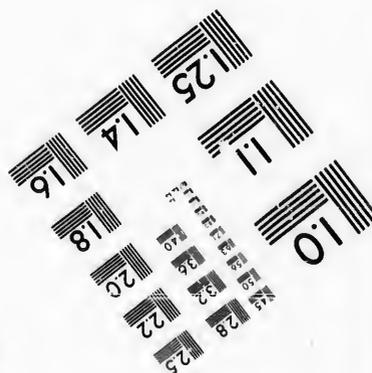
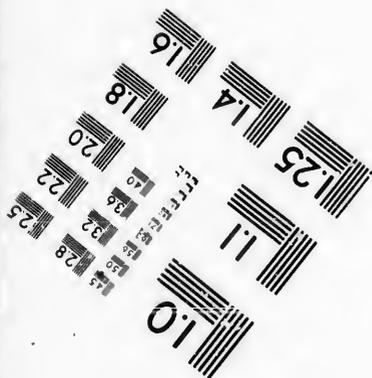
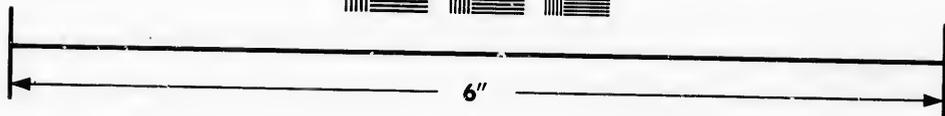
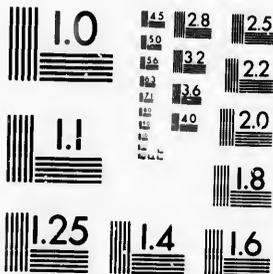


**IMAGE EVALUATION  
TEST TARGET (MT-3)**



**Photographic  
Sciences  
Corporation**

23 WEST MAIN STREET  
WEBSTER, N.Y. 14580  
(716) 872-4503

**CIHM/ICMH  
Microfiche  
Series.**

**CIHM/ICMH  
Collection de  
microfiches.**



Canadian Institute for Historical Microreproductions / Institut canadien de microreproductions historiques

**© 1986**

Technical and Bibliographic Notes/Notes techniques et bibliographiques

The Institute has attempted to obtain the best original copy available for filming. Features of this copy which may be bibliographically unique, which may alter any of the images in the reproduction, or which may significantly change the usual method of filming, are checked below.

L'Institut a microfilmé le meilleur exemplaire qu'il lui a été possible de se procurer. Les détails de cet exemplaire qui sont peut-être uniques du point de vue bibliographique, qui peuvent modifier une image reproduite, ou qui peuvent exiger une modification dans la méthode normale de filmage sont indiqués ci-dessous.

- |   |   |
|---|---|
| <input type="checkbox"/> Coloured covers/<br>Couverture de couleur  | <input type="checkbox"/> Coloured pages/<br>Pages de couleur  |
| <input type="checkbox"/> Covers damaged/<br>Couverture endommagée   | <input type="checkbox"/> Pages damaged/<br>Pages endommagées  |
| <input type="checkbox"/> Covers restored and/or laminated/<br>Couverture restaurée et/ou pelliculée   | <input type="checkbox"/> Pages restored and/or laminated/<br>Pages restaurées et/ou pelliculées   |
| <input type="checkbox"/> Cover title missing/<br>Le titre de couverture manque  | <input checked="" type="checkbox"/> Pages discoloured, stained or foxed/<br>Pages décolorées, tachetées ou piquées  |
| <input type="checkbox"/> Coloured maps/<br>Cartes géographiques en couleur  | <input type="checkbox"/> Pages detached/<br>Pages détachées   |
| <input type="checkbox"/> Coloured ink (i.e. other than blue or black)/<br>Encre de couleur (i.e. autre que bleue ou noire)  | <input checked="" type="checkbox"/> Showthrough/<br>Transparence  |
| <input type="checkbox"/> Coloured plates and/or illustrations/<br>Planches et/ou illustrations en couleur   | <input type="checkbox"/> Quality of print varies/<br>Qualité inégale de l'impression  |
| <input type="checkbox"/> Bound with other material/<br>Relié avec d'autres documents  | <input type="checkbox"/> Includes supplementary material/<br>Comprend du matériel supplémentaire  |
| <input type="checkbox"/> Tight binding may cause shadows or distortion along interior margin/<br>La reliure serrée peut causer de l'ombre ou de la distorsion le long de la marge intérieure  | <input type="checkbox"/> Only edition available/<br>Seule édition disponible  |
| <input type="checkbox"/> Blank leaves added during restoration may appear within the text. Whenever possible, these have been omitted from filming/<br>Il se peut que certaines pages blanches ajoutées lors d'une restauration apparaissent dans le texte, mais, lorsque cela était possible, ces pages n'ont pas été filmées. | <input type="checkbox"/> Pages wholly or partially obscured by errata slips, tissues, etc., have been refilmed to ensure the best possible image/<br>Les pages totalement ou partiellement obscurcies par un feuillet d'errata, une pelure, etc., ont été filmées à nouveau de façon à obtenir la meilleure image possible. |
| <input type="checkbox"/> Additional comments:<br>Commentaires supplémentaires:  |   |

