No. 706,548.

Patented Aug. 12, 1902.

P. GIRIN.

ROLLING MILL.

(Application filed Apr. 23, 1902.)

(No Model.)

2 Sheets—Sheet 1.

Fig. 1.

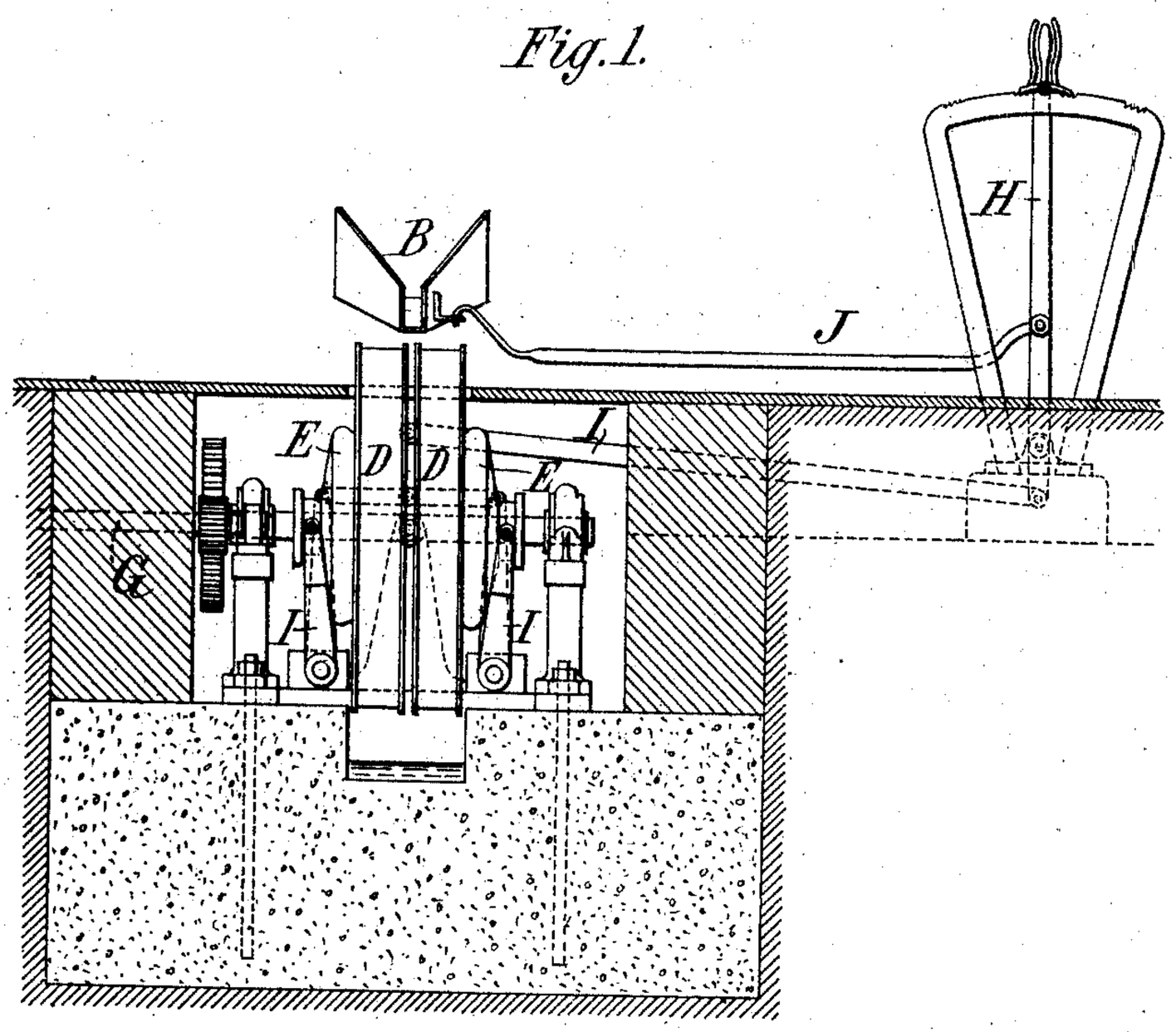


Fig. 4.

