No. 693,042. Patented Feb. 11, 1902.

W. B. MICHAEL.

SCRAPER FOR REVERSIBLE DISK PLOWS.

(Application filed Nov. 27, 1901.)

(No Model.) 2 Sheets—Sheet 1.

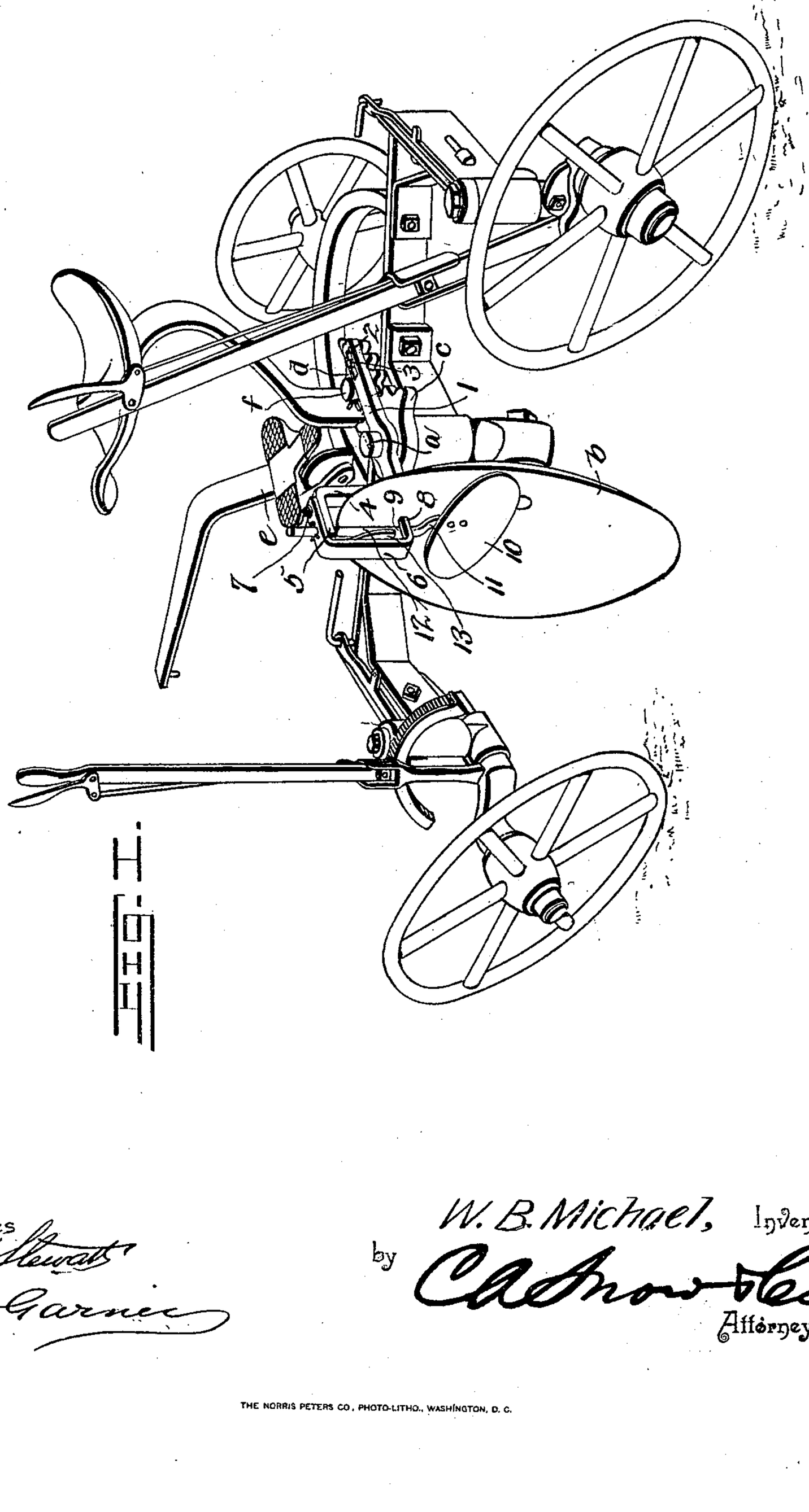

FIG. 1.

Witnesses
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J. W. Garner

W. B. Michael, Inventor.
by Church & Co
Attorneys

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Fig. 2.