This item is filmed at the reduction ratio checked below/  
Ce document est filmé au taux de réduction indiqué ci-dessous.

10X	12X	14X	16X	18X	20X	22X	24X	26X	28X	30X	32X
						<input checked="" type="checkbox"/>					

The copy filmed here has been reproduced thanks to the generosity of:

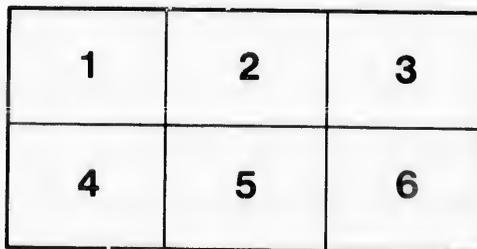
Library of the Public  
Archives of Canada

The images appearing here are the best quality possible considering the condition and legibility of the original copy and in keeping with the filming contract specifications.

Original copies in printed paper covers are filmed beginning with the front cover and ending on the last page with a printed or illustrated impression, or the back cover when appropriate. All other original copies are filmed beginning on the first page with a printed or illustrated impression, and ending on the last page with a printed or illustrated impression.

The last recorded frame on each microfiche shall contain the symbol  $\rightarrow$  (meaning "CONTINUED"), or the symbol  $\nabla$  (meaning "END"), whichever applies.

Maps, plates, charts, etc., may be filmed at different reduction ratios. Those too large to be entirely included in one exposure are filmed beginning in the upper left hand corner, left to right and top to bottom, as many frames as required. The following diagrams illustrate the method:



L'exemplaire filmé fut reproduit grâce à la générosité de:

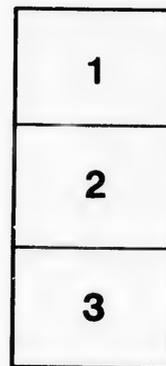
La bibliothèque des Archives  
publiques du Canada

Les images suivantes ont été reproduites avec le plus grand soin, compte tenu de la condition et de la netteté de l'exemplaire filmé, et en conformité avec les conditions du contrat de filmage.

Les exemplaires originaux dont la couverture en papier est imprimée sont filmés en commençant par le premier plat et en terminant soit par la dernière page qui comporte une empreinte d'impression ou d'illustration, soit par le second plat, selon le cas. Tous les autres exemplaires originaux sont filmés en commençant par la première page qui comporte une empreinte d'impression ou d'illustration et en terminant par la dernière page qui comporte une telle empreinte.

Un des symboles suivants apparaîtra sur la dernière image de chaque microfiche, selon le cas: le symbole  $\rightarrow$  signifie "A SUIVRE", le symbole  $\nabla$  signifie "FIN".

Les cartes, planches, tableaux, etc., peuvent être filmés à des taux de réduction différents. Lorsque le document est trop grand pour être reproduit en un seul cliché, il est filmé à partir de l'angle supérieur gauche, de gauche à droite, et de haut en bas, en prenant le nombre d'images nécessaire. Les diagrammes suivants illustrent la méthode.



1895

BELT DRIVEN  
AIR COMPRESSORS

MANUFACTURED BY THE

RAND DRILL COMPANY,

23 PARK PLACE,

New York, U. S. A.



BRANCH OFFICES :

Chicago, 1328 Monadnock Block.	Montreal, 16 Victoria Square.
Boston, 147 Pearl Street.	Halifax, N. S., Halifax Hotel.
San Francisco, 141 First Street.	Rat Portage, Ont.
Denver, 427 17th Street.	Mexico City, Apartado 830.
Helena, Mont.	Valparaiso, Chili.
Butte, Mont., 221 S. Washington St.	Melbourne, Australia.
Ishpeming, Mich.	Sydney, Australia.
Birmingham, Ala.	Johannesberg, South Africa.
Sherbrooke, Que.	

