

No. 848,558.

PATENTED MAR. 26, 1907.

N. A. KRAG & G. A. HANSEN.
POSTMARKING AND CANCELING MACHINE.

APPLICATION FILED OCT. 3, 1905.

2 SHEETS—SHEET 1.

Fig. 1.

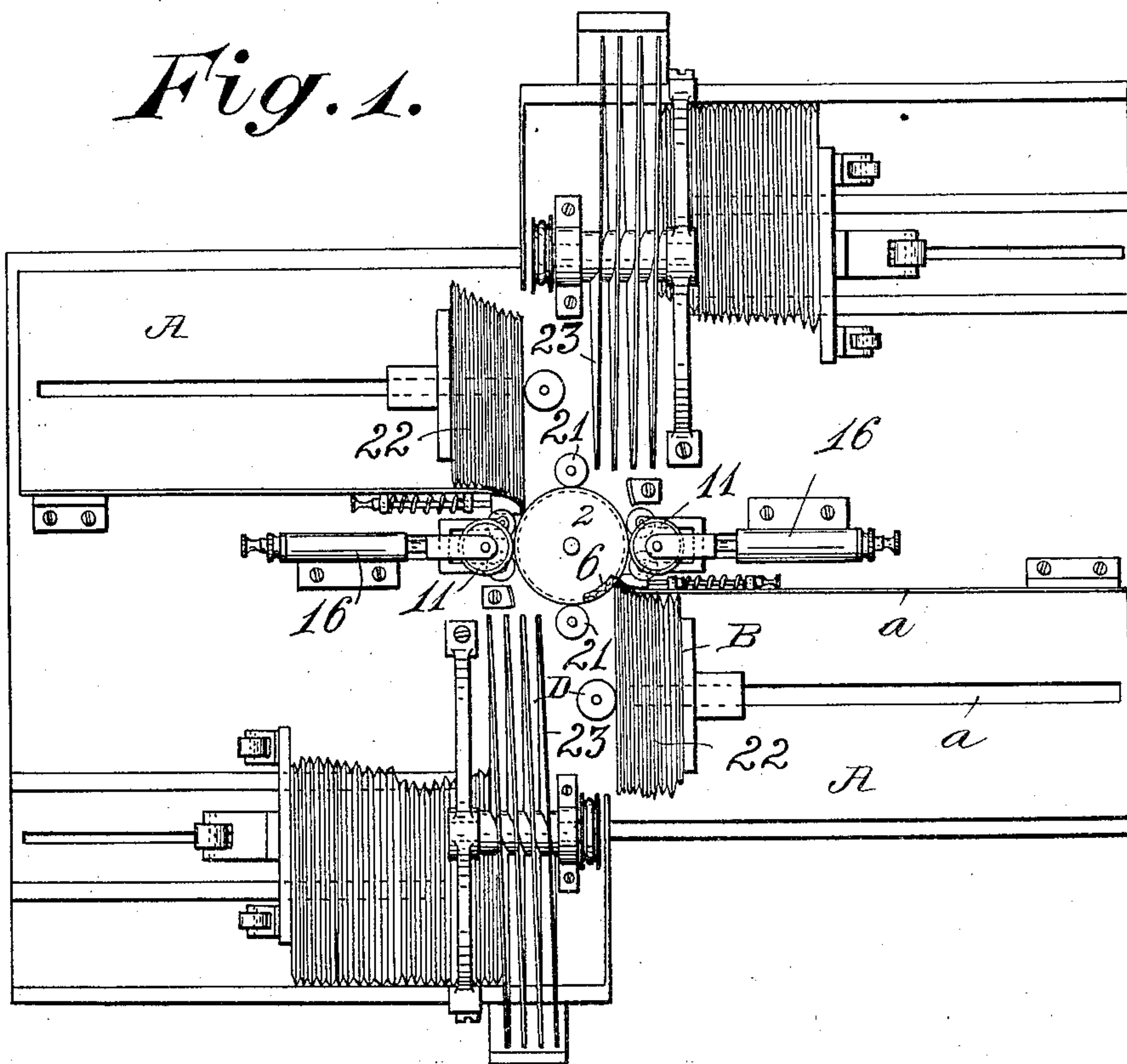


Fig. 2.

