

No. 662,230.

Patented Nov. 20, 1900

C. L. FENTON.
TYPE WRITING MACHINE.
(Application filed Aug. 16, 1900.)

(No Model.)

FIG. 1.

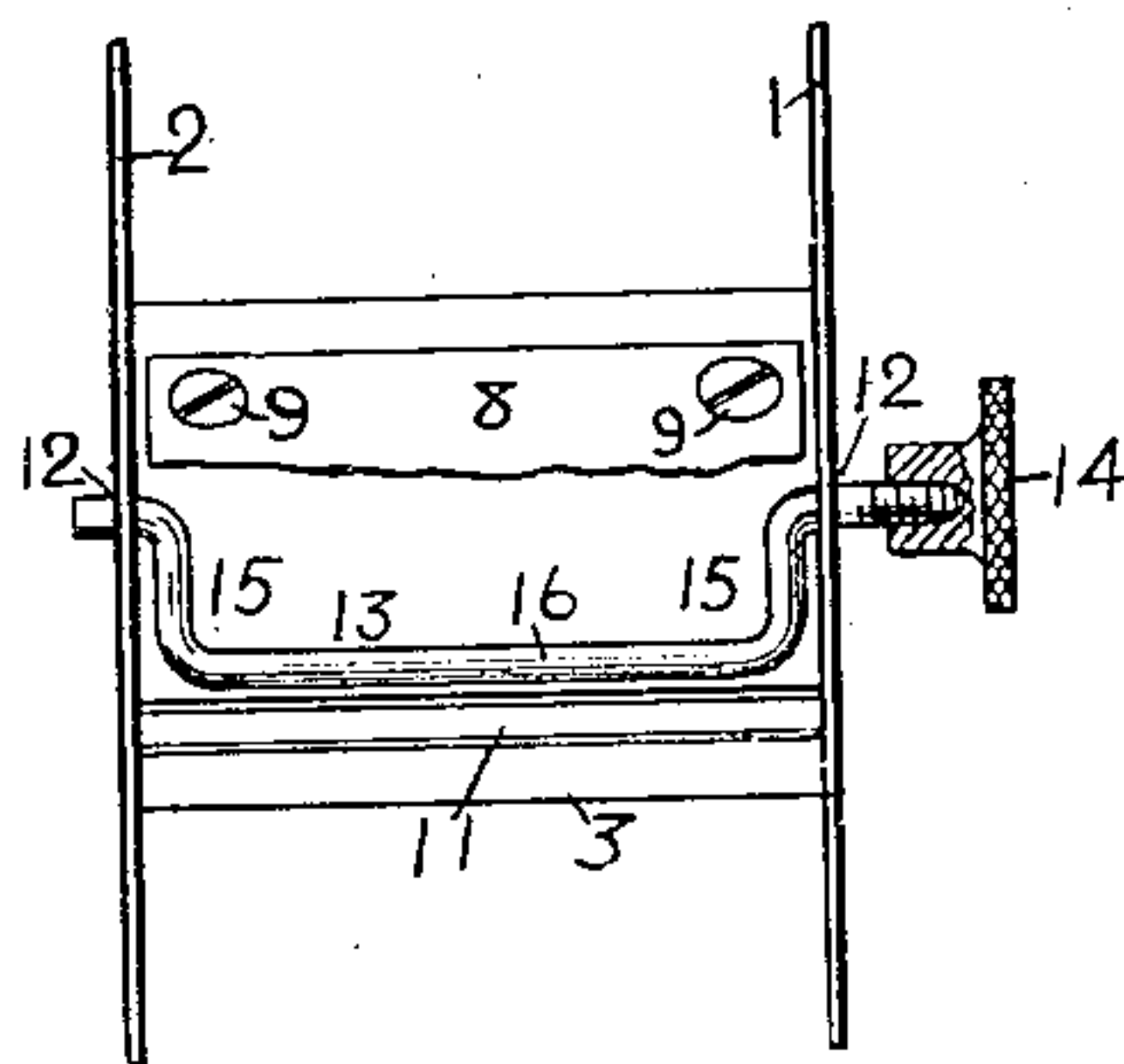


FIG. 2.

