

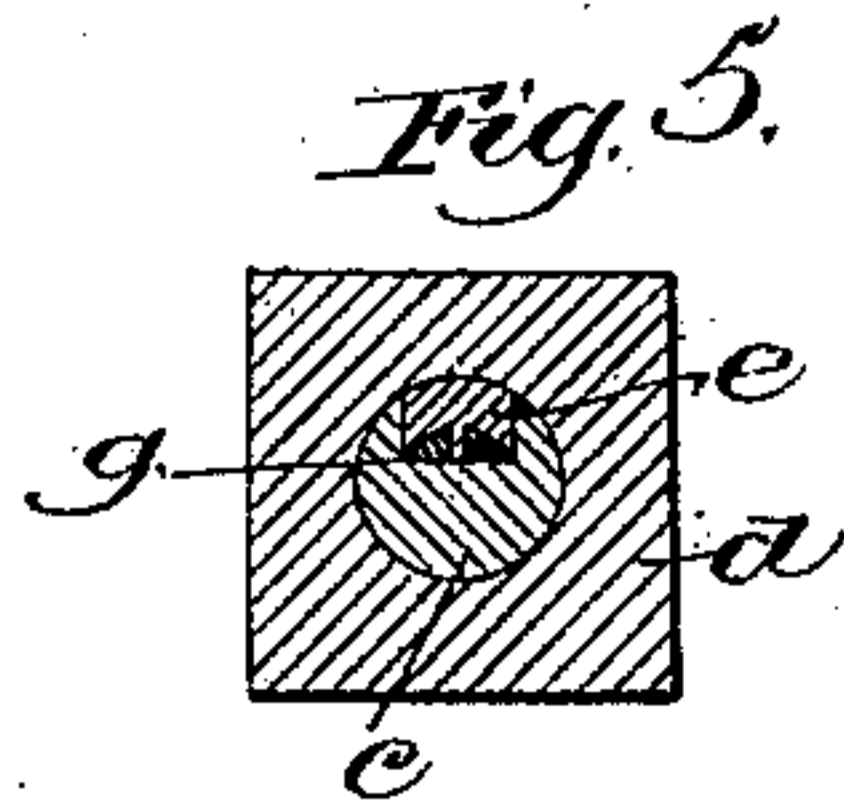
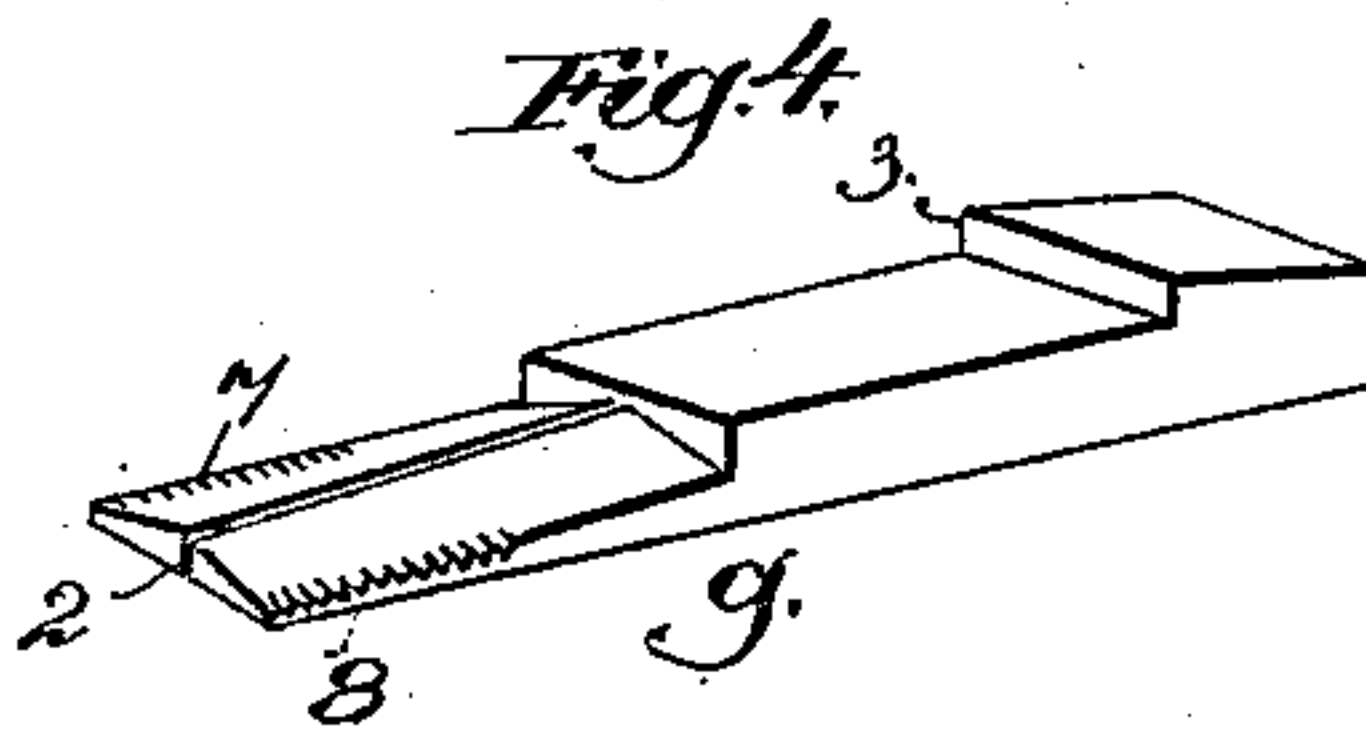
