

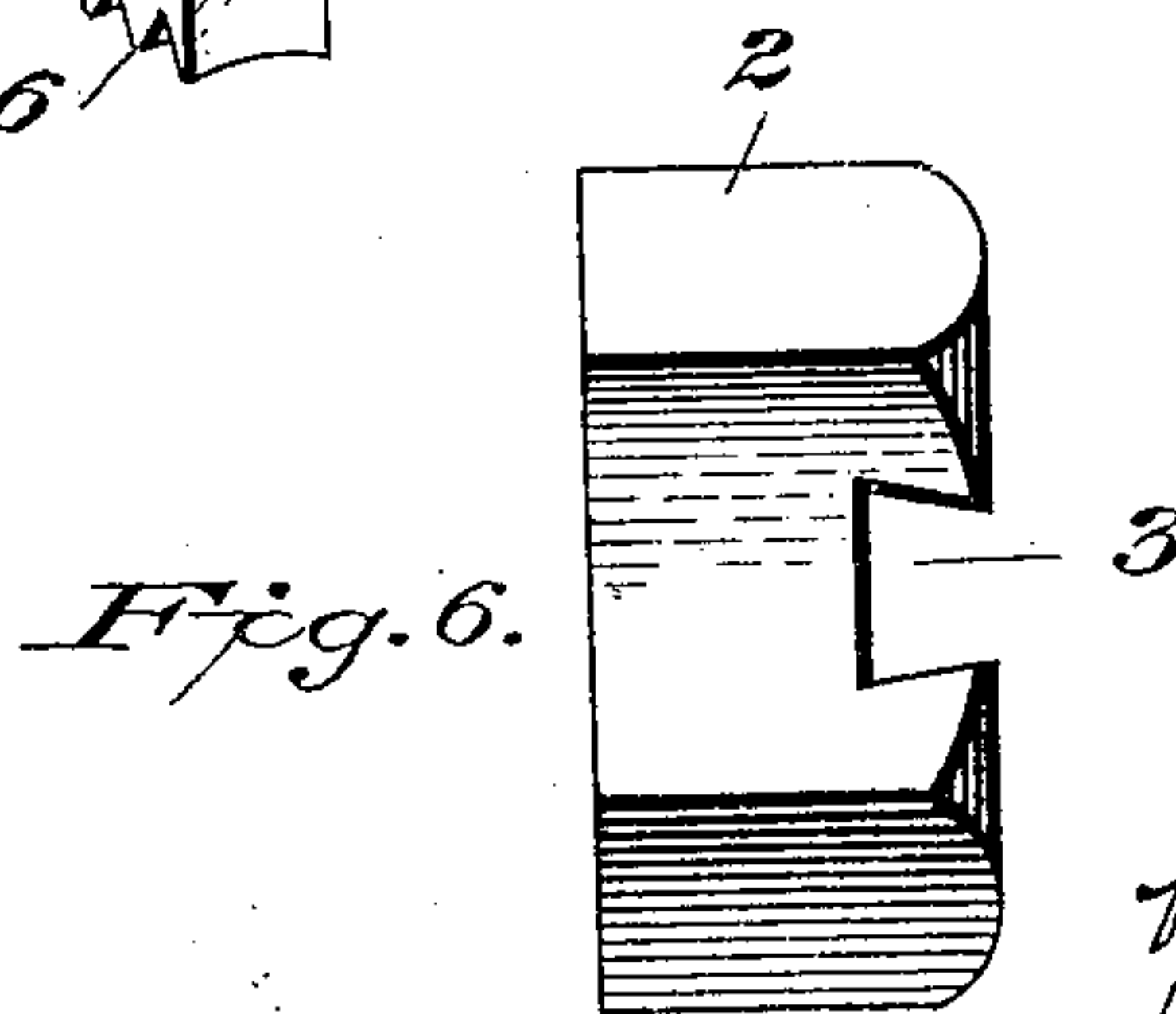
