No. 783,459. PATENTED FEB. 28, 1905.

W. C. PERRY.

SAFETY THREAD POINT.

APPLICATION FILED JUNE 11, 1904.

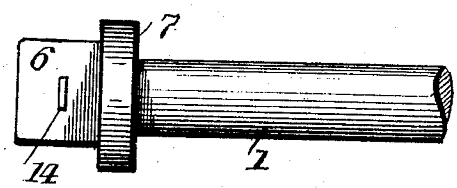

Fig. 1.

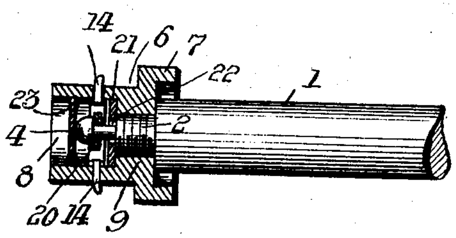

Fig. 2.

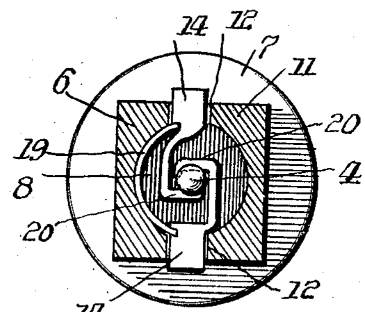

Fig. 3.

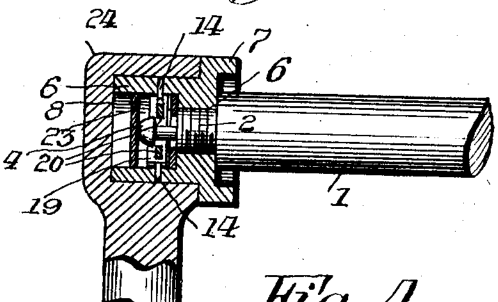

Fig. 4.

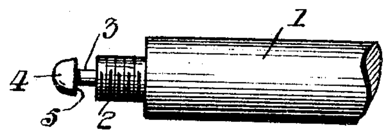

Fig. 5.

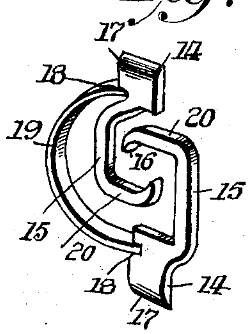

Fig. 6.

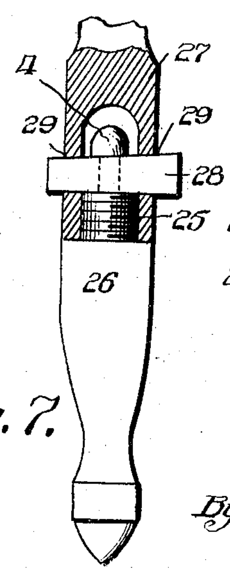

Fig. 7.

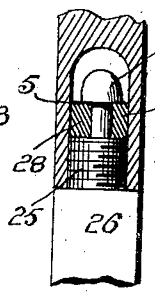

Fig. 8.

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UNITED STATES PATENT OFFICE.

WILLIAM C. PERRY, OF CROSSCREEK VILLAGE, PENNSYLVANIA.

SAFETY THREAD-POINT.

SPECIFICATION forming part of Letters Patent No. 783,459, dated February 28, 1905.

Application filed June 11, 1904. Serial No. 212,165.

To all whom it may concern:

Be it known that I, WILLIAM C. PERRY, a citizen of the United States of America, residing at Crosscreek village, in the county of Washington and State of Pennsylvania, have invented certain new and useful Improvements in Safety Thread-Points, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention has relation to nut-locks, and has for its object to provide a safety thread-point whereby nuts when once placed upon a threaded end of a bolt or spindle may be locked thereon until it is desired to remove the nut.

Another object of my invention is to provide a novel construction upon the threaded end of a bolt or spindle whereby a nut or cap will be retained thereon until it is desired to remove the same.

A further object of my invention is to provide a nut in which novel means is provided for gripping the threaded end of a bolt or spindle, and in connection with said nut I employ means whereby the same may be supported in the wrench which has been used to remove the nut.

The construction employed to accomplish the above results will be hereinafter described in detail, and referring to the drawings accompanying this application like numerals of reference indicate like parts throughout the several views, in which—

Figure 1 is a side elevation of my improved nut-lock. Fig. 2 is a vertical sectional view of the same, showing the nut in engagement with the safety thread-point. Fig. 3 is an enlarged transverse sectional view of the nut. Fig. 4 is a vertical sectional view of my improved nut-lock, showing a spanner-wrench in position thereon. Fig. 5 is a side elevation of my improved safety thread-point. Fig. 6 is a detail perspective view of the clips employed in the nut. Fig. 7 is a side elevation of my improved safety thread-point as constructed in connection with a drill-bit; and Fig. 8 is a similar view of the same, taken from another point of view, the retaining-wedges and part of the bit being in section.

In the accompanying drawings I have illustrated my improved nut-lock and safety thread-point as constructed upon a spindle, and it will be noted that the same may be employed in connection with the threaded end of a bolt or upon any construction wherein a nut is to be secured upon the threaded end of a rod, bolt, spindle, or the like.

