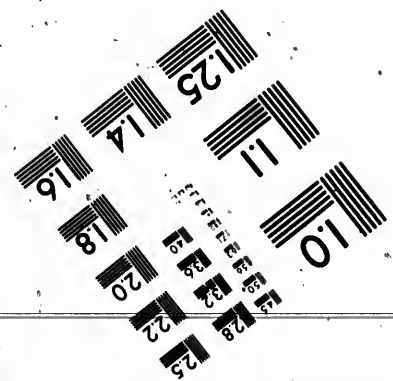
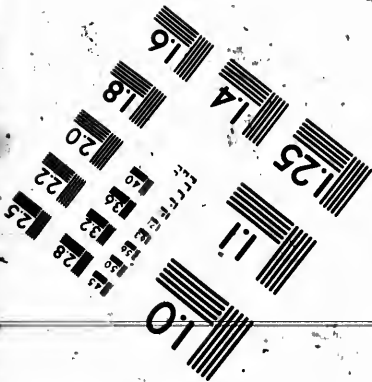
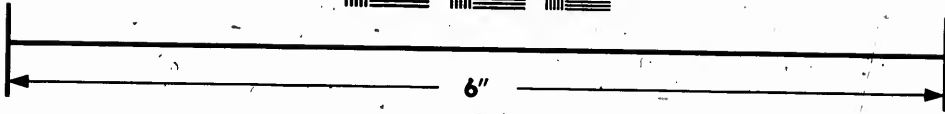
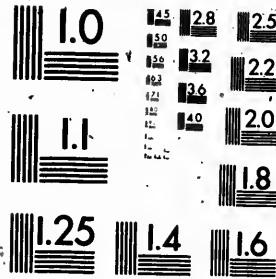


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Goldie : & : McGulloch



MANUFACTURERS OF

Steam Engines

Boilers, Mill Gearing, and Furnishings of every Description

ALSO THE WELL-KNOWN

Wheelock :: Automatic :: Engines

(HIGH PRESSURE, COMPOUND AND COMPOUND CONDENSING)



BINGHAM & WEBBER
Toronto

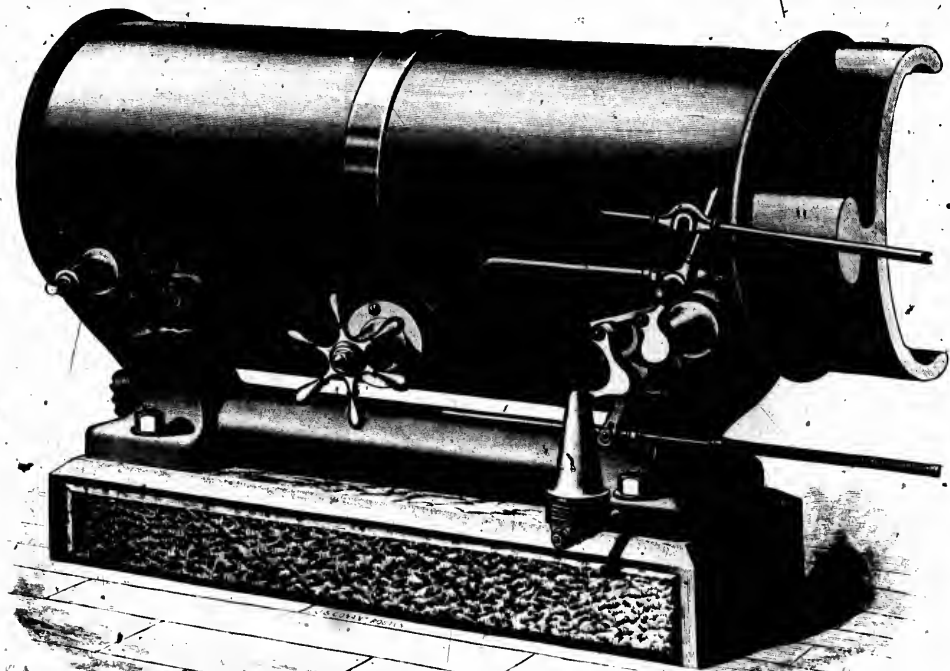
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GALT, ONTARIO

