

(No Model.)

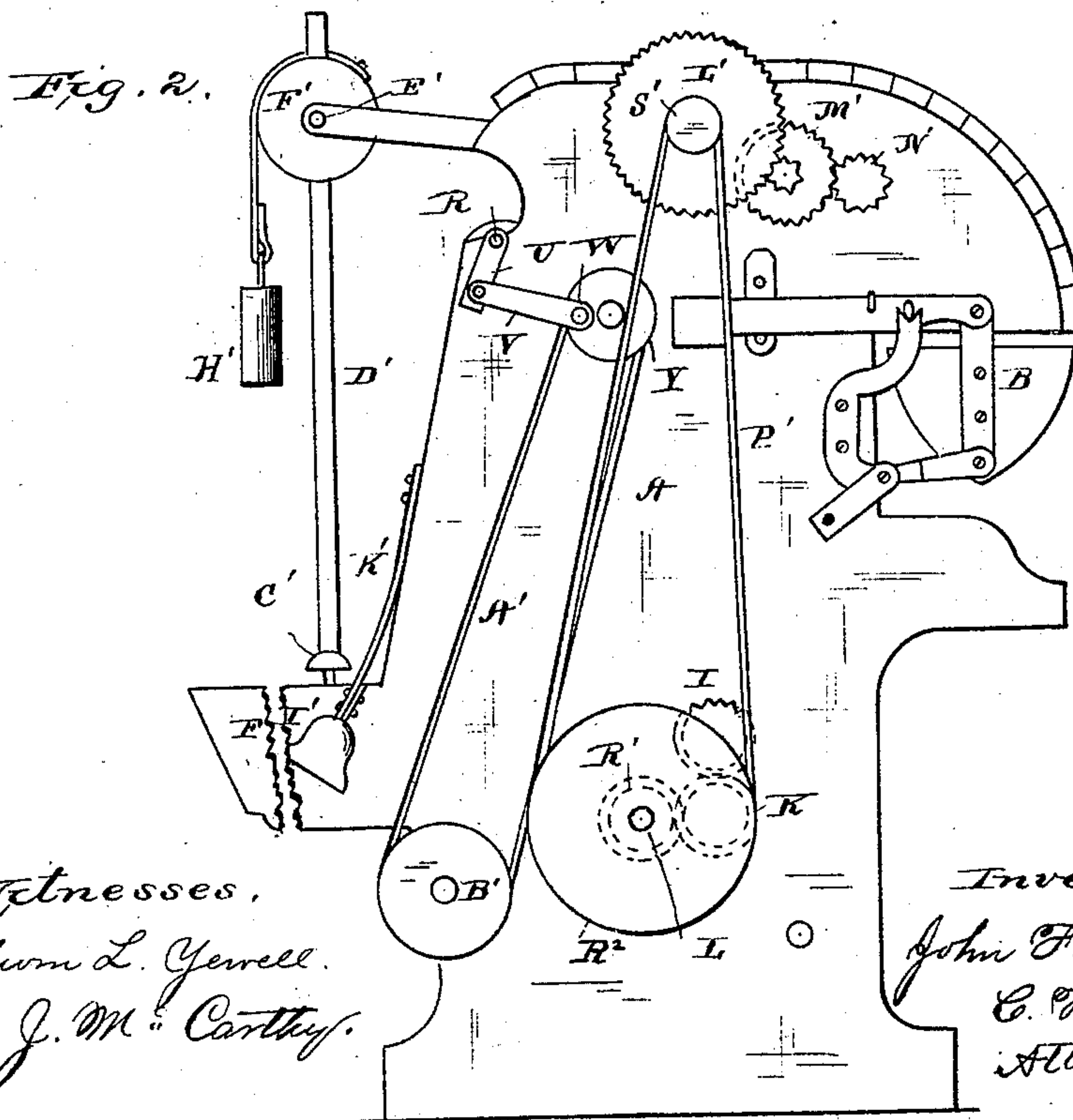
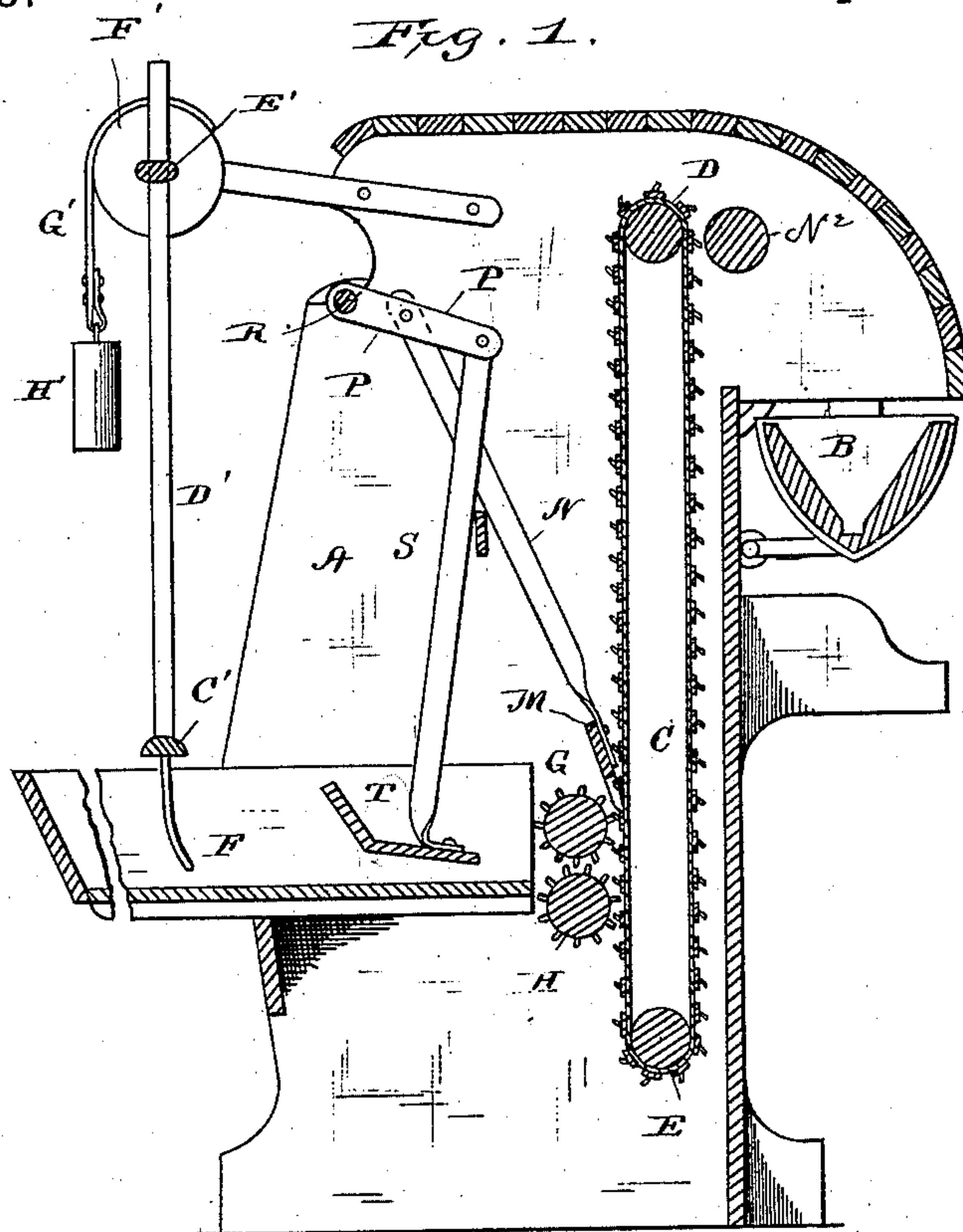
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J. F. GEBHART.