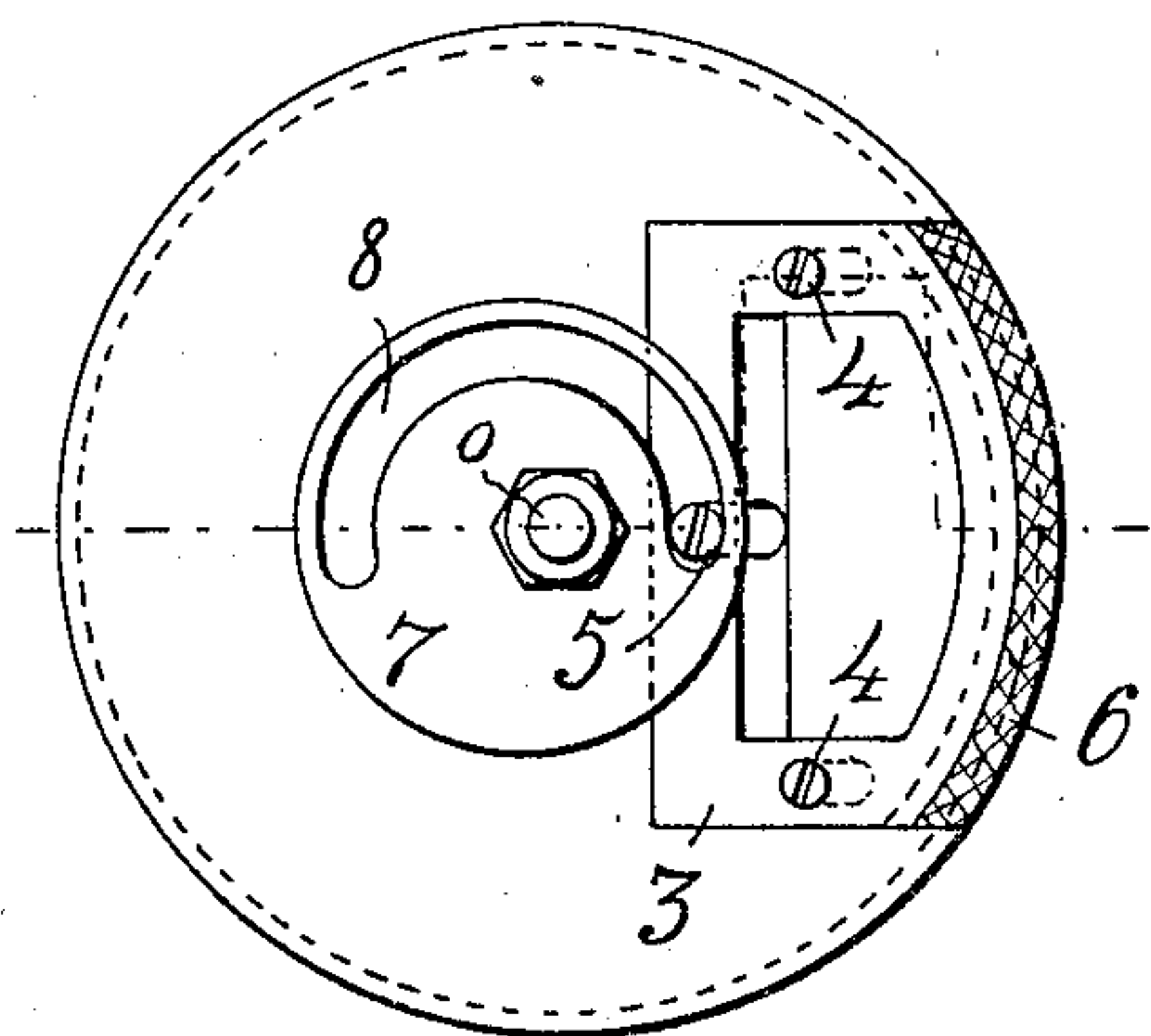
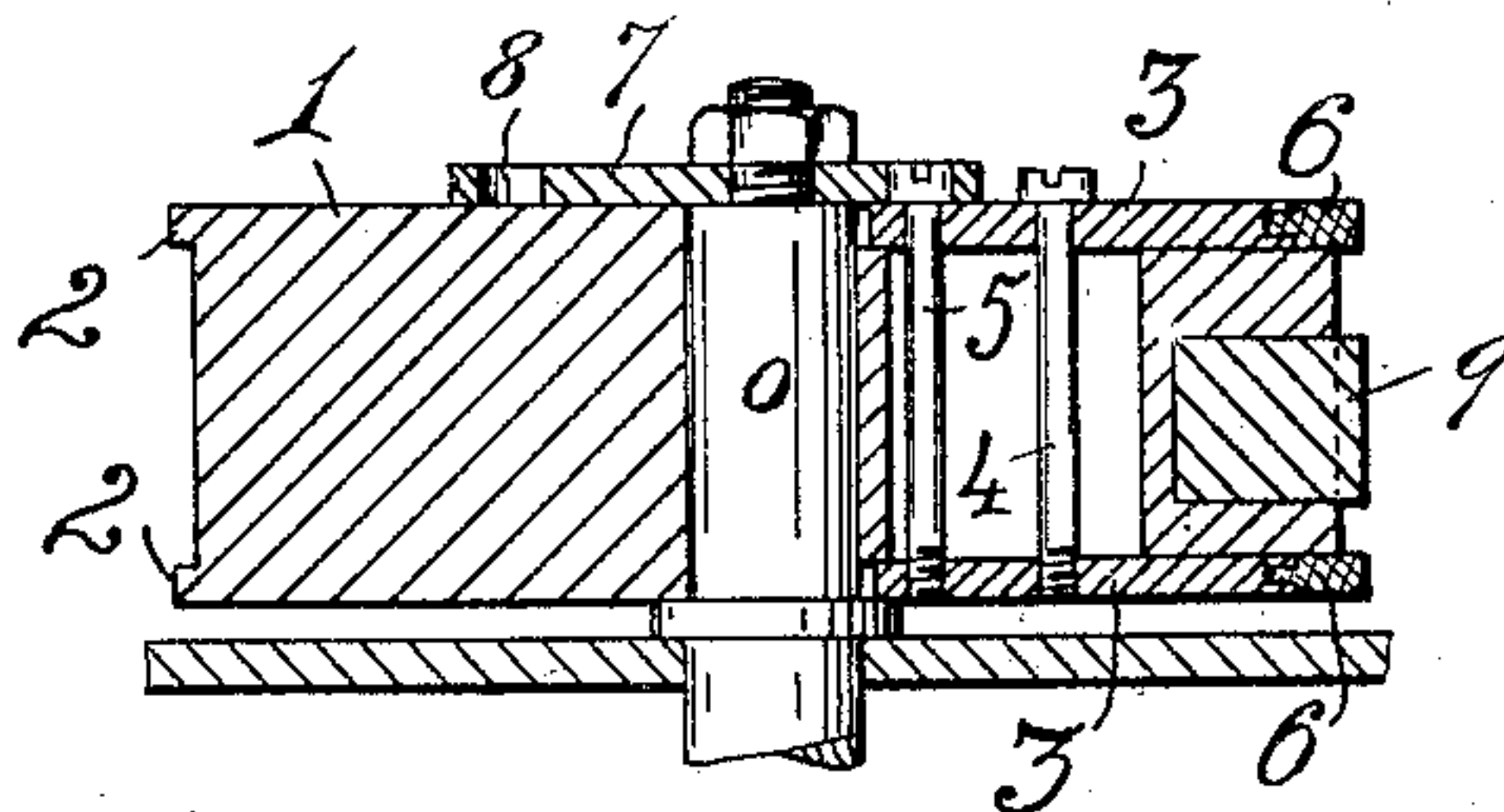


