

B. F. FORD.
SPOOL HOLDER.

APPLICATION FILED NOV. 25, 1908.

911,964.

Patented Feb. 9, 1909.

2 SHEETS—SHEET 1.

Fig. 1.

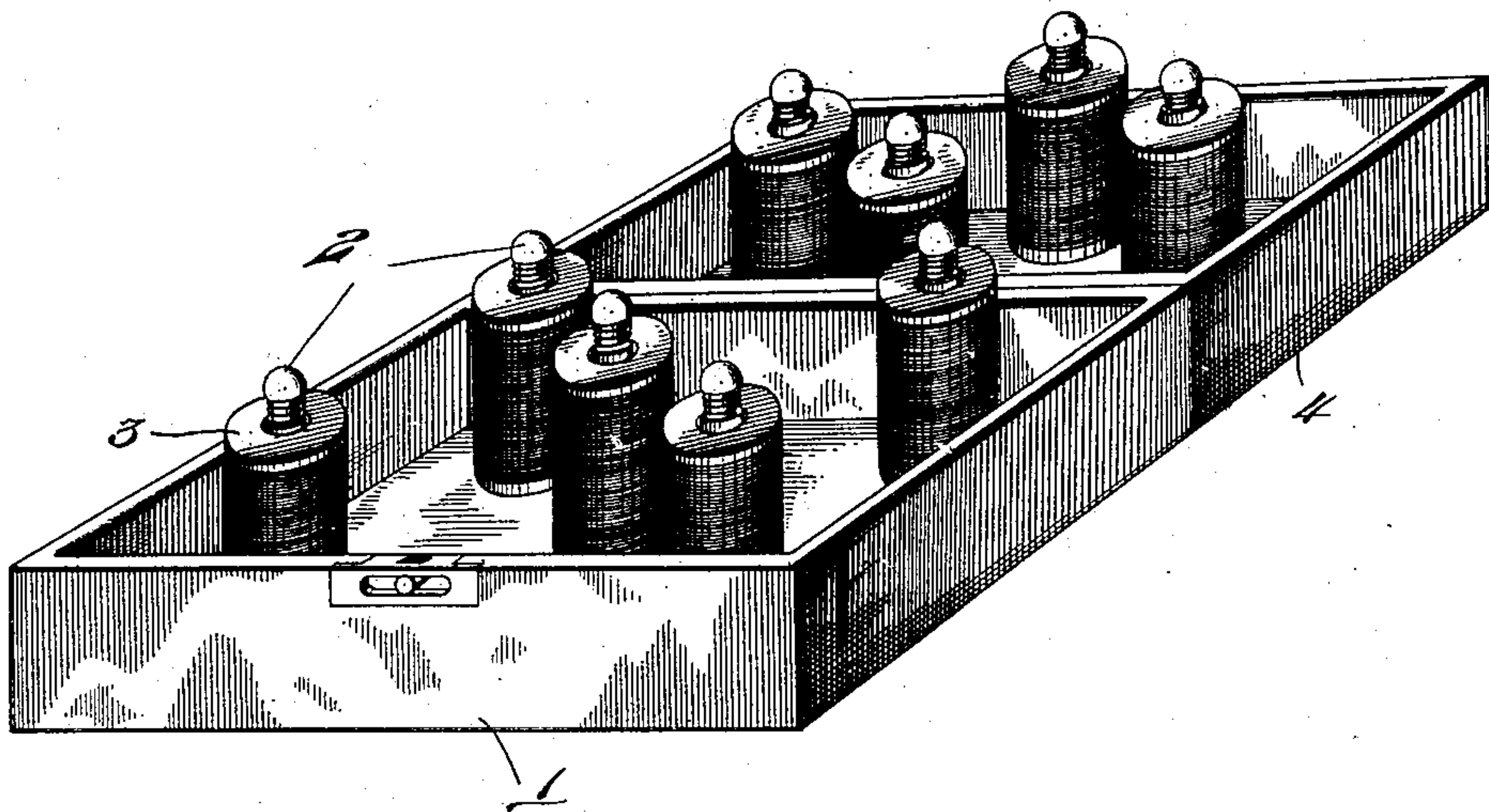


Fig. 2.