THE NEW PATENT SYSTEM

OF

Wheelock Automatic Cut-Off Engine



The general arrangement of the Engine follows the American type, the main bed being of trunk girder pattern, and so arranged that the chief bulk of metal lies in the direct line of strain between the cylinder and crank shaft bearings. The Wheelock Engine was awarded the Great Gold Medal at New York, 1875; the Centennial Medal at Philadelphia, 1876; the Gold Medal at Cincinnati, 1881; Gold Medal at Boston, 1881; and the Grand Prize at Paris, 1878; and at the Millers' International Exposition at Cincinnati, 1880, the Great Gold Medal for the best automatic engine under actual test. The Cincinnati test cost \$15,000, and the award given in competition with the Corliss and other automatic engines was, that "The Wheelock Engine gave the best regulation; the highest economy of fuel; the least clearance, and the least trouble to the operator,"—the highest award ever given to a steam engine. The chief features of the cut-off gear are its great simplicity; the fewness of its moving parts; the small amount of power absorbed in working it, and therefore the absolute control which the governor has over the slightest variation in the load on the engine, and the economy of steam thereby obtained. As distinguished from most of the automatic cut-off engines in the market, the Wheelock Engine has only one eccentric from which both the main steam and cut-off valves are actuated. The wristplate action which exists in the Corliss Engine, being obtained by a very simple and ingenious arrangement (one of the chief features in the construction of this cut-off gear, and the great dissimilarity to ordinary practice), is the suspension of the valve spindles on hardened steel bushes: as a consequence of being thus carried, the valves work with very little power from the absence of friction, and by an ingenious arrangement of the spindles and bushes, a perfectly steam-tight joint is formed, which dispenses with the ordinary stuffing gland and packing, and wear is practically nil.

The Valves are flat slide, with multiplicity of opening and extraordinary area, with minimum of movement. (See Fig. 1.) By the use of a knuckle-joint movement very slight lap is needed, and almost instantaneous opening and closing are secured with great ease of action under the most extraordinary pressure. The separate shells, or seats, show this knuckle joint movement. (See Figs. 2 and 3.)

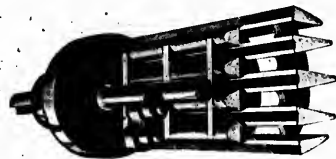


FIG. 1.

This system can be applied to the Corliss type of any body's make, and we guarantee positive advantage by its use.



FIG. 2.

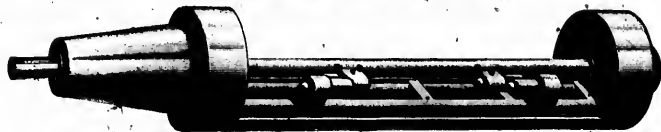


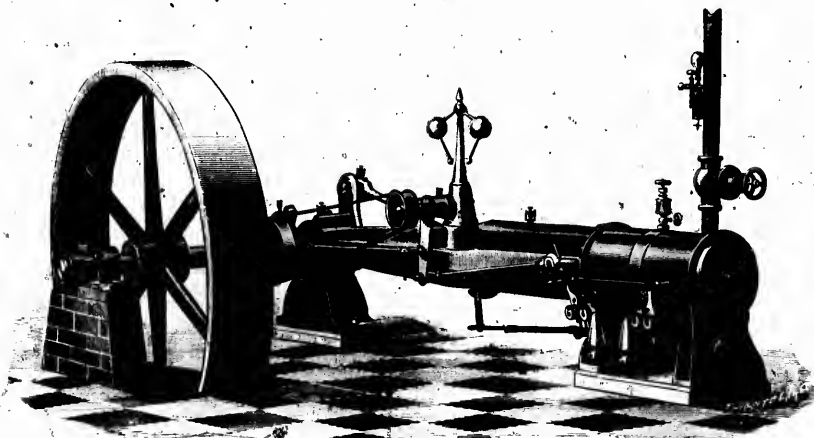
FIG. 3.

These Valves are fitted to separate seats that are driven into the holes in the Cylinder a little tapering, and no Bonnets are used. All the work on them is completed on the work-bench, and when in use they bring *no wear on the Cylinder.*

The system is especially adapted to high speed. The valves are perfectly tight, with no necessity for balancing. By the peculiar arrangement of the valve-movement, the Cut-off is very effective and positive in its action, as the Cut-off Valve has but slight movement after closing, while the knuckle-joint allows of continued movement of the mechanism without moving the valve.

