

(No Model.)

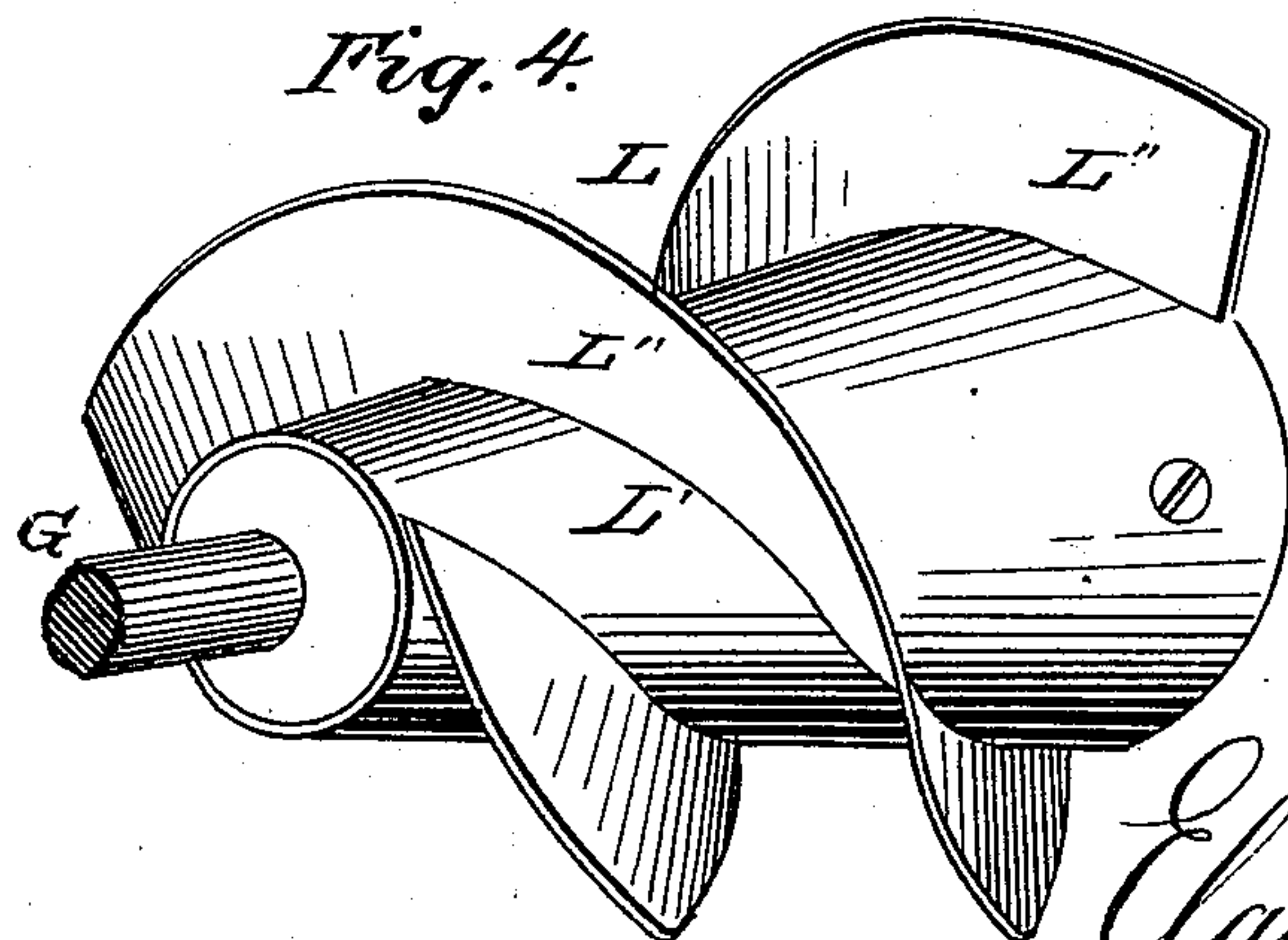