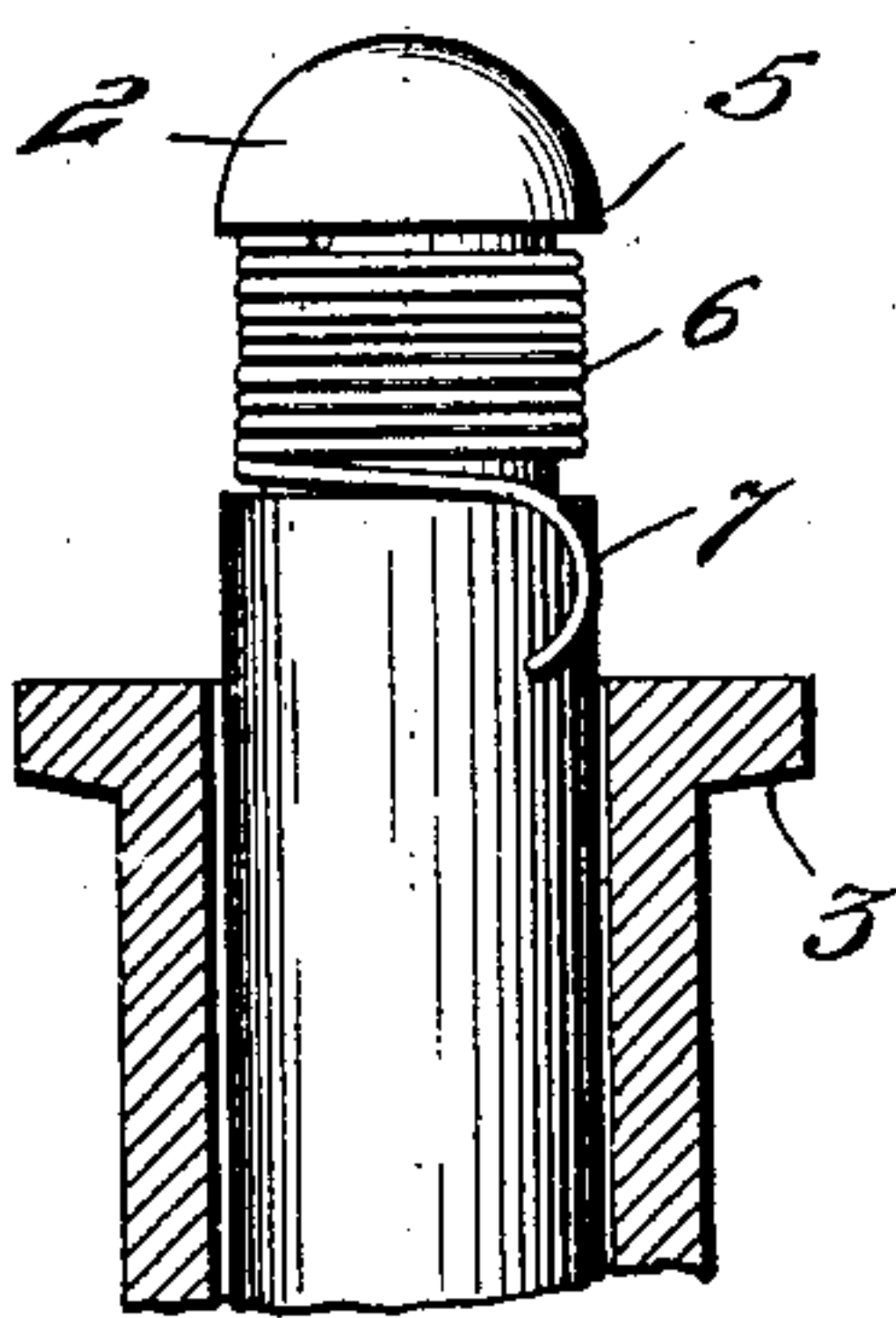


Fig. 3.

