

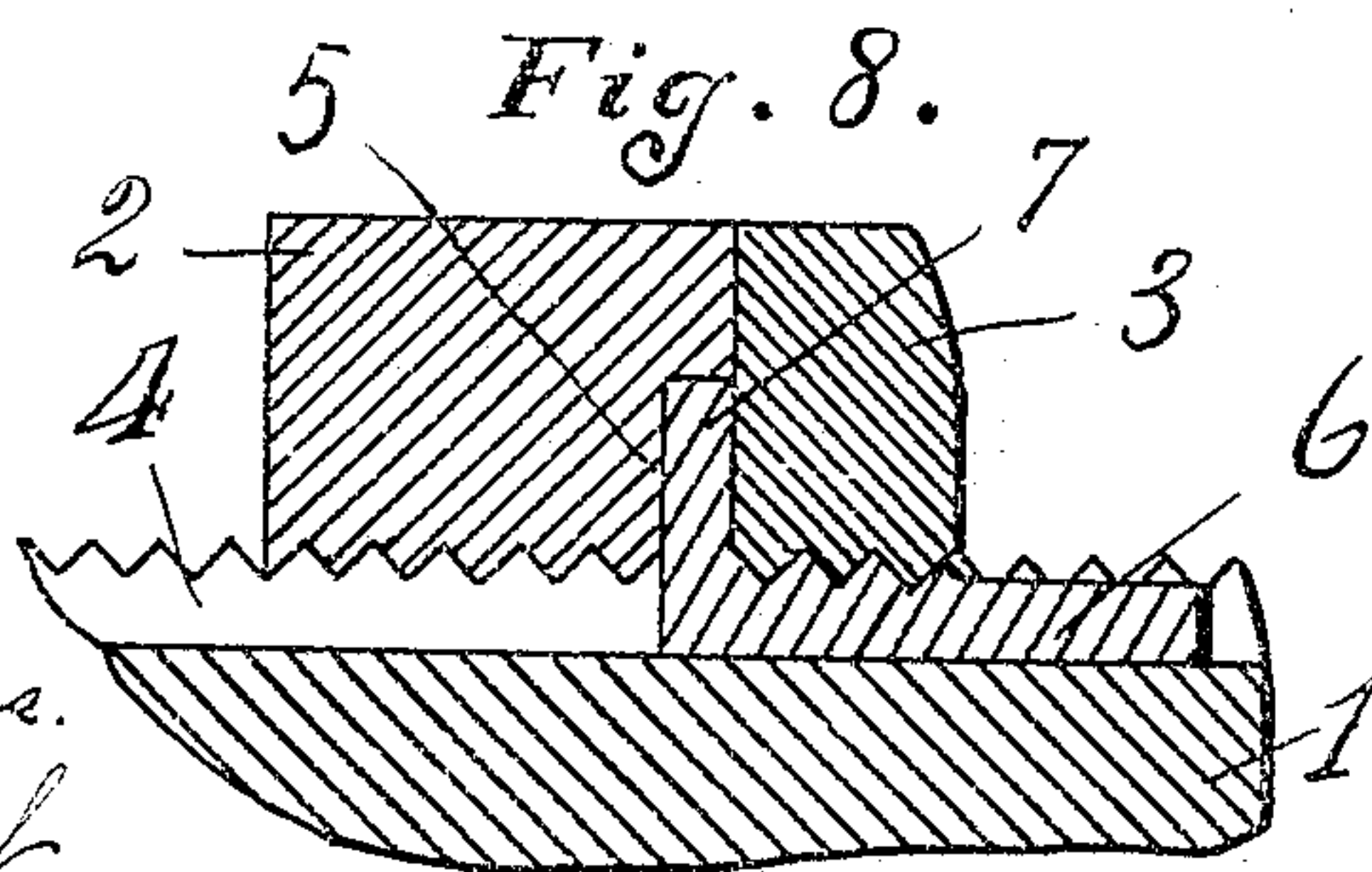
