

W. PRICE.
Cotton Choppers.

No. 137,715.

Patented April 8, 1873.

Fig. 1.

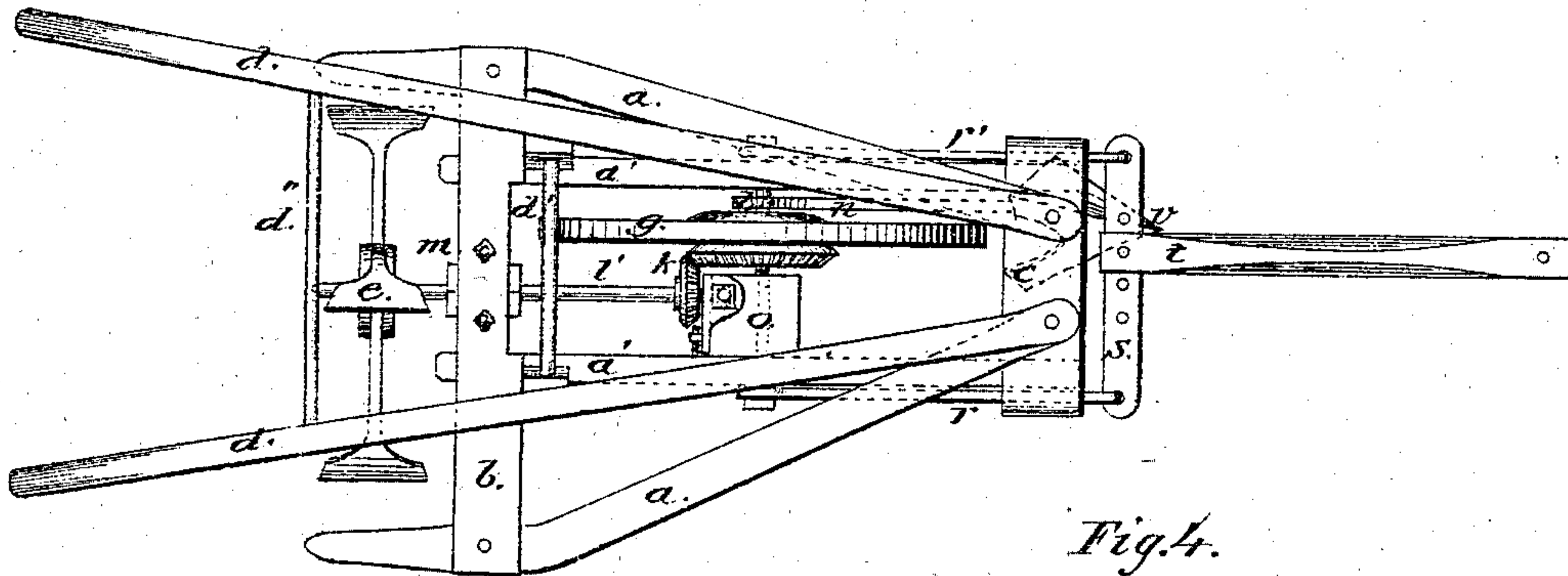


Fig. 4.

