L. VAN WINKLE.

BOLTING-UP DEVICE.

APPLICATION FILED NOV. 1, 1919.

1,404,914. Patented Jan. 31, 1922.

Fig. 1.

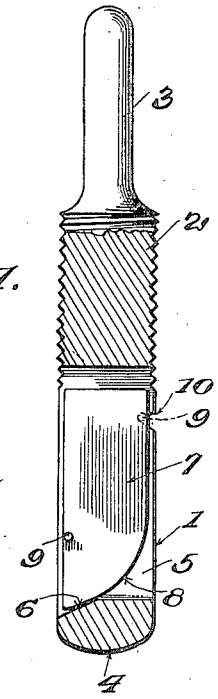


Fig. 2.

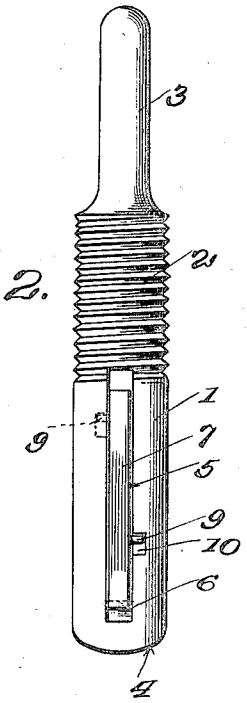
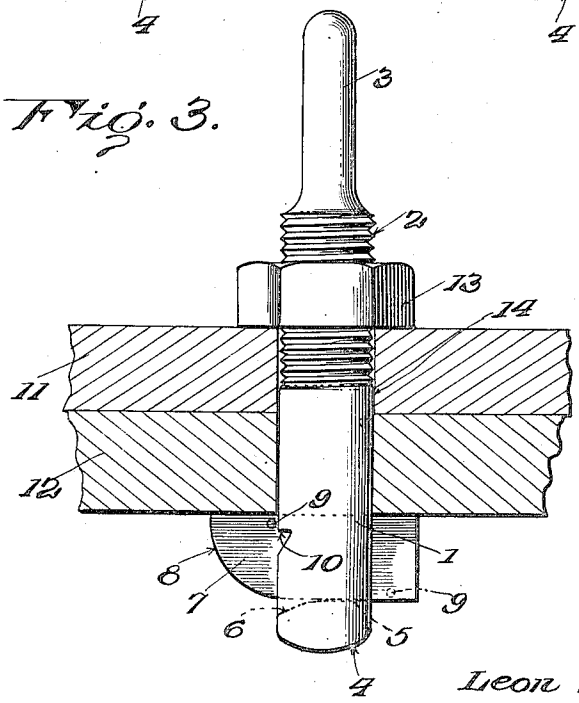


Fig. 3.



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UNITED STATES PATENT OFFICE.

LEON VAN WINKLE, OF SEATTLE, WASHINGTON.

BOLTING-UP DEVICE.

1,404,914. Specification of Letters Patent. Patented Jan. 31, 1922.

Application filed November 1, 1919. Serial No. 334,946.

To all whom it may concern:

Be it known that I, LEON VAN WINKLE, a citizen of the United States of America, residing at Seattle, in the county of King and State of Washington, have invented certain new and useful Improvements in Bolting-Up Devices, of which the following is a specification.

This invention relates to a device for temporarily securing plates together.

The object of the invention is to provide a device for bolting plates together which is adapted to be inserted and operated from one side of the plates.

Another object of the invention is to provide a headless bolt with a movable member carried thereby for gripping the opposite side of a plate through which it has been inserted.

The invention also comprehends improvements in the details of construction and operation which will be hereinafter particularly pointed out in the specification and claims.

In the drawings:

Fig. 1 is a partial sectional view of the body member with the parts in position for inserting through a hole in plates.

Fig. 2 is an elevation of the body member.

Fig. 3 is an elevation of the device in active position securing two plates.

1 indicates the main body portion of the device which is threaded at 2 and has a reduced end 3. The end opposite the reduced end is rounded at 4, and a longitudinal slot 5 is provided in this end portion, the end of the slot having a beveled portion 6. A key 7 is provided to fit in the slot 5; the end is rounded at 8 and pins 9 are provided to prevent the key from dropping out of the slot. Notches 10 are cut in the body portion 1 to accommodate the pins when the device is being inserted through the plates 11 and 12. The pins may also act to form a pivot for the key when swinging into position. The nut 13 is threaded on the threaded portion 2, of the body and tightened against the plates holding them together as shown in Fig. 3.

In use, the reduced end 3 is gripped by the hand and the key 7 is positioned in the slot, as shown in Fig. 1 in which position the device is ready to be inserted through the hole 14 in the plates 11 and 12.

The device is shown as being inserted through a hole in horizontal plates. In this case as the portion carrying the key extends through the holes in the plates the rounded portion of the key will ride down the beveled portion of the slot and fall into a position crosswise in the slot. The body is then pulled back through the hole and the nut threaded on and tightened, securing the plates as shown in Fig. 3.

Where the plates are in a vertical position, the device is held with the slot and key in a horizontal position until the portion carrying the key extends through the hole in the plates, when the body is turned to place the slot in a vertical position. The end of the key will fall out of the slot by gravity and lie in a crosswise position with respect to the body. The body is then pulled back through the slot until the key engages the plates, the nut screwed on and tightened, securing the plates together.

This device is principally used for temperarily securing a number of plates together while they are bolted at adjacent points, the hole used being one of the bolt holes.

What I claim is:

1. A device of the character described, comprising a body member having a slot in one end thereof, the other end portion being threaded, notches formed in the body near opposite ends and on opposite edges of the slot, a key adapted to fit in the slot having one corner thereof rounded to coact with a beveled portion of the slot in the body, pins carried by the key adapted to fit in the notches, whereby the key will change positions in the slot by gravity and a nut for threaded engagement with the body.

2. A device of the class described including a bolt provided with a slot and a key member movably disposed within said slot, having transverse lugs extending therefrom near diagonally opposite corners.

3. A device of the class described including a bolt provided with a slot and a key member movably disposed within said slot, having two pairs of transverse lugs extend-

ing from diagonally opposite corners, the key edge being curved at one side between the pair of lugs.

4. The combination of a bolt having a slot and flat faces formed on each side adjacent the slot, a key adapted to move freely in the slot having transverse lugs extending from diagonally opposite corners of the key and adapted to seat on the flattened faces of the bolt, the edge of the key being tapered on one side of the key between the lug carrying corners.

In testimony whereof I affix my signature.

LEON VAN WINKLE.