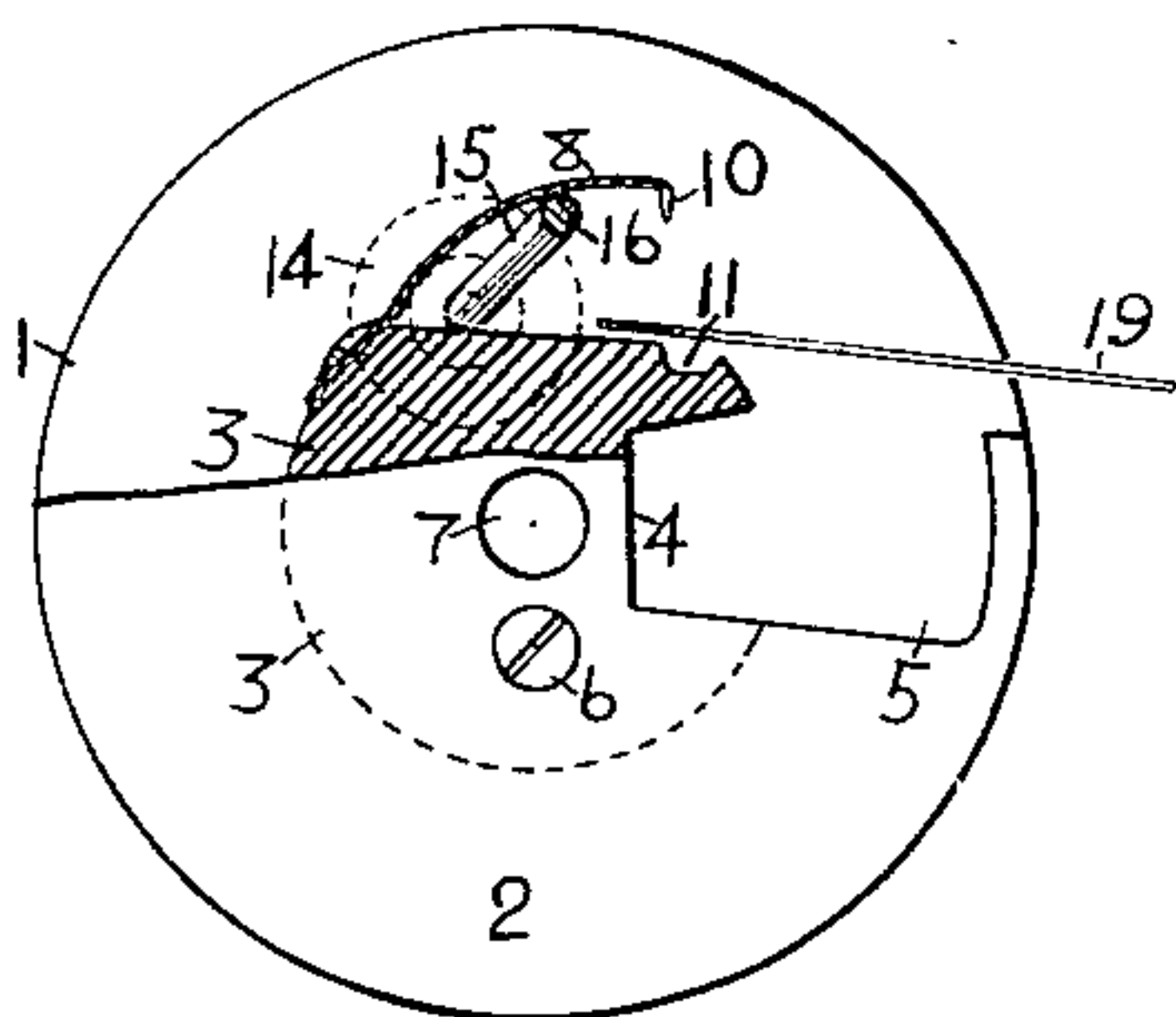


FIG. 3.