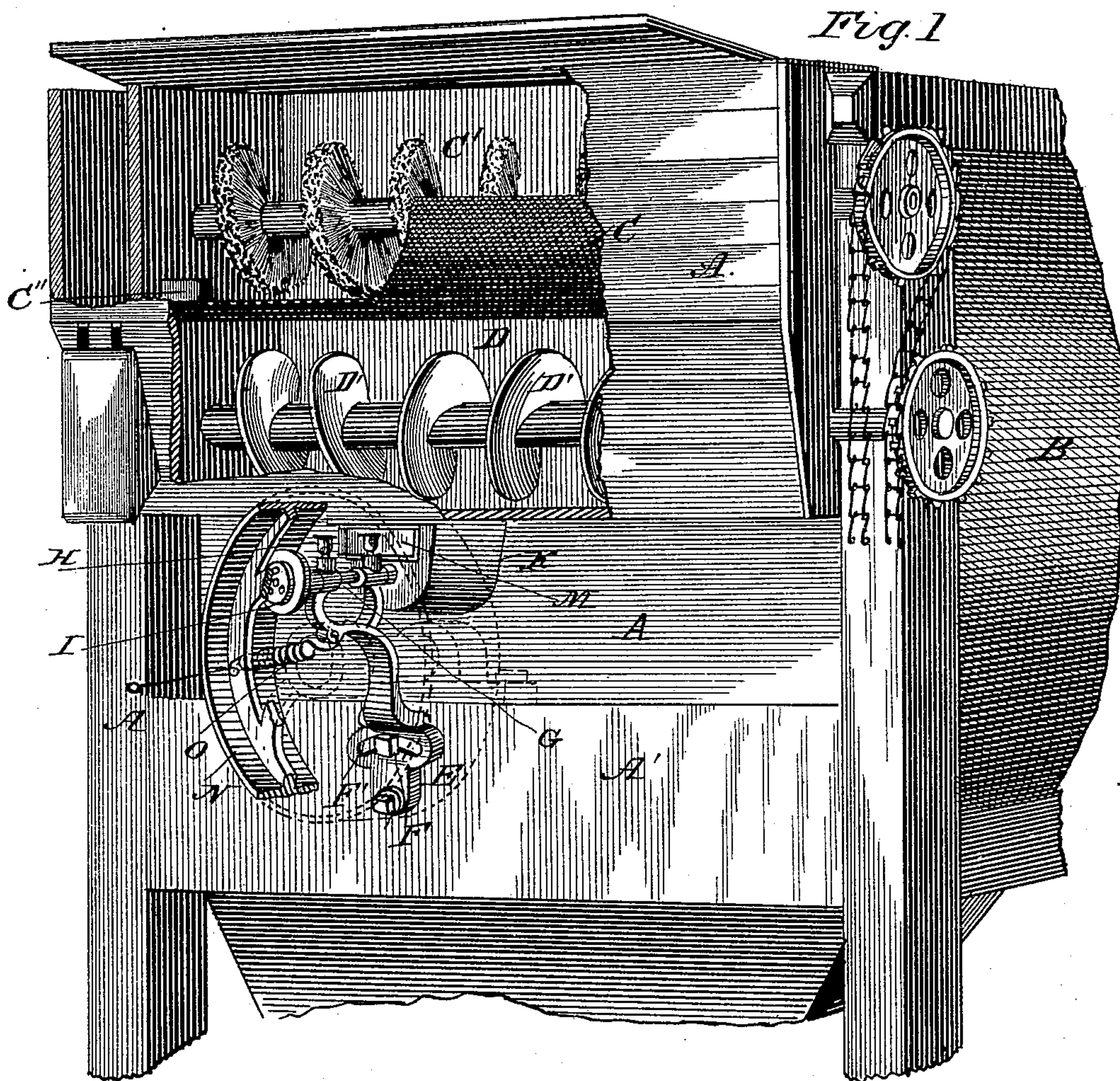
2 Sheets—Sheet 1.