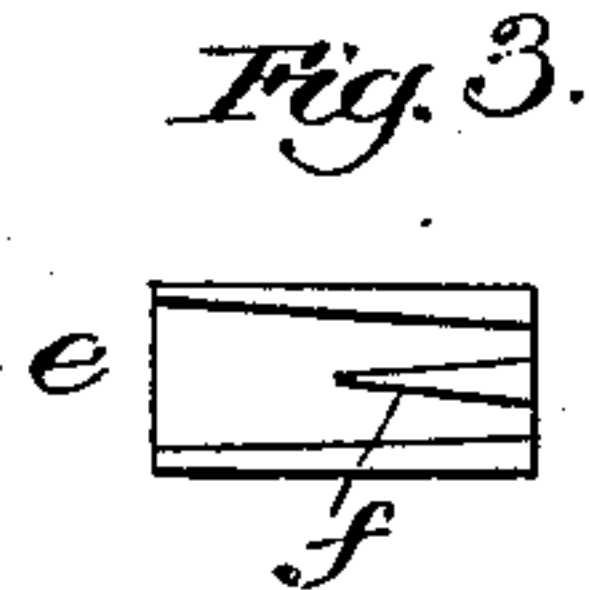
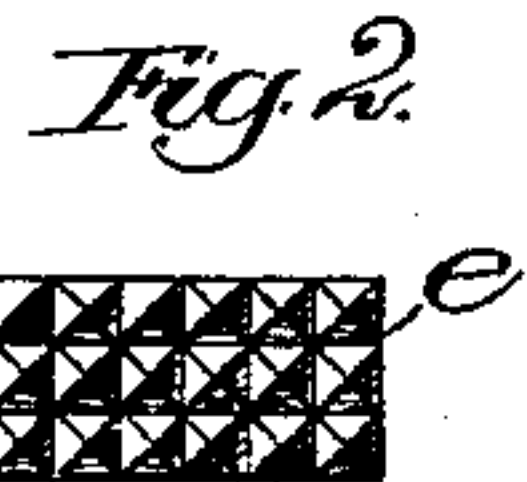
