

No. 681,719.

Patented Sept. 3, 1901.

M. MERK.
RIBBON SPOOL AND RIBBON.

(Application filed July 26, 1900.)

(No Model.)

FIG. 1.

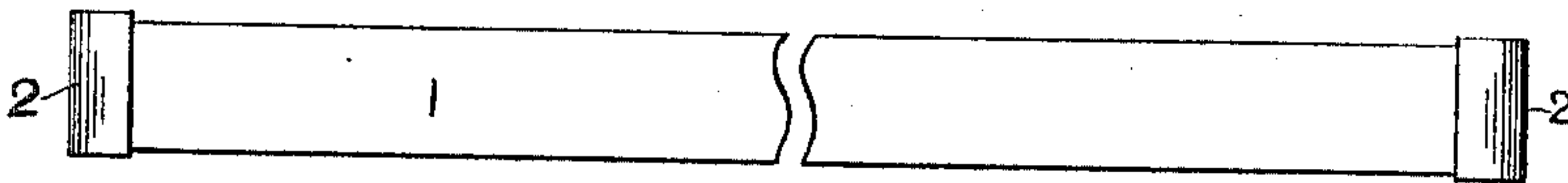


FIG. 2.

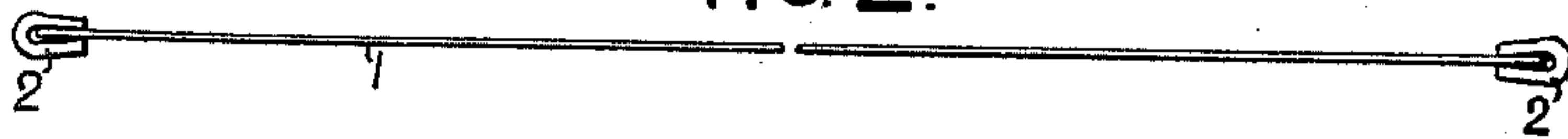


FIG. 5.