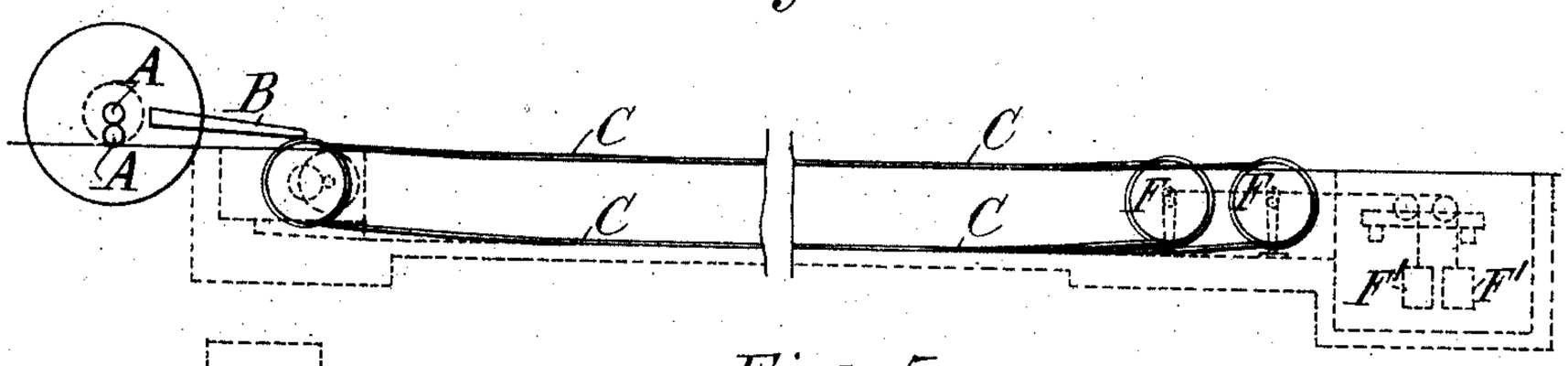
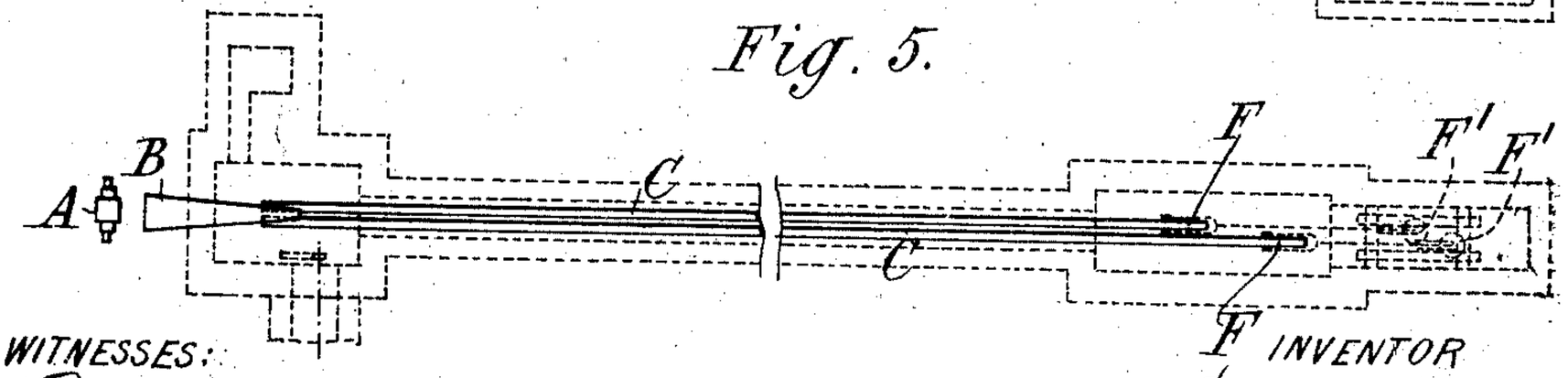


Fig. 5.



