

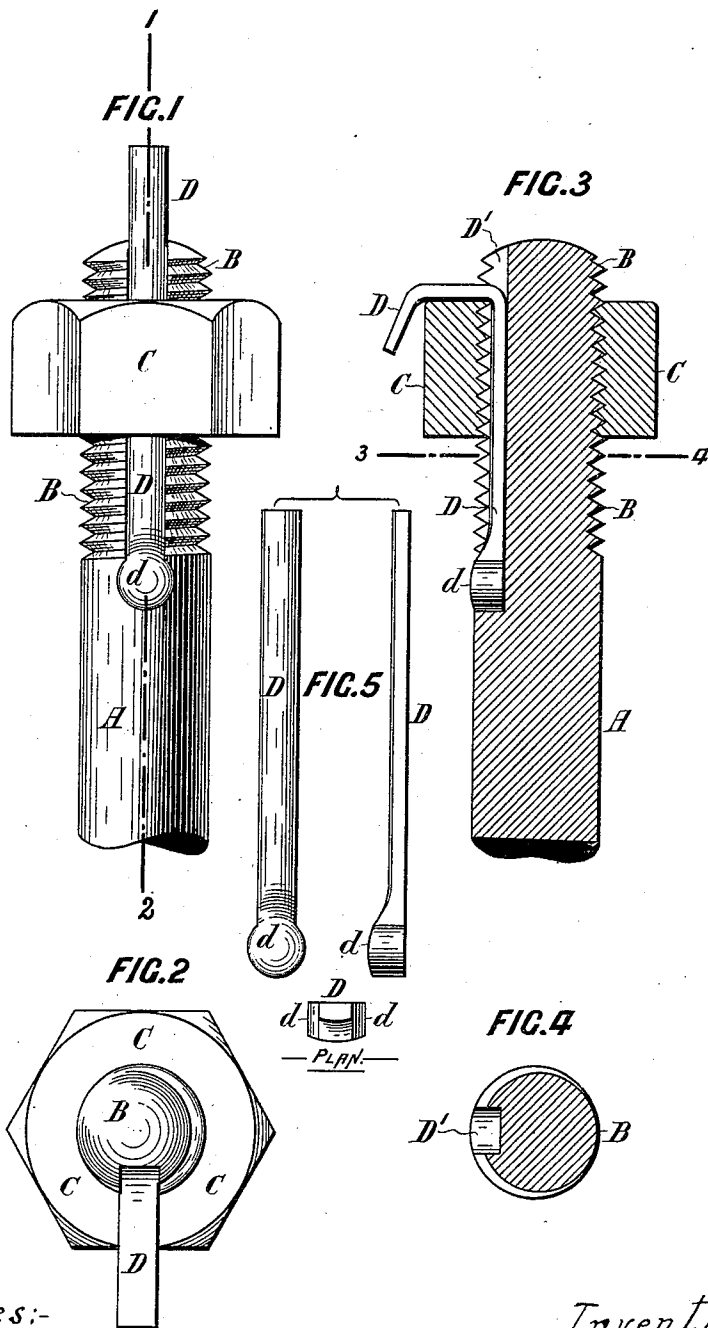
(No Model.)

A. GROSS.

APPLIANCE FOR LOCKING NUTS ON BOLTS.

No. 461,678.

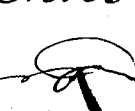
Patented Oct. 20, 1891.



Witnesses:-

E. H. Sturtevant.
M. W. Walsh

Inventor:-

Augustus Gross
by Richard 
attorneys.

UNITED STATES PATENT OFFICE.

AUGUSTUS GROSS, OF SYDNEY, NEW SOUTH WALES.

APPLIANCE FOR LOCKING NUTS ON BOLTS.

SPECIFICATION forming part of Letters Patent No. 461,678, dated October 20, 1891.

Application filed April 27, 1891. Serial No. 390,656. (No model.)

To all whom it may concern:

Be it known that I, AUGUSTUS GROSS, optician, of Sydney, in the Colony of New South Wales, Australia, have invented an Improved Mode of and Appliance for Locking Nuts on Bolts, of which the following is a specification.

In carrying my invention into effect an ordinary bolt may be adapted to the appliance for locking a nut thereupon. This is done by making a longitudinal groove or keyway down the threaded part of the bolt. The groove or keyway should be of sufficient depth to allow the locking appliance or key itself to repose within it without interfering in any way with the passage of the nut over the threaded part of the bolt. The end of the groove (which should extend beyond the thread) should be enlarged or scooped out in bulbous form to form a cavity so as to allow the bulbous end of the locking appliance or key to repose snugly within it; but in order that the appliance may be readily understood reference will be made to the accompanying sheet of drawings, in which—

Figure 1 is an elevation showing the front of the lock-nut appliance in position. Fig. 2 is a plan view of the same, showing the nut locked. Fig. 3 is a vertical section of the same, taken on the line 1 2 of Fig. 1, the locking appliance being shown in elevation and the nut locked. Fig. 4 is a cross-section of the device on the line 3 4 of Fig. 3, the locking appliance being removed. Fig. 5 are views that show in detail the locking appliance or key separate from the bolt.

A is the bolt, and B is the threaded part thereof.

C is the nut.

D is the locking appliance or locking-key, of which *d* is the enlarged or bulbous head hereinbefore referred to. A groove or keyway D' (see Fig. 4) is made longitudinally along the threaded part B of the bolt A, the groove extending beyond the threaded part B. The end of the groove is enlarged to receive the bulbous head of the locking appliance or key D, and will prevent the key from being with-

drawn longitudinally from the groove or keyway. The key or locking appliance should be made longer than the groove or keyway, (see Fig. 1,) so that the key may be turned over to lock the nut, as shown in Figs. 2 and 3. It is important that the groove be of such a depth that when the key is laid within it the upper surface of the key should just clear the bottom of the thread of the screw on the bolt. (See Fig. 3.) The key is also made to sit firmly in the keyway, so that the parts may be readily fitted together for use; but the bulbous or round end is thickened so as to extend outward beyond the surface of the bolt and tapered so that as the bolt is driven home in the bolt-hole the head of said key or lock is wedged firmly into the seat or cavity, thus firmly fixing the key in place. When the bolt is fixed in position and the nut screwed home, the workman will turn over in any suitable or handy way the projecting portion of the key into the position shown in Figs. 2 and 3, thus firmly securing the nut.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is—

The combination of the threaded bolt provided with a longitudinal groove terminating at its inner end beyond the threads of the bolt in a round or bulbous cavity, a key or lock constructed so as to seat snugly in the groove of such bolt, that the surface of such key or lock will clear the bottom of the thread of the bolt, having an enlarged bulbous end tapered so as to be wedged firmly to the bolt on the insertion of the latter in the bolt and extending beyond the nut a sufficient length to allow it to be turned over the nut, and thereby secure and retain the nut in position, as set forth.

Dated at Sydney, this 21st day of March, 1891.

AUGUSTUS GROSS.

In presence of—

WM. D. MASSEY,
J. S. WHITELOCKE.