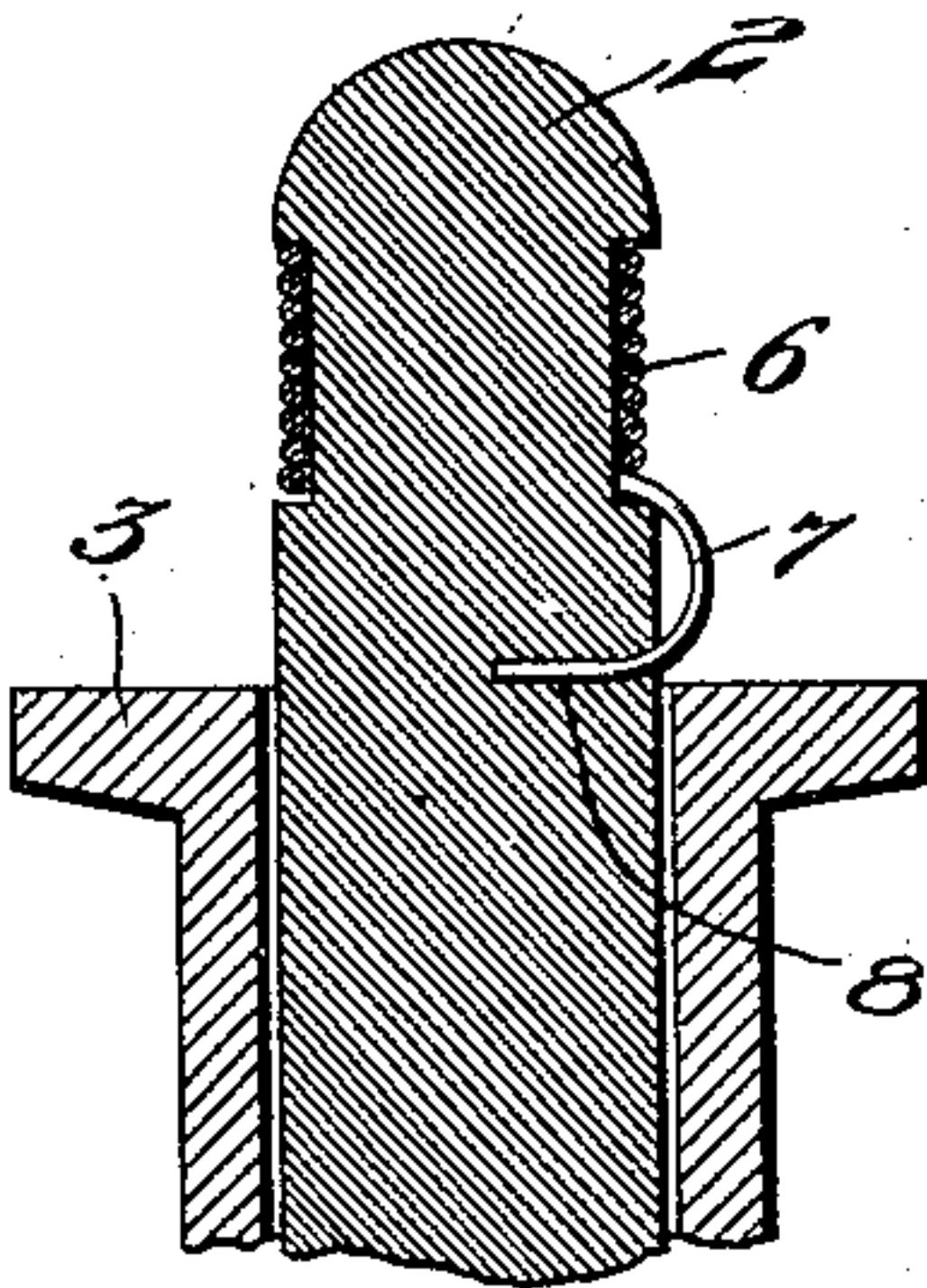
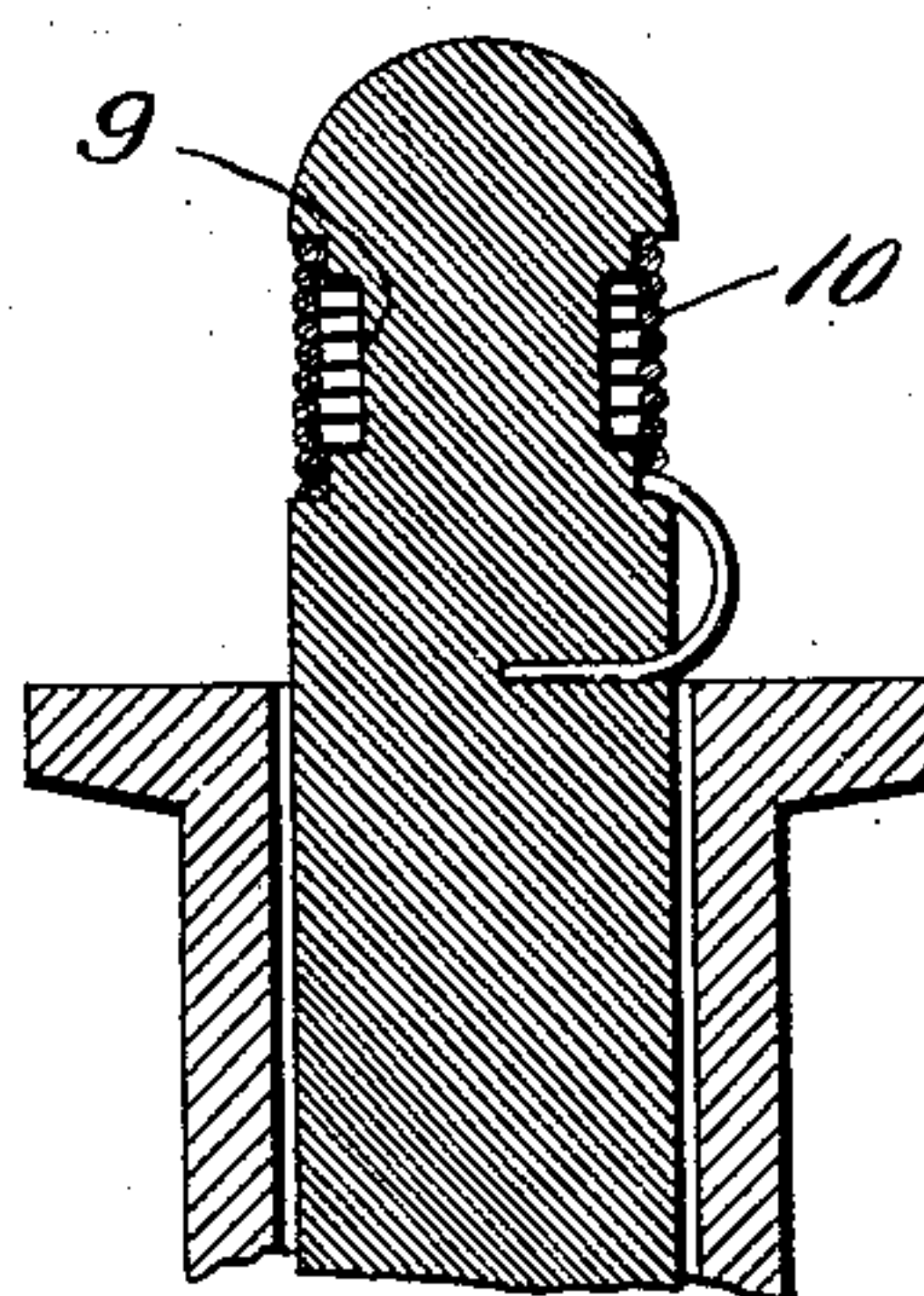


Fig. 4.



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2 SHEETS—SHEET 2.

Fig. 5.