Fig. 3.



Witnesses.

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2 SHEETS—SHEET 2.

Fig. 5.

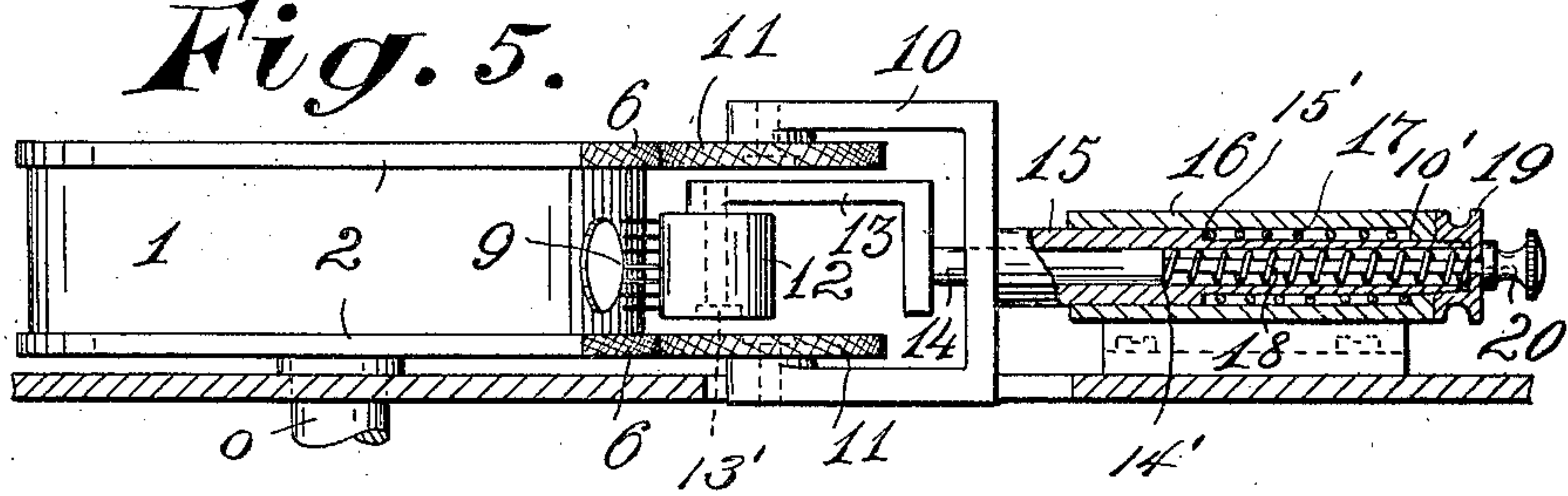


Fig. 4.

