

THE
BUTTERLEY COMPANY,
LIMITED.

—
1912.

—
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ADDRESSES OF WORKS AND OFFICES.

BUTTERLEY WORKS—Engineering, Foundry and Bridge Building Departments, Butterley, Derby.

Railway Stations: Butterley and Ripley, Midland Railway.

CODNOR PARK WORKS—Forges and Rolling Mills Department, Codnor Park.

Railway Stations: **Codnor Park**, Midland and Great Northern Railways.

LIME WORKS—Bull Bridge, Derby.

Railway Station: Ambergate, Midland Railway.

CHIEF OFFICES—BUTTERLEY.

Postal Address: BUTTERLEY, DERBY.
Telegraphic Address: "IRONWORKS, BUTTERLEY."
Telephone No. 6 RIPLEY.

CODNOR PARK WORKS OFFICES—

Postal Address: CODNOR PARK, ALFRETON.
Telegraphic Address: "IRONWORKS, BUTTERLEY."
Telephone No. 36 RIPLEY.

COLLIERY OFFICES—Codnor Park.

Postal Address: CODNOR PARK, ALFRETON.
Telegraphic Address: "LAOC, IRONVILLE."
Telephone No. 36 RIPLEY.

ADDRESSES OF OFFICES—continued.

52 Queen Victoria St. 14 March 1913.
LONDON OFFICES—118, Cannon Street,
London, E.C.

280 City
807 Bank
Agent: Mr. H. Homfray.

Telegraphic Address: "BUTTERLEY, LONDON."
Telephone No. 807 BANK, LONDON.

PROVINCIAL OFFICES—

Manchester—28, Deansgate, Manchester.

Agent: Mr. Wm. Arthur.

Telegraphic Address: "MALLEABLE, MANCHESTER."
Telephone No. 782 CITY, MANCHESTER.

Birmingham—Exchange Buildings,
Birmingham.

Agents: Messrs. Chas. Ryland & Sons.

Telegraphic Address: "RYLAND, BIRMINGHAM."
Telephone No. 1520 MIDLAND, BIRMINGHAM.

Glasgow—14, St. Vincent Place, Glasgow.

Agents: Messrs. D. S. Miller & Co.

Telegraphic Address: "WELDED, GLASGOW."
Telephone No. 7001 Y 5 N. CITY, GLASGOW.

COLONIAL OFFICES—

South Africa—

Johannesburg (P.O. Box 1352).

Agent: Mr. C. F. Wienand.

Australasia—Melbourne (G.P.O. Box 459).

Agent: Mr. R. W. Warrell.

Wm Parker
Common Park Works

21 Nov 1912

THE
BUTTERLEY COMPANY, Limited,
DERBYSHIRE.
ESTABLISHED 1790.

**Engineers, Iron and Steel
Manufacturers;
COLLIERY PROPRIETORS;**

MAKERS OF

ADMIRALTY SPECIAL CABLE IRON,

Hot Blast Pig Iron, Gas and Water Pipes,
Bridge and Steam Cylinders and heavy Cast
Ironwork, Wrought Iron and Steel Sheets,
Bars, Boilers, Bridges, Roofs, Girders, Dock
Gates, Caissons and Structural Ironwork,
Steam Engines, Cranes, Tanks, Heavy
Machinery, &c., &c.

CONTRACTORS TO
THE BRITISH ADMIRALTY,
WAR, INDIA AND COLONIAL OFFICES;

ALSO TO

The New South Wales, South Australian,
Queensland and New Zealand Governments;
The Imperial Austro-Hungarian, Italian,
Turkish, Greek, Chinese and Japanese
Governments, &c., &c.

1912.

NOTE.—All previous lists of maximum sizes of
Sheets and Lists of Extras and of Sections,
are hereby cancelled.

Copyright.

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BRANDS OF IRON AND STEEL.

PIG IRON :—

"Special Derbyshire," from a mixture of
Oolite and native Derbyshire Stone .. BUTTERLEY.
"Derbyshire All Mine," made solely from
selected Ironstones of the Coal Measures,
and obtained on the Butterley Estates .. BUTTERLEY MINE.

MANUFACTURED IRON :—

Crown quality .. ..	.. ..	BUTTERLEY 
Best .. ..	.. ..	BUTTERLEY B.
Best Best .. ..	.. ..	BUTTERLEY B.B.
Treble Best quality .. ..	.. ..	BUTTERLEY B.B.B.
Ordinary Cable .. ..	.. ..	BUTTERLEY CABLE.
Admiralty Cable .. ..	.. ..	BUTTERLEY SPECIAL CABLE.
Mild Steel .. ..	.. ..	BUTTERLEY STEEL.

MAXIMUM DIMENSIONS OF SHEETS
IN IRON AND STEEL

Thickness.	Area in	Length.	Width.		Diam.	Square.
	Square Feet.		ft. in.	ft. in.		
	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.
26 & 25 w.g.	15 0	6 0	2 6	2 6	2 6	2 6
24 & 21 w.g.	24 0	8 0	3 6	3 6	3 6	3 6
20 .. 17 w.g.	30 0	9 0	4 0	4 0	4 0	4 0
$\frac{1}{16}$ in.	30 0	9 0	4 0	4 0	4 0	4 0
$\frac{3}{32}$..	30 0	10 0	4 0	4 0	4 0	4 0
$\frac{1}{8}$..	30 0	10 0	4 0	4 0	4 0	4 0
$\frac{5}{32}$..	30 0	10 0	4 0	4 0	4 0	4 0
$\frac{3}{16}$..	32 0	10 0	4 0	4 0	4 0	4 0

For rectangular sheets other than square, the maximum dimensions are obtained thus:—Opposite the given thickness is the maximum superficial area which can be rolled of that thickness; this divided by the given length (within the table maximum) will show the obtainable width; or, divided by the given width (within the table maximum), will show the obtainable length.

FLATS.

From $\frac{1}{2}$ in. to 8 in. wide.

The sizes advance in width by

$\frac{1}{8}$ in. up to 3 in. wide.

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

$\frac{1}{2}$ 5 ..

$\frac{3}{4}$ 5 $\frac{1}{2}$..

$\frac{1}{2}$ 7 ..

1 8 ..