We have replaced a great many Engines of the Brown and Corliss type, and have built more Wheelock Engines than the combined output of all Brown and Corliss Engine builders in the Dominion.

The Wheelock Engine



Having made arrangements with the Patentee for the manufacture of the above celebrated **VARIABLE CUT-OFF ENGINE**, and also put into our Shops a number of special tools for the purpose, we are now prepared to supply these Engines, got up in the best style.

GOLDIE & McCULLOCH,

Canadian Manufacturers of the Wheelock Engine.

GALT, ONTARIO.

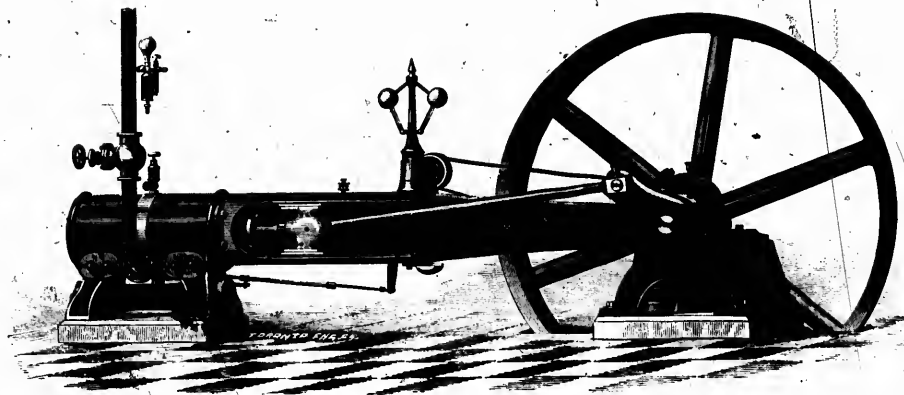
Our Standard Patterns are for the following sizes, viz.:

8 inch DIAMETER OF CYLINDER, 24 inch STROKE.

9	"	"	"	24	"	"
10	"	"	"	28	"	"
11	"	"	"	28	"	"
12	"	"	"	30	"	"
13	"	"	"	30	"	"
14	"	"	"	34	"	"

15 inch DIAMETER OF CYLINDER, 34 inch STROKE.

16	"	"	"	38	"	"
17	"	"	"	38	"	"
18	"	"	"	42	"	"
20	"	"	"	46	"	"
22	"	"	"	50	"	"
24	"	"	"	54	"	"



Larger sizes than those included in the above will be made by special arrangement.

