2 Sheets--Sheet 1.

E. D. WITHERS

Improvement in Swages for Horseshoe Calks.

No. 115,405. Patented May 30, 1871.

Fig 1

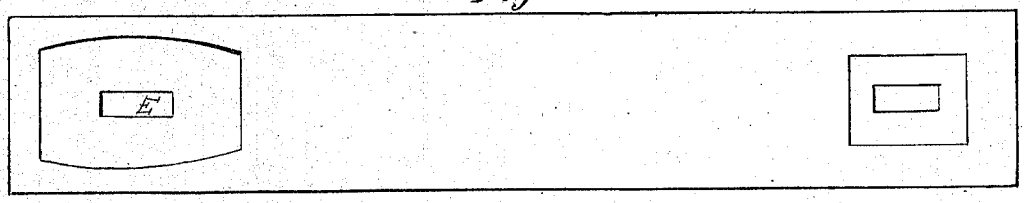


Fig 2

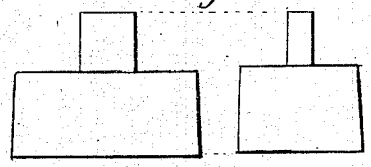


Fig 3

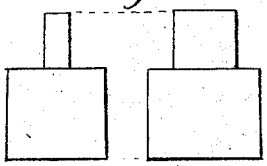


Fig 4

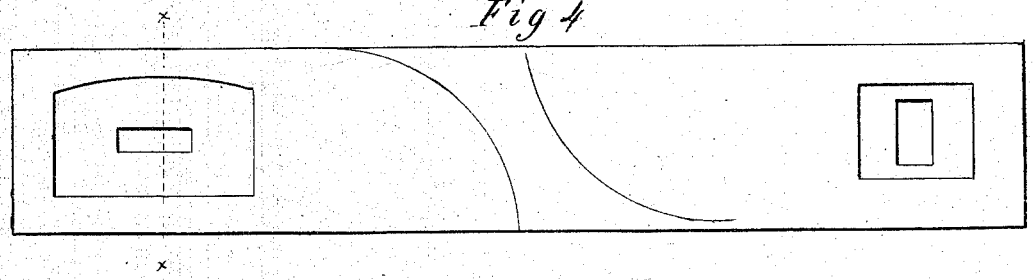


Fig 5

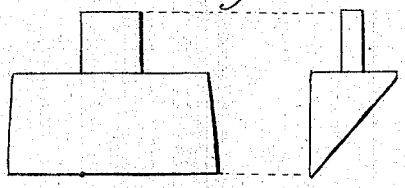


Fig 6

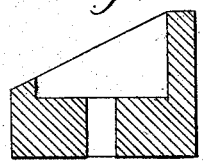
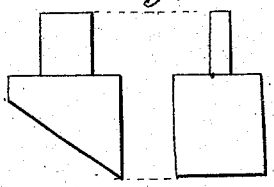


Fig 7



Inventor

Edwin D. Withers.

Daniel Breed Atty

Witnesses.

Wm. H. Seaman

E. D. WITHERS.

Improvement in Swages for Horseshoe Calks.

No. 115,405. Patented May 30, 1871.

Fig 8.

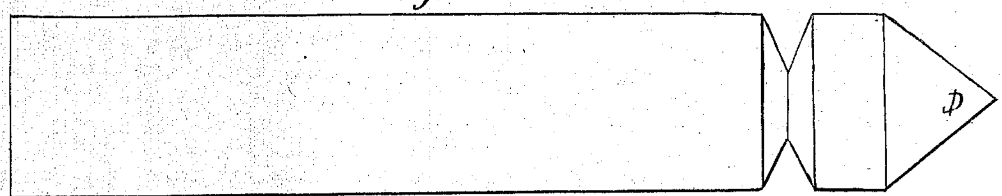


Fig 9.