FEEDING MECHANISM FOR CARDING ENGINES.

No. 285,608.

Patented Sept. 25, 1883.



Witnesses,  
Edmund L. Yewell.  
J. J. M. Carthy.

Inventor,  
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(No Model.)

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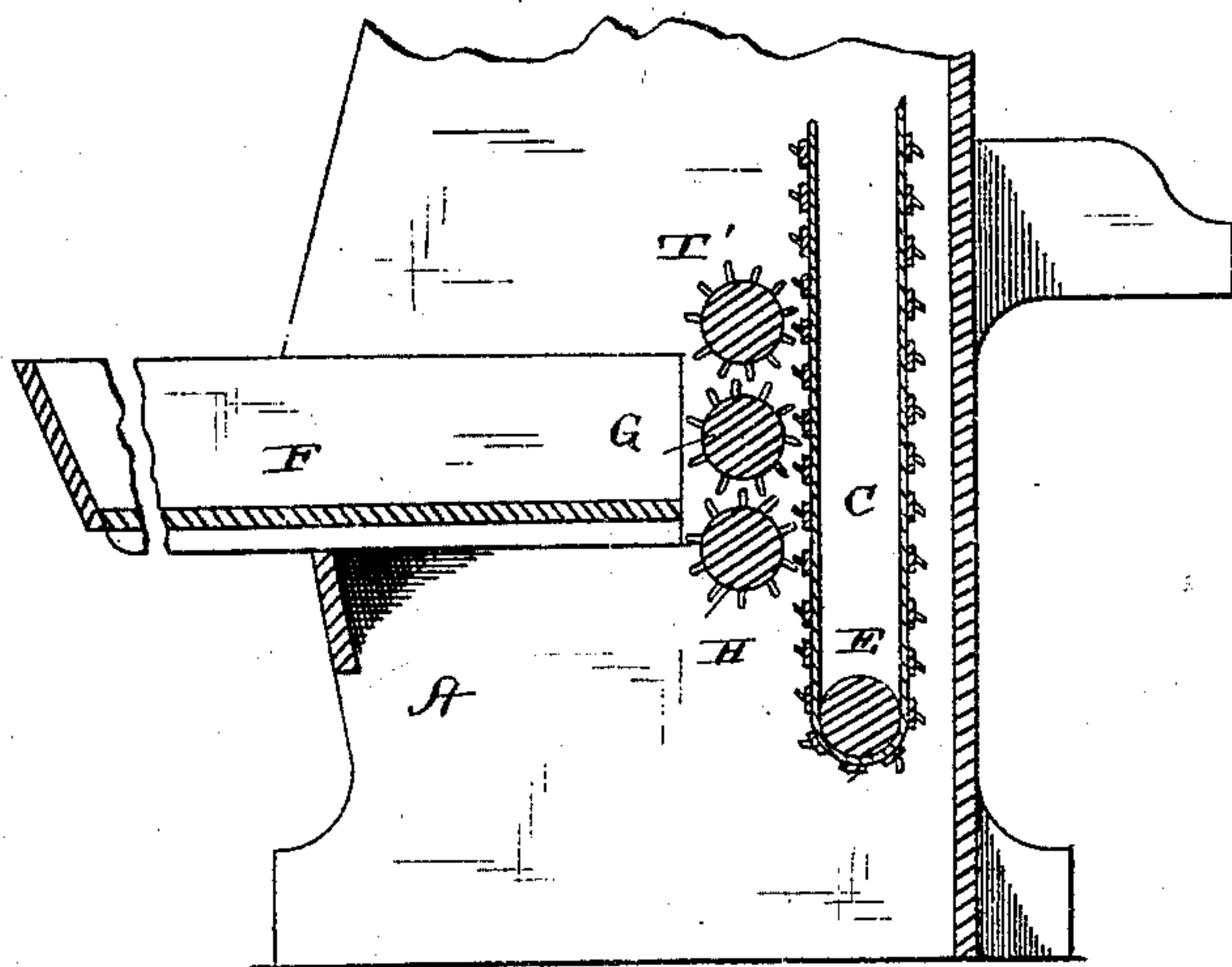
