

(No Model.)

J. EEN.

DEVICE FOR SHARPENING PLOW POINTS.

No. 412,486.

Patented Oct. 8, 1889.

Fig. 1.

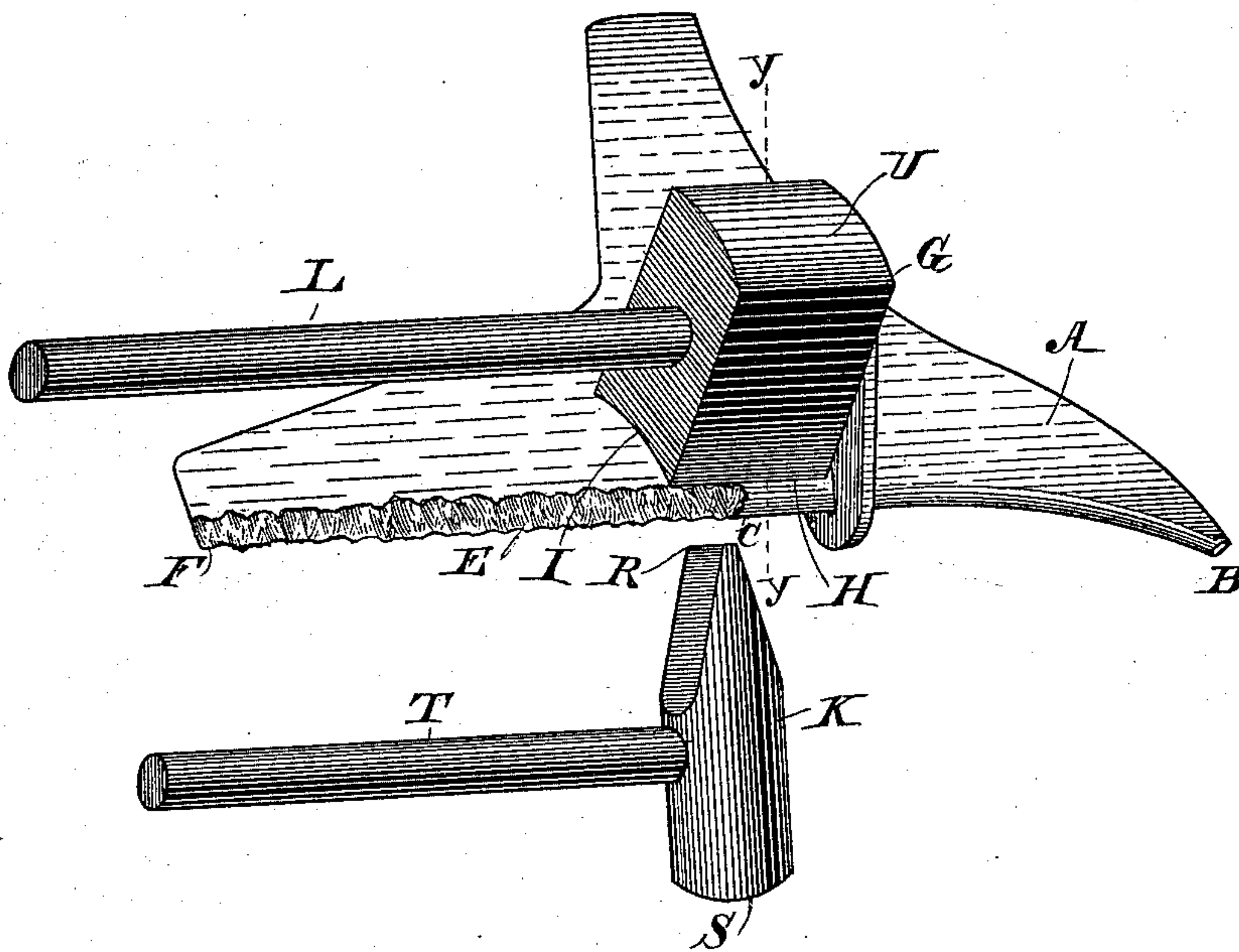


Fig. 2.