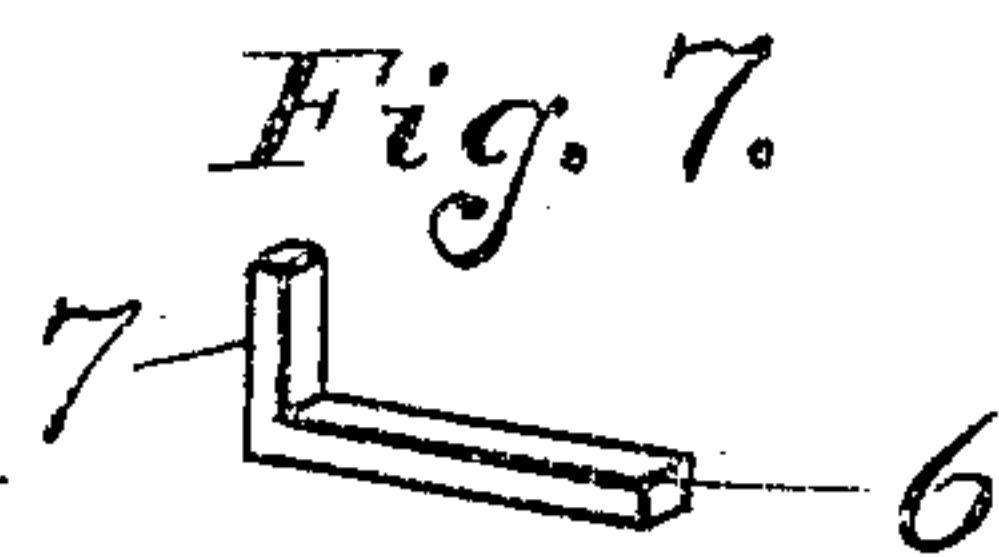
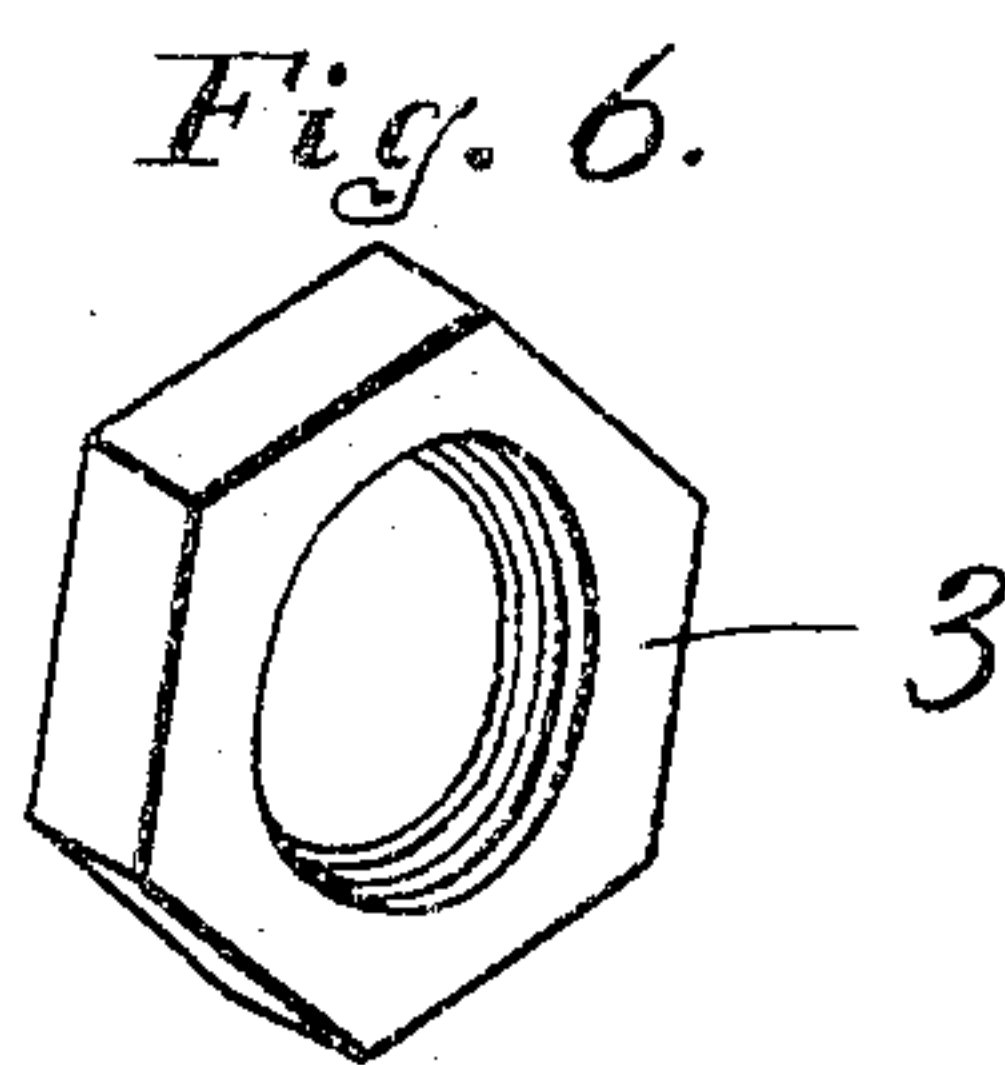