E. L. CONKLIN.

APPARATUS FOR FEEDING FLOUR TO BOLTING REELS.

No. 287,097.

Patented Oct. 23, 1883.



WITNESSES:

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*J. Fred. Reily.*

*Elgin L. Conklin*  
INVENTOR.

By *Louis Bagger & Co.*  
ATTORNEYS.



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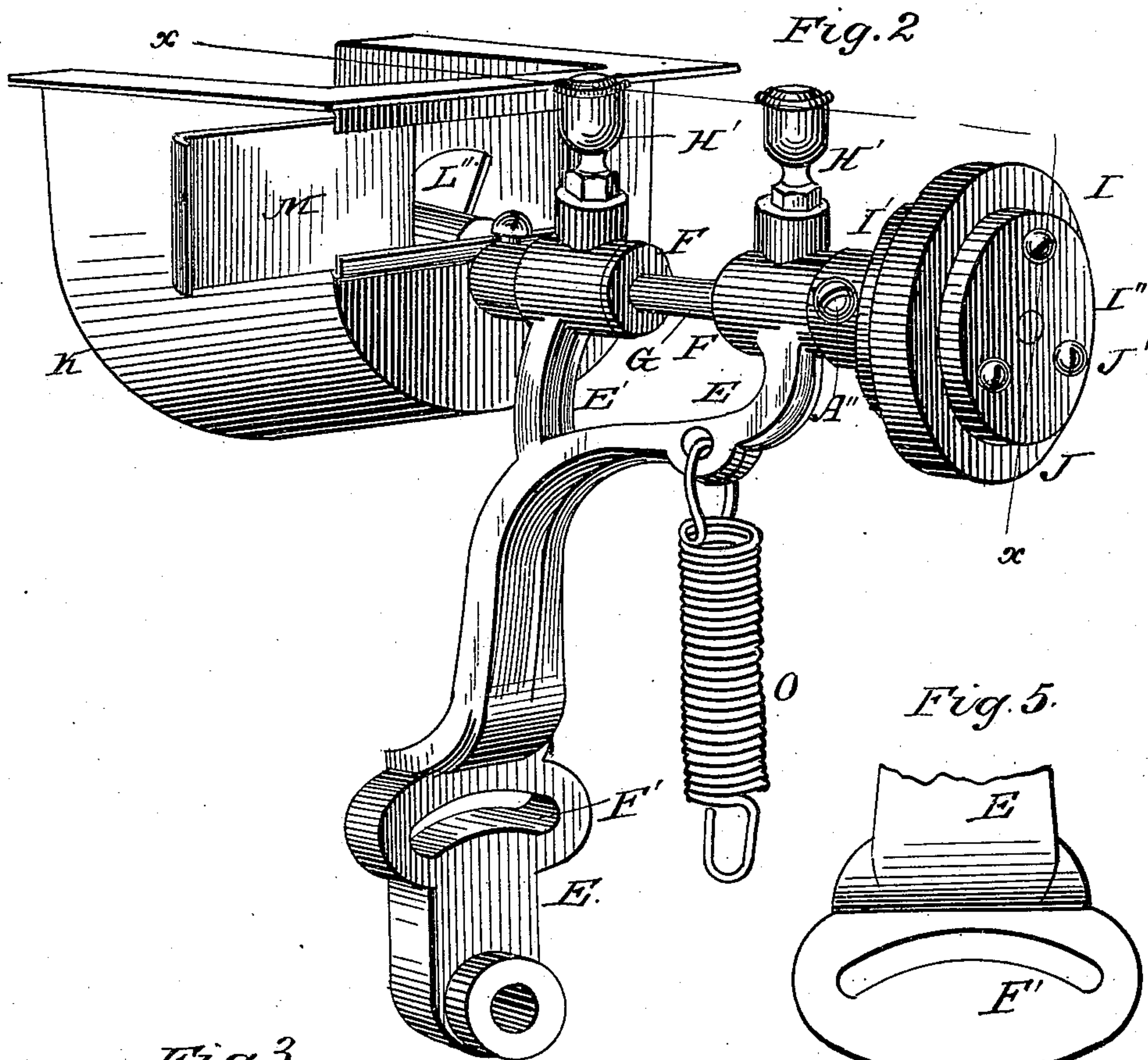