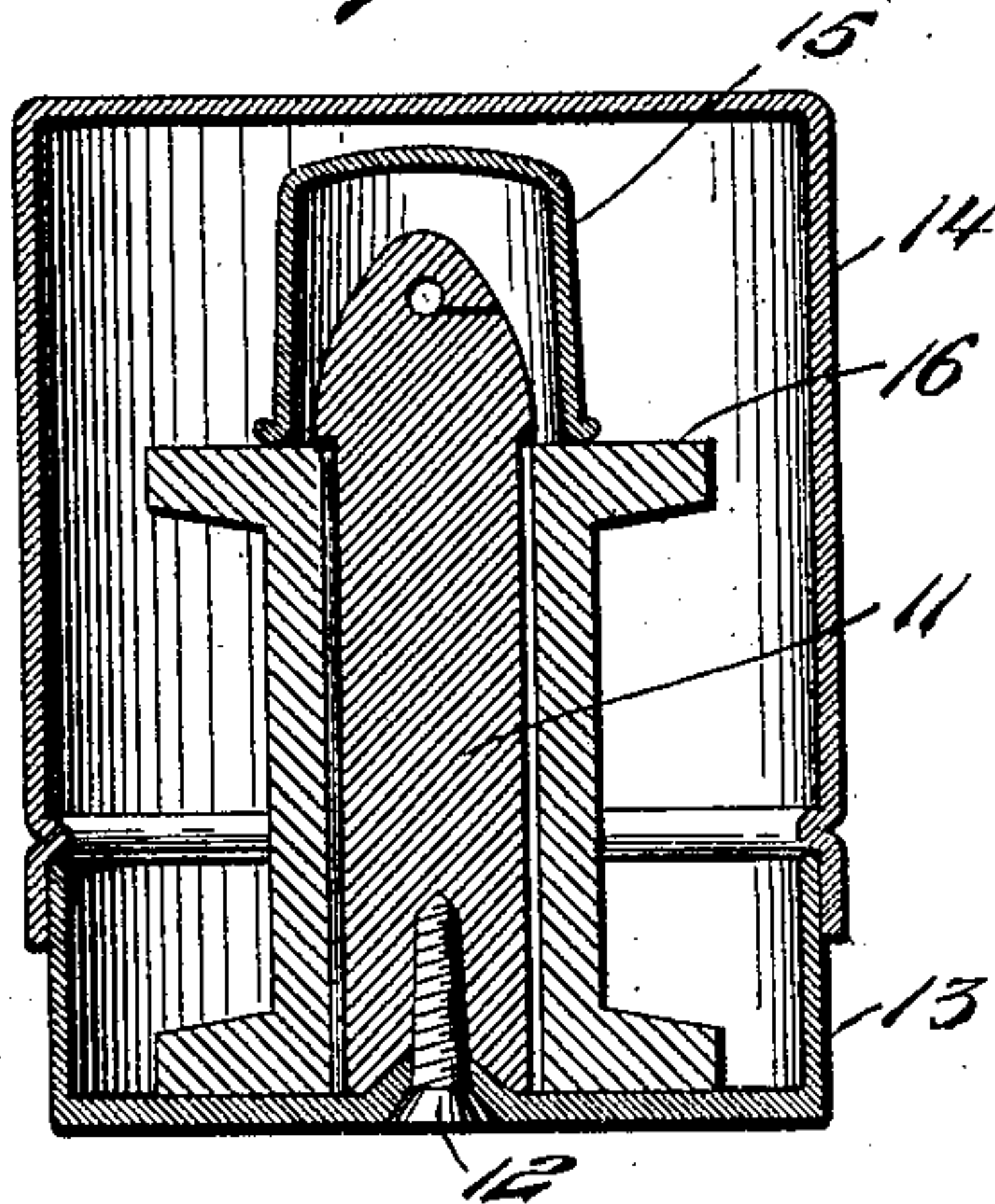


Fig. 6.