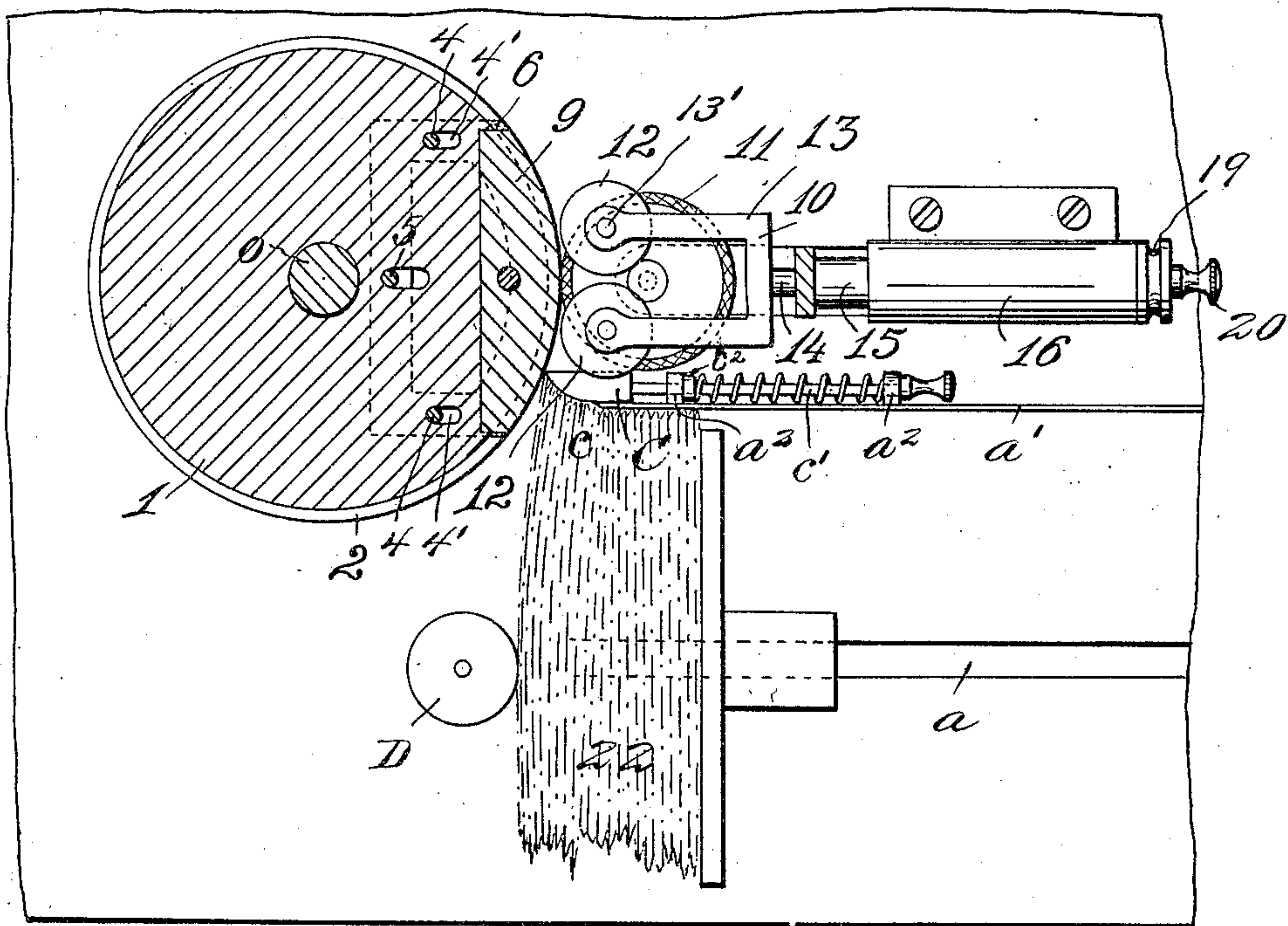
