

The Metal Trades'
Referee and
Storekeepers'
Guide

3RD EDITION.

BEING A TABLE OF
Weights, Measurements, and Other
Information.

Lysaght's Trade Marks.

"ORB" Tenax Flat Sheet

Iron, for working up, is of the finest possible quality, suitable for special high-class work, and is, in many instances, used as a substitute for copper.



"QUEEN'S HEAD" Galvanised Tinned Special Flat Sheets

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



QUEEN'S HEAD

"BLACK SHEETS" of

the same brand are extensively used by manufacturers of Ventilating and other Pipes, Trunks, Stoves, Fender Bottoms, Ovens, Stamping, Perforating, &c., and the many other purposes where a reliable quality is necessary.

"FLEUR-DE-LIS" Galvanised Tinned Flat

Sheets 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

me

16 in line

The Evolution of Galvanized Iron.

6

1837—The process patented by Mr. Henry
Crawford.

1851—Plain Sheet exhibited at the Great
Exhibition.

1854—Corrugating by Steam patented.

1857—Invention and Introduction of "ORB"
Iron by MR. JOHN LYSAGHT.

1906—During the half-century which has
since elapsed, the greatly improved methods
of production, and the care displayed
in its manufacture, have secured for
LYSAGHT'S GALVANIZED IRON
an unrivalled reputation throughout the
world, and, while it is true the sun never
sets on the British Empire, it is equally true
that it is always shining on "ORB" IRON.

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THIRD EDITION.

The various Tables given herein have been carefully compiled from existing sources of information, no responsibility is accepted, and no originality claimed in respect thereof. They supply in a condensed form approximate information which is not always readily accessible elsewhere.

Suggestions for further improvements or additions thereto will be thankfully received, and may be addressed to—

THE PUBLISHER,

“METAL TRADES REFEREE,”

P.O. Box 108, STOCK EXCHANGE, MELBOURNE.

Lysaght's Sections

Corrugated Iron.

Corrugations	Made in widths of	
* 1in. x $\frac{1}{4}$ in.	2ft. 0in. to 2ft. 6in. centres	
$1\frac{1}{2}$ in. x $\frac{3}{8}$ in.	do.	
2in. x $\frac{1}{2}$ in.	do.	
* 3in. x $\frac{3}{4}$ in.	2ft. 0in. to 2ft. 9in. centres	
4in. x 1in.	2ft. 0in. to 2ft. 8in. centres	
5in. x $1\frac{1}{4}$ in.	2ft. 1in. and 2ft. 6in. centres	
6in. x $1\frac{1}{2}$ in.	2ft. 0in. and 2ft. 6in. centres	

* These Corrugations (in the usual widths) are stocked by all the principal Wholesale Hardware Houses throughout Australia and New Zealand. The other Corrugations shown are supplied to order.

The following Corrugations (which are not illustrated) are also supplied to order, viz. :—

$$\begin{array}{llll} \frac{1}{2}'' & \times & \frac{1}{8}'' & 5'' \times 1\frac{1}{2}'' \\ 2\frac{1}{2}'' & \times & \frac{5}{8}'' & 5\frac{1}{10}'' \times 1'' \end{array}$$

as are also Special Weight-Bearing Sections, viz. :—

$$3\frac{11}{16}'' \times 2\frac{3}{8}'' \text{ and } 4'' \times 2''$$

PLEASE NOTE.—Every Sheet has the "ORB" brand stencilled thereon in Blue.

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

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	47	56	65	83	115	124
6 "	39	46	55	70	96	103
7 "	33	40	47	60	82	88
8 "	29	35	41	52	72	77
9 "	26	30	36	47	64	68
10 "	23	28	33	42	57	61



LYSAGHT'S "ORB" BRAND CORRUGATED IRON usually contains sheets in excess of the numbers given in the above tables, and is made in all lengths up to 12 feet, the heavier gauges to special order. Corrugations from 1 to 5 inches, those chiefly in use being 1-inch for ceilings, fences, &c., and 3-inch for ordinary purposes.

Iron—Weight-Bearing.

Approximate Weight per Square Foot.

(Corrugations $3\frac{11}{16}$ inches wide by $2\frac{3}{8}$ inches deep.)

Gauge.	Weight.	
	lbs.	ozs.
16	5	8
18	4	4
20	3	12
22	2	14
24	2	6

LYSAGHT'S Weight-bearing Iron is of the well-known "ORB" brand of English manufacture, and has secured the highest approval of architects and others wherever it has been used. It is made in almost any desired Corrugation or Gauge, black or galvanized, curved or otherwise.

Galvanized Iron—Plain.

Approximate number of 6 feet sheets to a case, Plain Iron averaging about 10 cwt.

Approximate weight per sheet 6 feet long, in lbs.

Gauge.	Width.			Gauge.	Width.		
	24	30	36		24	30	36
16 g	37	29	24 shts.	16 g	32	40	48 lbs.
18 g	47	39	31 „	18 g	25	29	36 „
20 g	63	47	39 „	20 g	20	25	29 „
22 g	73	59	49 „	22 g	17	19	23 „
24 g	86	69	57 „	24 g	12	16	19 „
26 g	120	97	78 „	26 g	9	12	14 „
28 g	139	109	85 „	28 g	8	11	13 „



QUEEN'S HEAD

LYSAGHT'S "Queen's Head" Special Flat somewhat exceeds the number of sheets given in the above tables. It is also obtainable in special sizes other than the above, to order.

LYSAGHT'S "Fleur de Lis" Plain Iron is largely used for the manufacture of the lighter classes of guttering, down-pipe, ridging, &c., its smoothness of surface and freedom from buckle being conspicuous features.



FLEUR DE LIS

are the **STANDARD** for the **BRITISH EMPIRE.**

Iron—Black Sheet.

Approximate Number of Sheets contained in 20 Bundles of
Black Sheet Iron, averaging about 20 cwt.

Gauge.	WIDTH.		
	24	30	36
16g.	76	62	50
18	96	76	64
20	118	100	74
22	152	124	101
24	190	155	126
26	254	198	164
27	280	218	174
28	340	256	208



LYSAGHT'S "Orb" Brand Tenax Special Flat Steel Sheets are obtainable in both Black and Galvanized. They have secured the approval of Ironworkers everywhere for those purposes in which a very high grade of quality is necessary, being almost as tough as copper.

LYSAGHT'S "Queen's Head" Black Sheet Iron is recognised as the standard of perfection. It will stand any and every possible test—characteristics which have secured for it a reputation almost world-wide.



ALL ROUND THE WORLD you will find

Tanks—Square Black Iron.

100 gallon measure	..	2ft. 8in. square
200 "	"	3ft. 8in. "
400 "	"	4ft. 0in. "

Tanks—Corrugated Iron.

(CIRCULAR).
Reputed Capacity.

— Diameter.	Height of Tank.				
	4 feet.	5 feet.	6 feet.	7 feet.	8 feet.
	gallons.	gallons.	gallons.	gallons.	gallons.
3 feet 3 inches	200	250	300	..	..
3 " 6 "	240	300	360	..	..
3 " 9 "	280	350	420	..	..
4 " 0 "	310	390	470	..	..
4 " 4 "	..	..	540	..	..
4 " 6 "	..	..	590	..	..
5 " 0 "	..	..	720	840	960
6 " 0 "	..	..	1050	..	..

Tank Makers should specify **LYSAGHTS "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.

Table Shewing Weight in Pounds

OF VARIOUS AREAS OF

Iron Plates of Different Thickness

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

LYSAGHT'S "ORB" brand GALVANIZED IRON has an

Bar Iron—Round and Square.

Approximate Weight per Lineal Foot.

