

I. W. EXLEY.

SET COLLAR.

APPLICATION FILED APR. 17, 1908.

930,169.

Patented Aug. 3, 1909.

Fig 1

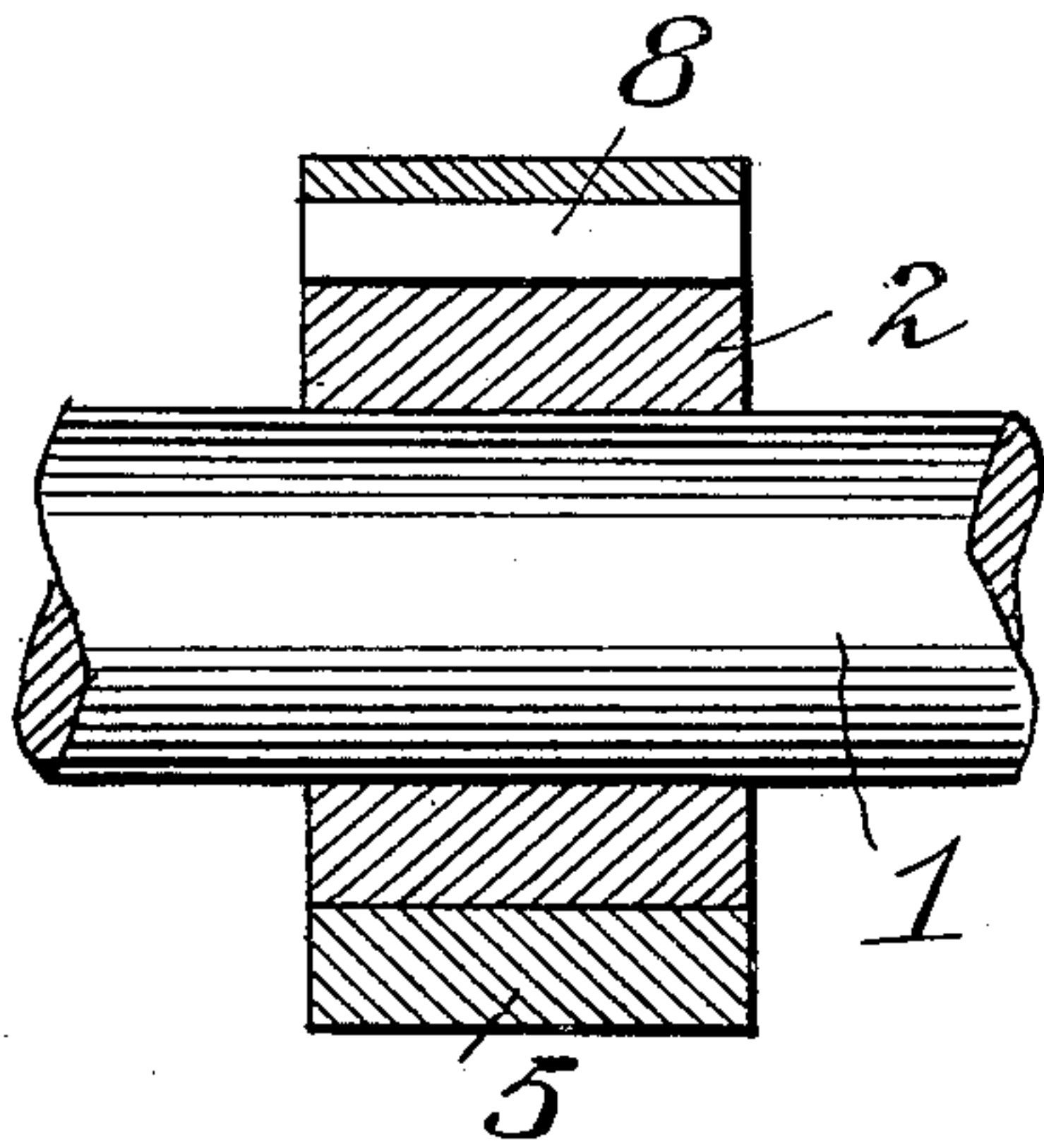


Fig 2

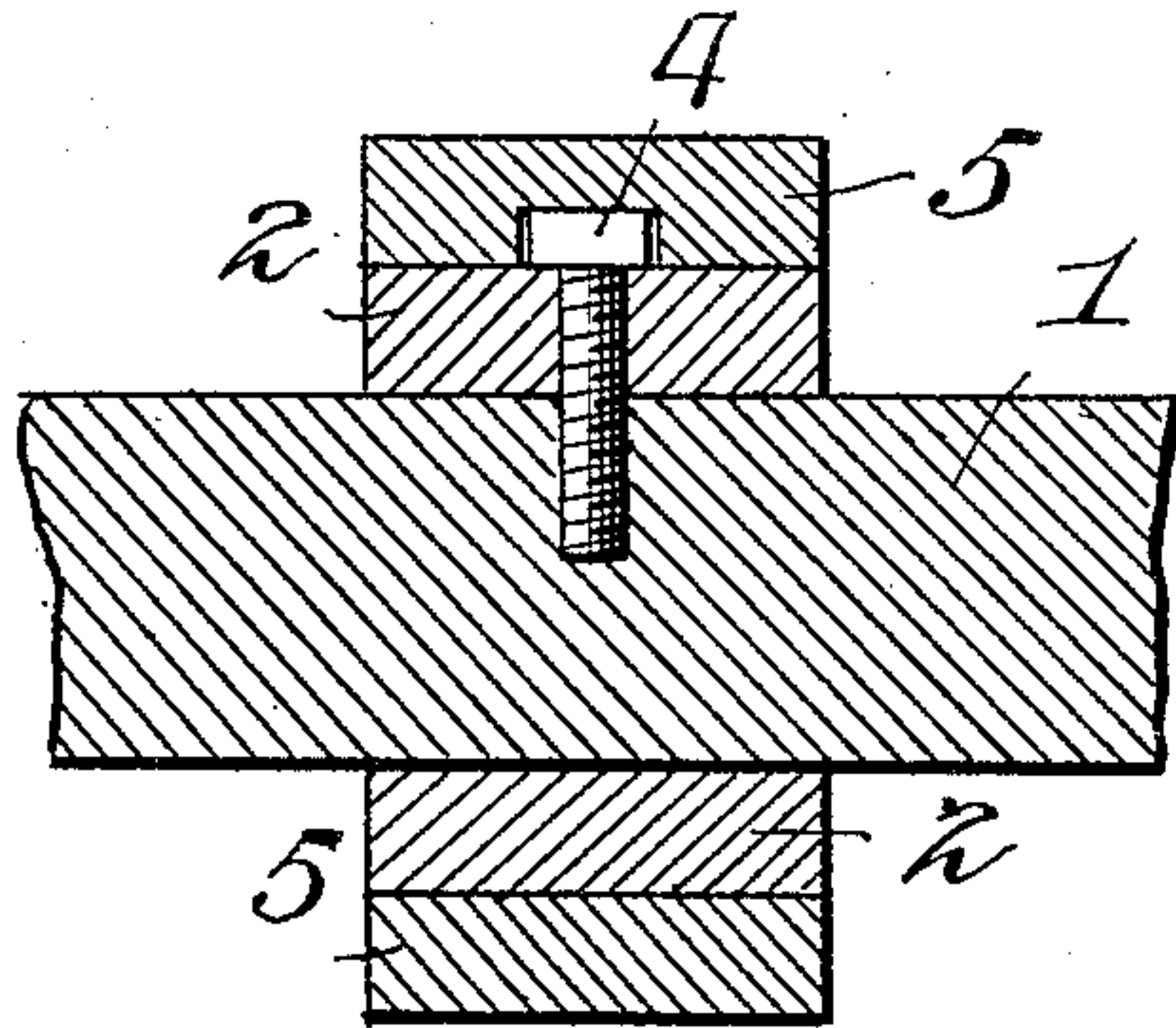


Fig 3.

