

No. 753,301.

PATENTED MAR. 1, 1904.

F. OBIOLS.
LOCK NUT.

APPLICATION FILED NOV. 7, 1903.

NO MODEL.

Fig. 1.

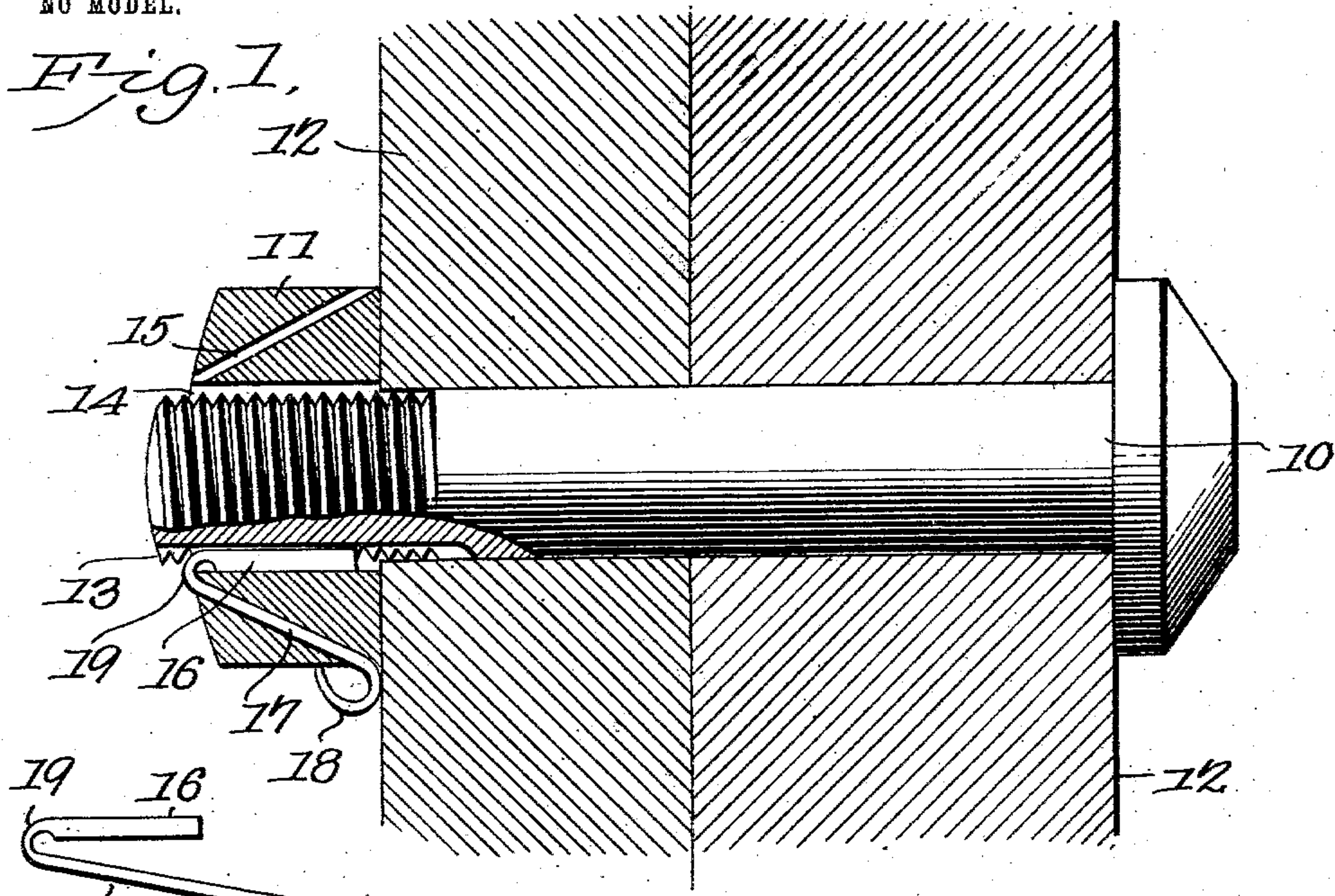


Fig. 3.