Diameter or Side.	Square Bars.	Round Bars.	Breadth or Diam. in Inches.	Square Bars.	Round Bars.	Breadth or Diam. in Inches.	Square Bars.	Round Bars.
$\frac{1}{4}$	·209	·164	$1\frac{1}{4}$	5·25	4·09	3	30·07	23·60
5/16	·326	·256	$1\frac{3}{8}$	6·35	4·96	$3\frac{1}{4}$	35·28	27·70
$\frac{3}{8}$	·470	·369	$1\frac{1}{2}$	7·51	5·90	$3\frac{1}{2}$	40·91	32·13
7/16	·640	·502	$1\frac{5}{8}$	8·82	6·92	$3\frac{3}{4}$	46·97	36·89
$\frac{1}{2}$	·835	·656	$1\frac{3}{4}$	10·29	8·03	4	53·44	41·97
9/16	1·057	·831	$1\frac{7}{8}$	11·74	9·22	$4\frac{1}{4}$	60·32	47·38
$\frac{5}{8}$	1·305	1·025	2	13·36	10·49	$4\frac{1}{2}$	67·63	53·12
11/16	1·579	1·241	$2\frac{1}{8}$	15·08	11·84	$4\frac{3}{4}$	75·35	59·18
$\frac{3}{4}$	1·879	1·476	$2\frac{1}{4}$	16·91	13·27	5	83·51	65·58
13/16	2·205	1·732	$2\frac{3}{8}$	18·84	14·79	$5\frac{1}{4}$	92·46	72·30
$\frac{7}{8}$	2·556	2·011	$2\frac{1}{2}$	20·87	16·39	$5\frac{1}{2}$	101·03	79·35
15/16	2·936	2·306	$2\frac{5}{8}$	23·11	18·07	$5\frac{3}{4}$	110·43	86·73
1	3·34	2·62	$2\frac{3}{4}$	25·26	19·84	6	120·24	94·43
$1\frac{1}{8}$	4·22	3·32	$2\frac{7}{8}$	27·61	21·68	—	—	—

established reputation of nearly half a century.

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 $\frac{1}{8}$	2.70	3.38	4.06	4.73	5.41	6.77	8.12	9.47	10.83
3 $\frac{1}{4}$	2.91	3.64	4.37	5.10	5.83	7.29	8.75	10.20	11.66
3 $\frac{3}{8}$	3.12	3.90	4.68	5.46	6.25	7.81	9.37	10.93	12.50
3 $\frac{1}{2}$	3.33	4.16	5	5.83	6.66	8.33	10	11.66	13.33
4	3.54	4.42	5.31	6.19	7.08	8.85	10.62	12.39	14.16
4 $\frac{1}{8}$	3.75	4.68	5.62	6.56	7.50	9.37	11.25	13.12	15
4 $\frac{1}{4}$	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 $\frac{1}{8}$	4.37	5.46	6.56	7.65	8.75	10.93	13.12	15.31	17.50
5 $\frac{1}{4}$	4.58	5.72	6.87	8.02	9.16	11.45	13.75	16.04	18.33
5 $\frac{3}{8}$	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

The "ORB" Brand on a sheet of

Girders (I).

(Standard Sizes.)

Size.	Weight per foot in lbs.	Size.	Weight per foot in lbs.
4 in. x 2 in.	5 $\frac{3}{4}$	10 in. x 6 in.	45
6 " x 3 "	16	12 " x 5 "	39
6 " x 5 "	25	12 " x 6 "	54
7 " x 3 $\frac{3}{4}$ "	18	14 " x 6 "	46
8 " x 4 "	25	15 " x 5 "	42
8 " x 6 "	35	15 " x 6 "	59
9 " x 3 $\frac{3}{4}$ "	20	16 " x 6 "	62
9 " x 7 "	58	18 " x 7 "	75
10 " x 5 "	29	20 " x 7 $\frac{1}{2}$ "	89

Steel Bars—Octagon.

Size.	Weight per foot in lbs.	Size.	Weight per foot in lbs.
$\frac{3}{16}$ inch	0.100	1 $\frac{1}{2}$ inch	3.640
$\frac{1}{4}$ "	0.180	1 $\frac{3}{4}$ "	4.500
$\frac{5}{16}$ "	0.280	2 "	5.450
$\frac{3}{8}$ "	0.410	2 $\frac{1}{4}$ "	6.480
$\frac{7}{16}$ "	0.550	2 $\frac{1}{2}$ "	7.610
$\frac{1}{2}$ "	0.720	3 "	8.820
$\frac{5}{8}$ "	1.120	3 $\frac{1}{4}$ "	11.520
$\frac{3}{4}$ "	1.620	4 "	14.580
$\frac{7}{8}$ "	3.200	5 "	18.000
1 "	2.870	6 "	25.920

Hoop Iron.

Weight of a Ten-foot Length in Pounds.

	16 W G	18 W G	19 W G	20 W G	21 W G	22 W G
1	1.10	.83	.71	.60	.54	.48
1 1/8	1.38	1.04	.89	.74	.68	.60
1 1/4	1.66	1.25	1.07	.89	.82	.71
1 1/2	1.80	1.35	1.16	.97	.88	.77
	10 W G	12 W G	14 W G	16 W G	17 W G	18 W G
1	4.68	3.65	2.60	2.08	1.81	1.55
1 1/8	5.26	4.10	2.92	2.34	2.04	1.75
1 1/4	5.85	4.56	3.25	2.60	2.27	1.93
1 1/2	6.43	5.01	3.57	2.86	2.49	2.13
1 3/4	7.02	5.47	3.90	3.12	2.72	2.32
2	8.15	6.35	4.55	3.60	3.15	2.70
2 1/8	9.36	7.30	5.20	4.16	3.63	3.10
2 1/4	10.53	8.20	5.85	4.68	4.08	3.50
2 1/2	11.71	9.12	6.50	5.20	4.54	3.87
2 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 1/8	15.10	11.80	8.40	6.70	5.80	5.00
3 1/4	16.30	12.70	9.10	7.20	6.30	5.40
3 1/2	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 1/4	19.90	15.50	11.05	8.84	7.70	6.60
4 1/2	21.07	16.40	11.70	9.36	8.17	7.00
4 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 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.)

Sheet Lead—Thickness of.

2 lbs. per square foot = .034 inches

3	"	"	"	.051	"
4	"	"	"	.068	"
5	"	"	"	.085	"
6	"	"	"	.102	"
8	"	"	"	.136	"
10	"	"	"	.170	"
12	"	"	"	.204	"

Weight of Lead Pipe in pounds per yard.

Diameter.	Extra Light.	Light.	Medium.	Strong.	Extra Strong.
Inches.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.
$\frac{1}{2}$	3	4	$4\frac{1}{2}$	5 & 6	7 & 8
$\frac{3}{4}$	$4\frac{1}{2}$	5	6	7	8 & 9
$\frac{1}{2}$	5	6	7	8	9 & 10
1	5	6	7	8	9 & 10
$1\frac{1}{4}$	6	8	10	12	14
$1\frac{1}{2}$	10	11	12	14	16 & 18
$1\frac{3}{4}$	13	14	16	18	20
2	16	18	20	22	24

IRON is GUARANTEED. Beware of Imitations.

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
3½ "	...	7	0	20	6 "	...	12	1	0
4 "	...	8	1	0	7 "	...	14	2	0
4½ "	...	9	1	0					

ZINC.

Weight per Super Foot (Ordinary Wire Gauge).

Gauge.	Lbs.	Gauge.	Lbs.	Gauge.	Lbs.
10	5·2	16	2·3	22	1·2
11	4·6	17	2·1	23	1·1
12	4·1	18	1·8	24	1·0
13	3·5	19	1·7	25	0·9
14	2·8	20	1·5	26	0·8
15	2·6	21	1·4	27	0·7

ZINC SHEETS.—(Approximate Weight of.)

Zinc Gauge.	Ozs. per sq. foot.	Weight per Sheet 7 x 3 feet.	Zinc Gauge.	Ozs. per sq. foot.	Weight per Sheet 7 x 3 feet.
		lbs. ozs.			lbs. ozs.
4	5	6 9	11	15	19 11
5	6	7 14	12	17	22 5
6	7	9 3	13	19½	25 9½
7	8	10 8	14	22	28 14
8	9	11 13	15	24	31 8
9	11	14 7	16	26	34 2
10	13	17 1	17	30	39 6

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

Sheet Zinc.