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(No Model.) 2 Sheets—Sheet 2.

Fig. 2.

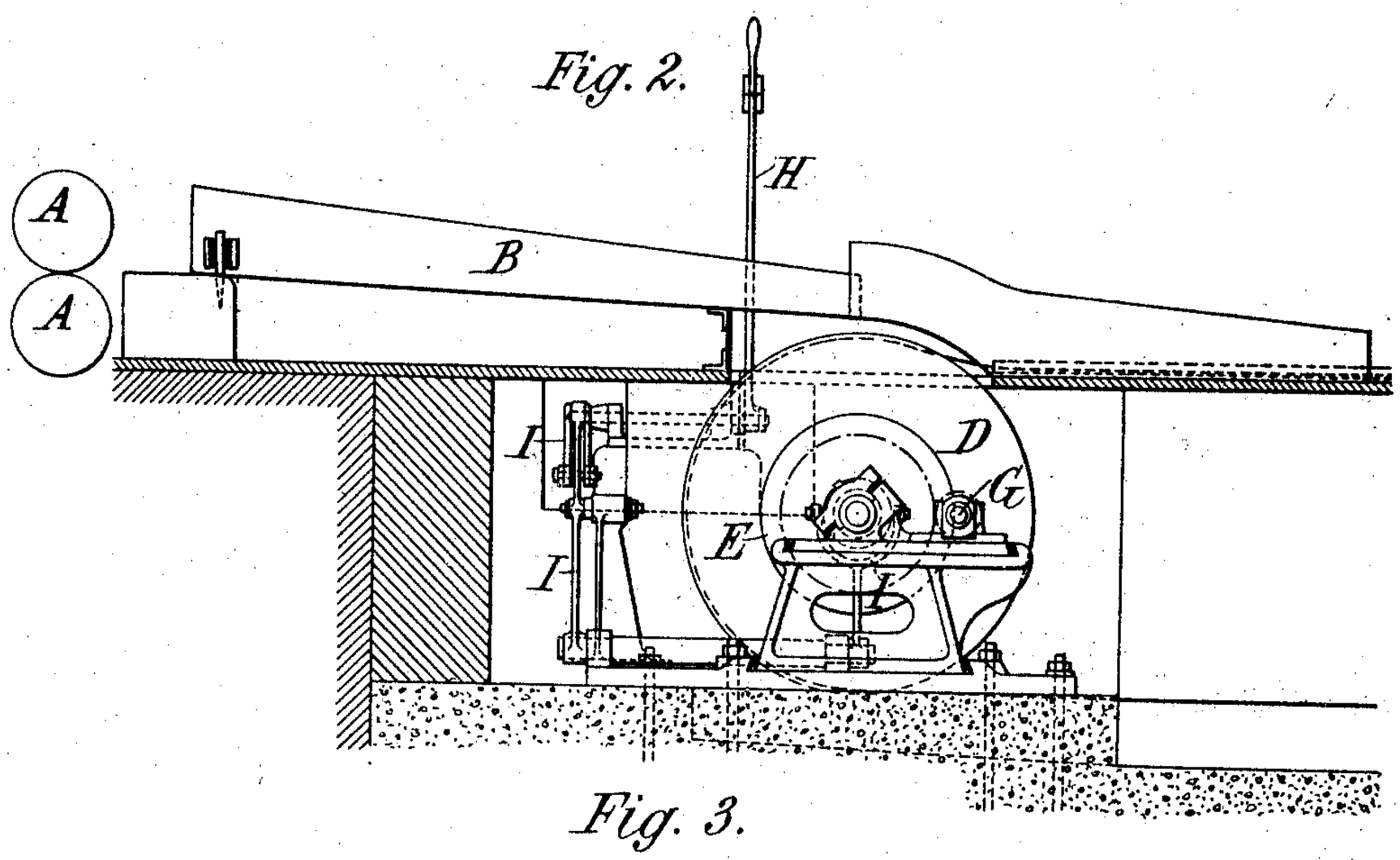
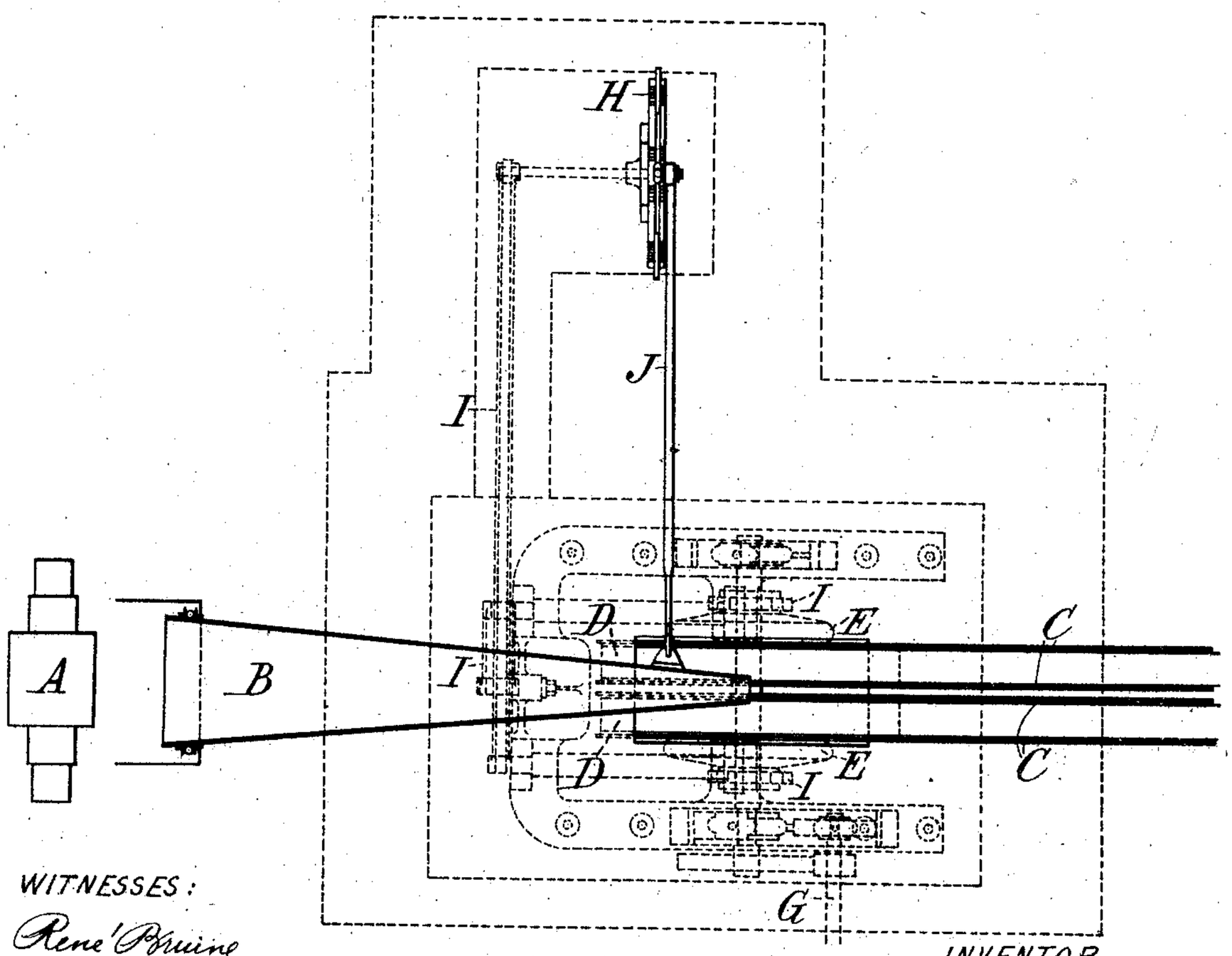


Fig. 3.