Fig. 3

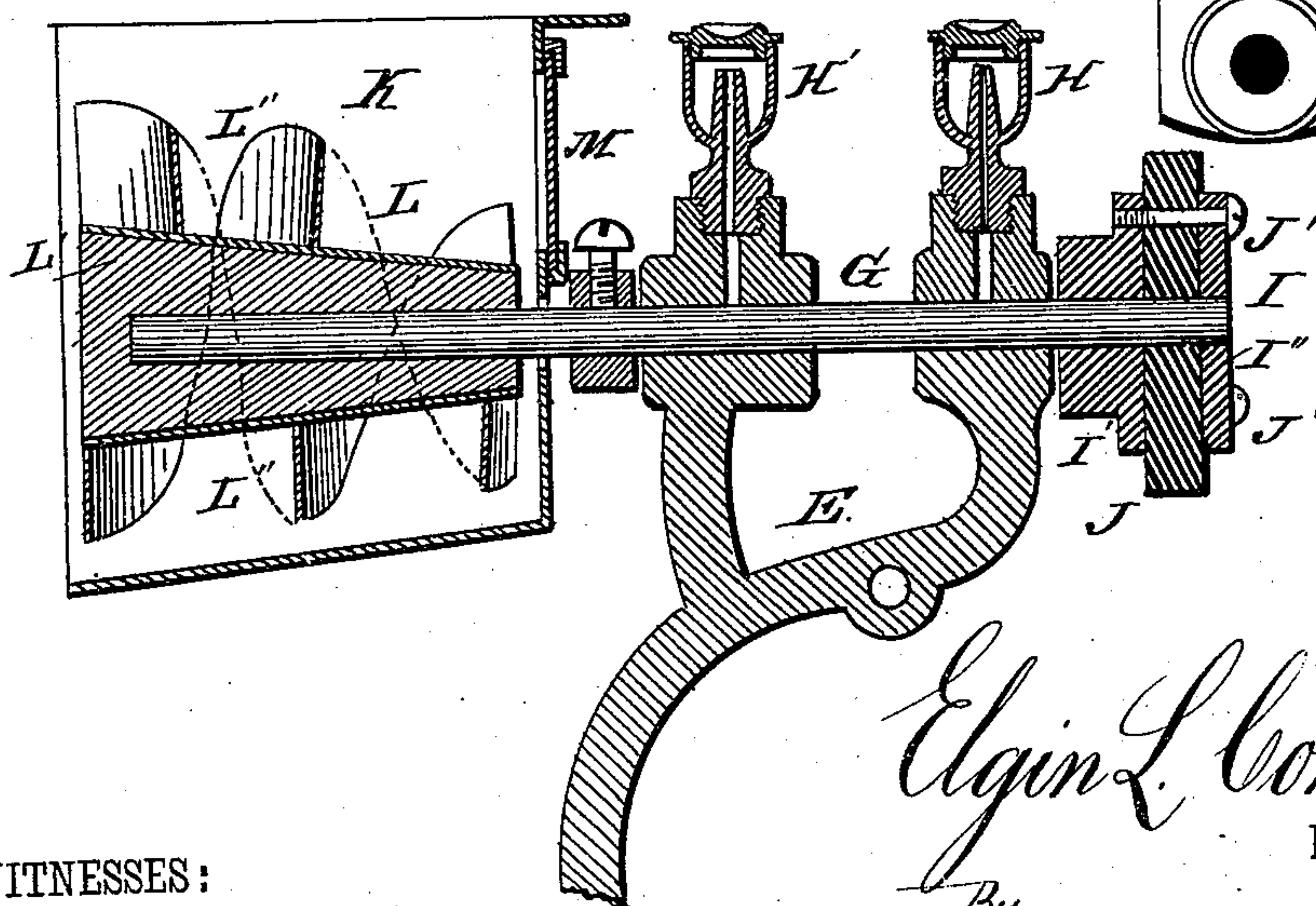