Approximate Weight and Thickness according to
"V.M." Zinc Gauge.

Thickness.			Weight per sq. foot in lbs.	36" x 84"		36" x 96"	
V.M. Zinc Gauge.	Decimals of an Inch.	Imperial Stan. Wire Gauge.		Weight of Sheets in Lbs.	Sheets per 5 Cwt. about	Weight of Sheets in Lbs.	Sheets per 5 Cwt. about
3	·007	37	·25	5·17	107	5·91	94
4	·008	36	·30	6·32	88	7·22	77
5	·010	33	·35	7·47	74	8·54	65
6	·011	32	·42	8·77	63	10·03	55
7	·013	29	·48	10·17	54	11·62	48
8	·015	27	·56	11·65	48	13·31	42
9	·018	26	·65	13·54	41	15·47	36
10	·020	25	·72	15·01	37	17·16	32
11	·023	23	·83	17·47	32	19·97	28
12	·026	—	·95	19·85	28	22·70	25
13	·029	22	1·06	22·23	25	25·41	22
14	·032	21	1·17	24·61	23	28·13	20
15	·038	20	1·36	28·55	20	32·62	17
16	·043	19	1·55	32·48	17	37·13	15
17	·048	18	1·73	36·33	15	41·54	14
18	·053	—	1·92	40·28	14	46·03	12
19	·058	17	2·11	44·22	13	50·54	11
20	·063	16	2·29	48·07	12	54·92	10
21	·070	15	2·55	53·48	11	61·13	9
22	·077	14	2·80	58·90	10	67·31	8
23	·084	—	3·07	64·40	9	73·56	7½
24	·091	13	3·32	69·81	8	79·56	7
25	·098	—	3·58	75·22	7½	85·55	6½
26	·105	12	3·84	80·64	7	92·55	6

Aluminium.

Gauge.	Weight per square foot in lbs.	Weight of Sheet 24 in. x 96 in. in lbs.
12	1.406	11 $\frac{1}{4}$
16	.906	7 $\frac{1}{4}$
18	.687	5 $\frac{1}{2}$
20	.25	4

A cube foot of Aluminium weighs 166lbs.

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.

Fluxes—For Soldering.

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

Fusing—Temperature of Metals.

	Degrees Fahr.
Solder	330
Tin	426
Lead	630
Zinc	800
Brass	1650
Silver	1830
Copper	2192
Gold	2280
Cast Iron	2912

LYSAGHT'S GALVANIZED IRON is used throughout the

Sheet Copper—Weights of.

The equivalent in Weight of the various Gauges are as follows :—

No.	Per Square Foot	No.	Per Square Foot
1	14 lbs. 0 oz.	16	3 lbs. 0 oz.
2	13 " 0 "	17	2 " 12 "
3	12 " 0 "	18	2 " 4 "
4	11 " 0 "	19	2 " 0 "
5	10 " 2 "	20	1 " 12 "
6	9 " 8 "	21	1 " 8 "
7	8 " 8 "	22	1 " 6 "
8	7 " 10 "	23	1 " 3 "
9	7 " 0 "	24	1 " 0 "
10	6 " 4 "	25	0 " 14 "
11	5 " 8 "	26	0 " 13 "
12	5 " 0 "	27	0 " 11½ "
13	4 " 8 "	28	0 " 10 "
14	4 " 0 "	29	0 " 9 "
15	3 " 8 "	30	0 " 8 "

Substance of Copper Sheets.

48 in. x 24 in. x 8 lbs. = 24 W G

"	10	"	23	"	full
"	12	"	21	"	
"	14	"	20	"	
"	16	"	19	"	
"	18	"	18	"	
"	24	"	16	"	

world, and is universally admitted to be THE BEST.

Weight per Lineal Foot of Seamless Drawn Copper Tubes.

Imp. St'd Gauge.	Thickness of Copper.							
	6	8	10	12	14	16	18	20
Inch's	0.192	0.160	0.128	0.104	0.080	0.064	0.048	0.036
Inside Diam. Inch's	Weight of a Lineal Foot in Pounds.							
$\frac{1}{16}$	1.03	0.79	0.58	0.44	0.32	0.24	0.17	0.12
$\frac{1}{8}$	1.32	1.04	0.78	0.60	0.44	0.34	0.25	0.18
$\frac{3}{16}$	1.61	1.28	0.97	0.76	0.56	0.44	0.32	0.23
$\frac{1}{4}$	1.90	1.52	1.17	0.92	0.68	0.53	0.39	0.29
$\frac{5}{16}$	2.19	1.76	1.36	1.07	0.80	0.63	0.46	0.34
$\frac{3}{8}$	2.48	2.00	1.55	1.23	0.92	0.73	0.54	0.40
$\frac{7}{16}$	2.77	2.24	1.75	1.39	1.04	0.82	0.61	0.45
$\frac{1}{2}$	3.06	2.49	1.94	1.55	1.17	0.92	0.68	0.51
$\frac{9}{16}$	3.35	2.73	2.13	1.70	1.29	1.02	0.75	0.56
$\frac{5}{8}$	3.64	2.97	2.33	1.86	1.41	1.11	0.83	0.61
$\frac{11}{16}$	3.93	3.21	2.52	2.02	1.53	1.21	0.90	0.67
$\frac{3}{4}$	4.22	3.45	2.71	2.17	1.65	1.31	0.97	0.72
$\frac{7}{8}$	4.51	3.70	2.91	2.33	1.77	1.40	1.04	0.78
$1\frac{1}{8}$	4.80	3.94	3.10	2.49	1.89	1.50	1.12	0.83
$1\frac{1}{4}$	5.09	4.18	3.29	2.65	2.01	1.60	1.19	0.89
$1\frac{3}{8}$	5.38	4.42	3.49	2.80	2.13	1.69	1.26	0.94
$1\frac{1}{2}$	5.67	4.66	3.68	2.96	2.25	1.79	1.33	1.00
$1\frac{7}{8}$	5.96	4.91	3.88	3.12	2.38	1.89	1.41	1.05
$2\frac{1}{8}$	6.25	5.15	4.07	3.28	2.50	1.98	1.48	1.10
$2\frac{1}{4}$	6.83	5.63	4.46	3.59	2.74	2.18	1.62	1.21

To ascertain the weight of a Seamless Tube of other metal, multiply the weight of a similar Copper Tube by 0.9626 for Brass (70 & 30 alloy)—by 0.86 for Wrought Iron—by 0.81 for Cast Iron—or by 1.28 for Lead.

The above weights are theoretically correct, but in practice a slight deviation from the theoretical weight must be expected.

Please Note—Every Sheet of LYSAGHT'S "ORB"

PIPING.

COMPO PIPE. —For Gas Fittings.

Size.	Feet in Coil.	Ozs. per ft.	Size.	Feet in Coil.	Ozs. per ft.
$\frac{1}{4}$	328	4	$\frac{3}{4}$	82	16
$\frac{1}{2}$	218	6	1	55	24
$\frac{3}{4}$	164	8	1	33	40
1	101	13			

GALVANIZED PIPING (Iron).

Weight per 100 feet.

Size.	Per 100 Feet.			Size.	Per 100 Feet.		
	C.	Q.	L.		C.	Q.	L.
$\frac{1}{4}$	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				

LEAD PIPE.—For Water Connections, &c.

Size.	Feet in Coil.	Lbs. per yd.	Size.	Feet in Coil.	Lbs. per yd.
$\frac{1}{4}$	170	$3\frac{1}{2}$	$1\frac{1}{4}$	63	12
$\frac{1}{2}$	127	$4\frac{1}{2}$	$1\frac{1}{2}$	38	18
$\frac{3}{4}$	100	5	$1\frac{3}{4}$	57	12
1	100	6	$1\frac{5}{8}$	55	14
$1\frac{1}{4}$	90	$6\frac{1}{2}$	$1\frac{7}{8}$	37	16 & 18
$1\frac{1}{2}$	76	$7\frac{1}{2}$	$1\frac{7}{8}$	37	20 & 22
$1\frac{3}{4}$	120	5	$1\frac{3}{4}$	38	17
2	160	6	2	37	17
$2\frac{1}{4}$	84	7	2	37	20
$2\frac{1}{2}$	74	8	2	37	22
$2\frac{3}{4}$	64	9	2	31	30
3	76	8	$2\frac{1}{2}$	11	30
$3\frac{1}{4}$	66	10	3	13	35
$3\frac{1}{2}$	56	12	$3\frac{1}{2}$	13	40
$3\frac{3}{4}$	66	10	4	13	50

Where two or more weights of the same size appear in the lead pipe, the heavier may be taken as the standard.