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PIERRE GIRIN, OF PARIS, FRANCE, ASSIGNOR TO STE. AME. DE COMMENTRY-FOURCHAMBAULT ET DECAZÉVILLE, OF PARIS, FRANCE.

ROLLING-MILL.

SPECIFICATION forming part of Letters Patent No. 706,548, dated August 12, 1902.

Application filed April 23, 1902. Serial No. 104,311. (No model.)

To all whom it may concern:

Be it known that I, PIERRE GIRIN, a citizen of the Republic of France, residing in Paris, France, have invented certain new and useful Improvements in Rolling-Mills, of which the following is a specification.

Bars of small thickness and considerable length, such as hoop-iron, when they leave the rolling-mill in which they have been manufactured are extremely flexible owing to their high temperature. In order that they may be obtained in a straight condition, it is necessary to exert a certain amount of traction upon the extremity which first issues from the rolling-mill. This traction may be exerted by operatives who seize the extremity of the bar by means of tongs and go away from the mill, running if it is a high-speed mill. This work is exceedingly onerous, and accidents are liable to happen.

This invention consists of an apparatus by which is mechanically effected the drawings or conveying of the flexible bars. This apparatus is based upon the following principle: In continuation of the rolling-mill are arranged two conveyers constituted by endless bands upon which the rolled bars are successively guided upon leaving the mill by means of a guide-channel the extremity of which is adapted to be displaced. Preferably the conveyers are operative only when there is a bar to be conveyed, and when this is not the case they remain at rest.

Figure 1 of the accompanying drawings is an elevation of the apparatus upon the operating side. Fig. 2 is a front elevation. Fig. 3 is a plan view; and Figs. 4 and 5 represent the apparatus as a whole, its median portion being broken for convenience of representation.

According to this invention the two conveyers are constituted by endless bands C, which pass over pulleys D D and F F in the same manner as band-saws. The upper length slides in U-shaped guides resting upon the flooring of the workshop, while the lower length travels in an appropriate trench. The tension of these two lengths is obtained by means of counterweights F′, which act upon the pulleys F. The rolled bars upon leaving the finishing-cylinders A of the rolling-mill are directed upon the endless bands by a channel B, which is adapted to be displaced by means of a lever H and a connecting-rod J in such a manner that its extremity is brought either above or in the middle of one or other of the endless bands. At the same time said lever H operates, by means of connecting-rods I, friction-clutches E, by means of which movement may be imparted to the pulleys D, which are the driving-pulleys for the endless bands. The movement is transmitted to the apparatus by means of a suitable shaft G. Upon operating the above-described lever H one of the pulleys D is caused to rotate, and at the same time the extremity of the channel B is brought above the band in movement.

While one bar is being rolled the bar previously rolled, which is upon the conveyer which is at rest, is removed.

The apparatus is driven from the rolling-mill itself, and the velocity of the endless bands is slightly greater than that of the bars leaving the mill, so that any bending of these flexible bars is prevented.

I claim—

The combination with finishing-cylinders of a rolling-mill, of a plurality of conveyers, means for directing a bar from said cylinders to either of said conveyers at will, driving mechanism, and means for simultaneously actuating said directing means and clutching to the driving mechanism the conveyer to which said bar is directed.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

PIERRE GIRIN.

Witnesses:

JULES ARMENGAUD, Jeune,

MARCEL ARMENGAUD, Jeune.