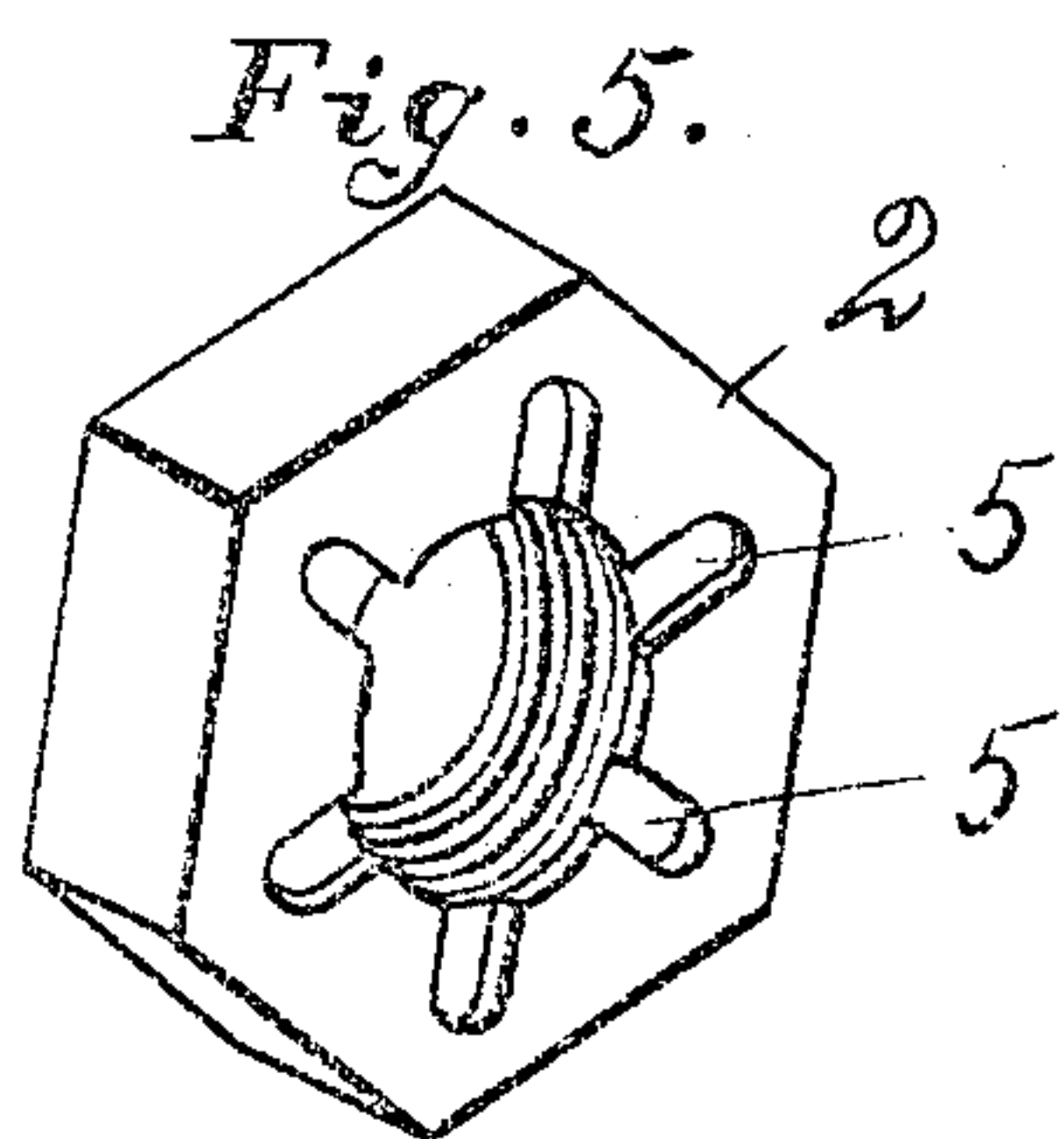
