

No. 791,548.

PATENTED JUNE 6, 1905.

M. H. FISCHER.

SET SCREW.

APPLICATION FILED MAY 23, 1903.

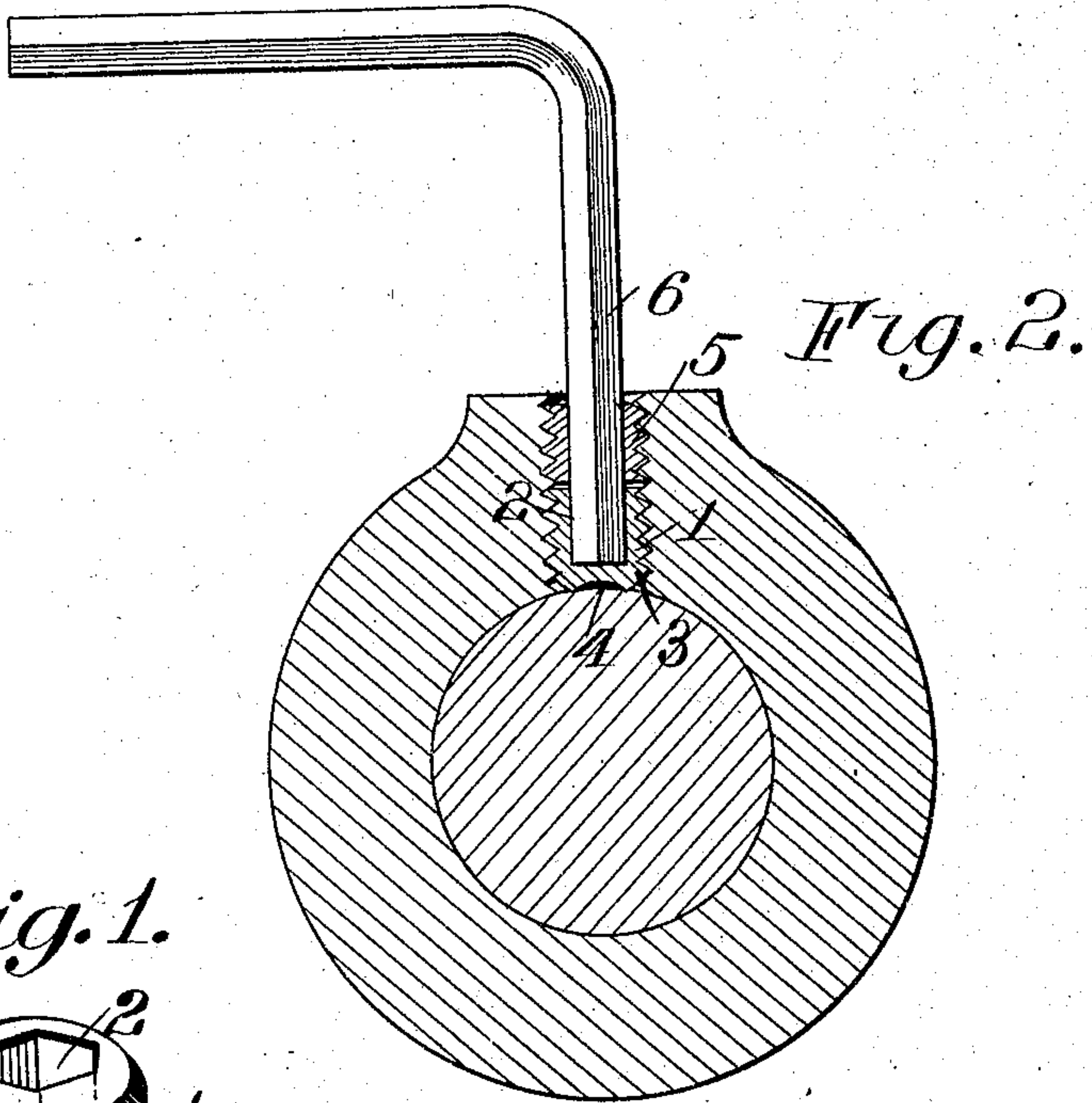


Fig. 1.

