $3\frac{1}{2}$ bags of lime and $1\frac{1}{2}$ loads of sand for a Double Chimney. About 1,000 bricks on an average go to $3\frac{1}{2}$ tons weight.

LIME.—From 15-16 bags to 1 ton weight.

CEMENT.—About $3\frac{1}{2}$ cwt. to one cask or barrel.

PLASTER OF PARIS.—Per barrel, weighs about $2\frac{3}{4}$ cwt.

LATH and PLASTER.—100 square yards require 4 bags of lime, 3 yards of sand, 16 bundles of 4ft. 6in. American laths, 8lbs. $1\frac{1}{4}$ inch nails, and half bag of hair.

LATHS.—A bundle of 4ft. 6in. American laths covers $6\frac{1}{2}$ square yards; a bundle of 4ft. 6in. ceiling laths covers 5 square yards.

OIL.—Oil weighs about 56lbs. per 5-gallon drum.

PAINT.—One gallon of mixed paint weighs 18 to 20 lbs., and will cover from 40 to 50 square yards with one coat, according to surface; 1lb. mixed paint will cover one square yard, three coats, or 90lbs. to 100 square yards, three coats. Allow 4lbs. mixed paint to every foot run of 11ft. high walls for three coats. Paint materials required for 100 square yards: $\frac{1}{2}$ cwt. white lead, 2 gallons of oil, 1 quart turps., 7 lbs. dryers, 3lbs. putty, and colours as desired, for three coats. One gallon of Glassard Oil will cover 50 square yards, two coats, or 2 gallons per 100 square yards, two coats.

NAILS.—1lb. 2-inch brads, $1\frac{1}{2}$ lb. $2\frac{1}{4}$ -inch, 2lbs. $2\frac{1}{2}$ -inch to every 100 feet of flooring; allow $\frac{1}{2}$ lb. $1\frac{1}{2}$ -inch nails to every 100 feet of lining; 1lb. of 2-inch nails to every 300 feet of weatherboards.

HOW TO MEASURE SPOUTING, RIDGING and DOWNPIPE.

—Spouting: From back to front, inside head. Ridging: From one edge to the other. Downpipe: Actual diameter.

DRILLING GLASS.—Dr. Ryan, chemist, of the Polytechnic Institution, says: "If a solution of camphor in turpentine be applied to the usual cutting instruments, to moisten, instead of emery or sulphate of copper, glass may be cut and bored just as easily as metals or other substances."

The "ORB" Brand on a Sheet of

Useful Information.

Approximate Number of Nails per lb.

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

1 Gross 1½in. Galvd. Screws = 2½lbs.

1 „ Lead Washers = 3lbs.

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.
1½	2/4	3½	30/4	6½	58/4	9½	86/4
1½	4/8	3½	32/8	6½	60/8	9½	88/8
1½	7/-	3½	35/-	6½	63/-	9½	91/-
1	9/4	4	37/4	7	65/4	10	93/4
1½	11/8	4½	39/8	7½	67/8	10½	95/8
1½	14/-	4½	42/-	7½	70/-	10½	98/-
1½	16/4	4½	44/4	7½	72/4	10½	100/4
2	18/8	5	46/8	8	74/8	11	102/8
2½	21/-	5½	49/-	8½	77/-	11½	105/-
2½	23/4	5½	51/4	8½	78/4	11½	107/4
2½	25/8	5½	53/8	8½	81/8	11½	109/8
3	28/-	6	56/-	9	84/-	1/-	112/-

For every ½d. per lb. increase add 2/4 per cwt.

WIRE.

Number of Feet per lb. of Weight.

Gauge.	Number of Feet per lb. Weight	Gauge.	Number of Feet per lb. Weight	Gauge.	Number of Feet per lb. Weight
3	6 feet	9	16 feet	15	70 feet
4	7 „	10	20 „	16	102 „
5	8 „	11	28 „	17	121 „
6	9 „	12	33 „	18	150 „
7	11½ „	13	42 „	19	194 „
8	13 „	14	54 „	20	245 „

Useful Information.

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

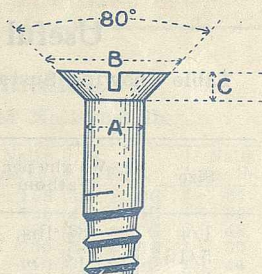
Table Showing Working Load and Tensile Strain of Best Mill Proof Chain.

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

LYSAGHT'S "ORB" is a Perfect Roofing Sheet.

STANDARD WOOD SCREWS.

A Useful Table.



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

TIMBER, &c.

