

F. D. BELKNAP.  
CARD TYPE WRITING MACHINE.  
APPLICATION FILED OCT. 5, 1908.

960,252.

Patented June 7, 1910.

Fig. 1.

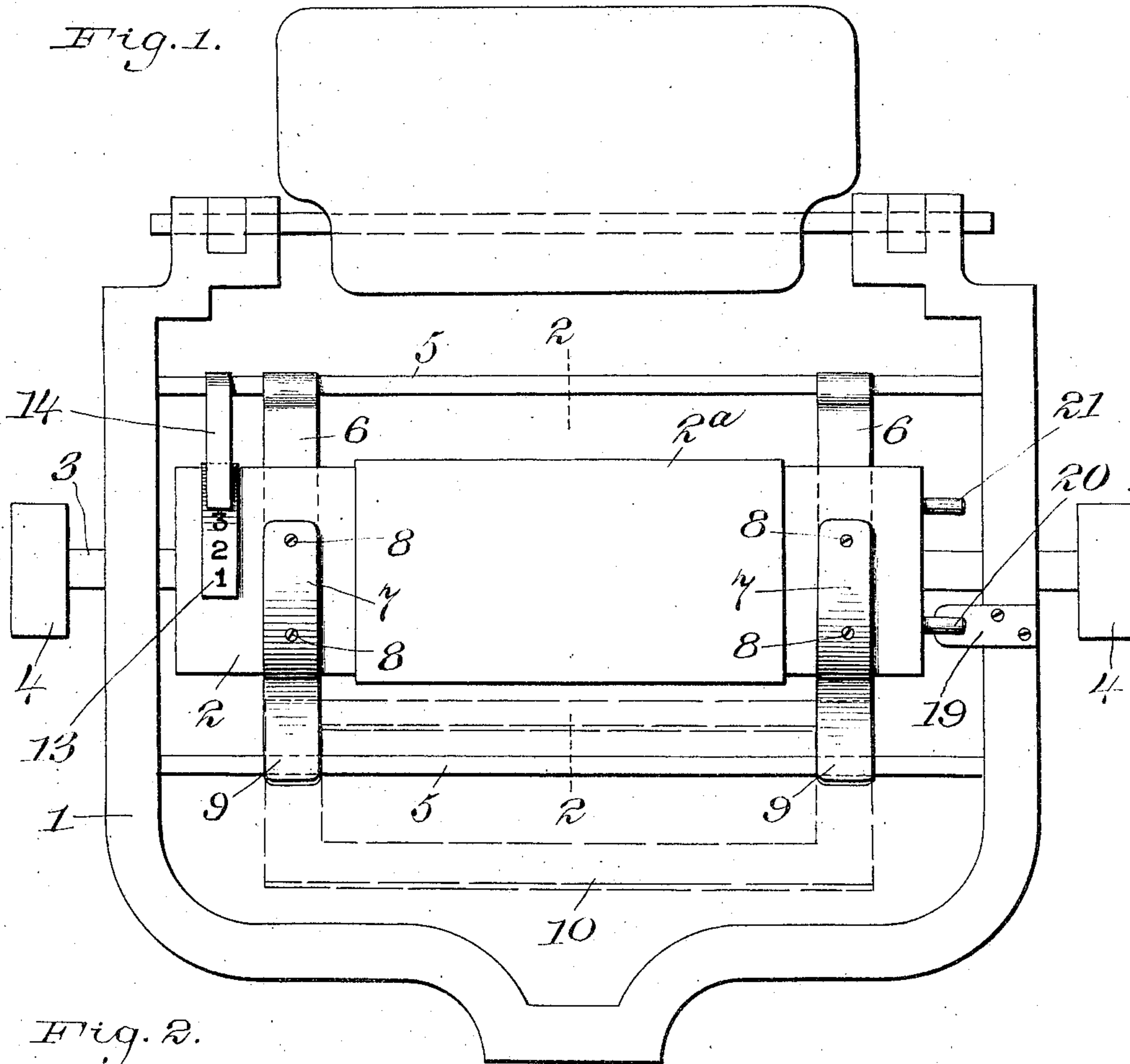


Fig. 2.

