A. W. Payne,

Horseshoe-Calk Sharpener.

No. 23,780. Patented Apr. 26, 1859.

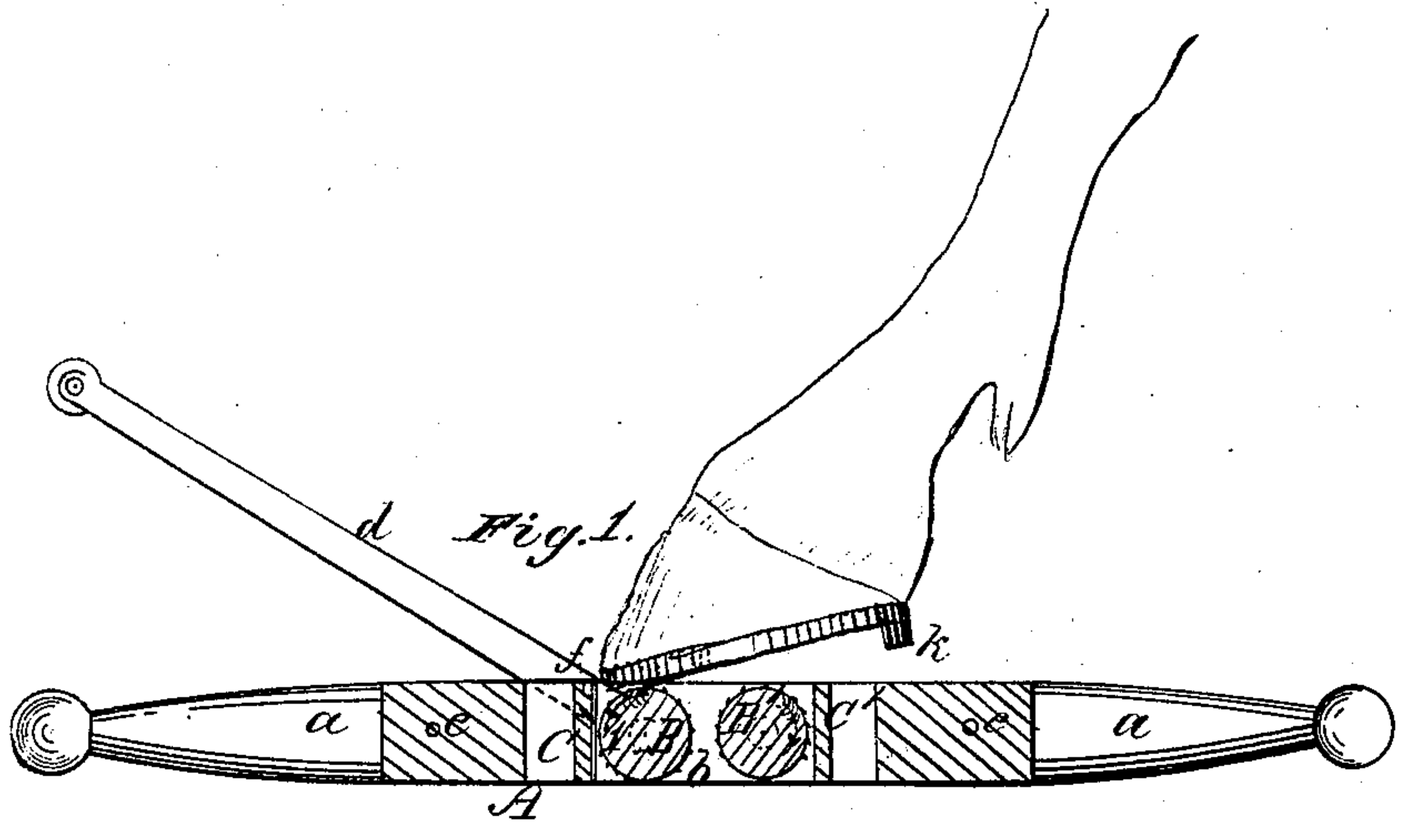

Fig. 1.

