

No. 884,336.

PATENTED APR. 7, 1908.

T. W. KIENAST.
FEEDING MECHANISM.
APPLICATION FILED JULY 22, 1907.

2 SHEETS—SHEET 1.

FIG. II.

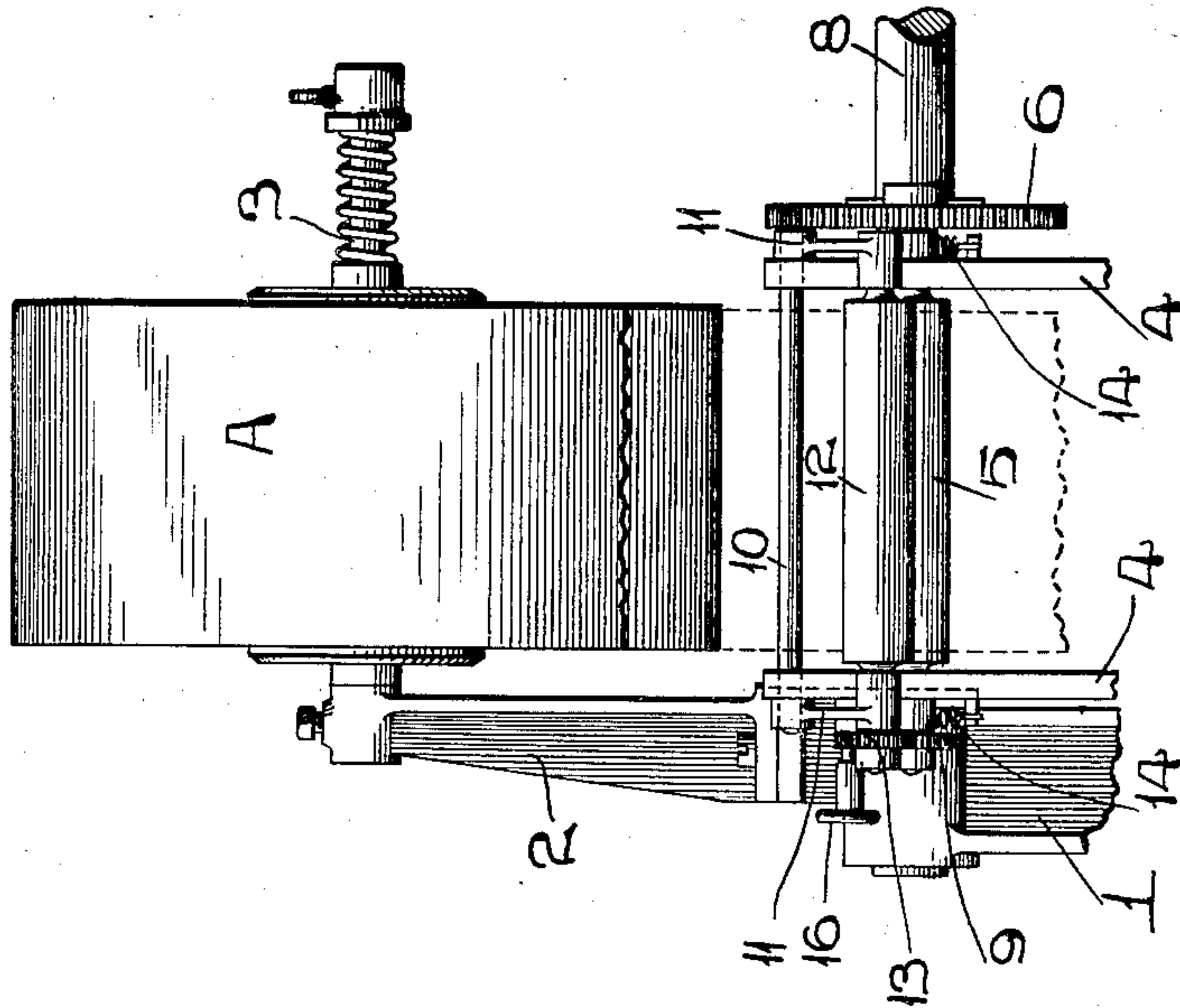
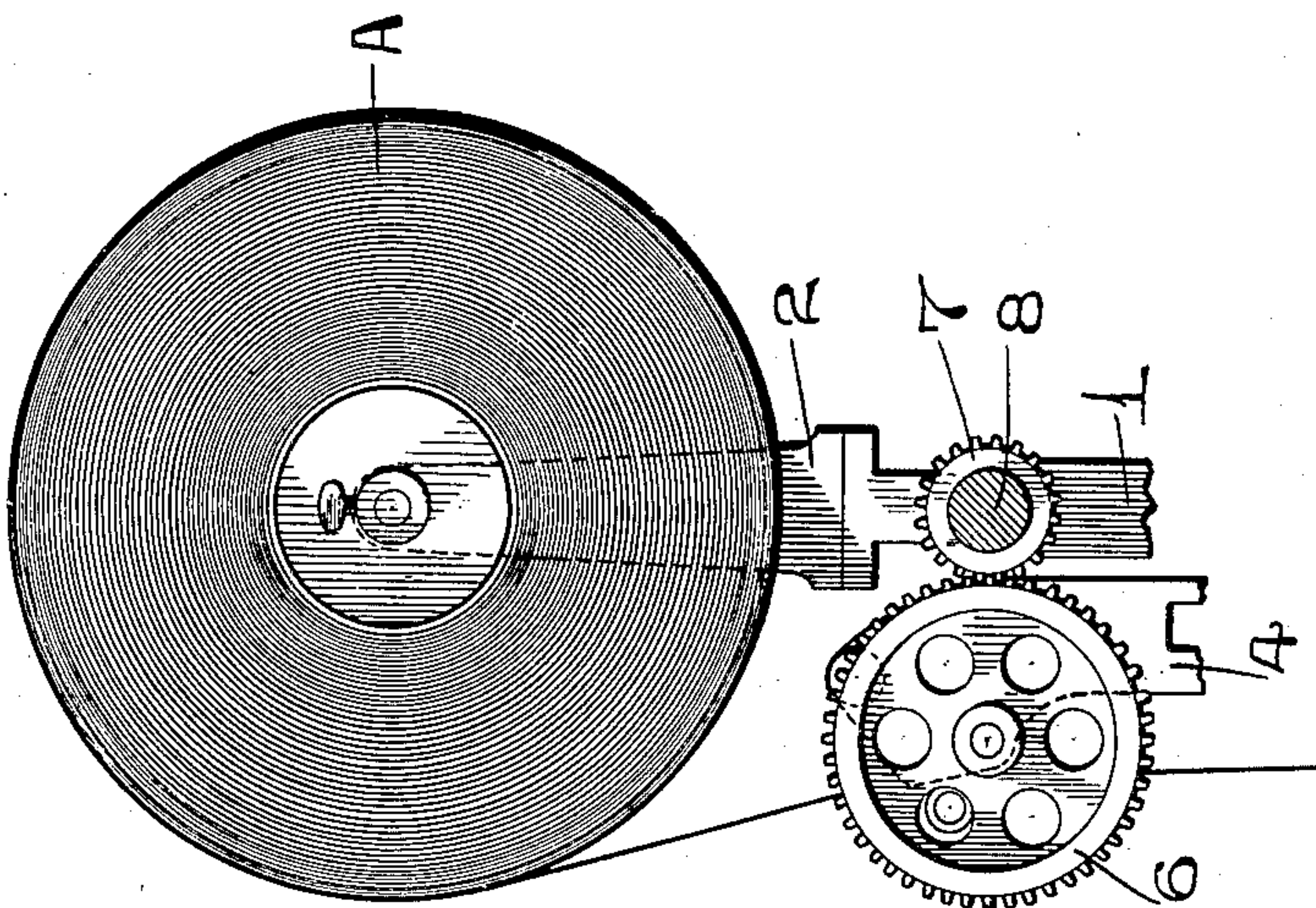