The thicknesses are not less than

$\frac{1}{8}$ in. up to 3 in. wide.

$\frac{3}{16}$ 4 ..

$\frac{1}{4}$ 7 ..

$\frac{5}{16}$ 8 ..

IN IRON AND STEEL.



CONVEX-SQUARE EDGE.

1 $\frac{1}{2}$ " wide	$\times \frac{1}{8}$ "	$\times \frac{1}{4}$ "	1 $\frac{1}{2}$ " wide	$\times \frac{1}{2}$ "	$\times \frac{1}{4}$ "
1 $\frac{1}{8}$ " "	$\times \frac{3}{16}$ "	$\times \frac{1}{4}$ "	1 $\frac{5}{8}$ " "	$\times \frac{9}{16}$ "	$\times \frac{1}{4}$ "
1 $\frac{1}{4}$ " "	$\times \frac{1}{2}$ "	$\times \frac{1}{4}$ "	1 $\frac{3}{4}$ " "	$\times \frac{3}{8}$ "	$\times \frac{1}{4}$ "
1 $\frac{3}{4}$ " "	$\times \frac{5}{8}$ "	$\times \frac{1}{4}$ "	1 $\frac{7}{8}$ " "	$\times 1"$	$\times \frac{1}{2}$ "
1 $\frac{7}{8}$ " "	$\times \frac{3}{4}$ "	$\times \frac{1}{2}$ "	1 $\frac{1}{2}$ " "	$\times \frac{1}{2}$ "	$\times \frac{1}{4}$ "
1 $\frac{3}{8}$ " "	$\times \frac{7}{16}$ "	$\times \frac{1}{8}$ "	1 $\frac{3}{4}$ " "	$\times \frac{9}{16}$ "	$\times \frac{1}{4}$ "
1 $\frac{5}{8}$ " "	$\times \frac{7}{16}$ "	$\times \frac{3}{16}$ "	1 $\frac{3}{8}$ " "	$\times \frac{3}{8}$ "	$\times \frac{1}{8}$ "
1 $\frac{7}{8}$ " "	$\times \frac{3}{8}$ "	$\times \frac{1}{4}$ "	1 $\frac{1}{2}$ " "	$\times \frac{3}{4}$ "	$\times \frac{1}{4}$ "
1 $\frac{3}{4}$ " "	$\times \frac{3}{4}$ "	$\times \frac{3}{8}$ "	1 $\frac{3}{4}$ " "	$\times \frac{3}{4}$ "	$\times \frac{7}{16}$ "
1 $\frac{1}{2}$ " "	$\times \frac{1}{2}$ "	$\times \frac{3}{16}$ "	1 $\frac{3}{4}$ " "	$\times 1"$	$\times \frac{1}{8}$ "
1 $\frac{1}{2}$ " "	$\times \frac{1}{2}$ "	$\times \frac{1}{4}$ "	2"	$\times \frac{1}{2}$ "	$\times \frac{1}{8}$ "
1 $\frac{1}{2}$ " "	$\times \frac{5}{8}$ "	$\times \frac{1}{8}$ "	2"	$\times \frac{1}{2}$ "	$\times \frac{1}{4}$ "
1 $\frac{1}{2}$ " "	$\times \frac{5}{8}$ "	$\times \frac{1}{4}$ "	2"	$\times \frac{5}{8}$ "	$\times \frac{3}{8}$ "
1 $\frac{1}{2}$ " "	$\times \frac{3}{4}$ "	$\times \frac{1}{4}$ "	2"	$\times \frac{3}{4}$ "	$\times \frac{3}{8}$ "
1 $\frac{1}{2}$ " "	$\times \frac{3}{4}$ "	$\times \frac{1}{2}$ "	2 $\frac{1}{4}$ " "	$\times \frac{1}{2}$ "	$\times \frac{1}{4}$ "
1 $\frac{1}{2}$ " "	$\times \frac{7}{8}$ "	$\times \frac{1}{4}$ "	2 $\frac{1}{4}$ " "	$\times \frac{5}{8}$ "	$\times \frac{1}{8}$ "
1 $\frac{1}{2}$ " "	$\times \frac{7}{8}$ "	$\times \frac{1}{2}$ "	2 $\frac{1}{4}$ " "	$\times \frac{3}{4}$ "	$\times \frac{3}{8}$ "
1 $\frac{1}{2}$ " "	$\times \frac{7}{8}$ "	$\times \frac{7}{16}$ "	2 $\frac{1}{2}$ " "	$\times 1"$	$\times \frac{1}{4}$ "
1 $\frac{1}{2}$ " "	$\times 1"$	$\times \frac{1}{2}$ "	2 $\frac{3}{4}$ " "	$\times \frac{1}{2}$ "	$\times \frac{1}{8}$ "
1 $\frac{1}{2}$ " "	$\times 1"$	$\times \frac{9}{16}$ "			

Minimum thicknesses are given, but we can slightly increase any of them if required.

IN IRON AND STEEL.

CHAMFERED OR CAPPING BARS.



1 $\frac{1}{2}$ " wide	$\times \frac{3}{16}$ "
"	1 $\frac{3}{4}$ " " $\times \frac{1}{4}$ "
"	1 $\frac{3}{4}$ " " $\times \frac{3}{16}$ "
"	1 $\frac{3}{4}$ " " $\times \frac{1}{4}$ "
"	2" " $\times \frac{1}{4}$ "
"	2" " $\times \frac{5}{16}$ "
"	2" " $\times \frac{1}{8}$ "
"	2 $\frac{1}{4}$ " " $\times \frac{1}{4}$ "
"	2 $\frac{1}{4}$ " " $\times \frac{3}{16}$ "
"	2 $\frac{1}{4}$ " " $\times \frac{1}{8}$ "
"	2 $\frac{1}{4}$ " " $\times \frac{3}{16}$ "
"	2 $\frac{1}{4}$ " " $\times \frac{1}{8}$ "
"	2 $\frac{1}{4}$ " " $\times \frac{3}{16}$ "
"	2 $\frac{1}{4}$ " " $\times \frac{1}{8}$ "
"	2 $\frac{1}{4}$ " " $\times \frac{3}{16}$ "
"	2 $\frac{1}{4}$ " " $\times \frac{1}{8}$ "
"	2 $\frac{3}{8}$ " " $\times \frac{1}{8}$ "
"	3" " $\times \frac{1}{8}$ "
"	3 $\frac{1}{2}$ " " $\times \frac{1}{8}$ "
"	5" " $\times \frac{1}{8}$ "



2"	$\times \frac{1}{4}$ "
"	2" " $\times \frac{3}{16}$ "

IN IRON AND STEEL.