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 ½	"	"	"	2330

Matchboards—

6 x 1½	"	"	"	2800
6 x 1	"	"	"	3400
6 x ¾	"	"	"	4800

Weatherboards, single " " " 3100

Oregon No. of Super. feet " " 790

V.D.L. Hardwood " " " 450

Jarrah " " " 400

Iron Bark " " " 310

Black Butt " " " 333

Shelving (American) 12 x ¾ " " 1050

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

5-feet Tasmanian Palings " " " 800

6-feet Tasmanian Palings (Launceston) " " 400

5-feet Tasmanian Palings " " " 500

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

Kauri No. of super feet to " 600

Cedar " " " 600

Clear Pine " " " 900

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

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

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

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

SUPERFICIAL FEET IN A BOARD OR PLANK

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

BRITISH WEIGHTS AND MEASURES.

AVOIRDUPOIS WEIGHT.

27.344 Grains	equal	1 Dram
16 Drams	"	1 Ounce (Oz.)
16 Ounces	"	1 Pound (Lb.)
28 Pounds	"	1 Quarter (Qr.)
4 Quarters	"	1 Hundredweight (Cwt.)
20 Cwt. (112 lbs. each)	"	1 Ton (2240 Lbs.)

The Avoirdupois Pound exceeds Troy in the proportion of 17 to 14 nearly, and the Troy Ounce is greater than the Avoirdupois in the proportion of 79 to 72 nearly.

TROY WEIGHT.

4 Grains	equal	1 Carat
24 Grains	"	1 Pennyweight (Dwt.)
20 Pennyweights	"	1 Ounce
12 Ounces	"	1 Pound
25 Pounds	"	1 Quarter
100 Pounds	"	1 Hundredweight
20 Hundredweights	"	1 Ton of Gold or Silver

By this weight, Gold, Silver, Platinum and Precious Stones (except Diamonds) are weighed. Diamonds and Pearls are weighed by Carats of 4 Grains each (equal only to 3.2 Grains Troy). The Troy Ounce is equal to $151\frac{1}{2}$ Diamond Carats. Gold, when pure, is said to be 24 Carats fine; if it contains one part alloy, it is said to be 23 Carats fine, and so on.

Standard Gold (i.e., Gold of our coinage) is 22 Carats fine. 40lbs. (Troy) of Standard Gold are coined into 1869 Sovereigns.

APOTHECARIES WEIGHT.

20 Grains	equal	1 Scruple	8 Drachms	equal	1 Ounce
3 Scruples	"	1 Drachm	12 Ounces	"	1 Pound

The pound and ounce are the same as in Troy weight.

APOTHECARIES FLUID MEASURE.

60 Minims	equal	1 Drachm	20 Ounces	equal	1 Pint
8 Drachms	"	1 Ounce	8 Pints	"	1 Gallon

There are $437\frac{1}{2}$ Grains in a Fluid Ounce.

"	"	4	Drachms in one Tablespoonful.
"	"	2	Ounces in one Wineglassful.
"	"	3	Ounces in one Teacupful.

GRAIN AND PRODUCE.

	Weight per bushel.	Bushels per bag.		Weight per bushel.	Bushels per bag.
Barley	.. 50lb.	.. 4	Oats	.. 40lb.	.. 4
Beans	.. 60lb.	.. 4	Wheat	.. 60lb.	.. 3
Bran	.. 20lb.	.. 8	Pollard	.. 20lb.	.. 9
Maize	.. 56lb.	.. 4	Peas	.. 60lb.	.. 4
Malt	.. 40lb.	.. 4			

A Bag of Flour:—Australian, 150lb.; English, 280lb.

Commonwealth and State Governments.

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
7.92	Inches	„	1 Link
9	Inches	„	1 Span
12	Inches	„	1 Foot
18	Inches	„	1 Cubit
36	Inch or 3 Feet	„	1 Yard
5½	Yards	„	1 Rod, Pole or Perch.
4	Poles,	} equal 1	Chain
22	Yards, or		
100	Links	} „	1 Furlong
40	Rods		
8	Furlongs	} „	1 Mile
80	Chains		
320	Rods, or	} „	1 Mile
1760	Yards		

MEASURE OF SURFACE.

144	Sq. Inches	= 1 Sq. Foot	40	Sq. Rods	= 1 Rood
9	Sq. Feet	= 1 Sq. Yard	4	Roods	= 1 Acre
30½	Sq. Yards	= 1 Sq. Rod	10	Sq. Chains	= 1 Acre
16	Sq. Rods	= 1 Sq. Chain	640	Acres	= 1 Sq. Mile
	1 Acre	contains	100,000	Sq. Links.	
	1 „	„	4,840	Sq. Yards.	

A square whose side is 69½ Yards is approximately 1 Acre.

GEOGRAPHICAL AND NAUTICAL MEASURE.

