

THE POLSON IRON WORKS CO. LIMITED.

(Successors to Wm. Polson & Co., Toronto, and Thos. Worswick & Co., Guelph.)

Wm. POLSON, President and General Manager.

J. F. MACKLEM, Vice-President.

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MANUFACTURERS OF THE

Brown and Allan Automatic Engines

Marine Engines

AND BOILERS.

HOISTING ENGINES*

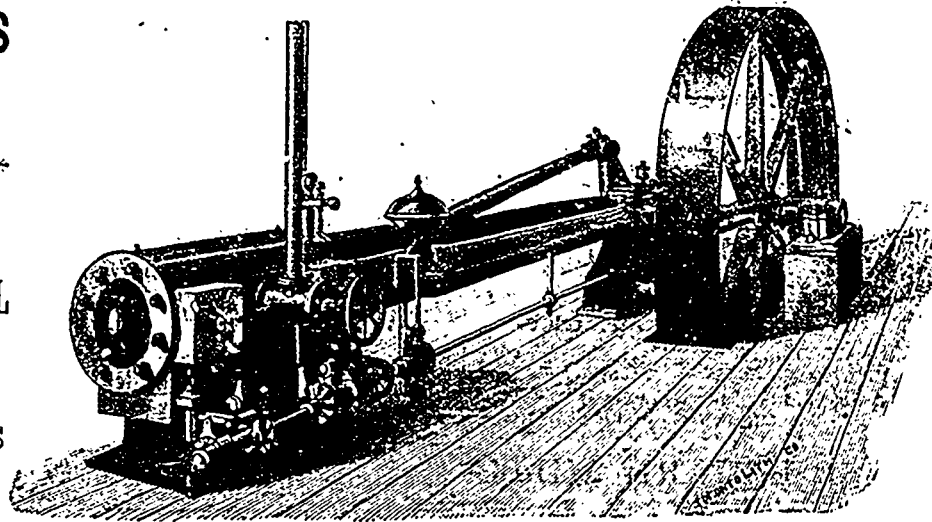
AND BOILERS.

STATIONARY & VERTICAL

ENGINES.

BOILERS

Of Every Description.



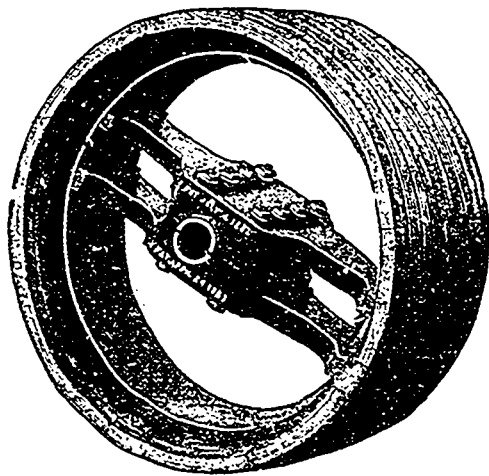
BUILDERS OF
STEAM
YACHTS
Launches
and Tugs.

GENERAL
MACHINERY
DEALERS.

OFFICE AND WORKS: ESPLANADE STREET EAST, (FOOT OF SHERBOURNE STREET),

Toronto, Ontario.

DODGE PATENT WOOD SEPARABLE OR SPLIT PULLEYS.



BEST BELT SURFACE, LIGHTEST, STRONGEST,
BEST BALANCED AND MOST CONVENIENT
PULLEY IN THE WORLD.

With our Patent Bushing System

Every pulley will fit 22 different sizes of shafting, and guaranteed to give from 30 to 60 per cent. more power from same belt and like tension than any iron or steel pulley. Every pulley a split pulley, 70 per cent. lighter than cast iron and 50 per cent. lighter than wrought iron or steel. Strong enough for any power required. Made in any size from nine inches to sixteen feet diameter.



As a material for pulleys wood is better than iron from the fact that it holds a belt much better. Most good mechanics are aware of this fact, but it may not be generally known how great is the difference, and for the benefit of our readers we give the result of two tests made and published by two of the most eminent mechanical authorities:—

Portion of Circumference embraced by Belt.	Rel. value of leather belt.		Portion of Circumference embraced by Belt.	Rel. value of leather belt	
	On Wooden Pulleys.	On Iron Pulleys.		On Wooden Pulleys.	On Iron Pulleys.
.20	1.50	1.42	.20	1.90	1.40
.30	2.43	1.69	.30	2.40	1.70
.40	3.26	2.02	.40	3.30	2.00
.50	4.38	2.41	.50	4.40	2.40
.60	5.38	2.87	.60	5.90	2.90
.70	7.90	3.43	.70	7.90	3.40

Morrison, Appleton's Encyclopedia, Haswell, Engineers and Mechanics' Pocket Book

A Dodge Patent Wood Pulley is better than iron from the

fact that it can be made very much lighter and thus save weight on the line shaft and bearings, thereby saving in expense from a saving in friction.

The advantages of the separable pulley are very apparent. By its use the necessity of taking down shafting already up for the purpose of putting on additional pulleys when needed, or to be changed, is avoided, thus saving time, trouble and expense, while their first cost is much less than any other pulley made not having these advantages.

The Compression Fastening whether used with keys in iron center or compression along, keeps the pulley always in balance as the compression on the shaft and key is always towards the center.

The most perfect balanced iron pulley fastened with set screws or key, is invariably out of balance by being thrown from the center, this fact is obvious to all mechanics.

The advantages of our mode of fastening over any other are: It is the only absolutely true fastening for a pulley. A pulley once properly balanced cannot be thrown out of balance in securing with this fastening. A pulley fastened with key or

set screw in the ordinary way, cannot be screwed without tilting the pulley from the shaft at that point where the key or set screw is placed, thus throwing the pulley out of balance.

Manufacturers should carefully avoid any pulley with a set screw fastening for shaft, also a key unless the pulley is compressed on it. The Dodge Patent Bushing system is a great convenience to manufacturers and also to agents who carry pulleys in stock, as with the aid of the patent bushings every pulley will fit 22 different sizes of shafts.

Haswell, the acknowledged authority and most quoted by American mechanics, summarizes thus: The ratio of friction to pressure of leather belts, when worn over wooden pulleys is 47, over turned cast iron pulleys, 24, thus showing the average advantage of a wood pulley over iron to be 50 per cent.

We also manufacture GROOVED HARD WOOD PULLEYS FOR TRANSMITTING POWER BY MANILLA ROPES (tallow laid) by the Dodge Patent System of applying the ropes and taking care of the slack.

Illustrated catalogues of belt pulleys and the rope transmission system will be furnished on application to

The Dodge Wood Split Pulley Co., 80 Adelaide St. W., Toronto.