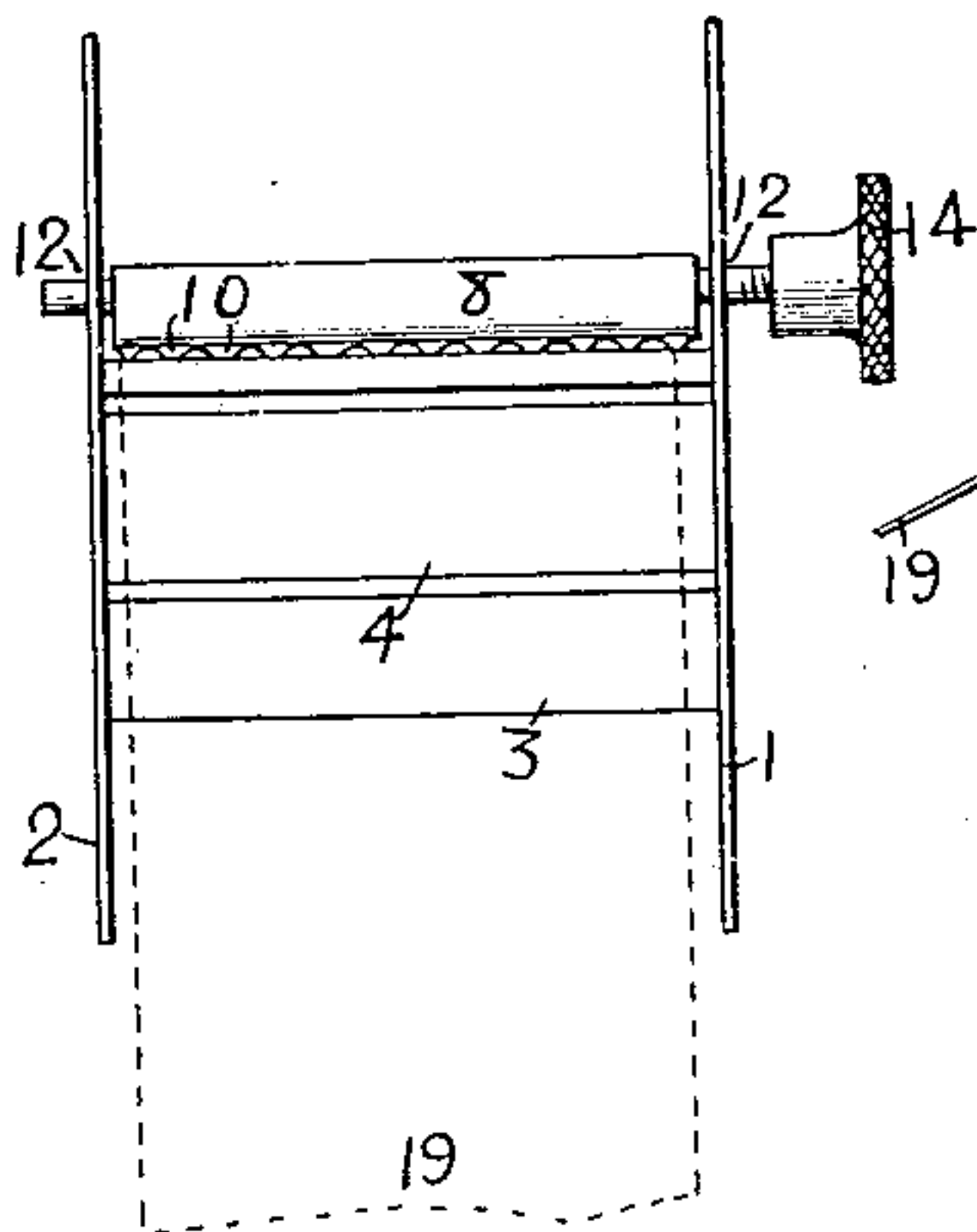


FIG. 4.

