Feb. 16, 1926.

1,573,328

B. SALE

LOCK NUT

Filed July 29, 1925

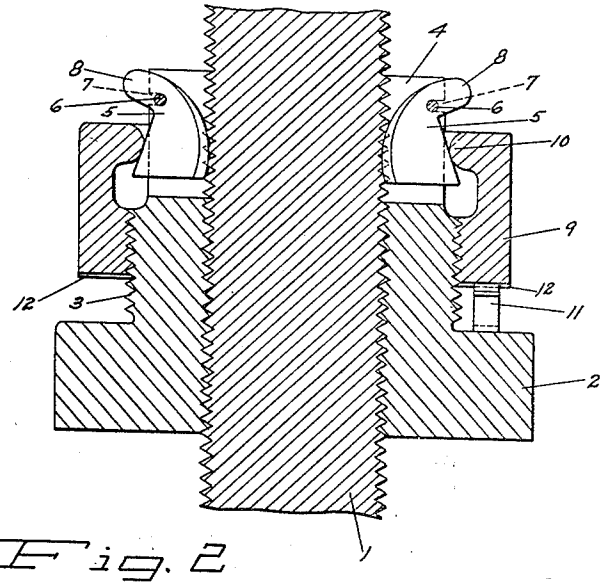


Fig. 2

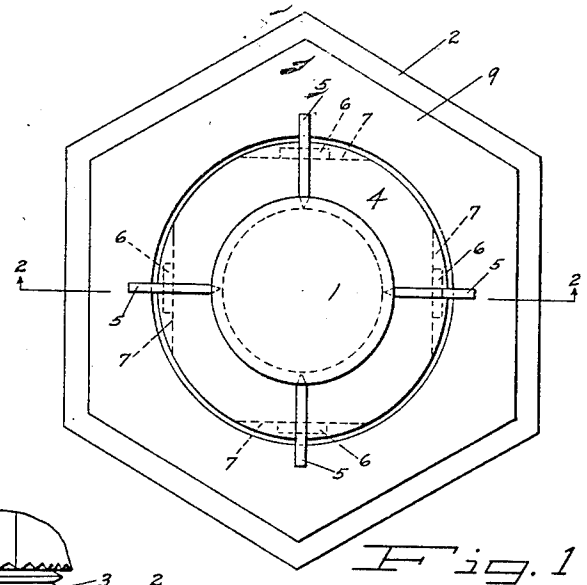


Fig. 1

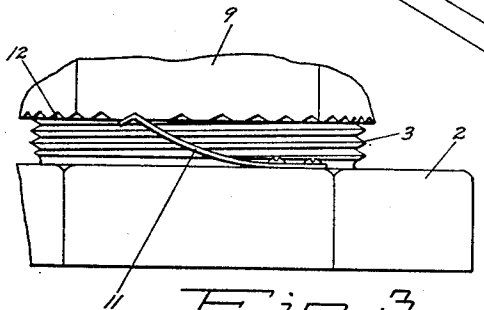


Fig. 3

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UNITED STATES PATENT OFFICE.

BURT SALE, OF PORTLAND, OREGON.

LOCK NUT.

Application filed July 29, 1925. Serial No. 46,763.

To all whom it may concern:

Be it known that I, BURT SALE, a citizen of the United States, residing at Portland, in the county of Multnomah and State of Oregon, have invented a new and useful Lock Nut, of which the following is a specification.

My invention relates to lock nuts in which that part of the device which performs the function of the ordinary nut is provided with a threaded neck, a slotted head, knives in the slots, and a sleeve nut to actuate the knives.

The objects of my invention are to furnish a device which is easy to manufacture; will fit any standard bolt; will hold on the bolt at any desired place; and will positively either lock or release the knives.

Other objects and advantages are to be found in the construction and arrangement of parts as will be described in the specification and particularly pointed out in the appended claims.

Fig. 1 is a plan view of the entire device.

Fig. 2 is a section through Fig. 1 along the line 2—2.