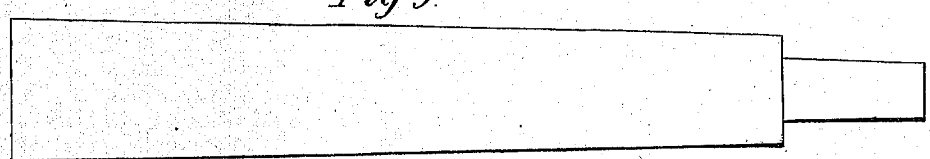
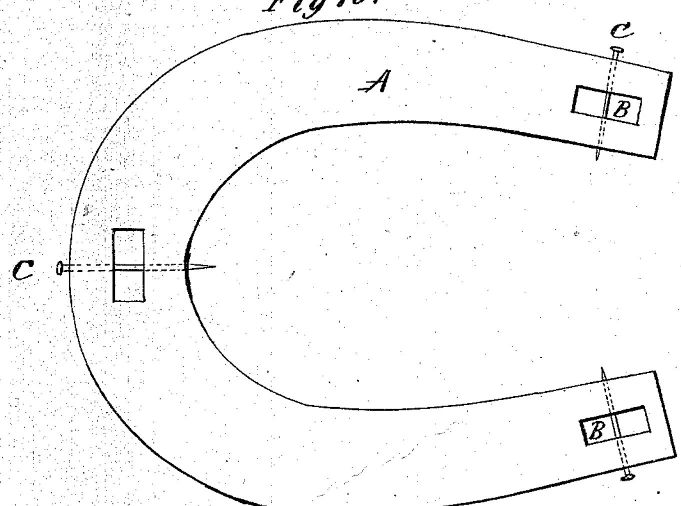


Fig 10.



Witnesses.

Wm H Seaman

[signature]

Inventor

EDWIN D. WITHERS.

Daniel Breed Atty

UNITED STATES PATENT OFFICE.

EDWIN D. WITHERS, OF PARKTON, MARYLAND.

IMPROVEMENT IN SWEDGES FOR HORSESHOE-CALKS.

Specification forming part of Letters Patent No. 115,405, dated May 30, 1871.

To all whom it may concern:

Be it known that I, EDWIN D. WITHERS, of Parkton, Baltimore county, Maryland, have invented a new and useful Improvement in the Manufacture of Horseshoes; and I hereby declare that the following is a full description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon.

My invention consists of certain novel swedges, and the manufacture of horseshoes or the calks thereof by means of such swedges.

In the accompanying drawing, Sheet 1, Figure 1 is a swedge for making summer calks; Figs. 2 and 3 represent the summer calks made therein; Fig. 4 is a swedge for making the winter calks; Figs. 5 and 7 are the winter calks; and Fig. 6 a cross-section thereof.

In Sheet 2, Fig. 8 is a bar of steel with a blank calk cut nearly off from the bar. Fig. 9 is a taper-punch for forming the mortises in the shoe to receive the tenons of the calks. Fig. 10 is the body of the shoe, with mortises to receive the tenons of the calks.

In the manufacture of horseshoes with my improved swedges the main part of the shoe may be made as seen in Fig. 10, Sheet 2, at A. The mortises B are finished by means of the punch, Fig. 9, which is slightly beveled in order to facilitate the removal of the calks, which are to be held in place by the pins C, passing through the shanks or tenons of the calks. In making calks from the bar of steel Fig. 8, the blank is heated, cut completely off, and the point of the blank inserted into the swedge—say, at the left hand, Fig. 1, so that the point of the blanks D will enter the mortise E of the swedge. Then the blank is hammered into the swedge, completely forming both the shank and the main part of the calk. The hole E of the swedges is a little beveled, to give the shank of the calk the slight taper necessary to facilitate its removal from the shoe after being worn. The heel-calk is made in like manner at the right hand of the swedge, Fig. 1. The toe-calks are seen in Fig. 2, and the heel-calk in Fig. 3, both having very broad faces. After these calks have been worn and the faces thereof have become more or less oblique, the toe-calk, Fig. 2, may be turned around so as to bring the original back side in front, and the two heel-calks may be exchanged and thus reversed. When these calks have been a second time worn they may be heated and then inserted in swedge, Fig. 4, and hammered into shape for winter use, as represented in Figs. 5 and 7, and thus worn a third time.

I do not broadly claim swedges for manufacturing removable calks of horseshoes, but confine my invention to the peculiar swedges and manufacture above described.

Having described my invention, I claim—

The above-described swedges, Figs. 1 and 4, Sheet 1, for the manufacture of horseshoes or horseshoe-calks, substantially in the manner and for the purposes set forth.

EDWIN D. WITHERS.

Witnesses:
DANIEL BREED,
WM. H. SEAMAN.