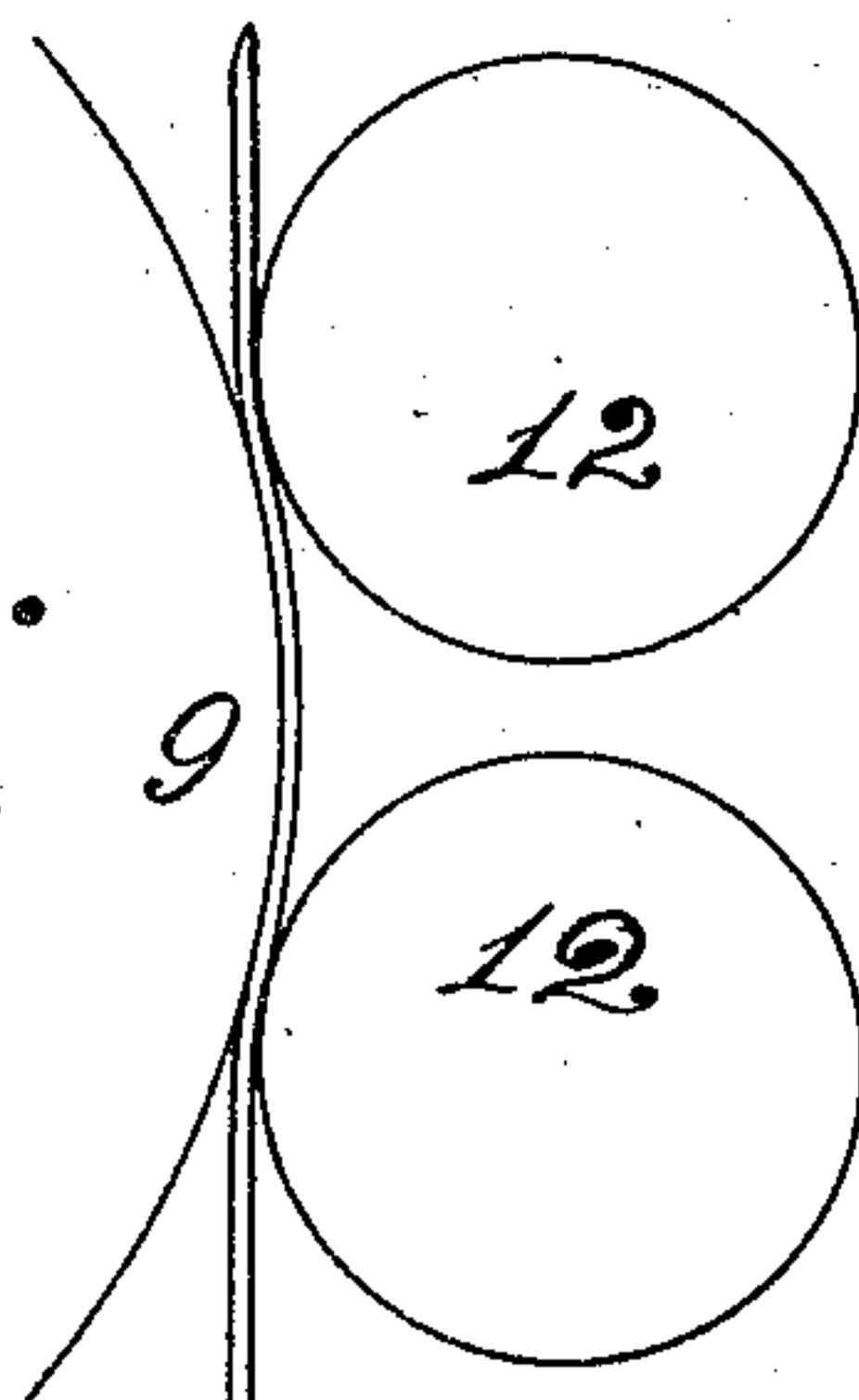


Fig. 4a.



