

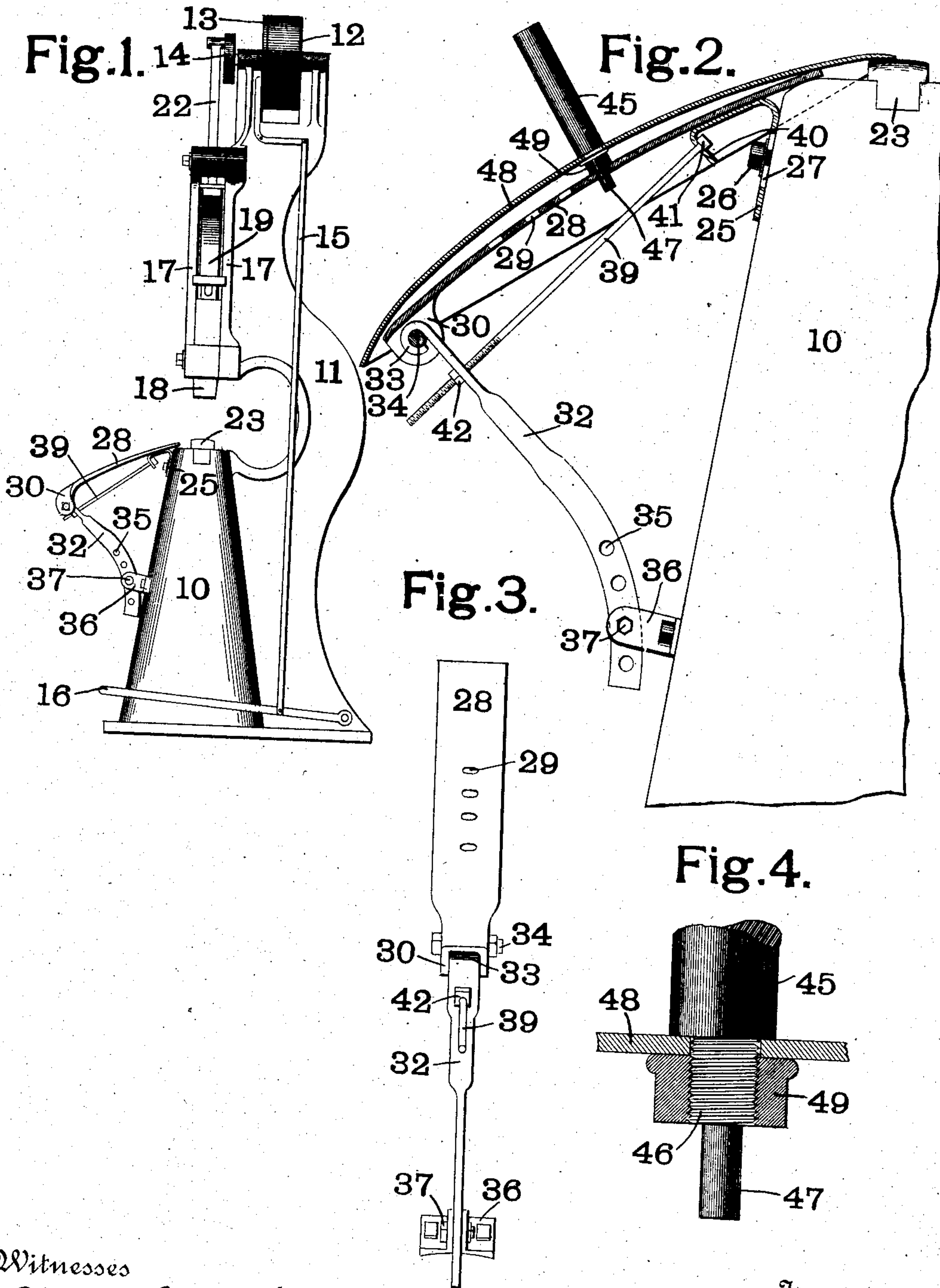
No. 833,969.

PATENTED OCT. 23, 1906.

H. C. LOWER.

WORK HOLDER FOR POWER HAMMERS.

APPLICATION FILED MAY 16, 1904.



Witnesses

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UNITED STATES PATENT OFFICE.

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WORK-HOLDER FOR POWER-HAMMERS.

No. 833,969.

Specification of Letters Patent.

Patented Oct. 23, 1906.

Application filed May 16, 1904. Serial No. 208,083.

To all whom it may concern:

Be it known that I, HENRY C. LOWER, a citizen of the United States, residing at the town of Abilene, in the county of Dickinson, in the State of Kansas, have invented a certain new and useful Work-Holder for Power-Hammers, of which the following is such a full, clear, and exact description as will enable any one skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, forming part of this specification.

My invention relates more particularly to means for holding disks for plows and harrows in position to be sharpened by means of a trip-hammer or other power-driven hammers, and has for its object to provide a simple and inexpensive means for sharpening harrow-disks and similar articles without wasting any of the metal of which the article is composed.

In the accompanying drawings, in which like characters of reference refer to similar parts of the different views, Figure 1 is a side elevation of a hammer to which a work-holder embodying one form of my invention is attached. Fig. 2 is an enlarged detail view of the work-holder and means of attaching the same to the base of the hammer, showing also a harrow-disk in position on the holder. Fig. 3 is an enlarged front elevation of the work-holder, and Fig. 4 is a partly-sectional view of a portion of the disk-handle.