6	Feet	equal 1	Fathom
110	Fathoms or		
660	Feet	„	1 Furlong
6,080	Feet	„	1 Knot
3	Knots	„	1 League
20	Leagues or		
60	Geographical Miles	„	1 Degree
360	Degrees or	„	The Earth's Circumference.
24,856	Miles		

MEASURE OF SOLIDITY.

1,728	Cubic Inches	equal 1	Cubic Foot
27	„ Feet	„	1 Cubic Yard
5	„ Feet	„	1 Barrel Bulk Shipping
40	„ Feet	„	1 Ton Shipping (Merchandise)
42	„ Feet	„	1 Ton Shipping (Timber).

LYSAGHT'S "ORB" is a Perfect Roofing Sheet.

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					
52 Weeks		"	1 Year		
365 $\frac{1}{4}$ Days		"	1 Common Year		
366 Days		"	1 Leap Year		
365d. 5h. 48m. 46s.		"	1 Tropical Year		

ELECTRICAL MEASURE.

The chief units, as generally accepted by Electricians, are as follow:—

Volt—Electromotive force is equal to about 92.6 per cent. of that given by one Daniell's Battery Cell.

Ohm—Resistance equals the resistance offered to the passage of a current of Electricity by a thread of Mercury 106 cm. long and 1 mm. cross-section at the temperature of melting ice.

Ampere—Current equals the current 1 Volt will drive through 1 ohm.

Watt—Power equals 44 ft. lbs. per minute.

Board of Trade Unit—Officially defined as "the energy contained in a current of 1,000 Amperes flowing under an electromotive force of 1 Volt during an hour."

Kilowatt equals one Board of Trade Unit. One Board of Trade Unit will keep a 16-candle incandescent lamp alight for about 16 hours.

746 Watts equals 1 horse-power.

METRIC WEIGHTS AND MEASURES.

Lineal Measures.

The unit for length is the Metre.

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

Weight.

The unit for weight is the Gramme.

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

A Milligramme measures .01543 of a Grain.

"ORB" IRON—Maximum Value—Minimum Cost.

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 = $\frac{1}{25}$ of an Inch.
- 2½ Centimetres = 1 Inch.
- 1 Metre = 39½ Ins. (3ft. 3¾in.)
- 1 Kilometre = 5 Furlongs
- 1½ Kilometre = 1 Mile.

AVOIRDUPOIS MEASURE.

- 1 Kilogramme = 2½ lbs.
- 1000 Kilogrammes = 1 ton.

SQUARE MEASURE.

- 6½ sq. Centimetres = 1 sq. inch
- 1 sq. Metre = 10¾ sq. feet.

BRITISH AND FOREIGN CURRENCY.—Equivalent of £1 Sterling (English). Subject to Daily Fluctuation.

		pre-war Value at 1/6/1914	Exchange Value at 5/11/1924
America	dollars to £1	4.88	4.55½
France	francs to £1	25.18	87.15
Belgium	francs to £1	25.34	94.25
Italy	lire to £1	25.27	104.50
Spain	pesetas to £1	26.47	33.67
Switzerland	francs to £1	25.20	23.54
Holland	florins to £1	12.13	11.46
Sweden	kroner to £1	18.24	17.03
Norway	kroner to £1	18.24	31.52
Denmark	kroner to £1	18.24	26.18
Germany	marks to £1	20.46	19.10bn
India	rupees to £1	15.05	17½

MENSURATION OF SURFACES AND SOLIDS.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

COMMONWEALTH POSTAL RATES.

PRINCIPAL POST OFFICE CHARGES.

Letters.—British Empire, 1½d. per oz. Foreign countries—3d. for first oz. and 1½d. each additional oz.

Letter Cards.—British Empire—1½d. each. Foreign countries—3d. each.

Post Cards.—British Empire—1d. each. Foreign countries—1½d. each.

Commercial Papers.—Australia, N. Zealand and Fiji—1d. per 2 oz. Other countries—1d. per 2 oz. (minimum 3d.).

Printed Papers.—British Empire—1d. per 4 oz. Foreign countries—1d. per 2 oz.

Patterns and Samples.—British Empire—1d. per 2 oz. Foreign countries—1d. per 2 oz. (minimum 2d.).

Merchandise.—Australia, N. Zealand and Fiji—1d. per 2 oz. Other countries—parcels rates.

Magazines and Books (printed in Australia).—Australia—1d. per 8 oz. Other countries in British Empire—1d. per 4 oz. Foreign countries—1d. per 2 oz.

(Printed outside Australia).—British Empire—1d. per 4 oz. Foreign countries—1d. per 2 oz.

Newspapers (printed and published in Australia).—Australia, N. Zealand and Fiji—each newspaper 1d. per 10 oz. United Kingdom via France—1d. per 4 oz., 1½d. for 4 to 10 oz., 1d. for each additional 4 oz. Wholly by sea—each newspaper 1½d. per 16 oz. Via America—1d. per 4 oz. U.S.A.—each newspaper 1d. per 4 oz. Other countries—1d. per 2 oz.