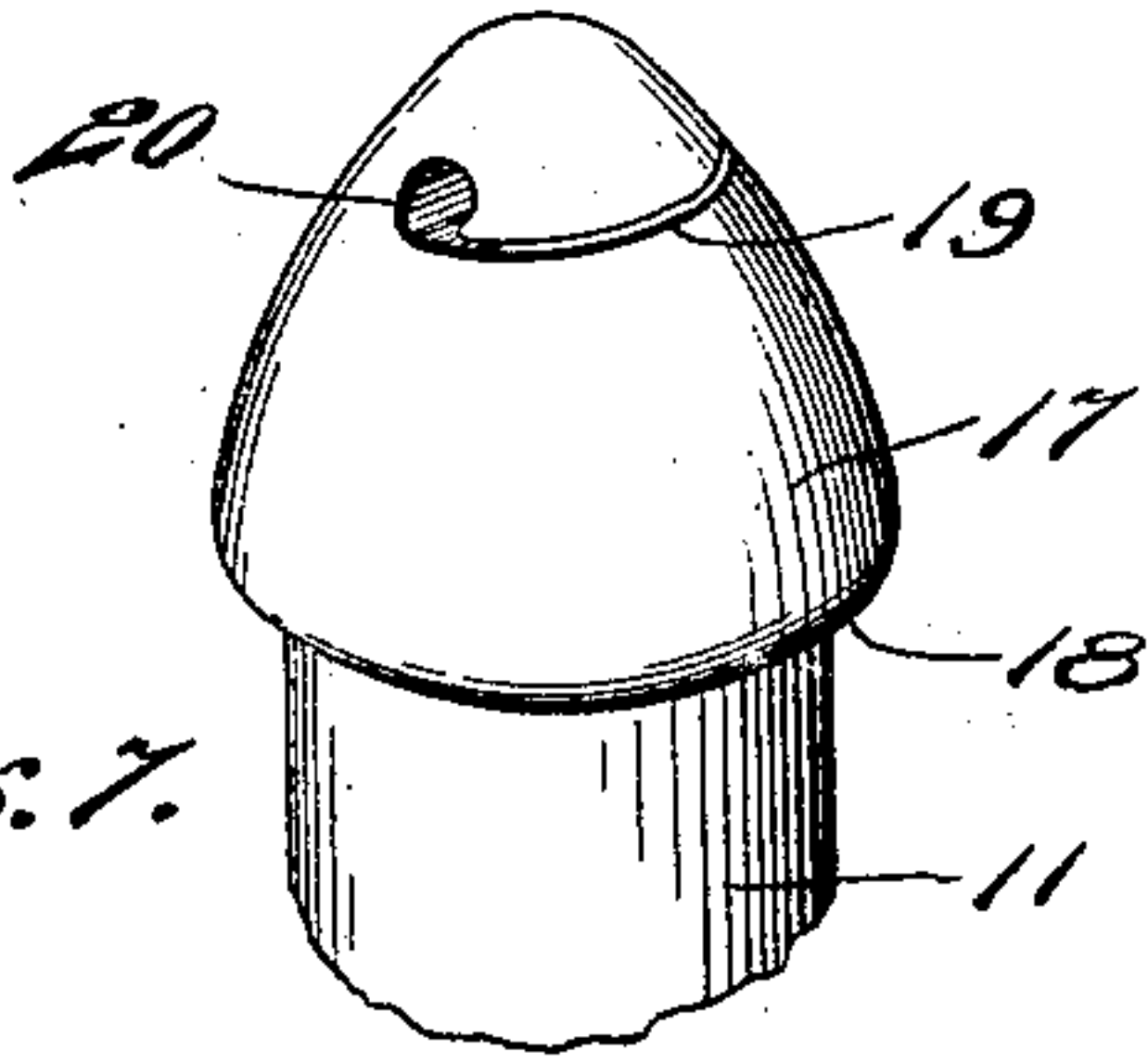
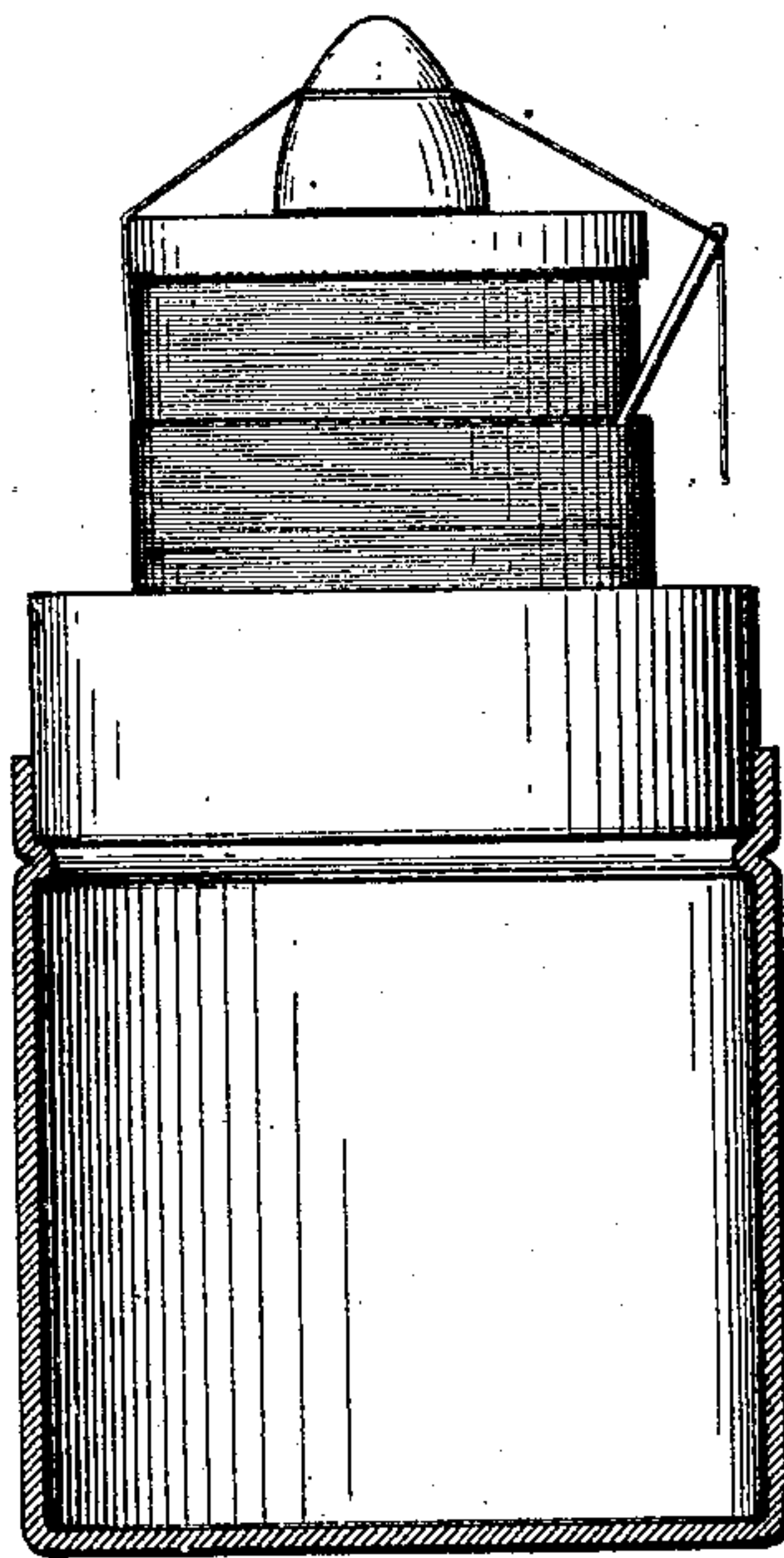


Fig. 7.