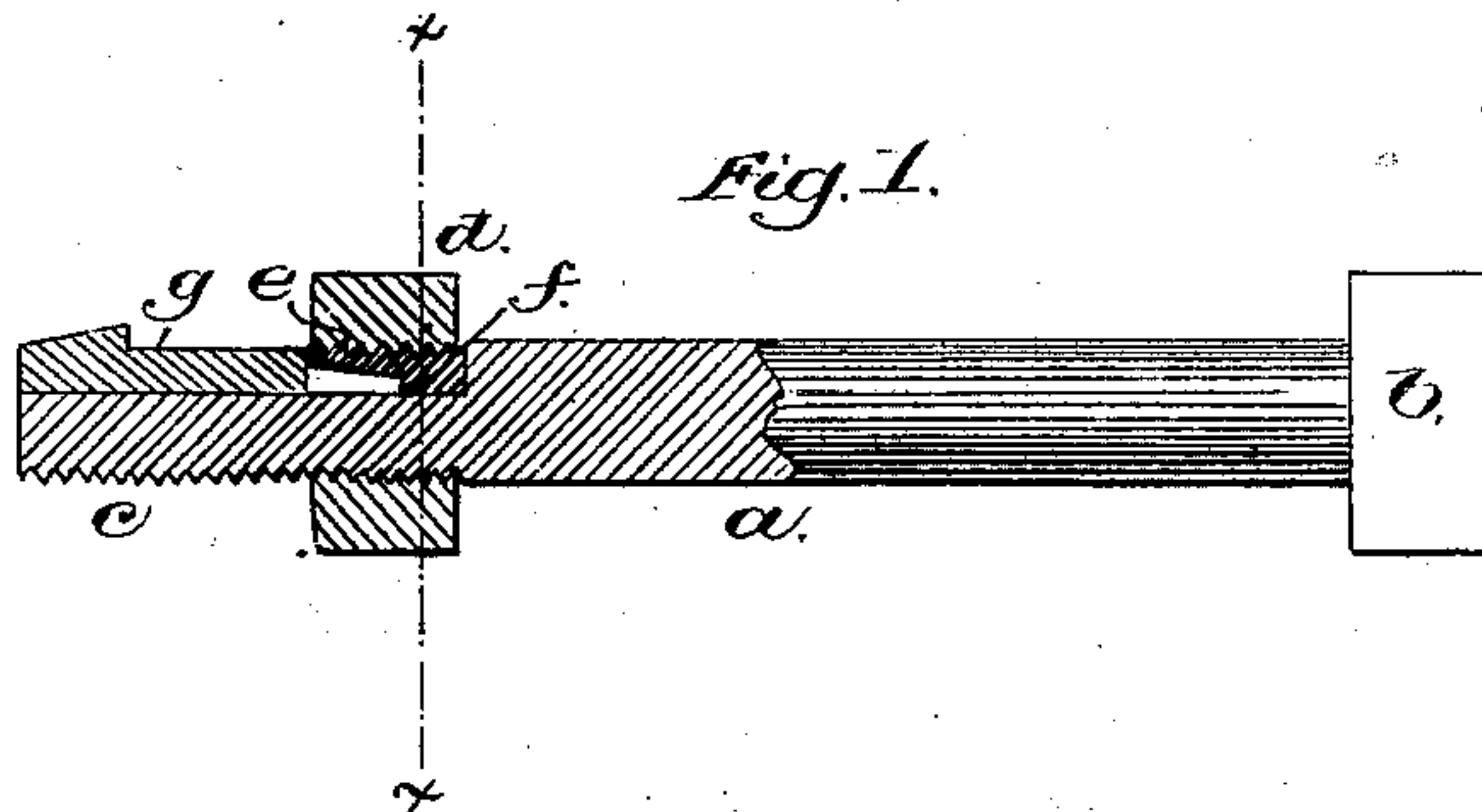
(No Model.)