(Printed outside Australia).—British Empire—1d. per 4 oz. Foreign countries—1d. per 2 oz.

Parcels (up to 11 lb.).—Within State—6d. for first lb. and 3d. each additional lb. Interstate, Papua, N. Zealand and Fiji—8d. for first lb. and 6d. each additional lb. United Kingdom—1s. 4d. for first lb. and 6d. each additional lb. Other countries—Special rates (see "Post and Telegraph Guide").

MONEY ORDERS.

	£2	£5	£7	£10	£12	£15	£17
	to	to	to	to	to	to	to
The Commonwealth ..	6d.	6d.	1/-	1/-	1/6	1/6	2/-
New Zealand and Fiji ..	6d.	1/-	1/6	2/-	2/6	3/-	3/6
Papua	9d.	9d.	1/6	1/6	2/3	2/3	3/-
United Kingdom and Foreign,	6d. or any amount up to £2, and 3d. for each additional pound or fraction of a pound.						

POSTAL NOTES.

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

TELEGRAPHIC—Including Address and Signature.

Town and Suburban—16 words, 9d. Each additional word 1d.

Country—16 words, 1/- Each additional word, 1d.

Inter-State—16 words, 1/4. Each additional word, 1d.

New Caledonia—Per word, 9d. (Noumea).

New Zealand—Per word, 4½d. Norfolk Island—Per word, 3d.

United Kingdom—Per word, 3/- Deferred 1/6, Week-end 9d., subject to a minimum charge of 15/-.

Suva, Fiji—Per word, 8d. Cape Colony—Per word, 2/3.

New York—Per word, 2/8.

“QUEEN’S HEAD” IRON branded Blue.

AREA AND POPULATION.

State or Territory	Year of Formation into Separate Colony or Territory	Present Area in Square Miles	Population*	
			4th April 1921	31st March, 1924
N.S.W.	1786	309,432	2,100,371	2,218,376
Tas.	1825	26,215	213,780	215,277
W.A.	1829	975,920	332,732	356,469
S.A.	1834	380,070	495,160	526,541
Vic.	1851	87,884	1,531,280	1,637,278
Q’ld.	1859	670,500	755,972	816,072
N. Ter.	1863	523,620	3,867	3,572
F.C.T.	1911	940	2,572	3,677
Total	—	2,974,581	5,435,734	5,777,262

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

* Exclusive of full-blood Aborigines.

POPULATION AND VITAL STATISTICS—AUSTRALIA, 1921 to 1923.

Heading.		1921	1922	1923
Population (,000 omitted. Exclusive of full-blood Aborigines.)	Males ...	2,799	2,866	2,930
	Females ..	2,710	2,767	2,820
	Total	5,510	5,633	5,750
Births	Number ..	136,198	137,496	135,222
	Rate	24.95	24.69	23.77
Marriages	Number ..	46,869	44,731	44,541
	Rate	8.59	8.03	7.83
Deaths	Number ..	54,076	51,311	56,236
	Rate	9.91	9.21	9.89
Deaths of Children under one Year	Number ..	8,952	7,251	8,184
	Rate	65.73	52.74	60.54

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.

POSTAL INFORMATION—Continued.

WIRELESS.

Messages can be transmitted to vessel within a coastal radius of 4 miles at 6d. to 11d. per word.

REGISTRATION FEE. Letters, 3d.

Late Fee on Unregistered articles, 1d.

Late Fee on Registered articles, 2d.

Specify "QUEEN'S HEAD."

GOVERNMENT RAILWAYS. Mileage (Route) according to Gauge, 30th June, 1923.

Government	Gauge				Total Mileage all Gauges	Approx. Total Cost of Construction and Equipment
	5ft. 3in.	4ft. 8½in.	3ft. 6in.	2ft. 6in. and under		
Federal	—	1,056.39	676.63	—	1,733.02	—
N.S.W.	—	5,278.28	39.51	—	5,317.79	£83,304,194
Vic. . .	4,211.58	—	—	121.77	4,333.35	59,798,696
Q'land.	—	—	5,875.15	*30.26	5,905.41	41,368,640
S.A. . .	1,163.51	—	1,209.58	—	2,373.09	19,270,704
W.A. . .	—	—	3,554.84	—	3,554.84	18,169,980
Tas. . .	—	—	638.55	*24.83	663.38	5,383,192
Total .	5,375.09	6,334.67	11,994.26	176.86	23,880.88	226,295,406

* Includes 2ft. gauge. † Includes 55.09 miles 2ft. gauge.