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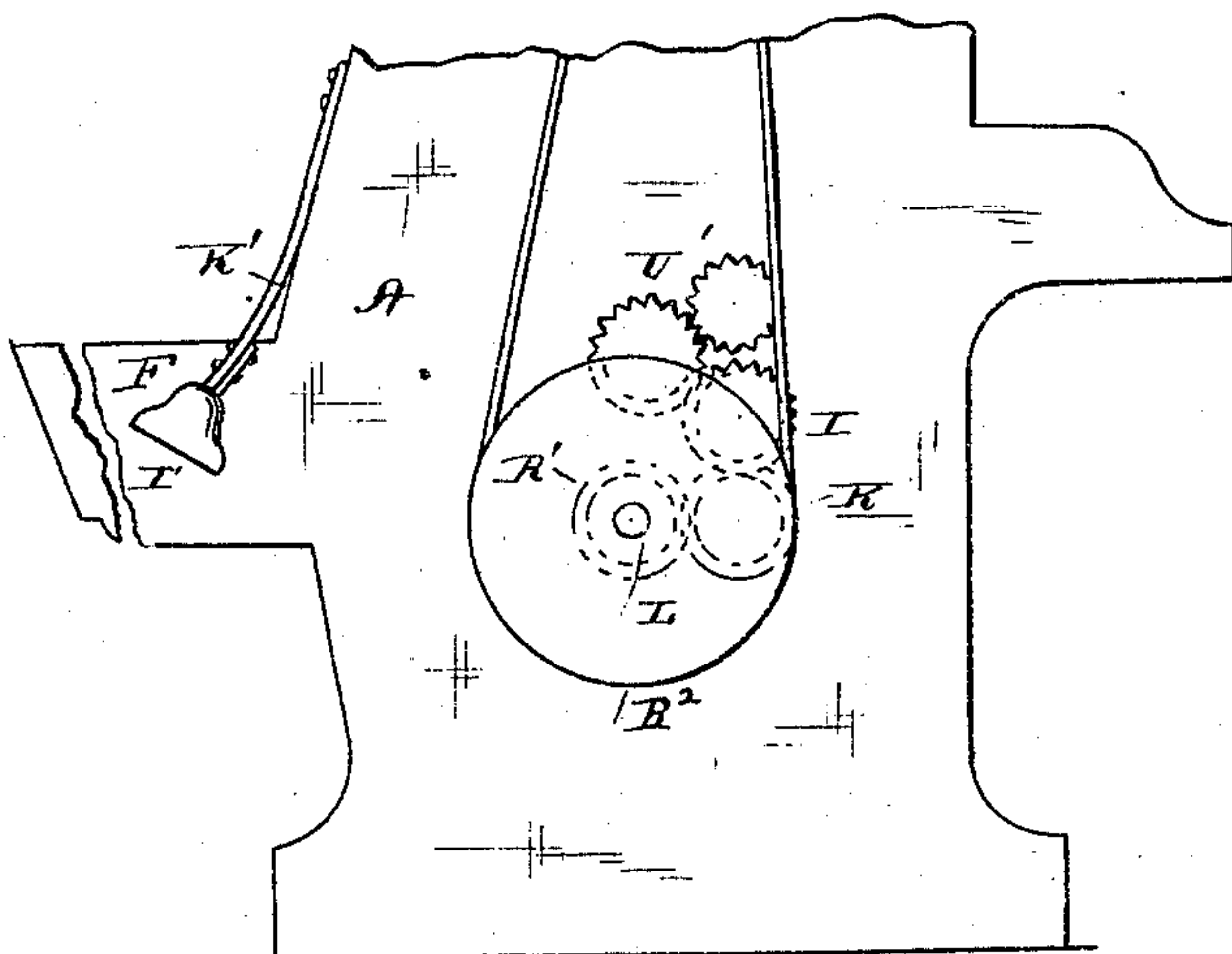
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*Fig. 3.*



*Fig. 4.*



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(No Model.)