Referring first to Fig. 1, 10 is the conical base of the hammer which may be a trip-hammer or a hammer of other suitable form. 11 is an upward extension in the upper end of which a belt-pulley 12, controlled by a friction-clutch 13 of any suitable form, is journaled. The shaft of the belt-pulley also carries a crank 14. 15 is a rod connected with the friction-clutch 13 and operated by a foot-lever 16 to control the action of said clutch. 17 represents the guides in which the head 18 of the hammer reciprocates. 19 is a spring interposed between said hammer and a connecting-rod 22. One end of this rod is connected with the spring 19 and the other end with the crank 14. 23 is the anvil. All of these parts are of usual and well-known construction and are therefore not more particularly described herein. They may be widely varied in form, and the particular construc-

tion above described may be changed without departing from my invention. 25 is a guide secured to the base 10 of the hammer by means of a bolt 26. This bolt passes through a slot 27 in the guide, by means of which the position of the guide 25 may be adjusted vertically. 28 is a slightly-bent strip of metal provided with a number of perforations 29 and resting at its inner end upon the guide 25. The outer end of this member 28 is provided with downwardly-projecting lugs 30. 32 is a link provided at its upper end with an eye 33, surrounding a bolt 34, carried in the lugs 30. The lower end of this link 32 is provided with a number of perforations 35. 36 indicates lugs bolted to the base 10 and provided with a bolt 37, passing through one of the perforations 35. 39 is a screw-threaded rod passing through a perforation in the downward projection 40 to the guide 25, to which it is secured by means of a head 41. The outer end of the screw-threaded rod 39 passes through a perforation in the link 32 and is provided with a nut 42 for purposes of adjustment.

Referring now to Figs. 2 and 4, 45 is a cylindrical metal handle provided with a reduced screw-threaded portion 46 and a portion 47 still further reduced. The screw-threaded portion 46 of this end is passed through the perforation in the center of an ordinary harrow-disk 48, and the handle 45 is then secured to the disk by means of a nut 49. The reduced portion 47 is then inserted into one of the perforations 29 of the member 28, so that the concave face of the harrow-disk will lie next the member 28, and the edge of the disk will project over and rest upon the anvil 23 in position to be operated upon by the head 18 of the hammer.

In the operation of my invention it will be evident that by placing the bolt 37 in the proper one of the perforations 35 in the lower end of the link 32 the inclination of the member 28 may be varied to secure a proper position upon the anvil for the edges of disks of various curvatures and that by inserting the handle 45 in the proper perforation 29 disks of various diameters may be properly positioned upon the anvil. It is also evident that by means of a nut 42 on the rod 39 the outward movement of the link 32 may be limited as desired. By rotating the handle

45 all points of the edge of the disk to be sharpened may be brought in turn upon the working face of the anvil and subjected to the operation of the hammer. By means of
 5 this handle 45 the disk may also be manipulated so that a greater or less amount of its edge shall be subjected to the hammering operation. It will thus be seen that my device is capable of sharpening disks of any size or
 10 curvature.

Having fully described my invention, what I claim as new, and desire to secure by Letters Patent of the United States, is—

1. In a disk-sharpening device, the combination with an anvil having a curved face, a work-holder for the anvil loosely supported at its inner end to move toward and from the face of the anvil, means for adjustably supporting the outer end of the holder from the
 20 anvil, and means for rotatably supporting a disk upon the upper side of the holder between its ends.

2. In a disk-sharpening device, the combination with an anvil, an inclined work-holder
 25 adjustably supported at its outer end from the anvil, with its inner end resting loosely on the anvil-face, and means for rotatably supporting a disk upon the upper side of the holder between its ends.

3. In a disk-sharpening device, the combination with an anvil, of an arm pivotally mounted thereon, a work-support attached at one end to said arm and slidingly supported adjacent to the anvil at the other, and
 35 means for rotatably mounting a disk on said work-holder.

4. In a disk-sharpening device, the combination with an anvil, of an arm pivotally mounted thereon and longitudinally adjustable, a work-support pivoted at one end to said arm and slidingly mounted adjacent to the anvil at the other, and means for rotatably mounting a disk on said work-holder.

5. In a disk-sharpening device, the combination with an anvil, of an arm pivotally mounted thereon, a work-support attached at one end to said arm, a guide carried by said anvil and slidingly supporting the other end of said work-support, and means for rotatably mounting a disk on said work-support.
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6. In a disk-sharpening device, the combination with an anvil, of an arm pivotally mounted thereon, a work-support attached at one end to said arm and slidingly supported adjacent to the anvil at the other, means for rotatably mounting a disk on said work-support, and means for limiting the movement of said work-holder from said anvil.

7. In a disk-sharpening device, the combination with an anvil, of an arm pivotally mounted thereon, a work-support attached at one end to said arm and slidingly supported adjacent to the anvil at the other, means
 55 for rotatably mounting a disk on said work-holder, and means for limiting the movement of said work-holder from said anvil.

8. The combination with an anvil-block, of two brackets secured to said block one above the other, an arm having its lower end
 70 portion pivoted to the lower bracket, a second arm pivoted to the upper end of the first said arm, and adjustably connected with the said upper bracket, and a pin for supporting the disks carried by the last said arm.

9. The combination with an anvil-block, of two brackets secured to said block one above the other, an arm provided with a series of holes in its lower end portion, a pivot-pin connecting the said arm with the lower
 75 bracket, a second arm pivoted to the upper end of the first said arm and adjustably connected with the said upper bracket, and a pin for supporting the disks carried by the last said arm.

10. The combination with an anvil-block, of two brackets secured to said block one above the other, an arm having its lower end portion pivoted to the lower bracket, a second arm pivoted to the upper end portion of
 80 the first said arm and provided with a series of holes and adjustably connected with the other said bracket, and a pin for supporting the disks journaled in any one of said series of holes.

In testimony whereof I have hereunto set my hand and affixed my seal in the presence of the two subscribing witnesses.

HENRY C. LOWER. [L. S.]

Witnesses:

W. H. TEETERS,
 C. E. RUGH.