List of Canadian Users of the Wheelock Engine

manufactured by Goldie & McCulloch

Craven Cotton Co (2 engines).....	Brantford, Ont.	York Farmers Colonization Co. Youngstown Man	J. & R. Kidd.....	Tilbury Ont.
Wm. Forbes	Toronto "	John Moody & Son	J. Y. Shantz & Sons.....	Berlin "
Clemens & Wells.....	Winterbourne "	John Capell.....	J. Y. Shantz.....	Berlin "
Ryan & McBride	Theford "	John R. Barber.....	A. & P. McNaughton.....	Alexandria "
Geo. S. Baldwin	Aurora "	Frank S. Wilson.....	Burr Bros.....	Guelph "
Simcoe Woollen Co.....	Simcoe "	Wood Bros.....	Geo. Vick.....	O'Neillia "
Hamilton Clock Co.....	Hamilton "	Geo. Howe.....	James Hay & Co.....	Woodstock "
Bowes, Jameson & Co.....	Hamilton "	Cobban Manufacturing Co.....	Barr & Wright.....	Renfrew "
A. Campbell & Co.....	St. Thomas "	Powell & Jones Co.....	John Fletcher.....	Toronto "
Saml. Jukes.....	Bradford "	M. Creighton.....	Crompton Corset Co.....	Berlin "
Barchard & Co.....	Toronto "	Thos. Buck.....	C. A. Ahrens.....	Berlin "
W. H. Banfield	Toronto "	Hamilton Spice & Coffee Co.....	J. E. Davidson.....	Toronto "
Cheney, Dunning & Co.....	Vankleek Hill "	Jas. S. Pews.....	J. Kaufman.....	Berlin "
Thos. Wilson	Harriston "	T. H. Wyman.....	R. Forbes & Co.....	Hespeler "
McGregor, Gourlay & Co.....	Galt "	J. Stevenson.....	S. F. Taylor & Son	Walkerton "
O. D. Cowan	Gananoque "	D. W. Hibner Co.....	J. Lee & Son.....	Walkerton "
Ayr American Plow Co.....	Ayr "	J. & L. Peffer.....	D. W. Karn & Co.....	Woodstock "
Watson Manufacturing Co.....	Ayr "	Cheney, Dunning & Co.....	Columbia Milling Co.....	Enderby, B.C.
Wm. Paterson	Brantford "	John Hern.....	Geo Carter, Son & Co.....	St. Marys, Ont.
W. & F. A. Scott	Galt "	W. Henderson.....	J. M. Lott.....	Edgar "
Canadian Pacific R.R.Co. (3 engines) Montreal, Q		John Irwin.....	T. Tushingham & Son.....	Toronto "
A. Griffith.....	Thorndale, Ont.	A. K. McKay.....	John Galbraith.....	Allandale "
G. P. Tolton	Guelph "	Duffin & Myers	Jas. Black.....	Toronto "
McBride & Smith.....	Scaforth "	D. H. Doorman.....	Evans Bros. & Littler.....	Ingersoll "
Waterford Manufacturing Co.....	Waterford "	John Carlyle.....	Halifax Gas Light Co. (2 engines).....	Halifax, N. S.
D. W. Thompson & Co.....	Toronto "	John Manwaring.....	H. Hollingshead.....	Dutton, Ont.
A. Moyer & Co.....	Listowel "	John Ratz.....	Doutigny & Hughton	Arnprior "
Geo. Smith & Co.....	Lambton Mills "	James Gordon.....	Sauer & Baird Bros.....	Plattsville "
McCulloch & Harriott.....	Souris, Man.	Simpson & Co.....	'Anthis Mfg. Co.....	Berlin "
Linton, Lake & Co.....	Galt, Ont.	Canadian Pacific R. R. Co.....	J. P. Wagner.....	Toronto "
Hudson Bay Co.....	Winnipeg, Man.	Grant & Co.....	Berlin Gas Co.....	Berlin "

Wagne
Corpor
John W
Joseph
Jacob
Freder
Yarm
Guelph
Oshaw
John C
J. G. K
J. E. I
D. Scr
Cobou
O. Nev
Woods
Eidt &
R. Lar
Camp
J. D. S
G. Gold
J. E. H
Beard
W. Tre
Knight
Hess
A. W.
Robt.
Smith
R. Dir
J. H. I
Waver
Peter
Jacob
Jas. W
Alex.
D. Kn

List of Users of the Wheelock Engine, continued.