CABLE ADDRESS, - - - - - **AGEBISHOP.**

A B C CODE 4TH EDITION, AND RAND DRILL CO'S CODE.

### **Duplex Belt Driven Compressor.**

The illustration upon the opposite page shows one of our favorite designs for belt driven compressors. The machine will be seen to comprise two of our regular pattern of Corliss frames with an air cylinder attached to each, the whole being driven by a belt pulley mounted upon the crank shaft between the two pillow blocks. To provide for a varying delivery of air where the requirements are liable to fluctuate, we fit these machines with an automatic regulator for throwing out of action one or both cylinders, as the case may be, through connection with their air valves.

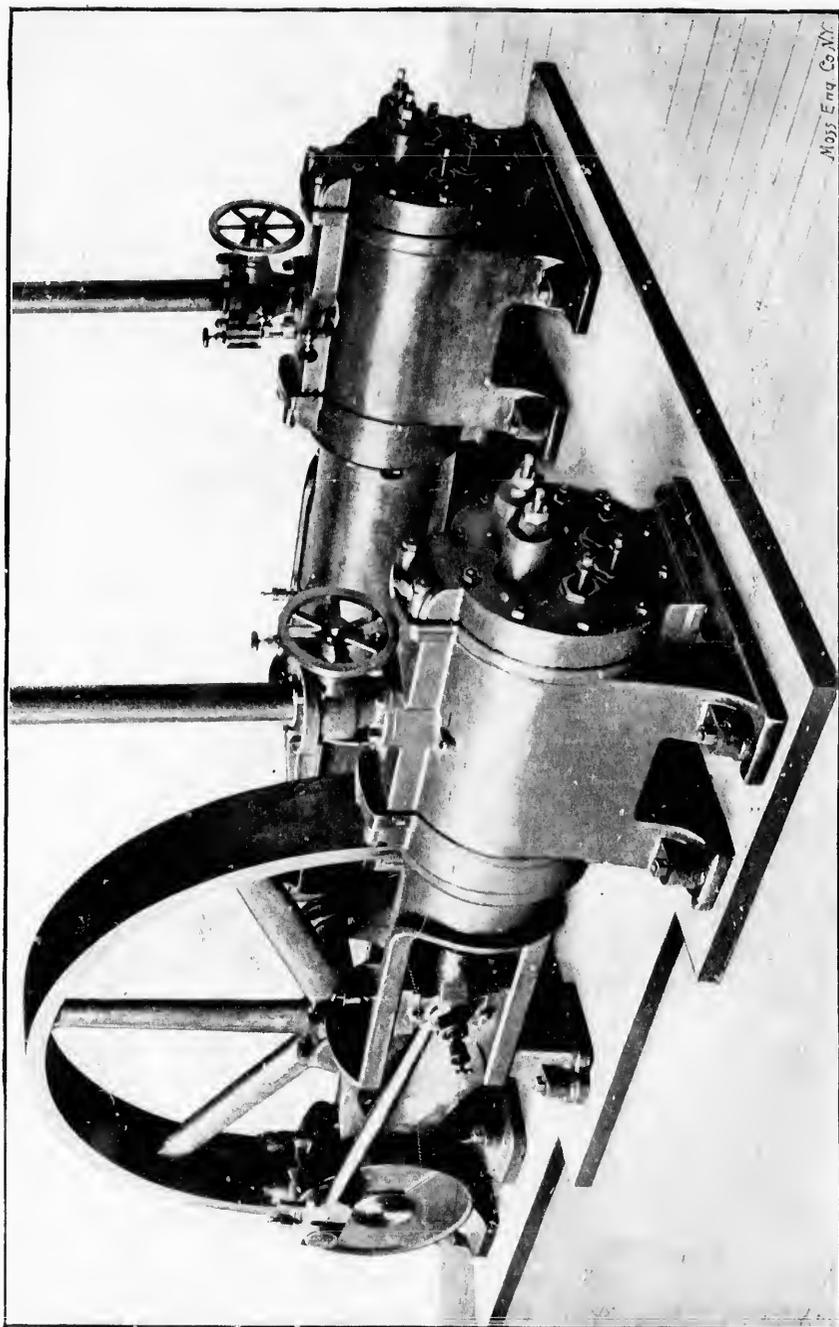


PLATE 88.—DOUBLE BELT DRIVEN COMPRESSOR.