NUT IRON.

$\frac{11}{16}$ in. wide \times $\frac{1}{2}$ in. and $\frac{3}{32}$ in. thick.

$1\frac{1}{32}$ " " \times $\frac{5}{8}$ " thick.

$1\frac{1}{16}$ " " \times $\frac{5}{8}$ " and $\frac{3}{32}$ " "

$1\frac{3}{16}$ " " \times 1 " thick.

$1\frac{1}{4}$ " " \times $\frac{3}{4}$ " and $\frac{3}{32}$ " "

$1\frac{3}{8}$ " " \times $\frac{11}{16}$ " thick.

$1\frac{13}{32}$ " " \times $\frac{7}{8}$ " "

$1\frac{7}{16}$ " " \times 1 " and $\frac{1}{32}$ " "

$1\frac{9}{16}$ " " \times 1 " " $\frac{1}{16}$ " "

$1\frac{5}{8}$ " " \times 1 " " $\frac{3}{32}$ " "

$1\frac{11}{8}$ " " \times $\frac{7}{8}$ " thick.

$1\frac{13}{8}$ " " \times $1\frac{1}{16}$ " "

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

$2\frac{5}{16}$ " " \times 1 " "

$2\frac{9}{16}$ " " \times 1 " "

These thicknesses can be slightly varied.

IN IRON AND STEEL.

ONE ROUND EDGED TYRE
BARS.

Sizes in inches.			Sizes in inches.		
Over all.	On flat.		Over all.	On flat.	
$1\frac{3}{8}$ \times	$1\frac{1}{16}$ \times	$\frac{7}{16}$	$2\frac{1}{8}$ \times	$1\frac{11}{16}$ \times	$\frac{5}{8}$
$1\frac{3}{8}$ \times	$1\frac{1}{8}$ \times	$\frac{1}{2}$	$2\frac{1}{8}$ \times	$1\frac{13}{16}$ \times	$\frac{11}{16}$
$1\frac{1}{2}$ \times	$1\frac{1}{4}$ \times	$\frac{1}{2}$	$2\frac{1}{8}$ \times	$1\frac{3}{4}$ \times	$\frac{3}{4}$
$1\frac{1}{2}$ \times	$1\frac{1}{2}$ \times	$\frac{7}{16}$	$2\frac{1}{4}$ \times	2 \times	$\frac{5}{8}$
$1\frac{1}{2}$ \times	$1\frac{9}{16}$ \times	$\frac{5}{8}$	$2\frac{1}{4}$ \times	2 \times	$\frac{11}{16}$
$1\frac{5}{8}$ \times	$1\frac{3}{8}$ \times	$\frac{1}{2}$	$2\frac{1}{4}$ \times	2 \times	$\frac{3}{4}$
$1\frac{5}{8}$ \times	$1\frac{11}{16}$ \times	$\frac{7}{16}$	$2\frac{1}{2}$ \times	$2\frac{1}{4}$ \times	$\frac{5}{8}$
$1\frac{5}{8}$ \times	$1\frac{5}{8}$ \times	$\frac{5}{8}$	$2\frac{1}{2}$ \times	$2\frac{1}{4}$ \times	$\frac{11}{16}$
$1\frac{3}{4}$ \times	$1\frac{1}{2}$ \times	$\frac{1}{2}$	$2\frac{1}{2}$ \times	$2\frac{1}{4}$ \times	$\frac{3}{4}$
$1\frac{3}{4}$ \times	$1\frac{13}{16}$ \times	$\frac{7}{16}$	$2\frac{1}{2}$ \times	$2\frac{3}{8}$ \times	$\frac{7}{8}$
$1\frac{3}{4}$ \times	$1\frac{7}{8}$ \times	$\frac{5}{8}$	$2\frac{3}{4}$ \times	$2\frac{3}{8}$ \times	$\frac{3}{4}$
$1\frac{3}{4}$ \times	$1\frac{13}{16}$ \times	$\frac{11}{16}$	$2\frac{3}{4}$ \times	$2\frac{5}{8}$ \times	$\frac{7}{8}$
$1\frac{7}{8}$ \times	$1\frac{5}{8}$ \times	$\frac{5}{8}$	3 \times	$2\frac{11}{16}$ \times	$\frac{5}{8}$
$1\frac{7}{8}$ \times	$1\frac{11}{8}$ \times	$\frac{11}{16}$	3 \times	$2\frac{3}{8}$ \times	$\frac{3}{4}$
$1\frac{7}{8}$ \times	$1\frac{1}{2}$ \times	$\frac{3}{4}$	3 \times	$2\frac{13}{16}$ \times	$\frac{11}{16}$
2 \times	$1\frac{11}{16}$ \times	$\frac{5}{8}$	3 \times	$2\frac{9}{16}$ \times	$\frac{7}{8}$
2 \times	$1\frac{13}{16}$ \times	$\frac{11}{16}$			
2 \times	$1\frac{5}{8}$ \times	$\frac{3}{4}$			

IN IRON AND STEEL.



TWO ROUND EDGED TYRE BARS.