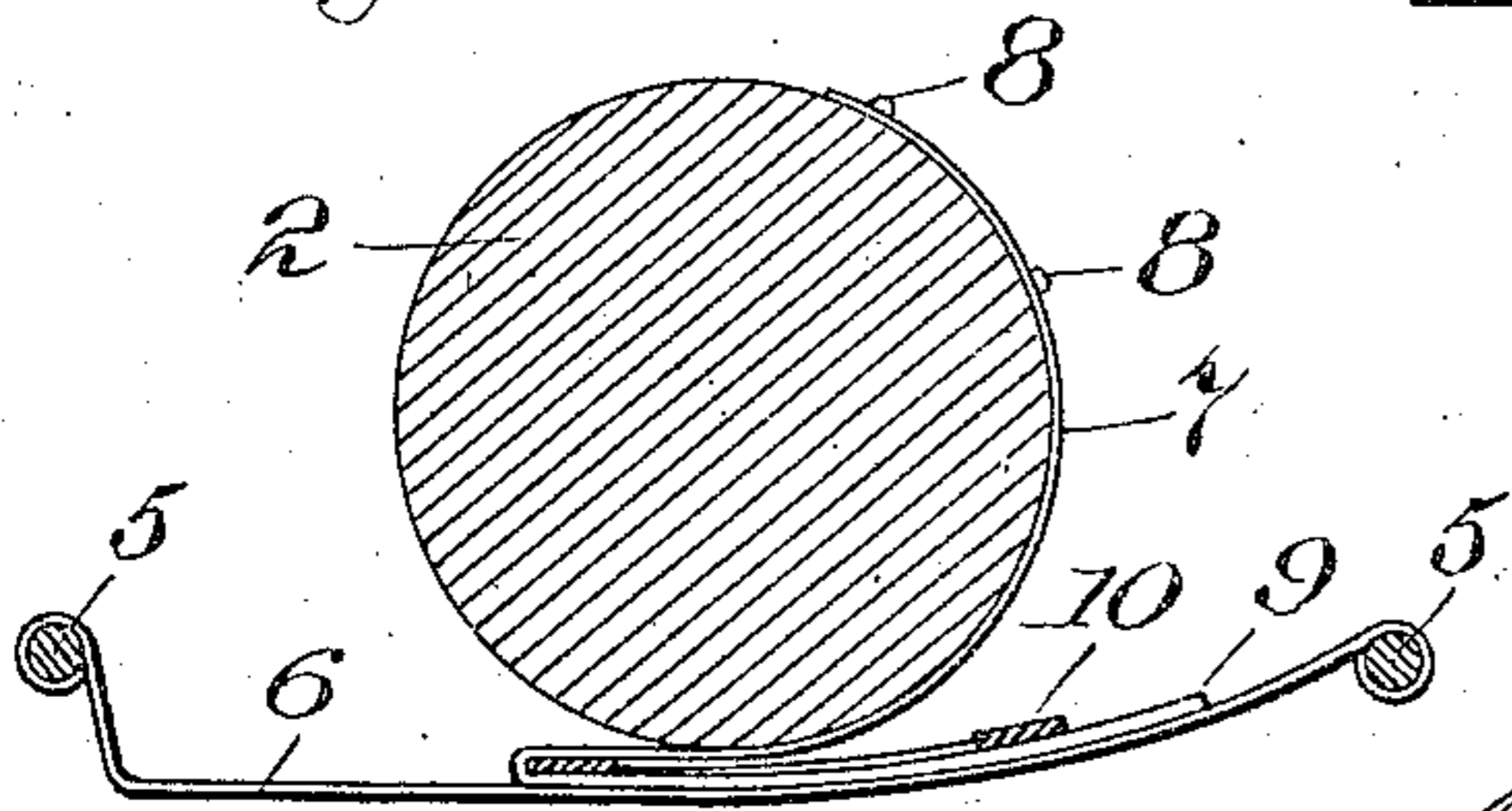


Fig. 3.