FIG. I.



ATTEST.

H. G. Fletcher.
Lily Rost

INVENTOR.
T. W. KIENAST.

By *H. G. Fletcher* ATT'Y.

No. 884,336.

PATENTED APR. 7, 1908.

T. W. KIENAST.
FEEDING MECHANISM.
APPLICATION FILED JULY 22, 1907.

2 SHEETS—SHEET 2.

FIG. III.

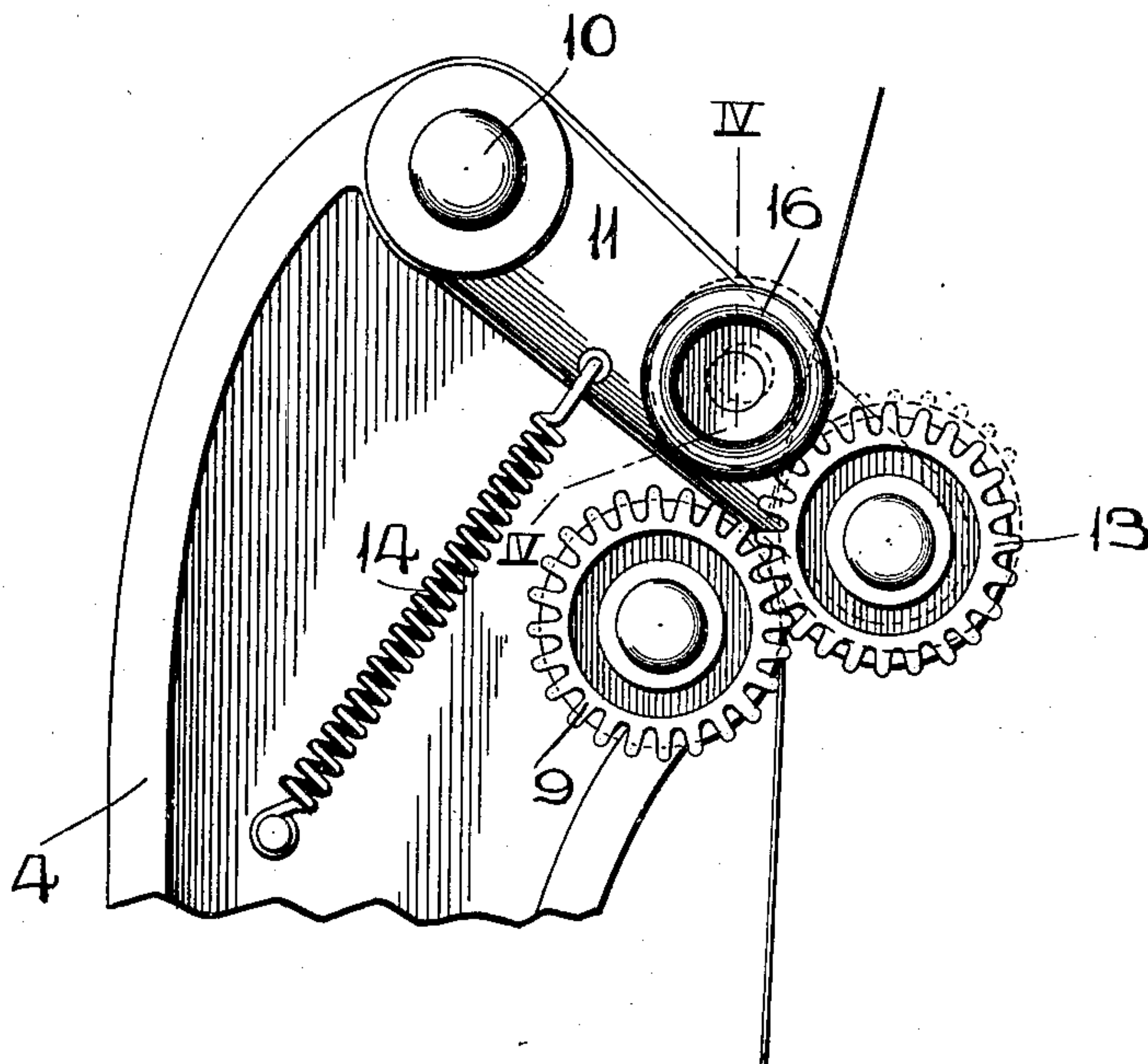
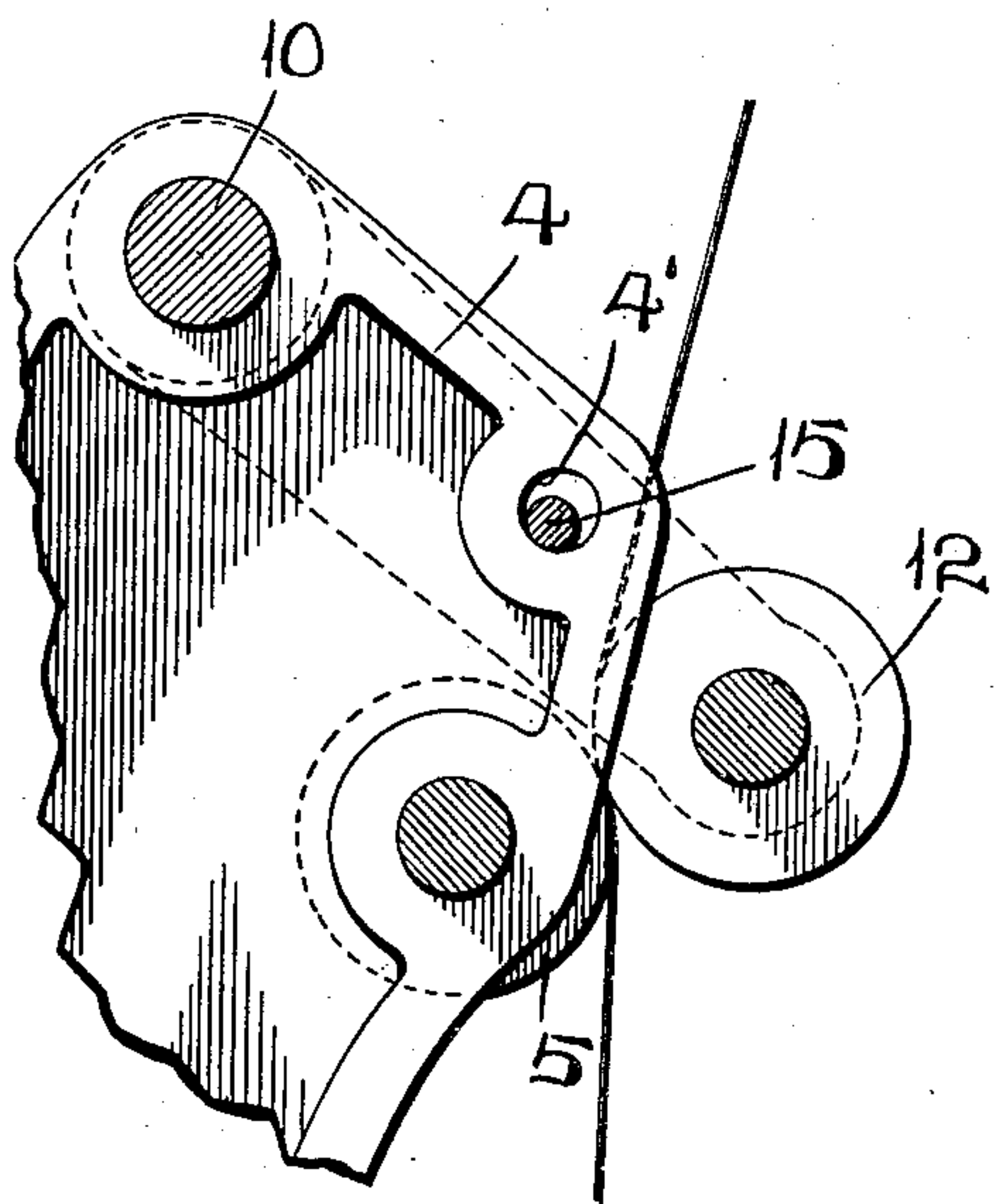
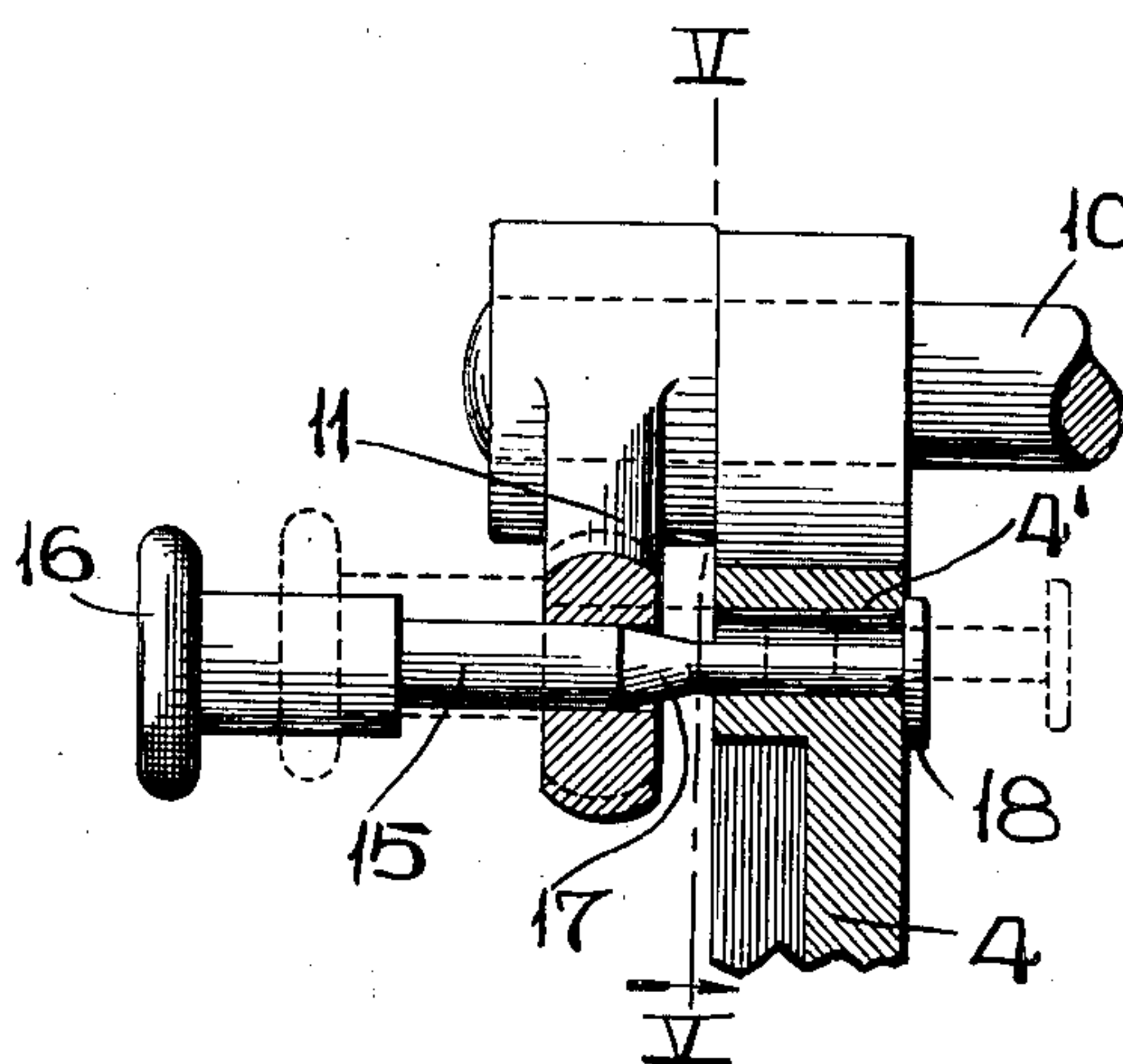