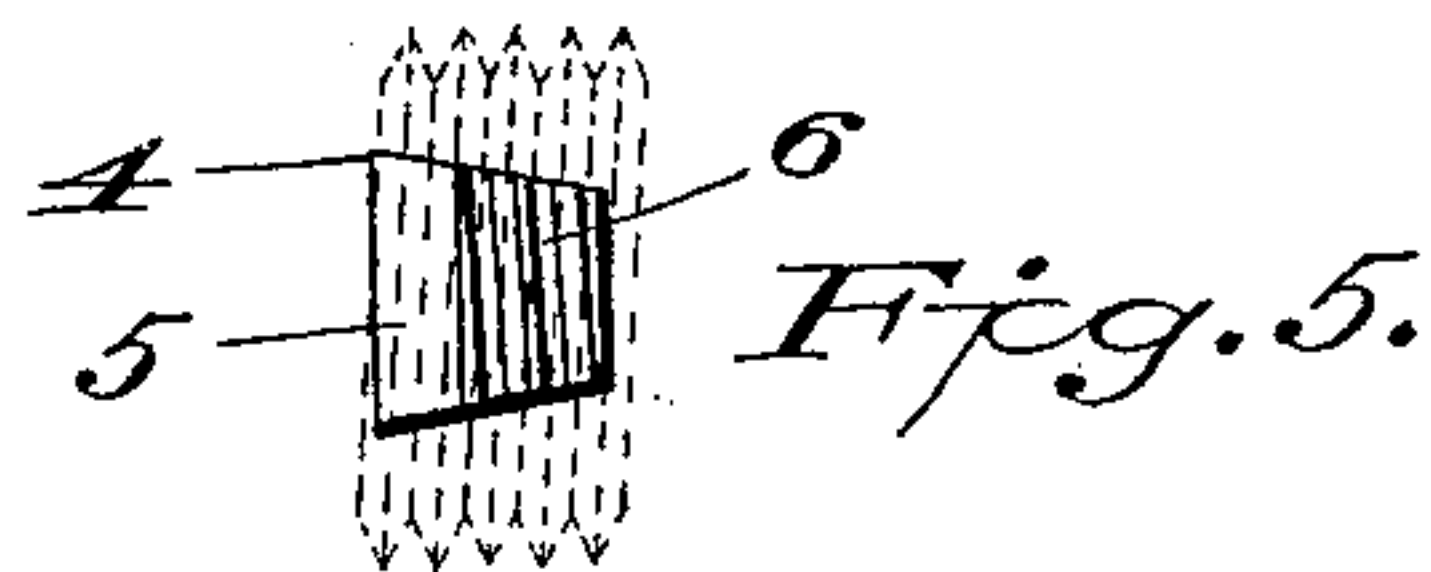
