

L. A. HOEFLICH.
SECURING DEVICE.
APPLICATION FILED OCT. 25, 1919.

1,361,858.

Patented Dec. 14, 1920.

Fig. 1.

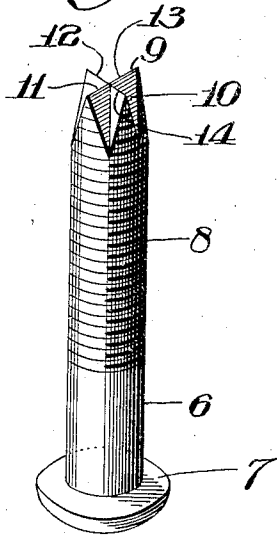


Fig. 4.

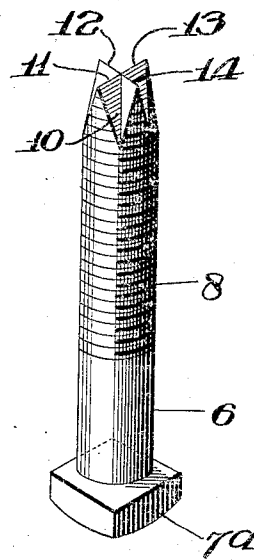


Fig. 2.

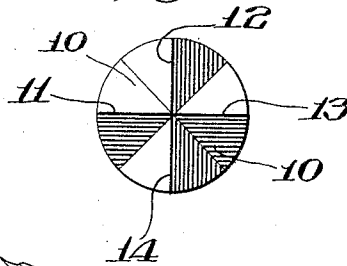


Fig. 3.

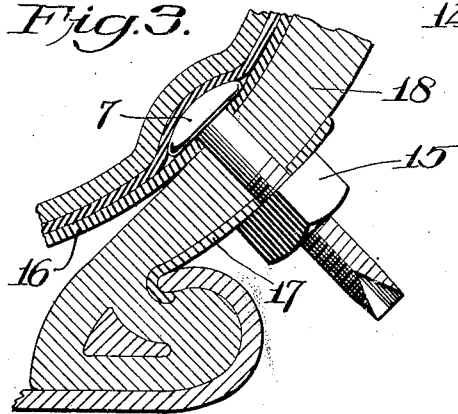
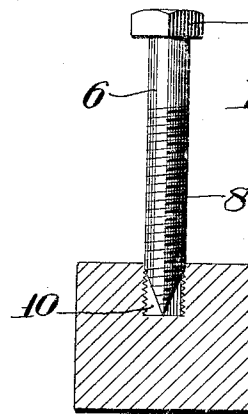


Fig. 5.



Witnesses:

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UNITED STATES PATENT OFFICE.

LLEWELLYN A. HOEFLICH, OF PLEASANTVILLE, NEW JERSEY, ASSIGNOR OF ONE-THIRD TO HOWARD M. DAVID, OF ATLANTIC CITY, NEW JERSEY, AND ONE-THIRD TO ALFRED M. OPPENHEIMER, OF PITTSBURGH, PENNSYLVANIA.

SECURING DEVICE.

1,361,858.

Specification of Letters Patent. Patented Dec. 14, 1920.

Application filed October 25, 1919. Serial No. 333,274.

To all whom it may concern:

Be it known that I, LLEWELLYN A. HOEFLICH, a citizen of the United States, residing at Pleasantville, in the county of Atlantic and State of New Jersey, have invented certain new and useful Improvements in Securing Devices, of which the following is a specification.

One object of my invention is to provide an improved securing device which can be made in the form of a bolt, spike or the like and which will be so constructed that it will readily penetrate materials of various characters and as such can be used with advantage for piercing the shoes of pneumatic tires for the purpose of binding or holding repair patches or other parts in place and therefore is particularly adapted for use in connection with my invention forming a part of my co-pending application for United States Patent, Serial No. 303,215, filed June 10, 1919.

Another object is to make my improved securing device of a simple and durable construction and so that it can be driven entirely or partway through a piece of material or it can be driven partway and then screwed the remainder of the way or it can be driven through one or more pieces of material and provided with a nut so as to form a binding of the material as will hereinafter be described.

These objects, and other advantageous ends which will be described hereinafter, I attain in the following manner, reference being had to the accompanying drawings in which

Figure 1 is a perspective view showing one embodiment of my invention,

Fig. 2 is an enlarged end view of Fig. 1,

Fig. 3 is a fragmentary elevation, partly in section, showing the device illustrated in Figs. 1 and 2 used in the form of a bolt for clamping a repair patch and securing plate to the shoe of a pneumatic tire,

Fig. 4 is a perspective view showing another embodiment of my invention, and

Fig. 5 is an elevation, partly in section, showing how my invention, in the form shown in Fig. 4, can be driven into a piece of wood or other material.

Referring to Figs. 1 to 3 inclusive of the drawing, my invention consists of a shank 6 which has a head 7 at one end and is screw

threaded as shown at 8; the screw threading extending from the opposite end 9 toward the head 7. The shank 6 is cut or formed to provide notches 10; said notches extending from the extreme end 9 toward the head 7 and gradually becoming shallower from the extreme end 9 as clearly shown in Fig. 1. Each notch 10, at the extreme end 9, extends inwardly to the axis of the shank 6 and the notches are so grouped as to provide a plurality of radially extending cutting edges 11, 12, 13 and 14; the cutting edges 11 and 13 extending transversely to the cutting edges 12 and 14. It will also be noted that the notches 10 form interruptions in the screw threads 8. The arrangement is such that a nut 15, such as shown in Fig. 3, can be screwed on the shank 7 to provide a bolt for clamping various pieces of material together such for example as a patch 16 and securing plate 17 to a rubber tire shoe 18.

By providing the notches as above described the shank 6 can be driven with a hammer into or through various materials; the cutting edges 11, 12, 13 and 14 operating as knives for cutting the material in planes radiating from the axis of the shank. This cutting provides an easy entrance of the shank in the material of various characters, since it permits the cut material to be pushed sidewise in various directions from a common center. In actual practice I have found that the toughest kind of a tire shoe including tough rubber having strong canvas embedded therein can be easily pierced by the shank 6. When used as a bolt as shown in Fig. 3, the nut 15 co-acts with the screw threads 8, in the usual manner of a bolt, after the shank has been driven through the material.

As shown in Figs. 4 and 5 my improved securing device can be used as a spike, lag screw or the like and can be driven, partway of its length, into wood and after which it can be turned in the form of a screw bolt or lag screw and in this instance the head, such as shown at 7^a, can be made angular for the purpose of providing a hold for a wrench. In this latter mentioned form of my invention the device can be made of such size as to be adapted for use in securing railroad tracks to the ties or for any other purposes where a securing device of this character is needed.

While I have described my invention as taking a particular form, it will be understood that the various parts of my invention may be changed without departing from the spirit thereof, and hence I do not limit myself to the precise construction set forth, but consider that I am at liberty to make such changes and alterations as fairly come within the scope of the appended claims.

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

1. A securing device including a screw threaded shank having one end notched to
15 provide cutting edges intersecting each other at an angle; substantially as described.

2. A securing device including a screw threaded shank having one end notched to provide cutting edges extending radially and intersecting each other at an angle; 20 substantially as described.

3. A bolt having transverse cutting edges at one end leading toward the axis thereof; substantially as described.

In testimony whereof I have signed my 25 name to this specification in the presence of two subscribing witnesses.

LLEWELLYN A. HOEFLICH.

Witnesses:

H. M. DAVIS,
CHAS. POTTS.