Sizes in inches.		Sizes in inches.	
Over all.	On flat.	Over all.	On flat.
$1\frac{1}{8} \times 1 \times \frac{5}{16}$		$1\frac{3}{4} \times 1\frac{5}{8} \times \frac{3}{8}$	
$1\frac{1}{8} \times 1 \times \frac{3}{8}$		$1\frac{3}{4} \times 1\frac{1}{2} \times \frac{5}{8}$	
$1\frac{1}{4} \times 1\frac{1}{8} \times \frac{5}{16}$		$1\frac{3}{4} \times 1\frac{1}{2} \times \frac{3}{4}$	
$1\frac{1}{4} \times 1\frac{1}{8} \times \frac{3}{8}$		$1\frac{3}{4} \times 1\frac{3}{8} \times \frac{7}{8}$	
$1\frac{5}{16} \times 1\frac{1}{8} \times \frac{7}{16}$		$1\frac{7}{8} \times 1\frac{5}{8} \times \frac{5}{8}$	
$1\frac{5}{16} \times 1\frac{1}{8} \times \frac{1}{2}$		$1\frac{7}{8} \times 1\frac{5}{8} \times \frac{3}{4}$	
$1\frac{3}{8} \times 1\frac{1}{4} \times \frac{5}{16}$		$2 \times 1\frac{3}{4} \times \frac{5}{8}$	
$1\frac{3}{8} \times 1\frac{1}{4} \times \frac{3}{8}$		$2 \times 1\frac{3}{4} \times \frac{3}{4}$	
$1\frac{7}{16} \times 1\frac{1}{4} \times \frac{7}{16}$		$2\frac{1}{8} \times 1\frac{7}{8} \times \frac{3}{4}$	
$1\frac{7}{16} \times 1\frac{1}{4} \times \frac{1}{2}$		$2\frac{1}{8} \times 1\frac{7}{8} \times \frac{7}{8}$	
$1\frac{1}{2} \times 1\frac{1}{4} \times \frac{5}{8}$		$2\frac{1}{4} \times 2 \times \frac{5}{8}$	
$1\frac{1}{2} \times 1\frac{1}{4} \times \frac{3}{8}$		$2\frac{1}{4} \times 2 \times \frac{3}{4}$	
$1\frac{9}{16} \times 1\frac{3}{8} \times \frac{7}{16}$		$2\frac{3}{8} \times 2 \times \frac{7}{8}$	
$1\frac{9}{16} \times 1\frac{3}{8} \times \frac{1}{2}$		$2\frac{3}{8} \times 2\frac{1}{4} \times \frac{7}{8}$	
$1\frac{5}{8} \times 1\frac{1}{2} \times \frac{3}{8}$		$2\frac{3}{4} \times 2\frac{1}{2} \times \frac{3}{4}$	
$1\frac{5}{8} \times 1\frac{3}{8} \times \frac{5}{8}$		$2\frac{7}{8} \times 2\frac{1}{2} \times \frac{3}{4}$	
$1\frac{5}{8} \times 1\frac{3}{8} \times \frac{3}{4}$		$2\frac{7}{8} \times 2\frac{3}{8} \times \frac{7}{8}$	
$1\frac{11}{16} \times 1\frac{1}{2} \times \frac{1}{2}$			

IN IRON AND STEEL.



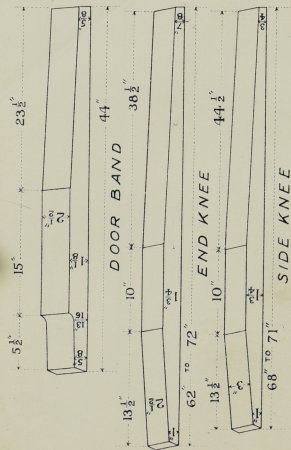
ANGLES.

Size in inches.	Thickness in inches.		Size in inches.	Thickness in inches.	
	From	To		From	To
$\frac{3}{8} \times \frac{3}{8}$	$\frac{1}{8}$	$\frac{3}{16}$	$2\frac{1}{2} \times 2$	$\frac{1}{8}$	$\frac{3}{8}$
$\frac{3}{8} \times \frac{3}{4}$	$\frac{1}{8}$	$\frac{3}{16}$	$2\frac{3}{4} \times 2$	$\frac{1}{8}$	$\frac{3}{8}$
$\frac{7}{8} \times \frac{3}{8}$	$\frac{3}{8}$	$\frac{3}{4}$	$2\frac{1}{2} \times 2\frac{1}{2}$	$\frac{1}{4}$	$\frac{1}{2}$
$1 \times \frac{3}{8}$	$\frac{3}{8}$	$\frac{1}{2}$	3×2	$\frac{3}{4}$	$\frac{3}{8}$
1×1	$\frac{3}{8}$	$\frac{3}{4}$	$2\frac{3}{4} \times 2\frac{3}{4}$	$\frac{1}{4}$	$\frac{3}{8}$
$1\frac{1}{4} \times 1\frac{1}{8}$	$\frac{1}{8}$	$\frac{1}{16}$	$2\frac{3}{4} \times 2\frac{1}{2}$	$\frac{1}{4}$	$\frac{1}{2}$
$1\frac{1}{4} \times 1$	$\frac{1}{8}$	$\frac{1}{4}$	$3 \times 2\frac{1}{2}$	$\frac{1}{4}$	$\frac{1}{2}$
$1\frac{1}{4} \times 1\frac{1}{4}$	$\frac{3}{8}$	$\frac{1}{4}$	3×3	$\frac{1}{4}$	$\frac{5}{8}$
$1\frac{1}{2} \times 1\frac{1}{4}$	$\frac{1}{8}$	$\frac{3}{8}$	$3\frac{1}{2} \times 3$	$\frac{1}{8}$	$\frac{5}{8}$
$1\frac{1}{2} \times 1\frac{1}{2}$	$\frac{1}{8}$	$\frac{3}{8}$	$4 \times 2\frac{1}{2}$	$\frac{1}{8}$	$\frac{5}{8}$
$1\frac{3}{4} \times 1\frac{1}{4}$	$\frac{3}{16}$	$\frac{3}{8}$	$3\frac{1}{2} \times 3\frac{1}{2}$	$\frac{3}{8}$	$\frac{3}{4}$
$1\frac{3}{4} \times 1\frac{1}{2}$	$\frac{1}{8}$	$\frac{3}{8}$	4×3	$\frac{1}{8}$	$\frac{5}{8}$
$2 \times 1\frac{1}{2}$	$\frac{1}{8}$	$\frac{3}{8}$	4×4	$\frac{3}{8}$	$\frac{3}{8}$
$2 \times 1\frac{3}{4}$	$\frac{3}{16}$	$\frac{3}{8}$	5×3	$\frac{3}{8}$	$\frac{5}{8}$
2×2	$\frac{1}{8}$	$\frac{3}{8}$	5×4	$\frac{3}{8}$	$\frac{5}{8}$
$2\frac{1}{4} \times 2\frac{1}{4}$	$\frac{1}{8}$	$\frac{3}{8}$	6×3	$\frac{3}{8}$	$\frac{5}{8}$
$2\frac{1}{2} \times 1\frac{1}{2}$	$\frac{3}{16}$	$\frac{3}{8}$	$6 \times 3\frac{1}{2}$	$\frac{3}{8}$	$\frac{5}{8}$
$2\frac{3}{4} \times 1\frac{1}{2}$	$\frac{3}{16}$	$\frac{3}{8}$	7×3	$\frac{3}{8}$	$\frac{5}{8}$

$3'' \times 1\frac{1}{2}''$ $\frac{3}{4}''$ only. 9.5 lbs per ft.
 The section about $\frac{1}{8}''$ radii on these corners
 march 1933.

