

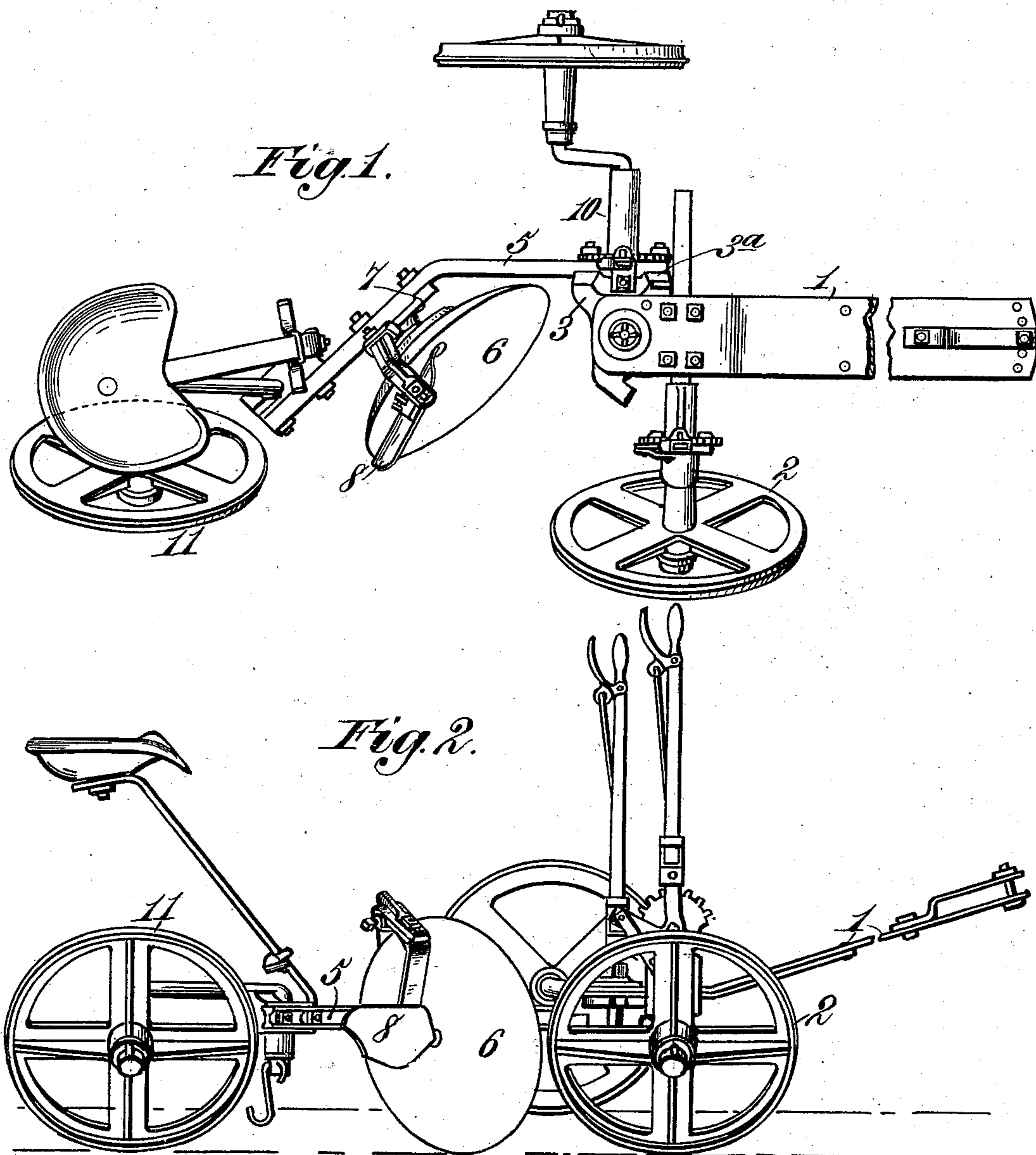
No. 692,655.

Patented Feb. 4, 1902.

M. T. HANCOCK.
CONVERTIBLE DISK PLOW.
(Application filed Oct. 26, 1901.)

(No Model.)

3 Sheets—Sheet I.



Witnesses,
Robert Everett,
Ces. Kesler

Inventor,
Milton T. Hancock,
By James L. Norris,
Atty.

No. 692,655.

