

(No Model.)

B. KOELZER & J. THANNEY.
HORSESHOE CALK.

No. 568,857.

Patented Oct. 6, 1896.

Fig. 1.

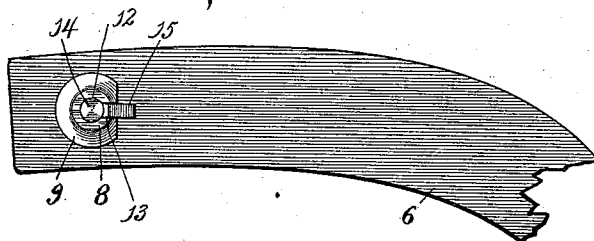


Fig. 2.

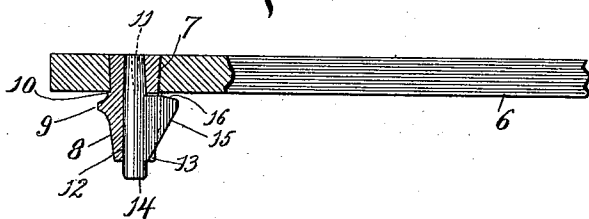


Fig. 3.

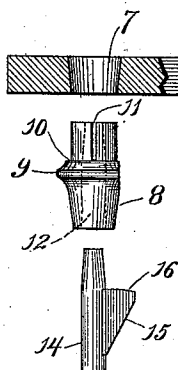


Fig. 4.

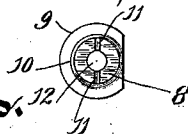
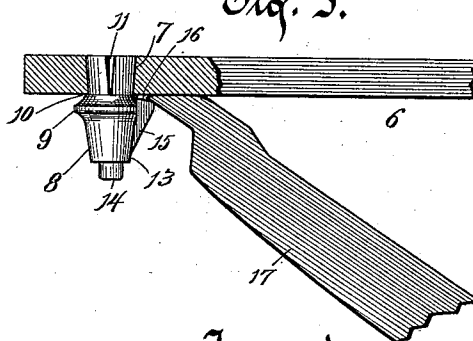


Fig. 5.



Witnesses:

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UNITED STATES PATENT OFFICE.

BERNARD KOELZER AND JOHN THANAY, OF MILWAUKEE, WISCONSIN.

HORSESHOE-CALK.

SPECIFICATION forming part of Letters Patent No. 568,857, dated October 6, 1896.

Application filed December 26, 1895. Serial No. 573,253. (No model.)

To all whom it may concern:

Be it known that we, BERNARD KOELZER and JOHN THANAY, of Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented a new and useful Improvement in Horseshoe-Calks, of which the following is a description, reference being had to the accompanying drawings, which are a part of this specification.

Our invention has relation to improvements in horseshoe-calks.

The invention has particular reference to that class of devices wherein the calk is formed with a split and expansible shank and a pin is adapted to be used in conjunction therewith for the purpose of expanding the calk and thereby tightly holding it in the aperture of the shoe, said shank also having an external annular shoulder, which shoulder, when it is desired to remove the calk, is adapted to be engaged by a suitable tool.

A device of the character above referred to is open to a serious objection, viz: the difficulty experienced in removing the same from the horseshoe. It is found in the practical use of such devices that it is not only exceedingly difficult to remove them, but in most cases impossible. It is apparent that after the calk is in use for some little time the projecting end of the pin will have worn down even with the end of the calk, whereby no projecting end is left which can be engaged for pulling the pin out. Even though there is a projecting end the pin is so tightly wedged in the tapered opening of the calk that it is next to impossible to extract said pin. Now as long as the pin is in place in the calk the split portion of said calk is forced so tightly against the edges of the opening in the horseshoe that it can be readily seen that any attempt to remove the calk and pin together is met with the strongest possible resistance. The annular shoulder on the calk is provided for the purpose of allowing a tool or lever to be inserted therebeneath for the purpose of prying the calk out of the opening in the shoe. Any person familiar with this class of devices knows with what difficulty such an attempt is attended.