Witnesses:

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UNITED STATES PATENT OFFICE.

NILS AALL KRAG AND GUSTAV ADOLF HANSEN, OF CHRISTIANIA, NORWAY.

POSTMARKING AND CANCELING MACHINE.

No. 848,558.

Specification of Letters Patent.

Patented March 26, 1907.

Application filed October 3, 1905. Serial No. 281,177.

To all whom it may concern:

Be it known that we, NILS AALL KRAG and GUSTAV ADOLF HANSEN, subjects of Norway, both residing at Christiania, Norway, have invented certain new and useful Improvements in Postmarking or Canceling Machines; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

This invention relates to a postmarking or canceling machine, and more especially to that type of machine in which the letters are fed to the stamping-die by means of a feed-roller exerting a pulling action on the letters, so that they, so to say, are "hauled" out from the magazine or feed-trough.

The object of the present invention is to provide means whereby the letters are fed to the stamping device in such way that the stamp is placed in the same position on all letters—that is to say, the same distance from one end of the letters whether they are long or short.

The invention also provides for a simplification of machines which use a feed-roller on a separate shaft placed in front of the stamping-roller by doing away with one roller.

The invention further provides an improved arrangement for pressing the letters into contact with the stamp or die to prevent ink from being carried over from the stamp onto the pressure-roll and from the latter onto the back of the letters.

The invention further comprises a duplex machine, and a very important feature of the machine consists in the means employed for feeding the letters so that the forward edge of each letter shall always have one and the same position relatively to the feed-roll and stamping-die.

In the accompanying drawings, Figure 1 is a plan view of a duplex-machine embodying the invention, showing the general arrangement. Fig. 2 is a top view, and Fig. 3 a vertical axial section, of the combined feed and stamping roller. Fig. 4 is a top view and partial horizontal section of the feeding and stamping mechanism. Fig. 4^a is a dia-

gram showing the coöperation of the stamping-roller and the two pressure-rollers; and Fig. 5 is an elevation of the stamping and feeding mechanism, showing some of the parts in vertical section.

The combined feeding and printing device comprises a roller 1 and two parallel disks 2 2, fixed on a shaft O, which latter is rotated by any suitable means. By the construction and operation of this device two stacks of letters may be fed thereto simultaneously, and for this purpose two magazines or feed-troughs A A are mounted so as to feed the letters from opposite directions, and the letters in the trough travel in a direction transverse to the plane of the letters. These troughs are preferably inclined so that the letters are fed forward by means of a gravity-operated weight B, guided in a slot *a* in the bottom of the trough. A vertical guide-wall *a'* on one side of the trough stands in such relation to the roller 1 that its lower end terminates near the periphery of the roller and at a point in the rear of its diameter drawn parallel to the guide-wall.

Means are provided to taper the end of the stack of letters before coming in contact with the roller and consists of a finger C, having a curved face *c*, against which the letters are carried by friction as they pass the end of the guide-wall *a'*. This finger is carried on a rod *c'*, mounted in bearings *a²* on the guide-wall *a'*, and is resiliently pressed toward the periphery of the roller by means of a spring *d*, surrounding the rod *c'* and abutting against a collar *c²* thereon and against one of the bearings *a²*. The forward movement of the rod is limited by the collar *c²* abutting against the forward bearing *a²*, and the collar is so positioned in relation to the end of the finger that the latter is not permitted to come into contact with the periphery of the roller, but is held very close thereto.

An idle roller D is centrally mounted at the lower end of the feed-trough and forms a central abutment for the letters therein. This roller in no way assists in feeding the letters from the trough, the feeding being accomplished entirely by the disks 2 2. The size of the latter is such that their circumference is somewhat greater than the length of the longest letter to be fed to the machine. Only a small portion of the disks is provided with gripping-surfaces adapted to feed or pull the letters from the trough. The re-

remaining portion serves simply as an abutment for the tapered end of the stack, this remaining portion being constructed, preferably, of polished steel. Consequently one letter only is fed or pulled from each trough at each rotation of the roll.

The gripping device is preferably made adjustable to allow for wear. It consists of two plates 3 3, mounted in seats formed in the upper and lower faces of the roller 1 and are held together by bolts 4 4, passing through slots 4' in the roller on each side of said seats. The outer-edges of these plates conform to the periphery of the disks 2 2, which are also recessed to receive them. A strip 6 of india-rubber is preferably mounted on the outer edges of said plates to insure an efficient gripping-face. A central bolt 5, passing through the inner edges of the plates 3, projects through a concentric slot 8, formed in a disk 7, mounted eccentrically on the shaft O, and by turning this disk the plate will be moved inwardly or outwardly, as desired.