J. H. RANSOM, Jr.

NUT LOCK.

No. 275,705.

Patented Apr. 10, 1883.



Witnesses:
John F. C. Powell,
Fred A. Powell.

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UNITED STATES PATENT OFFICE.

JONATHAN H. RANSOM, JR., OF BOSTON, MASSACHUSETTS.

NUT-LOCK.

SPECIFICATION forming part of Letters Patent No. 275,705, dated April 10, 1883.

Application filed February 2, 1883. (No model.)

To all whom it may concern:

Be it known that I, JONATHAN H. RANSOM, Jr., of Boston, county of Suffolk, State of Massachusetts, have invented an Improvement in Nut-Locks, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

The object of my invention is to produce a strong, secure, cheap, and efficient nut-lock.

In the practice of my invention I provide the bolt with a longitudinal groove or channel, into which, after the nut is turned upon the screw-thread, is applied a nut-engager having a serrated surface to engage or cut into the threads of the nut, the said nut-engager being acted upon at its under side by a wedge or key driven into the channel or groove in the bolt, as will be described.

Figure 1 represents in side view and partial section a bolt and nut with my improved nut-lock; Fig. 2, a top view of the nut-engager; Fig. 3, an under side view thereof; Fig. 4, a perspective view of the key or wedge, and Fig. 5 a cross-section of Fig. 1 on the dotted line *x x*.

My invention is applicable for the purpose of locking nuts on bolts used in connection with railways and other places where nuts are to be locked.

The bolt *a*, having a head, *b*, and screw-thread *c*, is grooved or channeled longitudinally for a distance equal to the threaded surface of the bolt.

The nut *d*, of any usual construction, is first turned on the screw-thread toward the head *b* until it is brought to the spot where it is to be locked, when the nut-engager *e*, having its upper side or face serrated or scored, as in Fig. 2, is placed in the groove of the bolt, as shown in Fig. 1, and thereafter the key *g* is also inserted in the said groove, with its beveled and preferably split front end under the nut-engager, and the said key is then driven farther into the said groove, forcing the nut-engager outward and its serrated surface into engagement with the threads of the nut thus locking the same firmly in place. As the key driven under the nut-engager arrives at the spreading device or wedge *f*, connected with and forming part of the nut-engager, the slit 2 of the wedge meets the point of the spreading device and opens the wedge-shaped

part of the key, thus increasing the action of its wedge-shaped surfaces to lift the nut-engager, and also so curling or upsetting the end of the key as to lock it at the back of the nut-engager and force the sides of the key against the side walls of the groove in the bolt.

The key will preferably have a shoulder or head, 3, to be struck or engaged by a hammer or otherwise to withdraw the key. The under side of the nut-engaging device is beveled from its edges inward, as shown in the section, Fig. 5, to correspond with the beveled surfaces 7 8 of the key *g*.

To increase the holding power of the wedge or key in the groove of the bolt the sides and bottom part, or either, may be serrated, so that as the key is driven into position the said serrations will penetrate the substance of the bolt. The serrations on *e* may be more or less sharp. It will be seen that the same result would be attained if the nut were provided with the groove or key-seat and the engaging device *e* forced by the key into the metal of the bolt, such construction being equivalent to that shown and described.

I claim—

1. The bolt and nut, either of which is provided with a key-seat or groove, in combination with a scored in contradistinction to a threaded engaging device, and a key to force said engaging device into engagement with the threads of the other, substantially as described.

2. The bolt and nut, one grooved or provided with a key-seat and the serrated engaging device provided at its under side with a spreading device, combined with the split wedge or key, to operate substantially as described.

3. The key *g*, having the two bevel-faces 7 8, and the bolt and nut, combined with the engaging device, beveled at its under side in cross-section to be acted upon by the faces 7 8 of the said wedge or key, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JONATHAN H. RANSOM, JR.

Witnesses:

G. W. GREGORY,
B. J. NOYES.