

No. 705,093.

Patented July 22, 1902.

T. F. KELLEY.
SET SCREW PROTECTOR.

(Application filed Mar. 6, 1902.)

(No Model.)

Fig. 1.

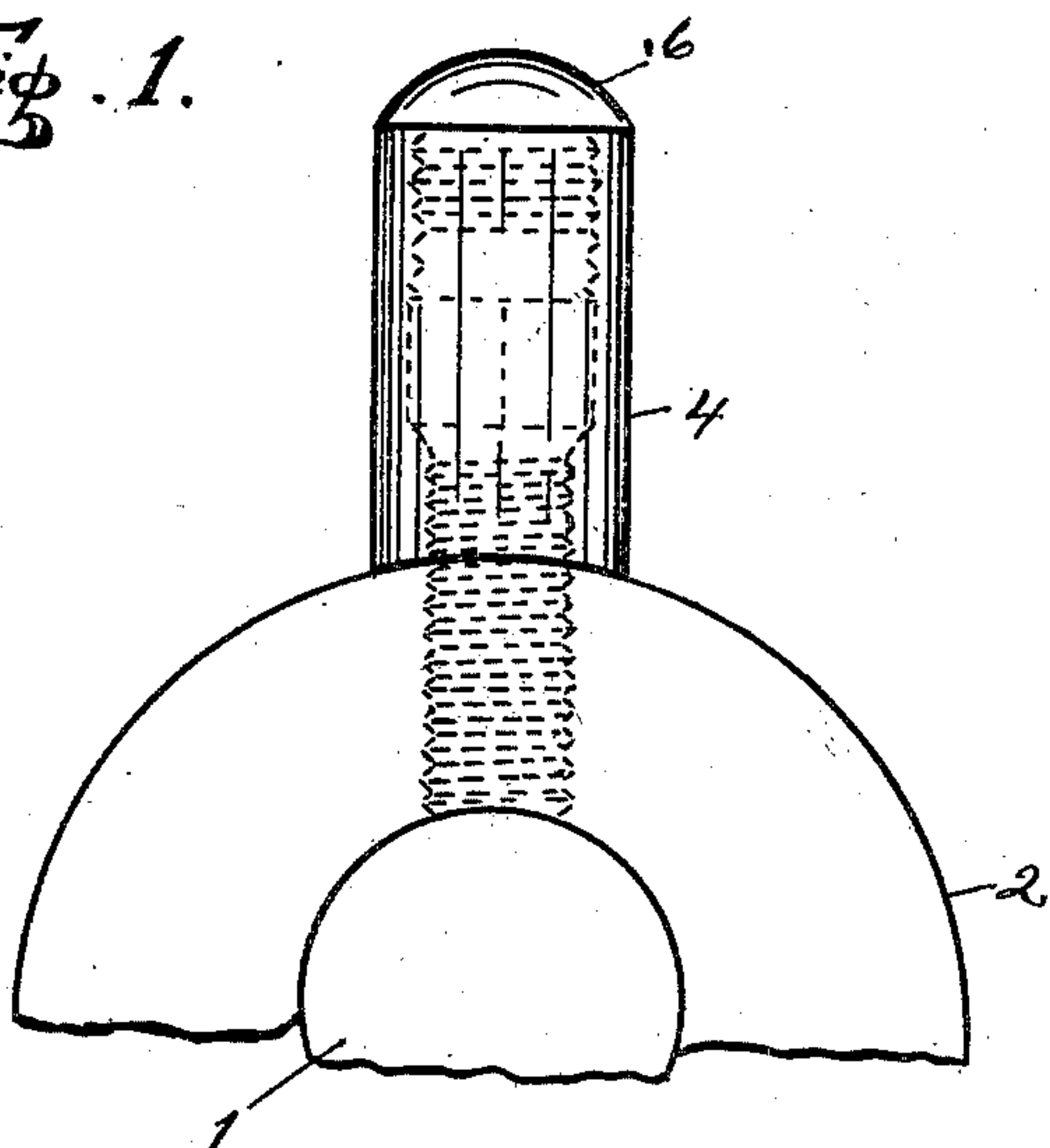


Fig. 2.