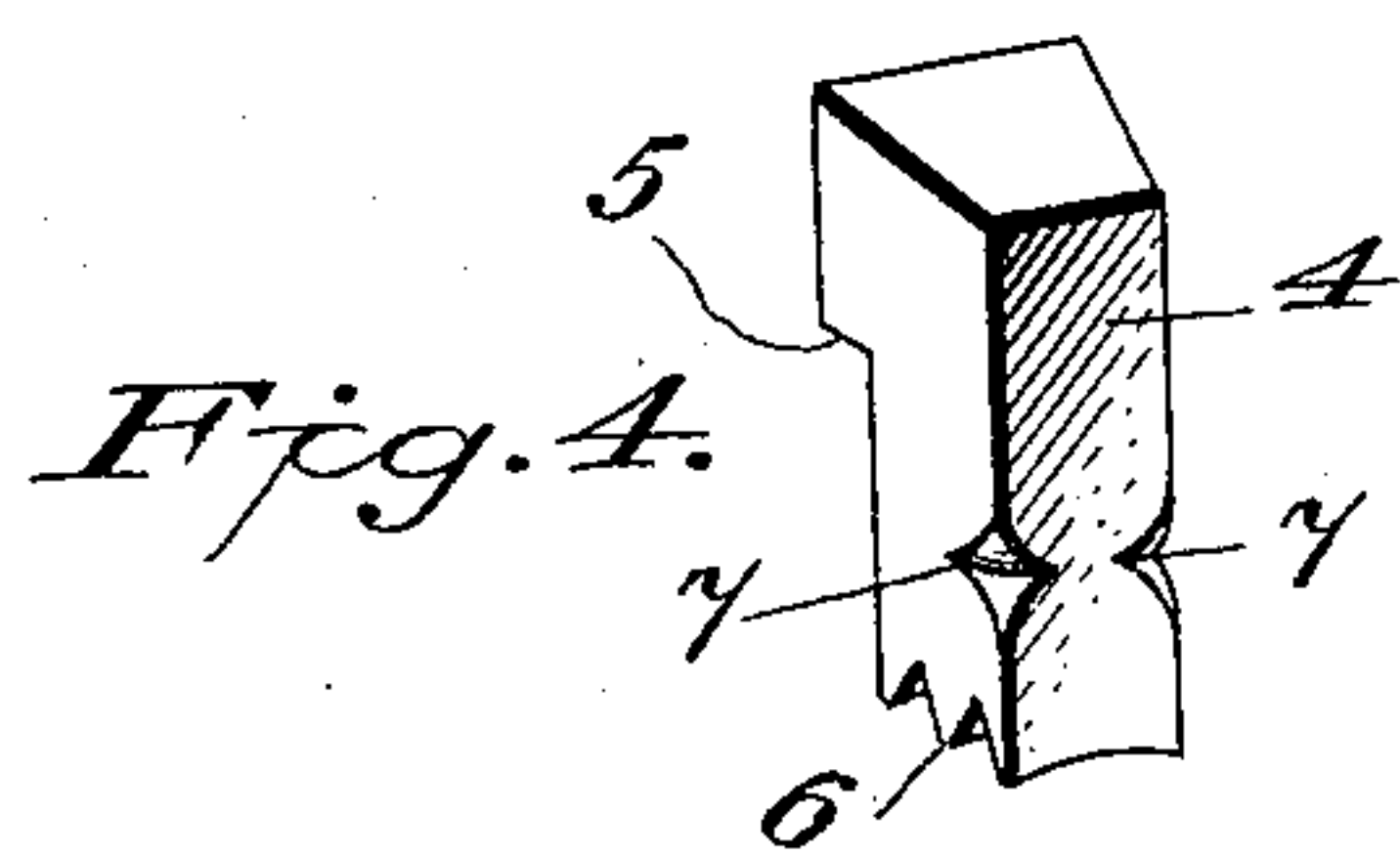