Moss Eng Co NY

### **Straight Line Belt Driven Compressor.**

The following illustration shows our straight line pattern of belt driven compressor, and is self explanatory. This machine is somewhat cheaper in cost than the Duplex, and for many purposes answers the purpose just as well. Like the Duplex machine, they are fitted, when needed, with automatic regulators acting upon the air valves.

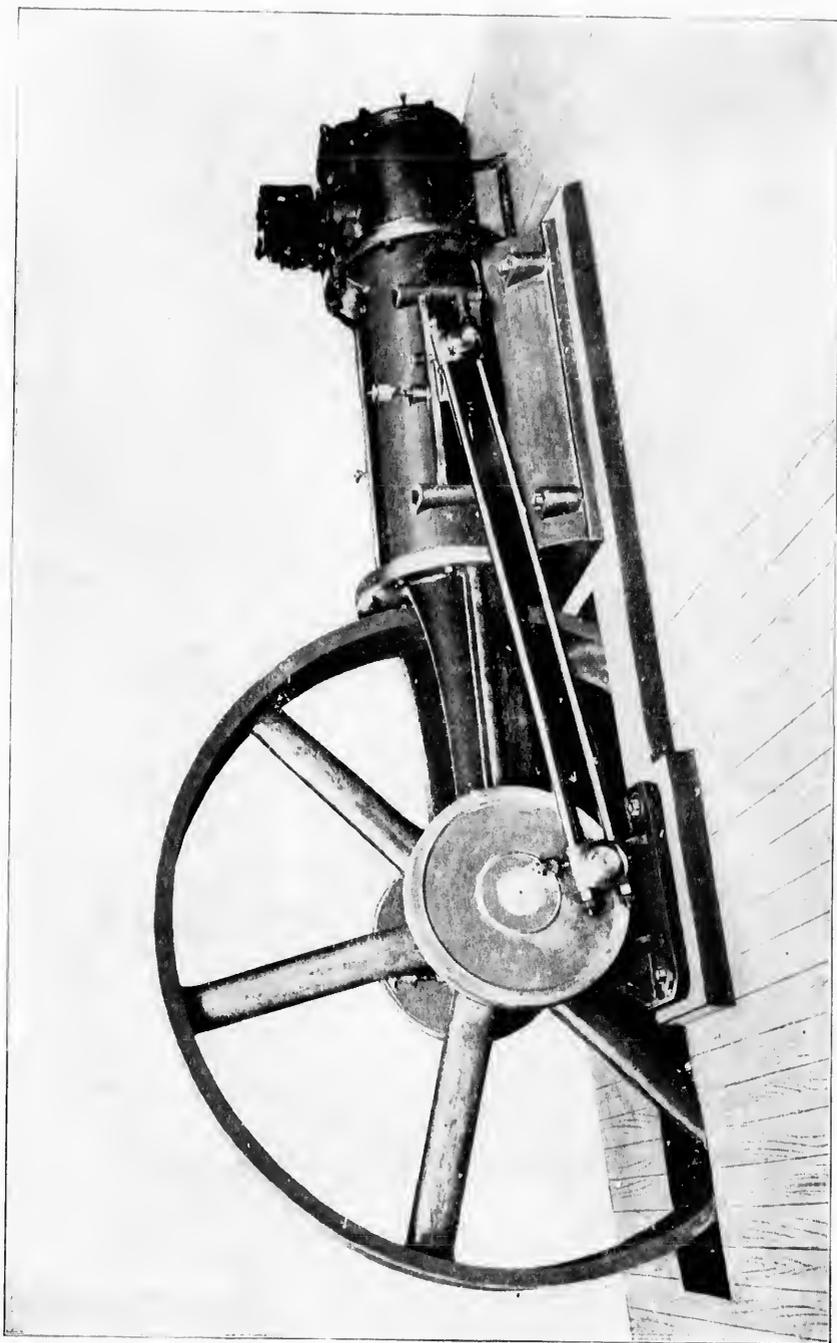


PLATE 105.—STRAIGHT LINE BELT DRIVEN COMPRESSOR.

### **Belt Driven Compressor with belt shifting regulator.**

The next and last illustration shows our pattern of small belt driven compressor intended for situations where the demand for air is subject to wide variation, or is liable to be suspended altogether at times. A regulator will be seen attached which throws the belt upon the loose pulley and stops the machine when the air pressure reaches the point determined upon for its limit. On the pressure dropping, the regulator throws the belt back upon the tight pulley and starts the machine.