Wagner, Zeidler & Co.	Toronto Junction Ont.	C. Rogers & Sons	Toronto, Ont.	W. Stahlschmidt & Co.	Preston, Ont.
Corporation of Orillia	Orillia	Bowman & Wiegand	Arthur	Gooderham & Worts	Toronto
John Wood & Sons	Toronto	Hay Bros.	Listowel	J. Cawthrop	Thamesford
Joseph Simpson	Toronto	Belleville Gas Light Co.	Belleville	H. McCormack	Ottawa
Jacob Zingsheim	Hanilton	Brockville Gas Light Co.	Brockville	Barnum Iron & Wire Co.	Windsor
Fredericton Gas Co.	Fredericton, N.B.	E. G. Thomas & Co.	Woodstock	C. J. Smith	Moosomin, Man.
Yarmouth Electric Light Co.	Yarmouth, N.S.	Charlottetown Woolen Mill Co.	Charlottetown, P.E.I.	Hamilton Electric Light Co.	Hamilton, Ont.
Guelpf Gas Co.	Guelpf, Ont.	Alex. Hodson	South Finch, Ont.	D. Maxwell	St. Mary's
Oshawa Electric Light Co.	Oshawa	L. Breithaupt & Co.	Berlin	F. T. Huber & Co.	Berlin
John Gourlay	Galt	A. Newland & Co.	Galt	F. Greybill & Co.	Waterloo
J. G. Reiner	Wellesley	Westman & Baker	Toronto	W. A. Gefolamy	Tara
J. E. Davidson	Toronto	John Hodson	Dunbar	A. Harris, Son & Co.	Brantford
D. Scrimgeour	Stratford	T. & J. Martin	Ottawa	Galt Knitting Co.	Galt
Cobourg Electric Light Co.	Cobourg	J. A. Armstrong	Guelph	Brantford Cordage Co.	Brantford
O. Newcombe & Co.	Toronto	Brantford Cordage Co.	Brantford	W. B. McAllister	Pembroke
Woodstock Electric Light Co.	Woodstock	C. Kreitzerger	Heidelberg	Hess Bros.	Toronto
Eidt & Schmidt	Mildmay	Coulter & Jewett	Toronto	Courtlaid Carriage Co.	Brantford
R. Lang & Son	Berlin	Geo. McCulloch & Co.	Rapid City, Man.	A. Jobson & Son	Cannington
Campbell & Co.	Blenheim	Dickenson & Sness	Hamilton, Ont.	Berlin Felt Boot Works	Berlin
J. D. Saunby	London	Ball Electric Light Co.	London	Stratford Gas Co., for the Stratford Electric Light Co.	Stratford
Goldie & McCulloch	Galt	Shultz Bros.	Brantford	John Bertram & Sons	Dundas
J. E. Humphrey	Moncton, N.B.	Saml. Mathews	Hamilton	Wm. Mason & Sons	Ottawa
Beardmore & Co.	Acton, Ont.	Jas. Wallace	Belleville	D. Hibner & Co.	Berlin
W. Treleaven	Lucknow	Toronto News Co.	Toronto	Macgregor, Gourlay & Co.	Galt
Knight & Wilson	Alliston	Workman & Watt	Brantford	A. W. Brodie, (compound cond'ng)	Hespeler
Hess Bros.	Listowel	W. Bell & Co.	Guelpf	Thos. Foster	Tara
A. W. Pringle	Belleville	Dudley & Scott	Toronto	Gilchrist, Green & Co.	Wingham
Robt. Light	Napance	A. Falk & Co.	Mount Forest	Thomas Bell	Wingham
Smith & Co.	Toronto	W. Leak & Co.	Toronto	The Patterson & Bro. Co.	Woodstock
R. Dinnis	Toronto	Peter Hay	Galt	McDougall & Co.	Galt
J. H. Broadfoot	Seaforth	Toronto Press Brick & Terra Cotta Co.	Milton	Corporation of Town of Goderich, for their Electric Light Station	Goderich
Waverley Knitting Co.	Preston	Boyd, Caldwell & Co.	Lanark	Methodist Publishing House	Toronto
Peter Knechtel	Hanover	Geo. Rathbone	Toronto	Ontario Industrial Loan and Investment Co.	Toronto
Jacob Raymer	Stouffville	Jos. E. Seagram, (2 engines)	Waterloo	Paris Winney Mill Co.	Paris
Jas. Watson	Toronto	A. Goodfellow	Tara		
Alex. Jardine & Co.	Toronto	D. McDonald	Orangeville		
P. Knechtel	Hanover	Houston & Harding	Montreal, Que.		

List of Users of the Wheelock Engine, continued.

George Cassidy	False Creek, B.C.	M. F. Beach	West Winchester, Ont.	M. Beatty & Sons	Welland, Ont.
Sandy McVean	Dresden, Ont.	Spink Bros'	Toronto "	Ireland National Food Co. (comp.) ..	Toronto "
W. H. Verity & Son	Exeter "	Mount Forest Electric Light Co' ..	Mt. Forest "	Thomas Eyre	North Augusta "
Malcolm & Smith	Brussels "	A. Davis & Son	King "	Kay Electric Light Co.	Hamilton "
M. J. Smith & Co., (second engine) ..	Toronto "	George Bros.	Stouffville "	Chas. Boeckh & Sons'	Toronto "
Wm. Partlo, (comp. condensing)	Ingersoll "	A. Newell & Co'	Toronto "	D. S. Clemens	Fisher's Mills "
John Cameron & Sons	Toronto "	Greening Wire Manufacturing Co. ...	Hamilton "	A. Harris, Son & Co., (being the second	
Sykes & Ainley	Glen Williams "	McKechnie Machine Co.	Hamilton "	Wheelock inside a year)	Brantford "

