

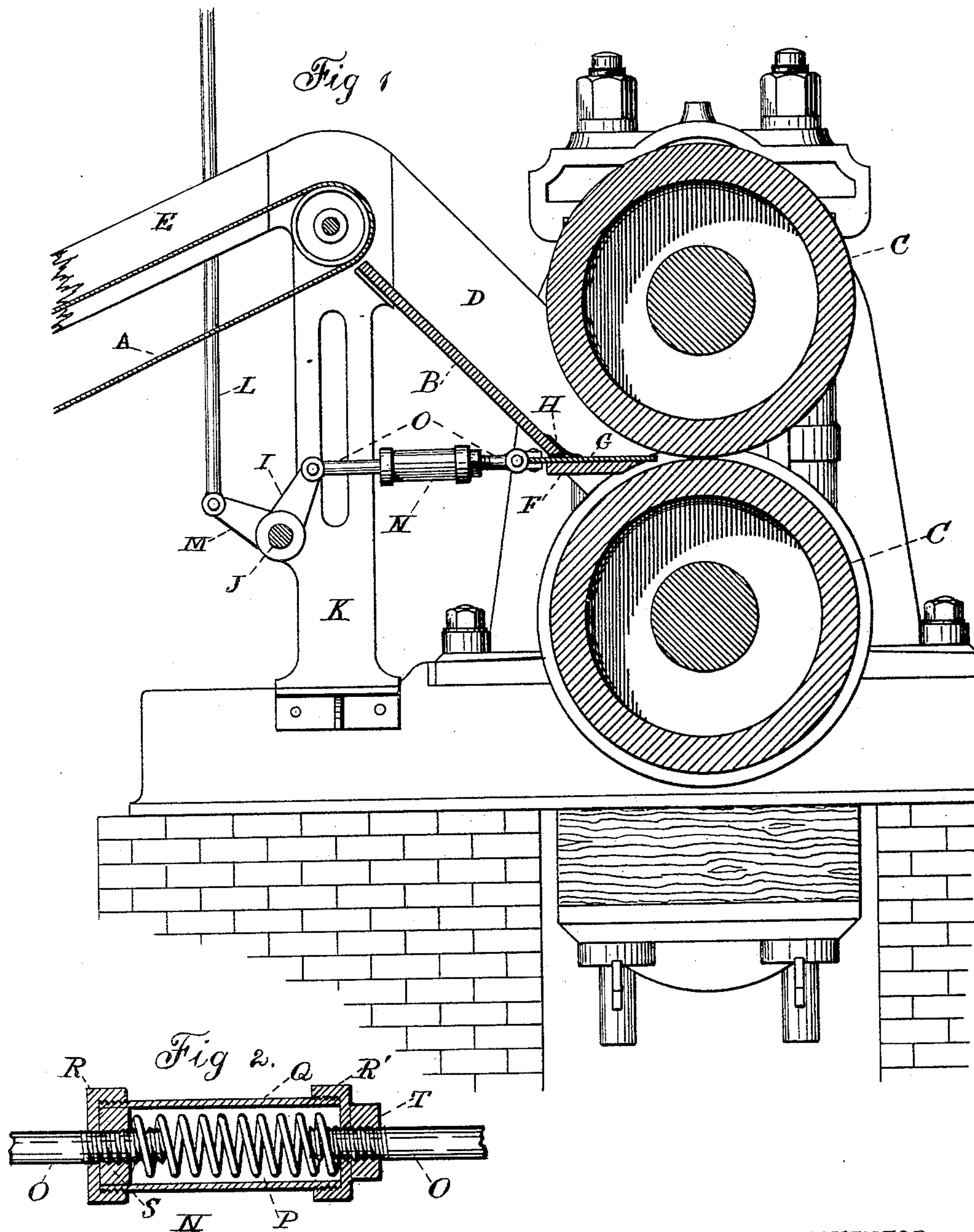
(No Model.)

2 Sheets—Sheet 1.

J. C. RILEY.
FORCE FEEDER.

No. 424,824.

Patented Apr. 1, 1890.



WITNESSES:
Robert Ries.
R. W. Dean

INVENTOR
John Claxton Riley
Walter A. Cook
Attorney

(No Model.)