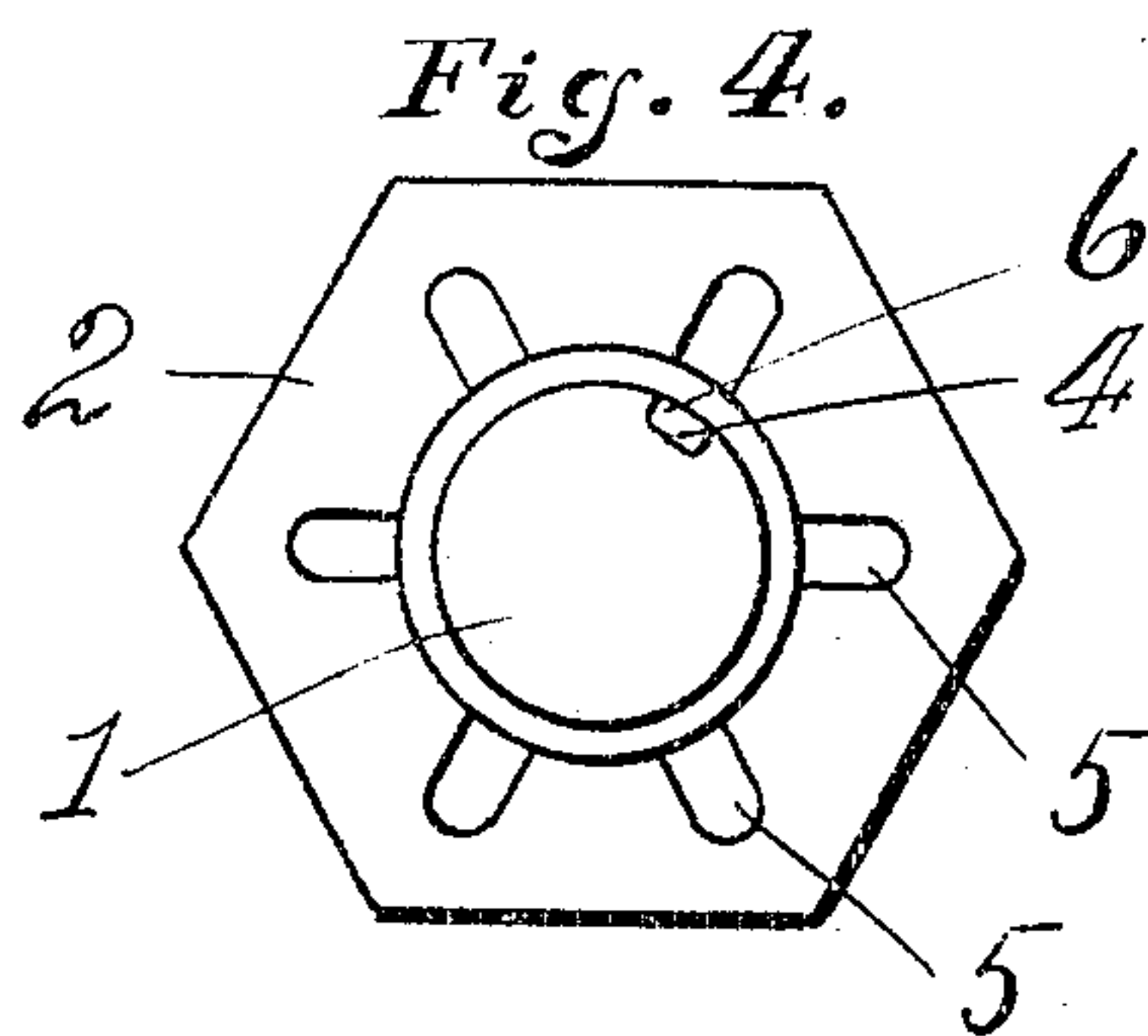
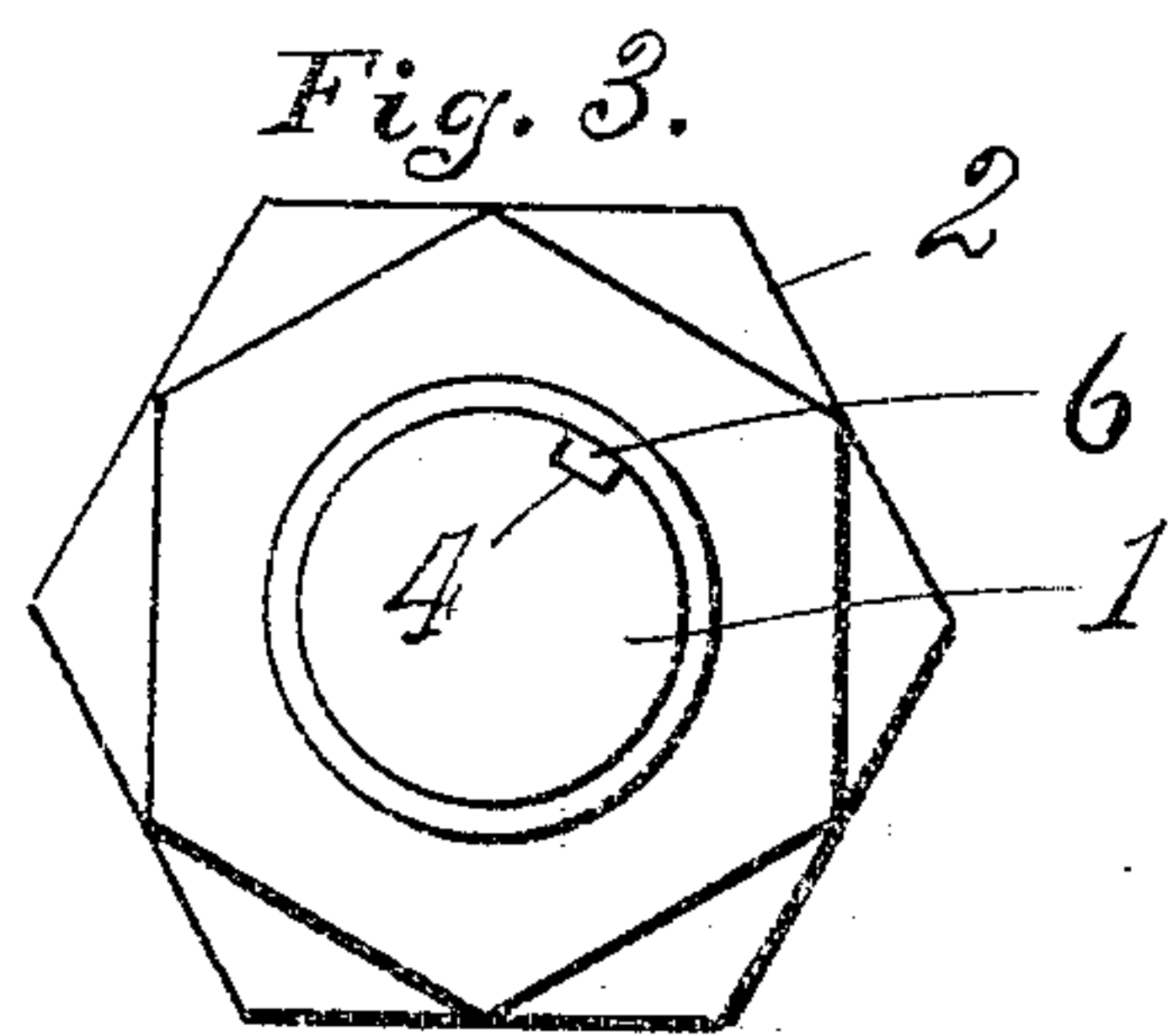