Pipes—Cast Iron (Water)

Spigot and Faucet.

NINE FEET LENGTHS.

Diameter.	Cwts.	Qrs.	Lbs.	Diameter.	Cwts.	Qrs.	Lbs.
2½	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

Drums or Pulleys.

Rules for Calculating the Speed.

The diameter of the driven being given, to find its number of revolutions :

RULE—Multiply the diameter of the driver by its number of revolutions, and divide the product by the diameter of the driven ; the quotient will be the number of revolutions of the driven.

The diameter and revolutions of the driver being given, to find the diameter of the driven, that shall make any number of revolutions in the same time :

RULE—Multiply the diameter of the driver by its number of revolutions, and divide the product by the number of revolutions of the driven, the quotient will be its diameter.

To ascertain the size of the driver :

RULE—Multiply the diameter of the driven by the number of revolutions you wish it to make, and divide the product by the revolutions of the driver ; the quotient will be the size of the driver.

Gas Tubes and Fittings.

INTERNAL DIAMETER.

TUBES.
 { Tubes, 2 to 14 ft. long 32 ft.
 Long Screws, 12 to 23 1/2 in. ea.
 " " 3 to 11 1/2 in. " "
 Bends " " " " " "
 Springs, not socketed " "

FITTINGS

{ Socket or Pipe Union

Elbows, square

" round

Tees

Crosses

Plain Sockets

Diminished Sockets

Flanges

Caps

Plugs

Backnuts

Nipples

Barrel Nipples

Union Pends

Main Cocks

" " with Brass Plugs

" " with Brass Plugs

	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	1 3/4	2	2 1/4	2 1/2	2 3/4	3	3 1/2	4
-3	-3 1/2	-4 1/2	-6	-8 1/2	1/0	1/3	1/6	1/9	2/6	3/0	3/3	3/6	4/6	5/6	5/6	5/6
-9	-10	-11	1/0	1/3	1/6	2/1	2/7	3/6	4/6	5/0	5/6	6/3	7/0	7/6	8/0	8/6
-6	-6 1/2	-7	-8	-9	1/2	1/3	2/3	3/3	4/3	5/3	6/3	7/3	8/3	9/3	10/3	11/3
-7	-7 1/2	-8	-9	-10	1/0	1/3	2/3	3/3	4/3	5/3	6/3	7/3	8/3	9/3	10/3	11/3
-5	-5 1/2	-6	-7	-8	1/0	1/3	2/3	3/3	4/3	5/3	6/3	7/3	8/3	9/3	10/3	11/3
2/0	2/6	3/0	4/0	5/6	6/9	8/0	9/0	10/0	15/0	17/6	20/0	22/6	27/6	35/0	46/6	56/6
-8 1/2	-9	-10	1/0	1/4	1/10	2/5	3/0	3/10	6/3	9/0	11/6	14/0	22/0	28/0	35/0	46/6
-9 1/2	-11	-12	1/0	1/3	1/6	2/1	2/7	3/6	4/6	5/0	5/6	6/3	7/0	7/6	8/0	8/6
-9	-10	-11	1/0	1/3	1/6	2/1	2/7	3/6	4/6	5/0	5/6	6/3	7/0	7/6	8/0	8/6
1/4	1/6	1/11	2/4	3/0	4/0	4/10	6/0	7/9	14/0	21/4	28/0	40/0	56/0	67/8	80/0	96/0
-2	-2 1/2	-3	-3 1/2	-4 1/2	-6 1/2	-8 1/2	-11	1/1	1/9	2/6	3/0	3/6	4/0	5/0	5/6	6/0
-3	-4	-5	-6	-7	-8	-9	-11	1/2	1/4	2/3	3/3	4/0	5/0	6/0	7/0	8/0
-9	-10	-11	1/0	1/2	1/4	1/9	2/0	2/3	2/9	4/0	5/0	6/0	7/0	8/0	9/0	10/0
-3 1/2	-4 1/2	-5 1/2	-6 1/2	-7 1/2	-8 1/2	-9 1/2	-10 1/2	1/3	1/7	2/0	2/3	3/6	4/9	5/6	6/6	7/6
-3	-3 1/2	-4	-5	-6	-7	-8	-9	1/0	1/3	2/0	2/3	3/6	4/9	5/6	6/6	7/6
-2	-2 1/2	-3	-3 1/2	-4	-5	-6	-7	-8	-9	1/0	1/3	2/0	2/3	3/6	4/9	5/6
-5	-5 1/2	-6 1/2	-7 1/2	-8 1/2	-9 1/2	-10 1/2	-11 1/2	1/3	1/7	2/0	2/3	3/6	4/9	5/6	6/6	7/6
2/6	3/0	3/9	5/0	6/3	8/6	10/0	11/6	13/6	21/0	27/0	32/0	37/0	49/0	58/0	70/0	84/0
2/3	2/9	3/6	4/6	6/6	8/6	11/0	14/0	18/0	27/0	40/0	50/0	60/0	85/0	110/0	140/0	176/0
7/0	8/9	11/6	16/0	21/6	28/0	35/0	45/0	60/0	88/0	100/0	125/0	150/0	212/0	260/0	320/0	392/0
3/6	4/0	5/6	7/6	10/0	13/0	17/6	22/0	28/0	38/0	50/0	65/0	80/0	110/0	140/0	176/0	224/0
10/6	12/0	16/6	22/6	30/0	39/0	52/6	69/0	91/0	121/0	158/0	205/0	265/0	340/0	440/0	560/0	704/0

List of Reducing Fittings is that of the largest diameter.

from leading Hardware Houses and Timber Merchants.

Comparison of different Gauges in use.

Dimensions of Sizes in Decimal Parts of an Inch.

Number of Wire Gauge.	British Imperial Standard.	New Birming- ham.	Stubs'.	American or Brown & Sharpe.	Washburn & Moen Mfg. Co.	U.S. Standard for Plate.	Number of Wire Gauge.
0	.324	.396	.34	.324	.306	.312	0
1	.300	.353	.3	.289	.283	.281	1
2	.276	.314	.284	.257	.262	.265	2
3	.252	.280	.259	.229	.243	.25	3
4	.232	.250	.238	.204	.225	.234	4
5	.212	.222	.22	.131	.207	.218	5
6	.192	.198	.203	.162	.192	.203	6
7	.176	.176	.18	.104	.177	.187	7
8	.169	.157	.165	.128	.162	.171	8
9	.144	.139	.148	.114	.148	.156	9
10	.128	.125	.134	.101	.135	.140	10
11	.116	.111	.12	.090	.120	.125	11
12	.104	.099	.109	.080	.105	.109	12
13	.092	.088	.095	.071	.091	.093	13
14	.080	.078	.083	.064	.080	.078	14
15	.072	.069	.072	.057	.072	.070	15
16	.064	.062	.065	.050	.062	.062	16
17	.056	.055	.058	.045	.054	.056	17
18	.048	.049	.049	.040	.047	.05	18
19	.040	.044	.042	.035	.041	.043	19
20	.036	.039	.035	.031	.034	.037	20
21	.032	.034	.032	.028	.031	.034	21
22	.028	.031	.028	.025	.028	.031	22
23	.024	.027	.025	.022	.025	.028	23
24	.022	.024	.022	.020	.023	.025	24
25	.020	.022	.02	.017	.020	.021	25
26	.018	.019	.018	.015	.018	.018	26
27	.016	.017	.016	.014	.017	.017	27
28	.014	.015	.014	.012	.016	.015	28
29	.013	.013	.013	.011	.015	.014	29
30	.012	.012	.012	.010	.014	.012	30

"ORB" IRON—it costs a little more.