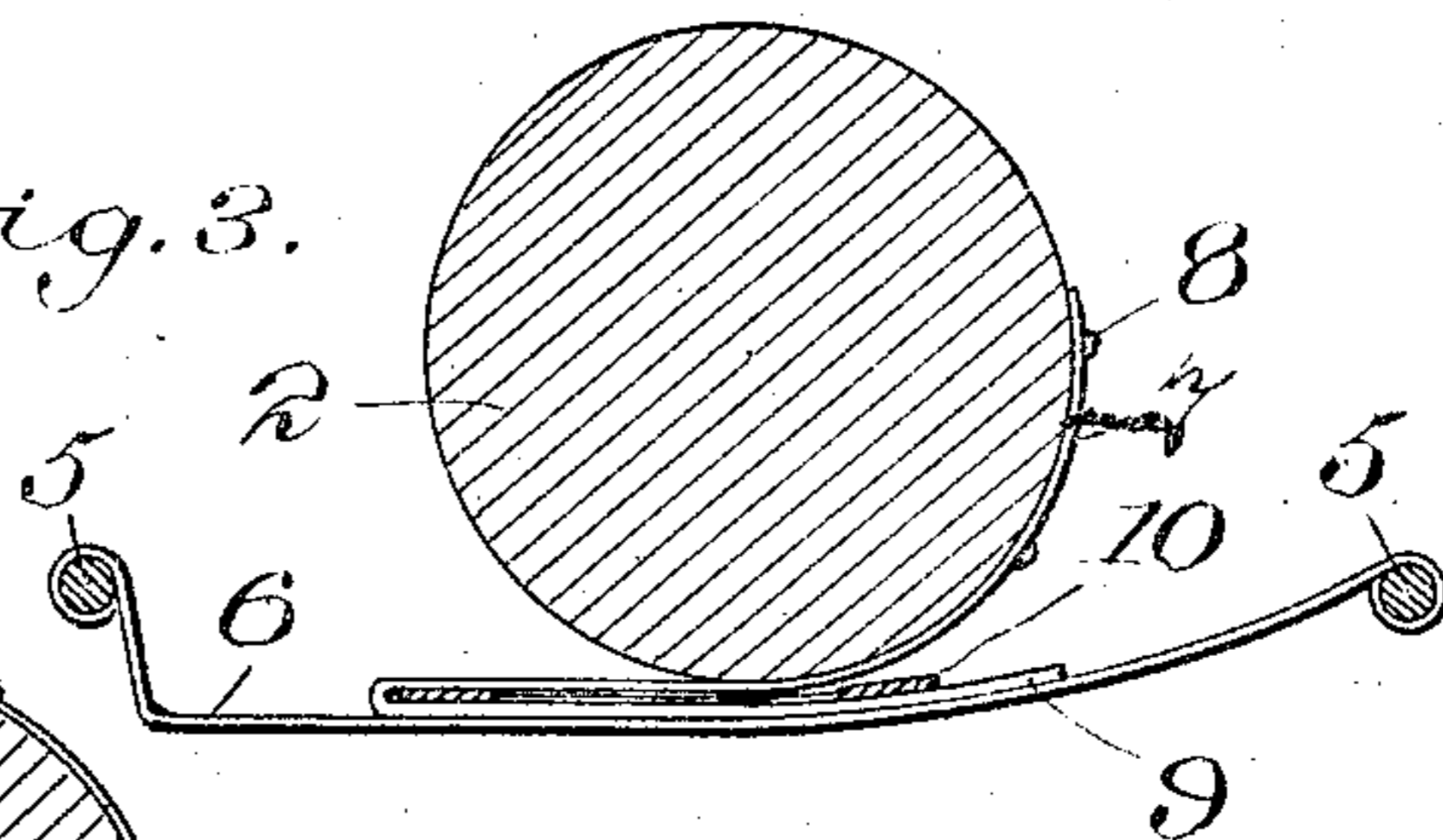