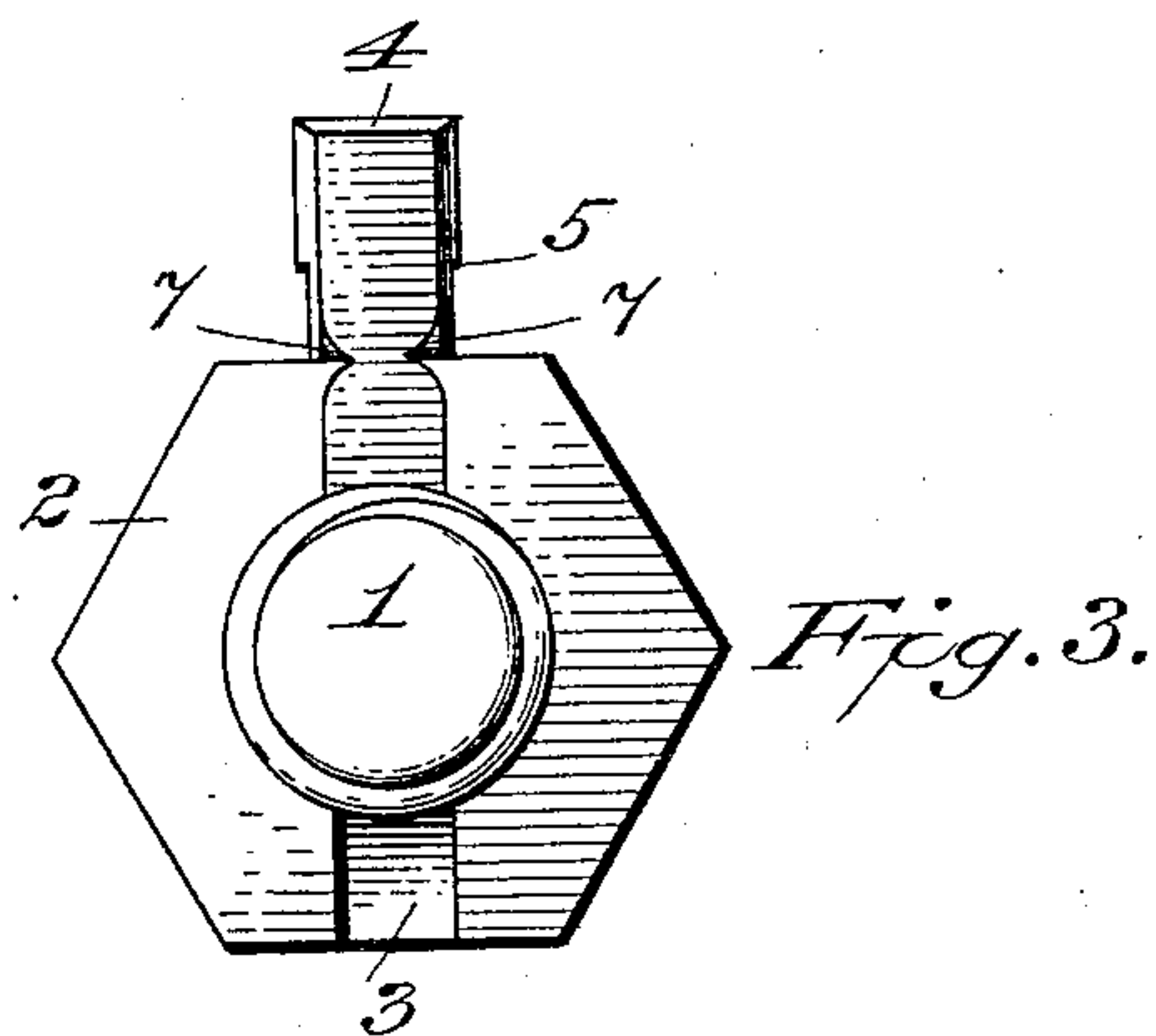
