

No. 754,455.

PATENTED MAR. 15, 1904.

W. J. JULIAN.
DISK SHARPENER.

APPLICATION FILED APR. 30, 1903.

NO MODEL.

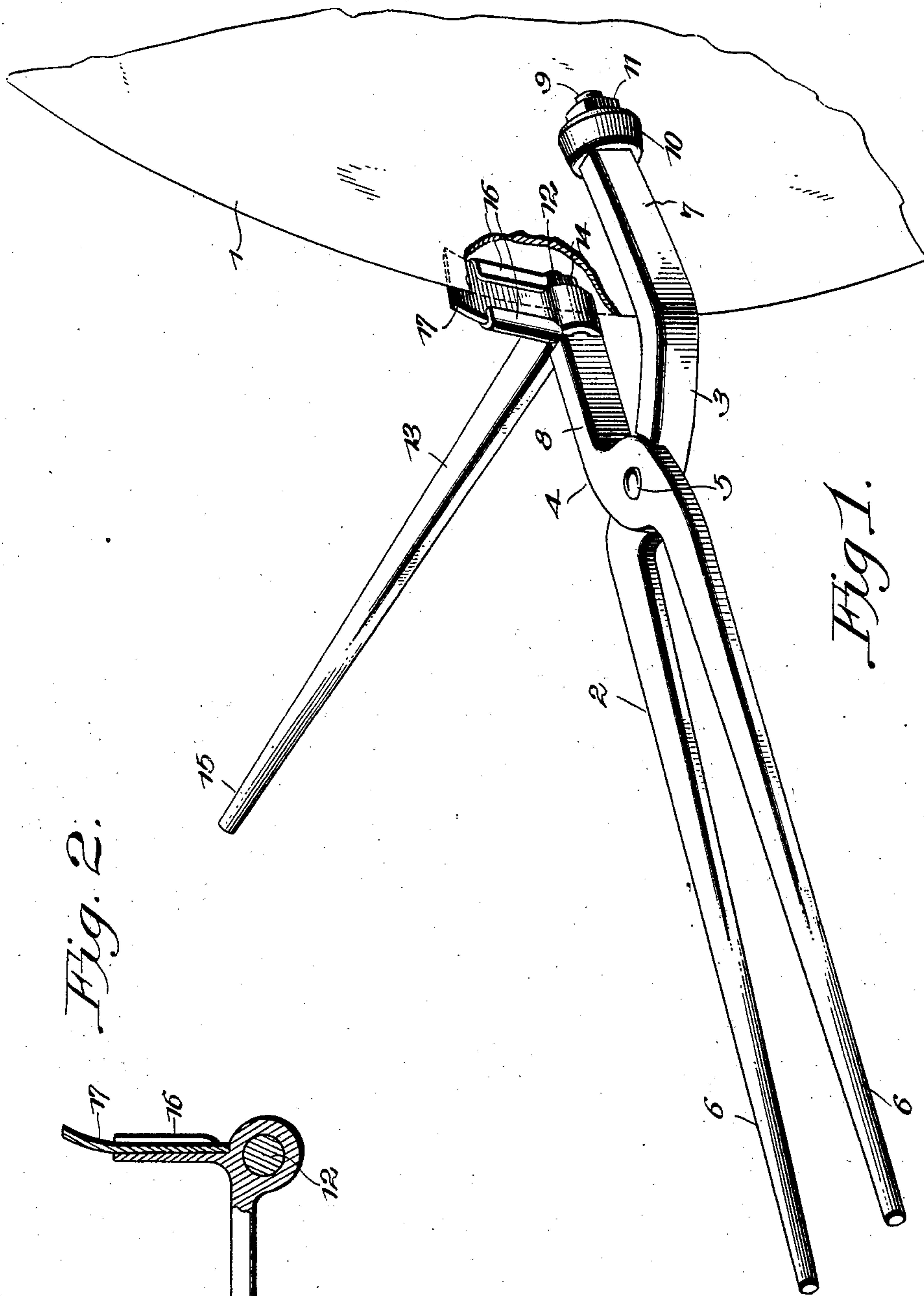


Fig. 2.

Fig. 1.

Witnesses
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UNITED STATES PATENT OFFICE.

WILLIAM J. JULIAN, OF CHARLES CITY, IOWA.

DISK-SHARPENER.