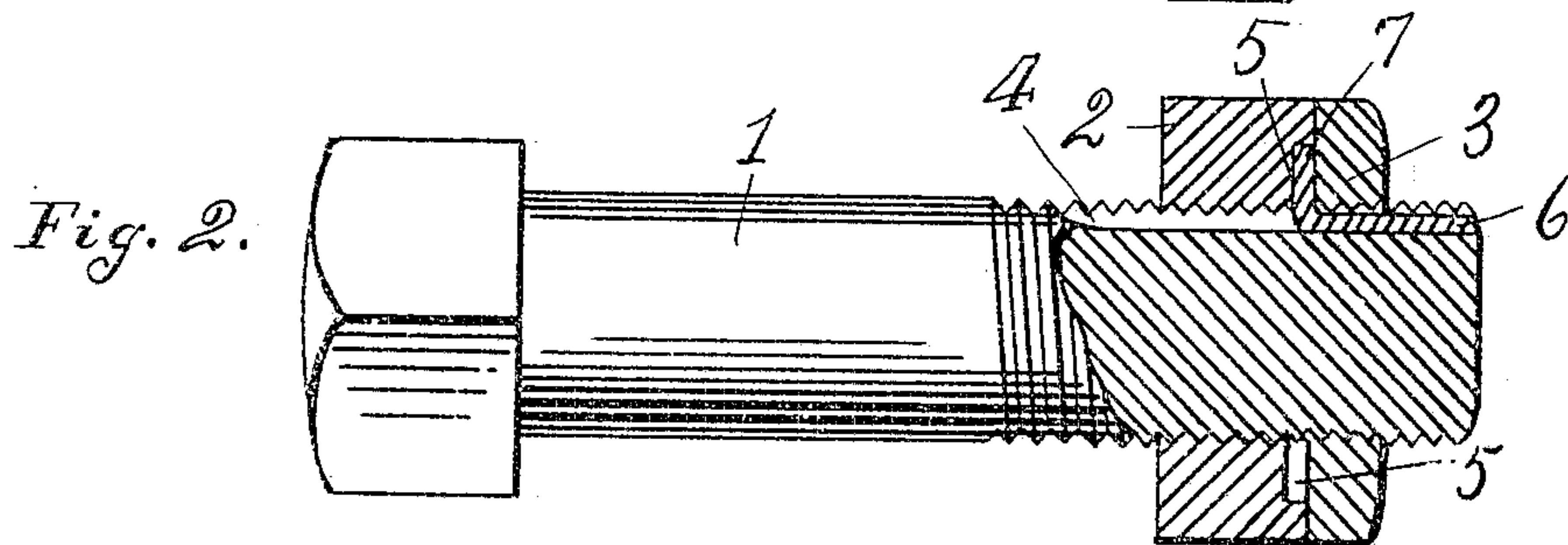