FIG. V.



ATTEST.
L. J. Fletcher.
Lily Rost

FIG. IV.



INVENTOR.
T. W. KIENAST.
BY *G. W. Knight* ATT'Y.

UNITED STATES PATENT OFFICE.

THOMAS WILLIAM KIENAST, OF NEW YORK, N. Y., ASSIGNOR TO SAMUEL CUPPLES ENVELOPE COMPANY, OF ST. LOUIS, MISSOURI, A CORPORATION.

FEEDING MECHANISM.

No. 884,336.

Specification of Letters Patent.

Patented April 7, 1908.

Original application filed December 27, 1906, Serial No. 349,618. Divided and this application filed July 22, 1907. Serial No. 384,899.

To all whom it may concern:

Be it known that I, THOMAS WILLIAM KIENAST, a citizen of the United States of America, residing in New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Feeding Mechanisms, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

My invention relates to a feeding mechanism designed for use in feeding strips or sheets of papers, such as those from which envelops are produced in envelop machines, the present application being a division from my application for Letters Patent of the United States, filed December 27th, 1906, No. 349618.

Figure I is a side elevation of my feeding mechanism with the power shaft shown in cross section. Fig. II is a rear elevation of the feeding mechanism. Fig. III is an enlarged elevation of the feeding mechanism viewed from the opposite side to that seen in Fig. I. Fig. IV is a vertical section taken on line IV—IV, Fig. III. Fig. V is a vertical cross section taken on line V—V, Fig. IV.

1 designates a part of the frame of a machine with which my feeding mechanism is to be used and which is surmounted by a post 2 that supports a spindle 3 on which is mounted a roll A of paper from which the web is to be drawn by the feeding mechanism to be described.

4 designates a pair of feed mechanism supporting members arranged parallel with each other and one of which is located adjacent to the frame part 1.