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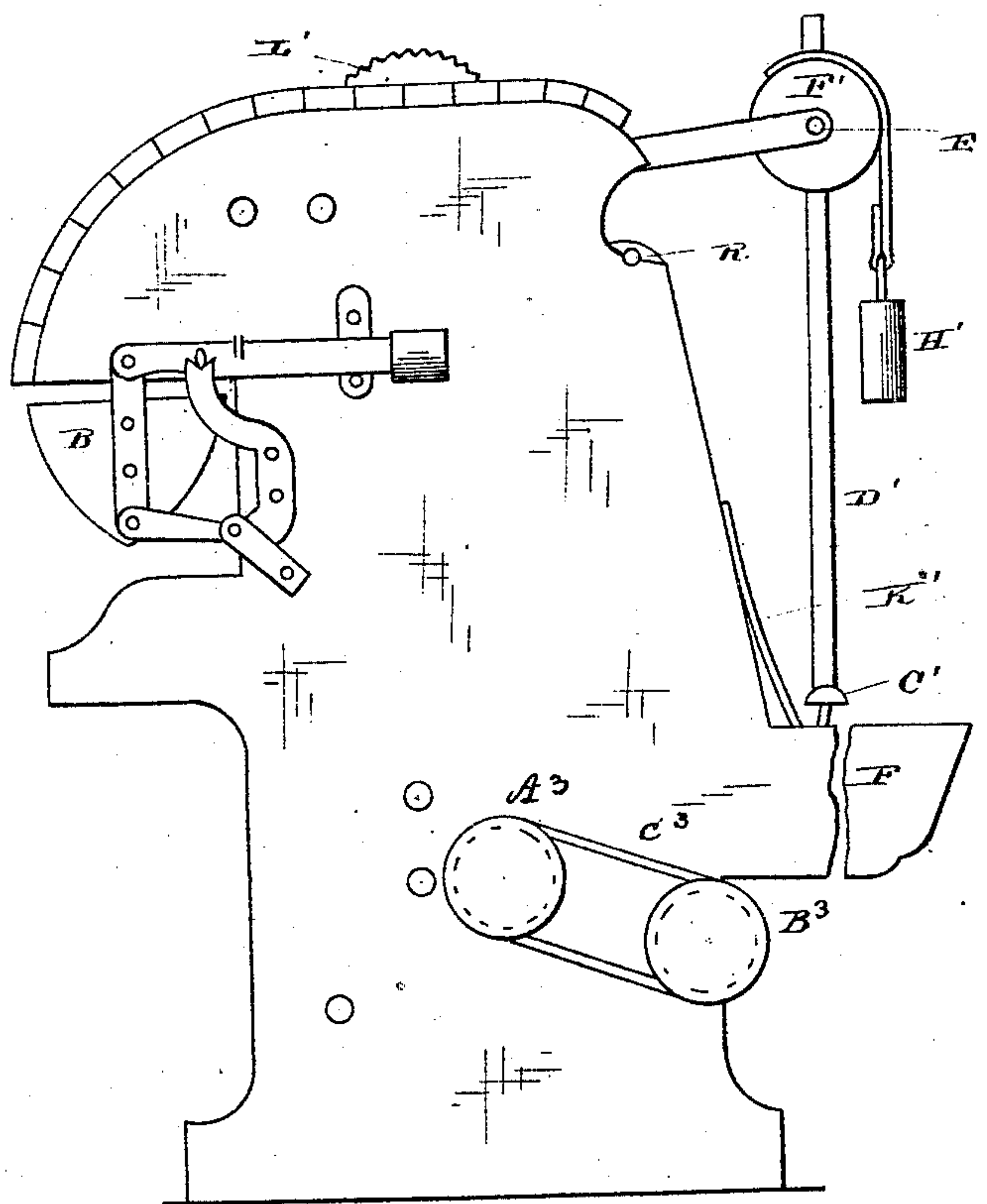
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Fig. 5.