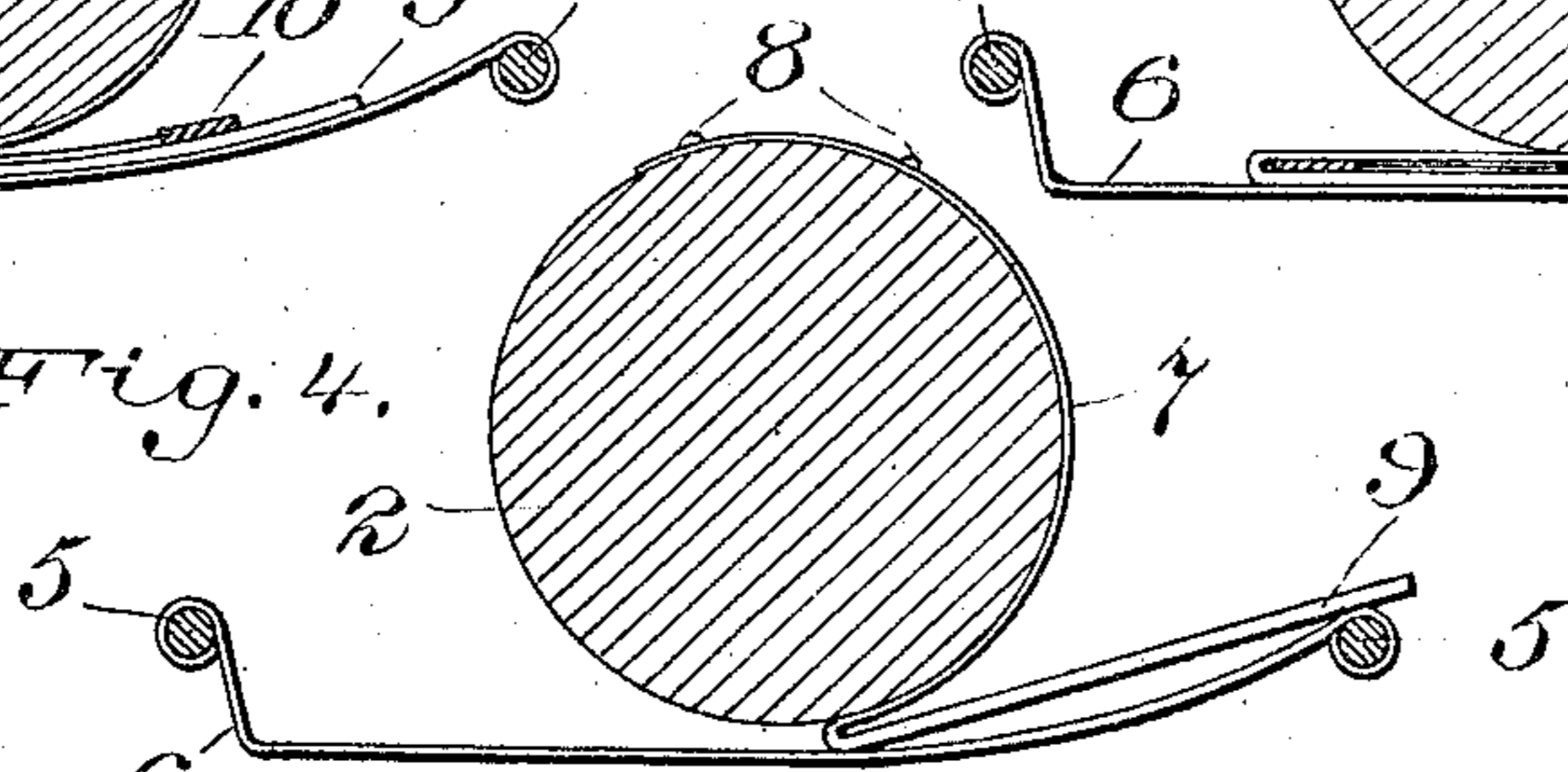