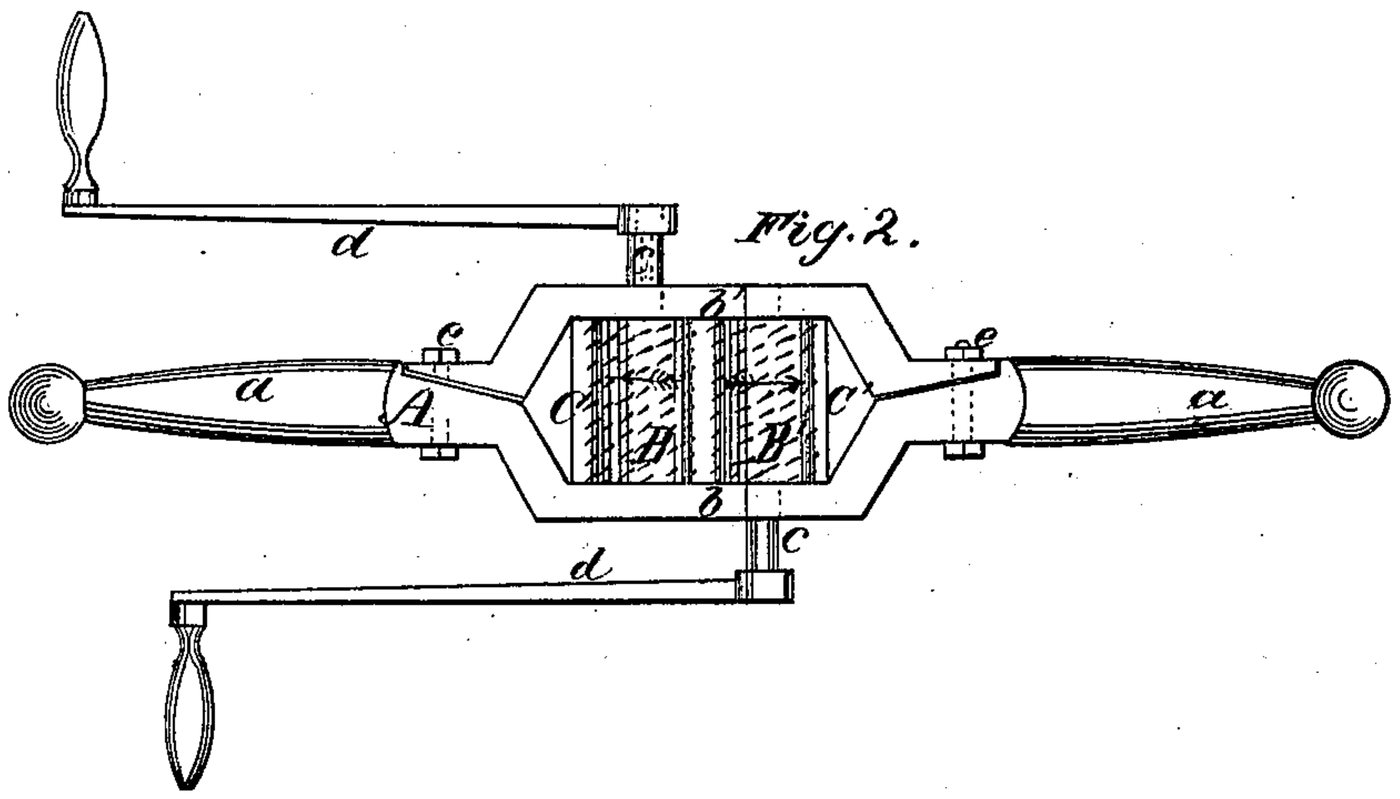

Fig. 2.

Witnesses.

Rufus H. Leonard

Charles A. Bourne

Inventor.