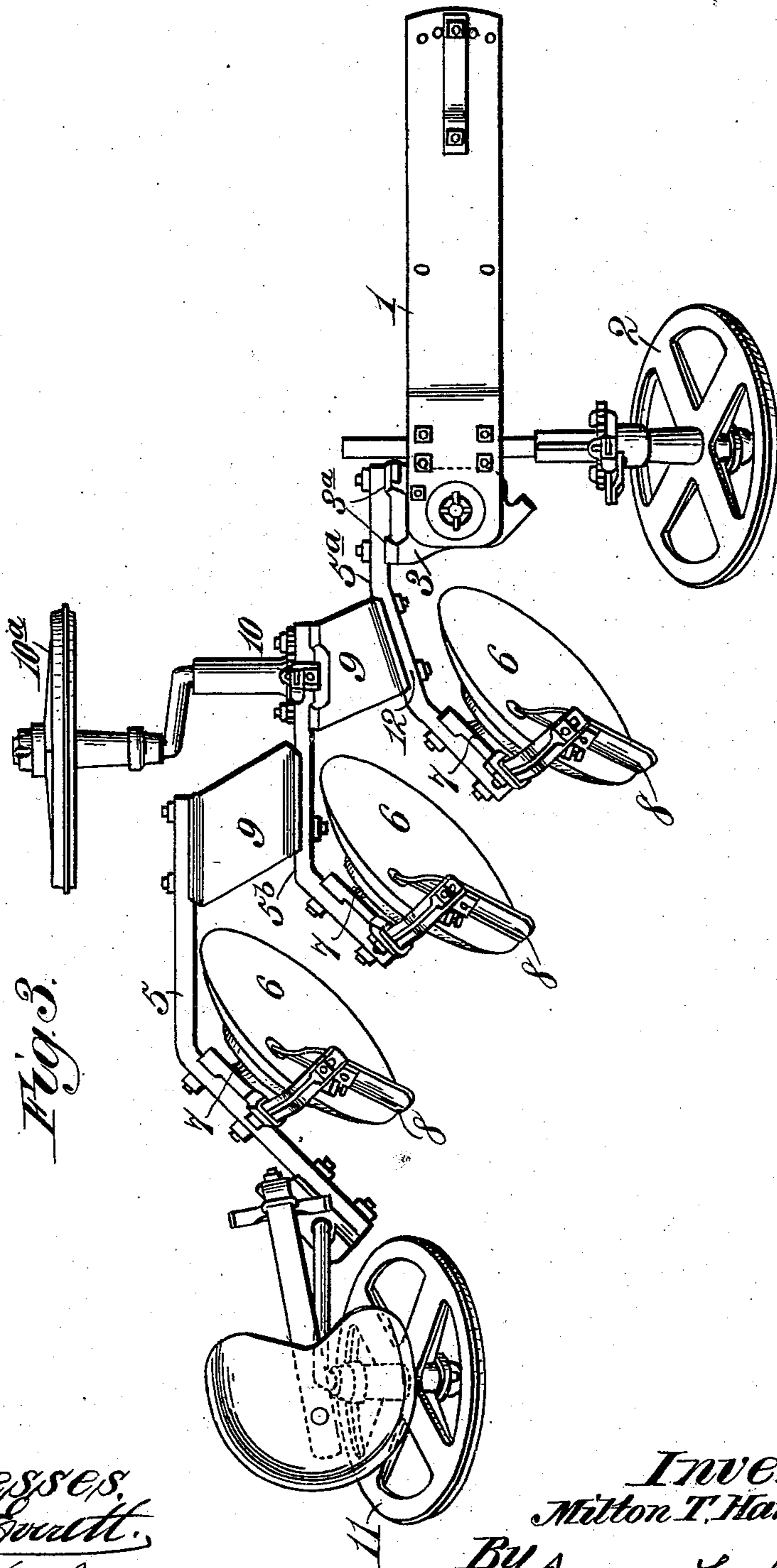
Patented Feb. 4, 1902.

M. T. HANCOCK.
CONVERTIBLE DISK PLOW.

(Application filed Oct. 26, 1901.)

(No Model.)

3 Sheets—Sheet 2.



Witnesses:
Robert Smith
Chas. Kesler

Inventor:
Milton T. Hancock
By *James L. Norris*
Atty.

No. 692,655.

Patented Feb. 4, 1902.

M. T. HANCOCK.
CONVERTIBLE DISK PLOW.

(Application filed Oct. 26, 1901.)

(No Model.)