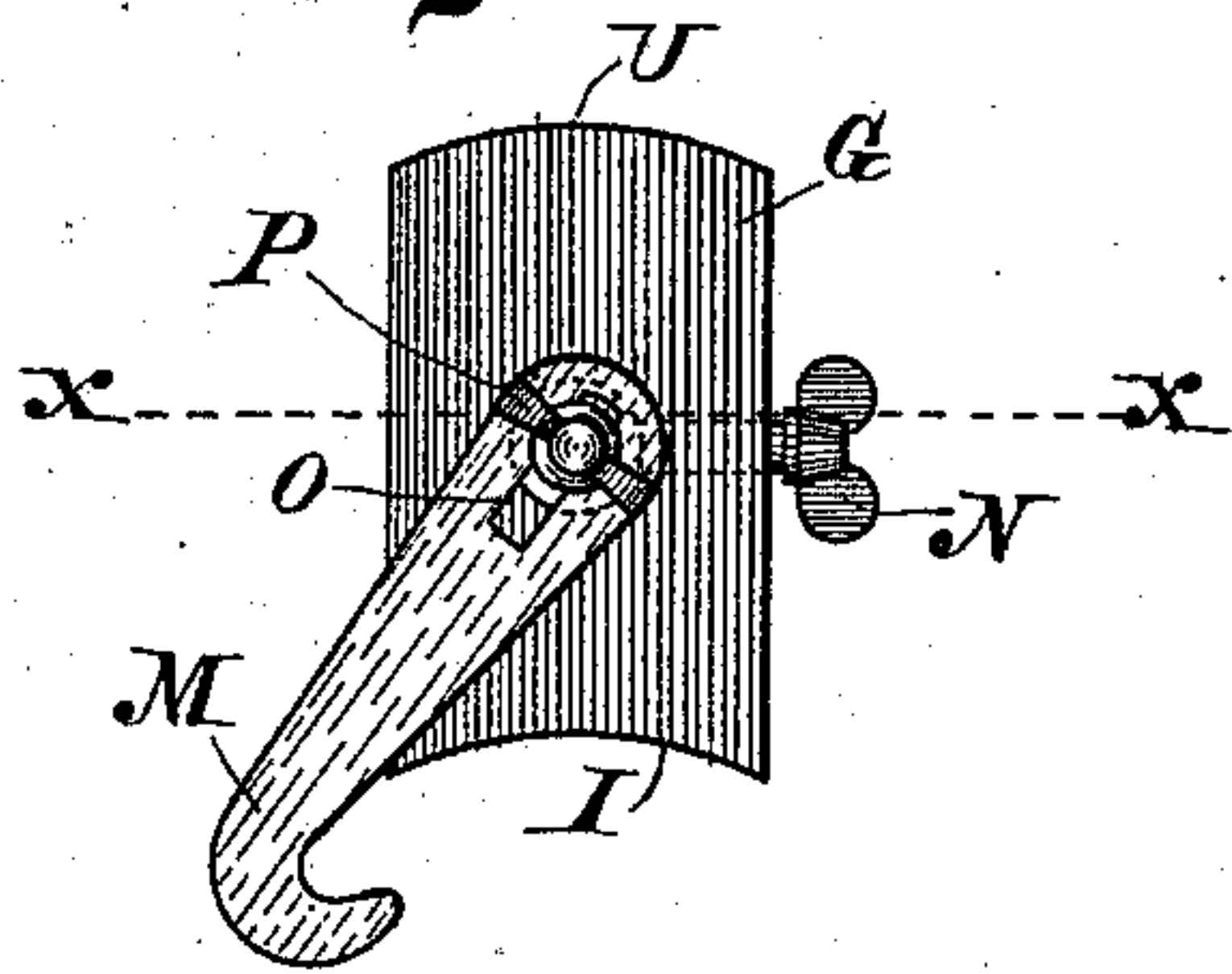


Fig. 4.