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	20.117	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	37.891	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

290
20
but is Cheaper in the end.

TIN PLATES.—Sheets and Weights.

Mark.	Inches.	Sheets.	Cwts.	Qrs.	Lbs.
IC	14 x 10	225	0	3	24
IX	14 x 10	225	1	0	24
IXX	14 x 10	225	1	1	17
IXXX	14 x 10	225	1	2	10
IXXXX	14 x 10	225	1	3	3
IC	14 x 20	112	0	3	24
IX	14 x 20	112	1	0	24
IXX	14 x 20	112	1	1	17
IXXX	14 x 20	112	1	2	10
IXXXX	14 x 20	112	1	3	3
IC	28 x 20	56	0	3	24
IX	28 x 20	56	1	0	24
IXX	28 x 20	56	1	1	17
IXXX	28 x 20	56	1	2	10
IXXXX	28 x 20	56	1	3	3
IC	12 x 12	225	0	3	24
IX	12 x 12	225	1	0	24
IXX	12 x 12	225	1	1	17
IXXX	12 x 12	225	1	2	10
IXXXX	12 x 12	225	1	3	3
DC	17 x 12 $\frac{1}{2}$	100	0	3	10
DX	17 x 12 $\frac{1}{2}$	100	1	0	8
DXX	17 x 12 $\frac{1}{2}$	100	1	1	3
DXXX	17 x 12 $\frac{1}{2}$	100	1	1	24
DXXXX	17 x 12 $\frac{1}{2}$	100	1	2	17
DC	17 x 25	50	0	3	10
DX	17 x 25	50	1	0	8
DXX	17 x 25	50	1	1	3
DXXX	17 x 25	50	1	1	24
DXXXX	17 x 25	50	1	2	17
DC	34 x 25	25	0	3	10
DX	34 x 25	25	1	0	8
DXX	34 x 25	25	1	1	3
DXXX	34 x 25	25	1	1	24
DXXXX	34 x 25	25	1	2	17
SDC	15 x 11	200	1	1	27
SDX	15 x 11	200	1	2	20
SDXX	15 x 11	200	1	3	13
SDXXX	15 x 11	200	2	0	6
SDXXXX	15 x 11	200	2	0	27
SDC	15 x 22	100	1	1	27
SDX	15 x 22	100	1	2	20
SDXX	15 x 22	100	1	3	13
SDXXX	15 x 22	100	2	0	6
SDXXXX	15 x 22	100	2	0	27

Wire Ropes—Weights and Strength.

Circumference.	Weight in lbs. per fathom.				Breaking strain in gross tons.					Circumference.
	Diameter.	Patent Steel Hoisting Ropes.	B. B. Wire Rigger.	Flexible Hawser.	Patent Cast Steel.	Plough quality Cast Steel.	Galv'd. R. B. Rigger.	Galv'd. C. S. Hauser.		
6	1 1/2	34 1/2	22	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 1/2	1 1/4	21 1/2	20	17	71	107	32	47	4 1/2	
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 1/2	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 1/2	1 1/4	6	6	4	20	29	7.4	12	2 1/2	
2 1/2	1 1/4	5	5	3	15 1/2	23	6.35	9 1/2	2 1/4	
2	1 1/4	4	4	2 1/2	12 1/2	18 1/2	4.3	7	2	
1 1/2	1 1/4	3	3	2	9 1/2	14 1/2	3.25	5 1/2	1 3/4	
1 1/2	1 1/4	2	2	1 1/2	7	10 1/2	2.25	3	1 1/2	
1 1/2	1 1/4	1 1/2	1 1/2	1	4 1/2	7	1.75	1 1/4	1 1/2	
1	1 1/4	1	1	3/4	3	4 1/2	1	1 1/4	1	

Imitations. There is nothing "just as good."

Coil Chain—Weight and Strength.

Nominal Diameter.	Weight per 100 feet.		English Proof Test.	Amer'n Proof Test.	Best B B B Crane Chain
	English.	American.			
	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.
$\frac{3}{16}$ "	41½	36	898	700	900
$\frac{1}{4}$	83	72	1680	1200	1500
$\frac{5}{16}$	116½	110	2621	2500	3200
$\frac{3}{8}$	158	150	3795	3500	4425
$\frac{7}{16}$	217	200	5152	4800	6100
$\frac{1}{2}$	271	250	6726	6200	7850
$\frac{9}{16}$	350	330	8512	7800	9870
$\frac{5}{8}$	433	420	10505	9600	12150
$\frac{11}{16}$	535	510	12700	11500	14550
$\frac{3}{4}$	633	580	15120	13800	17475
$\frac{7}{8}$	817	790	20585	18800	23780
1	1083	1020	26886	24600	31200
1½	1267	1270	34003	29500	37300
1¾	1500	1580	41000	36500	46175
1½	1800	1880	50803	44000	55660
1½	2083	2220	60480	52500	66400

Actual breaking strain of American is about double the proof tests, while the safe working load is about one-half the test.

"ORB" IRON more than

Iron Fencing Wire.

Gauge.	WEIGHT OF		LENGTH OF	
	100 yards.	1 mile.	1 cwt.	1 ton.
	lbs.	lbs.	yards.	yards.
4	40·6	714	276	5520
5	33·8	595	332	6640
6	28·2	495	397	7940
7	23·4	412	479	9580
8	19·6	314	573	11460
9	16·5	290	680	13600
10	13·7	241	819	16380
11	8	142	1393	27860
12	4·8	85	2322	46440

Steel Wire.

Table showing quantity required per mile of fencing.

Gauge.	Length per cwt.	WEIGHT REQUIRED PER MILE.														
		One Wire.			Two Wires.			Three Wires			Four Wires.			Five Wires		
No.	Yds.	c.	q.	L.	c.	q.	L.	c.	q.	L.	c.	q.	L.	c.	q.	L.
4	255	6	3	17	13	3	6	20	2	23	27	2	12	34	2	1
5	303	5	3	6	11	2	12	17	1	18	23	0	24	29	0	2
6	361	4	3	14	9	3	0	14	2	14	19	2	0	24	1	19
7	428	4	0	13	8	0	26	12	1	11	16	1	24	20	2	9
8	509	3	1	26	6	3	18	10	1	13	13	3	8	17	1	3
9	609	2	3	15	5	3	2	8	2	17	11	2	4	14	1	19
10	747	2	1	12	4	2	24	7	0	8	9	1	20	11	3	4
12	1,244	1	1	18	2	3	8	4	0	26	5	2	16	7	0	6
14	2,240	0	3	4	1	2	8	2	1	12	3	0	16	3	3	20
15	2,800	0	2	14	1	1	0	1	3	14	2	2	0	3	0	14
16	3,500	0	2	0	1	0	0	1	2	0	2	0	0	2	2	0
18	6,222	0	1	4	0	2	8	0	3	12	1	0	16	1	1	20
20	11,200	0	0	18	0	1	8	0	1	26	0	2	16	0	3	6

forty years in use, and still the Best.

Wire.

Comparative Weight of 100 Lineal Feet. Standard Gauge.

Gauge.	Iron.	Steel.	Brass.	Copper.
	lbs.	lbs.	lbs.	lbs.
0	27.77	28.06	30.58	31.78
1	23.81	24.05	26.21	27.24
2	20.15	20.36	22.19	23.06
3	16.80	16.97	18.50	19.22
4	14.24	14.39	15.68	16.29
5	11.89	12.01	13.09	13.61
6	9.75	9.85	10.74	11.16
7	8.19	8.28	9.02	9.38
8	6.77	6.84	7.46	7.45
9	5.49	5.42	6.04	6.28
10	4.33	4.38	4.77	4.96
11	3.60	3.60	3.92	4.07
12	2.86	2.89	3.15	3.27
13	2.24	2.26	2.47	2.56
14	1.69	1.71	1.86	1.94
15	1.37	1.39	1.51	1.57
16	1.08	1.10	1.19	1.24
17	.83	.84	.92	.95
18	.61	.62	.67	.70
19	.42	.43	.47	.49
20	.34	.35	.38	.39

Weight of a Cubic Inch of

Lead	equals	..	..	..	.4103	lb.
Copper, sheet	;;	..	..	..	.3225	..
Brass, ..	..	..	..	..	.3037	..
Iron, ..	..	..	..	..	.279	..
Iron, cast	..	..	..	..	.263	..
Tin, ..	..	..	..	..	.2636	..
Zinc, ..	..	..	..	..	.26	..
Water	..	..	..	..	.03617	..