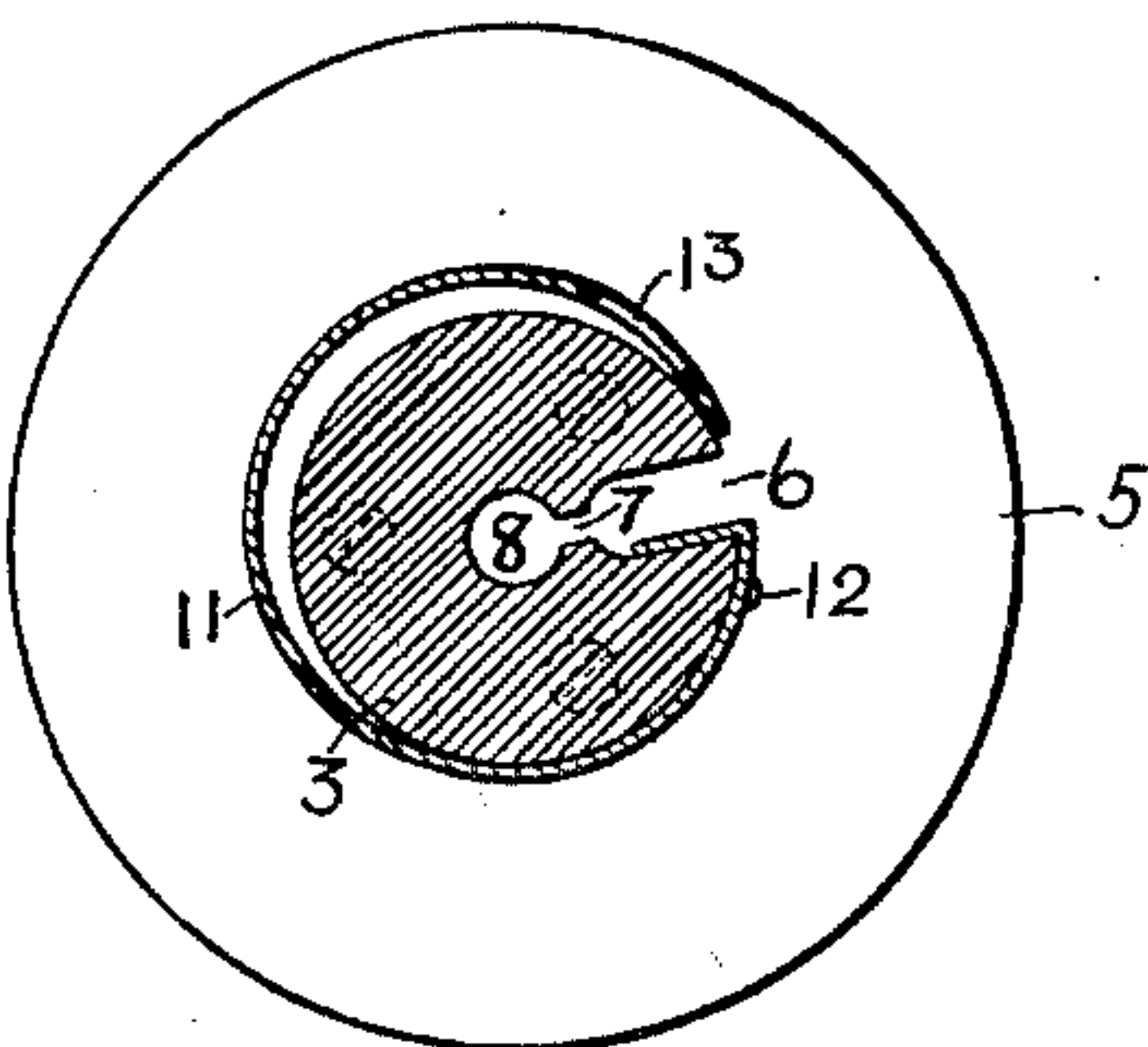


FIG. 3.

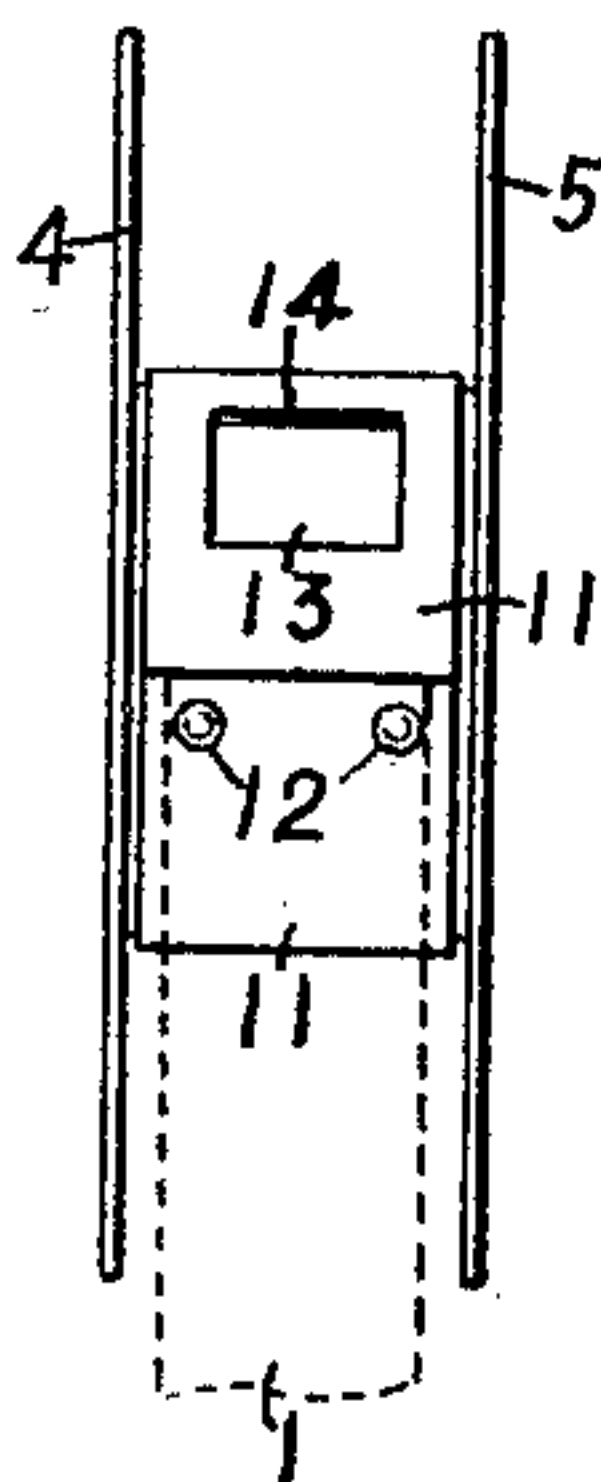


FIG. 4.

