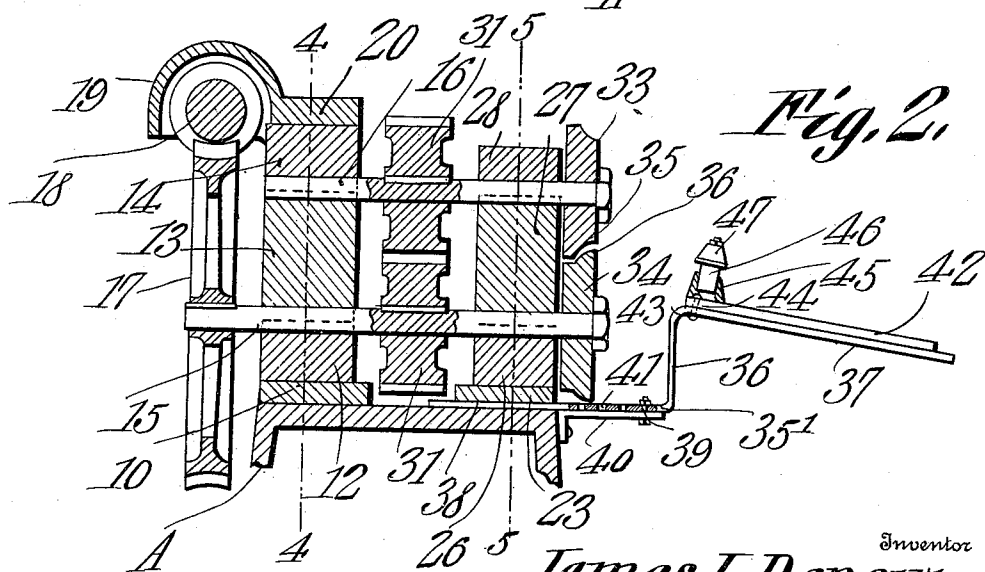
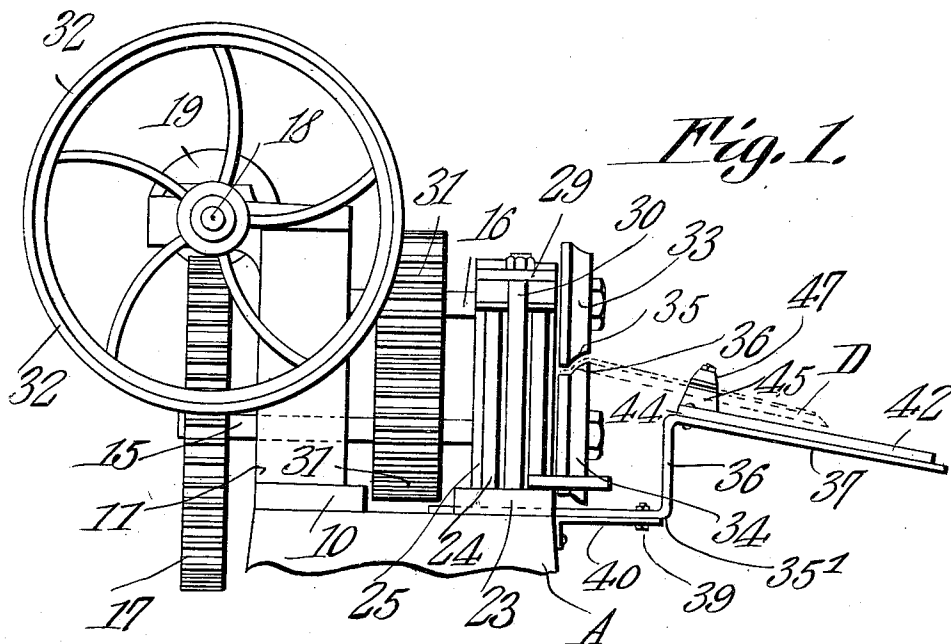


J. I. DEPEW.
DISK SHARPENER.
APPLICATION FILED AUG. 2, 1909.

979,831.

Patented Dec. 27, 1910.



Witnesses

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UNITED STATES PATENT OFFICE.

JAMES I. DEPEW, OF LOUP CITY, NEBRASKA.

DISK-SHARPENER.

979,831.

Specification of Letters Patent.

Patented Dec. 27, 1910.

Application filed August 2, 1909. Serial No. 510,794.

To all whom it may concern:

Be it known that I, JAMES I. DEPEW, a citizen of the United States, residing at Loup City, in the county of Sherman and State of Nebraska, have invented a new and useful Disk-Sharpener, of which the following is a specification.

It is the object of the present invention to provide an improved construction of machine for repairing plow and cultivator disks, and the invention aims to provide, in a single machine, means for resetting the edges of such disks and for sharpening the said edges.

It is a still further object of the invention to provide, in a machine of this class, means whereby disks of various diameters may be treated or repaired, and such means is embodied, in part, in a disk-supporting member, which may be moved to position to bring the edge of the disk between the setting rolls regardless of the diameter of the disk.

In the accompanying drawings:—Figure 1 is a side elevation of the machine, constructed in accordance with the present invention. Fig. 2 is a vertical longitudinal sectional view therethrough.