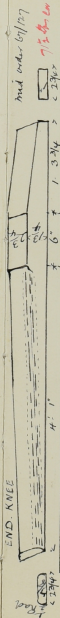
IN IRON AND STEEL.

WAGON SECTIONS.

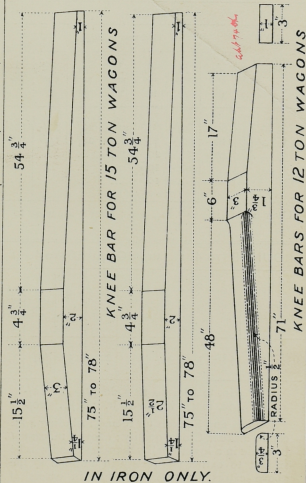


IN IRON ONLY.

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WAGON SECTIONS.



IN IRON ONLY.

LIST OF EXTRAS (PER TON).

FLATS.

Width in inches.	Thickness in inches.						
	$\frac{1}{16}$ and $\frac{3}{32}$	$\frac{1}{8}$ and $\frac{5}{32}$	$\frac{3}{16}$ and $\frac{7}{32}$	$\frac{1}{4}$ and $\frac{9}{32}$	$\frac{5}{16}$ and $\frac{11}{32}$	$\frac{3}{8}$ and $\frac{13}{32}$	$\frac{7}{16}$
$\frac{3}{8}$ to $\frac{1}{2}$ inches	160/-	80/-	60/-	40/-	20/-	20/-	10/-
$\frac{1}{2}$ " $\frac{3}{4}$ inches	110/-	40/-	30/-	20/-	20/-	15/-	10/-
$\frac{3}{4}$ " 1 " 3 inches	40/-	30/-	20/-	10/-	...	...	...
1 " 3 " 3 inches	...	20/-	10/-	...	...	...	...
Over 3 to 6	...	...	10/-	...	...	...	...

Over 6 in. wide to 7 in., 10/-; over 7 in. wide to 8 in., 20/-.

ROUNDS (TO 4½ IN.) AND SQUARES (TO 4 IN.).

$\frac{1}{8}$ in. No. 7 and No. 6.	No. 5 and $\frac{5}{8}$	No. 4.	$\frac{1}{4}$ in. and No. 3.	$\frac{3}{8}$ in.	$\frac{1}{2}$ in.	$\frac{11}{32}$ in.	$\frac{3}{8}$ in.	$\frac{3}{16}$ in.	$\frac{1}{16}$ in.
65/-	60/-	50/-	35/-	30/-	25/-	20/-	15/-	10/-	5/-

Over 3 in. to 4 in. (to 18 ft. long) ... 10/-
 ,, 4 in. to 4½ in. (to 16 ft. long)... 20/-

Rounds and Squares up to and including 4 in. can be made in Crown quality; above 4 in. cannot be made in a lower quality than Best, and will be subject to extras for quality in addition to the above extras for size. Lengths in excess of above per Special Agreement.

HALF-ROUNDS AND CONVEX.

Width in inches.	Thickness in inches.					
	$\frac{1}{8}$ and $\frac{5}{32}$	$\frac{3}{16}$ and $\frac{7}{32}$	$\frac{1}{4}$ and $\frac{9}{32}$	$\frac{5}{16}$ and $\frac{11}{32}$	$\frac{3}{8}$ and $\frac{13}{32}$	$\frac{7}{16}$ to $\frac{1}{2}$
$\frac{5}{16}$ to $\frac{3}{8}$	100/-	90/-	70/-	...	...	...
$\frac{3}{8}$ to $\frac{1}{2}$	100/-	80/-	60/-	50/-	...	...
$\frac{1}{2}$ to $\frac{5}{8}$	80/-	60/-	40/-	30/-	20/-	10/-
$\frac{5}{8}$ to 1	60/-	40/-	40/-	30/-	20/-	10/-
1 to 3	40/-	30/-	20/-	10/-	...	...

ANGLES AND TEES.

Size in united inches.	Thickness in inches.		
	$\frac{1}{8}$	$\frac{3}{16}$	$\frac{1}{4}$
$\frac{3}{8}$ and 1	80/-	70/-	...
1¼ and 1½	40/-	30/-	20/-
1¾	30/-	20/-	10/-
2 and over	20/-	10/-	...

Angles and Tees to 9 united inches without extra; over 9 united inches 10/- per ton extra for each inch or part of an inch. Sizes larger than 9 united inches cannot be made in a lower quality than Best, and will therefore be subject to the extra for quality in addition to the above.

CUTTING TO LENGTH,—6 in. and under	40/-
Over 6 in. to 12 in.	20/-
Over 12 in. to 24 in.	10/-
Over 24 in. to 25 ft.	5/-
Over 25 ft. to 30 ft.	10/-
Over 30 ft. to 35 ft.	15/-
Over 35 ft. to 40 ft.	20/-

For Bars of ordinary sizes.


Exceeding 40 ft. per Special Agreement.

NOTE.—To avoid the extra for Cut Lengths, a margin of a foot must be allowed on all ordinary lengths.

EXTRA FOR SECTION OVER ORDINARY BARS.

Angles	5/-
Tees	10/-
Half Rounds and Convex	10/-
One and two Round Edge	5/-
Special Wagon Building Sections	10/-

EXTRA FOR QUALITY OVER CROWN.