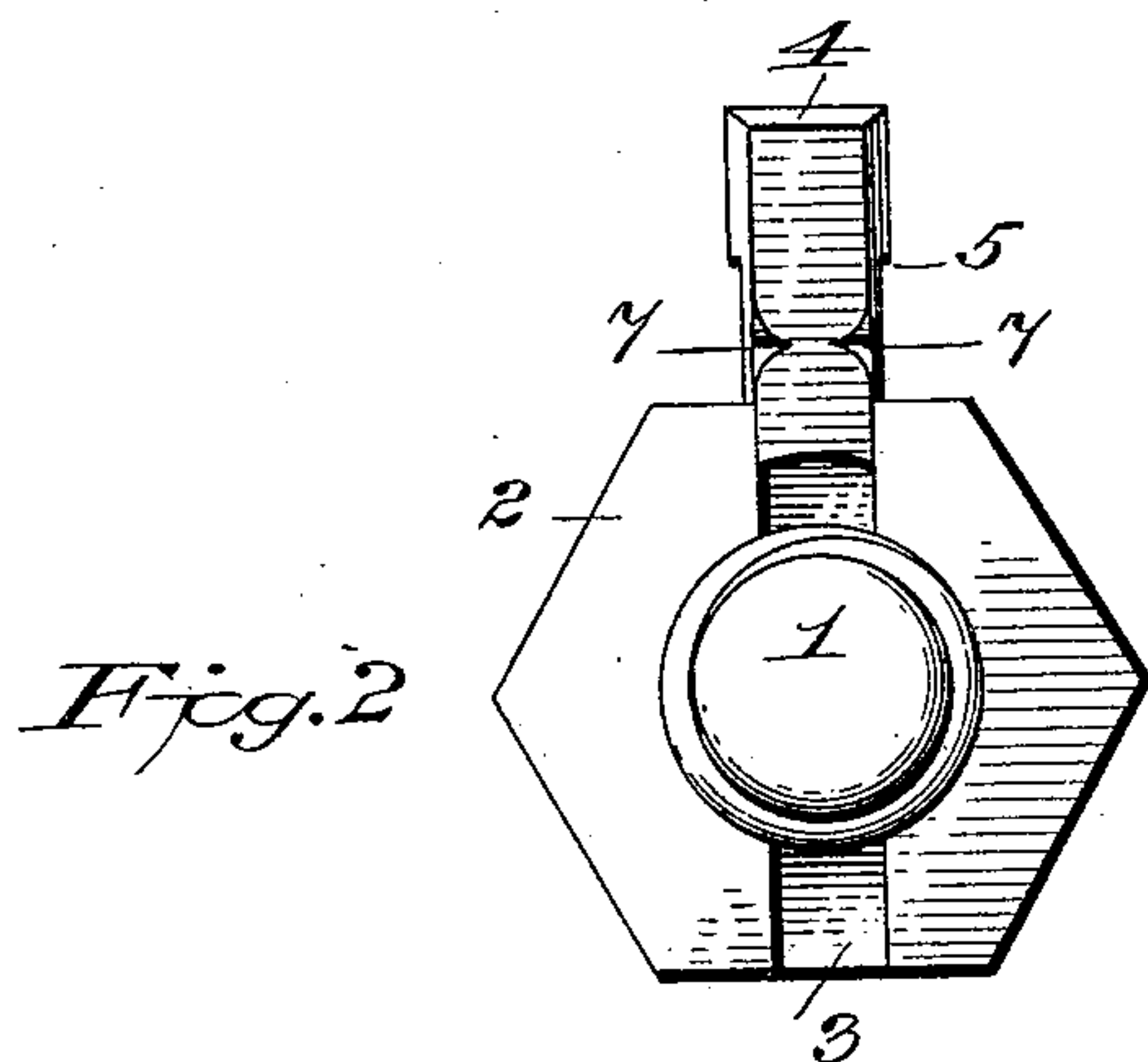