Fig. 4.



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# UNITED STATES PATENT OFFICE.

FRANK DRAYTON BELKNAP, OF NEW YORK, N. Y.

## CARD-TYPE-WRITING MACHINE.

960,252.

Specification of Letters Patent.

Patented June 7, 1910.

Application filed October 5, 1908. Serial No. 456,309.

To all whom it may concern:

Be it known that I, FRANK DRAYTON BELKNAP, a citizen of the United States of America, and a resident of the borough of Manhattan, city, county, and State of New York, have invented certain new and useful Improvements in Card-Type-Writing Machines, of which the following is a specification.

10 My invention relates to typewriting machines in general and more particularly consists of improved apparatus for facilitating the writing with regularity upon predetermined portions of cards or small strips of paper.

15 In certain types of addressing machines it becomes necessary to write in perforated letters upon a card or strip of parchment, or to write on cards formed of waxed paper, and, in order that such cards or strips of parchment shall perform their proper function in the addressing machine, it is important that the writing shall always be located at the same place on each card and that the cards shall be fed to the machine in a flat or nearly flat condition and shall be delivered after stenciling or printing by the machine in the same condition. It is difficult, if not impossible, with the ordinary typewriting machine feeding device to secure this accuracy, and the apparatus designed to hold the paper in position on an ordinary typewriting machine does not lend itself readily to the proper holding of such cards or small strips of paper or parchment. I have invented certain attachments for the standard typewriting machine which overcome these difficulties and perfected the same after long experimental use.

40 Apparatus embodying the preferred form of the invention at present known to me is illustrated in the accompanying sheet of drawing in which,

45 Figure 1 is a plan view of the platen and platen supporting carriage with attachments. Fig. 2 is a detail cross section on line 2—2 of Fig. 1, showing a card in position for writing the first line of the address on it. Fig. 3 is a similar view showing the card in position for writing the last line on it, and Fig. 4 is a detail view showing the clamp in open position ready to receive the card.

Throughout the drawings like reference figures indicate like parts.

55 1 represents the ordinary carriage of a typewriting machine, and 2 is the platen for

feeding and supporting the paper which may preferably be provided with a pad 2<sup>a</sup> for use in combination with the perforating type if such type is employed. This platen 60 is mounted on a shaft 3, journaled in carriage 1, and said shaft may be turned by means of the buttons 4, 4, on its ends.

5, 5, are bars extending across the carriage from which are supported strips of metal 6, 6, sometimes slightly curved as shown, which serve as guides to throw the card holding clamps into operation. The card holding clamp consists of a V-shaped spring, or piece of metal, one leg of which 7, is held against the platen, being fastened at its outer end, as by rivets or screws 8, 8, to said platen. The other leg 9, of the V-shaped spring, normally extends outward, as shown in Fig. 4, so as to leave an open space in which the card 10, or strip of paper may be inserted. This leg 9 is preferably reinforced or made of extra thickness so as to give it greater stiffness than the curved leg 7.

13 is a register in the shape of a strip arranged circumferentially of one end of the platen and marked with suitable divisions or numbers 1, 2, 3, as shown in Fig. 1. This register coöperates with the pointer 14, which, as shown, also acts to cover up such portion of the register as may be below it.

19 is a stop or projection on the carriage 1, and 20 and 21 are projecting pins on the end of the platen 2, which coöperates with the stop 19, to limit the movement of the platen in either direction.