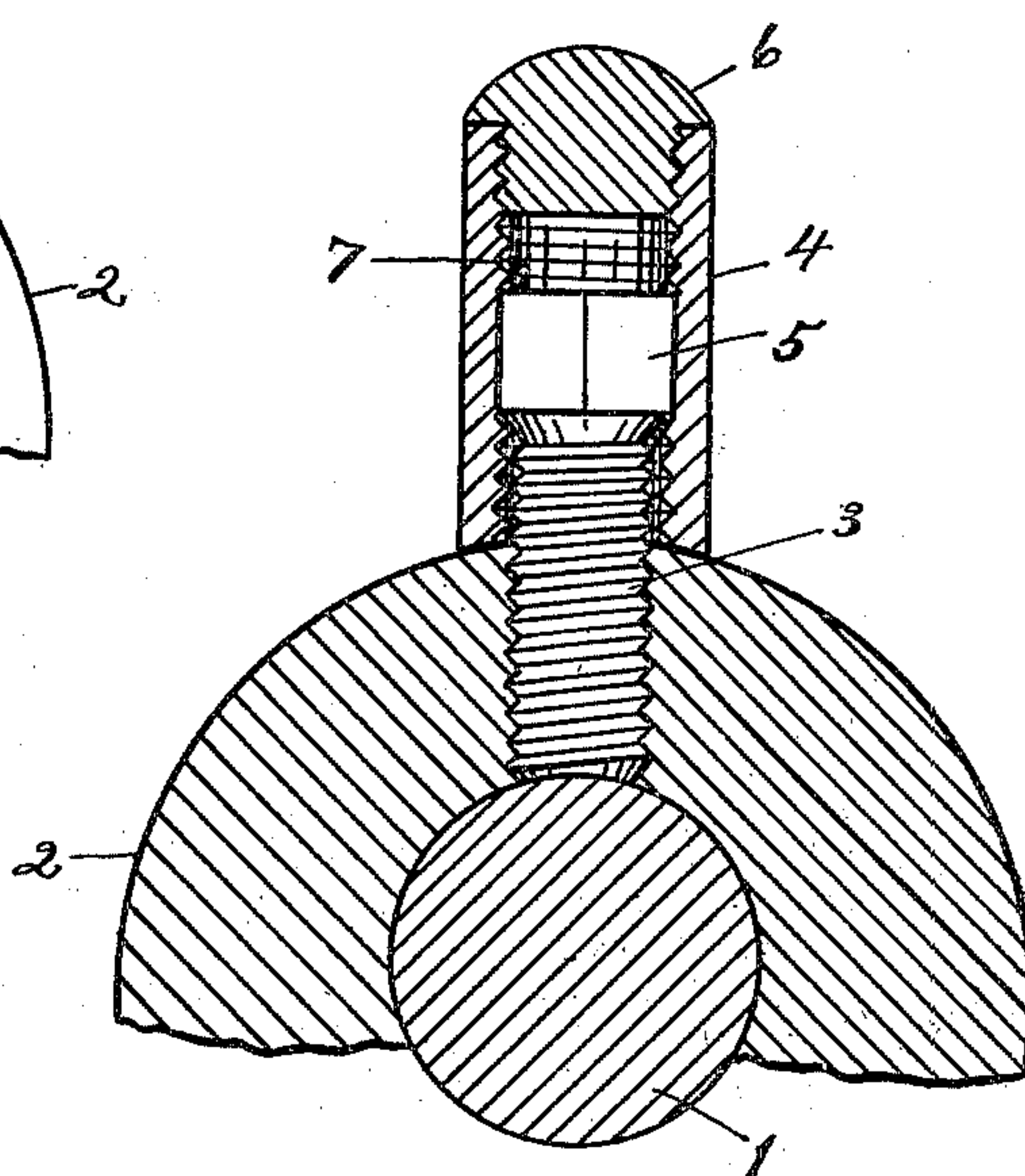


Fig. 3.