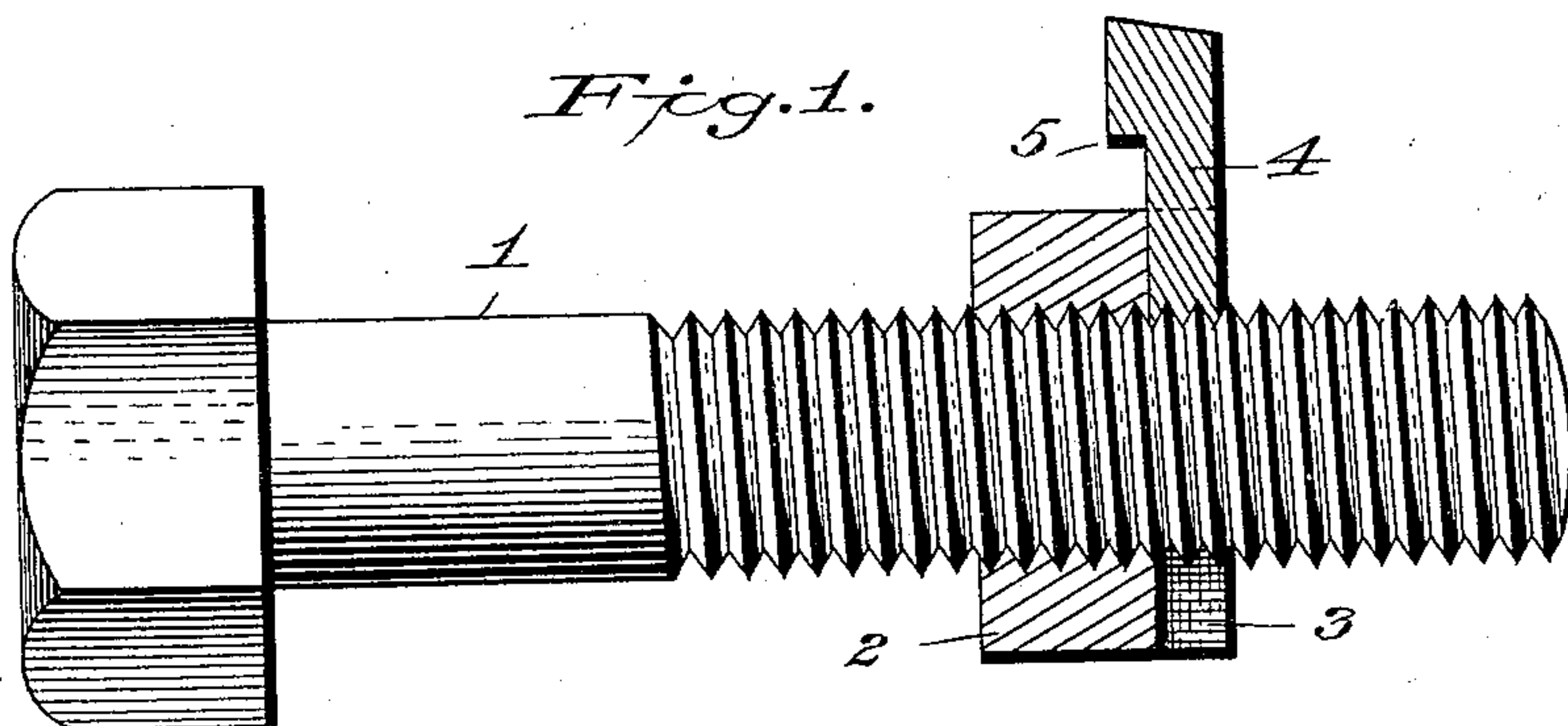
No. 633,093.