SPECIFICATION forming part of Letters Patent No. 754,455, dated March 15, 1904.

Application filed April 30, 1903. Serial No. 155,034. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM J. JULIAN, a citizen of the United States, residing at Charles City, in the county of Floyd and State of Iowa, have invented a new and useful Disk-Sharpener, of which the following is a specification.

This invention relates to an improved disk-sharpener, and has for its object to provide a simple, inexpensive, and efficient device of this character for sharpening the edges of disks used on harrows, cultivators, and other farm implements.

A further object of the invention is to provide a portable disk-sharpener in the form of a pair of tongs one of the pivoted members of which is provided with a beveled wheel or roller adapted to bear against the dished or concaved side of the disk, the opposite member being provided with a pivoted arm or lever carrying a knife or sharpener and adapted to engage the convex side of the disk and sharpen the edge thereof when the same is thrown in contact therewith and the disk rotated.

The invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended, it being understood that various changes in form, proportion, and minor details of construction may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

In the accompanying drawings, Figure 1 is a perspective view of my improved disk-sharpener, showing the same applied to a harrow-disk. Fig. 2 is a detail sectional view of the cutting-sharpener and holder.

Similar numerals of reference indicate corresponding parts in both figures of the drawings.

1 designates a harrow or cultivator-disk, and 2 my improved sharpening-tool. The tool 2 is preferably in the form of a pair of tongs and consists of two levers 3 and 4, pivoted together at 5 and formed with handles 6 and jaws 7 and 8. The jaw 7 is somewhat longer than the jaw 8, being curved outwardly, as shown, and provided with a reduced spindle 9, upon which is

removably journaled an oppositely-beveled antifriction-roller 10, a nut 11 engaging the threaded end of the spindle and serving to hold the roller in place on the end of the jaw. The jaw 8 lies substantially parallel with the handle 6, the end of the jaw being provided with a reduced spindle 12, upon which is journaled a lever 13, said lever being held in position by means of a nut 14, engaging the threaded end of the spindle 12. One end of the lever 13 is provided with a handle 15, the opposite end thereof being disposed at right angles thereto and formed with inwardly-extending flanges or guides 16, between which is secured in any suitable manner a knife or sharpener 17. The lever 13 is free to oscillate on the spindle 12 and is adapted to be thrown into and out of contact with convex edge of the disk when the same is rotated, the inclined or beveled face of the roller 10 engaging the concaved portion of the disk, preventing friction as the disk is rotated and holding the same in position while the knife 17 is at work on the opposite side sharpening the edge of the disk.

By having the lever 13, carrying the knife or sharpener, pivoted to one of the jaws a greater leverage is obtained, and consequently the pressure of the knife against the periphery of the disk materially increased.

In operation when it is desired to sharpen a disk the tool is applied to the disk with the roller 10 engaging the concave portion and the knife or sharpener in contact with the edge of the disk on the opposite side thereof. The disk is now rotated in any suitable manner and pressure applied to the handle 15 of the lever 13, the edge of the disk as it revolves between the pivoted jaws of the tool being effectively sharpened by the knife 17.

By having one of the jaws outwardly curved and longer than the other it causes the tool to more firmly engage the disk, while by having the roller oppositely inclined or beveled and detachably secured to the spindle said roller may be reversed to accommodate different-size disks.

From the foregoing description it will be seen that I have provided an extremely sim-

ple, inexpensive, and efficient device by means of which harrow-disks and the like may be quickly and readily sharpened without the employment of skilled labor.

5 Having thus described the invention, what I claim, and desire to secure by Letters Patent, is—

1. A disk-sharpener comprising a pair of pivoted members, a roller carried by one of
10 the members, a lever pivoted to the opposite member and a knife or sharpener carried by the lever.

2. A disk-sharpener comprising a pair of pivoted jaws, an antifriction-roller carried by
15 one of the jaws, a lever provided with an angular extension pivoted to the opposite jaw,

guides formed in the angular extension and a knife fitting within the guides.

3. A disk-sharpener comprising a pair of pivoted jaws, an oppositely inclined or beveled
20 antifriction-roller carried by one of the jaws and a lever provided with a knife or sharpener pivoted to the opposite jaw and arranged at right angles thereto.

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

WILLIAM J. JULIAN.

Witnesses:

F. C. FISHER,

CLARENCE SEAMAN.