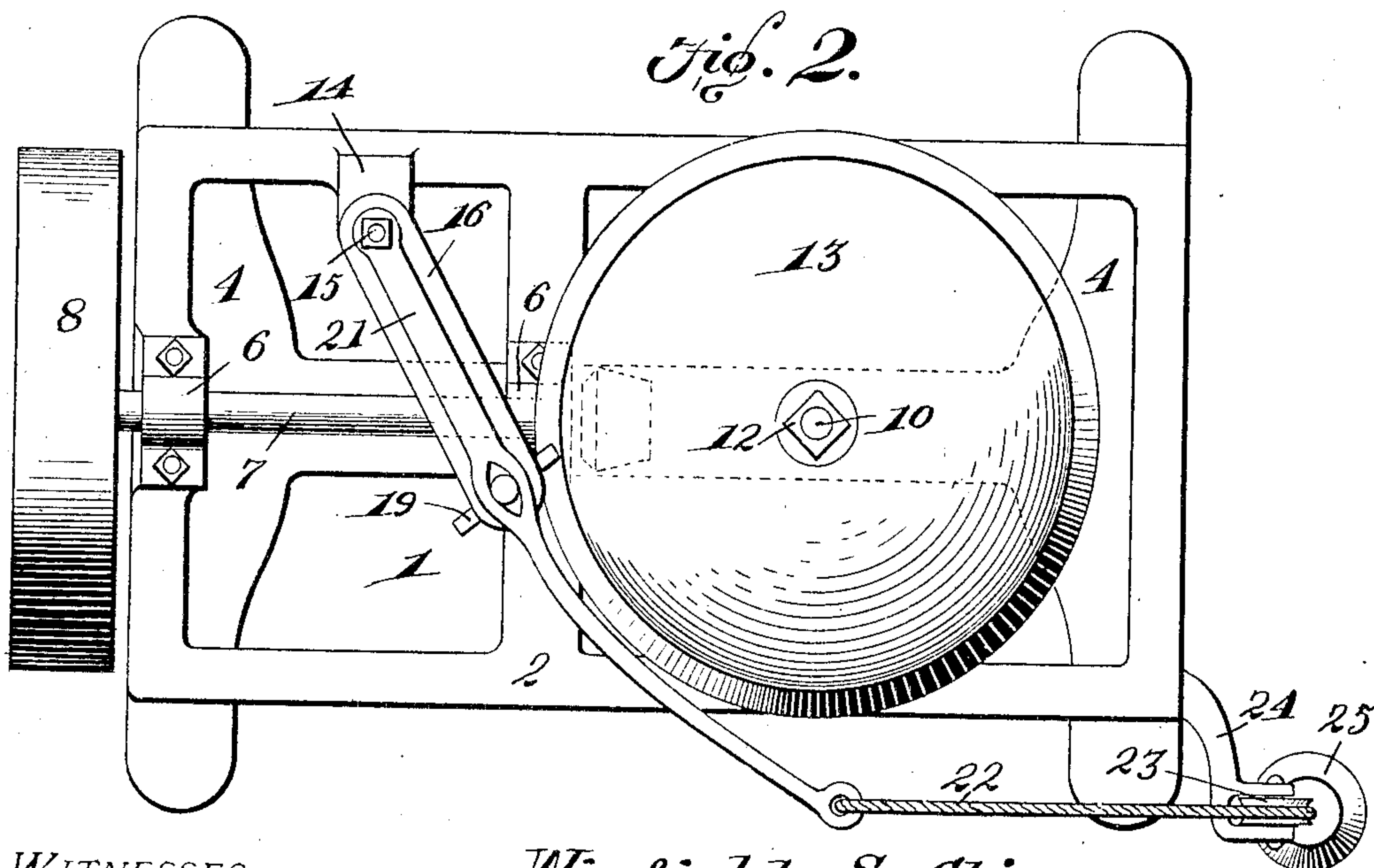
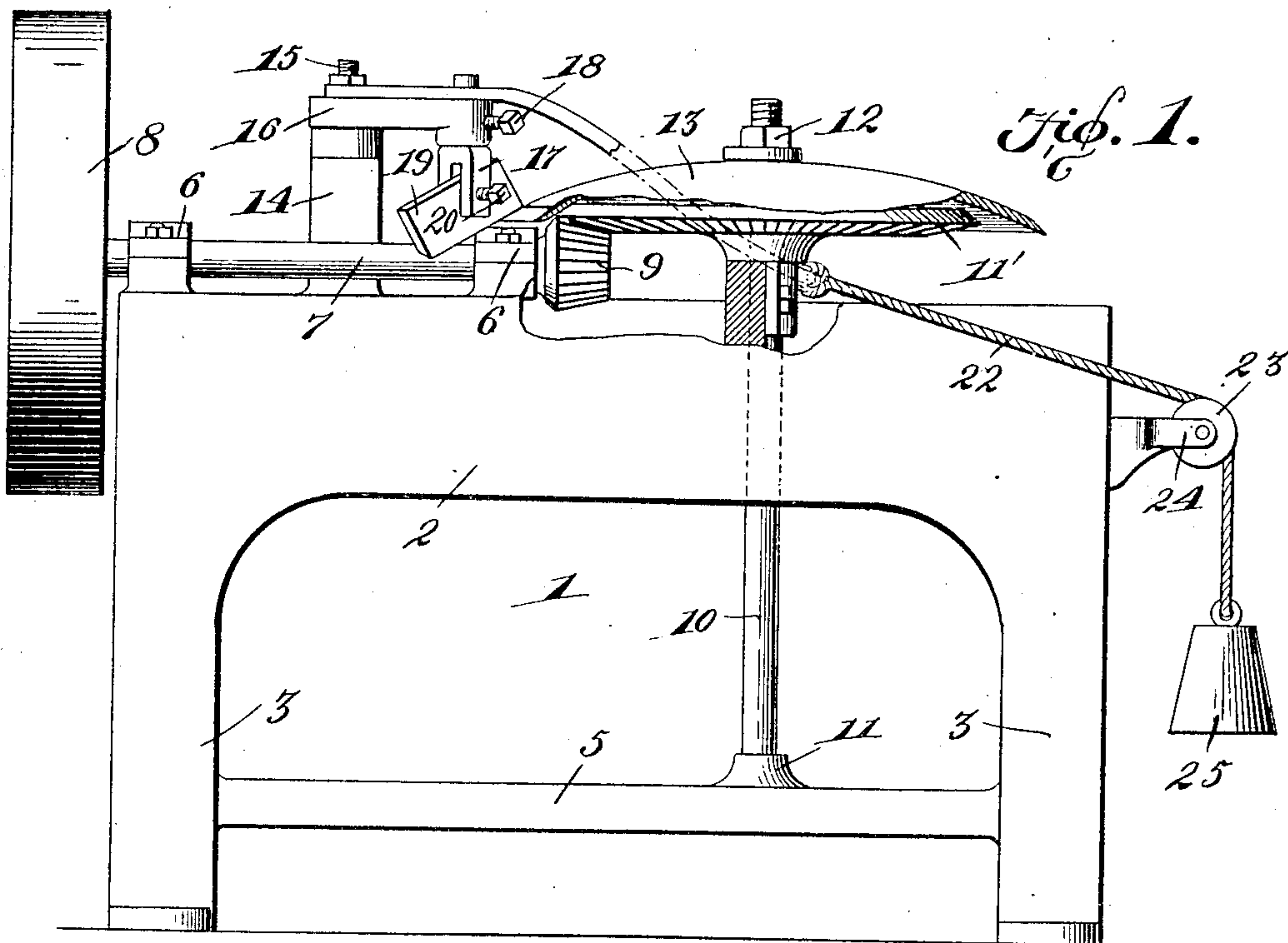