Patented Sept. 12, 1899.

R. CAMPBELL.
NUT LOCK.

(Application filed Apr. 4, 1899.)

(No Model.)



Witnesses

G. S. Elliott.
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UNITED STATES PATENT OFFICE.

ROBERT CAMPBELL, OF GADSDEN, ALABAMA, ASSIGNOR OF ONE-HALF TO
ORLANDO R. GOLDMAN, OF SAME PLACE.

NUT-LOCK.

SPECIFICATION forming part of Letters Patent No. 633,093, dated September 12, 1899.

Application filed April 4, 1899. Serial No. 711,682. (No model.)

To all whom it may concern:

Be it known that I, ROBERT CAMPBELL, a citizen of the United States, residing at Gadsden, in the county of Etowah and State of Alabama, have invented new and useful Improvements in Nut-Locks, of which the following is a specification.

This invention relates to certain new and useful improvements in nut-locks; and it consists in the combination, with a bolt constructed in the usual manner, of a nut therefor, which is provided with a dovetailed recess for the reception of a locking-key, said locking-key being so constructed that the end of the same which engages with the threads of the bolt will lock the nut against rotation and will not destroy or materially injure the threads, the key also being so constructed that it may be locked in the recess of the nut, all as will be hereinafter more specifically set forth.

In the accompanying drawings, which illustrate my invention, Figure 1 is a side elevation of a bolt upon which is shown the nut and locking-key in section. Fig. 2 is a front elevation showing the nut upon the bolt, the locking-key being placed in the recess in the nut. Fig. 3 is a view similar to Fig. 2, in which view the key is shown as being in engagement with the threads of the bolt and as being held against displacement. Fig. 4 is a detail perspective view of the locking-key. Fig. 5 is a diagrammatical view in which the locking-key is shown in full lines and the threads of the bolt are indicated by dotted lines, and Fig. 6 is a side elevation of the nut.

The bolt 1 is of the ordinary type, and the nut 2, which is used therewith, has formed in its face a dovetailed recess or groove 3, which extends across the face of the nut, so as to intersect the bolt-aperture and receive a locking-key 4. The locking-key 4 has beveled sides, the thickness thereof being substantially the same as the depth of the recess in the nut. The upper end of the key has formed thereon a rearward-projecting portion 5, which in use will be positioned over the side of the nut, and the opposite end of the key which engages with the threads of the bolt has formed therein one or more recesses or indentations, which provide projecting por-

tions 6, the pitch thereof being of a different angle from the pitch of the threads on the bolt, and this difference in pitch or angle of the threads or projections on the end of the key may be either different in degree or the reverse of those on the bolt, as when the threads on the bolt have a right-hand pitch or thread those on the end of the key have a left-hand pitch or thread, and vice versa. The face of the locking-key has formed therein indentations or recesses 7, positioned so that the deepest parts thereof will be on a line with the edge of the nut when the locking-key is in place, so as to lock the nut upon the bolt after the locking-key is driven home, so as to cause the projections or threads 6 to engage with and intersect the threads of the bolt. The metal adjacent to the outer faces of the dovetailed recess in the nut is then upset into the recesses 7 by the use of a cold-chisel or other implement to prevent the displacement of the key under ordinary conditions. The driving of the key into the threads of the bolt merely mars said threads without destroying them, so that when the key is withdrawn by the use of a suitable instrument placed under its head and against the nut the nut can be turned, and when turned the sharp edges of the recess which are at an angle will straighten out the metal which has been bent over and indented by the grooved face of the locking-key.

The locking-key is preferably made of steel and the dovetailed recess extending entirely across the face of the nut may be readily formed therein. In practice the recess which is uppermost will be used to receive the key.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a nut-lock the combination with a bolt, a nut having a dovetailed recess which intersects the bolt-aperture, of a locking-key having beveled side walls and indentations, the indentations being so positioned that when the end of the key engages with the bolt the outer walls of the dovetailed recess of the nut will be on a line with the indentations so that the corners can be forced into said indentations to lock the key in place.

2. In combination with a bolt and nut, of a

key for locking the nut upon the bolt, said key having a rearward-extending head adapted to lie over the nut, indentations in its front and side walls which will be positioned on a line with the side of the nut when one end of the key engages the thread of the bolt, substantially as shown.

3. As an improved article of manufacture, a locking-key for the purpose set forth comprising a body portion with beveled side walls, a head which projects from the wider side of one end of the body portion, the end opposite the head being curved, substantially on the same radii as the circumference of the bolt, said end having threads of a different pitch from the pitch of the thread of the bolt with which it is intended to engage and indentations in the front longitudinal edges of the key substantially as shown.

4. The combination, with a threaded bolt, and a nut having a dovetailed recess which extends into and across the face of the nut, of a locking-key adapted to be placed in said recess, one end of the key having threads which are of a different pitch from the threads of the bolt, indentations in said key, and a head or rear projecting portion adapted to be positioned over the nut, the parts being positioned in use so that the metal of the nut may be forced into said indentations, for the purpose set forth.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

ROBERT CAMPBELL.

Witnesses:

A. A. MCINTYRE,
O. R. GOLDMAN.