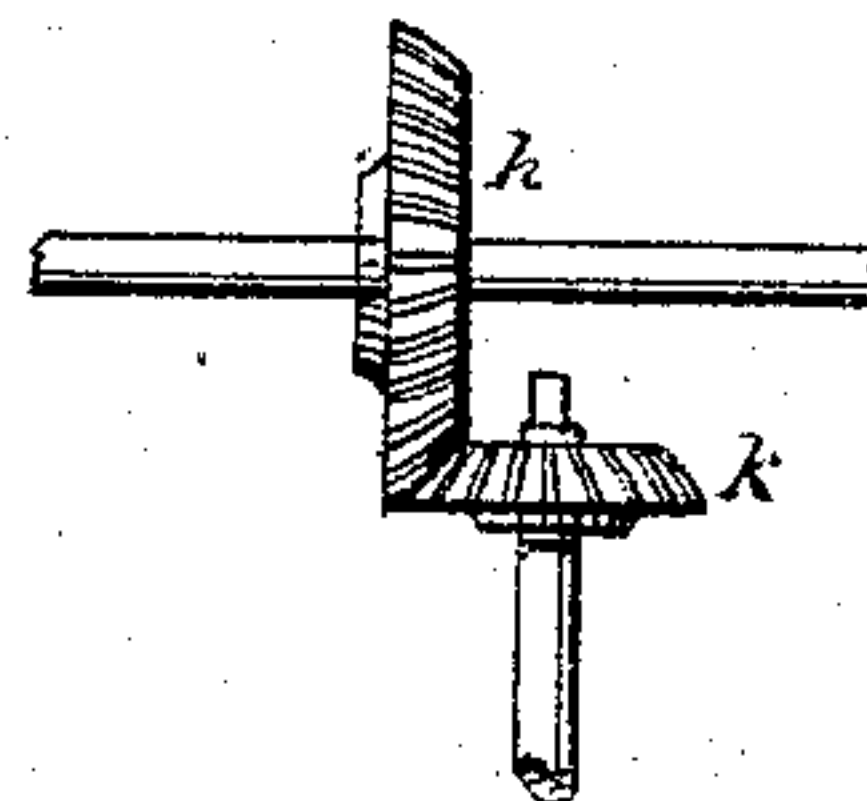


Fig. 2.