No. 869,624.

PATENTED OCT. 29, 1907.

W. S. CLINE.
DISK SHARPENING MEANS.
APPLICATION FILED MAY 7, 1906.



WITNESSES:

E. J. Stewart
R. H. Smith

Winfield S. Cline, INVENTOR.

By *C. A. Snow*
ATTORNEYS

UNITED STATES PATENT OFFICE.

WINFIELD S. CLINE, OF TRENTON, MISSOURI, ASSIGNOR OF ONE-HALF TO FRANK HALL, OF TRENTON, MISSOURI.

DISK-SHARPENING MEANS.

No. 869,624.

Specification of Letters Patent.

Patented Oct. 29, 1907.

Application filed May 7, 1906. Serial No. 315,605.

To all whom it may concern:

Be it known that I, WINFIELD S. CLINE, a citizen of the United States, residing at Trenton, in the county of Grundy and State of Missouri, have invented a new and useful Disk-Sharpening Means, of which the following is a specification.

My invention relates to machines for sharpening the disks of disk plows or other machines having a circular cutting edge.

One object of my invention is to provide means to constantly maintain the sharpening knife in contact with the disk no matter how irregular or out of shape the latter may be.

A further object is to provide means whereby the sharpening knife may be adjusted as desired in relation to the disk and the entire edge of the sharpening knife made use of.