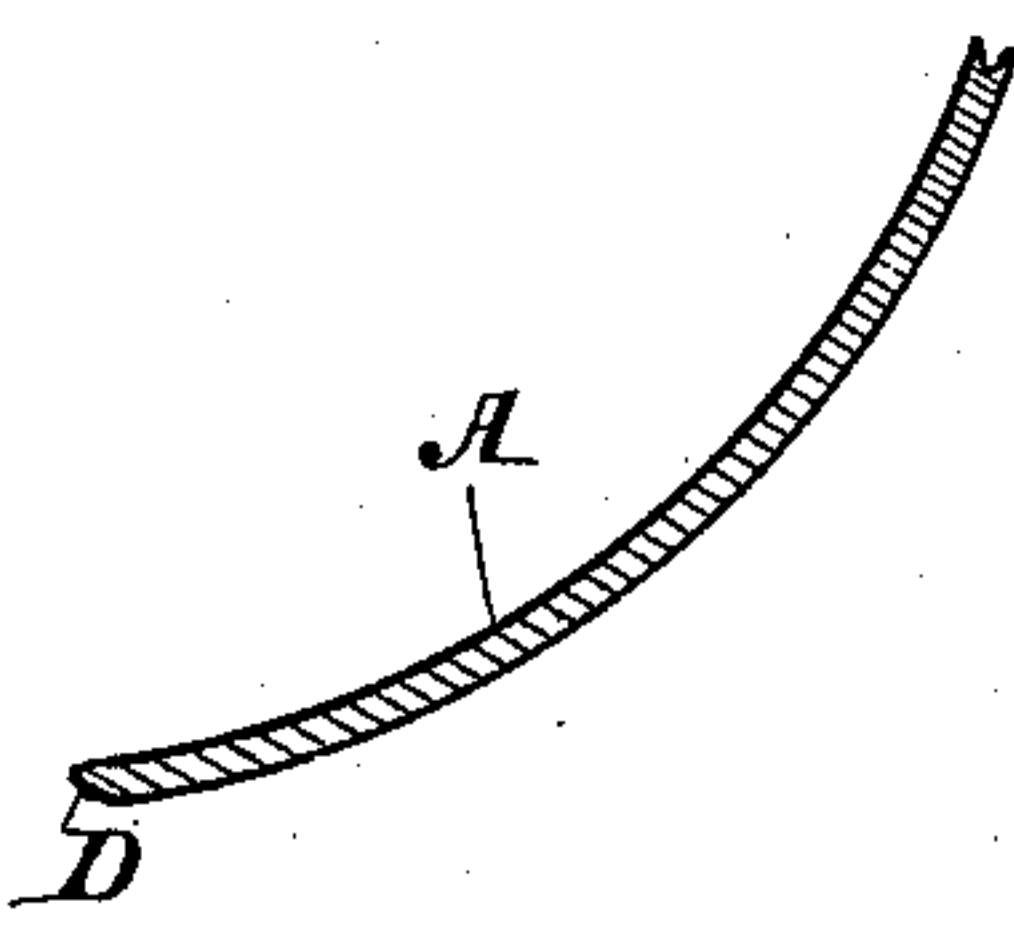


Fig. 5.

