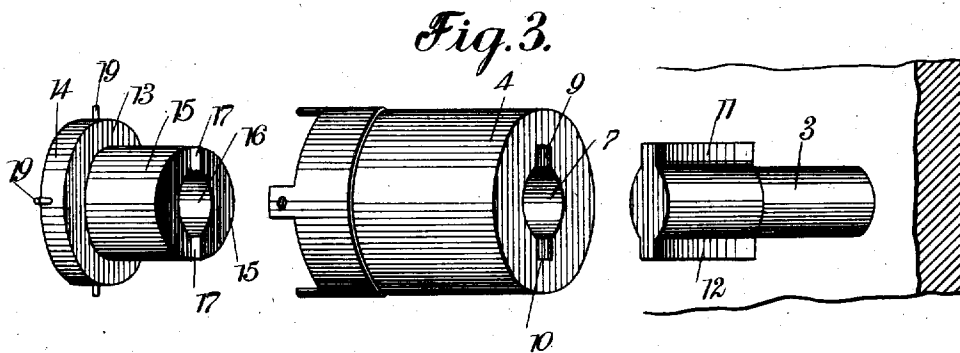
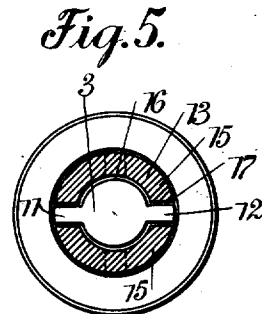
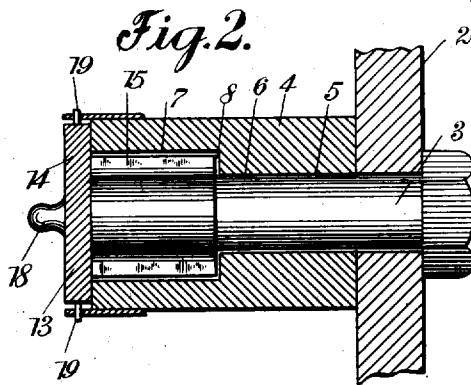
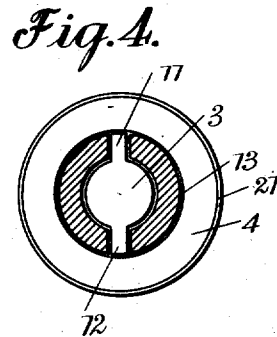
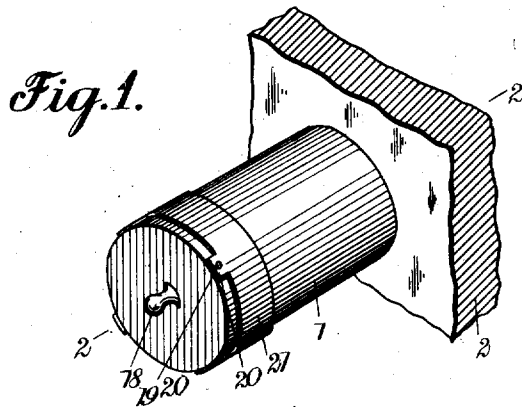


H. OTTE.
HOLD-ON SAFETY TAP.
APPLICATION FILED JUNE 8, 1911.

1,018,336.

Patented Feb. 20, 1912.



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HERMAN OTTE, OF TERRE HAUTE, INDIANA.

HOLD-ON SAFETY-TAP.

1,018,336.

Specification of Letters Patent.

Patented Feb. 20, 1912.

Application filed June 6, 1911. Serial No. 631,577.

To all whom it may concern:

Be it known that I, HERMAN OTTE, a citizen of the United States, and a resident of Terre Haute, in the county of Vigo and State of Indiana, have invented a new and Improved Hold-On Safety-Tap, of which the following is a full, clear, and exact description.

This invention relates to a new and improved tap for the purpose of taking the place of screw-threaded nuts and holding in a safe manner two parts together, or for holding a wheel on its axle.

An object of this invention is to provide a device which will be simple in construction, inexpensive to manufacture, strong, durable, safe and positive in its action, and easily adjusted.

A further object of this invention is to provide a tap adapted to interlock with a bolt or axle in a positive manner by means of keys passing through slots engaging shoulders and held in engagement with the shoulders out of alinement with the slots by means of an adjustable cap.

These and further objects, together with the construction and combination of parts, will be more fully described hereinafter and particularly set forth in the claims.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views, and in which—

Figure 1 is a perspective view; Fig. 2 is a longitudinal section on the line 2—2 of Fig. 1; Fig. 3 is a perspective view showing the several portions of the device separated one from the other; Fig. 4 is a transverse section showing the keys in alinement with the slots; and Fig. 5 is a transverse section showing the keys out of alinement with the slots and in their locking position.