Fig. 8.

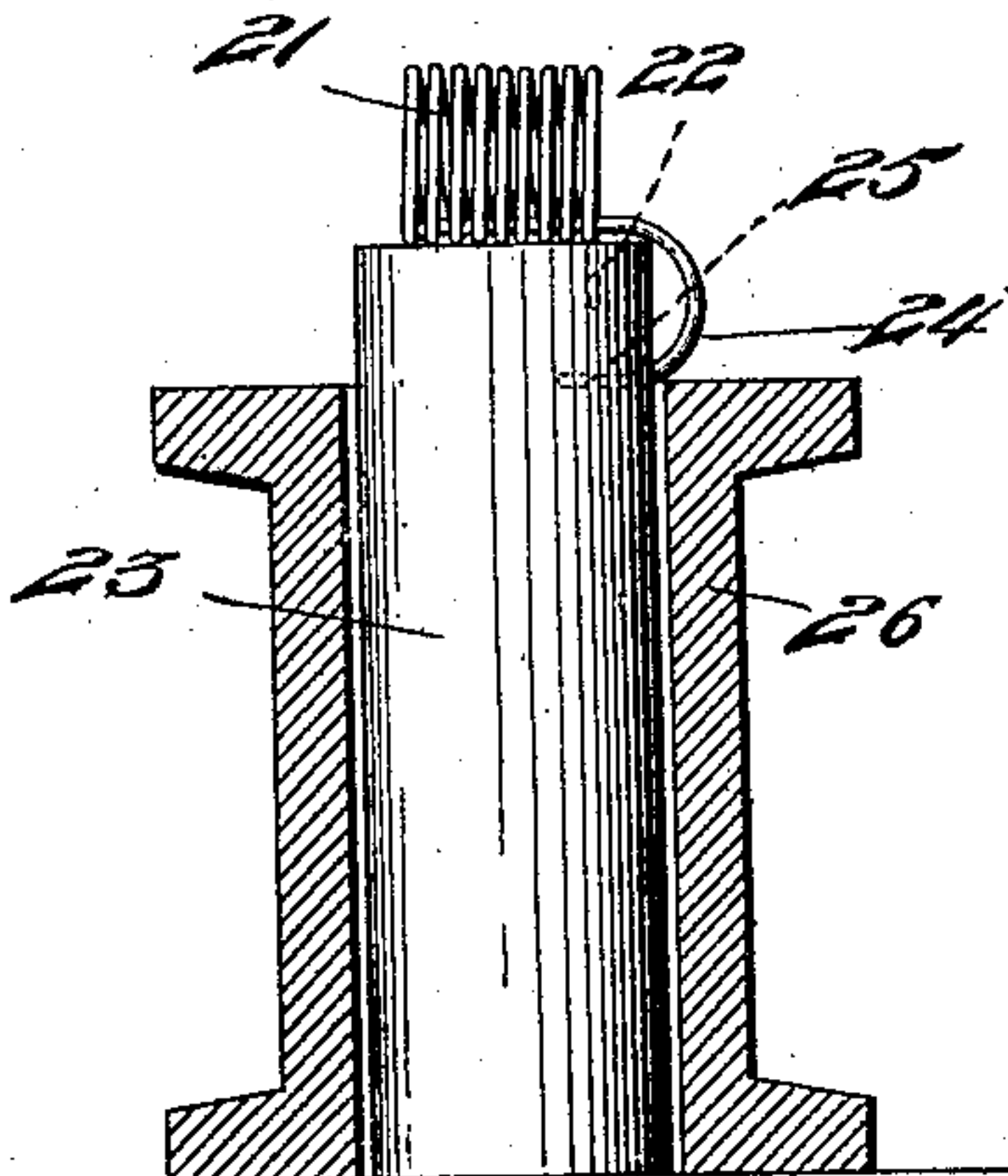
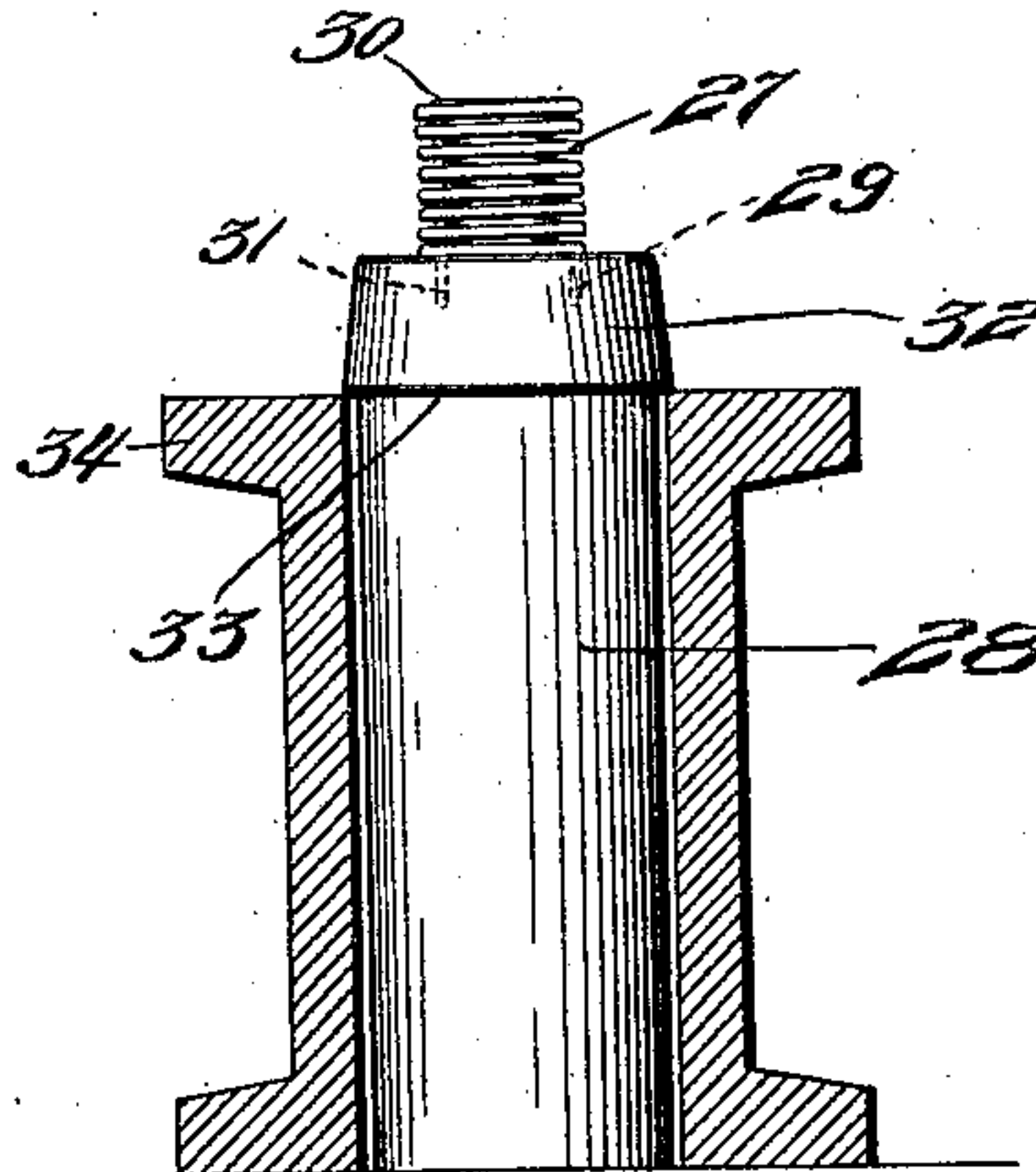


