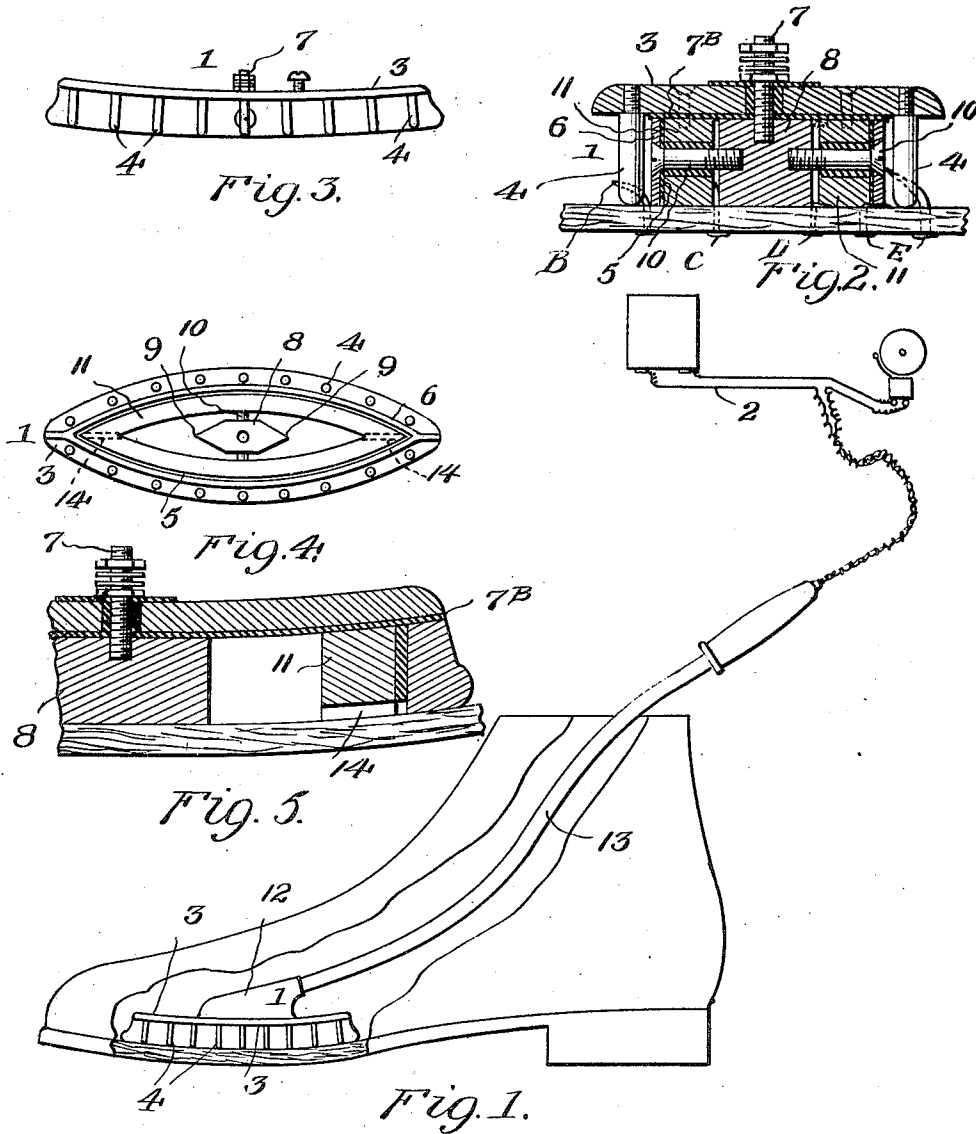


J. L. YOUNG.
TACK INDICATOR.
APPLICATION FILED JULY 30, 1920.

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WITNESS:

UNITED STATES PATENT OFFICE.

JESSE L. YOUNG, OF BROOKFIELD, MISSOURI.

TACK INDICATOR.

Application filed July 30, 1920. Serial No. 400,024.

To all whom it may concern:

Be it known that I, JESSE L. YOUNG, a citizen of the United States, residing at Brookfield, in the county of Linn and State of Missouri, have invented new and useful Improvements in Tack Indicators, of which the following is a specification.

This invention relates to a tack indicator and has for its primary object the construction of a device of this character that will enable the operator to immediately detect the nail in a shoe.

