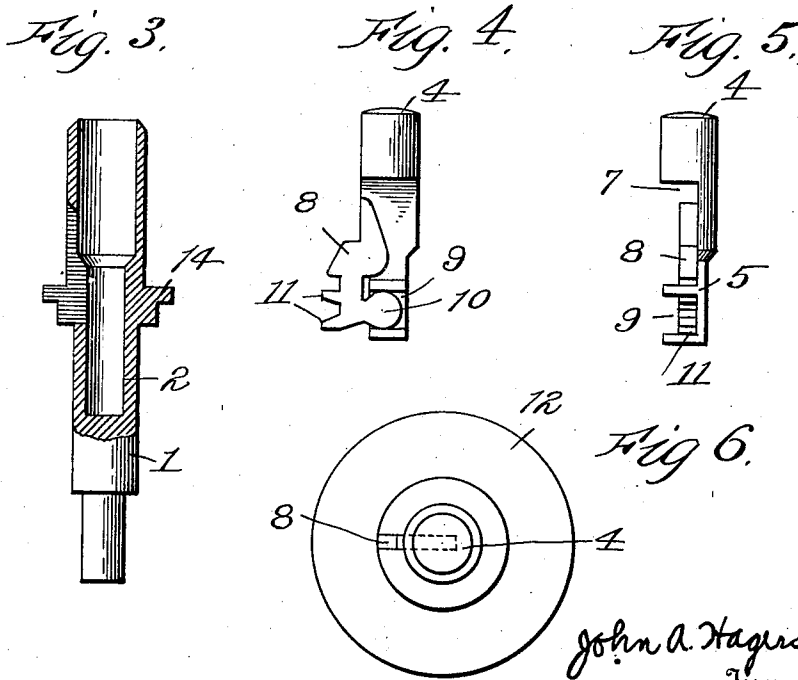
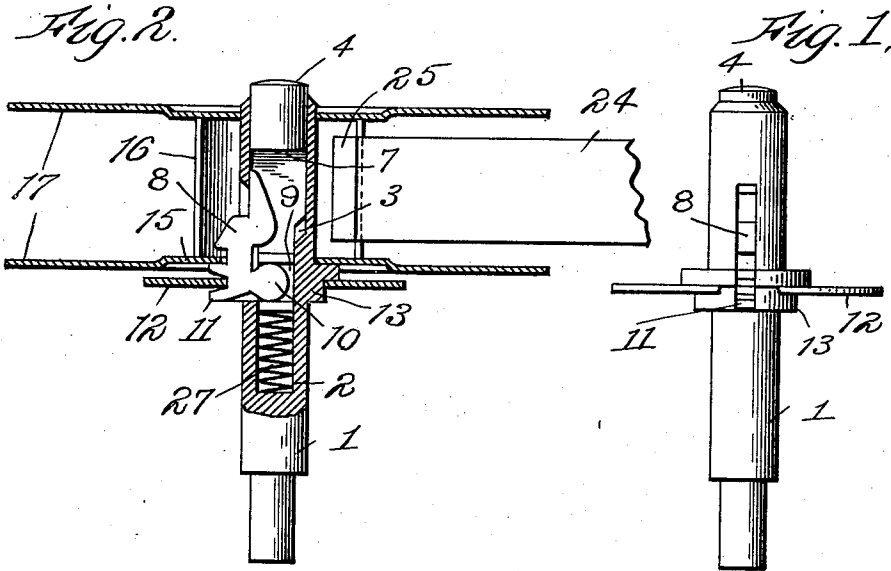


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TYPE WRITER RIBBON SPOOL AND MOUNT THEREFOR.
APPLICATION FILED JULY 10, 1917.

1,313,631.

Patented Aug. 19, 1919.
2 SHEETS—SHEET 1.



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By his Attorneys
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Fig. 7.