The reference-numeral 1 indicates a spindle the one end of which is contracted, as indicated at 2, forming a threaded portion upon which the nut is to be secured, and formed integral with this threaded contracted end of the spindle is a shank portion 3, having a hemispherical head 4 formed upon its outer end, this head forming an annular shoulder 5, against which the mechanism employed in connection with the nut is adapted to engage and lock the nut upon the threaded portion of the spindle.

The reference-numeral 6 indicates the nut which I have constructed in accordance with my invention, this nut being provided with an enlarged collar 7 and an annular recess 8 in its outer end, and in the partition 9 of said nut I form a screw-threaded aperture 10, which is adapted to engage the threaded contracted portion 2 of the spindle 1. In the side walls 11 and the recess 8 of the nut I mount the locking mechanism which is adapted to secure the nut upon the safety thread-point of the spindle. In the side walls 11 I provide the slots 12 12, through which pass the lugs 14 14, carrying upon their inner ends the U-shaped clips 15 15, the extreme ends of these clips being bent downwardly, as indicated at 16 16, and the other end of the lugs 14 14 are formed with beveled portions 17 17, the object of which will be hereinafter more fully described.

As illustrated in Fig. 3 of the drawings, the lugs 14 14 are arranged in the slots 12 12, which are diametrically opposite each other, and in the one edge of the lugs 14 14 I provide notches 18 18, in which the ends of the spring 19 are adapted to engage, this spring being mounted in the annular recess 8 of the nut. When the nut is locked upon the threaded contracted end of the spindle, the horizontal portions 20 20 of the U-shaped clips are adapted to engage the shoulder 5 of

the semicylindrical head 4, the lugs 14 14 projecting through the slots 12 12 of the nut, as clearly shown in Figs. 2 and 3 of the drawings. Before placing said clips within the recess 8 I place therein an annular washer 21, which is provided with an aperture 22, and after said washer and clips have been placed in position I secure in the end of the nut an annular plate 23, which is adapted to protect the clips and their appurtenant parts that are mounted in the nut. When it is desired to remove the nut from the spindle, a spanner-wrench may be employed, as shown in Fig. 4 of the drawings and designated by the reference-numeral 24, this wrench being adapted to span the nut, and in placing the same thereon the inner sides of the wrench are adapted to engage the beveled ends 17 17 of the lugs 14 and force the same inwardly, depressing the ends of the spring and releasing the horizontal portions 20 20 of the clips from engagement with the annular shoulder 5 of the semicylindrical head 4 of the spindle, at which time the wrench may be turned to withdraw the nut from the threaded contracted end of the spindle, and it will be seen that the spring 19 of the nut will have a tendency to force the lugs 14 14 outwardly against the inner sides of the wrench, consequently holding the nut in the wrench and preventing the same from becoming disengaged, which is a great convenience to those removing the nut from said spindle, preventing the nut from becoming lost or disengaged from the wrench.

In Figs. 7 and 8 of the drawings I have illustrated my improved safety thread-point, as constructed in connection with the threaded contracted end 25 of a drill-bit 26, and the reference-numeral 27 indicates the other portion of the drill to which the bit is to be secured, and in connecting heavy and large members together I have dispensed with the U-shaped clips and in place of the same employ wedges 28 28, which are driven through apertures 29 29, formed in the drill portion 27, these wedges being adapted to engage the annular shoulder 5 formed by the semicylindrical head 4 of the safety thread-point and lock the drill portion 27 upon the threaded contracted end of the bit 26. This construction, as illustrated in Figs. 7 and 8 of the drawings, may be employed for coupling two sections of shafting or the like together.

While I have herein shown the spring-clips as being U-shaped, I wish it to be understood that I do not care to confine myself to this specific shape as shown and described, but may construct the same of such a shape that will be advantageous to the general features of my improved nut-lock, and other slight changes may be made in the details of construction without departing from the scope of the invention, and I do not care to limit myself to the construction herein shown, but may construct the same as will be permitted by the scope of the appended claims.

What I claim is—

1. A member having a reduced threaded portion, a neck of less diameter than the threaded portion and a head on the free end of the neck of less diameter than the thread portion, a second member engaging the threaded portion, and a lock passing entirely through opposite sides of the second member and engaging the neck to secure the members in locked engagement, substantially as described.

2. In a nut-lock the combination with a bolt having a contracted threaded end, a hemispherical headed shank portion formed integral with said contracted end, of a nut, and spring-clips carried by said nut for engaging the headed shank of the bolt, said clips being pressed apart by the passage therebetween of said headed shank portion.

3. In a nut-lock of the character described, the combination with a spindle having threads formed thereon, of a headed shank formed integral with said spindle, a nut, said nut having a recess formed therein, U-shaped clips mounted in said recess and adapted to engage the headed shank of the spindle, a curved spring carried by said nut to normally hold said clips in engagement with said spindle, and means for releasing said clips from the exterior of the nut, substantially as described.

In testimony whereof I affix my signature in the presence of two witnesses.

WILLIAM C. PERRY.

Witnesses:
W. STEWART REED,
JOHN S. CUMMINS.