It is the object of our invention to provide a construction of expansible calk and expanding-pin of such character that the above-

named objections are entirely removed and a device presented in which the calk can at all times be readily and speedily removed.

With the above object in view the invention consists of the devices and parts or their equivalents, as will hereinafter more fully appear.

In the accompanying drawings, Figure 1 is an under view of a fragment of a horseshoe, showing our invention applied thereto. Fig. 2 is an edge view of Fig. 1, part being in section. Fig. 3 is a detached view of a fragment of the horseshoe, of the calk, and of the expanding-pin. Fig. 4 is a lower end view of the calk with the expanding-pin removed, and Fig. 5 is a view of the calk properly applied to the shoe and a tool or lever engaging under the lateral shoulder of the pin in order to show clearly the manner of removing said pin.

Referring to the drawings, the numeral 6 indicates a fragment of a horseshoe provided with an opening 7, which is advisably tapering, as clearly shown in Figs. 2, 3, and 5.

The calk is indicated by the numeral 8, and about centrally this calk is provided with an external annular shoulder 9. Immediately above this shoulder is preferably another shoulder, 10, which is of less diameter, and is adapted to bear directly against the under side of the horseshoe. From the shoulder 9 downwardly the calk is preferably of a truncated conical form, and from the shoulder 10 upwardly is slightly tapered to register with the tapering edge of the opening 7 of the horseshoe. This portion of the calk is provided with any desired number of slits 11, two being shown in the present drawings, arranged at diametrically opposite points. The slits extend from the shoulder 10 to the upper extremity of the calk.

The calk is tubular throughout to form a longitudinal opening 12, and this longitudinal opening from a point about corresponding to the location of the shoulder 10 is tapered inwardly upwardly, as clearly shown. The lower portion of the calk, or that portion which is not forced into the opening of the horseshoe, is provided with an elongated slot 13.

The numeral 14 indicates the expanding-pin, which pin is provided with a laterally-

extending lug 15, having a widened upper end 16 and its outer edge preferably beveled. The upper end of the pin proper is tapered from a point approximately in line with the upper end of the lug 16 to the upper extremity of said pin, said taper registering with the tapering portion of the longitudinal opening 12 of the calk.

In the application of the invention any desired number of these devices may be arranged at different points of the horseshoe, preferably at the heel and toe thereof. In adjusting a device to the shoe the calk is first inserted in the opening and the pin is then passed upwardly into the longitudinal opening of the calk, care being taken that the laterally-projecting lug 16 is in line with the elongated slot 13, in order that no obstruction is offered to the free entrance of the pin. Several hard blows on the end of the pin will be sufficient to drive the same home and to cause its tapering end to spread the slitted portion of the calk outwardly tightly against the edge of the opening of the horseshoe.

In removing the device it is not necessary to remove the calk and pin together, but the end of a removing tool or lever similar to 17 may be passed between the under side of the shoe and the upper broad end 16 of the laterally-extending lug 15. An up pressure upon the outer end of the lever will readily force the pin out of the calk, and the moment the pin is removed the split portion of the calk will contract and allow said calk to be

readily withdrawn from engagement with the tapered opening of the shoe.

What we claim as our invention, and desire to secure by Letters Patent, is—

1. A tubular horseshoe-calk, having a slit or a series of slits extending for a suitable distance in the upper portion thereof, and having a longitudinal slot in the lower portion extending through the calk, said slot being separate from, and independent of, the slit, or one of a series of the slits.

2. The combination, with a tubular expansible calk provided through its lower portion with a longitudinal slot, of an expanding-pin provided medially with a laterally-projecting lug, said lug constituting a shoulder, which projects laterally through the longitudinal slot of the calk, to such an extent, and so located, as, when the pin is within the calk, to be engaged by a removing-tool.

3. The combination with an expansible tubular calk having its bore contracted, and said calk also provided with a longitudinal slot, of an expanding-pin acting against the contracted portion of the bore of the calk, and provided with a laterally-projecting lug adapted to pass through the longitudinal slot.

In testimony whereof we affix our signatures in presence of two witnesses.

BERNARD KOELZER.
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Witnesses:

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