3 Sheets—Sheet 3.

Fig. 4.

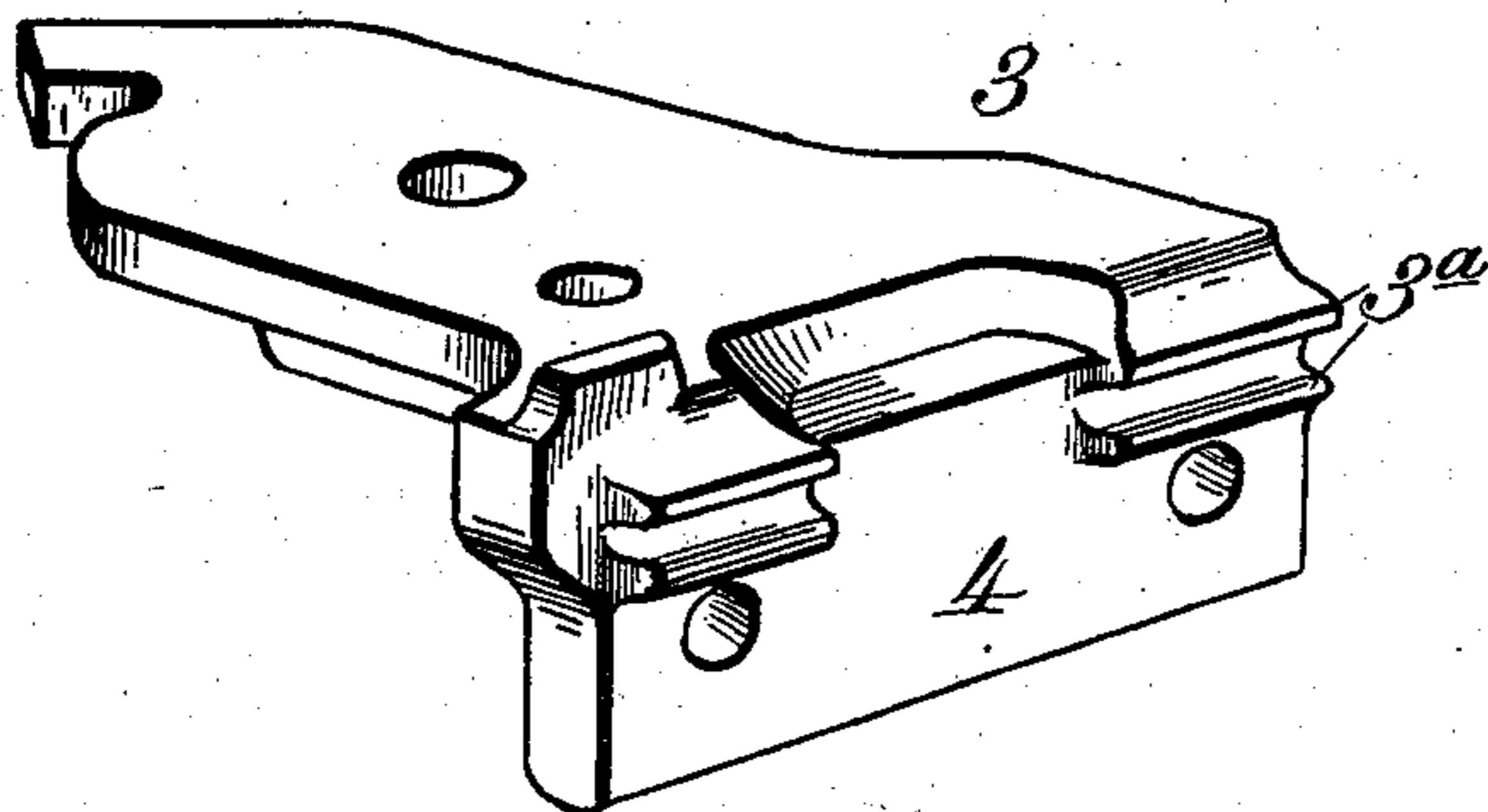


Fig. 5.