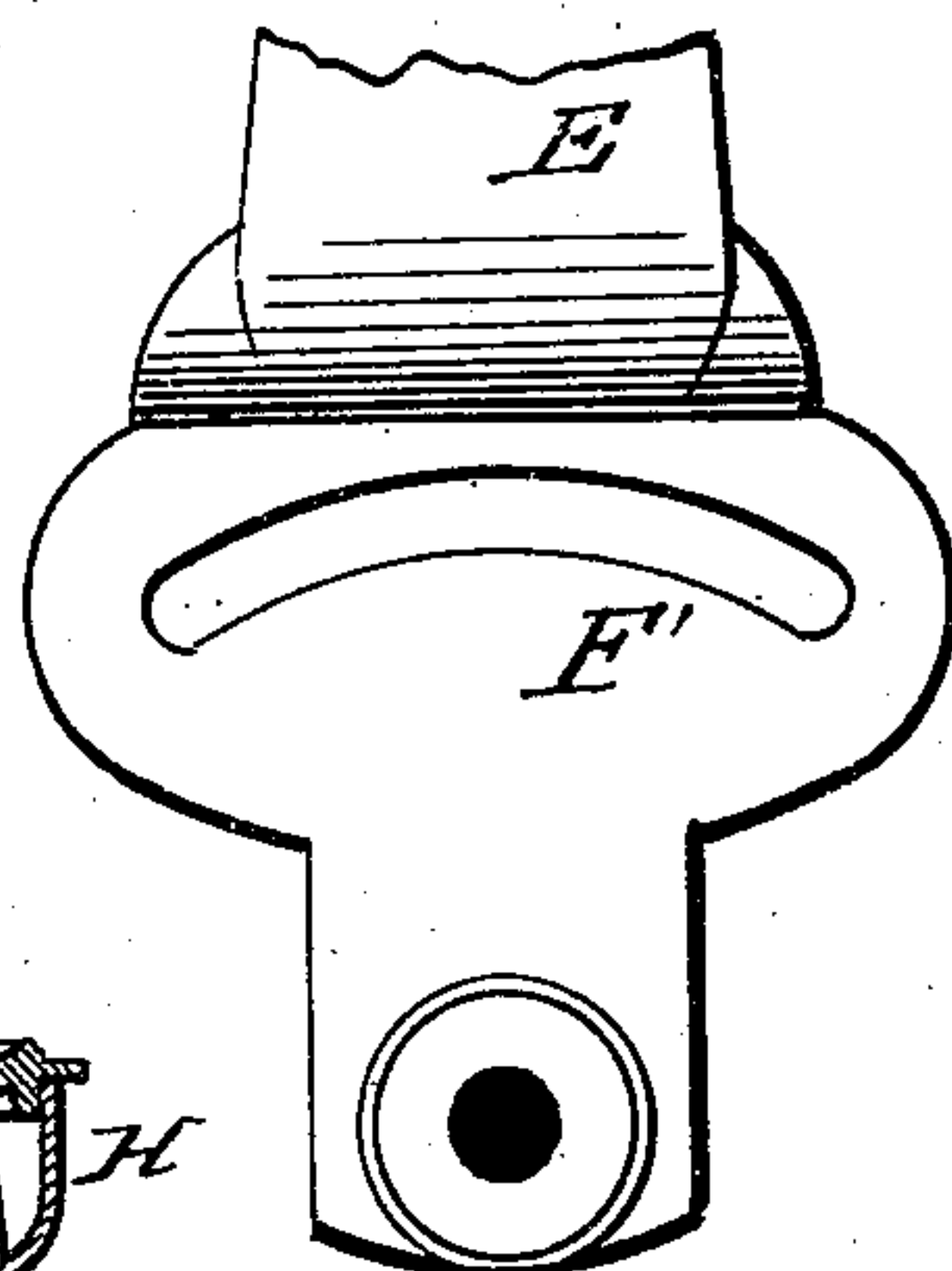