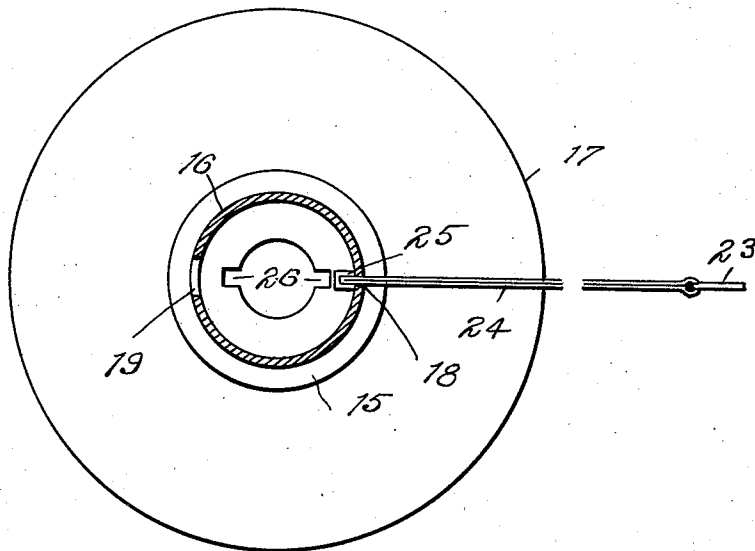


Fig. 8.

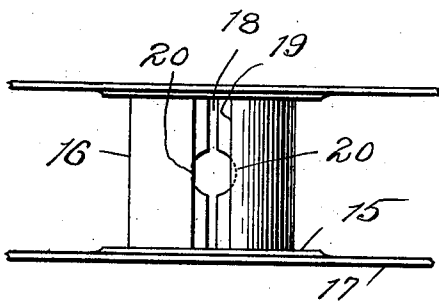
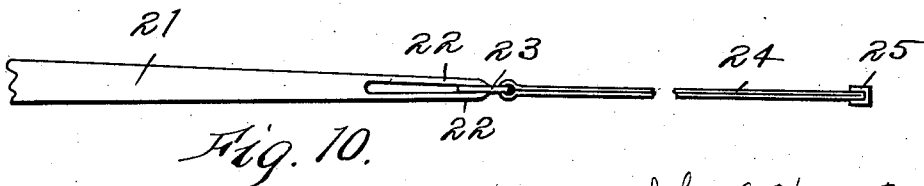
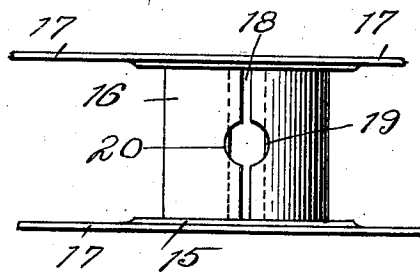


Fig. 9.



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By his Attorneys *Smith Bros.*

UNITED STATES PATENT OFFICE.

JOHN A. HAGERSTROM, OF SCRANTON, PENNSYLVANIA, ASSIGNOR TO VICTOR TYPE-WRITER COMPANY, OF NEW YORK, N. Y., A CORPORATION OF NEW YORK.

TYPE-WRITER RIBBON-SPOOL AND MOUNT THEREFOR.

1,313,631.

Specification of Letters Patent.

Patented Aug. 19, 1919.

Application filed July 10, 1917. Serial No. 179,665.

To all whom it may concern:

Be it known that I, JOHN A. HAGERSTROM, a citizen of the United States, and resident of Scranton, in the county of Lackawanna and State of Pennsylvania, have invented certain new and useful Improvements in Type-Writer Ribbon-Spools and Mounts Therefor, of which the following is a specification.

10 This invention relates to typewriter ribbon spools and means for mounting the same and has for its primary object to provide an improved construction, combination and arrangement of parts in a device of this character. One of the objects of my invention is to provide a ribbon spool of improved construction. Another object is to provide a ribbon spool spindle of improved construction with improved means for detachably locking a ribbon spool to said spindle. Further objects of invention will appear in the specification and be pointed out in the appended claims, reference being had to the accompanying drawings exemplifying my invention in a preferred embodiment.