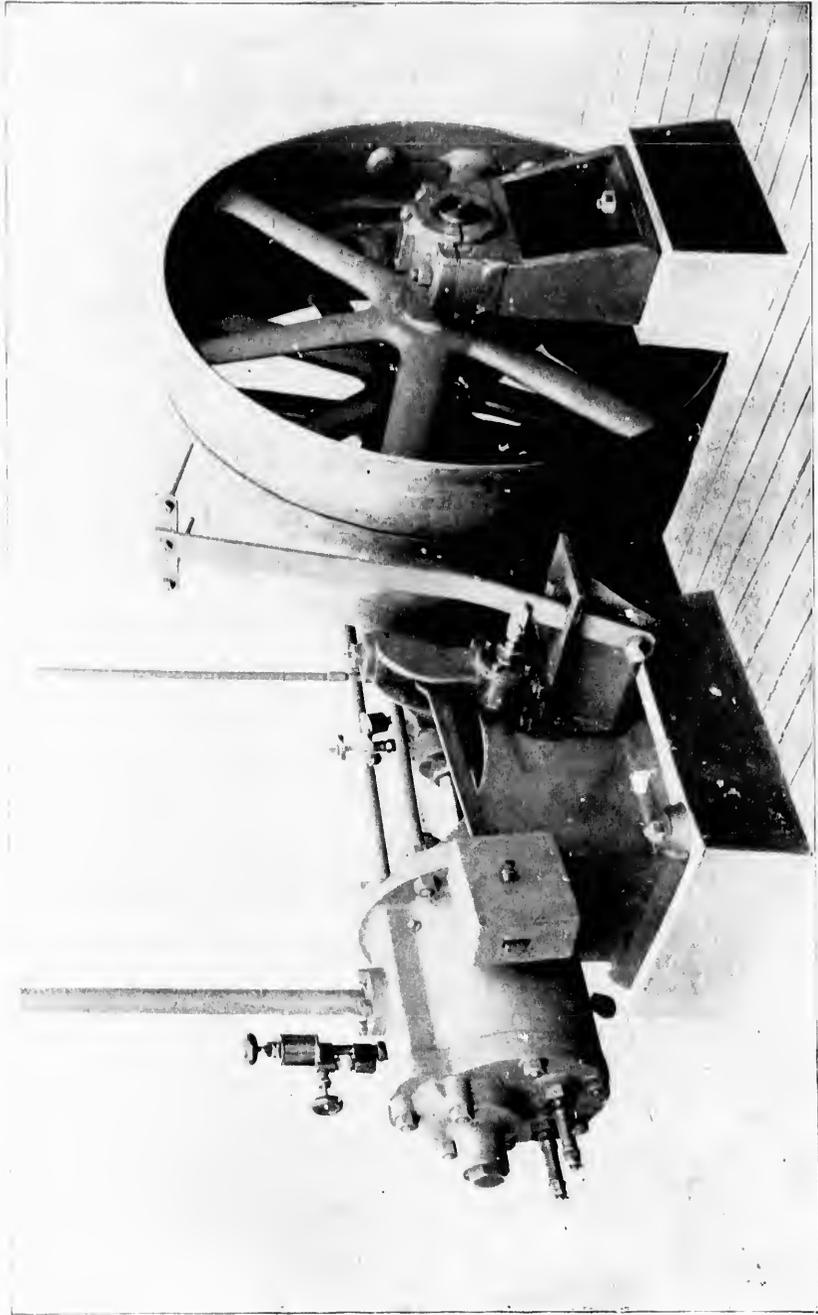


PLATE 103.—BELT DRIVEN COMPRESSOR WITH BELT SHIFTING REGULATOR.

CHICAGO 1893

## OFFICIAL RIBBON



Issued by Authority of the

### WORLD'S COLUMBIAN EXPOSITION

*Geo. R. Davis*

Director-General.

*John Boyd Thayer*

Chairman.

Committee of Awards.

DEPARTMENT E—MINES AND MINING.

*A. H. Schiff*

CHIEF.

DEPARTMENT F—MACHINERY

*Wm. Robinson*

CHIEF

## TEN AWARDS ON

Duplex Air Compressor, having Compound Corliss Steam  
and Compound Air Cylinders.  
High Pressure Compressor.  
Straight Line Compressor.  
Little Giant and Stogger Rock Drills.  
Furnace Tapping Drill.  
Tunnel Column and Shaft Bar.  
Deroy Pit.  
Collective Exhibit Air Compressors and Rock Drills.

EXHIBITED BY

**RAND DRILL COMPANY,**  
NEW YORK CITY.