A. W. Payne

UNITED STATES PATENT OFFICE.

A. W. PAYNE, OF MORRIS, NEW YORK.

IMPROVEMENT IN SHARPENING THE CALKS OF HORSESHOES.

Specification forming part of Letters Patent No. **23,780**, dated April 26, 1859.

To all whom it may concern:

Be it known that I, A. W. PAYNE, of Morris, in the county of Otsego and State of New York, have invented a new and useful Improvement or Device for Sharpening the Calks of Horseshoes when the Same are Attached to the Horses' Feet; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a longitudinal central section of my invention. Fig. 2 is a plan or top view of the same.

Similar letters of reference indicate corresponding parts in the two figures.

The object of this invention is to obtain an implement whereby the calks of horseshoes may be sharpened without detaching the shoes from the feet of the horse.

The invention is designed for country use, and in those cases where the calks are not tempered or hardened, as is necessary in paved cities, in order to prevent the quick wearing of the shoes.

The invention consists in placing within a suitable stock or frame a rotary steel burr or cutter, one or more, and a bearing plate or plates, arranged as hereinafter fully shown and described, whereby the desired work may be done with facility and in proper manner.

To enable those skilled in the art to fully understand, construct, and use my invention, I will proceed to describe its construction and the way in which it is used.

A represents a stock or frame, which is constructed of metal and formed with two handles, *a a*, one at each end, and a central portion having parallel sides *b b'*, in which the axes *c c* of steel cylinders B B' are fitted and allowed to rotate freely. The cylinders B B have their peripheries cut, as shown in Fig. 2, to form burrs or cutters. These cylinders are properly tempered or hardened, and their axes *c c* project, one through the side *b* and the other through the side *b'*, and each has a crank, *d*, attached. The cylinders extend the whole width of the space between the sides *b b'*, and by the side of each cylinder or cutter B plates C C' are placed. These plates are firmly secured in the stock or frame, and their edges are "flush" with the upper and lower surfaces of the sides *b b'*, as shown clearly in Fig. 1. The side *b'* of the central part of the stock or frame is secured to the stock by bolts *e*, so that it may be detached at pleasure and the cutters removed for the purpose of being sharpened or replaced by new ones, if necessary. This will be understood by referring to Fig. 2.

The implement is used as follows: The horse's feet are raised one at a time, and the front calk, *f*, of the shoe placed between the plate C and the burr or cutter B, the latter by means of its crank *d* being turned in the direction indicated by the arrow 1, and cutting the inner side of the front calk, *f*, and sharpening the same. When this calk is finished, the foot is raised and one of the back calks, *k*, of the shoe is placed between the burr or cutter B' and the plate C', and the inner side of said calk is cut by the rotation of cutter B'. The other back calk is operated on in a similar manner. The plates C C', it will be seen, serve as bearings for the calks while they are being operated on.

By employing two cutters B B', with bearing-plates C C', both the front and the back calks of a shoe may be sharpened without turning the implement, and the work is thereby considerably facilitated. One cutter, however, may be used with advantage, a tool with one cutter being far preferable to the old mode of detaching the shoe in order to sharpen the calks.

In paved cities the within-described invention could not be used, as the calks are hardened to prevent wear, and consequently cannot be acted upon by the cutters. For country use the calks are not hardened. They are constructed of steel, and are more durable than the hardened calks on account of not being liable to break, and, unhardened or untempered, will well resist wear on unpaved roads.

My invention may be used by any person of ordinary ability, and will save a vast deal of expense, as at present the shoes require to be detached from the horse's feet in order to have the calks sharpened.

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

The rotary burrs or cutters B B', one or more, in connection with the bearing plate or plates C C', placed within a suitable frame or stock, A, and arranged substantially as and for the purpose set forth.

A. W. PAYNE.

Witnesses:

A. BISSELL LEONARD,

CHARLES A. BONNE.