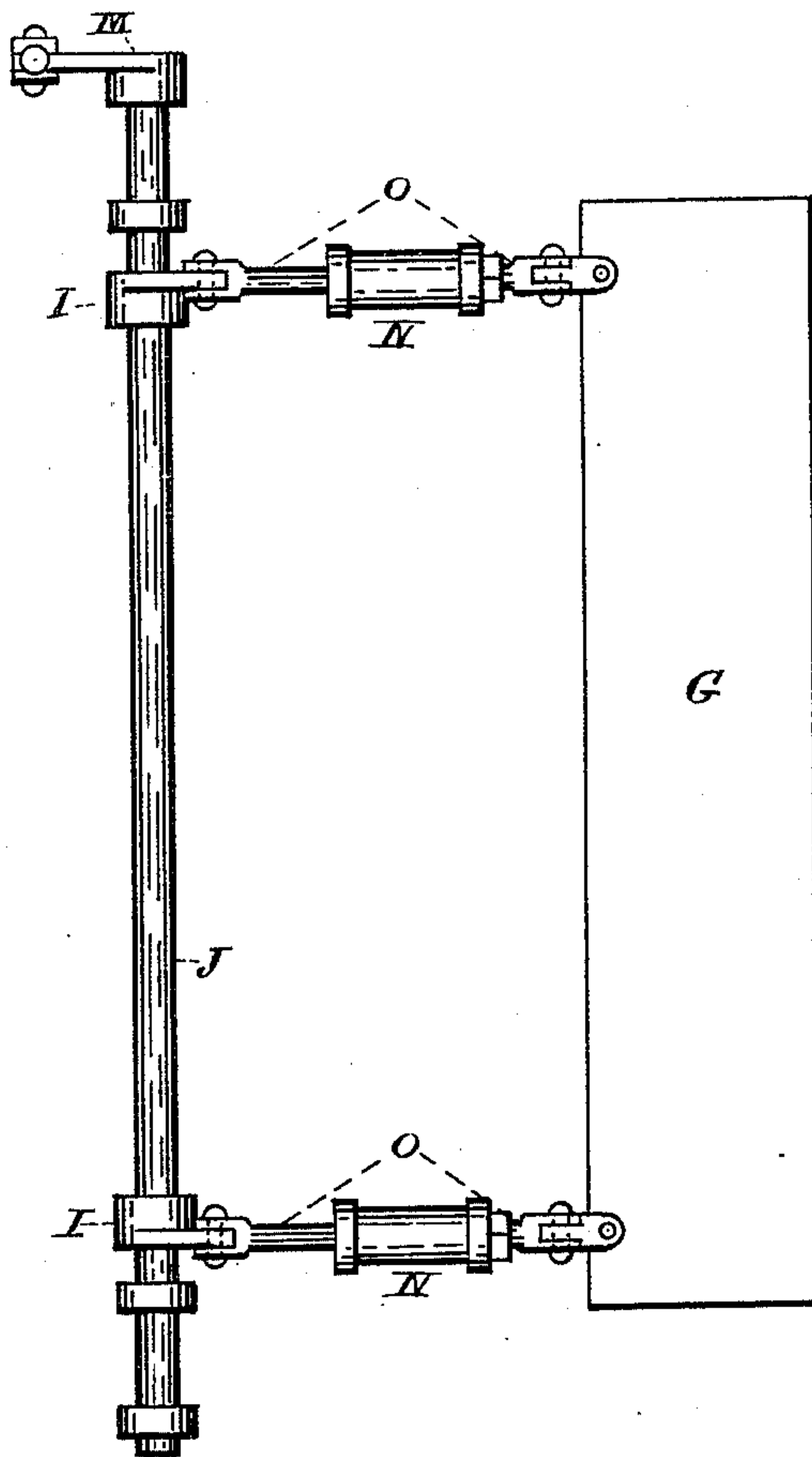
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Fig 3.



WITNESSES:

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By

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Attorney

UNITED STATES PATENT OFFICE.

JOHN CLAXTON RILEY, OF NEW ORLEANS, LOUISIANA.

FORCE-FEEDER.

SPECIFICATION forming part of Letters Patent No. 424,824, dated April 1, 1890.

