Aug. 26, 1924. 1,506,497

C. E. MEYER

DISK SHARPENER

Filed Jan. 9, 1924

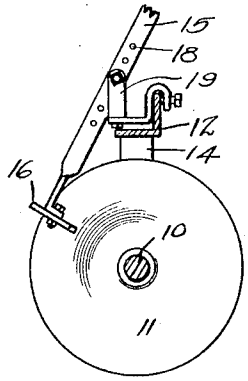


Fig. 1

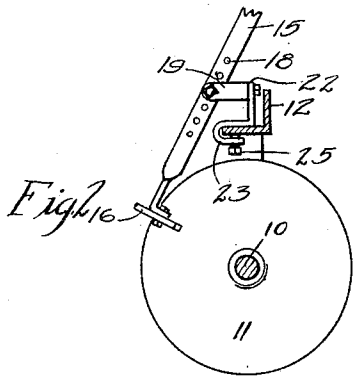


Fig. 2

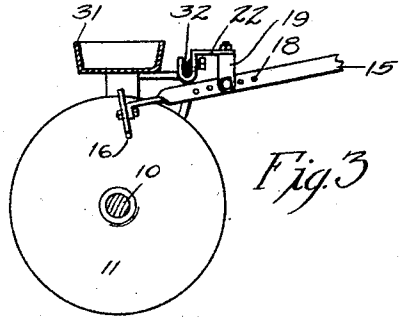


Fig. 3

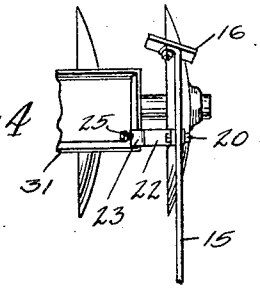


Fig. 4

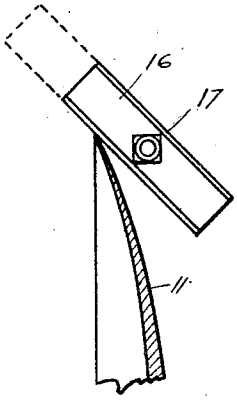


Fig. 5

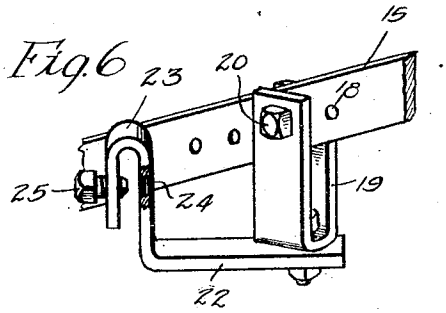


Fig. 6

Witness
Lynn Latta

Inventor
Clarence E. Meyer
By Bair & Freeman Atty's

Patented Aug. 26, 1924. 1,506,497

UNITED STATES PATENT OFFICE.

CLARENCE E. MEYER, OF NEAR VAN METER, IOWA.

DISK SHARPENER.

Application filed January 9, 1924. Serial No. 685,156.

To all whom it may concern:

Be it known that I, CLARENCE E. MEYER, a citizen of the United States, and a resident near Van Meter, in the county of Madison and State of Iowa, have invented a certain new and useful Disk Sharpener, of which the following is a specification.

The object of my invention is to provide a disk sharpener of simple, durable and inexpensive construction.

More particularly, it is my object to provide such a disk sharpener which can be readily and easily attached and used for sharpening the disks during the usual operation of the machine.

A further object is to provide such a disk sharpener having parts so constructed and arranged as to facilitate the easy attachment upon the parts of the machine in position for accomplishing the purpose, which parts may be readily and easily removed.

A further object is to provide in such a structure means for properly supporting the sharpener in position for effective use.

An additional object is to provide such a device having its parts so connected and arranged, as to make them readily adaptable for mounting on disking machines of different makes.