A stamping or canceling die 9 is preferably mounted in any suitable manner between the two plates 3 3.

Two feed-disks 11 are mounted at opposite points and alongside each resilient finger C and engage both the upper and lower disks 2 on the roller 1, said disks 11 being also provided with india-rubber working edges. Each of these disks is, as clearly shown in Fig. 5, mounted to freely rotate in a forked holder 10, which latter is mounted on one end of a hollow rod 15, longitudinally movable in a bearing 16. A portion of the rod 15 is reduced, forming a shoulder 15', and this reduced portion is surrounded by a spring 17, which abuts against said shoulder and against a shoulder 10' at the end of the bearing. The rod 15 projects through the bearing and carries a thumb-nut 19, by means of which the tension of the spring 17 may be adjusted for the purpose of regulating the pressure of the disks 11 against the disks 2 2.

Within the hollow rod 15 is mounted a longitudinal and independently-movable rod 14, which carries a support consisting of two horizontal parallel arms 13 13, each of which carries a vertically-mounted spindle 13' of a pressure-roller 12. A portion of the rod 14 is reduced, forming a shoulder 14', and this reduced portion is surrounded by a spring 18, which abuts against said shoulder 14' and the thumb-nut 19. The rod 14 projects through the thumb-nut 19 and has a nut 20 thereon, by means of which the tension of the spring 18 is adjusted.

The rollers 12 12 do not contact with the face of the stamping-die, the nut 20 being so adjusted as to hold the rollers at a certain distance away from said face—say one thirty-second of an inch. No ink is therefore carried over from the stamping-die onto these

pressure-rollers. The latter will, nevertheless, press the letters close against the stamping-face of the die, because they will cause the letters to be bent around the roller 1 when passing between the three rollers, as shown in the diagram Fig. 4^a.

Inking-rollers 21 21 are mounted opposite one another and are of such length as to come between the disks 2 2 and will therefore come in contact with the stamping-die only, thus preventing the disks from being inked.

The operation of the machine is as follows: The letters (designated by 22) are fed along the troughs A A by the weights B, the abutments D arresting their progress past the desired point, and the forward edge of the first letter in each stack will abut against the periphery of the disks 2 2 and remain there until the gripping-plates 3 3 arrive at the point shown in Fig. 1. The rubber strips 6 will now grip the first letter and carry it along a short distance, when it is engaged by the pressure-rolls 12 12 and pressed into contact with the printing-die 9 directly under the gripping-surfaces. The two disks 11 11 cooperate with the strips 6 6 and also with the disks 2 2 on the roller 1 and insure the passage of the letters into the assembling-screws 23, which operate in the well-known manner. The friction between the letters will cause those near the end of the stack in the feed-trough to be carried over against the curved face of the finger C, and thus taper the end of the stack so that only one letter at a time can be engaged by the extreme end of the finger.

It will readily be understood that the machine will operate singly equally as well as double. Such duplex machines may be worked by one operator, and as the operative parts are not exposed to more wear than in a single machine it will be very economical and a time and labor saving machine.

We claim—

1. In a postmarking and stamp-canceling machine, a rotatable feed member having a part of its periphery composed of a non-friction material and a part of its periphery composed of friction material, said parts having the same radius, means to feed a letter-stack in a direction transverse to the plane of the letters to present the forward edge of the forward letter to the periphery of said feed member at a point of the latter in rear of a diameter drawn at right angles to the plane of the letters in the stack, and a resilient finger mounted at said point, capable of a movement to and from the periphery of the feed member without coming into contact with the latter.

2. In a postmarking and stamp-canceling machine, a rotatable feed member, a stamping element mounted on the same shaft as the said feed member but in another axial plane, means to present the forward edge of a

letter to said feed member, and a resilient finger mounted so as to be capable of a movement to and from the periphery of the feed member without coming into contact with the latter.

3. In a postmarking and stamp-canceling machine, a rotatable feed member having part of its periphery composed of a non-friction material and part of its periphery composed of friction material, means to feed a letter-stack in a direction transverse to the plane of the letters to present the forward edge of the forward letter directly to the periphery of the said feed member at a point of the latter in rear of a diameter drawn at right angles to the plane of the letters in the stack, and means to taper the end of the stack adjacent to the feed member.

4. In a postmarking and stamp-canceling machine, a rotatable feed member composed of two parallel disks placed on the same shaft, said disks having part of their periphery composed of a non-friction material and part of their periphery composed of friction material, a stamping element mounted on the same shaft as the said feed member between the said disks, and means to present the forward edge of a letter to said feed member.