Fig. 5



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# UNITED STATES PATENT OFFICE.

ELGIN L. CONKLIN, OF CORNING, NEW YORK.

## APPARATUS FOR FEEDING FLOUR TO BOLTING-REELS.

SPECIFICATION forming part of Letters Patent No. 287,097, dated October 23, 1883.

Application filed July 13, 1883. (No model.)

*To all whom it may concern:*

Be it known that I, ELGIN L. CONKLIN, a citizen of the United States, and a resident of Corning, in the county of Steuben and State of New York, have invented certain new and useful Improvements in Apparatus for Feeding Flour to Bolting-Reels; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a perspective view of a bolting-reel, with parts of the outer casing broken away to show my improved apparatus for feeding flour or other materials into bolting-reels in operative position. Fig. 2 is a perspective view of my improvement detached from the reel. Fig. 3 is a longitudinal vertical sectional view taken on line *xx*, Fig. 2. Fig. 4 is a perspective detail view of the feeding-screw, and Fig. 5 is a detail view of the lower part of the bracket.

Similar letters of reference indicate corresponding parts in all the figures.

My invention has relation to apparatus for feeding flour or other material into centrifugal or other bolting-reels; and it consists in the improved construction and combination of parts of an apparatus adapted to feed flour into a centrifugal or other bolting-reel in a continuous and even spray, as will be hereinafter more fully described and claimed.

In the accompanying two sheets of drawings, A represents the frame of a centrifugal bolting-reel to which my improvement is adapted to be attached. B indicates the cylindrical bolting-reel, one end only of which is shown in the drawings; C, a wire trough over the head of the reel, in which conveyer-brushes C' revolve, the said trough being provided at one end with a drop-valve, C'', through which is passed any hard substance which will not admit of being brushed through the wire trough; and D, a lower trough, having a revolving right-and-left spiral, D', adapted to feed the grain toward the center of the trough. The above-mentioned parts form no portion of my present invention.

E represents a bracket, which is pivoted adjustably to about the center of a cross-beam, A', forming part of the frame A, by means of a screw-bolt passing through its lower extremity, and a thumb-screw or screw-bolt, F, working in a transverse slot or enlarged hole, F', in the lower part of the bracket. The ends of the arms E' of the bracket E are constructed to form journal-boxes, F, in which a shaft, G, is supported. Upon the top of the journal-boxes are oil-cups H', through which the axle G and its bearings may be lubricated. Upon the outer end of the shaft G is secured a friction-pulley, I, consisting of a disk, I', secured upon the shaft by means of a screw, A'', passing through a collar upon the outer face of said disk; a disk, I'', corresponding in size to the disk I', and a disk, J, of leather or other suitable material, and of greater diameter than the disks I' and I'', and secured between the disks I' and I'' by screw-bolts J' passing through the three disks.

K represents a metal trough or casing, which is secured to the bottom of the lower trough, D, previously referred to, at or near its center, the inner open end of the casing K being opposite the central opening of the revolving reel B. The inner end of the shaft G passes through an opening in the outer head of the casing K, and extends within the said casing for its entire length. Upon that end of the shaft which is within the casing K is secured a feeding-screw, L, consisting of a cone-shaped core, L', secured upon the shaft with its largest end toward the inner open end of the casing K, the core being preferably made of wood, and covered with tin or other suitable material, which is secured to the wooden core by small screws, and two spiral flanges, L'', extending from end to end of the cone-shaped central piece, L'.

M indicates a slide in the outer closed end of the casing K, through which air may be admitted into the said casing to facilitate the cooling and feeding of the flour or other material, as will be hereinafter described.

My improved apparatus is secured in operative position by fastening the lower end of the bracket at or near the middle of the cross-beam A' of the frame A by means of a screw-bolt passing through its lower extremity, and



a thumb-screw or screw-bolt, F, working in a transverse slot or enlarged hole, F', in the lower part of the bracket, as previously described, so that the friction-pulley I will press  
5 against the inner side of the rim of the flange-pulley N, secured upon the main drive-shaft of the bolting-reel B. A spiral spring, O, fastened at one end to the upper part of the bracket E and at the other to the cross-beam  
10 A', serves to hold the friction-wheel I firmly against the rim of the flange-pulley N. The casing K is secured to the lower trough, D, at or near its center, so as to receive the flour or other material which is fed to the center of the  
15 said trough, the inner open end of the casing K being opposite the central opening of the revolving reel B.

From the foregoing description, taken in connection with the accompanying drawings,  
20 the construction and operation of my improved apparatus for feeding flour into bolting-reels will readily be understood without requiring further explanation.