Witnesses.

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# UNITED STATES PATENT OFFICE.

JOHN F. GEBHART, OF NEW ALBANY, INDIANA.

## FEEDING MECHANISM FOR CARDING-ENGINES.

SPECIFICATION forming part of Letters Patent No. 285,608, dated September 25, 1883.

Application filed March 17, 1882. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN F. GEBHART, of New Albany, in the county of Floyd, and in the State of Indiana, have invented certain  
5 new and useful Improvements in Feeding Mechanism for Carding-Engines; and I do hereby declare that the following is a full, clear, and exact description thereof, reference  
10 to the letters of reference marked thereon, making a part of this specification.

This invention relates to certain machines for carding wool and preparing it for the spinning-machines.

15 Heretofore great difficulty has been experienced in the use of this class of machines, owing to the fact that it has been impossible to secure even work at what is called the "first  
20 breaker-card," the said difficulties arising from the irregular quantities of wool fed to the same. Various plans have been invented to obviate the defects thus incurred; but none have successfully accomplished the object.  
25 Another difficulty has been experienced resulting from the fact that when mixed wools are being operated upon the long stock becomes separated from the heavy and short stock by the comb heretofore used to equalize  
30 the wool as it was carried by the toothed apron to the trough of the scales. A still further difficulty has been found from the fact that when the hopper contained more or less wool the toothed apron would carry more or less wool  
35 at different times to the scales, and thus deliver more or less surplus while the scales were being tripped.

My invention has for its object to obviate these objections; and it consists, first, in the combination, with the toothed apron, of a box  
40 or trough located at the rear of the apron, from which the wool is fed to the apron in uniform quantities, as more fully hereinafter specified; second, in the combination, with the toothed  
45 apron, of two toothed rollers located immediately back of the apron, and suitable mechanism for driving them, whereby the wool is distributed and fed to the apron, as more fully hereinafter set forth; third, in the combination,  
50 with the toothed apron and feed-trough, of an improved device for advancing the wool to the feed-rollers, as more fully hereinafter speci-

fied; fourth, in the combination, with the apron and feed mechanism, of an improved device for packing the wool on its way to the rollers, as more fully hereinafter specified; and, fifth, in  
55 the combination, with the apron and feed mechanism, of a stripper whereby the wool is prevented from lapping around the feed-roller.

In the drawings, Figure 1 represents a vertical sectional view of my improved apparatus. 60 Fig. 2 represents a side elevation of the same. Fig. 3 represents a vertical sectional view of a portion of my apparatus, showing a modification thereof; Fig. 4, a side elevation of such modification; and Fig. 5 indicates a side ele-  
65 vation of the side opposite that shown in Fig. 2.

The letter A indicates the frame of the apparatus, and B the scales thereof, which may be of the ordinary or any approved construction. 70

The letter C indicates the toothed apron, which is constructed, as usual, and arranged to travel on the rollers D E.

F indicates a horizontal trough located at the rear of the apron, and G H two toothed  
75 rollers journaled in suitable bearings in the frame of the apparatus. The shafts of the said rollers are provided with intergearing cog-wheels I K, which are driven by a cog-wheel, R', of the driving-shaft L, as seen in Fig. 2, 80  
whereby these rollers are rotated in opposite directions and made to distribute and feed the wool to the apron.

The letter M indicates a comb located in front of the upper toothed roller and secured 85 to the rods N, which are rigidly attached to the arms P of a shaft, R, arranged transversely of the machine. The said arms are provided with depending rods S, rigidly attached thereto, to the lower ends of which is secured a  
90 packer, T, arranged transversely of the machine, which serves to guide the wool to the toothed rollers and pack it on its passage thereto. The shaft R is provided with an arm, U, which connects, by means of a pit-  
95 man, V, with a wrist-pin, W, on a wheel, Y, which is driven by a belt, A', extending from a wheel, B', which derives its motion from the main driving mechanism of the apparatus  
100 through the medium of suitable mechanism, consisting of a pulley, A<sup>3</sup>, mounted upon the driving-shaft, a pulley, B<sup>3</sup>, arranged trans-



versely to the apparatus, and a connecting-belt, C<sup>3</sup>, so as to give a rocking movement to the shaft R and operate the packer and stripper.