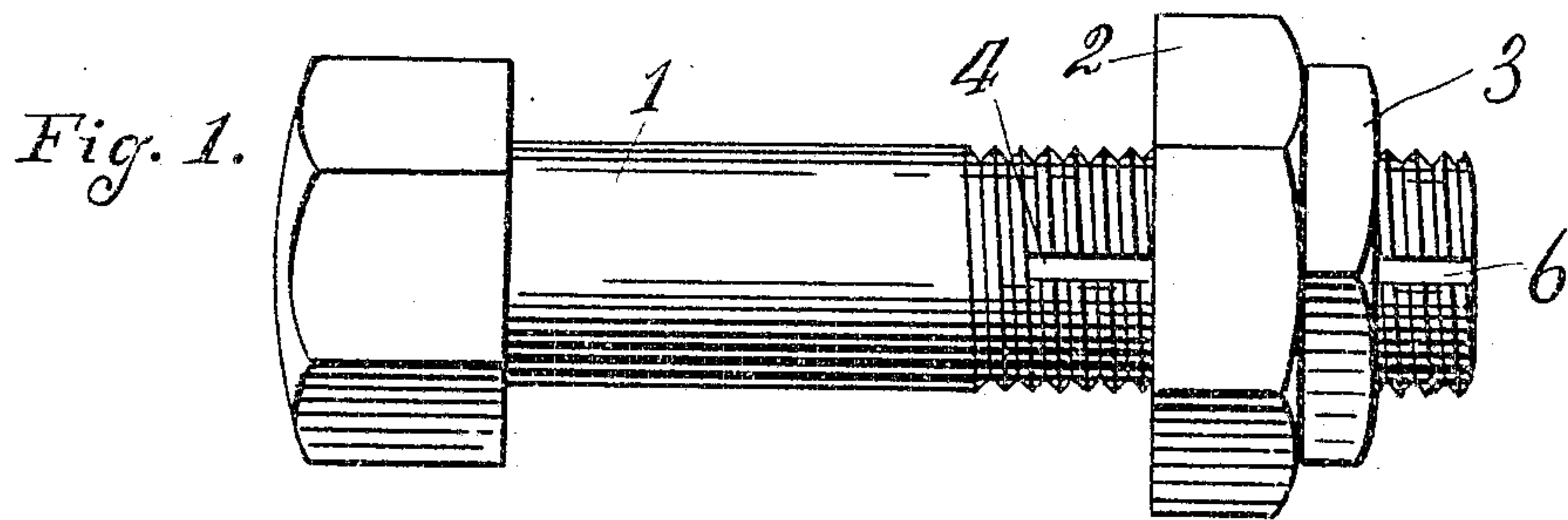
No. 788,058.