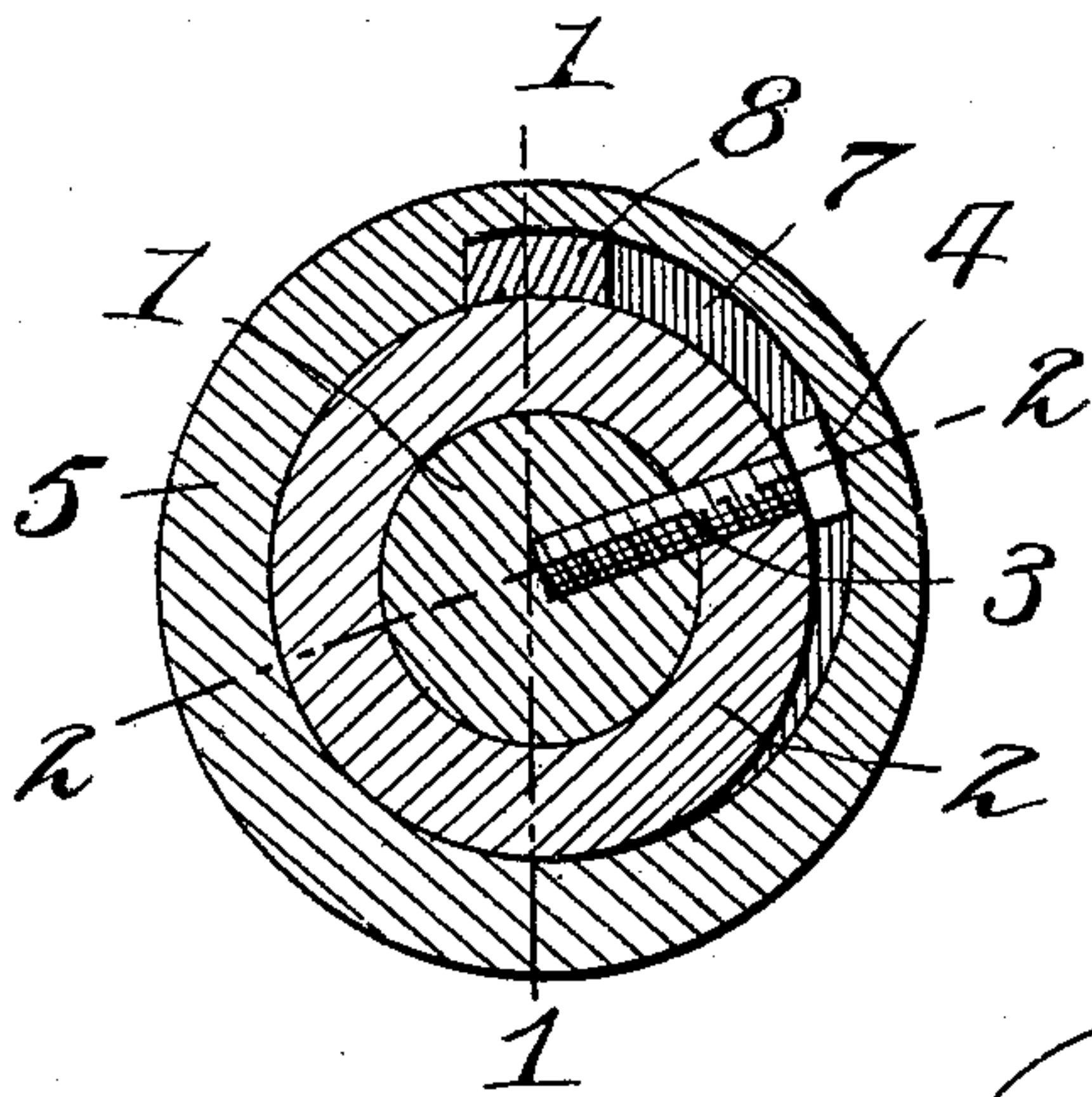


Fig 4.