Distance by Rail Between State Capital Cities and Time of Journey

	Miles	Act'l time of journey Hrs. Mins.	Breaks en route	
			Hrs. Min	
Adelaide-Perth . .	1,687	66 10	Terowee . . .	— 30
			Pt. Augusta	— 45
			Kalgoorlie .	3 37
Adelaide-Melbourne	483	16 33		
Adelaide-Sydney .	1,074	33 47	Melbourne .	3 57
			Albury . . .	— 21
Adelaide-Brisbane	1,789	60 57	Melbourne .	3 57
			Sydney . . .	4 55
			Albury . . .	— 21
Brisbane-Sydney .	715	26 58	Wallangarra	— 22
Brisbane-Melbourne	1,306	44 —	Wallangarra	— 22
			Sydney . . .	8 —
			Albury . . .	— 24
Brisbane-Perth . . .	3,746	127 35	Wallangarra	— 22
			Sydney . . .	8 —
			Albury . . .	— 24
			Melbourne .	3 39
			Adelaide . .	— 50
			Terowee . . .	— 30
			Pt. Augusta	— 45
			Kalgoorlie .	3 37
Melbourne-Sydney	591	17 14	Albury . . .	— 21
Melbourne-Perth .	2,170	83 35	Adelaide . .	— 50
			Terowee . . .	— 30
			Pt. Augusta	— 45
			Kalgoorlie .	3 37
Sydney-Perth	2,761	100 37	Albury . . .	— 24
			Melbourne .	3 39
			Adelaide . .	— 50
			Terowee . . .	— 30
			Pt. Augusta	— 45

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

Every Sheet of "ORB" IRON

NEW SOUTH WALES.

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

VICTORIA.

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

TASMANIA.

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

All - Steel Railway Carriages and 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 Bristol (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.

There are different qualities for the varying purposes and conditions, and particulars of these qualities can always be obtained from **John Lysaght (Aust.), Ltd.**, in the State Capitals of the Commonwealth.

Thousands of tons of such panels are in use in different countries (England, India, China, South America, Ceylon, Burma, &c., &c.), and are giving the very greatest satisfaction; and in nearly every instance Goods Trucks are roofed with **LYSAGHT'S CORRUGATED "ORB" IRON.**

(Advt.)

FERTILIZERS.

Description of Fertilizer.	Nitrogen in the form of Sulphate of Ammonia.	Potash Pure.	Phosph. Acid Water soluble.	Phosph. Acid Citrate soluble.
Superphosphate, 36/38%	—	—	17%	.5%
Superphosphate, 45% ..	—	—	21%	.5%
Basic Superphosphate ..	—	—	—	17%
No. 2	2%	1%	10%	.15%
„ 3	3.5%	2%	3%	12%.
„ 4	4%	2%	8%	.12%
„ 5	3%	7%	10%	.15%
„ 6	3%	4%	10%	.15%
„ 8	4%	—	11%	.16%
„ 10	2%	—	13%	.2%
„ 11	—	4%	12%	.18%
“Legume”	—	2%	6%	6%
“Bana”	4%	10.4%	5%	5%
“777” (Three Sevens)	7%	7%	—	7%
“Howes”	9%	11%	—	6%

Cabbage-growers who wish to mix Bonedust with one of the above should use No. 6.

The materials used for the above mixtures are Superphosphate, Sulphate of Ammonia, and Sulphate of Potash. Quotations given for buyers' own mixture in lots of 1 ton or more—not less.

The Best is the Cheapest.

**Analysis of Fertilizers for different purposes,
reprinted from pamphlet issued by Australian
Fertilizers Pty., Ltd.**

Phosph. Acid insoluble.	Gypsum Lime Sulphate.	Crops for which Fertilizers are intended under average conditions.
.5 %	33 %	{ Wheat and Oats for Grain, also Lucerne in soils rich in Potash.
1 %	40 %	
.5 %	33 %	Substitute or Super, in wet, sour soils.
.41 %	20 %	Wheaten and Oaten Hay, Turnips, Carrots, Rape, Pastures, Cotton.
.5 %	30 %	Maize (Cobs), Cabbages, Cauliflowers, etc.
.33 %	15 %	Green Fodder (not Lucerne), Flowers, Shrubs.
.41 %	19 %	Potatoes, Tomatoes, Citrus Fruits, Apples, Pears, Passions, Grapes, and Tobacco on poor soils.
.41 %	19 %	Stone Fruits, Strawberries, Sugar Cane, Onions, and Tobacco on good soils.
.45 %	21 %	Melons, Pumpkins, etc. Lawns. Also sub- stitute for No. 4 for soils rich in potash.
.53 %	25 %	Substitute for No. 2 in soils not deficient in potash.
.5 %	23 %	Lucerne, Peas, Beans, etc., on soils de- ficient in potash.
.3 %	20 %	Peas, Beans, Lucerne and Green manure Crops on soils deficient in lime.
.25 %	18 %	Bananas.
.1 %	12 %	Sugar Cane.
.1 %	11 %	Special for Sugar Cane.