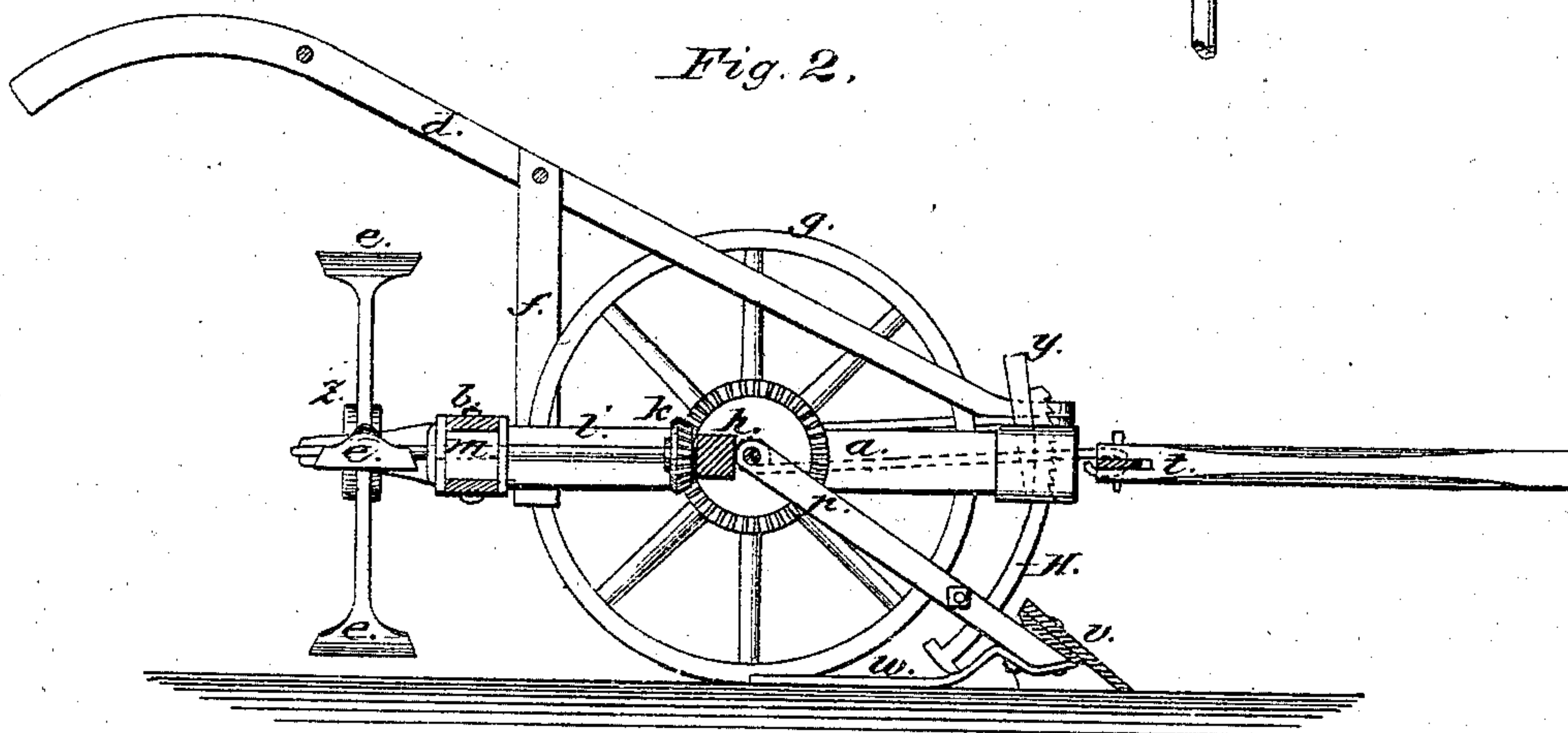
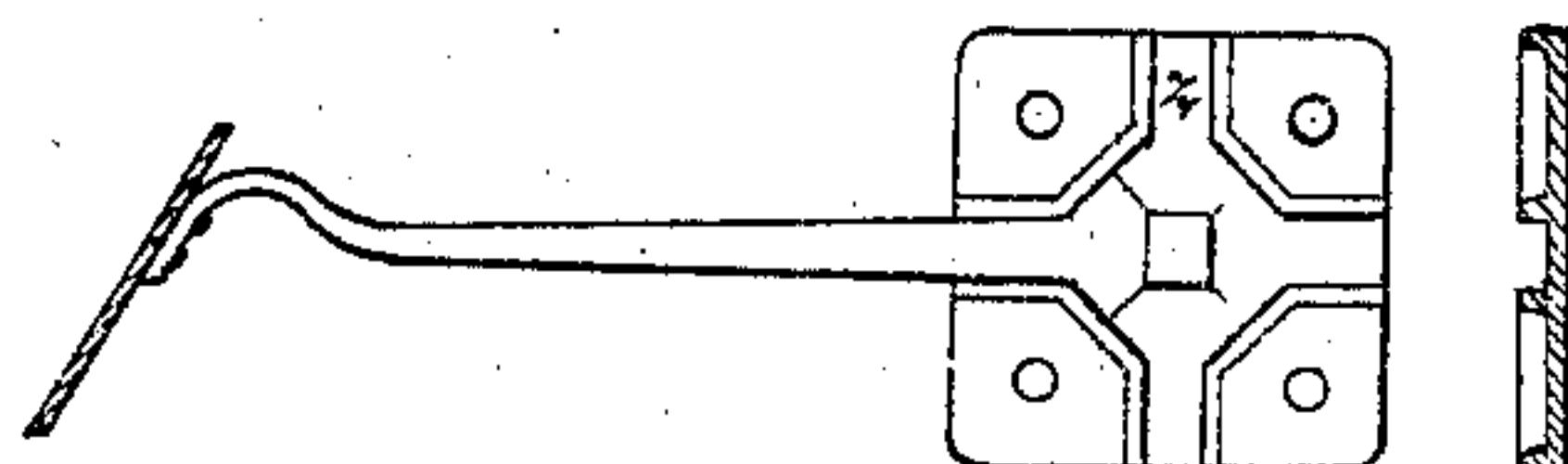


Fig. 3.



Witnesses:

Inventor:

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WHITMAN PRICE, OF MOUNT OLIVE, NORTH CAROLINA.

IMPROVEMENT IN COTTON-CHOPPERS.

Specification forming part of Letters Patent No. **137,715**, dated April 8, 1873; application filed October 28, 1872.

To all whom it may concern:

Be it known that I, WHITMAN PRICE, of Mount Olive, in the county of Wayne and State of North Carolina, have invented certain new and useful Improvements in Cotton-Choppers; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawing and to the letters of reference marked thereon which form a part of this specification.

Figure 1 is a plan view. Fig. 2 is a longitudinal sectional view. Fig. 3 is an enlarged detailed view of one of the choppers and the flanges for holding them. Fig. 4 is an enlarged view of the gear-wheels which operate the choppers, showing the construction of their teeth, which, instead of being like ordinary teeth, straight upon the face, are curved, thus allowing them to work when their shafts are not at right angles to each other.