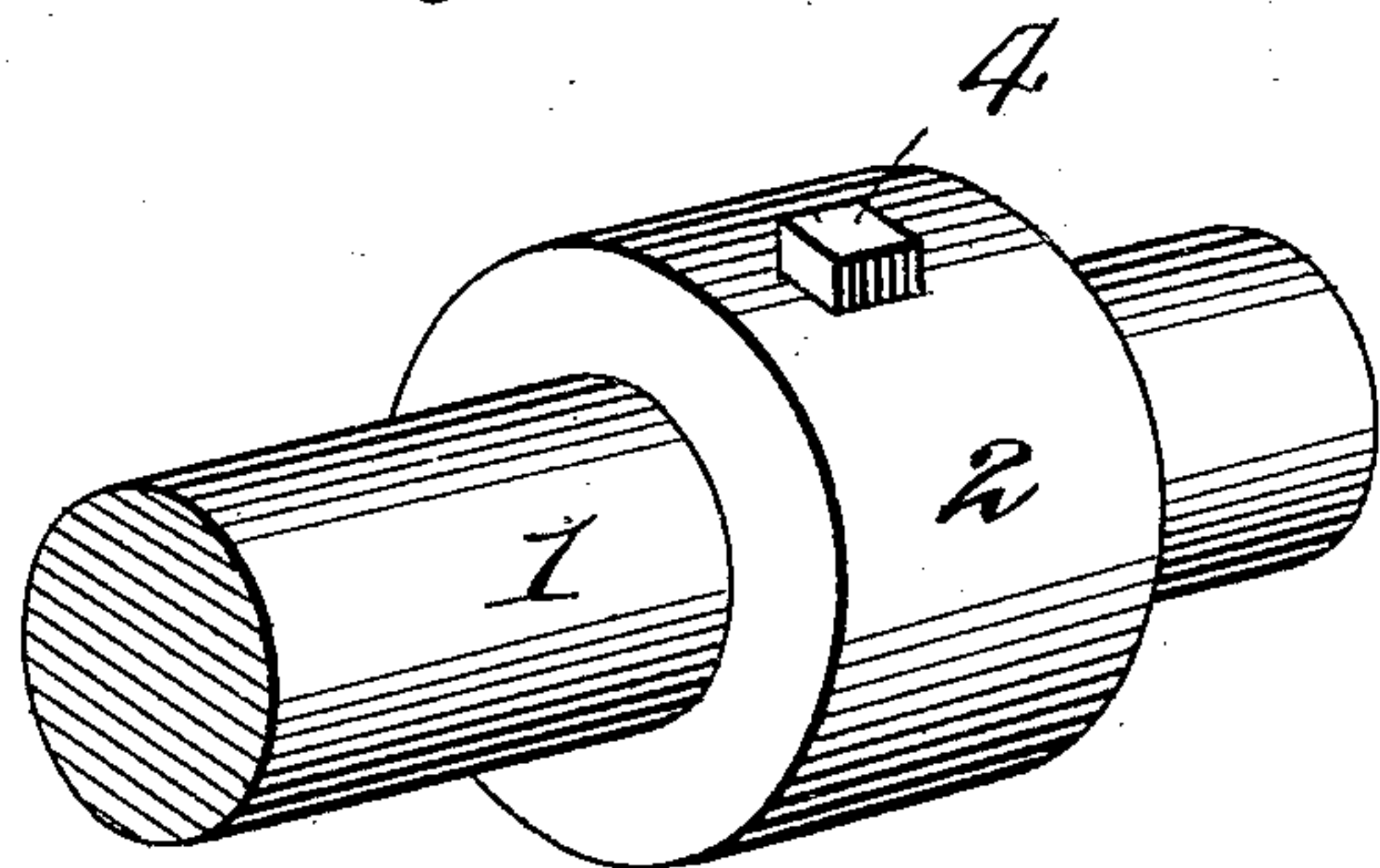