Bonedust, Blood and Bone, Bone and Super., Nitrate of Soda,
Sulphate of Ammonia, Sulphate of Potash, etc., also supplied.

TABLES OF DISTANCES BETWEEN PORTS.

FREMANTLE TO BURKETOWN.

[illegible]

BROADCASTING.

AUSTRALIAN WIRELESS REGULATIONS.

Wireless Broadcasting commenced officially in Australia in December, 1923, controlled by regulations gazetted under the Wireless Telegraphy Act, 1905-1919, on July 25, 1923. The first big broadcasting station was erected at Sydney by Farmer & Company, Limited. The principal feature of those regulations was that wireless receiving sets were to be sealed to the wave lengths of the broadcasting stations, to whom annual subscriptions were payable by those persons receiving the broadcasting services. These regulations were, however, amended on July 17, 1924, and receiving sets capable of receiving any wave length from 200 to 2,000 metres were permitted on payment of a common fee to the Commonwealth Government.

From the powerful broadcasting stations which are now working at regular hours in Australia, high-class musical entertainments, news and cable services, stock exchange and weather information, and market reports are transmitted at certain hours of each day, and, by special arrangements with some of the leading newspapers, sporting information is broadcast over the whole of the Commonwealth within a few minutes of the main events being decided.

In Sydney and Melbourne, two of the large stations are linked up with the leading theatres of those two cities. In Sydney the New South Wales Conservatorium of Music, the Town Hall, the Royal Society's Lecture Rooms and other important public halls and churches in the city are connected with Farmer's service.

THE REGULATIONS.

The wireless regulations issued in July, 1924, have made the whole broadcasting position remarkably simple, and those desirous of participating in the advantages which accrue from the supporting of such a movement are now able to obtain licenses and pay the necessary fees with the same ease as that with which they purchase postal notes. The broadcasting stations are conducted by private enterprise under license from the Commonwealth Government, provision being made for the granting of licenses enabling two classes of stations, "A" grade and "B" grade, to operate. The former share in the revenue collected from license fees, while the latter do not receive any revenue.

The number of "A" grade stations is limited to two in New South Wales, two in Victoria, and one in each of the other States.

Any person wishing to listen-in to a broadcast programme need only obtain a Broadcast Listener's License from any Post Office, and is then at liberty to tune in to the whole of the stations to which his set will respond. He may use any type of receiver, and may utilise any circuit, provided, of course, that, by mishandling a receiver, he does not cause a disturbance in the ether surrounding his station, and so interfere with others who may be listening in.

The fees payable for licenses vary according to the district in which the prospective listener resides.

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

Each State is divided into zones as follows:—

Queensland, New South Wales, Victoria, and South Australia.

Zone 1.—The territory between the coastline approximately 250 miles north of Brisbane and 250 miles west of Adelaide, and a line running about 250 miles from the coast, with such local variations as it is expedient to introduce.

Zone 2.—The contiguous territory reaching about 150 miles further beyond Zone 1.

Zone 3.—The remaining territory in those States.

West Australia and Tasmania.

Zone 1.—The territory of the State embraced by a circle of approximately 250 miles' radius drawn from the centre of the town or city in which the broadcasting station is erected.

Zone 2.—Between the 250-mile circle and another concentric circle of approximately 400 miles' radius.

Zone 3.—The rest of the State outside the 400-mile boundary.

Three classes of licenses are issued—ordinary, temporary and special licenses.

An ordinary license is one which enables a person to operate a receiver in his own home or for his own use.

A temporary license is issued where temporary use of a receiver is required, such as at demonstrations in public, etc.

A special license is issued for use in hotels, restaurants, places of amusement, or other places where the reception is intended for public use.

FEES.

The fees which are payable for receiving licenses are as follows:—

Class of License	Fee Payable.		
	Zone 1	Zone 2	Zone 3
Ordinary License	35/- per year during 1st year	30/- per annum during 1st year	25/- per annum during 1st year
	30/- per year during 2nd year	25/- per annum during 2nd year	20/- per annum during 2nd year.
Special License	£10 per annum	£9 per annum	£7/10/- per annum
Temp'rary License	20/- per week	17/6 per week	15/- per week

STATIONS OPERATING.

Stations which are now operating in Australia, and which may be heard each day are as follows:—

Station & Call Sign.	Place.	Owned by	Wave length. Metres.	Power. Watts.
2 F.C.	Sydney	Farmer & Company Ltd.	1,100	5,000
2 B.L.	Sydney	Broadcasters (Sydney) Limited	350	500
3 L.O.	Melbourne	Broadcasting Company of Aust., Pty. Ltd.	1,720	5,000
3 A.R.	Melbourne	Associated Radio Co., Ltd.		500
6 W.F.	Perth	Westralian Farmers Ltd...	1,250	5,000

beautiful appearance. It's bright and it lasts!