Barb Wire.

No. 12 contains 440 yards per cwt.

No. 14 contains 710 yards per cwt.

“ORB” IRON—the maximum value at the minimum of cost.

Wire Netting.

Approximate weight per Mile, 24 inches wide.

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

Size.	Weight.	Size.	Weight.
Inches.	cwt. qr. lbs.	Inches.	cwt. qr. lbs.
24 x $\frac{1}{2}$ x 20	18 0 26	24 x 2 x 19	6 1 21
24 x $\frac{3}{4}$ x 19	16 3 25	„ x 2 x 18	8 1 12
„ x $\frac{3}{4}$ x 20	12 2 12	„ x 2 x 17	12 0 14
24 x 1 x 19	12 2 8	„ x 2 x 16	14 0 25
„ x 1 x 20	9 3 17	24 x $2\frac{1}{2}$ x 18	6 3 8
24 x $1\frac{1}{4}$ x 19	9 3 8	„ x $2\frac{1}{2}$ x 17	9 3 17
„ x $1\frac{1}{4}$ x 18	12 0 10	„ x $2\frac{1}{2}$ x 16	11 2 15
„ x $1\frac{1}{4}$ x 17	16 2 19	24 x 3 x 18	5 1 8
24 x $1\frac{1}{2}$ x 19	8 2 14	„ x 3 x 17	7 2 16
„ x $1\frac{1}{2}$ x 18	11 1 1	„ x 3 x 16	9 2 18
„ x $1\frac{1}{2}$ x 17	14 1 10	„ x 3 x 15	13 0 14
24 x $1\frac{5}{8}$ x 19	7 0 17	„ x 3 x 14	15 0 12
„ x $1\frac{5}{8}$ x 18	8 2 7	24 x 4 x 16	7 2 22
„ x $1\frac{5}{8}$ x 17	13 1 6	„ x 4 x 15	9 2 6
		„ x 4 x 14	11 0 26

Birmingham Wire Gauge.

Comparative Sizes.

No.	1	4	7	11	16	22	gauges =
	$\frac{5}{16}$	$\frac{1}{4}$	$\frac{3}{16}$	$\frac{1}{8}$	$\frac{1}{16}$	$\frac{1}{32}$	of an inch.

Wire Netting. (ENGLISH "ROLL" LIST).

Per Roll of 50 Yards.

Mesh.	Gauge	12-in.	18-in.	24-in.	30-in.	36-in.	42-in.	48-in.	60-in.	72-in.
$\frac{1}{2}$ -in.	22	13/3	19/11	26/6	33/2	39/9	46/5	53/0	66/4	..
"	20	16/0	24/0	32/0	40/0	48/0	56/0	61/0	80/0	..
$\frac{3}{4}$ -in.	20	8/0	12/0	16/0	20 0	24/0	28/0	32/0	40/0	48/0
"	19	10/3	15/5	20/6	25/8	30/9	35/11	41/0	51/4	61/6
1-in.	20	6/5	9/7	12/9	16/0	19/2	22/4	25/6	..	..
"	19	7/3	10/11	14/6	18/2	21/9	25/5	29/0	..	..
"	18	8/9	13/2	17/6	21/11	26/3	30/8	35/0	..	..
1 $\frac{1}{4}$ -in.	19	5/9	8/8	11/6	14/5	17/3	20/2	23/0	28/10	34/6
"	18	7/0	10/6	14/0	17/6	21/0	24/6	28/0	35/0	42/0
"	17	9/5	14/1	18/9	23/6	28/2	32/10	37/3	47/0	56/4
"	16	12/6	18/9	25/0	31/3	37/6	43/9	50/0	62/6	..
1 $\frac{1}{2}$ -in.	19	4/9	7/2	9/6	11/11	14/3	16/8	19/0	23/9	28/6
"	18	5/9	8/8	11/6	14/5	17/3	20/2	23/0	28/9	34/6
"	17	7/3	10/11	14/6	18/2	21/9	25/5	29/0	36/3	43/6
"	16	9/6	14/3	19/0	23/9	28/6	33/3	38/0	47/6	57/0
1 $\frac{3}{4}$ -in.	19	4/5	6/7	8/9	11/9	13/2	15/4	17/6	21/11	26/3
"	18	5/5	8/1	10/9	13/6	16/2	18/10	21/6	26/11	32/3
"	17	7/0	10/6	14/0	17/6	21/0	24/6	28/0	35/0	42/0
"	16	8/9	13/2	17/6	21/11	26/3	30/8	35/0	43/9	52/6
2-in.	19	3/6	5/3	7/0	8/9	10/6	12/3	14/0	17/6	21/0
"	18	4/5	6/7	8/9	11/0	13/2	15/4	17/6	21/11	26/3
"	17	5/11	8/10	11/9	14/9	17/8	20/7	23/6	29/5	35/3
"	16	7/6	11/3	15/0	18/9	22/6	26/3	30/0	37/6	45/0
"	15	9/3	13/11	18/6	23/2	27/9	32/5	37/0	46/3	55/6
2 $\frac{1}{2}$ -in.	19		4/11	6/6	8/2	9/9	11/5	13/0	16/3	19/6
"	18		6/3	8/3	10/4	12/5	14/6	16/6	20/3	24/9
"	17		7/11	10/6	13/2	15/9	18/5	21/0	26/3	31/6
"	16		10/2	13/6	16/11	20/3	23/8	27/0	33/9	40/6
3-in.	18			6/9	8/6	10/2	11/10	13/6	16/11	20/3
"	17			8/9	11/0	13/2	15/4	17/6	21/11	26/3
"	16			11/0	13/9	16/6	19/3	22/0	27/6	33/0
"	15			13/0	16/3	19/6	22/9	26/0	32/6	39/0
"	14			15/9	19/9	23/8	27/7	31/6	38/5	47/3
4-in.	16			8/0	10/0	12/0	14/0	16/0	20/0	24/0
"	15			10/6	13/2	15/9	18/5	21/9	26/3	31/6
"	14			12/6	15/8	18/9	21/11	25/0	31/3	37/6

Relative Value based on Mile Measurements.

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

Timber, Etc.

Deals	as 9 x 3	No. of running	feet to Ton (20 cwt.)	350
Flooring	6 x $1\frac{1}{8}$	"	"	1557
"	6 x 1	"	"	1750
"	6 x $1\frac{1}{4}$	"	"	2000
"	6 x $1\frac{3}{4}$	"	"	2330
Matchboards	6 x $2\frac{1}{2}$	"	"	2800
"	6 x $3\frac{1}{2}$	"	"	3400
"	6 x 3	"	"	4800
Weatherboards, Single		"	"	3100
Oregon	No. of super feet	"	"	790
V.D.D. Hardwood		"	"	450
Jarrah		"	"	400
Shelving (American) 12 x $\frac{7}{8}$		"	"	1050
6 feet Tasmanian Palings (Hobart) No. to		"	"	650
5 "	"	"	"	800
6 "	"	"	"	400
5 "	"	"	"	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 6 ft. 8 ins. x 2 ft. 8 ins. x $1\frac{1}{2}$ in.	No. to Ton	"	"	55
" 6 ft. 8 ins. x 2 ft. 8 ins. x $1\frac{1}{4}$ in.	"	"	"	70
" 6 ft. 6 ins. x 2 ft. 6 ins. x $1\frac{1}{2}$ in.	"	"	"	58
" 6 ft. 6 ins. x 2 ft. 6 ins. x $1\frac{1}{4}$ in.	"	"	"	75

Superficial Feet in a Board or Plank

is known by multiplying the length by the breadth. 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.