In the drawings,—

Figure 1 is a side elevation of the ribbon spool spindle;

30 Fig. 2 is an axial section of the spindle and spool mounted thereon, parts being broken away and parts shown in section;

Fig. 3 is a similar view of the spindle with contiguous parts removed;

35 Fig. 4 is a side elevation of the axially slidable bolt and latch operated thereby;

Fig. 5 is an elevation at right angles to Fig. 4;

Fig. 6 is a bottom plan view of Fig. 1;

40 Fig. 7 is a transverse section of the spool;

Fig. 8 is a side elevation of one side;

Fig. 9 is a side elevation of the same from the opposite side to that shown in Fig. 8, parts being broken away;

45 Fig. 10 is a side elevation of a bodkin showing its application to the present invention.

Referring more particularly to the drawings, the ribbon spool spindle 1 is hollowed interiorly to form an axial bore comprising a portion 2 of relatively small diameter and a portion 3 of relatively large diameter, which opens through the end of said spindle. Slidable within the spindle 1 is an axially movable bolt 4 having its lower end 5 re-

duced in diameter to fit the portion 2 of the axial bore. As shown in Figs. 4 and 5, the bolt 4 and 5 is recessed at 7 to accommodate the latch arm 8 and with a recess 9 to accommodate a ball 10 which constitutes an arm extending inwardly into the recess 9. The latch 8 is provided with outwardly extending lugs 11 which are spaced apart to provide a notch, said lugs 11 being adapted to fit over the inner edge of a flange 12 65 which constitutes a fulcrum for the latch. The flange 12 is rigidly connected to the spindle 1 around an enlarged hub portion 13, said hub portion being slotted to accommodate the latch. The spindle 1 is also provided with an annular shoulder 14 which is adapted to support the hub portion 15 of a ribbon spool which also comprises a cylindrical wall 16 with spaced flanges 17. The cylindrical wall 16 is provided on one side 75 with a narrow slot 18 and on the other side with a broad slot 19, the edges of the narrow slot being arcuately recessed at 20 to permit the insertion of a bodkin 21 (see Fig. 10). The bodkin 21 being inserted through the 80 recesses 20 and narrow slot 18 to protrude oppositely through the large slot 19, is adapted by its jaws 22 to engage the buckle 23 on the end of a tape 24, said tape being provided on its other end with an enlarge- 85 ment 25 which prevents it being drawn entirely through the small slot 18. It will be seen therefore that when the spool has been properly positioned, the end of a typewriter ribbon may be readily drawn through and 90 secured in the buckle 23 as shown in Fig. 7. The spool flanges 17 extend inwardly beyond the cylindrical wall 16 and are provided with radial notches 26, neither of which is adapted to snap over the latch head 8 when 95 the bolt 4 is depressed against the spring 27 which is housed within the reduced portion 2 of the center bore of the spindle 1 and presses against the inner end of the bolt 4. When it is desired to remove the ribbon 100 spool from the spindle 1, the fingers grip the upper flange 17 while the bolt 4 is depressed, the latch 8 being shifted inwardly to release the ribbon spool and permitting it to be moved axially from the spindle 1. The 105 manipulation of the ribbon holding tape has already been described.

I claim:

1. In a device of the character described, a spindle hollowed interiorly, an axially 110

slidable bolt therein, which protrudes at one end of said spindle, said spindle being provided with a ribbon supporting flange, a latch pivoted on said flange and movably engaging said bolt, and a ribbon spool adapted to be engaged by said latch.

2. In a device of the character described, a spindle hollowed interiorly, an axially slidable bolt therein, which protrudes at one end of said spindle, said spindle being provided with a ribbon supporting flange, a latch pivoted on said flange and movably engaging said bolt, and a ribbon spool adapted to be engaged by said latch, said bolt and latch being provided with registering recesses for accommodating said latch.

3. In a device of the character described, a spindle hollowed interiorly, an axially slidable bolt therein, which protrudes at one end of said spindle, said spindle being provided with a ribbon supporting flange, a latch pivoted on said flange and movably engaging said bolt, and a ribbon spool

adapted to be engaged by said latch, said latch being provided with an inwardly extending arm articulately engaging said bolt.

4. A typewriter ribbon spool provided with a cylindrical drum on which a ribbon may be rolled, and axially spaced flanges for confining the ribbon roll, said flanges extending inwardly beyond said drum for bearing on the ribbon spool spindle, said flanges being provided with inwardly depressed surfaces adjacent said drum, said flanges being provided with radial notches for the reception of a latch mounted on the ribbon-spool spindle.

5. In a typewriter, a ribbon spool spindle, a bolt reciprocable axially of said spindle, a flange carried by said spindle, and a spool engaging latch having a notch by means of which it is oscillatably mounted on said flange, and an arm having a rounded extremity, said bolt being provided with a recess, the walls of which are movably engaged by said rounded extremity.

JOHN A. HAGERSTROM.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."