Iron, Copper and Brass Wires

IRON				100 FEET	
S.W.G. No.	Weight of 100 yards in Avoir.lbs	Weight of 1 Statute Mile in Avoir.lbs	Length of 1 cwt. in Yards	Copper Wire in lbs.	Brass Wire in Lbs.
7/0	193.4	3,404	58	76.576	72.006
6/0	166.5	2,930	67	65.947	62.010
5/0	144.4	2,541	78	57.104	53.752
4/0	123.8	2,179	91	49.009	46.083
3/0	107.1	1,885	105	42.388	39.858
2/0	93.7	1,649	120	37.095	34.88
0	81.2	1,429	138	32.155	30.235
1	69.6	1,225	161	27.5445	25.922
2	58.9	1,037	190	23.333	21.940
3	49.1	864	228	19.451	18.290
4	41.6	732	269	16.486	15.502
5	34.8	612	322	13.768	12.940
6	28.5	502	393	11.792	10.617
7	24.0	422	467	9.4882	8.921
8	19.8	348	566	7.8414	7.373
9	16.0	282	700	6.3516	5.972
10	12.7	223	882	5.0185	4.7189
11	10.4	183	1,077	4.1217	3.8756
12	8.4	148	1,333	3.313	3.1153
13	6.5	114	1,723	2.5926	2.4378
14	5.0	88	2,240	1.9603	1.8433
15	4.0	70	2,800	1.5879	1.4931
16	3.2	56	3,500	1.2546	1.1767
17	2.4	42	4,667	0.96058	0.9324
18	1.8	32	6,222	0.70573	0.6636
19	1.2	21	9,333	0.49000	0.46083
20	1.0	18	11,200	0.39698	0.37328
21	0.795	13.9	14,199	0.21366	0.29493
22	0.609	10.7	18,418	0.24014	0.22529
23	0.448	7.8	25,070	0.17643	0.1659
24	0.376	6.6	29,835	0.14826	0.1394
25	0.311	5.4	36,100	0.12252	0.1152
26	0.252	4.4	44,568	0.099243	0.093318

"QUEEN'S HEAD" Flat Sheets command

Comparison Table for Wires and Cables

NEW STANDARD			Approx. Equivalents OLD STANDARD	
No. and diam. of Wires forming Conductor	Nominal Area.		No. and diam. of Wires forming Conductor	Area in Sq. ins.
	Sq. in.	Sq. M/m.		
1/.036	.0010	.66	1/20 s.w.g.	.0010
1/.044	.0015	.98	1/18 "	.0018
3/.029	.0020	1.25	3/22 "	.0018
3/.036	.0030	1.93	3/20 "	.0030
1/.064	.0030	2.08	1/16 "	.0032
7/.029	.0045	2.93	7/22 "	.0042
7/.036	.0070	4.52	7/20 "	.0070
7/.044	.0100	6.75	7/18 "	.0125
7/.052	.0145	9.43	7/17 "	.0170
7/.064	.0225	14.3	7/16 "	.0221
17/.052	.0400	25.5	19/17 "	.0459
19/.064	.0600	38.7	19/16 "	.0600
19/.072	.0750	49.0	19/15 "	.0750
19/.083	.1000	65.1	19/14 "	.0937
37/.064	.1200	75.4	37/16 "	.1168
37/.072	.1500	95.4	37/15 "	.1500
37/.083	.2000	127.0	37/14 "	.1820
37/.093	.2500	159.0	37/13 "	.2500
37/.103	.3000	195.0	37/12 "	.3000
61/.093	.5000	322.0	61/13 "	.4000
61/.103	.4000	262.0	61/12 "	.5000
91/.093	.6000	391.0	61/.112 }	.6000
91/.103	.7500	480.0	91/.101 } ins.	.7500
127/.103	1.0000	669.0	127/.101 }	1.0000

Price per ton—how much per lb.?

A SIMPLE METHOD OF ARRIVING AT THIS.

EXAMPLE—1 ton	£28
Divided by 7	4
" " 4	1
Deduct last two numbers	3 pence per lb.
Or—1 ton	£100
Divided by 7	14.285
" " 4	3.571
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
	£28 per ton

the confidence of Ironworkers everywhere.