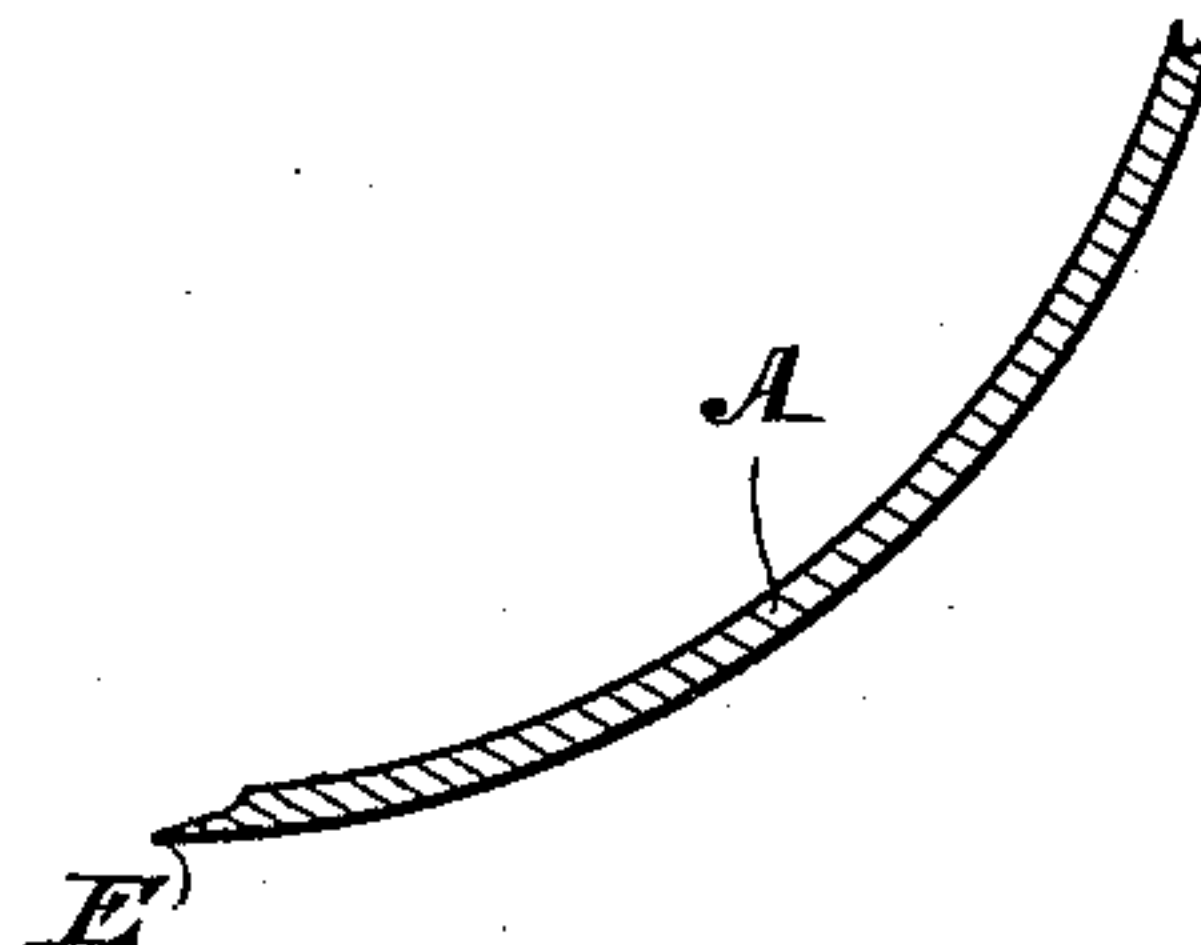
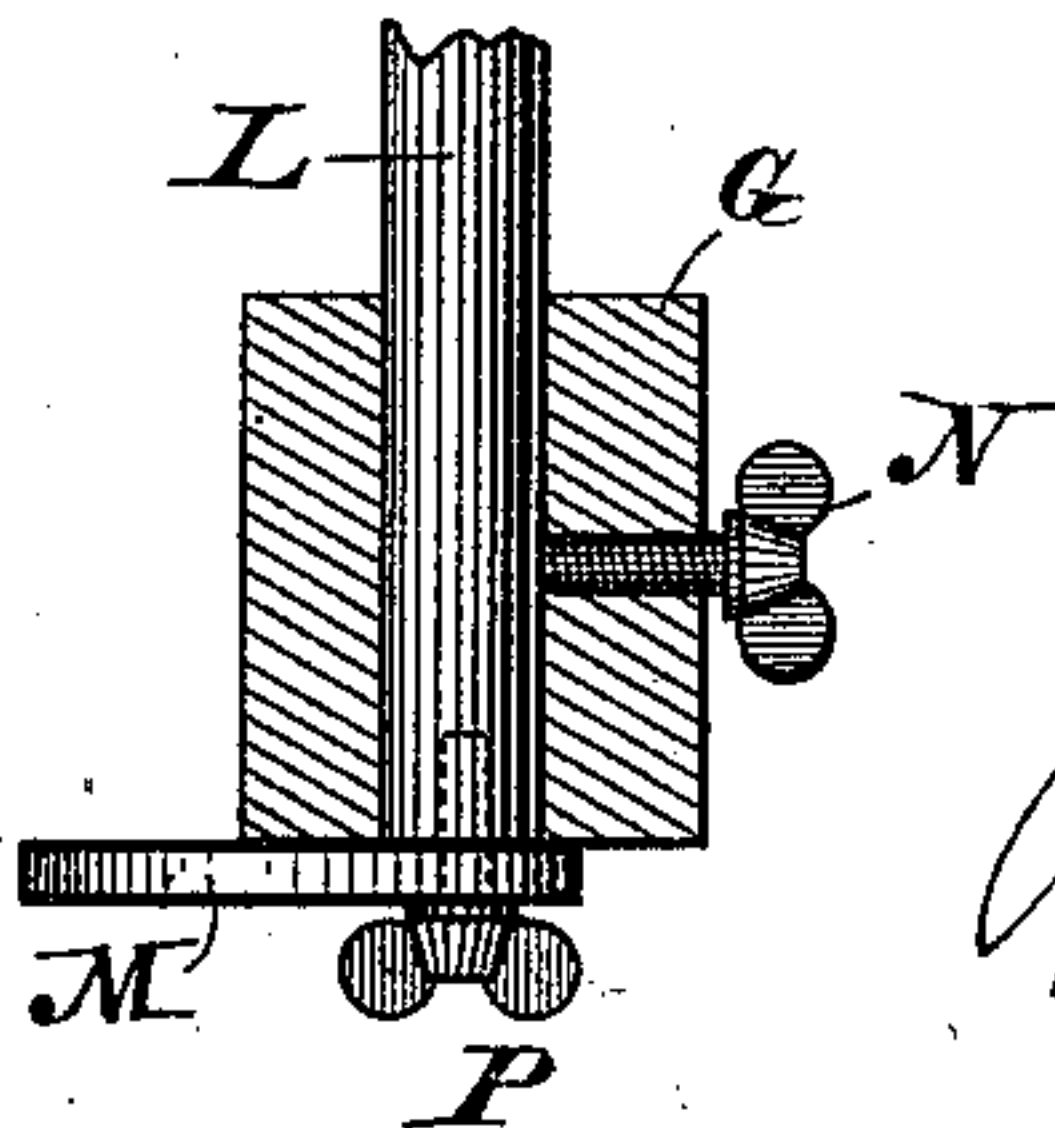