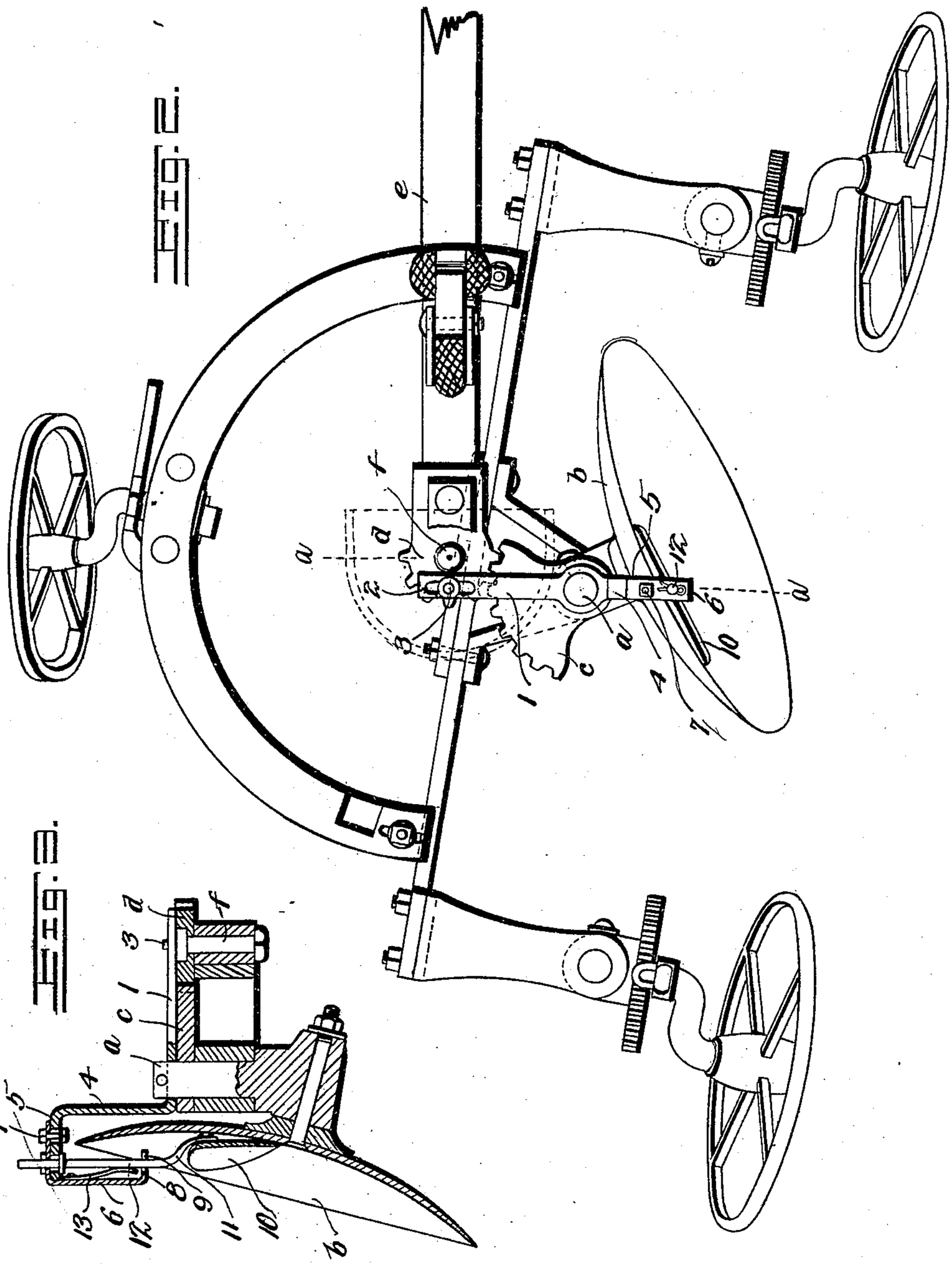

Fig. 3.

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UNITED STATES PATENT OFFICE.

WILLIAM BYRON MICHAEL, OF CHATTANOOGA, TENNESSEE.

SCRAPER FOR REVERSIBLE-DISK PLOWS.

SPECIFICATION forming part of Letters Patent No. 693,042, dated February 11, 1902.

Application filed November 27, 1901. Serial No. 83,929. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM BYRON MICHAEL, a citizen of the United States, residing at Chattanooga, in the county of Hamilton and State of Tennessee, have invented a new and useful Scraper for Reversible-Disk Plows, of which the following is a specification.

My invention is an improved scraper for reversible-disk plows of that class in which the disk-carrying element is automatically reversed by gearing which connects the same to the tongue or draft element of the plow; and the object of my invention is to provide an improved scraper which remains in direct operative relation to the disk at all adjustments of the latter and is automatically adjusted to the disk by the reversing-gear which reverses the disk; and to this end my invention consists in the peculiar construction and combination of devices hereinafter fully set forth and claimed.