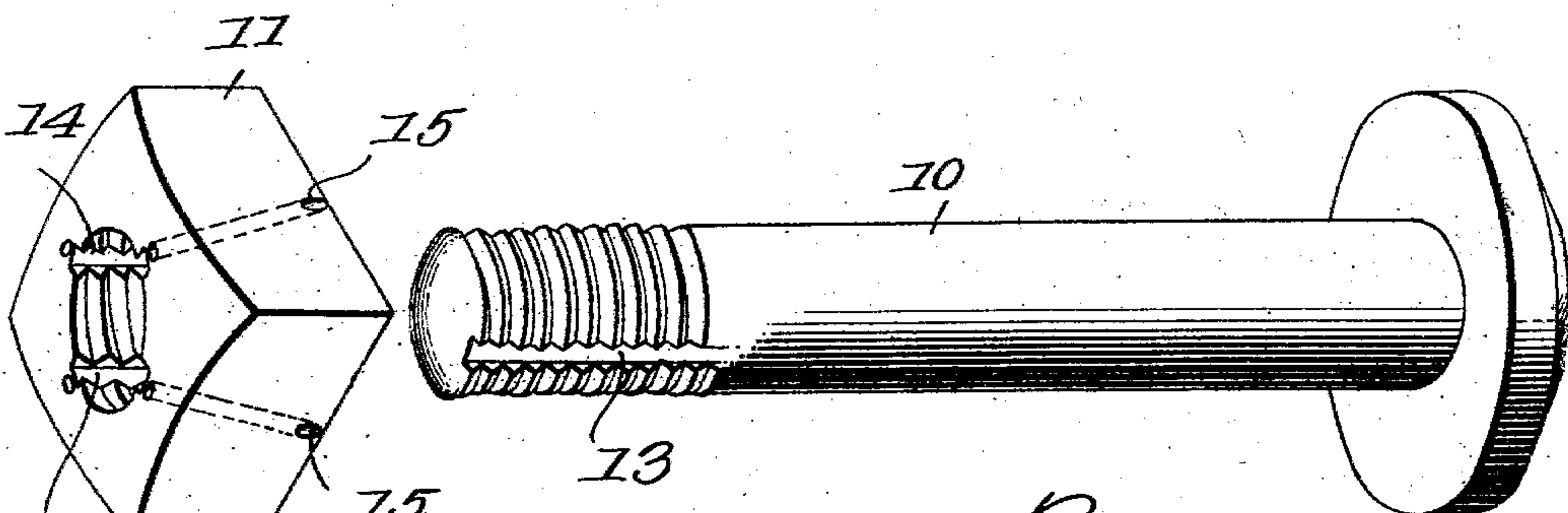


Fig. 2.

Witnesses
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UNITED STATES PATENT OFFICE.

FRANK OBIOLS, OF WINNEMUCCA, NEVADA, ASSIGNOR OF ONE-HALF TO
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LOCK-NUT.

SPECIFICATION forming part of Letters Patent No. 753,301, dated March 1, 1904.

Application filed November 7, 1903. Serial No. 180,247. (No model.)

To all whom it may concern:

Be it known that I, FRANK OBIOLS, a citizen of the United States, residing at Winnemucca, in the county of Humboldt and State of Nevada, have invented a new and useful Lock-Nut, of which the following is a specification.

This invention relates to nuts capable of being locked to their bolts to prevent them turning backwardly thereon, and has for its object to simplify and improve such devices.

The invention consists in certain novel features of construction, as hereinafter shown and described, and specified in the claims.

In the drawings illustrative of the invention, in which corresponding parts are denoted by like designating characters, Figure 1 is a sectional view illustrating the improved construction. Fig. 2 represents a perspective view of the improved nut and bolt disconnected. Fig. 3 is a side view of the improved locking-key detached.