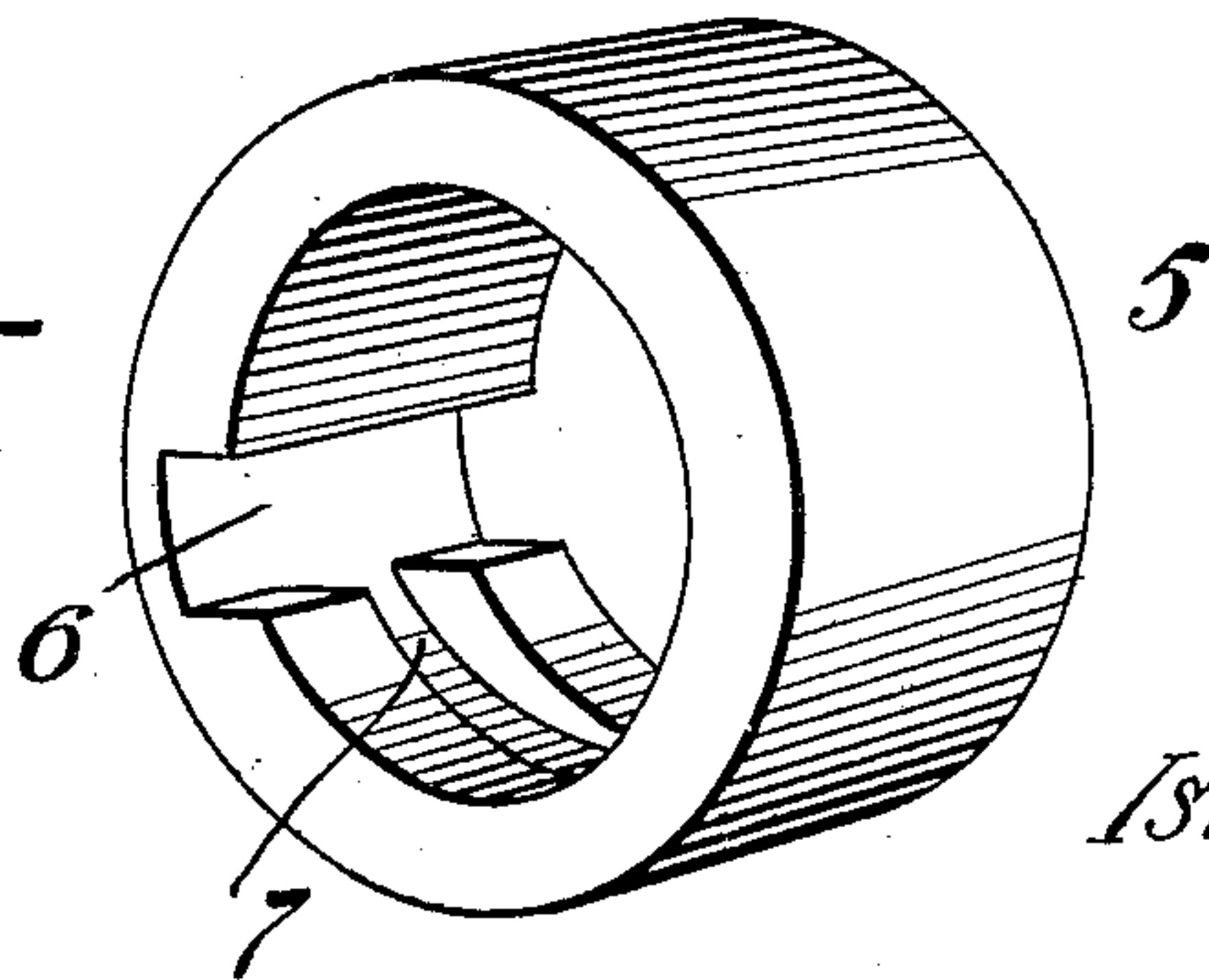