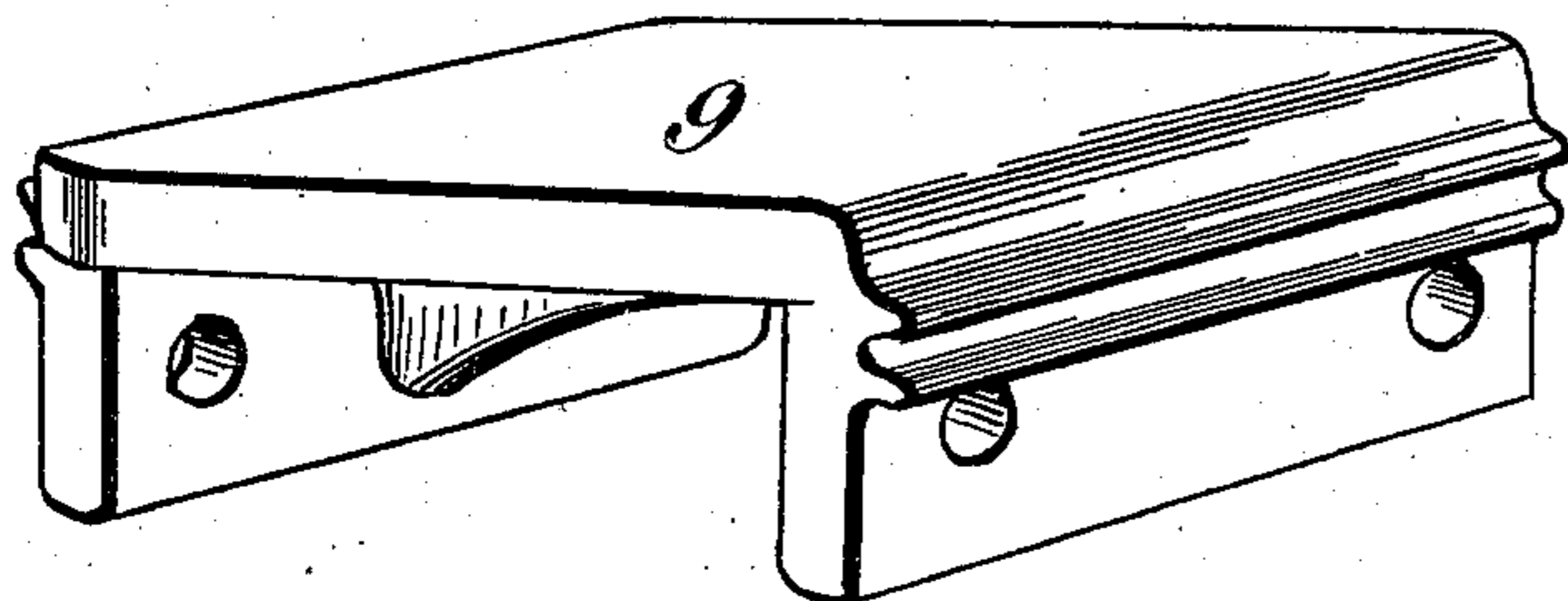
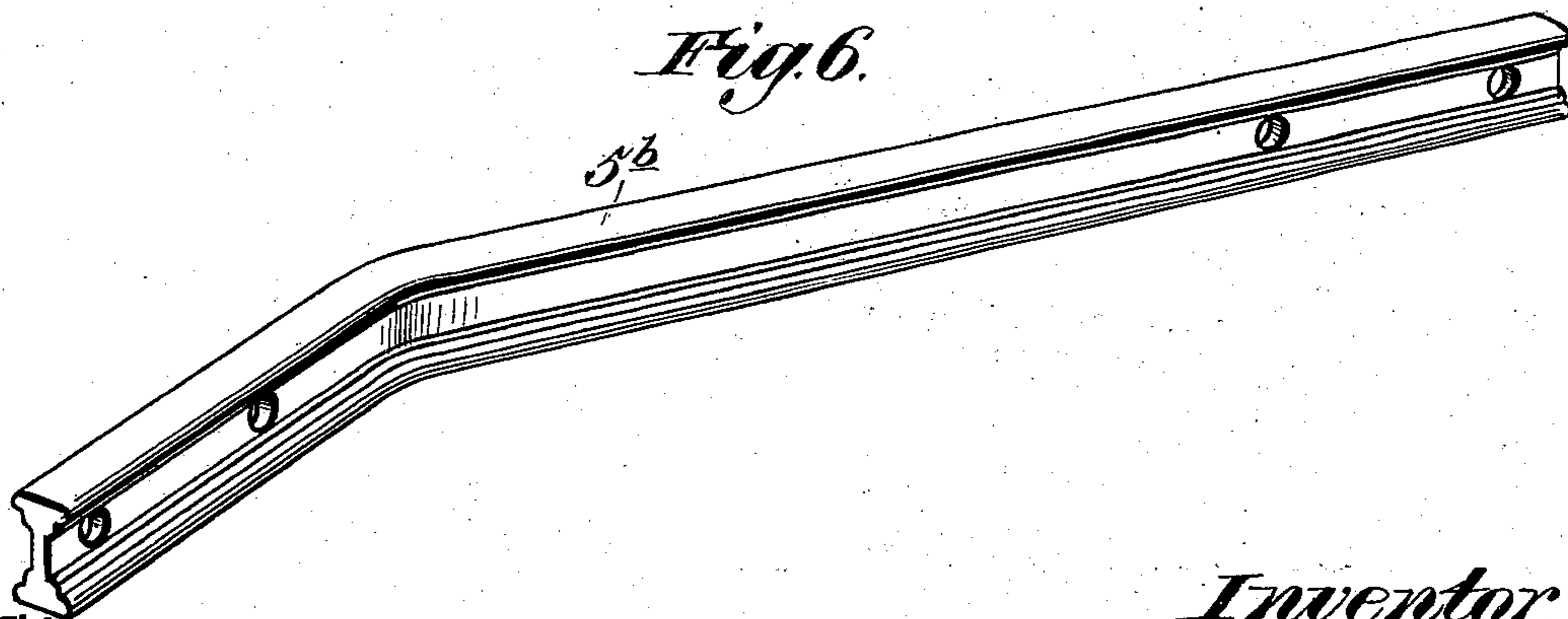