It will be seen that by constructing my improved apparatus in the manner described  
25 the feed-screw L will feed the flour or other material evenly and steadily into the bolting-reel, and by placing the largest end of the cone-shaped feeder L toward the inner end of the casing K it will act as a suction-fan, and  
30 thereby facilitate the feeding of the flour or other material into the bolting-reel. By constructing a slide, M, in the outer closed end of the casing K, the air is admitted into the bolting-reel directly through the feeding-chamber K, and the air thus admitted, under the influence of the cone-shaped feeder L, which acts  
35 as a suction-fan, will form a circle or become rarefied, so as to cool and feed the flour or other material in a spray as it enters the reel, so that it feeds close up to the reel-head, and I am thereby enabled to utilize the entire inner surface of the cloth which covers the bolting-reel, thereby largely increasing its capacity, while, when the flour is fed into the bolting-reel through a spout of ordinary construction, it travels from eight to twelve inches in the reel before it falls upon the cloth, so that  
40 a loss of from one-twelfth to one-eighth of the wearing-surface of the cloth is sustained. By constructing the bracket E with the transverse slot or enlarged hole F' near its lower end, through which a thumb-screw or screw-bolt, F, is inserted, the spiral spring O, previously referred to, is enabled to draw the friction-wheel I firmly against the inside of the rim of the flange-wheel N when the periphery of the friction-wheel has become worn by continued friction. It is obvious that shaft G  
45 may be driven by any other suitable means.

Having thus described my invention, I claim and desire to secure by Letters Patent of the United States—

1. The combination of a bolting-reel, a wire  
65 trough provided with revolving spiral brushes and having at one end a drop-valve, a lower

trough provided with a right-and-left spiral adapted to feed the flour or other material toward its center, bracket E, pivoted adjustably upon the frame of the bolting-reel at its head,  
70 and having arms E', provided on their extremities with journal-boxes F, having oil-cups H', shaft G, supported in the journal-boxes F, and provided with a friction-pulley, I, feeding-screw L, spiral spring O, chute or casing K, adapted to be attached to the bottom of the lower trough, D, and provided with a slide in its outer closed end, adapted to admit air to the reel through the feeding-chamber K, at or near its center, in direct contact with  
75 the material, the said feeding-screw L revolving in the casing K, and consisting of a cone-shaped central piece having its largest end toward the inner open end of the feeding-chute K, and provided with spiral flanges extending from end to end, and adapted to feed the flour or other material into the bolting-reel in an even spray, and flange-pulley N, secured upon the outer end of the main drive-shaft of the bolting-reel, and adapted to transmit motion to the friction-pulley I, all constructed and arranged as and for the purpose shown and set forth.

2. The combination of a bolting-reel, a wire trough provided with revolving spiral brush-  
95 es and having at one end a drop-valve, a lower trough provided with a right-and-left spiral adapted to feed the flour or other material toward its center, bracket E, pivoted adjustably upon the frame of the bolting-reel at its head, and having arms E', provided on their extremities with journal-boxes F, having oil-cups H', shaft G, supported in the journal-boxes F, and provided with a feeding-screw, L, spiral spring O, chute or casing K,  
100 adapted to be attached to the bottom of the lower trough, D, and provided with a slide in its outer closed end, adapted to admit air to the reel through the feeding-chamber K, at or near its center, in direct contact with the material, the said feeding-screw L revolving in casing K, and consisting of a cone-shaped central piece having its largest end toward the inner open end of the feeding-chute K, and provided with spiral flanges extending from end to end, and adapted to feed the flour or other material into the bolting-reel in an even spray, and means by which the shaft G may be rotated, all constructed and arranged as and for the purpose shown and set forth.

3. The combination of the chute or casing K, provided with a slide in its outer closed end, feeding-screw L, consisting of a cone-shaped central piece having its largest end toward the inner open end of the feeding-chute K, and provided with spiral flanges extending from end to end, and adapted to feed the flour or other material in an even spray, and means by which the feeding-screw is rotated, as and for the purpose shown and set forth.

4. The combination of the bracket E, having transverse slot F' in its lower end, and



arms E', provided on their extremities with journal-boxes F, having oil-cups H', shaft G, supported in the journal-boxes F, and provided with a friction-pulley, I, feeding-screw 5 L, spiral spring O, adapted to hold the friction-pulley in operative position, chute K, provided with a slide, M, in its outer closed end, the said feeding-screw L revolving in casing K, and consisting of a cone-shaped central piece having its largest end toward the 10 inner open end of the feeding-chute K, and provided with spiral flanges extending from

end to end, and adapted to cool and feed the flour or other material in an even spray, all constructed and arranged as and for the purpose shown and set forth. 15

In testimony that I claim the foregoing as my own I have hereunto affixed my signature in presence of two witnesses.

ELGIN L. CONKLIN.

Witnesses:

ELLSWORTH D. MILLS,  
STEPHEN T. HOYT.