

April 3, 1945.

A. L. BECKET

2,372,653

ELECTRICAL TERMINAL

Filed April 19, 1940

Fig. 1.

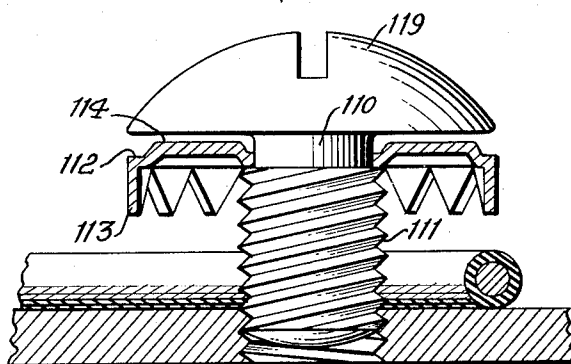
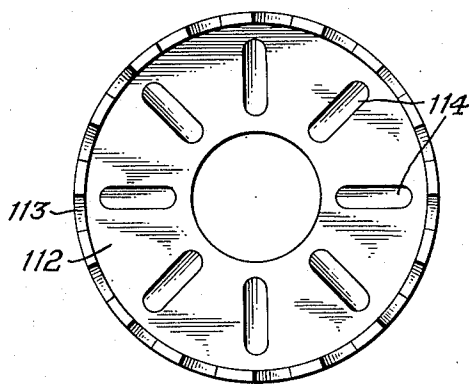


Fig. 2.



INVENTOR

ALAN L. BECKET

BY *James J. Cannon.*

ATTORNEY

UNITED STATES PATENT OFFICE

2,372,653

ELECTRICAL TERMINAL

Alan L. Becket, East Orange, N. J.

Application April 19, 1940, Serial No. 330,438

2 Claims. (Cl. 173-340)

My invention relates to improvements in electric terminals in which electric connection is made between insulated wire and the terminals without removing the insulation. Contact is effected between insulated wires and terminals by crushing, piercing or impaling the insulation. The wire is pressed against the terminal, which terminal contains sharp prongs at its end or about a terminal screw, rivet, nail, eyelet, washer or disc, which said terminal screw, rivet, nail, eyelet, washer, or disc has sharp prongs to crush or pierce the insulation and thus make contact.

As will be apparent from the disclosures in my prior patents, #2,053,060 for Attachment plug and #1,991,045 for Electric plug for improvements in piercing insulated wires in such devices an essential feature in such piercing is that it be accomplished by a permanent and stable piercing terminal which is simple in construction and inexpensive to manufacture and which can be operated by anyone whether skilled or unskilled in the art of electrical equipment. Other essential features are that such improvements can be used in connection with a terminal box, socket, receptacle, attachment plug, portable appliances such as vacuum cleaners, toasters, and the like in which the terminal connection is subject to constant tugging, pulling or vibration, switch board or tumbler board or any other type of electrical connections.

It should be pointed out that the pressure of the insulated wire against the terminal has a function in maintaining a pressure upon the threads of the terminal screw to eliminate the tendency of the screw coming loose under vibration, wear, expansion or contraction. Play between the threads of the screw and the threads into which it is screwed is eliminated in my device. The resiliency of the insulation material gives the desired pressure to press the terminal against the screw head to maintain frictional contact between the engaging threads.

It is a simplified type of construction, inexpensive to manufacture and easy to use. Its many and diversified uses are too numerous to

mention and its simplicity lends to its general usefulness. Some of its forms and uses are disclosed in the following drawing to which reference is made; however applicant does not confine his invention to those disclosed as many other uses and purposes not disclosed in said drawing are possible.

Figure 1 is a clamping screw arrangement.

Figure 2 is bottom view of the piercing washer shown in Figure 1.

Reading on Figure 1 is a clamping screw arrangement and consists of the following parts: 109 is screw head, 110 is shank portion of screw, 111 rolled out thread portion of screw, 112 piercing washer, 113 contact prongs, 114 locking ribs. In Figure 1, the unthreaded portion 110 of the screw shank directly below the head portion 109 of the screw is smaller in diameter than the threaded portion 111. The portion 110 of the shank provides an annular groove or recess in which the washer 112 is free to rotate. The rolled out threads 111 hold the washer from sliding down the screw shank.

Figure 2 is bottom view of the piercing washer 112, shown in Figure 1.

I claim:

1. A clamping screw arrangement comprising a headed screw having a threaded shank, a washer with contact prongs tapered for piercing insulation on an insulated conductor wire and making electrical contact with the conductor when the shank is screwed into a cooperating member, said washer being rotatable on the screw shank and being non-separable therefrom.

2. A clamping screw arrangement comprising a headed screw having a threaded shank, a washer with contact prongs tapered to a point to pierce the insulation of an insulated conductor wire and make electrical contact with the conductor when the shank is screwed into a cooperating member, said washer being rotatable on the screw shank and being non-separable therefrom.

ALAN L. BECKET.