In the drawings the machine is illustrated as mounted upon a base frame A, only the upper portion of which is shown, it forming no part of the present invention, and serving merely to support the working parts of the machine in position. Upon the top of this frame A, at the rear thereof, is a base-plate 10, having upstanding therefrom vertical frame members 11, which serve as guides, between which are mounted blocks 12, 13 and 14, the block 12 being disposed upon the base 10, the block 13 upon the block 12, and the block 14 upon the block 13. A shaft 15 is journaled for rotation between the bearing blocks 12 and 13, and between the bearing blocks 13 and 14 is journaled a similar shaft 16. The shaft 15 has its rear end projecting beyond the rear faces of the bearings between which it is journaled, and carries a worm wheel indicated by the numeral 17, this wheel being in mesh with a worm shaft 18, which is journaled in an inverted semi-cylindrical housing 19, integral with a cap plate 20, which is secured upon the bearing block 14.

A base-plate 23 is disposed upon the top of the base frame A of the machine at the forward end thereof, and, upstanding from

this base plate 23 are side frame members or guides 24, having reinforcing flanges or wings 25. Between these guides 24 are mounted bearing blocks, one indicated by the numeral 26, another by the numeral 27, and a third by the numeral 28, these blocks corresponding to the blocks 12, 13, and 14, respectively, heretofore described, and the upper block 28 corresponding not only to the block 14, but also to the cap plate 20, inasmuch as it embodies ears 29, located one at each end, through which the upper ends of bolts 30 are passed, these bolts engaging, at their lower ends, through the base plate 23, and serving to hold the upper block 28 in position upon the block 27 and to cause the blocks 28 and 27 to bear more or less firmly upon the shaft above which they are disposed, it being understood that the shafts 15 and 16, heretofore described, are journaled also between these several blocks 26, 27 and 28 in the same manner as they are journaled between the blocks 12, 13 and 14, respectively. Between the two sets of bearing blocks above described, the shafts 15 and 16 have mounted thereon gears 31, which are in mesh and gear the two shafts for simultaneous rotation at the same rate of speed. Upon the worm shaft 18 is fixedly mounted a fly-wheel 32, and it will be readily understood that when this fly-wheel is rapidly rotated the shaft 15 will be correspondingly rotated and will impart rotative motion to the shaft 16.

Upon the forward ends of the shafts 15 and 16 are fixed disk rolls, one of which (the upper one) is indicated by the numeral 33, and the other, (the lower one) by the numeral 34. The upper disk roll 33 has its peripheral edge concaved throughout a portion of its width, as indicated by the numeral 35, and the peripheral edge of the lower disk 34 is convexed throughout a corresponding portion, as indicated by the numeral 36, the concave portion of the roller 33 and the convex portion of the roller 34 coöperating to concave or set the edge of a plow or harrow disk rolled between them.

The invention contemplates, as before stated, the provision of means for supporting a disk, the edge of which is to be reset and sharpened, and the means provided will now be described.

The means mentioned above is embodied in part in a stationary arm, the attaching

portion of which is indicated by the numeral 35; the arm being comprised, in addition to the attaching portion, of an upstanding portion 36 and a portion 37 which extends nearly parallel to the portion 35', but in an opposite direction from the portion 36 to that in which the attaching portion extends. The attaching portion is slidably fitted in a seat 38, which is formed in the base 23, and the arm is held firmly in place through the medium of a securing bolt 39, which is engaged through a bracket 40 upon the stand A and interchangeably through openings 41 in the said attaching portion 35' of the arm, it being understood that, by this construction, the arm may be supported in various positions in advance of the disk rolls 33 and 34. When so positioned, the portion 37 of the arm will project forwardly considerably beyond these disks 33 and 34, and is to be grasped by the left hand of the operator of the machine, the right hand grasping the handle end of a lever 42, which is pivoted as at 43 upon the portion 37 of the arm, and has its free or handle end projecting in the same general direction as the said portion 37 of the arm. This lever 42 has a widened portion or enlargement, which is indicated by the numeral 44. Upon this widened portion 44 of the lever 42 there is formed an upstanding sleeve socket indicated by the numeral 45, and fitted loosely removably in this socket is a short stub shaft or spindle, which is indicated by the numeral 46, and which is provided with a head 47. As will be observed from an inspection of Fig. 1 of the drawings, the disk, the edge of which is to be overturned, said disk being

illustrated in dotted lines in said figure of the drawings and indicated by the reference character D, has the shaft or spindle 46 engaged through its axial opening, with the head 47 bearing against the upper or convex surface of the disk. When so mounted, by swinging the hand lever 42 upon its pivot to the right, the edge of the disk will be brought to position between the disk rolls 33 and 34, between the working surfaces 35 and 36 thereof respectively, whereupon motion is imparted to the shafts 15 and 16, to cause the rotation of the disks 33 and 34, whereupon the edge of the disk D will be overturned to the proper degree.

What is claimed is:—

In a machine of the class described, a frame, shafts mounted to rotate in the frame, disk-rolls carried one by each of the shafts, said rolls coöperating, a bracket supported upon the frame, a support comprising a bar bent to afford a portion disposed upon the bracket and formed with a plurality of openings, a bolt engaged through the bracket and through the openings interchangeably, said bar being bent from its said portion to extend upwardly and thence forwardly at an angle downwardly, in advance of the rolls, and a lever pivoted upon the last mentioned portion of the bar and arranged to support the disk to be sharpened.

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

JAMES I. DEPEW.

Witnesses:

W. E. HENRY,
Jno. W. LONG.