Fig. 3.



Witnesses.

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# UNITED STATES PATENT OFFICE.

JOHN EEN, OF AMHERST, WISCONSIN.

## DEVICE FOR SHARPENING PLOW-POINTS.

SPECIFICATION forming part of Letters Patent No. 412,486, dated October 8, 1889.

Application filed February 11, 1889. Serial No. 299,427. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN EEN, of Amherst, in the county of Portage and State of Wisconsin, have invented a new and useful Process and Device for Sharpening Plow-Points; and I do hereby declare the following to be a full, clear, and exact description of said invention, reference being had to the accompanying drawings, and to the letters or figures of reference marked thereon, which form a part of this specification.

When the plow is used for a considerable time, especially in soil having considerable sand or grit in it, the point becomes very dull or rounded at its lower edge, and usually it wears off on the underside, whereby it becomes so shaped as to direct or throw the plow out of the ground, and it becomes necessary to sharpen the point or so change the form of the edge as to make it sharp and cause it to direct the plow downward or make the thrust into the ground rather than out of the ground. To thus sharpen a plow-point requires taking the point to a blacksmith-shop unless the farmer is provided with some implements or means for sharpening it himself, and to enable a farmer to do this readily and satisfactorily is the object of my newly-invented process and device.

In the drawings, Figure 1 is a plow-point which has become dulled or rounded at its lower edge by use and in which is shown a part of the edge as sharpened by my process and device in connection with the complete device for that purpose. Fig. 2 is a front view of the block or anvil and hook. Fig. 3 is a transverse longitudinal section of the anvil on line X X of Fig. 2. Fig. 4 is a transverse section of a part of the plow-point on line Y Y of Fig. 1, showing the lower edge as rounded by use. Fig. 5 is a transverse section of a plow-point, showing the lower edge as sharpened by my process and device.

The same letters refer to like parts in all the views.