5. In a postmarking and canceling machine, a feed member composed of two disks mounted on a shaft at a certain distance from each other, a free roller in coöperation with each of said disks and means to press the free roller yieldingly against the periphery of the said disks, a stamping member mounted on the same shaft as the said disks between the latter, two free rollers in coöperation with the stamping member, said free rollers having parallel axes and means to hold said rollers at a certain distance from the face of the stamping element and exert a yielding resistance when pressed outwardly.

6. In a postmarking and canceling machine, the combination with a rotary stamping member and an inking device, of means to press a letter in contact with the stamping-face, said means consisting of two resilient rollers having parallel axes, and means to hold the rollers at a certain distance from the face of the stamping member.

7. A duplex postmarking and stamp-canceling machine having one rotating feed member, one rotating stamping member, two sets of free rollers at two opposite points of the rotating feed member and two assembling screws.

8. In a postmarking and stamp-canceling machine, a rotatable member composed of a plurality of recessed parallel disks composed of a non-frictional material, a frictional portion adjustably mounted in said recess, and stamping elements carried by the adjustable portion.

9. In a duplex postmarking and stamp-canceling machine, a rotating feed member,

and means adapted to present letters at diametrically opposite points of the feed member.

10. In a duplex postmarking and stamp-canceling machine, a rotating member, means adapted to present letters at diametrically opposite points of the rotating member, and a gripping device carried by the rotating member adapted to consecutively engage letters at the different points.

11. In a duplex postmarking and stamp-canceling machine, a rotating member, feed-troughs adapted to present letters at different points of the rotating member, gripping devices on the latter, and a stamping member carried by the rotating member.

12. In a duplex postmarking and stamp-canceling machine, a rotating feed member, feed-troughs adapted to present letters at different points of the latter, a stamping member on the feed member, pressure-rolls adapted to coöperate with the stamping member at different points of the feed member.

13. In a duplex postmarking and stamp-canceling machine, a rotating feed member, feed-troughs adapted to present letters at different points of the feed member, a stamping member on the latter, pressure devices adapted to coöperate with the stamping member at different points of the feed member, and pressure-disks adapted to coöperate with the feed member at different points thereof.

14. In a duplex postmarking and stamp-canceling machine, a rotating feed member, feed-troughs adapted to present letters at different points of the feed member, a stamping member on the latter, means at different points of the feed member to ink the stamping member, pressure-rolls adapted to coöperate with the stamping member at different points of the feed member, and pressure-disks adapted to coöperate with the latter at different points.

15. In a postmarking and stamp-canceling machine, a rotatable shaft, a plurality of recessed parallel disks mounted thereon having non-frictional peripheries, a plate having a frictional periphery mounted in the recessed portion of each disk, means for connecting said plates, means to adjust the latter in the recesses and a stamping member mounted on the plates.

16. In a postmarking and stamp-canceling machine, a rotatable shaft, a roller mounted thereon, a disk having a recess formed in its periphery mounted on each side of the roller, a plate adjustably mounted in said recess, a disk pivoted eccentrically on the shaft having an arcuate slot therein, and a connecting member for the plates projecting through the slots.

17. In a postmarking and stamp-canceling machine, a rotatable shaft, a roller mounted

thereon, having seats formed therein, a disk mounted on each side of the roller and having a recess registering with the seats, plates adjustable in the recesses, a disk pivoted eccentrically on the shaft having an arcuate slot therein, a bolt connecting the plates projecting through the slot, and a stamping-die mounted between the plates.

18. In a postmarking and stamp-canceling machine, the combination with a feedway and the guide-wall thereof, of a roller having its periphery projecting in rear of the guide-wall, a non-frictional member on said roller to arrest the passage of the letters in one direction, a frictional member to grip and carry the letters at right angles to their path of travel in the feedway and a stamping member carried by the roller.

19. In a postmarking and stamp-canceling machine, the combination with a feedway, of a rotatable feed member at the delivery end of the latter having a non-frictional portion to arrest the passage of the letters in one direction and a frictional portion to grip and carry the letters at right angles to their path of travel in the feedway, and a resiliently-mounted finger cooperating with said feed member.

In testimony that we claim the foregoing as our invention we have signed our names in presence of two subscribing witnesses.

NILS AALL KRAG.

GUSTAV ADOLF HANSEN.

Witnesses:

HENRY BORDENWICH,
MICHAEL ALGER.