Best, and Iron branded  or Best Shoe	10/-
Best, Best	20/-
Best, Best, Best	40/-
Butterley Special Cable	60/-
Lots under 5 cwts. of a size	5/-

The basis price fixed at any time shall be for delivery in 4-ton lots and over, and of not less than 5 cwts. of a size; smaller lots than 2 tons being subject to special agreement.

IRON AND STEEL SHEETS.

Gauge.	Length to ft. in.	Width to ft. in.	Area to ft. in.	
Singles under $\frac{1}{4}$ in. to 20 w.g.	9 0	3 6	25 0	Nil.
Doubles to 24 w.g.	8 0	3 0	22 0	10/-
Lattins 25 w.g.	6 0	2 6	18 0	30/-
" 26 w.g.	6 0	2 6	18 0	30/-
Length.—For every 12 ins. or part over specified length				10/-
Width.—For every 3 ins. or part over specified width				10/-
Area.—For every 5 ft. or part over specified area				10/-
Sketches and Circles				20/-
Under 12 in. wide				10/-

TABLE OF WEIGHTS OF FLAT BAR
IRON PER LINEAL FOOT.

Width.	$\frac{1}{4}$	$\frac{5}{16}$	$\frac{3}{8}$	$\frac{1}{2}$	$\frac{5}{8}$	$\frac{3}{4}$	$\frac{7}{8}$	1
	In.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.	lbs.
1	·83	1·04	1·25	1·67	2·08	2·50	2·92	3·33
1 $\frac{1}{4}$	1·04	1·30	1·56	2·08	2·60	3·13	3·65	4·16
1 $\frac{1}{2}$	1·25	1·56	1·88	2·50	3·13	3·75	4·38	5·00
1 $\frac{3}{4}$	1·46	1·82	2·19	2·92	3·65	4·38	5·10	5·83
2	1·67	2·08	2·50	3·33	4·17	5·00	5·83	6·67
2 $\frac{1}{4}$	1·88	2·34	2·81	3·75	4·69	5·63	6·56	7·50
2 $\frac{1}{2}$	2·08	2·60	3·13	4·17	5·21	6·25	7·29	8·33
2 $\frac{3}{4}$	2·29	2·86	3·44	4·58	5·73	6·88	8·02	9·17
3	2·50	3·13	3·75	5·00	6·25	7·50	8·75	10·00
3 $\frac{1}{4}$	2·71	3·39	4·06	5·42	6·77	8·13	9·48	10·83
3 $\frac{1}{2}$	2·92	3·65	4·38	5·83	7·29	8·75	10·21	11·67
3 $\frac{3}{4}$	3·13	3·91	4·69	6·25	7·81	9·38	10·94	12·50
4	3·33	4·17	5·00	6·67	8·33	10·00	11·67	13·33
4 $\frac{1}{4}$	3·54	4·43	5·31	7·08	8·85	10·63	12·40	14·17
4 $\frac{1}{2}$	3·75	4·69	5·63	7·50	9·38	11·25	13·13	15·00
4 $\frac{3}{4}$	3·96	4·95	5·94	7·92	9·90	11·88	13·85	15·83
5	4·17	5·21	6·25	8·33	10·42	12·50	14·58	16·67
5 $\frac{1}{4}$	4·38	5·47	6·56	8·75	10·94	13·13	15·31	17·50
5 $\frac{1}{2}$	4·58	5·73	6·88	9·17	11·46	13·75	16·04	18·33
5 $\frac{3}{4}$	4·79	5·99	7·19	9·58	11·98	14·38	16·77	19·17
6	5·00	6·25	7·50	10·00	12·50	15·00	17·50	20·00
6 $\frac{1}{4}$	5·42	6·78	8·12	10·84	13·54	16·26	18·96	21·66
7	5·84	7·30	8·76	11·66	14·58	17·50	20·42	23·34
8	6·66	8·34	10·00	13·34	16·66	20·00	23·34	26·66

TABLE OF WEIGHTS
OF ROUND AND SQUARE BAR IRON
PER LINEAL FOOT.

Dia- meter or Side.	Round.		Dia- meter or Side.	Round.	
	lbs.	lbs.		lbs.	lbs.
In.	lbs.	lbs.	In.	lbs.	lbs.
$\frac{3}{16}$	·09	·12	$1\frac{1}{16}$	8·10	10·32
$\frac{1}{4}$	·17	·21	$1\frac{1}{8}$	9·30	11·84
$\frac{5}{16}$	·26	·32	2	10·58	13·47
$\frac{3}{8}$	·37	·47	$2\frac{1}{16}$	11·95	15·21
$\frac{7}{16}$	·51	·65	$2\frac{1}{8}$	13·39	17·05
$\frac{1}{2}$	·66	·84	$2\frac{1}{4}$	14·92	19·00
$\frac{9}{16}$	·84	1·07	2	16·53	21·05
$1\frac{1}{16}$	1·03	1·32	2	18·23	23·21
$1\frac{1}{8}$	1·25	1·59	2	20·21	25·47
$1\frac{3}{16}$	1·49	1·90	2	21·87	27·84
$1\frac{1}{2}$	1·75	2·22	3	23·81	30·31
$1\frac{5}{8}$	2·03	2·58	$3\frac{1}{4}$	27·94	35·58
$1\frac{3}{4}$	2·33	2·96	$3\frac{1}{2}$	32·41	41·26
1	2·65	3·37	$3\frac{3}{4}$	37·20	47·36
$1\frac{1}{4}$	3·49	4·26	4	42·32	53·89
$1\frac{1}{2}$	4·13	5·26	$4\frac{1}{2}$	53·00	67·50
$1\frac{3}{4}$	5·00	6·37	5	65·45	83·33
1	5·95	7·59	$5\frac{1}{2}$	79·20	101·68
$1\frac{1}{2}$	6·99	8·89	6	95·65	121·00

STANDARD SHEET AND HOOP IRON
GAUGE (B.G.).

ISSUED IN MARCH, 1884.

By the South Staffordshire Ironmasters'
Association, for the use of Sheet and Hoop
Iron Makers.