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
2	6	178	0	13	9	0	0	10	19	0	0
3	0	214	0	14	0	0	0	10	20	0	0
3	4	221	0	14	3	0	0	10	21	0	0
3	9	228	0	14	6	0	0	11	22	0	0
4	0	3	0	14	9	0	0	11	23	0	0
4	3	314	0	15	0	0	0	11	24	0	0
4	6	331	0	15	3	0	0	11	25	0	0
4	9	338	0	15	6	0	0	11	26	0	0
5	0	355	0	15	9	0	0	11	27	0	0
5	3	4	0	16	0	1	0		28	0	0
5	6	414	0	16	3	0	1	0	29	0	0
5	9	431	0	16	6	0	1	0	30	0	0
6	0	448	0	16	9	0	1	0	31	0	0
6	3	465	0	17	0	1	0	0	32	0	0
6	6	5	0	17	3	0	1	1	33	0	0
6	9	514	0	17	6	0	1	1	34	0	0
7	0	531	0	17	9	0	1	1	35	0	0
7	3	548	0	18	0	0	1	1	36	0	0
7	6	565	0	18	3	0	1	1	37	0	0
7	9	582	0	18	6	0	1	2	38	0	0
8	0	6	0	18	9	0	1	2	39	0	0
8	3	614	0	19	0	0	1	2	40	0	0
8	6	631	0	19	3	0	1	2	41	0	0
8	9	648	0	19	6	0	1	2	42	0	0
9	0	665	0	19	9	0	1	2	43	0	0
9	3	7	1	0	0	0	1	3	44	0	0
9	6	714	2	0	0	0	2	6	45	0	0
9	9	731	3	0	0	0	3	9	46	0	0
10	0	748	4	0	0	0	5	0	47	0	0
10	3	765	5	0	0	0	6	3	48	0	0
10	6	8	6	0	0	0	7	6	49	0	0
10	9	814	7	0	0	0	8	9	50	0	0
11	0	831	8	0	0	0	10	0	55	0	0
11	3	848	9	0	0	0	11	3	60	0	0
11	6	865	10	0	0	0	12	6	65	0	0
11	9	882	11	0	0	0	13	9	70	0	0
12	0	9	12	0	0	0	15	0	75	0	0
12	3	914	13	0	0	0	16	3	80	0	0
12	6	931	14	0	0	0	17	6	85	0	0
12	9	948	15	0	0	0	18	9	90	0	0
13	0	965	16	0	0	1	0	0	95	0	0
13	3	10	17	0	0	1	1	3	100	0	0
13	6	1014	18	0	0	1	2	6			

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.

LYSAGHT'S "ORB" IRON—Beware of

STOCK SIZES OF GEOMETRICAL FLOOR TILES.

SIZE	SHAPE	No. PER YARD	SIZE	SHAPE	No. PER YARD	SIZE	SHAPE	No. PER YARD
6" x 6"		36	6" OCTAGON		41	3" HEXAGON		164
3/4-6"		72	1/2 " " { short " " { half		82	Long half }		328
6" x 3"		72	1/2 " " { long " " { half		82	Short half }		328
4 1/2" x 4 1/2"		72	4 1/2" Oct.		82	2" HEX.		374
1/2-4 1/2"		144	1/2 " " short		164	Long half }		748
3" x 3"		144	3" Oct.		164	Short half }		748
1/2-3"		288	6" x 3" Hex.		96	1 1/2" Hex.		658
2 1/2" x 2 1/2"		288	1/2 " " "		192	Short half }		1316
1 1/2" x 1 1/2"		576	4 1/2" x 2 1/2"		144	Long half }		1316
1 1/2" x 1 1/2"		576	3" x 1"		432	3 1/2" Hex.		106
1 1/2" x 1 1/2"		1152	3" x 1 1/2"		288	HEXAGON FISH 6 1/2" x 4 1/2"		72
1 1/2" x 1 1/2"		2304	6" x 2"		108	4 1/2" PENT.		96
1" x 1"		1296	6" x 1 1/2"		144	4 1/4" x 2 1/8" PENT.		128
1/2-1"		2592	6" x 1"		216	3" x 2"		216
3" x 0 1/2"		864	3" PENTAGON		115	4 1/2" x 1 1/2"		192
3" x 0 1/2"		576						
4 1/2" x 1 1/2"		288						

When ordering it is sufficient to quote number shown in right of shape column.

Imitations. There's nothing "just as good."

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.

FIRST AID

TO THE

INJURED

Country residents desirous of forming a First-Aid Class in their district are invited to correspond with the Secretary, St. John's Ambulance Brigade, in the Capital City of the State in which they are resident.

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 collarbone.

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.

LYSAGHT'S "ORB" Galvanized Iron.

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 preventative, 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.

"ORB" IRON—Over Fifty Years in use.

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

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

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

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

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

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

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

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

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

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

LYSAGHT'S IRON supplied to H.M. Admiralty.

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 neutraliser 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.

Tank Makers should specify **LYSAGHT'S "ORB"** Brand Corrugated Iron—it will stand any and every possible test in curving or otherwise, being almost as tough as copper. It is obtainable up to 12 feet in length.