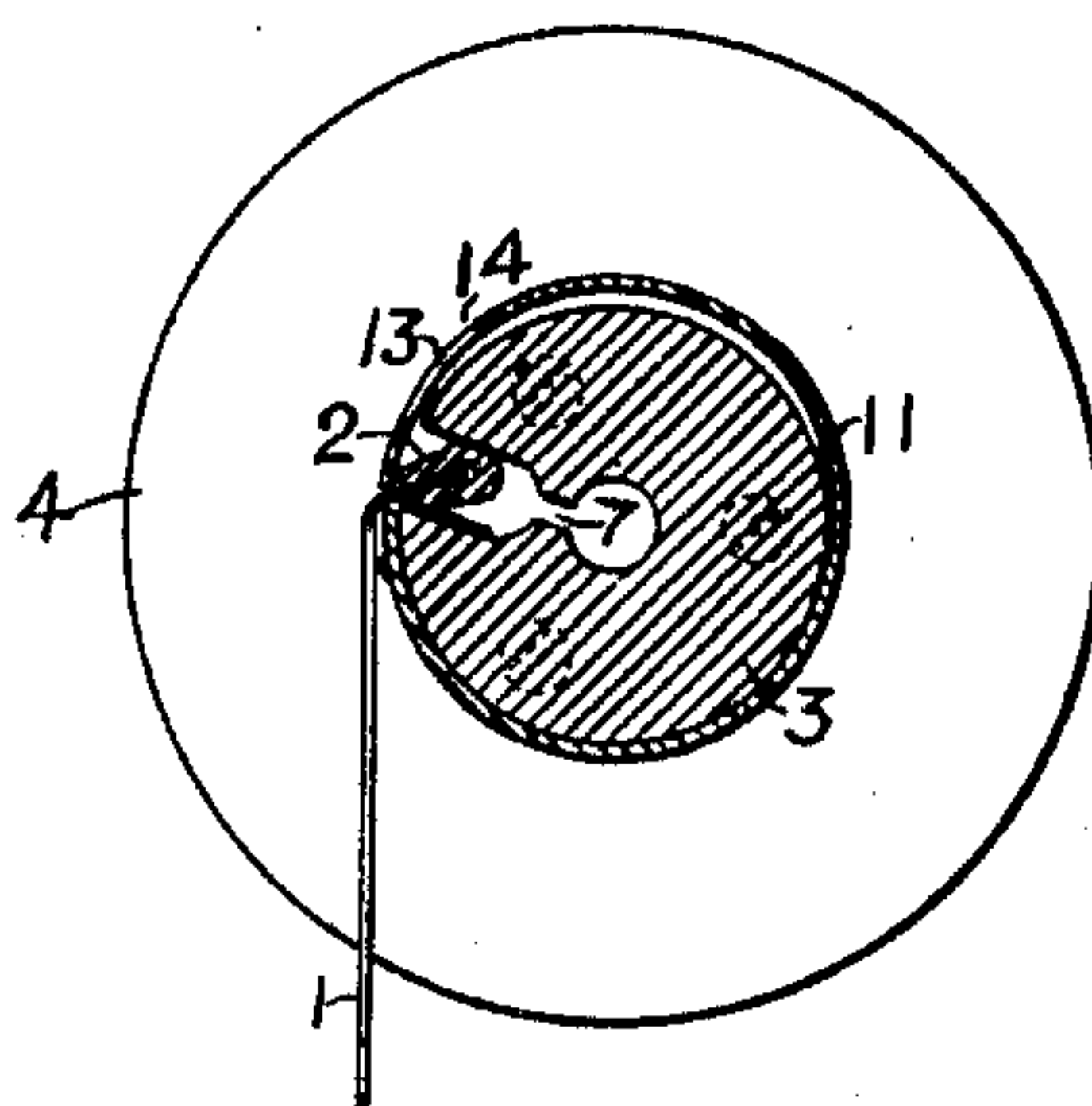