In the accompanying drawings, Figure 1 is a perspective view of a reversible-disk sulky-plow, known as the "Dixie Reversible Disc Plow," provided with a scraper embodying my improvements. Fig. 2 is a top plan view of the same. Fig. 3 is a detail transverse section of the same, taken on a plane indicated by the line *a a* of Fig. 1.

In the embodiment of my invention I provide a reversing-arm 1, which is fulcrumed on the spindle *a* of the standard which carries the plow-disk *b*. The said spindle *a*, as will be understood by those familiar with this class of plows, is provided with a segment-gear *c*, which meshes with a segment-pinion *d*, that is attached to and operated by the tongue of draft element *e*. The spindle *f*, on which said segment-pinion turns, forms the pivot of the said tongue or draft element. The inner end of the arm 1 is provided with a slot 2, and the same is engaged by a crank-pin 3, which projects from the upper side of the segment-pinion *d* at a suitable distance from the center of said segment-pinion. The outer portion of the arm 1 is upturned, as at 4, a suitable distance to clear the upper side of the disk *b*, and at the upper end of the said upturned portion 4 of said arm is formed the horizontally-disposed outwardly-extending portion 5, to which is pivotally connected a depending spring-arm 6 by a bolt or other suitable pivot 7. The said depending spring-arm 6 has at its lower end an inwardly-extending horizontally or substantially horizontally disposed foot 8, in which is a slot 9.

The scraper 10 is preferably of the form shown in the drawings, is disposed transversely on the concaved face of the plow-disk *b* at a point above the center thereof, and has its lower edge, which is its scraping edge, curved to correspond with the concavity or profile of the said plow-disk. The said scraper is connected to the lower cranked portion 11 of a spindle 12. The said spindle is fitted in the slot 9 of the foot of the spring-arm 6, and its upper portion is journaled in an opening with which the outwardly-extending portion 5 of the reversing-arm 1 is provided. The diameter of the said opening somewhat exceeds that of the said spindle 12, so that the latter is free to play somewhat radially with respect to the fulcrum of the arm 1, formed by the spindle *a*. Hence the scaper is adapted to be shifted laterally on the concaved face of the plow-disk by the motion of the arm 1 when the plow-disk is reversed by the turning of the tongue or draft element *e* and the gears *c d*, which connect said tongue or draft element to the spindle that carries the plow-disk. On the inner side of the depending spring-arm 6 is a spring 13, which is here shown as a single-leaf spring, but which may be of any suitable construction, and the said spring 13 bears against the outer side of the spindle 12 and forces the said spindle inwardly toward the plow-disk, and hence keeps the scraper in operative contact with the concaved face of the plow-disk under all conditions. It will be understood that the spring-arm 6, the spring 13, and the spindle 12 form a yielding connection between the scraper 10 and the reversing-arm 1 which carries it, and it will be further understood that modifications may be made in the said yielding connection, and hence I do not desire to limit myself in this particular. Neither do I desire to limit myself to the precise construction and combination of devices herein

shown and described, as it is evident that modifications may be made therein without departing from the spirit of my invention.

Having thus described my invention, I claim—

1. In combination with a disk plow and means for reversing the same, a pivoted arm connected to and automatically operated by the plow-reversing means, and a scraper carried by said pivoted arm, substantially as described.

2. In combination with a disk plow and means for reversing the same, a pivoted arm, connected to and automatically operated by the plow-reversing means, a scraper bearing on the disk plow and a yielding connection between said scraper and said pivoted arm, substantially as described.

3. In combination with a disk plow and means for reversing the same, a pivoted arm connected to and automatically operated by the plow-reversing means, said arm having a depending spring-arm at its outer end, a scraper having a spindle journaled in a bearing in said pivoted arm and connected to said depending spring-arm, and a spring carried by said spring-arm, and bearing inwardly against said spindle of the scraper to press the latter against the disk plow, substantially as described.

4. In a plow of the class described, the combination of a plow-disk, a reversing-spindle carrying the same, a reversible draft element, a gear on said reversing-spindle, a pinion connected to and actuated by said reversing draft element and engaging said gear, an arm pivoted on said spindle, a connection between said arm and said pinion whereby said arm is reversed simultaneously with the plow-disk by said pinion and a scraper for said plow-disk and carried by said arm, substantially as described.

5. In a plow of the class described, the combination of a plow-disk, means to reverse the same, a scraper for the plow-disk, and an arm carrying the scraper, said arm being connected to and automatically operated by said disk-reversing means, substantially as described.

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

WILLIAM BYRON MICHAEL.

Witnesses:

CHAS. E. MILLS,

JOHN C. SHELTON.