With these and other objects in view my invention consists in the parts, improvements and combinations of parts hereinafter fully set forth and pointed out in the claims, it being understood, however, that various minor changes in form, proportion and arrangement of parts may be resorted to without departing from the principle of my invention or sacrificing any of the advantages thereof.

In this specification and in the accompanying drawings forming a part thereof, the same reference characters are applied to the same parts throughout.

In the drawings:—Figure 1 is a view in side elevation of one form of device embodying my invention. Fig. 2 is a top plan view of the device shown in Fig. 1.

Reference numeral 1 designates the machine frame having a body 2 and standards 3, the standards being connected by cross braces 4 and the cross braces being connected by a longitudinal brace 5. Bearings 6, 6 are provided for a shaft 7 having the pulley 8 secured to one end thereof and the gear 9 at its other end. A shaft 10 is journaled in the body of the machine frame and in a step bearing 11 in the brace 5. While the shaft 10 is here shown vertically it will be evident that this shaft may be placed at any convenient angle. On the shaft 10 near its upper end is mounted a gear 11' meshing with the gear 9. The upper end of shaft 10 is threaded to receive a tap 12 which is used to firmly secure the disk 13 to be sharpened upon the upper face of the gear 11'.

At one side of the body of the machine frame and substantially midway between the pulley 8 and the shaft 10 is a post 14 having a broad, flat upper face from which a pivot pin 15 projects upwardly. Lying flat on the top of post 14 and pivoted upon pin 15 is a plate 16 which has a vertical opening therein at the end opposite pivot pin 15 for the passage of a knife holder 17.

The knife holder 17 is adjustably held in plate 16 by a set bolt 18. The lower end of the knife holder is provided with a vertical central slot wherein the sharpening knife 19 is adjustably held by means of the set bolt 20.

A lever 21 having openings to receive the pivot pin 15 and the knife holder 17 is placed upon the plate 16 and a nut is secured upon the threaded upper end of pivot pin 15. The end of lever 21 opposite pivot pin 15 is extended outwardly and downwardly at the side of the machine frame. By means of a perforation in this end of lever 21 a cord 22 is attached thereto. The said cord passes over a pulley 23 secured to an outwardly extending arm 24 on the machine frame and has on its end a weight 25. The pulley is so pointed that the arm of the lever 21 is continuously drawn inwardly and downwardly.

The operation of my improved disk sharpener is as follows:—The disk to be sharpened is placed on the gear 11' and fastened down by the tap 12. The knife is adjusted to bear properly upon the disk 13, it being evident that the sharpening knife will be readily adjustable to operate upon a disk of almost any size and shape since by means of set bolt 18 the knife holder and knife may be turned to any horizontal angle and by means of the set bolt 20 the knife may be given a considerable adjustment in a vertical plane. By these two adjustments the sharpening knife 19 is made universally adjustable. The parts having been placed in proper relative position, power is applied at the pulley wheel 8 when the disk 13 will be rotated and the sharpening knife 19 will be maintained in constant contact with the disk, no matter how irregular the edge or surface of the disk may be, by the weight 25 which exerts a downward pull upon the knife as well as a pull toward the center of the disk.

It will be evident that I may mount as many disk rotating and sharpening devices along the shaft 7 as the length of the shaft, which may be increased at will, will permit.

The sharpening knife may be moved longitudinally in the knife holder or if desired the screw 20 may be loosened and the knife turned over. In this way I am able to make use of the entire edge of the sharpening knife.

I claim:—

1. In a device of the class described the combination of a rotatable shaft, means for securing a disk thereto, a support, a pivoted device thereon, a knife holder longitudinally and rotatably movable in the said device, a sharpening knife adjustable in said holder, a lever pivoted upon the support and apertured for the passage of the knife holder and means for drawing the free end of the lever downwardly and toward the center of the disk.

2. In a device of the class described the combination of
a rotatable shaft, removable means for securing a disk
thereon, a post having a flat top and a pivot pin in its
top, a plate pivoted on said pin and apertured for the re-
5 ception of a knife holder, a knife holder longitudinally
and rotatably movable in the aperture in said plate, the
knife holder being provided with a slot, a sharpening
knife removably and adjustably held in said slot, a lever
pivoted upon said pivot pin above the plate and apertured
10 for the passage of the knife holder and means for pulling

the free end of the lever horizontally and downwardly to
contact the knife with the disk.

In testimony that I claim the foregoing as my own, I
have hereto affixed my signature in the presence of two
witnesses.

WINFIELD S. CLINE.

Witnesses:

S. M. HILL,

ANNA McCLURE.