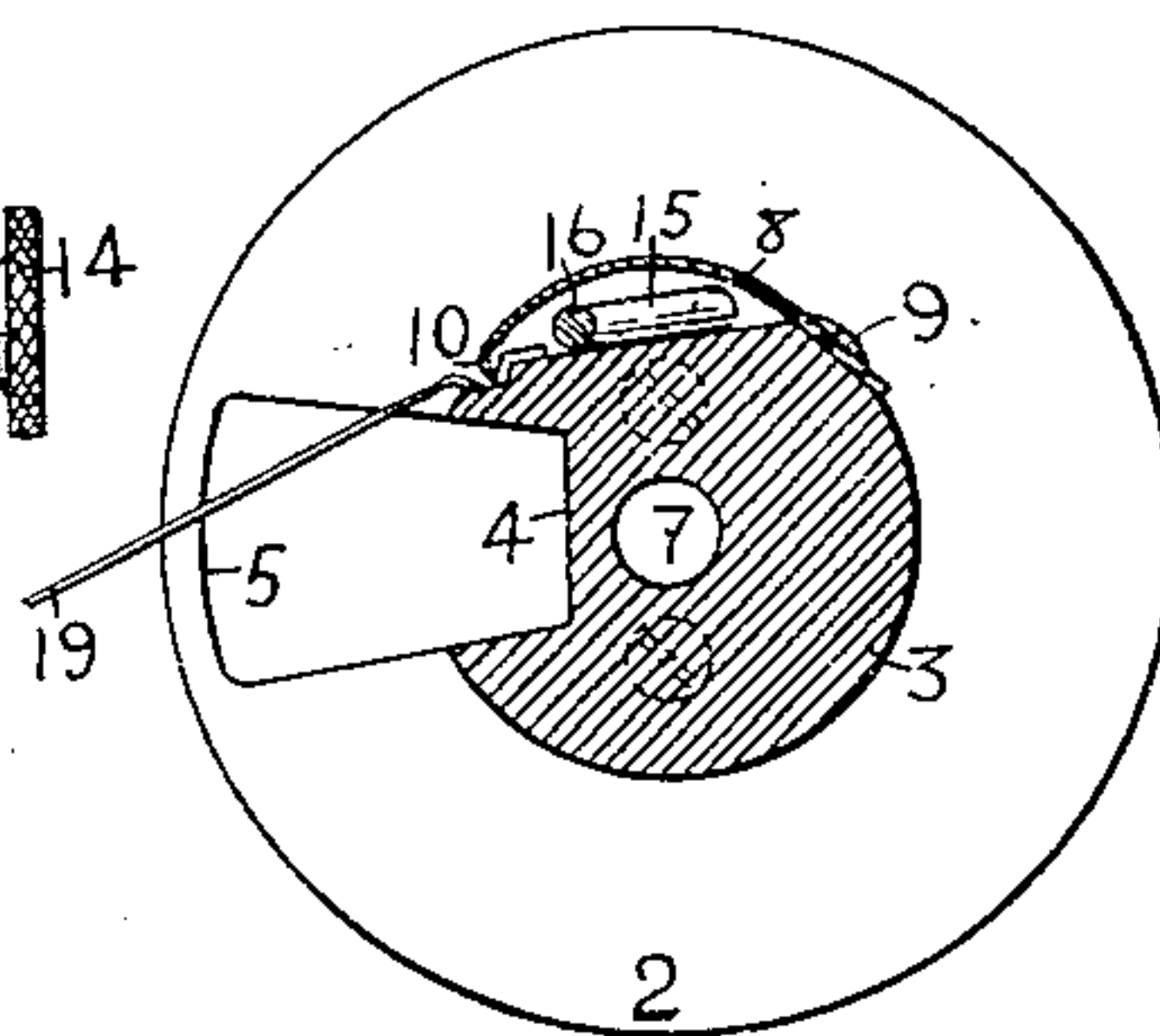


FIG. 6.