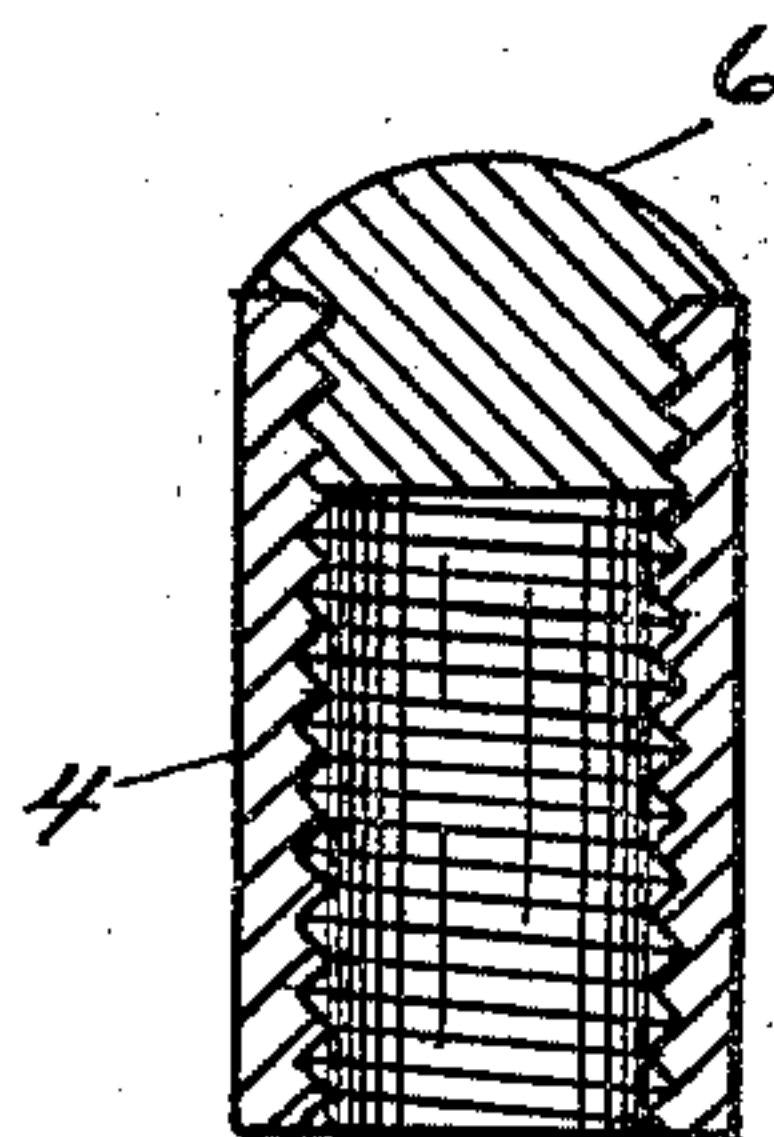
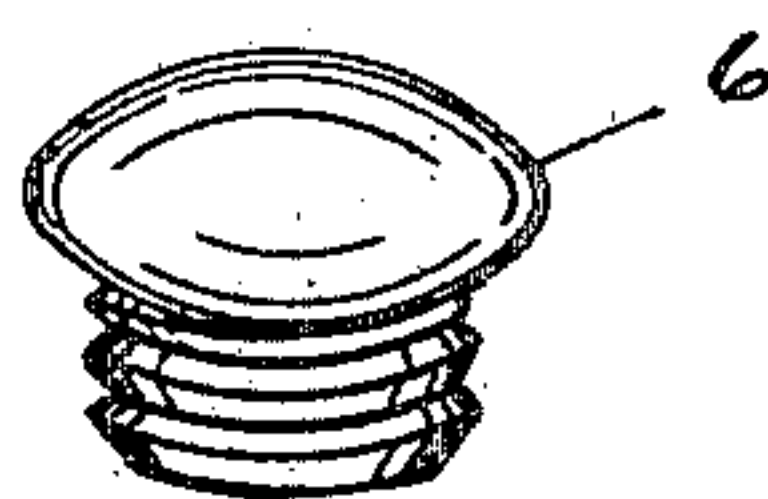


Fig. 4.



WITNESSES:

Cedelaide Kearns.
Augusta Viberg.

Thomas F. Kelley INVENTOR

BY Chapin & Denny
ATTORNEYS.

UNITED STATES PATENT OFFICE.

THOMAS F. KELLEY, OF LIGONIER, INDIANA.

SET-SCREW PROTECTOR.

SPECIFICATION forming part of Letters Patent No. 705,093, dated July 22, 1902.

Application filed March 6, 1902, Serial No. 96,876. (No model.)

To all whom it may concern:

Be it known that I, THOMAS F. KELLEY, a citizen of the United States, residing at Ligonier, in the county of Noble, in the State of Indiana, have invented certain new and useful Improvements in Set-Screw Protectors; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to improvements in set-screw protectors specially adapted for use upon revolving shafts.