Fig 5.



Witnesses

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SET-COLLAR.

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To all whom it may concern:

Be it known that I, ISRAEL W. EXLEY, a citizen of the United States, residing at Colville, in the county of Stevens and State of Washington, have invented new and useful improvements in Set-Collars, of which the following is a specification.

This invention relates to set collars for shafts, and the object of the invention is to provide a set collar with an effective retaining means whereby the danger of the collar becoming loosened upon the shaft will be entirely eliminated.

With these objects in view the invention resides in providing an ordinary set collar with a retaining element having a projecting head, and a second collar having its inner periphery provided with a longitudinal opening and a central angular recess communicating with the longitudinal opening, the longitudinal opening being adapted for the reception of the headed retaining element upon the first collar and to direct it within the angular recess, when the second collar is rotated and the longitudinal recess left open for the reception of a retaining wedge or lock.

To these ends the invention resides in the novel construction of elements and their arrangement in operative combination herein-after fully described and claimed.

In the accompanying drawings, Figure 1 is a longitudinal sectional view of a set collar constructed in accordance with the present invention and being taken upon the line 1—1 of Fig. 3. Fig. 2 is a similar sectional view taken upon the line 2—2 of Fig. 3. Fig. 3 is a central transverse sectional view of the device. Fig. 4 is a detail perspective view of the first collar having the headed retaining element. Fig. 5 is a similar view of the locking or securing collar.

In the accompanying drawings the numeral 1 designates a shaft for pulleys, of the ordinary construction. Secured upon this shaft 1 is a collar 2. This collar 2 is provided with an opening alining with a threaded opening in the shaft 1 and these openings are adapted for the reception of a retaining

element 3 provided with a head 4 projecting upon the face of the collar 2.

The numeral 5 designates the securing collar. This collar has its inner periphery of a size equaling the outer annular surface of the collar 2. The collar 5 has its inner periphery provided with a longitudinal passage 6, of a size approximately equaling that of the headed projection 4 of the retaining element 3. Coöperating with the longitudinal opening 6 is a central angular passage 7, having its walls diminishing from its point of connection with the surface of the cut away portion 6.

When the collar 2 is positioned upon the shaft 1, the collar 5 is inserted upon the collar 2, the longitudinal opening 6 provided by the collar 5 being inserted over the projecting head 4 of the retaining element 3. When the head 4 of the retaining element is brought into alinement with the passage 7 of the collar 5, the collar is rotated so as to bring the head within the passage 7 and away from the passage 6. When this is accomplished a wedge or locking element 8 is inserted in the longitudinal passage 6 and the collars 2 and 5 securely locked upon each other, and the retaining element 3 effectively locked and held in position upon the shaft 1.

From the foregoing description it will be seen that the invention provides a set collar which is perfectly smooth upon its outer face, thereby presenting no obstructions, such as set screws or the like, and thus obviating the liability of accidents which frequently occur by such obstructions contacting the clothing of persons passing the shaft. It will be further noted that a plurality of set collars may be employed upon a shaft, and that the outer collars may be readily removed by simply withdrawing the wedge or locking element 8.

Having thus fully described the invention what is claimed as new is:

In a device of the character described, a shaft provided with a threaded orifice, a collar provided with an orifice adapted to aline with the orifice of the shaft, a threaded element having an enlarged squared head

engaging the said orifices, a second collar having a longitudinal cut away portion extending its entire width, and a centrally arranged wedge shaped recess transversely of and communicating with the longitudinal cut away portion, the second collar being adapted to be slid over the first collar and the head of the threaded element connecting the first collar with the shaft positioned

within the wedge shaped recess, and a retaining member for the longitudinal slot of the second collar. 10

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

ISRAEL W. EXLEY.

Witnesses:

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G. W. EXLEY.