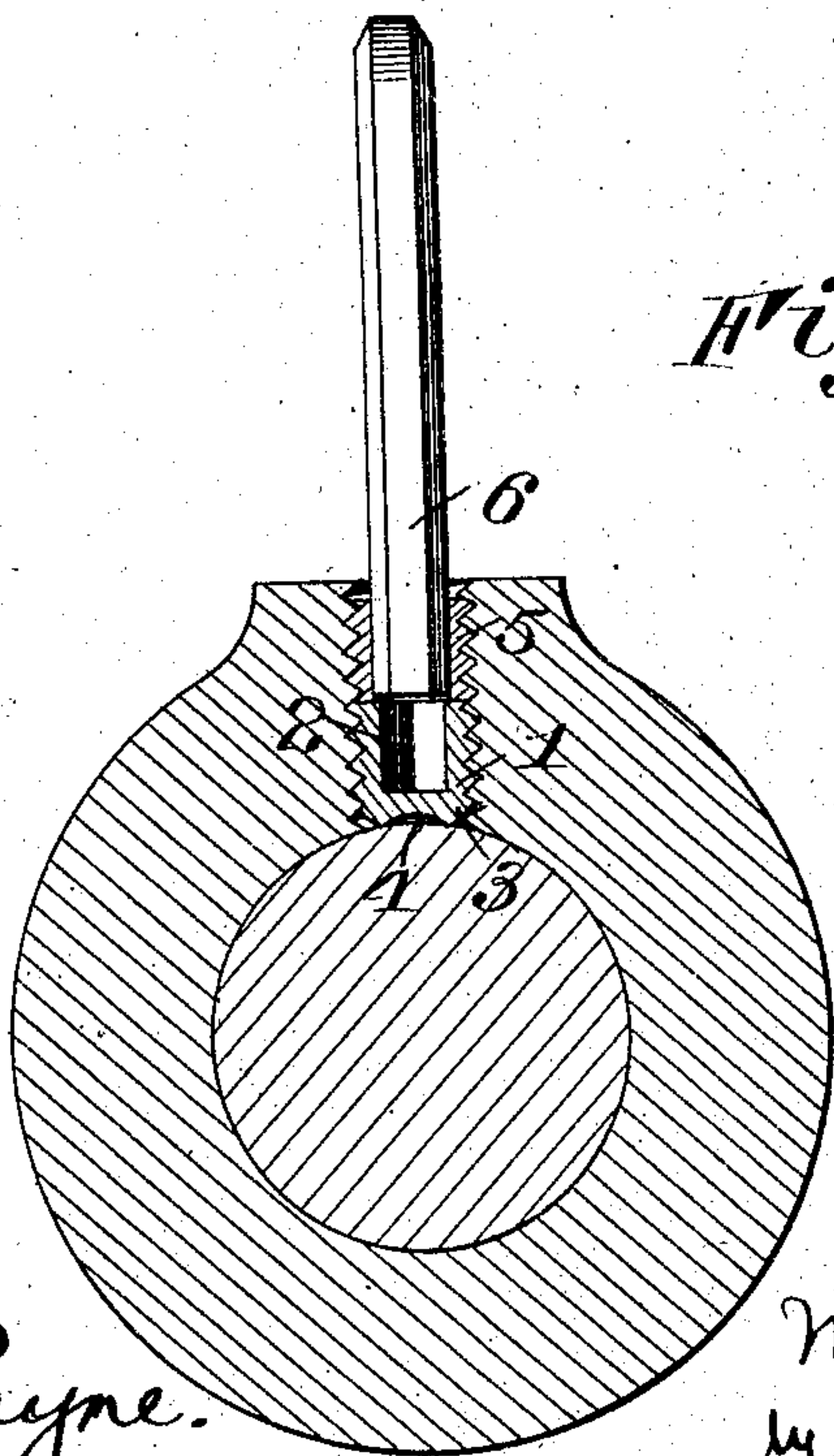
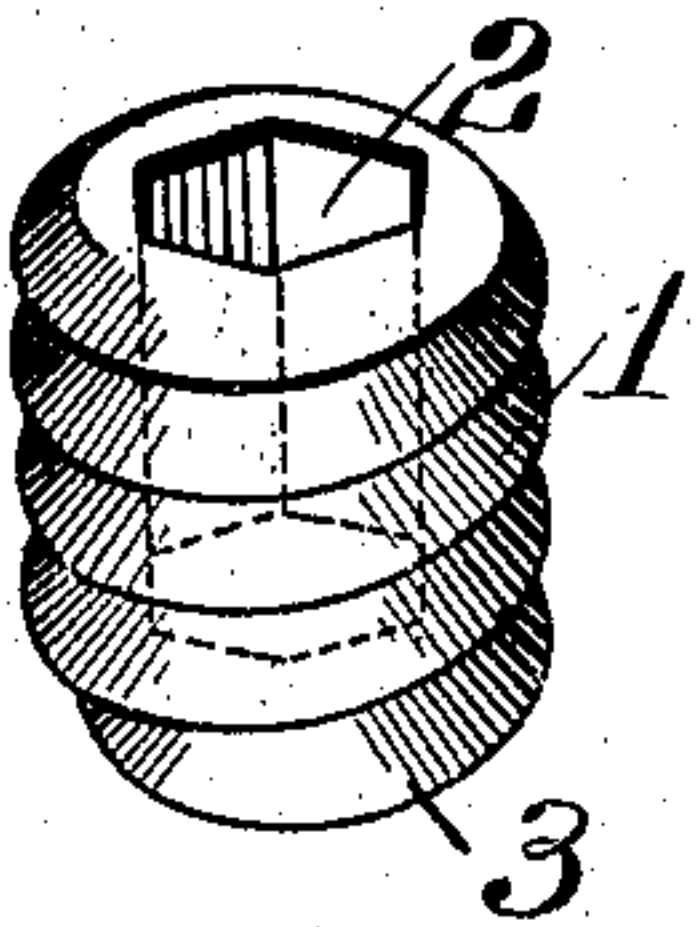


Fig. 3.