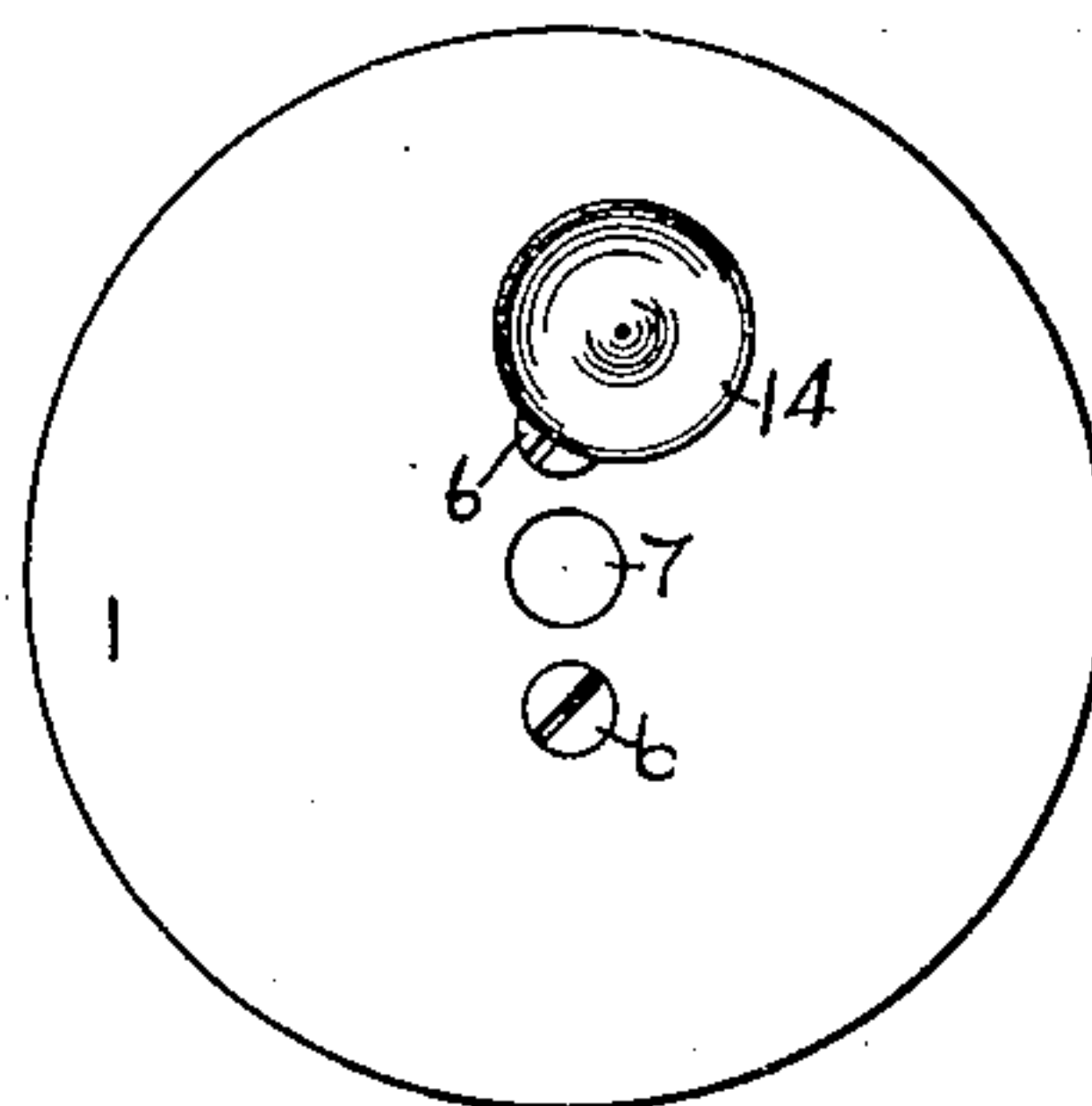