5 The letter C' indicates a beam arranged transversely of the machine, provided with teeth on its lower edge and secured to the rods D', which depend from a rock-shaft, E'. The said shaft is provided with pulleys F', having straps  
10 G', secured to their peripheries, to which are secured the weights H', which tend to force the toothed bar forward and feed the wool to the toothed rollers.

The letter I' indicates a bell or alarm secured to the spring K', which is operated by the toothed beam striking said spring K' to sound an alarm when the wool in the trough is about to become exhausted and notify an attendant to feed in a fresh supply.

20 The letters L', M', and N' indicate the gearing, driven by a belt, P', passing over pulleys R<sup>2</sup> and S', by means of which motion is imparted to the upper apron-roller, D, and the roller N<sup>2</sup>, for delivering the wool to the scale-trough.

The operation of my invention will be readily understood in connection with the above description, and is as follows: The wool is placed in the trough in suitable quantities in  
30 front of the toothed beam by an attendant, who moves back said beam at that time to admit of said wool being placed therein. By the said beam it is pressed forward under the packer to the feed-rollers. From these it is distributed in uniform quantities to the toothed apron, which carries it up to the weighing devices.

In the modification shown in Fig. 3 the stripper is in the form of a toothed roller, indicated by the letter T', which is driven by gearing  
40 U', Fig. 4, so as to rotate above the upper toothed feed-roller and prevent the wool from lapping around said roller.

The teeth on the toothed feed-beam are arranged at an angle to the same, inclining forward, in order to pack the successive portions of the wool together and "splice" the same, instead of forming a vertical joint, and thus insure uniformity of the supply delivered to feed-rollers. When the beam C' and teeth F  
50 have fed the charge of wool or other material fully forward, it strikes the spring carrying the alarm-bell, thus notifying the attendant that another charge is necessary.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, 55 is—

1. The combination, with the toothed apron and the roller located near its upper end for assisting in delivering the wool to the scale, and the gears for rotating them in the same  
60 direction, of the toothed rollers located between the apron and a feed-trough, and the mechanism for operating them in opposite rotary directions, as described, whereby the wool is distributed and fed to the apron, the said  
65 mechanism consisting of the intergearing pinions on the ends of said rollers meshing with the main driving-shaft, substantially as set forth.

2. The combination, with the toothed apron  
70 and feed-trough, of the toothed beam and mechanism, as described, for advancing it against the wool to feed the same to the toothed rollers, substantially as specified.

3. The combination, with the apron and the  
75 oppositely-rotating toothed feed-rollers located closely thereto, of the feed-trough and packer mounted upon a rock-shaft and adapted to work in the trough, whereby the wool is packed as it passes to the toothed rollers and  
80 then fed to the apron, substantially as described.

4. In combination with the toothed beam, the feed-rollers and the apron, the stripper, whereby the wool is prevented from lapping  
85 round the upper roller and is fed uniformly to the apron, substantially as specified.

5. In combination with the oscillating toothed feed-beam and mechanism for moving it forward, the alarm adapted to be operated by the  
90 beam to indicate when the troughs need refilling, substantially as specified.

6. In combination with the trough, packer, and rollers, the oscillating beam provided with inclined teeth, adapted to advance the wool  
95 and splice the successive charges of wool, substantially as specified.

In testimony whereof I affix my signature, in presence of two witnesses, this 16th day of March, 1882.

J. F. GEBHART.

Witnesses:

J. J. MCCARTHY,  
CHAS. D. DAVIS.