The following Electric Light Companies are using the Wheelock Engine :

Yarmouth Electric Light Co.	Yarmouth, N.S.	Ball Electric Light Co.	London, Ont.
Fredericton Electric Light Co.	Fredericton, N.B.	Woodstock Electric Light Co.	Woodstock "
Halifax Gas Light Co.	Halifax, N.S.	Cobourg Electric Light Co.	Cobourg "
Oshawa Electric Light Co.	Oshawa, Ont.	Orangeville Electric Light Co.	Orangeville "
Guelph Gas Co.	Guelph "	Mt. Forest Electric Light Co.	Mt. Forest "
Berlin Gas Co.	Berlin "	Hamilton Electric Light Co. (2 engines) ..	Hamilton "
Galt Electric Light Co.	Galt "	Corporation of Town of Goderich	Goderich "
Orillia Electric Light Co.	Orillia "	Stratford Gas Co.	Stratford "
Belleville Gas Co.	Belleville "	Reliance Electric Light Co.	Waterford "
Brockville Gas Co.	Brockville "	Ball Electric Light Co.	Amprior "
T. Eaton & Co's Electric Light Station ..	Toronto "	Corporation of Town of Mitchell	Mitchell "
Renfrew Electric Light Co.	Renfrew "		

We are now building an Engine for the Kay Electric Light Co., for their Works in Hamilton, Ont., also for Fort Wayne Jenny Electric Light Co., for Brookville, Ont.

We are building High Pressure, Compound, and Compound Condensing Engines of the Wheelock type.

We are now building Wheelock Engines for the following firms :

J. W. MANN MFG. CO.	Brockville, Ont.
THOS. WHITE	Hawkesbury, "
T. EATON & CO., (2 engines)	Toronto, "
TORONTO PAPER CO.	Cornwall, "
GLOBE FURNITURE CO.	Walkerville, "
BALL ELECTRIC LIGHT CO.	Arnprior, "
A. H. WHELÉR	Meadowvale, "
HAMILTON ELECTRIC LIGHT CO., (second engine)	Hamilton, "
CORPORATION OF TOWN OF MITCHELL	Mitchell, "
ONTARIO GOVERNMENT, for Central Prison	Toronto, "
FORT WAYNE JENNY ELECTRIC LIGHT CO.	Brockville, "
IRELAND NATIONAL FOOD CO.	Toronto, "

AT THE RECENT INVENTORS' EXHIBITION IN LONDON, ENGLAND, A GOLD MEDAL WAS AWARDED THE WHEELOCK ENGINE.

The following, from the Worcester, Mass., "Evening Gazette," gives the reader an idea of the success of the Wheelock Engine abroad :

"MR. JEROME WHEELOCK has just returned from a business trip to England, and reports a most favorable errand. He is now engaged in getting out several drawings of his improved cut-off engine, to send abroad. The machinery in the London, Eng. Exhibition building is driven by a Wheelock 300 horse power engine, which is admired by the crowned heads and expert mechanics of all Europe. Another of his engines is in use in the British arsenals in Woolwich, having 1,000 horse power. The French Government has ordered engines sufficient to cover 4,500 horse power to be distributed throughout its various arsenals, and also engines having several thousand horse power for the Water-works of Paris. Another is about to be put in a 100,000 spindle mill at Manchester, Eng., having a 56 in. cylinder and 8 ft. stroke; another at Oldham, and still another is being put up in India by British authority. In this country one of the largest shipments was recently made to the Chicago City Railroad Company for drawing street cable cars consisting of two engines, 36 x 72, making the eleventh consecutive engine sent to this company."

In our own Dominion the success of the Wheelock Engine is unparalleled; upwards of two hundred and sixty are now in use, and the firm busy on ordered work.