Corrugated Iron.

Covering Capacity per Square.

One Ton of Galv. Corrugated Iron has an approximate covering capacity as follows:—

	Sq. Feet.	Squares (10 x 10 ft.)
26 g. Single Lap., about	2200	Or 22 Squares
Lap and Half „	2000	„ 20 „
Double Lap „	1900	„ 19 „
24 g. Single Lap., about	1600	Or 16 Squares
Double Lap „	1400	„ 14 „

To ascertain the cost per Square, divide price per ton by the respective number of Squares,

Spring Head Nails.

One packet (100 Nails) is usually allowed to one Square of Roofing.

Ridging, Spouting, Etc.

The actual size of ordinary gauge Ridging, Spouting and Down Piping is always something less than the trade or nominal size.

Thus 14 in. Ridging measures only 13 in.

16 „ „	15 in. and so on.
4½ „ Spouting „	4 in. „
3 „ Down Pipe „	2¾ in. „

RIDGING WEIGHS	12 in.	14 in.	16 in.	18 in.
	21	23	30	33 lbs. per 6 lengths
SPOUTING	4 in.	4½ in.	5 in.	6 in.
	17	20	23	25 lbs. „
DOWNPIPE	2 in.	2½ in.	3 in.	—
	11	15	18 lbs.	— „

BRICKS, about 800, 2 bags of lime, and one load of **SAND** are required for an ordinary **COTTAGE CHIMNEY**, and 1,500 bricks, 3½ bags lime, and 1½ loads sand to a double chimney.

About 1,000 bricks, on an average, go to 3½ tons weight.

LATH and PLASTER.—100 square yds. requires 4 bags lime, 3 yds. sand, 16 bundles 4 ft. 6 in. American Laths, 8 lbs. 1½ in. nails, and ½ bag hair.

COLONIAL LATHS.—A bundle 4 ft. 6 in. weighs about 36 lbs., and covers 5 square yards.

AMERICAN LATHS.—A bundle 4 ft. 6 in. weighs about 56 lbs., and covers 6½ square yards.

OIL, per 5 gallon drum, weighs about 56 lbs.

CEMENT, per barrel, weighs about 3¾ cwt.

Mensuration.

Simple Rules.

The **area** of a **circle** is about three-fourths the area of a square, having a side equal to its diameter.

The **circumference** of a circle is about three and one-seventh times its diameter.

The cubical contents of **cones** or **pyramids** are one-third that of cylinders or prisms, respectively, which have the same size base and are equal in height.

The **area** of the **curved surface** of a **cone** can be found by multiplying the slope of the cone by the circumference of the base and dividing by two.

Capacity of Cisterns or Tanks.

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.—Multiply the diameter into itself and deduct one-fifth from the product, then multiply the remainder by the depth, and the result by $6\frac{1}{4}$ (6.2321) will give the contents in gallons.

Water.—A cube foot of water contains nearly $6\frac{1}{4}$ gallons (6.2321) and weighs a fraction over 62 lbs. (62.5).

Hints for Reckoning.

TO FIND THE SUPERFICIAL MEASUREMENT OF TIMBER.

Multiply the breadth by the thickness in inches, divide by 12, then multiply product by the length.

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

EXAMPLE— Tons cwt. qr. lbs.
2 10 1 18 @ £5/10/-per ton.

Reckon the tons as pounds; cwt. as shillings; each qr. 3d. and for every 9 lbs. 1d., equals

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

£12	12	1
1	5	2½

£13 17 3½ Answer.

TO FIND THE PREMIUM OR DISCOUNT OF ANY SUM.

EXAMPLE:—£24/10/6 @ 3½ %.

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

£24 10 6
double 3½ = 7

£17·1 13 6 Answer 17 1/10th of a shilling, say 17/2

ANOTHER SIMPLE CALCULATION is to divide the discount rate by 5; and multiply the amount to be dealt with by the quotient; then by reading the pounds as shillings, and the shillings in equal proportion, the result will be the amount of discount or premium, as the case may require.

EXAMPLE:—£9 10 0 @ 40 %.

Divide 40 by 5 leaves 8; multiply

£9	10	0
by	8	

£76 0 0 Answer 76 shillings.

forty years in use, and still the Best.

Gold.

Table of the Qualities and Value

—	£ s. d.	Alloy Contained.
24 Carats.	4 5 0	Nil.
23 "	4 1 5 $\frac{1}{2}$	1 Carat
22 "	3 17 11	2 "
21 "	3 14 4 $\frac{1}{2}$	3 "
20 "	3 10 10	4 "
19 "	3 7 3 $\frac{1}{2}$	5 "
18 "	3 3 9	6 "
17 "	3 0 2 $\frac{1}{2}$	7 "
16 "	2 16 8	8 "
15 "	2 13 11 $\frac{1}{2}$	9 "
14 "	2 9 7	10 "
13 "	2 6 0 $\frac{1}{2}$	11 "
12 "	2 2 6	12 "
11 "	1 18 11 $\frac{1}{2}$	13 "
10 "	1 15 5	14 "
9 "	1 11 10 $\frac{1}{2}$	15 "
8 "	1 8 4	16 "
7 "	1 4 9 $\frac{1}{2}$	17 "
6 "	1 1 3	18 "

Gold and Silver Plate.

English Sterling Plate is denoted by the following marks, viz. :

1. Initial letters of the maker's Christian and surname.
2. Hall Mark stamp denoting where manufactured.
3. Duty Mark being the head of the reigning sovereign.
4. A letter and device indicating the year in which the plate is made.

The **Hall Mark** shows where the gold or silver plate upon which it is stamped was manufactured or assayed, viz. :

LONDON .. A Leopard's Head	CHESTER A Dagger & Three Wheat Sheaves
EDINBURGH Castle and Lion	EXETER A Castle with two wings
GLASGOW .. Tree and Salmon with ring in mouth	SHEFFIELD A Crown
BIRMINGHAM An Anchor	YORK .. Five Lions and a Cross
NEWCASTLE Three Castles	DUBLIN A Figure of Hibernia
The Standard Mark for Gold is -	
For ENGLAND A lion passant	For GLASGOW A rampant lion
" EDINBURGH A thistle	" all IRELAND A crowned harp

The Standard Mark for Silver throughout the United Kingdom is the figure of Britannia.

Foreign Monies.

And their English Equivalents.

(Subject to variation in Standard Currencies.)

ENGLISH Money.	UNITED STATES and CANADA.	FRANCE.	GERMANY.
£ s. d.	Dol. Cent.	Franc. Cent.	Mark. Pfen.
0 5 0	1 22	6 30	5 10
0 6 0	1 46	7 50	6 12
0 7 0	1 70	8 80	7 14
0 8 0	1 94	10 0	8 16
0 9 0	2 19	11 30	9 18
0 10 0	2 43	12 61	10 20
0 11 0	2 67	13 80	11 22
0 12 0	2 92	15 10	12 24
0 13 0	3 16	16 30	13 26
0 14 0	3 40	17 60	14 28
0 15 0	3 65	18 90	15 30
0 16 0	3 89	20 10	16 32
0 17 0	4 12	21 40	17 34
0 18 0	4 38	22 60	18 36
0 19 0	4 62	23 90	19 38
1 0 0	4 86	25 22	20 40

INDIA :—RUPEE is nominally of the value of 1/4 sterling.

SPAIN :—One PESETA nearly 9½d. „

AUSTRIA :—One KRONER 10d. „

To ascertain the ENGLISH equivalent of AMERICAN Dollars and Cents, divide the same by 2, then by 12, and again by 20.

Answer—£104 4s. 4d.

EXAMPLE :—

	DOL. CENT.
2	500-25 to English equiv.
12	25,012—1
20	2084—4 shillings & pence
	104-4 pounds & shillings

British Weights and Measures.

IMPERIAL STANDARD.

Apothecaries' Weight.

Used for compounding Medical Prescriptions. The Avoirdupois Weight is used to buy and sell in quantity. The Grain, Ounce, and Pound are the same as Troy.