The mode of operation of my invention is as follows: Normally, the platen is in the position shown in Fig. 4, which means that the stop 21 is in contact with the projection 19, and the card to be perforated or otherwise written upon is inserted by being dropped into the open clamp or clamps, as indicated in Fig. 1 in broken lines. On turning the platen by means of the buttons 4, 4, the card will be drawn down in front of and under the platen and the spring clamp caused to grasp the same by the action of the guide 6, which forces the leg 9 of the clamp to travel in approximately a straight line tangent to the circumference of the platen while the flexible leg 7 partly unwinds and extends its unwound portion in a similar tangent to the circumference of the platen. The greater stiffness of the leg 9 prevents its inner end from being bent.

upward by the action of the curved leg 7, and compels said curved leg to straighten out as shown in Figs. 2 and 3. This keeps the card 10 flat throughout the operation while holding it firmly in position for printing. When the figure "1" or the first division of the register, appears at the end of the pointer 14, the name of the person being addressed may be written upon the first line of the card. Further rotation of the platen so as to expose the figure "2" of the register to view, will indicate that the card is in position for the second line, such as the street address to be written. The next partial rotation sufficient to disclose the figure "3" as shown in Fig. 1 of the drawings, will bring the card to the last position shown in Fig. 3, after which the last line or city address may be written. This means that the stop 20 has come down upon the top of the projection 19, and further rotation of the platen is impossible. By reversing the rotation of the platen, it is brought back into the position shown in Fig. 4, and the card may be picked out.

The guide 6 is made slightly arc-shaped and has a radius of curvature which is much greater than the radius of curvature of the platen 2. This slight curvature and dropped portion at the back of the machine is made necessary by the height of the bars 5, 5. If these bars were lowered, the guide 6 could be straightened correspondingly. This approximately straight tangential location of guides 6, 6, permits the clamps to open when the platen is in the position shown in Fig. 4. Furthermore, this shaping of the guide permits the clamp holding the card to run out along the guide without much curvature, as shown in Fig. 3. This saves the card from being bent while in the machine. As these cards are filed in magazines, it is important that they should not be bent. As they are in some cases to be used in addressing machines having straight guide passageways adapted to operate upon flat cards, it is also particularly important for this reason that the cards are not bent by the typewriting machine.

It is evident, of course, that various changes could be made in the details of construction illustrated and described without departing from the spirit and scope of my invention as above explained.

Having therefore, described my invention, I claim:

1. In a typewriting machine, the combination with the platen of a clamping device for holding the paper in a predetermined position on said platen, said clamping device comprising a V-shaped spring, one leg of

which is fastened to the platen, together with a guide mounted on the platen supporting carriage, which guide compresses said spring when the paper is in position to be struck by the type.

2. In a typewriting machine, the combination with the platen of a clamping device for holding the paper in a predetermined position on said platen, said clamping device comprising a V-shaped spring, one leg of which is fastened to the platen, together with an approximately tangential guide strip, said strip being mounted on the carriage in line with the V-shaped spring and in contact with the same.

3. In a typewriting machine, the combination with the platen of a clamping device for holding a card in a predetermined position on the platen, said clamp comprising a spring portion curved to the circumference of the platen and a stiffer portion tangential thereto, together with a tangentially arranged guide for said stiffer portion.

4. In a typewriting machine, the combination with the platen of a clamping device for holding a card in a predetermined position on the platen, said clamp comprising a spring portion curved to the circumference of the platen and a stiffer portion tangential thereto, the clamp being attached to the platen only at the outer end of the curved spring portion.

5. In a typewriting machine, the combination with the platen of a clamping device for holding a card in a predetermined position on the platen, said clamp comprising a spring portion curved to the circumference of the platen and a stiffer portion tangential thereto the clamp being attached to the platen only at the outer end of the curved spring portion, together with a tangentially arranged guide for said stiffer portion.

6. In a typewriting machine, the combination with the platen, of a clamping device for holding a card flat while being fed tangentially to said platen, said clamp comprising a spring portion curved to the circumference of the platen and fastened thereto at one end only, a stiffer straight portion connected to the curved portion at the free end of the latter and tangential thereto and to the platen when in position, and means for causing the straight portion to travel in substantially a straight line tangential to the platen as the platen revolves.

Signed at New York, N. Y. this 1 day of Oct. 1908.

FRANK DRAYTON BELKNAP.

Witnesses:

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SAMUEL WEINBERG.