An object of the invention is to accomplish the foregoing result without interfering with the neat appearance of the finished shoe.

Another object of the invention is the novel manner of constructing the circuit closer or contact head so that it will be impossible for same to pass over a tack irrespective of its position without operating the circuit closer.

With these and other objects in view the invention will be better understood from the following detailed description taken in connection with the accompanying drawing wherein:

Fig. 1 is a diagrammatic view.

Fig. 2 is an enlarged sectional view through the circuit closer or head.

Figs. 3, 4 and 5 are detailed views.

At the beginning I wish to call attention to the fact that in the manufacture of shoes the insole is tacked to a wooden last, later in the operation these tacks are removed but quite often some are overlooked or missed and the tacks are left in the shoe projecting in various directions. The purpose of my device is to detect the presence of the tacks irrespective of their bent formation and in such a manner that a neat appearance of the finished shoe will not be spoilt.

Again referring to the drawing illustrating one construction of my invention for accomplishing the foregoing result the numeral 1 designates a circuit closer or contact head for closing the signal circuit 2 when engaging a tack. This signal circuit 2 may be of any well known construction for giving a signal when closed. The circuit closer consists of a base 3 into which is screwed at spaced points a plurality of contact pins 4. This base may be of any required shape to facilitate traveling of the same within the shoe as shown in Fig. 1

but, for the purpose of illustration I have shown same elliptical in shape. Supported by the base but insulated therefrom by the insulation 5 is a contact strip 6. It will be noted that the contact strip 6 is spaced a small distance from the contact pin so that the circuit closer is normally open at this point. Supported by the screw 7 which in turn is insulated from the base is a contact block 8 having wedge shape extremities 9 for the purpose hereinafter explained. The screws 10 connect this block to the strips 6 and are further insulated from and support the contact member 11 in such a manner that the same is permanently spaced from the block 8. Mounted upon the base is a socket 12 detachably engaged by the handle 13 which is of the required shape to be easily inserted into the shoe. To complete the invention I provide a tack groove 14 in each end of the contact member 11 for the purpose now to be described. Referring to the enlarged sectional view which illustrates the sole of a shoe in a diagrammatic manner it will be seen that when the tack extends in a direction as illustrated at B the distance between one of the contact pins and the contact strip will be bridged for closing the signal circuit. When a tack extends as shown at C it will be lodged in between the contact member 11 and block 8 so as to close the signal circuit. When the tacks are bent as illustrated at D and E the distance between the contacts will be bridged for closing the signal circuit. One of the advantages of the tack groove is that when a tack is in the spaces arranged at the opposite ends of the contact block the tack in the movement of the device will pass through the tack groove so as to assume a position to bridge the distance between the two contacts.

A very important feature of my invention is the novel manner of constructing and associating the parts so that the device may be readily moved about in the shoe and all surfaces properly passed over so that when a tack is present it will be sure to bridge at least two of the contacts for closing the signal circuit.

It is, of course, to be understood that the invention may be constructed in various other manners and the parts associated in different relations and, therefore, I do not desire to be limited in any manner except

as set forth in the claims hereunto appended.

Having thus described my invention what I claim is:

5 1. A tack indicator comprising a plurality of contacts supported spaced from each other, an indicating circuit connected to the contacts, means for moving the contacts about
10 in a shoe to bring about engagement between the tacks and the contacts for closing the said circuit.

2. In a tack indicator, a head, a plurality of spaced contacts carried by said head and connected one with the other, a single spaced
15 contact carried by said head and spaced from said plurality of contacts, an audible signal in circuit with said spaced and plurality of contacts whereby when a bridging substance is engaged by said spaced and any-

one of said plurality of contacts, said audible 20 signal will be excited.

3. A tack indicator comprising a signal circuit, and a contact head for closing the circuit when a tack is engaged, said head consisting of a plurality of spaced contact 25 pins, a contact strip spaced from the pins at a pre-determined distance, and a pair of contact members acting independently to close said circuit when a tack is engaged thereby.

4. A tack indicator comprising a signal 30 circuit, a circuit closer, and a handle for moving the circuit closer about in a shoe, said circuit closer consisting of a plurality of contact members spaced apart and insulated in pairs for the purpose set forth. 35

In testimony whereof I affix my signature.

JESSE L. YOUNG.