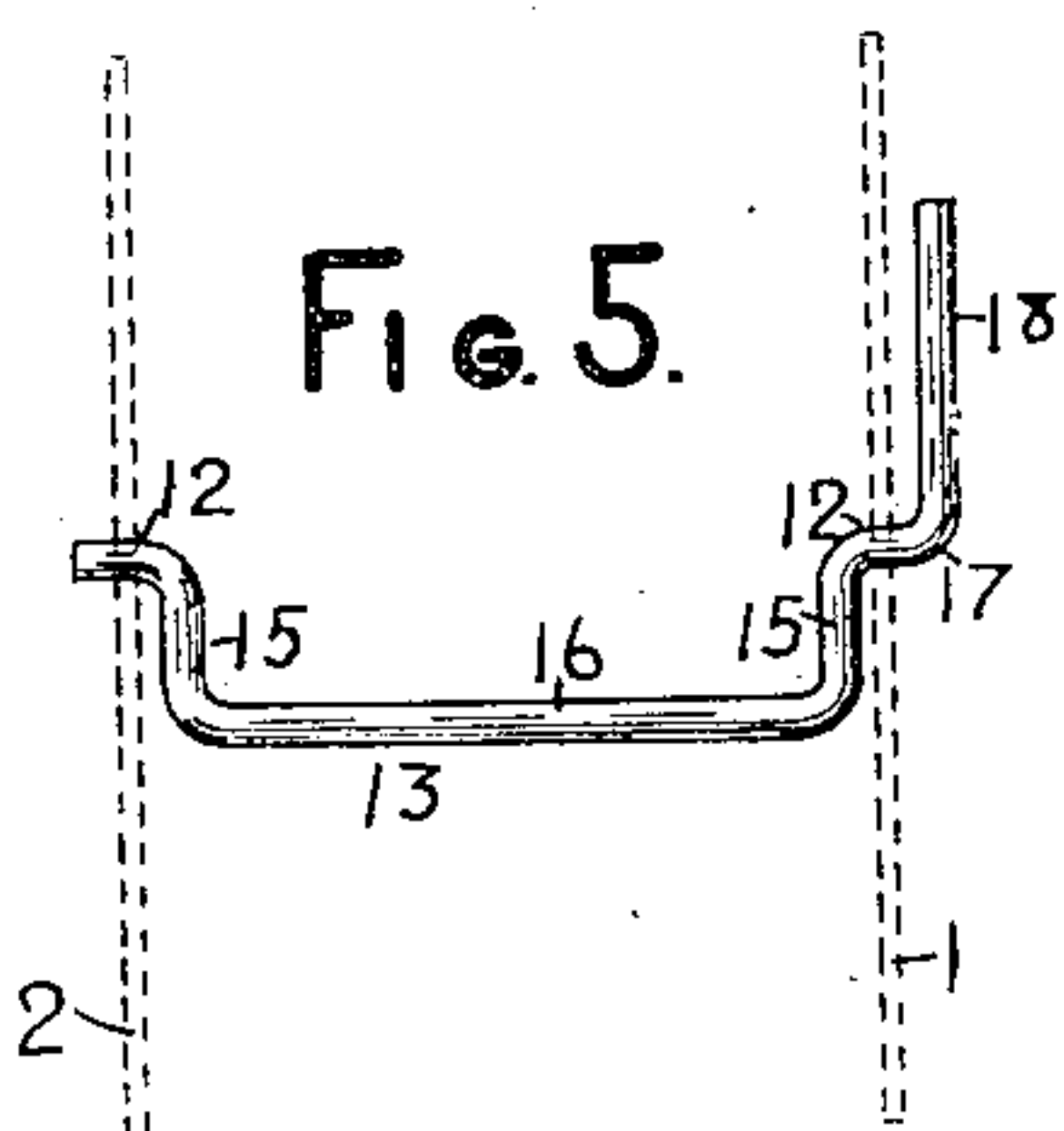