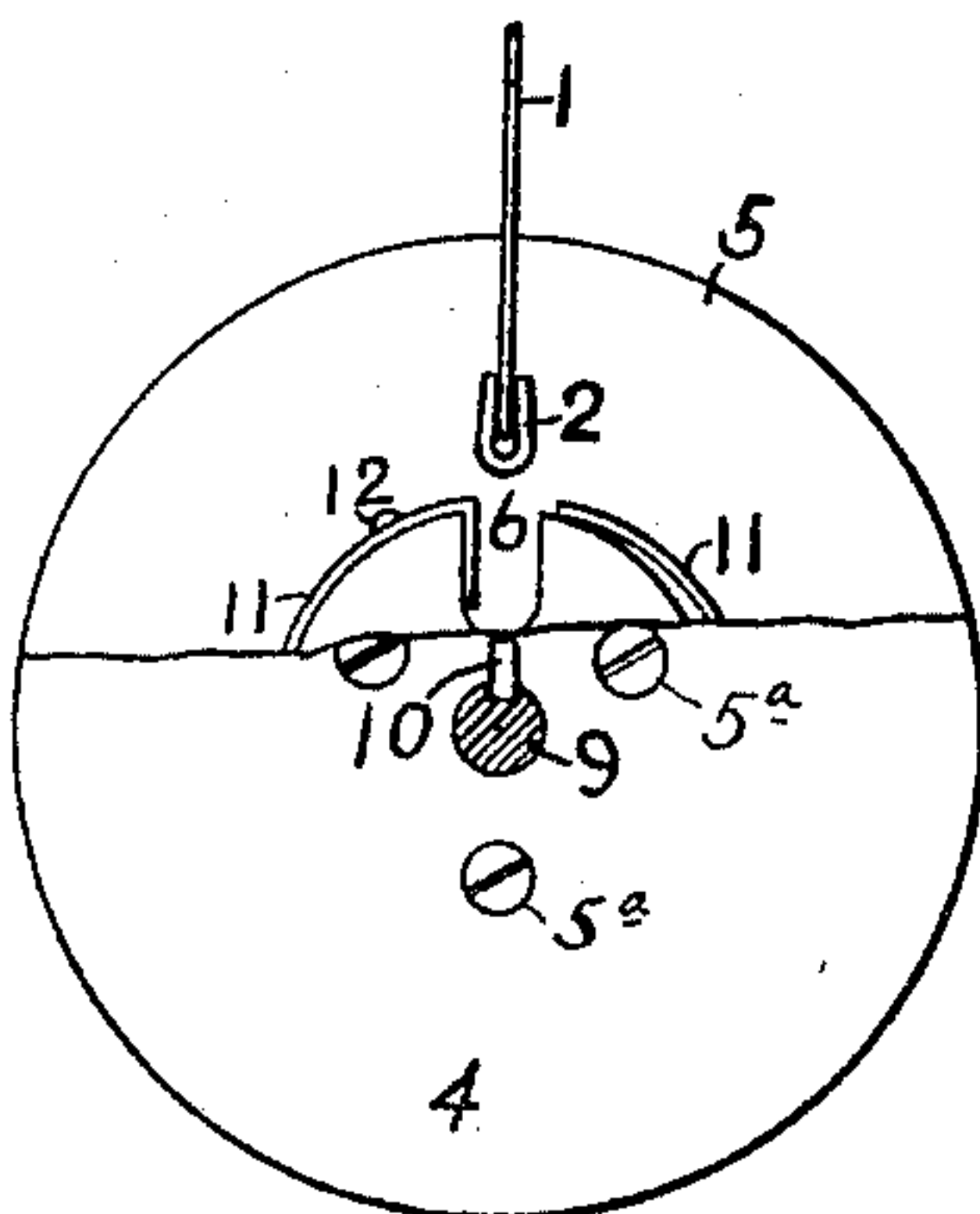