Fig. 9.



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UNITED STATES PATENT OFFICE.

BETTINA FILLMORE FORD, OF CHEVY CHASE, MARYLAND.

SPOOL-HOLDER.

No. 911,964.

Specification of Letters Patent.

Patented Feb. 9, 1909.

Application filed November 25, 1908. Serial No. 464,413.

To all whom it may concern:

Be it known that I, BETTINA FILLMORE FORD, a citizen of the United States, residing at Chevy Chase, in the county of Montgomery and State of Maryland, have invented certain new and useful Improvements in Spool-Holders, of which the following is a specification.

My invention relates to improvements in spool holders, and it consists in the constructions, combinations and arrangements herein described and claimed.

An object of my invention is to provide an attractive and compact device for retaining spools in convenient position for ready use at any desired time.

A further object of my invention is to provide an improved spool holder adapted to efficiently protect the spool thread from becoming soiled or injured, and to maintain any desired tension on the thread for preventing tangling and waste of the latter.

In the accompanying drawings, forming a part of this application and in which similar reference numerals indicate corresponding parts in the several views: Figure 1 is a perspective view of one embodiment of my invention for containing a plurality of spools; Fig. 2 is a side elevation, on a larger scale, of the free end of one of the spindles shown in Fig. 1; Fig. 3 is a section of the construction shown in Fig. 2; Fig. 4 is a similar section, illustrating a modification in which the spindle is provided with a stepped recess; Fig. 5 is a central section of my preferred construction for a single spool; Fig. 6 is a side elevation of the construction shown in Fig. 5, with the receptacle open and the cover portion thereof shown in section constituting a support for the body portion; Fig. 7 is a perspective view of the free end of the spindle shown in Figs. 5 and 6; Fig. 8 is a side elevation of a modified form of spindle, and Fig. 9 is a side elevation of a further slight modification.

