No. 689,777. Patented Dec. 24, 1901.

W. H. BARNABY.

DISK SHARPENER.

(Application filed June 13, 1901.)

(No Model.)

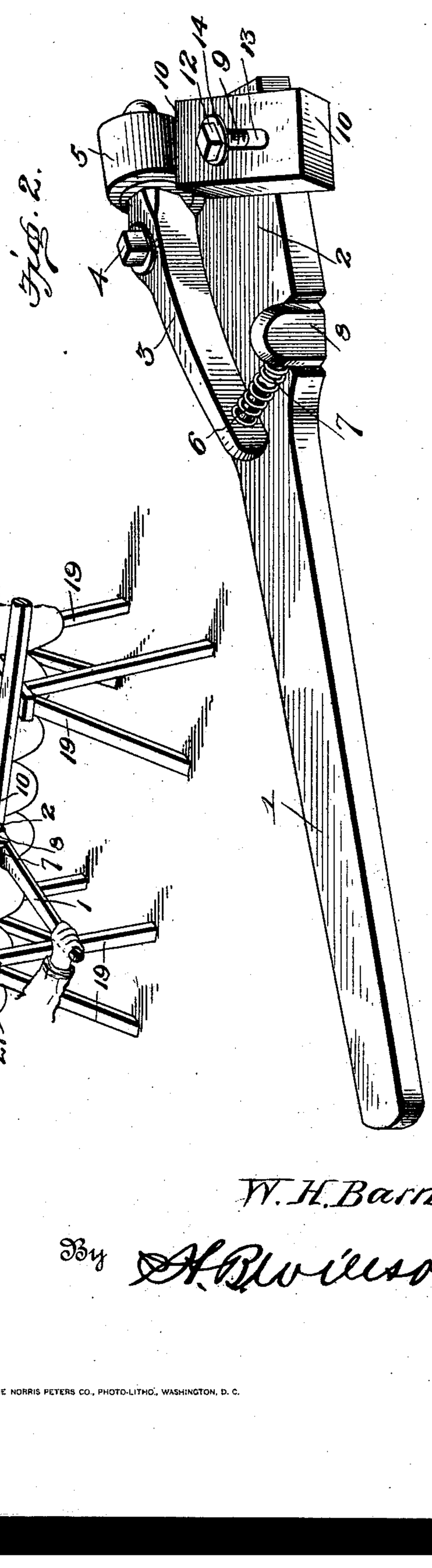

Fig. 2.

Fig. 1.

Witnesses

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UNITED STATES PATENT OFFICE.

WILLIAM H. BARNABY, OF BASCO, ILLINOIS.

DISK-SHARPENER.

SPECIFICATION forming part of Letters Patent No. 689,777, dated December 24, 1901.

Application filed June 13, 1901. Serial No. 64,483. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. BARNABY, a citizen of the United States, residing at Basco, in the county of Hancock and State of Illinois, have invented certain new and useful Improvements in Disk-Sharpeners; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to a tool for sharpening cultivator-disks.

The object of the invention is to provide a device of this character which shall be simple and cheap of construction and efficient in use and adapted for sharpening both right and left disks.

To this end the invention consists of certain novel features of construction, combination, and arrangement of parts, as will be hereinafter more fully described, and particularly pointed out in the appended claim.

In the accompanying drawings, Figure 1 is a perspective view showing the mode of use of the invention, and Fig. 2 is a similar view of the tool.

Referring now more particularly to the drawings, the numeral 1 designates the handle of the tool, which is widened at one end 2 to serve as a bearing and support for the sharpening means. Upon this widened or large end of the handle is mounted a lever 3, which turns loosely on a pivot pin or bolt 4, suitably connected to the part 2. The lever 3 is arranged upon one side of the center of the upper surface of the enlarged portion 2 of the handle and carries at its outer end a roller 5 to bear upon one side of the disk which is being sharpened. To the inner face of the rear end of the lever is connected a guide-pin 6, which serves as a guide and holder for one end of a coil-spring 7, which is secured at its opposite end to a block or support 8, mounted upon the portion 2 of the handle at the side opposite that upon which the said lever is pivoted.

A cutting bit or block 9 is located upon the part 2 of the handle opposite the roller 5 and is provided with two cutting edges 10, either of which may be used at will by simply reversing the position of the bit. The said bit is adjustably connected to the handle by means of a set-screw 12, projecting through a slot 13 therein and through a threaded orifice (not shown) in the handle, a disk or washer 14 being connected with the head of said screw or interposed between the same and the bit to institute a secure binding action on the latter when the screw is adjusted to hold said bit firmly in its adjusted position. By means of the screw 12 and slot 13 the bit may be moved toward and from the roller 5 to compensate for the different thicknesses of the edges of the disks inserted between them to be sharpened.

In the practical operation of the invention the bars or supports 15 of the cultivator, which carry the disks 16 on their shaft 17, are removed, together with said disks and shaft and the bearings 18 of said shaft, and supported upon trestles 19, the bearings 18 resting upon said trestles, so as to allow the shaft 17 freedom to revolve. A crank-handle 20 is then applied to one end of said shaft, so that the shaft and disks may be turned while the latter are being sharpened. A plank or support 21 of any suitable type is then extended between the trestles and rested thereon upon one side or the other of the disks, accordingly as said disks are of the right or left hand type, and the tool rested upon said support, as shown in Fig. 1. The crank-handle 20 is then turned to revolve the shafts and disks and the tool placed in position so that the edge of the disk operated upon moves between the roller 5 and cutting-bit 9. As the disk revolves the lever 3, through the instrumentality of the spring 7, will force the roller 5 into contact with one side of the disk, causing said roller to press the opposite side of the disk against the adjacent cutting edge of the bit 9, whereupon said cutting edge will reduce the thickness of the metal at the edge of the disk until the edge of the disk is of the desired sharpness. By simply reversing the position of the support 21 and the tool from one side to the other of the disks being acted upon right or left hand disks may be sharpened at will.

From the foregoing description, taken in connection with the accompanying drawings, the construction, mode of operation, and ad-

vantages of the invention will be readily understood without a further extended description.

Changes in the form, proportion, and minor details of construction may be made within the scope of the invention without departing from the spirit or sacrificing any of the advantages thereof.

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

A tool for sharpening cultivator-disks, comprising a handle, a reversible bit mounted upon the handle and extending transversely thereof and formed with a longitudinal slot, a set-screw projecting through said slot and adapted for adjustably clamping the bit to the handle in either of its operative positions, a lever pivoted to the handle opposite the bit and carrying at one end a roller adapted to bear against the opposite side of the edge of the disk from said bit, a bearing or support upon the handle in rear of the bit, and a spring interposed between said support and the opposite end of the lever and exerting pressure upon said lever to force the roller toward said cutting-bit, substantially as described.

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

WILLIAM H. BARNABY.

Witnesses:
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A. D. MARKILLIE.