FIG. 6.



WITNESSES

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RIBBON-SPOOL AND RIBBON.

SPECIFICATION forming part of Letters Patent No. 681,719, dated September 3, 1901.

Application filed July 26, 1900. Serial No. 24,874. (No model.)

To all whom it may concern:

Be it known that I, MARTIN MERK, a citizen of the United States, and a resident of Amsterdam, in the county of Montgomery and State of New York, have invented certain new and useful Improvements in Ribbon-Spools and Ribbons, of which the following is a specification.

My invention relates to means for connecting the ends of an inking-ribbon to the spools or bobbins of type-writing and other machines, and has for its main object to provide a construction whereby the ribbon may be attached and detached with facility and expedition and without soiling the hands of the operator.

Other objects will appear hereinafter in connection with the description of the devices and the mode of attaching and detaching the ribbon.

My invention consists in certain features of construction of both the ribbon and the ribbon-spools and various combinations of devices, all as will be hereinafter more fully explained, and particularly pointed out in the appended claims.

In the accompanying drawings, Figure 1 is a plan view of an inking-ribbon for a type-writing or other machine embodying one feature of my invention, the middle portion being omitted or removed, so as to show both ends of the ribbon. Fig. 2 is an edge view thereof. Fig. 3 is an edge view of a ribbon-spool embodying the several features of construction belonging to the spool proper and also showing in dotted lines a portion of the ribbon. Fig. 4 is a central vertical section through Fig. 3, showing one end of the ribbon connected to the spool. Fig. 5 is a view similar to Fig. 4, but omitting the ribbon and showing the spring catch or cover as retracted to permit the insertion of one end of the ribbon; and Fig. 6 is a side elevation of the spool with one of the heads partly broken away and showing the ribbon-spool shaft and one end of the ribbon in position to be connected to the spool, the catch or cover being drawn back as in Fig. 5.

In the various views the same part will be

found designated by the same numeral of reference.

1 is the inking-ribbon, which is provided at both ends, preferably, with an enlargement 2, preferably made of a piece of sheet metal and attached to the ribbon simply by clamping, pressing, or folding it thereupon, as illustrated.

The spool comprises a cylindrical core or barrel 3 and two heads or flanges 4 and 5, preferably secured to said core by screws 5^a. Radially of the core is formed or provided a recess or chamber 6, from which extends a slot 7, that meets a central hole or bearing 8 for the passage therethrough of the spool-shaft 9, which is supported in the machine in the usual way and which is preferably provided with a feather 10, that engages the slot or groove 7 in the spool and causes the latter to turn with the shaft. A circular spring or band of metal 11 is secured at near one end by pins or screws 12 to the core 3 and adjacent one side of the recess 6, which is provided to receive the enlargement 2 on the ribbon, and this end of the band or spring is preferably bent radially and into said recess, as shown. The band is of a length such that when in normal position its free end will cover or bridge over the mouth of the recess 6, and hence will act to retain the enlargement 2 on the end of the ribbon within said recess, as shown at Fig. 4. The spring-band is formed with an opening or cutaway 13 at near its free end to enable the finger-nail to catch upon the rear edge 14 of said pin, and thus conveniently retract or pull back the free end of the spring from the position shown at Fig. 4 to that shown at Figs. 5 and 6, and thereby enable the ribbon end either to be connected to the spool or disconnected therefrom. When the enlargement upon the ribbon is within the recess and the free end of the spring-band covers or closes the mouth of the same, as shown at Fig. 4, the ribbon end is held to or upon the spool without liability of accidental detachment so long as the pull on the ribbon is not in the direction of the free end of the spring-band. In practice the ribbon is caused to wind around the band in

a direction opposite to that of the free end of the band, as illustrated at Fig. 4. When it may be desired to connect a ribbon with its spool, the spool may be turned with its recess into a vertical position, as illustrated at Fig. 6, and the free end of the spring-band then retracted circumferentially, as shown in said view and in Fig. 5, and while the parts are in these positions one end of the ribbon is dropped or let down into said recess, after which the spring is released and its free edge flies forward to bridge the recess and hold the enlargement therein and to bind or press the ribbon more or less against the opposite or fixed end of the spring-band.