Application filed December 31, 1889. Serial No. 335,562. (No model.)

To all whom it may concern:

Be it known that I, JOHN CLAXTON RILEY, a citizen of the United States, residing at New Orleans, in the parish of Orleans and State of Louisiana, have invented certain new and useful Improvements in Force-Feeders; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters of reference marked thereon.

Figure 1 is a vertical section through the rollers of a sugar-mill for regrinding and shows the force-feeder applied to it. Fig. 2 is a longitudinal section of the flexible connection N to a larger scale. Fig. 3 is a plan of the force-feeder.

My invention relates to a force-feeder for feeding bagasse between the rollers of a regrinding-mill or into bagasse-burners, or for feeding sawdust into refuse-furnaces.

In regrinding-mills the rollers should be adjusted in close contact in order to obtain a good extraction of juice, and as the bagasse does not then readily enter between the rollers it becomes necessary to provide some means for facilitating a positive and regular feed of the bagasse, so as to effect a perfect and economical operation of the mill.

To this end my invention consists in the construction and combination of parts hereinafter described and claimed.

An endless carrier A brings the bagasse from the first mill, (not shown,) where the sugar-canes have been subjected to a first pressure. The resulting bagasse which the first mill has discharged onto the carrier A is dumped onto a chute B, extending the whole length of the mill-rollers C and the same width as carrier A. The chute B is stationary and has sides D, forming a continuation of the sides E of carrier A. At the lower end of chute B is a stationary table F of the whole length of the mill-rollers C. On the upper surface of this table F is a plate G of the same length as the mill-rollers C, and arranged so as to have a backward and forward motion, and at its forward motion to penetrate between the mill-rollers C to near the point where the circumferences touch each other. A flexible apron of rubber or leather H, rest-

ing on plate G and fastened to chute B by one edge, prevents any bagasse from being drawn backward by the backward motion of plate G. The backward and forward motion of plate G is obtained by means of two arms I, fastened to a rock-shaft J, which extends across the mill and is supported on standards K. The shaft J receives its motion through a suitable connection L and arm M, either from an eccentric or crank. (Not shown.) I have placed an adjustable yielding connection N in the connecting-rods O O' between the arms I and the plate G in case the bagasse should be thicker on one side of the mill than on the other. This yielding connection, as shown at Fig. 2 in section and at N on Figs. 1 and 3, consists of a spiral spring P in a casing Q. At each end of the casing Q are caps R R'. S is a collar screwed on the end of the rod O', and T is a jam-nut on rod O. Rod O screws into cap R', while rod O' can slide in cap R. The collar S, which is screwed on end of rod O', can slide in casing Q as the spring P is compressed or extended by any inequalities of the bagasse. By turning this collar S on the screw end of the rod O' the tension of the spring P can be adjusted as may be required.

I am aware that force-feeds for cane-mills, &c., have been made before; but I consider the yielding connection necessary to overcome irregularities in the quantities of bagasse, and the table F serves also the purpose of preventing the bagasse which falls down the chute B from coming in contact with the lower roller, so that any absorption of the juice which runs down the lower roller by the bagasse is prevented.

What I claim, and desire to secure by Letters Patent, is—

1. The combination, with the stationary table F, the sliding plate G, and the rock-shaft J, having arms I, of the rods O O' and an adjustable yielding connection between said rods, substantially as described.

2. The combination of the rollers C C, the chute B, the stationary table F, the sliding force-plate G, the rock-shaft J, having arms I, and the yielding connecting-rods O O', substantially as shown and described.

3. The combination, with the sliding plate

G, the rock-shaft J, having arms I, and the rods O O', of the spiral spring P, the casing Q, having caps R R', the adjustable collar S, and the jam-nut T, substantially as described.

- 5 4. The combination of the rollers C C, the chute B, the table F, the sliding force-plate G, the flexible apron H, attached to the lower end of the chute and extended onto said plate, the rock-shaft J, and an adjustable yielding

connection between said shaft and plate, substantially as shown and described.

In testimony whereof I have hereunto subscribed my name in the presence of two witnesses.

JOHN CLAXTON RILEY.

Witnesses:

WALTER H. COOK,
ROBERT RIES.