The improvement herein described may be applied to any form or size of bolt or nut, but for the purpose of illustration is shown applied to an ordinary form of bolt 10 and nut 11 for binding together a body of any suitable material, as 12. The bolt is provided with a longitudinal groove 13, extending transversely of its threads, and the nut is provided with one or more similar grooves 14, extending transversely of its threads and registering with the groove 13 in the bolt when the nut is rotated. The nut-grooves are preferably formed very shallow to avoid weakening the nut. Any number of the grooves may be employed; but generally one will be arranged in the bolt and two or more in the nut. For the purpose of illustration four grooves are shown in the nut; but it will be understood that any desired relative number may be employed without affecting the principle of the invention.

Extending through the nut 11 are obliquely-formed channels 15, corresponding in number to the grooves 14 and opening relatively near the latter on one face of the nut and inclined outwardly and terminating through the sides of the nut near their opposite faces.

A key member of substantially U shape, as

shown in Fig. 3, is provided, the leg 16 adapted for insertion into the registering grooves 13 14 and the leg 17 for insertion through the adjacent channels 15. The leg 17 is relatively thinner than the leg portion 16, with its protruding end bent laterally to engage the adjacent face of the nut, as at 18, to effectually prevent its accidental displacement.

By inclining the channels or apertures 15 and terminating them contiguous to the body member 12 the relatively thin leg portion 17 will strike the body 12 at an angle, and as the key is forced "home" into the registering apertures 13 14 the end 18 will be bent laterally upon the unyielding body 12, and thereby automatically "clenched" against the nut, as will be obvious.

The juncture 19 of the two leg portions 16 17 of the key member will preferably be formed thinner than the body portion of the leg 17 to facilitate the bending into U shape. By this simple means when the nut is "set up" as far as required one of the apertures 14 is caused to register with the aperture 13 and the key placed in position, with its leg portions in the respective apertures, as above described, and when forced home by a blow of a hammer, wrench, or other implement the clenching is automatically completed, and the nut thereby effectually locked fast to the bolt and irremovable therefrom until the key is detached. The clenched end 18 will be of sufficient strength to resist any strains to which the nut will be subjected while in use, but will yield to a force sufficient to withdraw it when the nut is to be removed. The malleability of the leg portion 17 and its end 18 will be sufficient to permit attachment and detachment of the key several times; but their cost will be so slight that a new one may be furnished each time the nut is removed.

Having thus described the invention, what is claimed is—

1. In a nut-lock, a bolt having a longitudinal groove transversely of its threads, a nut having a longitudinal groove transversely of its threads for registration with the groove in said bolt, an aperture extending obliquely through the nut, and a U-shaped key with the

legs thereof extending through the nut-aperture and into said registering grooves respectively, the leg which extends through the nut-aperture being of a length greater than the 5 depth of the aperture and adapted to extend therethrough and engage the object through which the bolt is passed.

2. In a nut-lock, a bolt having a longitudinal groove transversely of its threads, a nut 10 having a longitudinal groove transversely of its threads for registration with the groove in said bolt, an aperture through the nut spaced from the groove therein, and a U-shaped key with one of its leg members adapted for engagement with said registering apertures and 15 the other leg for extension through said nut-aperture and bendable laterally in advance of the exit of the aperture, to prevent the removal of the key,

20 3. In a nut-lock, a bolt having a longitudinal groove transversely of its threads, a nut having a longitudinal groove transversely of its threads for registration with the groove in said bolt, an aperture through the nut spaced 25 from the groove therein, and inclined outwardly and terminating through the side near the inner face of the nut, and a key of sub-

stantially U shape with one leg for engagement with said registering apertures and the other leg for extension through said inclined 30 nut-aperture and bendable laterally in advance of the exit of the aperture.

4. In a nut-lock, a bolt having a longitudinal groove transversely of its threads, a nut 35 having a longitudinal groove transversely of its threads for registration with the groove in said bolt, an aperture through the nut spaced from the groove therein, and inclined outwardly and terminating through the side near the inner face of the nut, and a key of sub- 40 stantially U shape with one leg for engagement with said registering apertures and the other leg of reduced size and adapted for extension through said inclined aperture and bendable laterally upon the body upon which 45 the nut rests and against the outer surface of the nut.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

FRANK OBIOLS.

Witnesses:

C. D. MACKAY,
C. E. ROBINS.