The main purpose of making the enlargement on the ribbon of metal or of some more or less heavy material is to make the end of the ribbon heavy, so that it may be connected to the spool with greater facility than it could be if the end of the ribbon were left plain or the enlargement formed simply by bunching the stock of the ribbon itself. By making the enlargements as weights they act to keep the ribbon taut or straight when the latter is held above the recess, as shown at Fig. 6, and as the band is lowered the gravity of the weight causes it to move straightway down into the recess, from which it will be observed that the ribbon may be readily and speedily attached to or connected with the spool.

The employment of a weight at the end of the ribbon to carry the latter down between the flanges of the spool, so that the ribbon may be engaged therewith, is of especial value in that class of spools having short hubs or cores and wherein the flanges or heads are comparatively close together and are of such diameter as to make it inconvenient for the fingers to be inserted between said flanges for the purpose of connecting and disconnecting the end of the ribbon.

It will be observed that by my construction a very short ribbon-spool may be used or one in which the heads or flanges are unusually near each other, because it is not necessary for the fingers to enter between said flanges, since a knife, pencil, or other tool may be used to retract the spring and hold its free end back while the end of the ribbon is dropped into the recess or chamber.

In so far as the idea of attaching the weight to the end of the ribbon for the purpose of locating or guiding the ribbon to or within the grasp of its fastening means is concerned it is immaterial whether the spool be provided with the peculiar holding devices shown herein, because manifestly many other forms or constructions may be provided to connect the ribbon to the spool after its weighted end has served to locate or bring the end of the ribbon to the place where the attaching devices are located, it being a desideratum, especially with light and narrow ribbons on short spools with large flanges or heads, to provide some means on the ribbon for bringing

it quickly and accurately into engagement with the fastening devices whatever may be their nature. The ribbon may be detached from the spool either by retracting the spring-band or by pulling on the end of the ribbon in a direction to force back the free end of the spring-band. Where the spool is arranged to rotate in a horizontal plane, of course the weight as such will not serve to guide the ribbon to the fastening devices; but it will be useful as a lump or enlargement in connection with the recess and cover or spring-band.

If desired, the extreme ends of the ribbon for a few inches may be left plain or uninked.

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

1. A ribbon-spool provided with a recess to receive the end of a ribbon, and a cover for said recess adapted to hold the ribbon in place.

2. A ribbon-spool having a recess to receive the end of a ribbon, and a spring-band for closing said recess.

3. A ribbon-spool having a recess for the reception of the end of a ribbon, and a circumferential spring-band for holding the ribbon.

4. A ribbon-spool provided with a recess and also with a spring-band secured at one end to the core of the spool and bridging said recess at its free end, which latter is adapted to be retracted to permit the attachment and detachment of the end of an inking-ribbon.

5. A ribbon-spool having a recess and also a spring-band which is secured at one end and at its opposite free end forms a cover for said recess, and said free end being provided with means enabling it to be retracted.

6. A ribbon-spool having a recess and a circumferential spring-band secured at one end to the core of the spool and normally bridging said recess at its free end and having at the latter a notch or opening to facilitate the retraction of said free end.

7. The combination with a ribbon-spool having a recess in its core, of an inking-ribbon having an enlargement at one end adapted to enter said recess, and means for holding the enlargement therein.

8. The combination with a spool having a recess in its core, of an inking-ribbon having an enlargement at one end, and a spring upon said core for holding said enlargement within said recess.

9. The combination of a ribbon-spool having a recess in its core, an inking-ribbon having an enlargement at one end, and a spring-band attached to said core and having one end arranged normally to cover said recess but adapted to be pulled back so as to permit of the insertion and withdrawal of the end of the ribbon.

10. The combination of a spool having a recess in its core, an inking-ribbon having a weighted enlargement at one end thereof adapted to said recess, and means on the core

for holding the weighted enlargement within said recess.

11. The combination of a ribbon-spool having a recess in its core, a ribbon having an enlargement at one end and a spring-acting catch or cover for holding said end within said recess.

Signed at Amsterdam, in the county of Montgomery and State of New York, this 24th day of July, A. D. 1900.

MARTIN MERK.

Witnesses:

PUTMAN MILLER,
EDWARD A. McCAFFREY.