Fig. 6.



Witnesses,
Robert Everett
Chas. Kesler

Inventor
Milton T. Hancock
By *James L. Norris*
Atty.

UNITED STATES PATENT OFFICE.

MILTON T. HANCOCK, OF SHREVEPORT, LOUISIANA.

CONVERTIBLE DISK PLOW.

SPECIFICATION forming part of Letters Patent No. 692,655, dated February 4, 1902.

Application filed October 26, 1901. Serial No. 80,125. (No model.)

To all whom it may concern:

Be it known that I, MILTON T. HANCOCK, a citizen of the United States, residing at Shreveport, in the parish of Caddo and State of Louisiana, have invented new and useful Improvements in Convertible Disk Plows, of which the following is a specification.

My invention relates to improvements in disk plows capable of conversion from a single-disk plow into a gang-disk machine carrying a plurality—such as two, three, or more—of plowing-disks, and vice versa.

The invention has for its object to provide a machine of this class having novel, simple, and economical construction and accurate and facile means of conversion from a single to a plurality disk plow, or the converse, and possessed, furthermore, of novel means and capacities of interadjustment of the disk-carrying beams and the cooperating appurtenances.

To the ends stated the invention consists in the novel features of construction, combination, and arrangement of elements herein-after described and claimed, reference being made to the accompanying drawings, in which—

Figure 1 is a top plan view of my improved plow organized as a single-disk plow. Fig. 2 is a side elevation thereof. Fig. 3 is a top plan view of the plow organized as a gang or plurality disk plow of three disks. Fig. 4 is a perspective view of the coupling element. Fig. 5 is a perspective view of a spacing member, and Fig. 6 is a detail perspective view of a supplemental beam.

In the said drawings the reference-numeral 1 indicates the tongue of the plow, which by preference is a resilient tongue of the character shown and claimed in my Letters Patent of February 13, 1900, No. 643,499. The tongue, however, need not, within the scope of my present invention, be of this character. Adjustably connected to the tongue, substantially in the manner indicated in said prior patent, is a staggered furrow-wheel 2.

The numeral 3 indicates the preferred form of coupling element or bracket employed and to which the rear end of the tongue is pivotally connected, so that the tongue and the staggered furrow-wheel carried thereby may swing in the proper direction to facilitate the

turning of the plow. The coupling-bracket 3 is provided with a web or flange 4, to which the primary plow-beam 5, when the machine is adjusted as a single-disk plow, is connected and to which a supplemental disk-carrying beam is connected when the machine is arranged as a plurality-disk plow.

In Fig. 1 of the drawings the machine is illustrated as a single-disk plow. The beam 5, which I herein term the "primary" beam, is constructed of a bent arm or an arm having a deflected rear part and the forward end of which is constructed and adapted to fit against the coupling-bracket 3 and is provided with means (in the example shown, bolt-holes) coincident to similar means with which said bracket is provided to receive fastening devices, such as bolts, whereby the beam is rigidly and securely held to the bracket. To assist in the rigidity of the connection of the beam and to prevent possibility of movement thereof, the coupling element, as shown, may be provided with lips 3^a, which lap over or lie against the beam.