It is well known that exposed set-screws for securing pulleys and like devices upon revolving shafts in factories and like situations are a source of great danger to employees whose duties require their attention about such machinery, particularly in oiling the bearings about a revolving shaft, for the reason that the projecting end of such set-screws is liable to catch the clothing of the attendant and break an arm or otherwise injure him by drawing him into contact with the shaft.

The prime object of my present invention is to obviate the danger of such accidents from exposed set-screws on revolving mechanism by providing a cheap, simple, and secure protecting sheath or covering for the exposed portion of such set-screws.

My invention consists of a tubular hood, sheath, or protector of firm but flexible material, preferably of rubber and of a proper size to admit and contain the exposed portion of the set-screw, the said sheath having its inner surface provided with a suitable screw-thread, by means of which it is firmly seated in position and rigidly secures its closing-cap and having its upper end closed by a proper removable cap, preferably of wood, adapted to form a screw-threaded connection with the said sheath.

The novel feature of my invention resides in the construction and arrangement by which all danger of accidents caused by either the set-screw or the protector catching upon the clothing of the attendant is obviated.

Similar reference-numerals indicate like parts throughout the several views of the accompanying drawings, in which—

Figure 1 is a side elevation of my improvement in position upon a projecting set-screw shown in dotted outline. Fig. 2 is a vertical central section of Fig. 1, showing the relative arrangement of the operative parts and also showing the space which is left between the closing-cap and the adjacent end of the set-screw. Fig. 3 is a detail of my improvement in vertical central section. Fig. 4 is a perspective detail of the screw-threaded plug or cap for closing the upper end of the shield.

Upon any proper revoluble shaft 1 is mounted a proper pulley 2, rigidly fixed thereon by any proper set-screw 3 in the usual or other proper manner and whose upper end projects in an exposed position as usual.

My inclosed protector consists of a tubular hood or sheath 4, internally screw-threaded preferably throughout its entire length to better enable it to securely cling to the said set-screw, whose projection above the pulley may vary in different situations, and is formed of flexible material, preferably of rubber and of proper size to snugly admit and contain the angular head 5 of the set-screw 3, as shown in Fig. 2, and is thereby adapted to be firmly seated on the pulley 2 and securely adheres to the said set-screw by its elasticity during all the vibrations to which it is subjected in ordinary use. This tubular sheath or protector 4 has its upper end closed by a proper screw-threaded plug or cap 6, preferably of wood, and is preferably of sufficient length to leave an intervening space 7 therein between the head 5 of the set-screw 3 and the inner end of the cap or plug 6, Fig. 2, whereby in case of accident or emergency the cap will readily be forced from its seat in the manner hereinafter described. It is obvious that as the walls of the protector 4 are flexible it can readily be slipped onto and over the projecting head 5 of the set-screw, which is slightly larger in cross-section than the central opening in said sheath, whereby no ordinary jarring or strain can displace it when thus firmly mounted. Should the sleeve or other portion of the clothing of an attendant catch upon or become entangled with the cap 6, the sheath

4 will bend laterally at the point of the said space 7, whereby under a comparatively slight lateral strain the cap will be unseated or dismounted, and thereby release the clothing entangled therewith without any danger therefrom. It is also evident that should the cap 6 be removed or lost the sheath 4 would still form a secure and efficient protector for the set-screw 3.

10 My invention thus described is cheap, simple, efficient, and convenient, readily placed in position or removed therefrom, and having small liability of getting out of repair and adapted to perfectly obviate all danger of
15 contact with the said set-screw.

Having thus described my invention and the manner of employing the same, what I desire to secure by Letters Patent is--

20 1. A set-screw protector consisting of an internally-screw-threaded tubular sheath, open at its lower end and adapted to firmly inclose the protruding portion of said set-screw, and provided with a removable cap

adapted to close the upper end of said sheath by a screw-threaded connection, as described. 25

2. In a set-screw protector, the combination of an internally-screw-threaded tubular sheath open at its lower end and having a flexible portion between the set-screw and the cap when in position, and a removable screw-threaded cap adapted to close the upper end of the sheath, as described. 30

3. A set-screw protector consisting of a tubular inclosing sheath internally screw-threaded for the purposes specified, and adapted to be secured in an upright position upon the protruding portion of the set-screw by its own elasticity, as described. 35

Signed by me at Ligonier, county of Noble, and State of Indiana, this 26th day of February, A. D. 1902. 40

THOMAS F. KELLEY.

Witnesses:

JAMES I. GAUGUER,
WRIGHT M. SMITH.