H. Howell,

Calk Sharpener.

No. 113,670. Patented Apr. 11. 1871.

Fig. 1

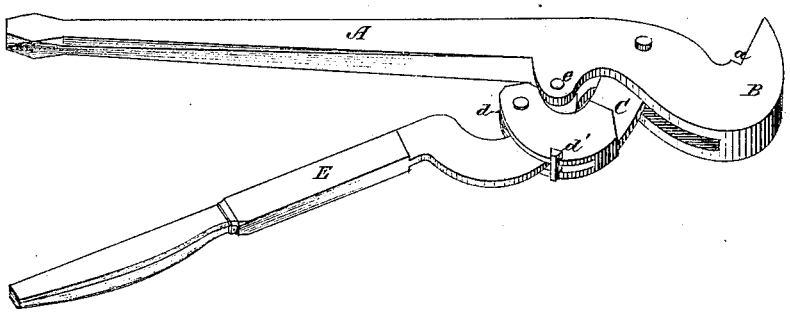
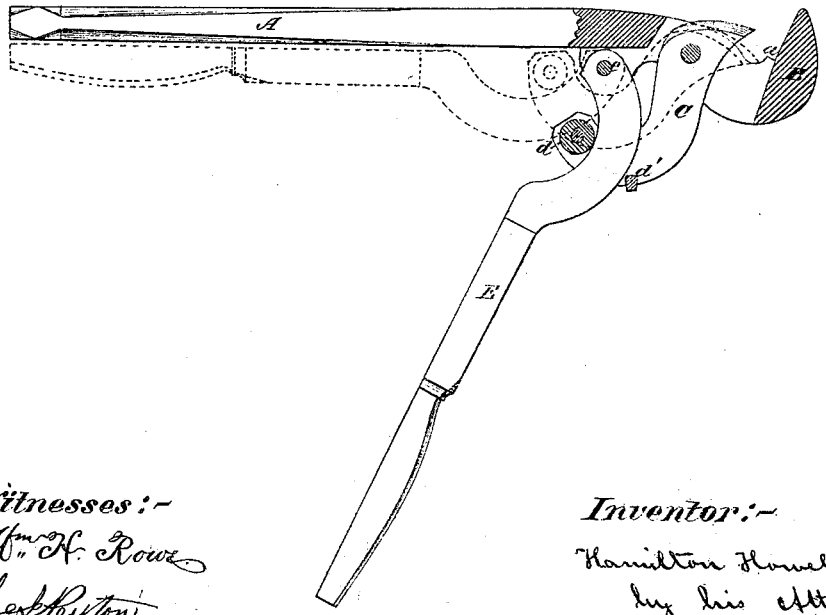


Fig. 2



Witnesses:-

Wm. H. Rowe

Jacob Peyton.

Inventor:-

Hamilton Howell

by his Attys

Wm. W. Baldwin

UNITED STATES PATENT OFFICE.

HAMILTON HOWELL, OF SALEM, OHIO.

IMPROVEMENT IN MACHINES FOR SHARPENING HORSESHOE-CALKS.

Specification forming part of Letters Patent No. **113,670**, dated April 11, 1871.

To all whom it may concern:

Be it known that I, HAMILTON HOWELL, of Salem, in the county of Columbiana and State of Ohio, have invented a new and useful Improvement in Machines for Sharpening Calks while on the feet of the horse, of which implement the following is a specification, reference being had to the accompanying drawing, in which—

Figure 1 is a view in perspective, and Fig. 2 a sectional elevation, of the implement.

My invention relates to that class of instruments by which the side of the calk is cut away so as to give it a beveled edge.

Its object is to obtain an increased leverage as the cut progresses and the resistance increases, and likewise to produce a simple and effective machine; to which ends the improvement consists in combining a fixed jaw to abut against one side of the calk, a movable cutter vibrating on a point in said fixed jaw, and a lever vibrating on a pivot on the handle of the fixed jaw and acting on the movable cutter, as hereinafter more fully set forth.

The handle A has a jaw, B, formed on one end, and is slotted vertically near this jaw. A cutter, C, vibrates on a pivot in the slot of the handle A. The rear end of the cutter-stock is bent backward, and carries a friction-roller, *d*. A lever, E, vibrates on a pivot, *e*, on the handle A. This lever also curves backward, and passes through a slot in the rear end of the cutter, between the friction-roller *d* on one side and a stop, *d'*, on the other.

In operation the fixed jaw is placed against one side of the calk, the bottom of which rests against the ledge *a*. The lever E is then swung up against the handle A, as shown in dotted lines in Fig. 2. As the lever is pressed up its curved part moves over the friction-roller and raises that end of the cutter-stock to which it is attached, thus depressing the cutter into the slot of the handle A and shearing off the side of the calk. As the lever E approaches the handle A the friction-roller approaches the pivot *e* of said lever, the length of which is thus increased, and consequently greater power attained toward the end of the stroke. The lever, when depressed, bears against the stop *d'* and retracts the cutter for another stroke.

I thus secure a simple, compact, and effective implement, operating with but little friction, and with a positive movement both in opening and closing the jaws.

I do not broadly claim, in a calk-cutter, the combination of any two levers for operating the cutting-jaws, that device being old.

I claim as my invention—

The combination of the slotted fixed jaw, the slotted vibrating cutter-stock, its friction-roller and stop, with the curved vibrating lever pivoted to the handle and passing through the slot in the cutter-stock, all these members being constructed and operating as hereinbefore set forth, so that the cutter works with an increase of power from the beginning to the end of its stroke.

In testimony whereof I have hereunto subscribed my name.

HAMILTON HOWELL.

Witnesses:

GRANVILLE L. WATTSON,

R. H. GARRIGUES.