FIG. 5.



WITNESSES

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TYPE-WRITING MACHINE.

SPECIFICATION forming part of Letters Patent No. 662,230, dated November 20, 1900.

Application filed August 16, 1900. Serial No. 27,103. (No model.)

To all whom it may concern:

Be it known that I, CHARLES L. FENTON, a citizen of the United States, and a resident of West Winfield, in the county of Herkimer and State of New York, have invented certain new and useful Improvements in Type-Writing Machines, of which the following is a specification.

My invention relates to ribbon-spools of type-writing and other machines; and its object is to provide means for firmly attaching the end of the ribbon to the spool and readily releasing it therefrom when desired without the necessity of soiling the fingers in handling the ribbon.

To this end my invention consists, primarily, in the combination with a ribbon-spool of a device for clamping the ribbon upon the core of the spool and a finger-piece arranged outside of the spool-flange for raising the clamp and releasing the ribbon therefrom.

My invention further consists in certain features of construction and combinations of devices, all as will be more fully hereinafter set forth, and particularly pointed out in the concluding claims.

In the accompanying drawings, Figure 1 is a plan of a ribbon-spool, such as is used in the Remington No. 6 type-writing machines, showing my improvements applied thereto, the ribbon-clasp being broken away to disclose the construction therebeneath. Fig. 2 is a rear elevation of the spool, the rear flange being partly broken away and the core and other parts being shown in section. Fig. 3 is a side elevation of the spool, the ribbon attached thereto being indicated by dotted lines. Fig. 4 is a sectional front elevation of the spool with the ribbon attached. Fig. 5 is an elevation of a modified clamp-releasing device, and Fig. 6 is a front elevation of the spool.

Throughout the several views similar parts are designated by similar numerals of reference.

The front spool-flange is designated as 1, the rear flange as 2, and the wooden core as 3. As usual, the core is recessed at 4 and the rear flange perforated at 5 in line with said recess to permit the entrance of the weighted arm which forms part of the automatic ribbon-re-

versing mechanism in said type-writing machine. The flanges are secured to the ends of the core by screws 6, and the whole structure is bored axially at 7 to receive the usual spool-shaft.

I provide a clamp consisting of a leaf-spring 8, curved to conform to the general curvature of the spool-core and secured at one longitudinal edge to the latter by means of screws 9. The spring preferably covers about one-fourth of the periphery of the spool-core, and its free longitudinal edge is provided with a series of inwardly-directed teeth 10. The teeth or serrations engage the ribbon fabric and clamp it against the core; but so far as certain features of my invention are concerned the serrations are not essential so long as the ribbon is properly clamped or held. If desired, a peripheral recess 11 may be cut longitudinally of the spool-core in position to cooperate with the teeth 10 to hold the ribbon.

Means are provided for enabling the operator to force the free end of the spring-clamp away from the spool-core, so as to permit the insertion or removal of the end of the ribbon. I prefer to use a bail extending between and pivoted in the spool-flanges at 12 and lying beneath the clamp 8 or between said clamp and the spool-core, the latter being cut away at 13 to afford room for the bail. The forwardly-projecting end or axis of the latter is provided with a button 14, whereby the bail may be rotated upon its pivots 12. During this movement the arms 15 of the bail vibrate and cause the cross-bar 16 of the bail to engage the under surface of the clamp 8 and force the latter outwardly and away from the spool-core, as indicated at Fig. 2, whereby the ribbon is released and may be withdrawn from the spool. When it is desired to insert another ribbon, the parts are again moved to the Fig. 2 position and the end of the ribbon is dropped between the spool-core and the clamp, whereupon the button 14 is released and the spring 8 snaps into working position, as indicated at Fig. 4, doubling the ribbon down in the recess 11 and firmly holding it there.

In the modification shown at Fig. 5 the button 14 is omitted and the projecting end or shaft of the bail is bent at 17, so that the free

end 18 thereof extends parallel with the spool-flange and close thereto, thus forming a convenient lever for operating the bail to release the clamp and occupying less room in the machine than is taken by the projecting button 14.