Referring more particularly to the separate parts of this invention as embodied in the form shown in the drawings, 1 indicates a tap, which may be used in place of a screw-threaded nut to secure a wheel or other member, indicated at 2, to an axle or bolt, indicated at 3. The tap 1 is provided with a body portion 4 in the form of a cylinder having a central opening 5. The central opening 5 is in two sections 6 and 7, both of which are cylindrical in form, and the former of which is smaller than the latter, so as to form between them a shoulder 8.

Extending from opposite sides of the cylindrical bore or opening 6, there are provided slots 9 and 10 extending through the thickened portion of the body portion 4, so as to form continuous longitudinal slots between the outside of the body portion 4 and the enlarged cavity or bore 7. These slots are for the purpose of permitting the body portion of the tap to be inserted on the bolt or axle 5, which in this instance is shown as being provided with oppositely-extending flanges or keys 11 and 12, which are adapted to pass into the slots 9 and 10. It will be readily seen that when the keys 11 and 12 have once been passed through the slots 9 and 10 and entered the enlarged cavity or bore 7, a relative rotation of the body portion 4 of the tap and the bolt 5 will bring the keys, which do not extend the full length of the bolt, in opposition to the shoulder 8, so that the tap cannot be separated from the bolt or axle without bringing the keys 11 and 12 in alinement with the slots 9 and 10. In order to produce this relative rotation readily, there is provided a cap 13, which is shown to consist of a head 14 having semi-cylindrical flanges 15 projecting therefrom in spaced relation, so as to have a central bore 16 corresponding to the cylindrical portion of the bolt or axle 5, and slots 17 adapted to permit the insertion of the keys 11 and 12 therein. The flanges 15 together form a tubular member of slightly less magnitude than the magnitude of the bore or cavity 7 in the body portion 4.

The cap 13 may be manipulated by means of a knob 18. In order to lock the cap in any position of adjustment relative to the body portion 4, the head 14 is provided with projecting lugs 19, which are adapted to snap into openings provided in spring taps 20 on a collar 21. These spring taps form spring latches for securing the cap and body portion to the tap, against relative rotation.

The utility of the device will be readily understood when taken in connection with the above description. When it is desired to secure a wheel or other member 2 onto the axle or bolt 3, the body portion 4 of the tap is passed over the axle or bolt, so that the keys 11 and 12 will pass into the slots 9 and 10. The cap 13 may be then inserted into the cavity 7, so that the slots 17 therein will have the keys 11 and 12 entering them. The cap 13 can be rotated by the knob 18, or the body portion 4 itself rotated, so that

there will be a relative movement of the body portion and the bolt or axle 5, whereby the keys 11 and 12 will be brought out of register with the slots 9 and 10, and with the ends thereof abutting against a solid portion of the shoulder 8. A position at right-angles to the original position may be best adapted, as indicated in Fig. 5. The body portion 4 and the cap 13 can be locked in this relative position of adjustment by forcing the cap in, so that the lugs 19 will snap into the openings in the spring catches 20.

It will thus be seen that there is provided a simple, inexpensive and efficient device, which can be readily adjusted, and which will positively lock the parts together.

While I have shown one embodiment of my invention, I do not wish to be limited to the specific details thereof, but desire to be protected in various changes, alterations and modifications which may come within the scope of the appended claims.

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

1. The combination with a member having one or more keys thereon, of a tap adapted to be detachably connected to said member, said tap comprising a body portion having a plurality of bores of different magnitudes so as to form a shoulder between them, one of said bores having slots radiating therefrom corresponding to said keys and permitting said keys to pass into

the larger of said bores, and a cap for rotating said keys out of alinement with said slots, said cap comprising a head, and a pair of semi-tubular flanges projecting from said head in spaced relation so as to form slots between them adapted to permit the passage of said keys between the flanges.

2. The combination with a member, having one or more keys thereon, of a tap adapted to be detachably connected to said member, said tap comprising a body portion having a plurality of bores of different magnitudes so as to form a shoulder between them, one of said bores having slots radiating therefrom corresponding to said keys and permitting said keys to pass into the larger of said bores, a cap for rotating said keys out of alinement with said slots, said cap comprising a head and a pair of semi-tubular flanges projecting from said head in spaced relation so as to form slots between them adapted to permit the passage of said keys between the flanges, lugs on said head, and spring catches on said body portion, adapted to engage said lugs to lock said cap against movement relative to said body portion.

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

HERMAN OTTE.

Witnesses:

WM. T. TICHNOR,
HERMAN A. MAYES.