Referring especially to Figs. 1, 2 and 3 of the drawings, 1 indicates the body portion of a receptacle, in which are secured a symmetrical series of spindles 2 for supporting spools 3. The cover portion 4 of the receptacle carries a complementary series of spindles 2, which are positioned to be equally spaced between the several spindles of the body portion when said cover and body portions are joined to close the receptacle. This arrangement of the two series

of spindles provides a compact construction, in which a maximum space is provided between the several spindles of each series when the receptacle is open for use. This improvement provides a very advantageous construction, in which a maximum number of spools are contained in the closed receptacle in such arrangement that, when the receptacle is opened for use, ample space will be provided between the several spools of each series to permit the convenient positioning and removal of spools on said spindles, and the insertion of the spool threads in the tensioning device carried by the spindles. The free end of each spindle 2 is provided with a peripheral recess 5 in which is closely seated a helical spring 6; the inner end of said spring being extended at 7 beyond the periphery of the spindle and slidably fitting in a bore 8 in the latter. In the operation of this construction, the spool is slipped to position on the spindle past the resilient projection 7 of the spring, which latter constitutes a stop for retaining the spool on the spindle. The spool thread is then wound about the coils of the helical spring 6 until it enters between a sufficient number of said coils to produce the desired tension, or resistance, on the thread. When any required length of thread has been withdrawn against the tension of the spring coils and severed, the remaining end of the spool thread will be securely retained by the tension between the several coils; thereby preventing tangling and waste of the thread, and presenting the end of the latter in convenient position for any subsequent use.

Fig. 4 illustrates a slight modification, in which the peripheral recess of the spindle is stepped, or formed of increased depth at its medial portion 9. In this modification, the thread will pass through the several coils of the helical spring 10 and seat on the bottom of the stepped recess 9; thereby producing a greater tension on the thread than the previously described construction.

Figs. 5, 6 and 7 illustrate my preferred construction for a single spool holder. In this construction, a spindle 11 is secured, as by a screw 12, to the body portion 13 of a receptacle; said body portion preferably terminating below the mid-length of the spindle 11, to expose the spool for convenient handling when the receptacle is open in use. The cover portion 14 of the receptacle fits over the body portion 13 when closed, and is

shown formed of sufficient dimension to permit the retention of a thimble 15 on top of the spool 16 and over the free end of the spindle 11. When the receptacle is opened
 5 for use, the cover portion 14 can be fitted over the bottom of the body portion 13, as shown in Fig. 6, to constitute a convenient supporting base and prevent displacement and accidental loss of said cover portion.
 10 The free end of the spindle 11 is provided with a tapered head 17 having a radially-extending shoulder 18, for permitting free positioning of the spool on the spindle and efficiently retaining said spool against acci-
 15 dental displacement. A feed slot 19 extends substantially tangentially to the lower periphery of a bore 20 extending through the tapered head 17 of the spindle; said bore being formed either cylindrical, or tapered
 20 from each end toward its medial portion. In this construction, the spool is readily slipped past the tapered head to position on the spindle, and the spool thread is guided through the feed slot 19 into the bore 20;
 25 the tangential arrangement of said feed slot preventing displacement of the thread from the bore therethrough. The bore 20 can be formed of sufficient size to frictionally engage the thread to produce the desired tension on
 30 the latter. However, if it be desired to increase the tension on the thread, the latter can be passed about the head 17 and again guided into the bore 20 by the feed slot.

Fig. 8 illustrates a modified construction
 35 in which a helical spring 21 has one end 22 anchored in the top of the spindle 23, and its other end 24 extended beyond the periphery of said spindle and secured therein at 25. In this construction, the thread can be passed
 40 back and forth between any required number of coils of the spring 21 to produce the desired tension, and the projecting end 25 constitutes a yielding stop for retaining the spool 26 in position on the spindle.

Fig. 9 illustrates a modification in which a
 45 helical spring 27 is positioned axially on the end of the spindle 28, with its lower end 29 anchored therein. The upper end of the spring 27 is bent downwardly at 30 against the
 50 inner surface of the spring coils, and anchored at 31 in the top of the spindle. In this modification, the spool thread is wound about the spring 27 a sufficient number of times to pass said thread between the re-

quired number of the spring coils for pro- 55
 ducing the desired tension; the downwardly projecting portion 30 of the spring constituting a stop for efficiently preventing displacement of the thread from between the
 60 several coils of the spring. The spindle 28 is shown provided with a tapered head 32 having a radially-extending shoulder 33, for retaining the spool 34 in position on the spindle.

I have illustrated and described preferred 65
 and satisfactory constructions, but changes could be made within the spirit and scope of my invention.

Having thus described my invention, what I claim as new and desire to secure by Let- 70
 ters-Patent is:

1. In a spool holder, the combination of a receptacle comprising body and cover portions, a series of spindles carried by said body
 75 portion, a series of spindles carried by said cover portion in position to be equally spaced between the body-portion spindles when the receptacle is closed, and means carried by
 80 said several spindles for retaining spools thereon and guiding the spool threads, substantially as described.

2. In a spool holder, the combination of a spindle, and a common means provided with
 85 a portion extending beyond the periphery of said spindle for retaining a spool thereon and with a portion positioned within the periphery of said spindle for engaging the spool thread with any desired tension, substantially as described.

3. In a spool holder, the combination of a 90
 spindle provided with a peripheral recess, and a helical spring seated in such recess and provided with an outwardly extending portion projecting beyond the periphery of said
 95 spindle, substantially as described.

4. In a spool holder, the combination of a spindle provided with a peripheral recess and
 100 a bore, and a helical spring seated in such recess, one end of said spring being extended outwardly beyond the periphery of said spindle and returned in sliding engagement with such bore, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

BETTINA FILLMORE FORD.

Witnesses:

G. AYRES,
 B. M. OFFUTT.