It will be seen that by means of the foregoing construction the ribbon (designated as 19) may be instantly detached from or re-attached to the spool and that by the provision of a clamp-raising button or finger-piece outside of the spool-flange said clamp may be opened readily and without liability of soiling the fingers. It will also be seen that the device is positive in action, inexpensive to manufacture, and readily applicable to existing machines.

I regard the provision of an outside finger-piece as of special importance, and while I have illustrated but two constructions of said finger-piece, yet I do not consider that the invention is limited thereto or to any particular mechanism operated by said finger-piece, as the gist of the invention resides in the combination, with a ribbon-clamp arranged within the spool or at the spool-core, of a lifting device extending from said clamp to a point outside of the spool. It is not essential in all cases that the releasing devices shall extend through the spool-flange, as it may be otherwise arranged to be convenient of access and to avoid the necessity of bringing the fingers of the operator into contact with either the ribbon or any part that has been smeared with ink therefrom. Many other changes in details of construction and arrangement may be made within the scope of the invention.

What I claim as new, and desire to secure by Letters Patent, is—

1. In a ribbon-spool having a flange, the combination with a ribbon-clamp arranged upon one side of said flange, of a finger-piece arranged at the other side of said flange and connected to said clamp for raising the latter.

2. In a ribbon-spool having a flange, the combination with a ribbon-clamp arranged upon one side of said flange, of a finger-piece extending from said clamp through said flange.

3. In a ribbon-spool comprising a pair of flanges, the combination with a ribbon-clamp arranged between said flanges, of a finger-piece arranged at one end of the spool outside of the flange and connected to said clamp for raising the latter.

4. In a ribbon-spool, the combination of a core, a flange, a spring arranged upon one side of said flange for clamping the ribbon to the core, and a finger-piece arranged upon the other side of said flange and connected to said spring.

5. In a ribbon-spool, the combination of a pair of flanges united by a core, a spring secured upon said core for clamping the end of the ribbon thereto, and a finger-piece connected to said spring and extending through one of said flanges.

6. In a ribbon-spool, the combination with a ribbon-clamping spring, of a crank provided with a finger-piece and constructed and arranged to act upon said spring and cause the latter to release the ribbon.

7. In a ribbon-spool comprising a pair of flanges and a core, the combination of a ribbon-clamping spring, a bail arranged between and pivoted in said flanges and constructed to engage said spring and cause it to release the ribbon, and a finger-piece for said bail.

8. In a ribbon-spool comprising a pair of flanges and a core, the combination of a ribbon-clamp spring, a bail arranged between and pivoted in said flanges and constructed to engage said spring and cause it to release the ribbon, and a finger-piece for said bail, said finger-piece being in the form of a lever which extends from the axis of said bail alongside of the spool-flange and close thereto.

9. In a ribbon-spool, the combination with a pair of flanges and a core, of a spring overlying said core and secured thereto and constructed at its free end to clamp the end of the ribbon to said core, a bail lying between said spring and said core and pivotally mounted in said spool-flanges, and a finger-piece for said bail.

10. In a ribbon-spool, the combination with a pair of flanges and a core, of a spring overlying said core and secured thereto and constructed at its free end to clamp the end of the ribbon to said core, a bail lying between said spring and said core and pivotally mounted in said spool-flanges, and a finger-piece for said bail, said finger-piece being arranged outside one of said flanges and upon a part of the bail which extends through the flange.

11. In a ribbon-spool, the combination with a pair of flanges and a core, of a ribbon-clamp overlying said core, and a bail arranged between said clamp and said core and pivotally mounted at its ends in said spool-flanges, one end of said bail being prolonged and bent to form a finger-lever for turning said bail to release said clamp.

Signed at the village of West Winfield, town of Winfield, in the county of Herkimer and State of New York, this 14th day of August, A. D. 1900.

CHARLES L. FENTON.

Witnesses:

GERTRUDE H. CRANDALL,
L. L. MONTGOMERY.