No. of Gauge.	Thickness in			Approximate weight per superficial foot of Sheet Iron in lbs.
	Ordinary fractions of an inch.	Decimals of an inch.	Millimetres.	
3 ^o	$\frac{1}{2}$	·5000	12·700	20·000
2 ^o		·4452	11·288	17·808
1 ^o		·3964	10·068	15·856
1	$\frac{1}{4}$	·3532	8·971	14·128
2		·3147	7·993	12·588
3		·2804	7·122	11·216
4		·2500	6·350	10·000
5		·2225	5·651	8·900
6		·1981	5·032	7·924
7		·1764	4·480	7·056
8		·1570	3·988	6·280
9		·1398	3·551	5·592
10		·1250	3·175	5·000
11	$\frac{1}{8}$	·1113	2·827	4·452
12		·0991	2·517	3·964
13		·0882	2·240	3·528
14		·0785	1·994	3·140
15	$\frac{1}{16}$	·0699	1·775	2·796
16		·0625	1·587	2·500
17		·0556	1·412	2·224
18		·0495	1·257	1·980
19		·0440	1·118	1·760

NOTE.—The weight in Steel can be found
by adding 2 per cent., or $\frac{1}{50}$ th, to the weight
in Iron.

STANDARD SHEET AND HOOP IRON
GAUGE (B.G.)—*continued.*

ISSUED IN MARCH, 1884,

By the South Staffordshire Ironmasters'
Association, for the use of Sheet and Hoop
Iron Makers.

No. of Gauge.	Thickness in		Approximate weight per superficial foot of Sheet Iron in lbs.	
	Ordinary fractions of an inch.	Decimals of an inch.		Millimetres.
20	$\frac{1}{8}$	·0392	·996	1·568
21		·0349	·886	1·396
22	$\frac{1}{16}$	·03125	·794	1·250
23		·02782	·707	1·128
24		·02476	·629	·9904
25		·02204	·560	·8816
26		·01961	·498	·7844
27		·01745	·4432	·698
28	$\frac{1}{32}$	·015625	·3969	·625
29		·01390	·3531	·556
30		·0123	·3124	·492
31		·0110	·2794	·440
32		·0098	·2489	·392
33		·0087	·2210	·348
34		·0077	·1956	·300
35		·0069	·1753	·276
36		·0061	·1549	·244
37		·0054	·1371	·216
38		·0048	·1219	·192
39		·0043	·1092	·172
40		·00386	·0980	·1544

NOTE.—The weight in Steel can be found by adding 2 per cent., or $\frac{1}{50}$ th, to the weight in Iron.

STANDARD WIRE GAUGE (W.G.).
LEGALIZED BY BOARD OF TRADE, MARCH, 1884.

No. of Gauge.	Thickness in		No. of Gauge.	Thickness in	
	Decimals of an inch.	Milli-metres.		Decimals of an inch.	Milli-metres.
7/0	·500	12·700	23	·024	·610
6/0	·464	11·785	24	·022	·559
5/0	·432	10·973	25	·020	·508
4/0	·400	10·160	26	·018	·457
3/0	·372	9·449	27	·0164	·4166
2/0	·348	8·839	28	·0148	·3759
0	·324	8·229	29	·0136	·3454
1	·300	7·620	30	·0124	·3150
2	·276	7·010	31	·0116	·2946
3	·252	6·401	32	·0108	·2743
4	·232	5·893	33	·0100	·2540
5	·212	5·385	34	·0092	·2337
6	·192	4·877	35	·0084	·2134
7	·176	4·470	36	·0076	·1930
8	·160	4·064	37	·0068	·1727
9	·144	3·658	38	·0060	·1524
10	·128	3·251	39	·0052	·1321
11	·116	2·946	40	·0048	·1219
12	·104	2·642	41	·0044	·1118
13	·092	2·337	42	·0040	·1016
14	·080	2·032	43	·0036	·0914
15	·072	1·829	44	·0032	·0813
16	·064	1·626	45	·0028	·0713
17	·056	1·422	46	·0024	·0610
18	·048	1·219	47	·0020	·0508
19	·040	1·016	48	·0016	·0406
20	·036	·914	49	·0012	·0305
21	·032	·813	50	·0010	·0254
22	·028	·711			

The above Gauge is the only one for Wire under which Contracts and business dealings can be made legally binding.

WHITWORTH'S DECIMAL GAUGE.
WITH WEIGHT OF IRON SHEETS.

No. of Whitworth's Gauge.	Thickness in		Weight of Iron Sheets per ft. in lbs.	No. of Whitworth's Gauge.	Thickness in		Weight of Iron Sheets per ft. in lbs.
	Decimals of an inch.	Milli- metres.			Decimals of an inch.	i metres.	
1	·001	·025	·04	36	·036	·914	1·44
2	·002	·051	·08	38	·038	·965	1·52
3	·003	·076	·12	40	·040	1·016	1·60
4	·004	·102	·16	45	·045	1·143	1·80
5	·005	·127	·20	50	·050	1·270	2·00
6	·006	·152	·24	55	·055	1·397	2·20
7	·007	·178	·28	60	·060	1·524	2·40
8	·008	·203	·32	65	·065	1·651	2·60
9	·009	·229	·36	70	·070	1·778	2·80
10	·010	·254	·40	75	·075	1·905	3·00
11	·011	·279	·44	80	·080	2·032	3·20
12	·012	·305	·48	85	·085	2·159	3·40
13	·013	·330	·52	90	·090	2·286	3·60
14	·014	·356	·56	95	·095	2·413	3·80
15	·015	·381	·60	100	·100	2·540	4·00
16	·016	·406	·64	110	·110	2·794	4·40
17	·017	·432	·68	120	·120	3·048	4·80
18	·018	·457	·72	125	·125	3·175	5·00
19	·019	·483	·76	150	·150	3·810	6·00
20	·020	·508	·80	200	·200	5·080	8·00
22	·022	·559	·88	250	·250	6·350	10·00
24	·024	·610	·96	300	·300	7·620	12·00
26	·026	·660	1·04	350	·350	8·890	14·00
28	·028	·711	1·12	400	·400	10·160	16·00
30	·030	·762	1·20	450	·450	11·430	18·00
32	·032	·813	1·28	500	·500	12·700	20·00
34	·034	·864	1·36				

NOTE.—The Weight in Steel can be found by adding 2 per cent., or $\frac{1}{50}$ th, to the weight in Iron.