Fig. 3 is a detail of the auxiliary lock.

Similar numerals refer to similar parts throughout the several views.

The bolt is designated by the numeral 1, the nut by 2. The neck 3 forms an integral part of the nut 2 and carries a male thread. The head 4 joins the neck integrally, but the outside thread may be omitted. Said head is divided by a plurality of radially extending slots. The knives 5 resemble miniature cleavers, and are pivotally mounted in said slots. The pivots 6 for the knives 5 are solid with said knives and rest in the grooves 7 which cross the slots near the upper part of the head 4. Extending at right angles to the back of each knife, like the arm of a bell crank, is the handle 8. Screwably mounted on the neck 3 is a sleeve nut 9 whose upper portion is provided with an inwardly directed shoulder 10, which latter either presses the knives into the threads of the bolt and thereby locks the nut, or otherwise, by pressing against the handle 8, forces the knives away from the bolt and thereby permits the turning of the nut. An auxiliary lock is provided by a curved spring 11 whose one end is firmly affixed to the upper surface of the nut adjacent to the neck, while a crimp at the other, the free end, engages the notches 12 in the under surface of the sleeve nut. This auxiliary lock will prevent the unintentional turning of the sleeve nut and thus give additional assurance that the knives will remain in the desired position.

Having thus described my invention, it will be seen that my objects have been accomplished and though I have shown the preferred form of construction, I reserve to myself the right to make minor changes, providing I do not violate the spirit and principle of my invention.

I claim:

1. In a device of the character described, the combination of a nut having an inside thread, a neck coaxially with the nut and forming an integral part thereof, said neck having a male thread, a head coaxially with the neck and forming an integral part thereof, said head having an inside thread and being divided by a plurality of radially extending slots, a groove in the head across each slot, a knife movable in each slot, said knife being pivotally mounted in the groove, a handle projecting at right angles from the back of the knife and capable of receding into the slot, a sleeve nut screwably mounted on the neck, said sleeve nut having at the upper surface an inwardly directed shoulder, the clock-wise rotation of the sleeve nut forcing the shoulder along the back of the knife and pressing the knife edge past the inside thread of the head, the counter clock-wise rotation of the sleeve nut pressing the handle into the slot and withdrawing the knife edge from the inside thread of the head, and a crimped spring between the upper surface of the nut and the lower surface of the sleeve nut to normally retain the shoulder at a definite place on the back of the knife.

2. In a device of the character described, the combination of a nut having an inside thread, a neck coaxially with the nut and forming an integral part thereof, a head coaxially with the neck and forming an integral part thereof, said head being divided by a plurality of radially extending slots, a knife pivotally mounted in each slot, the edge of the knife being capable of extending beyond the inner circumference of the head, the back of the knife extending wedge-shaped beyond the outer circumference of the head, a handle projecting from the back of the knife and at right angles thereto near the pivotal point, a sleeve nut screwably mounted on the neck, and an inwardly di-

rected shoulder near the upper surface of the sleeve nut, said shoulder being disposed in the corner between the knife and the handle and pressing alternately against the knife and the handle.

3. In a device of the character described, the combination of a nut, a neck coaxially with the nut, a head coaxially with the neck, said head being divided by a plurality of slots extending radially within the plane of the axis, a knife pivotally mounted in each slot, the edge of the knife being capable of extending beyond the inner circumference of the head, a sleeve nut screwably mounted on the neck, an inwardly directed shoulder near the upper surface of the sleeve nut, and means actuated by said shoulder to forcibly withdraw the knife edge into the slot and thus clear of the inner circumference of the head.

4. In a device of the character described, the combination of a nut, a neck coaxially with the nut, a head coaxially with the neck, said head being divided by a plurality of radially extending slots, a knife pivotally mounted in each slot, and means screwably mounted on the neck to forcibly press the edge of the knife either toward the axis of the head or away from it.

Signed by me at Portland, Oregon this 22nd day of July, 1925.

BURT SALE.