Rearward of the point of connection of the beam with the coupling-bracket the former is deflected laterally, as shown, to dispose the disk attached thereto substantially in the line of draft of the machine. The disk 6, attached to this beam, is secured to the laterally-deflected portion of said beam by means of a journal-box 7, secured to the beam in any suitable manner and preferably capable of adjustment in the way set forth in the Letters Patent hereinbefore mentioned. This journal-box supports the standard of an adjustable scraper, also as in my said Letters Patent. The deflected rearward portion of this beam extends considerably beyond the disk, so that the staggered caster-wheel, hereinafter referred to, will be properly positioned to perform its functions.

The reference-numerals 5^a 5^b indicate supplemental beams (of which any desired number may be utilized) of substantially similar shape, each thereof having a forward portion constructed and adapted to be connected to the coupling-bracket 3 in the manner described with reference to the primary beam 5 and having a laterally-deflected rearward portion for the purpose of disposing the plow-disk carried thereby substantially in the

line of draft of the machine. These supplemental beams each carry plowing-disk 6 and disk scrapers 8 in the manner set forth with reference to the primary beam and disk. As stated, each of the beams in the complement of the machine is so constructed that it is capable of attachment to the coupling-bracket 3, and their construction and form are also such that by the interposition of spacing members 9 each of the beams is adapted to be interposed at any place in the gang of disks of a plurality-disk plow. The functions of the spacing members are to serve, first, as a means to which any given supplemental disk-carrying beam or the primary beam may be connected, the said spacing elements being provided with lipped flanges, against which the attaching ends of such beams are disposed and detachably but rigidly connected by means, for instance, of bolts; secondly, to so space apart the beams and the disks carried thereby that the disks will assume their proper line in the gang for the accurate accomplishment of the plowing operation, and, thirdly, by reason of the detachable connection between said spacing members and the beams to afford adjustment in respect of the distance between the disks. In some characters of soil where, for instance, the disks are adjusted to cut a twelve-inch furrow it is best that the disks shall be so arranged that the cutting action of one shall extend to or intersect the edge of the furrow cut by the preceding disk, in which event a spacing element of proper dimensions will be employed. In other characters of ground it is possible to economize time with a machine of a given number of disks by setting the disks farther apart by the substitution of a spacing element of greater dimension, the cutting-line of the disk in this case being such that a slight ridge is left between the furrows, which, however, falls in or breaks off. To permit of the substitution of spacing elements for this purpose of adjustment, it is important that the supplemental beams utilized in the machine shall be supported by and connected directly to the spacing elements rather than to each other, as this enables accomplishment of the adjustment spoken of merely by the substitution of spacing elements without the necessity of re-forming the beams or supplying in the complement of the machine beams of various shapes or dimensions. It is important also that the land-side-wheel axle-box 10 shall be detachable and capable of being shifted and attached to either of the supplemental beams, so that the land-side wheel 10^a may at all times be disposed as nearly as possible in the middle of the longitudinal extent of the machine to serve as a pivot-wheel to facilitate the turning of the machine in a small compass.

When a machine having a single disk is employed, the axle-box of the land-side wheel is connected to the beam thereof preferably by the same fastening means which connect the

beam to the coupling-block. When a three-disk plow, such as shown in Fig. 3 of the drawings, is utilized, it is desirable to shift the land-side wheel rearward to bring it more nearly in the position above indicated, and it is then attached to the intermediate beam 5^b by the means which connect said beam to the spacing member. It may be shifted to different positions, as may be found necessary or desirable, according to the number of disks used in the machine.