GOLDIE & McCULLOCH

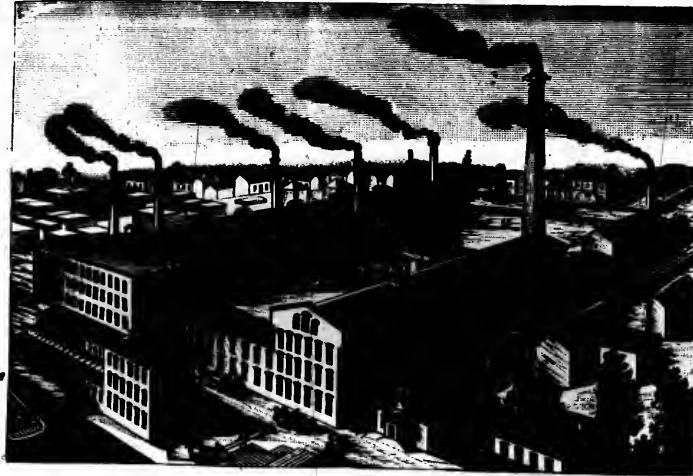
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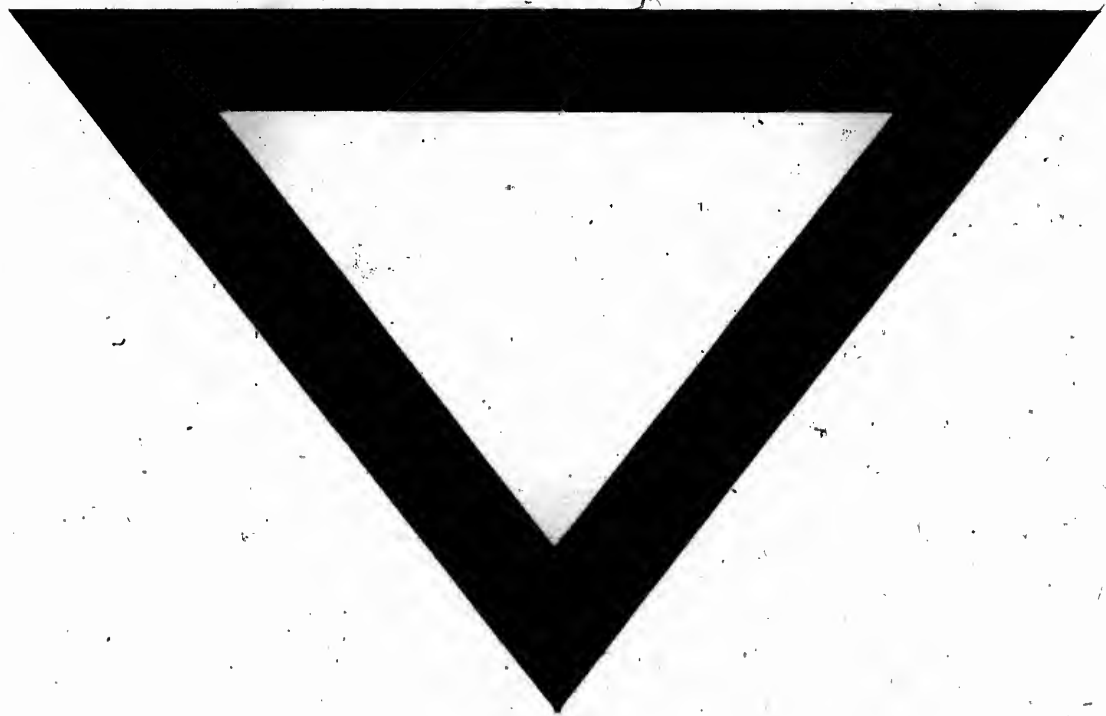
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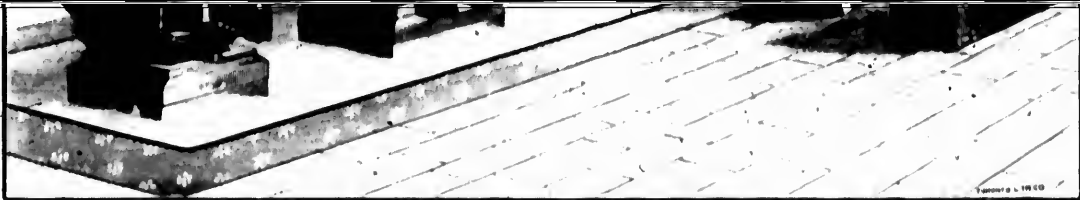
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We have several of these Engines running



Giving the highest degree of satisfaction.