PATENTED APR. 25. 1905.

W. L. MORROW.

NUT LOCK.

APPLICATION FILED SEPT. 9, 1904.



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# UNITED STATES PATENT OFFICE.

WILLIAM LAFAYETTE MORROW, OF STOCKTON, CALIFORNIA.

## NUT-LOCK.

SPECIFICATION forming part of Letters Patent No. 788,058, dated April 25, 1905.

Application filed September 9, 1904. Serial No. 223,832.

*To all whom it may concern:*

Be it known that I, WILLIAM LAFAYETTE MORROW, a citizen of the United States, residing at Stockton, in the county of San Joaquin and State of California, have invented certain new and useful Improvements in Nut-Locks, of which the following is a specification.

This invention relates to improvements in nut-locks, the object of the invention being to provide a cheap and simple form of nut-lock by which the nut shall be effectually prevented from unscrewing from the bolt.

In the accompanying drawings, Figure 1 is a plan view of a bolt having the nut and jam-nut thereon constructed in accordance with the invention. Fig. 2 is a longitudinal section of the same before the key has been swaged or swelled between the bolt and nut. Fig. 3 is an end view of the same. Fig. 4 is an end view, the jam nut having been removed. Fig. 5 is a perspective view of the main nut detached. Fig. 6 is a perspective view of the jam-nut detached. Fig. 7 is a perspective view of the key detached. Fig. 8 is an enlarged broken sectional view showing the key swaged under the nut.

Referring to the drawings, 1 represents a bolt, 2 the main nut thereon, and 3 the jam or locking nut thereon. The bolt has in its threaded portion a longitudinal groove 4 extending to the end of the bolt. The outer face of the main nut has a circular series of short sockets 5 extending radially from the central aperture of the nut. After the main nut has been screwed onto the bolt the desired distance a key 6, of soft metal, as copper, is inserted in the groove with its head 7 in one of said sockets 5, the main nut being turned to bring the nearest socket into alinement with the groove. Then an ordinary jam-nut 3 is screwed on over the key tight up against the main nut. The end of the soft-metal key which projects beyond the jam-nut is now given a sharp blow with a hammer, punch, or other suitable instrument. This causes the soft metal to swage or swell beneath the jam-

nut. The effect of this swaging or swelling of the key is twofold. First, being of soft metal, it acts as a cushion to the jam-nut and absorbs or cuts off the vibrations which would otherwise be imparted to the jam-nut. The tendency of the jam-nut to turn upon the bolt is removed. Secondly, the soft-metal key, swaged between the inner surface of the jam-nut and the groove in the bolt, acts as a friction device or anchor and prevents the jam-nut turning.

A further novel feature of this invention consists of the construction of the main nut having the sockets of such shape and arrangement that an ordinary jam-nut will completely close said sockets and protect them against rain and other atmospheric influences.

It will be seen that with this construction any ordinary jam-nut can be used, and the only changes in construction from the ordinary bolt and nut are the groove in the bolt and the sockets in the main nut. These changes are small and inexpensive.

Moreover, the construction allows of the nut being put on very quickly, the only difference from an ordinary bolt and nut being that after screwing on the nut the key is inserted with its head in the socket and after screwing on the jam-nut a sharp blow is given to the key. The difference in time occupied is inappreciable. Again, while the swaging of the copper or other soft-metal key is sufficient to hold the jam-nut from becoming loose under ordinary vibration, yet it does not prevent the jam-nut from being unscrewed when desired, so that the nut can be taken off just as quickly as an ordinary nut from an ordinary bolt.

I claim—

In combination with a bolt having a longitudinal groove, a main nut on said bolt having in its outer face a series of short sockets extending radially from the central aperture of the nut, a jam-nut of ordinary construction and of size to completely cover said sockets, and a key in the groove having its head in

one of the sockets and passing underneath the  
jam-nut, said key being of soft metal and  
swaged or swelled between the jam-nut and  
the groove whereby said key acts as a cushion  
5 to reduce the vibration transmitted to the  
jam-nut, substantially as described.

In witness whereof I have hereunto set my

hand in the presence of two subscribing wit-  
nesses.

WILLIAM LAFAYETTE MORROW.

Witnesses:

LENA WILLIAMS,

F. H. CARTER.