With these and other objects in view, my invention consists in the construction, arrangement and combination of the various parts of my disk sharpener, whereby the objects contemplated are attained, as hereinafter more fully set forth, pointed out in my claim, and illustrated in the accompanying drawings, in which:

Figure 1 is a sectional view of a portion of a disking machine frame with a disk sharpener embodying my invention installed thereon.

Figure 2 is a similar view showing the sharpener installed in a slightly different manner.

Figure 3 is a similar view illustrating the manner of installation on a machine with another type of frame.

Figure 4 is a top view showing still another manner of installation.

Figure 5 is a sectional view of a disk showing the relation of the cutter blade thereto in operative position; and

Figure 6 is an enlarged perspective view, parts being broken away, of the sharpener.

In the accompanying drawings, I have used the reference numeral 10 to indicate generally the axle of the disking machine, having mounted thereon the disk 11. I have shown also the transverse frame member 12 and the supporting brackets 14 for supporting the frame on the axle.

It is desirable to be able to sharpen the disks on a machine of this kind while they are on the machine and without removing them from the axle on account of the consequent saving of time.

I have therefore provided a readily attachable and detachable disk sharpener, which comprises a lever bar or the like 15, having bolted to its forward end a sharpener blade 16, having the sharp edges 17. The lever 15 has spaced from its forward end a series of holes 18.

The arms of a U-shaped yoke 19 are pivoted to the lever 15 by means of a bolt 20 selectively received in one of the holes 18. Pivoted to the central member of the yoke 19 by means of a bolt 21 is a bar 22 projecting from a channel-shaped bracket 23 in the walls of which are openings 24 to receive a set screw 25.

In the use of my improved disk sharpener, the walls or arms of the bracket 23 are placed on opposite sides of a member of the frame 12 of the disking machine and are locked thereto by the set screws 25.

In Figure 1, I have shown the bracket 23 fastened on the vertical flange of an angle bar frame member 12.

In Figure 2, I have shown the bracket 23 mounted on the horizontal flange of a similar frame member.

In Figure 3, I have shown a different frame element, the rod 30, which supports the disk cleaners, and have illustrated the bracket 23 installed thereon.

In Figure 4, the bracket 23 is shown supported on the end of the box 31, which is found on some makes of disking machines. These various installations illustrate the adaptability of my device for use with practically all makes of such machines.

This is an important feature of my invention, insomuch as it makes it possible for the dealer to keep on hand a small stock and yet to sell to the user of any particular make of machine. It also permits the sharpener to be made in a standard form in the factory so that the manufacturer may have the benefit of factory production.

As an illustration of the adaptability of my sharpener, I call attention to Figure 4, showing how the end disk, which is beyond the frame members, can be sharpened by the device mounted on the box 31, which terminates substantially short of the end of the axle on which the end disk is mounted.

When the disk is drawn over the field, the operator grasps the rear end of the lever 15 and forces the cutter blade 16 against the edge of the disk for sharpening the disk. The pressure may be manually regulated as may be desired according to circumstances.

I find that the disks can be sharpened very rapidly with a device of this kind.

Enough side play is permitted to allow the use of considerable length of the cutter blade, thus reducing the likelihood of overheating on account of friction at one point thereon.

As soon as one disk is sharpened, the sharpener may be shifted over for operating on the next disk.

Any suitable material may be used for the sharpener parts, and it is obvious that some of the parts might be modified in structure or arrangement without departing from the real purpose and spirit of my invention, and it is my intention to cover by my claim, any such modification or use of mechanical equivalents, as may be reasonably included within its scope.

I claim as my invention:

In a disk sharpener, a lever, a sharpener blade secured to one end thereof, an U-shaped yoke having its arms pivoted to said lever, a bar pivoted to the central portion of said yoke, a channel-shaped bracket on said bar offset therefrom and opening substantially at right angles thereto.

Des Moines, Iowa, December 28, 1923.

CLARENCE E. MEYER.