The plow-point A, as shown in Fig. 1, has its lower edge from B to C shown as dulled or rounded as the result of use on the plow. A cross-section of this rounded edge is seen in Fig. 4. The result of the wear on the edge of the point by use is to cut it away mostly on the lower corner, as seen at D in Fig. 4, and

the point when so worn tends to throw the plow out of the ground as it is drawn forward, and also this dulled or rounded edge is very hard to pull through the ground, especially through sod, as its edge has not sufficient cutting capability. To overcome this the edge should be sharpened and made to incline downward or to cut at its lower corner, giving it the form seen at E from C to F of Fig. 1. To do this I provide a steel block or anvil G, having a straight edge H and a slightly-concave face I, which I place on the upper outer surface of the point A, so that its straight edge H will be back about a half inch from the lower edge B C and parallel therewith, and then with a hammer K, I strike a light but quick blow against the upper rounded edge of the point at an angle thereto and in front of the straight edge H of the anvil, and thereby chip off a small piece of the upper corner of this edge B C, and by repeated chipping in this way I reduce the edge to the sharp form shown at E. To accomplish this successfully the anvil G is provided with a handle L, which is fitted into the anvil G, so as to be revoluble therein, and at the front end of the anvil a hook M is rigidly affixed to the handle L, which hook can thereby be readily controlled and held in position by grasping the handle or rotated in the anvil, as desired. The shank of this hook extends beyond the lower straight edge H of the anvil, and is adapted to clasp upon and engage with the edge of the plow-point A when the anvil is placed thereon, and hold it in proper position relative thereto, as shown in Fig. 1. A thumb-screw N turns through the side of the anvil G against the handle L, whereby the handle and anvil can be made rigid with reference to each other, and whereby by loosening it the handle and hook can be adjusted by rotation in relation to the anvil. The shank of the hook M is provided with a slot O, through which a thumb-screw P passes, and turns into the handle L, whereby the radial length of the hook can be adjusted to adapt it for use in connection with plow-points of different thicknesses and with reference to placing the anvil in different positions thereon. The hammer-head K has a long and narrow but flat face R at one end, and has a larger flat face S at the other end, and is provided with a handle T. The



narrow flat face R is especially adapted for the chipping process hereinbefore mentioned in connection with the anvil. The chipping process is especially adapted for use in connection with plow-points that are made of chilled cast-iron, which is the material and method of manufacturing most plow-points at the present time. There are, however, some plow-points made of steel, which may be sharpened by beating or pounding the edge, whereby it is made thinner and sharper, and to adapt this anvil for this purpose the anvil is also provided with a slightly-convex face U, which is adapted to be placed against the plow-point on the lower side, and the anvil can then be held firmly against the edge by reversing the hook to that side of the anvil, and the point can then be beaten by striking it on its upper edge with the larger face S of the hammer, so that the anvil and hammer are thereby adapted for sharpening steel points by beating, which process has been done heretofore, but for which no such convenient and simple device has been provided as my anvil with its rotating handle and hook.

What I claim as new, and desire to secure by Letters Patent, is—

1. A device for sharpening plow-points, consisting of a metal anvil having a straight edge, a handle, and a hook rigid to the handle, the handle being so fitted into the anvil as to be revoluble therein, substantially as described.

2. An anvil for sharpening plow-points, constructed of metal and having a straight edge

H, a concave face I, a revoluble handle L, and a hook M, the hook being rigid to the handle, and the handle being capable of adjustment in the anvil by means of a thumb-screw N, substantially as described.

3. An anvil for sharpening plow-points, having a concave face I and a convex face U, in combination with a revoluble handle, and hook M rigid thereto, substantially as described.

4. In a device for sharpening plow-points, a metal anvil having a face or faces adapted to bear against the side of a plow-point, and a hook secured adjustably to a handle revoluble in the anvil, the hook being provided with a slot and secured to the handle by means of a thumb-screw passing through the slot and turning into the handle, whereby the hook is made adjustable, substantially as described.

5. A device for sharpening plow-points, consisting of an anvil having a straight edge H, a concave face I, and a hook M, rigid on a handle revoluble in the anvil, in combination with a hammer having a narrow flat face R and a large flat face S, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN EEN.

Witnesses:

G. E. DUSENBURY,  
A. J. SMITH.