5 is a feed roller, the spindles of which are journaled in the supporting members 4, and to one of the spindles of which is fixed a spur wheel 6, (see Figs. I and II—) that is driven by a spur wheel 7 fixed to a drive shaft 8 that is mounted in the frame part 1 and any other suitable support and to which power may be communicated in any desirable manner. The spur wheel 6 coöperates with the spur wheel 7 for the purpose of driving the feed roller 5. Upon the spindle of the feed roller 5 at the end of said roller opposite to that to which the spur wheel 6 is applied, is a spur wheel 9 (see Figs. II and III).

10 designates a rock shaft mounted in the

supporting members 4, and 11 are hanger arms fixed to said rock shaft and having their free ends located in proximity to the spindles of the feed roller 5.

12 is a second feed roller having its spindles journaled in the hanger arms and which is adapted to be moved toward and away from the feed roller 5. The spindle of the feed roller 12 that is located at the end of said feed roller, corresponding to that which bears the spur wheel 9, has fixed to it a spur wheel 13 that is arranged in mesh with said spur wheel 9, thereby providing for the rotation of the second feed roller with the first named feed roller, but with the rollers rotating in opposite directions in order that the web of paper passed between the two rollers from the roll A will be withdrawn from said roll and fed to a desired point of delivery.

14 are tension springs that connect the hanger arms 11 to the supporting members 4 and which serve to provide the requisite degree of pressure upon the web of paper, while it is passing between the feed rollers.

It is very desirable in feeding mechanisms of the character of that described herein, to provide means whereby one of the feed rollers may be held separated from the other feed roller, while the web of paper is being passed between the rollers and carried to a point at which it is to be drawn upon or operated upon. In consideration of this fact, I utilize means for holding the feed roller 12 temporarily separated from the feed roller 5 and which I now describe.

15 is a lift pin that is slidably fitted in one of the hanger arms 11, and which is provided with a knob or handle 16. The shank of this lift pin has a conical portion 17 located intermediate of its ends and between it and the inner end of the pin the shank is reduced in diameter. The reduced portion of the shank of the pin is located in a pin hole 4' in the supporting member 4, adjacent to the arm in which the lift pin is mounted and in which the pin is held due to the existence of a stop button 18 at the inner end of the lift pin. When the lift pin is pressed inwardly from the position in which it is seen in full lines Fig. IV to the position seen in dotted lines in the same view, the conical portion 17 of the pin enters into the pin hole 4' thereby causing the hanger arm, in which the lift pin is fitted, to be lifted. As a result of the lifting

of said hanger arm, the rock shaft 10 is rotated, and both hanger arms attached to it move simultaneously to carry the feed roller 12 journaled therein, in a direction away from the opposing feed roller 5 and provide a clearance between the feed rollers, sufficient to permit the ready passage of the web of paper between the rollers. To permit the feed roller 12 to again assume its normal position and exert pressure upon the web of paper passed between the feed rollers, it is only necessary to draw the lift pin outwardly with the result of removing its conical portion from the pin hole 4' in the supporting member that contains it and the feed roller descends by gravity, or is caused to return to its normal position under the influence of the tension springs 14.

Claims:

1. A feeding mechanism of the character described, comprising a pair of feed rollers, hanger arms by which one of said feed rollers is supported, and a lift pin for holding the feed roller supported by said hanger arms, separated from the other feed roller to provide a clearance between the feed rollers while the object to be fed is being passed between them, substantially as set forth.

2. A feeding mechanism of the character described, comprising supporting members, a pair of feed rollers supported by said supporting members, hanger arms in which one

of said rollers is journaled, and a lift pin located in one of said hanger arms and adapted to be moved in the adjacent supporting member to move the hanger arm supported roller relative to the other roller, substantially as set forth.

3. A feeding mechanism of the character described, comprising supporting members, a pair of feed rollers, hanger arms in which one of said rollers is journaled, and a lift pin slidably fitted in one of said hanger arms and adapted to be moved in the adjacent supporting member to move the hanger arm supported roller relative to the other roller; said lift pin being provided with a conical portion, substantially as set forth.

4. A feeding mechanism of the character described, comprising supporting members, a pair of feed rollers, hanger arms in which one of said rollers is journaled, and a lift pin slidably fitted in one of said hanger arms and adapted to be moved in the adjacent supporting member to move the hanger arm supported roller relative to the other roller; said lift pin having a shank provided with a conical portion intermediate of its ends and terminating at its inner end in a stop button, substantially as set forth.

T. WILLIAM KIENAST.

In the presence of—

HOWARD C. H. CLUDGE,
HUBERT J. SNYDER.