BIRMINGHAM WIRE GAUGE (B.W.G.).

No. of Gauge.	Thickness in decimals of an inch.	No. of Gauge.	Thickness in decimals of an inch.
5/0	·500	17	·058
4/0	·454	18	·050
3/0	·425	19	·041
2/0	·380	20	·035
0	·340	21	·032
1	·300	22	·028
2	·284	23	·025
3	·260	24	·022
4	·238	25	·020
5	·220	26	·018
6	·203	27	·016
7	·180	28	·014
8	·165	29	·013
9	·148	30	·012
10	·135	31	·010
11	·120	32	·009
12	·109	33	·008
13	·095	34	·007
14	·083	35	·005
15	·072	36	·004
16	·065		

There does not appear to be any absolutely defined Standard for the B. W. G., several different values being given, but the above is the one most generally adopted.

AREAS OF CIRCLES.

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Diain.	0 in.	1 in.	2 in.	3 in.	4 in.	5 in.	6 in.	7 in.	8 in.	9 in.	10 in.	11 in.
Di. ft.	Sq. ft.	Sq. ft.	Sq. ft.	Sq. ft.	Sq. ft.	Sq. ft.	Sq. ft.	Sq. ft.	Sq. ft.	Sq. ft.	Sq. ft.	Sq. ft.
1	7854	922	1'07	1'23	1'40	1'58	1'77	1'97	2'18	2'41	2'64	2'89
2	3'14	3'41	3'69	3'98	4'28	4'59	4'91	5'24	5'59	5'94	6'30	6'66
3	7'07	7'47	7'88	8'30	8'73	9'17	9'62	10'08	10'56	11'04	11'54	12'05
4	12'57	13'10	13'64	14'19	14'75	15'32	15'90	16'50	17'10	17'72	18'35	18'99
5	19'61	20'29	20'97	21'65	22'34	23'04	23'76	24'48	25'22	25'97	26'73	27'49
6	28'27	29'06	29'87	30'68	31'50	32'34	33'18	34'04	34'91	35'78	36'67	37'57
7	38'48	39'41	40'34	41'28	42'24	43'20	44'18	45'17	46'16	47'17	48'19	49'22
8	50'27	51'32	52'38	53'46	54'54	55'64	56'75	57'86	58'99	60'13	61'28	62'44
9	63'62	64'80	66'00	67'20	68'42	69'64	70'88	72'13	73'39	74'66	75'94	77'24
10	78'54	79'85	81'18	82'52	83'86	85'22	86'59	87'97	88'36	90'76	92'17	93'60
11	95'03	96'48	97'93	99'40	100'88	102'37	103'87	105'38	106'90	108'43	109'98	111'53
12	113'10	114'67	116'26	117'86	119'47	121'09	122'72	124'36	126'01	127'68	129'35	131'04
13	132'73	134'44	136'16	137'89	139'63	141'38	143'14	144'91	146'69	148'49	150'29	152'11
14	153'94	155'78	157'63	159'49	161'36	163'24	165'13	167'03	168'95	170'87	172'81	174'76
15	176'62	178'68	180'60	182'65	184'66	186'67	188'69	190'73	192'77	194'83	196'89	198'97
16	201'06	203'16	205'27	207'39	209'53	211'67	213'83	215'99	218'17	220'35	222'55	224'76

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ENGINEERING WORKS EXECUTED

Include Boilers, Engines, and Scoop Wheels for draining the Fen Districts of Littleport and Downham, Deeping, Sutton and Mepal, Manca and Welney, Waterbeach, March first and fourth Districts, Mildenhall, &c., &c.

Pumping Engines at the Waterworks, Shrewsbury, Oxford, Chelsea, Nottingham, Hull, Amsterdam, Hamburg, &c., &c.

Colliery Winding and Pumping Engines and Boilers at Clay Cross, Netherseal, Eastwood, Moira, Portland, Langley, Silverdale, Kirkby and other Collieries.

Rolling Mills at the London and North Western Railway Works, Crewe; the Lancashire and Yorkshire Railway Works, Horwich; the works of Vickers, Sons & Co., Sheffield; &c., &c.

BRIDGES.—At Vauxhall, over the Thames. At Trent, over the River Trent. Fixed and swing bridges at Dordrecht. At Selby, over the Ouse. At Cambridge, over the Cam. At Ely, over the Ouse.

Also for the principal railways, including the London and North Western, Midland, Great Northern, Great Eastern, Great Central, Lancashire and Yorkshire, Lancashire, Derbyshire and East Coast, Hull and Barnsley, London, Brighton and South Coast, South Eastern, &c., &c.; also for the New South Wales, Queensland, New Zealand and Tasmanian Governments; the principal Indian and Colonial Railways, Smyrna and Cassaba Railway, &c., &c.

ROOFS.—St. Pancras Station, London; Leicester Gas Works; Bass & Co.'s Ale Stores; Midland Railway Locomotive Sheds; Vickers & Sons' Steel Works; Mersey Docks; &c., &c.

CRANES AND GAS WORKS PLANT.—Purifiers for Hastings, Derby, and other works; 20-ton cranes for Portsmouth Dockyard, &c., &c.

COLLIERY PLANT.—Iron headstocks, pulleys, cages, ventilating fans, and coal sorting machinery at New Hucknall, Wollaton, Kirkby, Portland, Ibstock, Blackwell, Clifton, Bidworth, Whitwick, Baddesley, Swanwick, Pentrich, and other Collieries.

BUTTERLEY WORKS.

Butterley Station, Via Ambergate, Pye Bridge, Ripley, or Langley Mill, Midland Railway.

Iron Castings of every description.

Bed Plates for Engines and Machinery, to 20 tons weight.

Bridge Cylinders and Culvert Pipes to 10 feet diameter.

Columns and Stanchions.

Road-Roller Cylinders to 10 tons.

Bending Rolls to 25 feet long, cast vertically.

Broken Cinders for Road Metal, Railway Ballast, Concrete, or Asphalte Paving, from selected Slag.

Engines, Boilers, Heavy Machinery, Coal Sorting Plants, Rolling Mills, Bridges, Roofs, Gas Works Plant, Structural Iron and Steel Work.

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