It will be observed from the drawings that when the disk is adjusted as a single-disk plow the primary beam is utilized, said beam being provided with means at its rearward extremity to receive the pivoted staggered caster-wheel 11, the office of which is to assist in the proper support of the beam and guiding of the machine. The primary beam when the machine is converted into a plurality-disk or gang-disk plow is disposed always at the rear, to the end that the attached caster-wheel may perform its stated functions. The said primary beam is, as before stated, so formed and constructed that it is adapted to be attached either to the coupling-bracket or to any spacing member interposed between the supplemental beams. The said supplemental beams, as also hereinbefore stated, are of substantially similar construction and shape, to the end that these beams and the disks carried thereby may be interposed at any position intermediate the coupling-bracket and primary beam. The front supplemental beam in the example shown in the drawings is slightly different in form from other supplemental beams that may be utilized, having a laterally-deflected intermediate portion 12, to which a spacing element is connected, and the corresponding spacing element has an approximately wedge formation. This form is perhaps preferable to bring the plowing-disks carried by the several beams approximately directly in the line of draft of the machine. Such form of the specified supplementary beam, however, is not essential, as sufficient deflection may be attained at the rearward ends of the beams to which the disks are connected. All the supplementary beams have substantially the same form and with the primary beam have identically the same form in respect of those portions which attach to the coupling-bracket or any interposed spacing member.

Starting with the supporting-wheels, tongue, and caster-wheel-carrying primary beam, a complete single-disk plow is presented capable of simple, rapid, and accurate conversion into a double, triple, or other gang or plurality disk plow by interposing one or more supplemental disk-carrying beams by reason of the construction of the forward end of the primary beam and the several supplemental beams, which enables them not only to be attached directly to the coupling element to constitute a single-disk plow, but also to be attached to any interposed supple-

mental beam, the primary beam always constituting the rear or caster-wheel-carrying beam of a gang or plurality disk plow. As a gang-plow the number of disk-carrying beams may be varied, as they are each similarly constructed and connect in like manner to the spacing members, and they may be interposed at any place in the gang intermediate the coupling element and the primary beam. The plow possesses also the valuable capacity of substitution of spacing members and shiftability of land-side-wheel axle-box hereinbefore set forth.

By my invention a disk plow is provided which is not only capable of conversion from a single to a gang or plurality disk plow, but by a novel construction, arrangement, and formation of parts exemplifies great economy and simplicity.

The coupling element or bracket shown is the one I prefer to use; but I wish it understood that I do not restrict myself to this particular arrangement of coupling element, as it is only essential within the scope of my invention that there be a coupling part adapted to connect with the several beams of the machine.

Other changes in detail and arrangement may be made without departing from the scope of my invention as set forth in the following clauses of the claim.

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

1. In a convertible disk plow, the combination with a coupling element, of a primary disk-carrying beam provided with a caster-wheel, and a supplemental disk-carrying beam, the supplemental beam constructed and adapted to detachably connect to the coupling element and the primary beam constructed and adapted to detachably connect directly to the coupling element and also to be connected to the supplemental beam, substantially as described.

2. In a convertible disk plow, the combination with a coupling element, of a primary disk-carrying beam provided with a caster-wheel and constructed and adapted to detachably connect directly to said element, and a supplemental disk-carrying beam adapted to be interposed between the primary beam and the coupling element and constructed and adapted to be detachably attached directly to said element, said primary beam being also constructed and adapted to be detachably

connected to the supplemental beam, substantially as described.

3. In a convertible disk plow, the combination with a coupling element, of primary and supplemental disk-carrying beams having similarly-constructed attaching ends, a caster-wheel carried by the primary beam, and means for detachably securing the primary or supplemental beams to the coupling element or the primary beam to the supplemental beam when the latter is included in the plow, substantially as described.

4. In a convertible disk plow, the combination with a coupling element, of primary and supplemental disk-carrying beams having similarly-constructed attaching ends, whereby they are adapted to be substituted one for the other at the coupling element, and means for detachably incorporating said beams in the plow organization, substantially as described.

5. In a convertible disk plow, the combination with a coupling element, of detachable primary and supplemental disk-carrying beams, having similarly-constructed attaching ends, and a detachable and shiftable land-side wheel adapted to be connected to either of said beams, substantially as described.

6. In a convertible disk plow, the combination with detachable primary and supplemental disk-carrying beams, having similarly-constructed attaching ends, a coupling element constructed to connect with either of said beams, and detachable spacing members interposed between the beams and to which the forward ends of the beams are connected whereby spacing adjustment between the disks is secured, substantially as described.

7. In a convertible disk plow, the combination with detachable primary and supplemental disk-carrying beams, having similarly-constructed attaching ends, a coupling element constructed to connect with either of said beams, detachable spacing members interposed between the beams and to which the forward ends of the beams are connected, and a detachable and shiftable land-side wheel adapted to be connected to either of said beams, substantially as described.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

MILTON T. HANCOCK.

Witnesses:

S. B. CANTEY,
WM. COPPS.