Witnesses.

Walter B. Payne.

Willard Rich.

Inventor.

Max H. Fischer

by Edmund S. Church

his Attorney.



# UNITED STATES PATENT OFFICE.

MAX H. FISCHER, OF EAST ORANGE, NEW JERSEY, ASSIGNOR TO HOLLOW SCREW COMPANY, OF NEW YORK, N. Y., A CORPORATION OF NEW YORK.

## SET-SCREW.

SPECIFICATION forming part of Letters Patent No. 791,548, dated June 6, 1905.

Application filed May 23, 1903. Serial No. 158,437.

*To all whom it may concern:*

Be it known that I, MAX H. FISCHER, of East Orange, in the county of Essex and State of New Jersey, have invented certain  
5 new and useful Improvements in Set-Screws; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, and  
10 to the reference-numerals marked thereon.

My present invention relates to improvements in set-screws, and has for its object to provide an article that can be readily and cheaply manufactured, but which will obviate  
15 many of the difficulties of manipulation that have characterized the use of former devices.

The ordinary set-screw formed by cutting threads upon the outer surface of solid cylinders of metal and providing one end thereof  
20 with a shallow slot or recess for the key or other instrument by means of which it is adjusted has been found to have as its chief objection a tendency to become jammed either from rust, mutilation, or the lodgment of foreign substances in the tapping, and the means  
25 provided have proved inadequate to effect its immediate removal. Furthermore, when once broken or crushed in its adjusted position it has required a large expenditure of time and  
30 labor to extricate the fragments. Therefore I have devised an article which effectually eliminates these difficulties, as the force exerted to cause its removal is directly applied throughout its whole length, which equalizes  
35 the strain and dissipates any tendency it may have to twist or break; and my device is further designed to provide a simple and convenient method of locking the screw in its adjusted position by using it in conjunction with  
40 another in such a manner that both may be easily released without necessitating the separate removal of either.

In the drawings, Figure 1 is a perspective view of the screw. Fig. 2 is a cross-sectional  
45 view of a shaft and hub to which the screw is applied with the latter in process of adjustment, and Fig. 3 is a similar view showing the method of operating the locking connection.

Similar reference-numerals in the three figures indicate similar parts.

The device consists, essentially, of a hollow engaging screw 1, closed at one end and provided with an aperture 2, which I have shown hexagonal in shape to conform as near as possible with the contour of the piece without  
50 weakening it, though it may be of any angular or irregular form that will not admit of the free rotation of a similarly-shaped key or wrench inserted therein. The closed end is beveled at 3 and provided with either a convex or concave face 4, accordingly as adapted  
55 to engage a flat or rounded surface. The locking member 5 is similarly constructed, but is open at both ends and has the aperture extending throughout its entire length. The  
60 inner end of the locking member and the outer end of the nut are each provided with the flattened faces, as shown, so that as the former is forced into engagement with the latter there will be considerable frictional engagement between the abutting faces, which will serve to  
65 hold both the nut and the locking member in position.

The method of using the device is as follows: The locking member is slipped upon the  
70 shank of a mandrel or key 6, similar in cross-section to its interior and adapted to engage therewith, and the latter is then inserted in the aperture in the member 1, when both are driven together until the latter forms a bite  
80 with the surface to be engaged. The key is then partially withdrawn, as shown in Fig. 3, until it engages with the locking member only, when the latter is independently driven into firm contact with the upper surface of the engaging member, securing it in its position. In  
85 releasing the connection the locking member is first started until the key-shank is permitted to operate in the aperture in the engaging member, when both may be withdrawn either  
90 totally or partially.

It will be understood that I do not limit my-

self to a set-screw of two parts only, as any number may be used in series and locked successively one upon the other.

I claim as my invention—

- 5 A set-screw composed of two exteriorly-threaded sections, one of said sections having an irregular aperture extending therethrough and the other an aperture therein adjacent the

first section, said sections having on their proximate ends faces adapted to frictionally engage with each other.

MAX H. FISCHER.

Witnesses:

HARRY T. DEANE,  
DOUGLAS JOHNSON.