20 Grains	=	1 Scruple	=	20 Grains Troy.
3 Scruples	„	1 Dram	„	60 „ „
8 Drams	„	1 Ounce	„	480 „ „
12 Ounces	„	1 Pound	„	5760 „ „

Apothecaries' Fluid Measure.

60 Minims	=	1 Dram	20 Ounces	=	1 Pint
8 Drams	„	1 Ounce	8 Pints	„	1 Gallon

Troy Weight.

By this weight, Gold, Silver, Platina, and Precious Stones (except Diamonds) are weighed. Diamonds and Pearls are weighed by Carats of 4 Grains each (equal only to 3·2 Troy Grains). The Troy Ounce is equal to 151½ 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,

3·17 Grains	=	1 Carat		
24 Grains	„	1 Pennyweight	=	24 Grains
20 Pennyweights	„	1 Ounce	„	480 „
12 Ounces	„	1 Pound	„	5760 „

Avoirdupois Weight.

Used for all General Merchandise,

27½ Grains	=	1 Dram		
16 Drams	„	1 Ounce	=	437½ Grains
16 Ounces	„	1 Pound	„	7000 „
14 Pounds	„	1 Stone		
28 Pounds	„	1 Quarter		
4 Quarters	„	1 Hundredweight	=	112 Pounds
20 Cwts.	„	1 Ton	„	2240 „

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.

British Weights & Measures—(Continued.)

Geographical and Nautical Measure.

- 6 Feet = 1 Fathom
 110 Fathoms or 660 Feet = 1 Furlong
 6080 Feet = 1 Knot
 3 Knots = 1 League
 20 Leagues or 60 Geographical Miles = 1 Degree
 360 Degrees, or 24,856 Miles, the Earth's Circumference.

Measure of Length.

- | | |
|----------------------------------|-----------------------|
| 12 Inches = 1 Foot | 4 Poles = 1 Chain |
| 3 Feet „ 1 Yard | 10 Chains „ 1 Furlong |
| 5½ Yards „ 1 Pole | 8 Furlongs „ 1 Mile |
| 1760 Yards (5280 Feet) = 1 Mile. | |

In scientific calculations and by Revenue Officers the inch is divided into tenths and hundredths. Mechanics divide it into eighths. The chain is divided into 100 links, each 7.92 inches.

Measure of Capacity.

Used for Liquids and Dry Goods generally.

- | | |
|-----------------------|---------------------------|
| 4 Gills = 1 Pint | = 34½ Cubic Inches nearly |
| 2 Pints „ 1 Quart | „ 69½ „ „ „ |
| 4 Quarts „ 1 Gallon | „ 277½ „ „ „ |
| 2 Gallons „ 1 Peck | „ 554½ „ „ „ |
| 4 Pecks „ 1 Bushel | „ 2218½ „ „ „ |
| 8 Bushels „ 1 Quarter | „ 10½ „ Feet „ |
| 5 Quarters „ 1 Load | „ 51½ „ „ „ |

A Bushel of Wheat, on an average, weighs 60 pounds; Barley, 47 pounds; Oats, 40 pounds. The Gallon contains 10 pounds Avoirdupois of Distilled Water exactly.

Grain and Produce.

	Per bushel.	Average bushels per bag.		Per bushel.	Average bushels per bag.
Barley	.. 50 lb.	.. 4	Oats	.. 40 lb.	.. 4
Beans	.. 60 „	.. 4	Peas	.. 60 „	.. 4
Bran	.. 20 „	.. 8	Pollard	.. 20 „	.. 9
Maize	.. 56 „	.. 4	Wheat	.. 60 „	.. 4
Malt	.. 40 „	.. 4			

A Bag of Flour:—Australian, 200 lb.; English, 280 lb.

an established reputation of nearly half a century.

British Weights & Measures—(Continued.)

Hay and Straw.

36 Pounds Straw 1 Truss | 60 Pounds New Hay 1 Truss
56 " Old Hay 1 " | 36 Trusses 1 Load

The Load of Old Hay is 18 cwt., of New 19 cwt. 32 lb.,
and of Straw 11 cwt. 64 lb.

Measure of Surface.

144 Inches = 1 Foot | 40 Perches = 1 Rood
9 Feet " 1 Yard | 4 Roods " 1 Acre
30½ Yards " 1 Rod or Perch | 10 Chains " 1 Acre*
16 Rods " 1 Chain | 640 Acres " 1 Mile

* That is, 10 Chains long by 1 Chain broad, or a Square
whose side is 70 yards, is nearly an Acre.

The following Table has been added as a basis for
estimating the approximate acreage of any given enclosed
area of and:—

YARDS WIDE.		YARDS LONG.	CONTAINS.	FEET WIDE.		FEET LONG.	CONTAINS.
5	by	968	1 Acre.	60	by	726	1 Acre.
10	"	484	"	110	"	396	"
20	"	242	"	120	"	363	"
40	"	121	"	220	"	198	"
70	"	69½	"	240	"	181½	"
80	"	60½	"	440	"	99	"

Measure of Solidity.

1728 Cubic Inches = 1 Cubic Foot
27 Cubic Feet " 1 Cubic Yard
5 " " " 1 Barrel Bulk Shipping
40 " " " 1 Ton Shipping
40 " " " 1 Load Hard English Timber, &c.
50 " " " 1 Load Foreign Fir.

Memoranda.

21.2.04

The Walsh Singer
timber 1465 feet

2x4. 3 18 feet
3x3 10 feet
1x3. 136
464

Fence Statement

3/4 mile $\frac{1}{2}$ x per mile £20.5.0
1/2 for 200 rods $\frac{1}{2}$ m.b. 5.8.9
3 averaged 1/5 cost 15.0
clearing line 1.5.0
2 cords barbed wire 2 1/2 2.8.0
£ 29.16.9

Half payment £ 14. 8. 4 1/2

24.10.88

Memoranda.

[Faint handwritten notes at the bottom of the page:]

B.O.S. 2 1/2 Hayan
from S.O.B. 1 1/2 0 flake / .P
L.P. 54, 320ae 11/8
L.S. 58, 800.. 11/8
L.S. 109, 160. 10/-

Landville Sept. 16th 1879

Sept 16 1904
 2 1/2 lbs. of skin & weight of same set
 to be used as 1 bundle contains
 1 1/2 lbs. of skin & 1 1/2 lbs. of weight 149 lbs

As a bundle containing
 20 lb of hair 22 lb weight 222
 22 lb weight 364

cuñis qm llos
3 1. 0

Memoranda.

Memoranda.

Sept. 12/10

12/10

1. *Chloris*
 2. *Chloris*
 3. *Chloris*
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 5. *Chloris*
 6. *Chloris*
 7. *Chloris*
 8. *Chloris*
 9. *Chloris*
 10. *Chloris*

Memoranda

• Demerang Butte sent out

Mr. Robbins Seadville

Mr. Devog baslah

J. Rains Berrinwa

F. J. Piper baslah

Sonragan St. Gulayong

John Schreinerville

A. J. Schreiner

A. Rivas Seadville

H. Bentley Tallewang

W. Charles Creek Bridge

W. Waterford Sonaween

5-843, Memoranda. April 22nd 1907 **T**

along road

Memoranda.

10

across along fence

10

10

up 10
10

FORWARDED BY THE "REFUGEE" WILL BE FORWARDED
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LYSAGHTS, LIMITED,
24 BOND STREET,
SYDNEY.

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"ORB" Galvanised Corrugated Iron is favorably 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.



"REDCLIFFE" Corrugated Iron.—A brand of well established repute and in large demand, occupying a premier position in those markets in which price is a primary consideration.



"WEIGHT BEARING" Iron Lysaght's **"ORB"** brand used for building purposes, maintains the makers' reputation, and may be specified by Architects and Engineers in the full confidence that it will justify their preference.

Galvanized Iron



LYSAGHT'S.

.. 'Orb' ..

'Queen's Head'



BEWARE OF IMITATIONS.

Every Sheet of Lysaght's Iron
bears one or other of the maker's
trade marks, without which none
can be genuine.