This invention relates to certain improvements upon a cotton-chopper for which Letters Patent of the United States were granted me June 6, 1854; and it consists in the improved method of constructing and arranging the various parts of the machine, as will be hereinafter more fully explained.

The framing of the machine consists principally of two side pieces, *a a*, which are secured at their front ends to a cross-piece, *c*, and are connected near their rear by another cross-piece, *b*. To the upper side of this frame are secured two handles, *d*, connected by ties *d'*. They are further supported by upright pieces *f*, which are attached at their lower ends to the girts *a' a'*. These girts are supported at their ends by the cross-pieces *b* and *c*, and are employed for the purpose of carrying the bearings of the shaft *l*. This shaft *l* is placed at right angles to the longitudinal axis of the machine, and in such a position that the whole device when complete shall be nearly balanced thereon. The rods *r r'* are formed with a bearing at one end which encircles the outer ends of the shaft *l*. They then pass through the cross-piece *c* and are attached to the draft-bar *s*, which is perforated with a series of holes to enable the pole or

tongue *t* to be placed at any desired point, and securely fastened at that point by a bolt passing through both. This arrangement of the rods and draft-bar enables the operator to throw the machine to either side of a central line, as may be required by the work to be performed. An ordinary shovel-plow, *v*, of light construction, is attached to one end of the arms *p*, and in the rear of the plow, secured to the arms *p* by the same bolts which hold the plow, are two metal carrying-springs or shoes, *w*, which serve to steady its movements and prevent a tendency to enter the earth too deeply. A curved and serrated bar passes through the arms *p* in the rear of the plow, and, going up through a suitable mortise in the cross-piece *c*, is secured at any desired height by the key *y*.

It will be perceived that this bar *x*, although preventing the plow from penetrating too deeply, offers no resistance to its rising in case of meeting with an obstruction; neither does any other part of the mechanism, as the arms *p* are journaled at their upper ends to the shaft *l*. This provision is found to be of great value in working in new or rough lands.

The carrying-wheel *g* is secured upon the shaft *l*, as is also the bevel-gear wheel *h*. I sometimes make the central portion or hub of these wheels of wood, in order to secure lightness, the wooden hub being made so as to fill a cavity formed between the two, and in which it is securely held by bolting them together. Gearing into the wheel *h* is the bevel-pinion *k* upon one end of the shaft *l'*. This shaft, at the end carrying the pinion, is journaled in a movable bearing secured to the block *o* by a single bolt. A screw working in a nut attached to the bearing, and having its opposite end journaled in the girt *a'*, enables the operator to throw the pinion *k* into or out of gear with the wheel *h*. The shaft *l'*, in passing through the cross-piece *b*, rests in a movable journal-box, *m*, which is secured in any desired position by two screw-bolts passing through the two pieces of which the cross-piece *b* is formed. The journal-box and shaft being properly placed, the nuts upon the bolts are screwed up and the box thus held firmly in place. At the outer end of shaft *l'* is secured a flange, *z*, having recesses in its face for the reception of

the enlarged ends of the hoe-carrying arms *e*. A similar flange, but moving easily on the shaft *l'*, is provided, which, after the arms *e* have been inserted, is securely held in contact with them and the other flange by screw-bolts passing through suitable holes in both flanges. The hoes may thus be quickly changed by simply loosening the bolts which connect the flanges, and others inserted.

This method of construction also enables the operator of the machine to employ any number of hoes that he may deem necessary, as the flanges are constructed with four, eight, six, or twelve recesses, and each recess may be filled by the arm of a hoe, or any desired number may be inserted and the other spaces left vacant without in any way disarranging the operation of the machine.

It will be seen that this method of constructing and arranging the chopping-hoes and their operative mechanism allows them, together with the shaft upon which they hang, to be turned to the right or left side of the machine, or remain at right angles to the driving-shaft *l*, as the work in hand may require, and in order to admit of this movement the teeth of the wheels *k* and *h*, instead of having a straight face, are rounded in such a manner as to render these actions free when their shafts depart from a right angle.

The machine constructed as herein described will be found to possess many advantages, among which may be enumerated the nearly perfect balancing of the machine upon the

shaft *l*, which enables the operator to throw the chopping-hoes into and out of work by a comparatively slight muscular effort. Another advantage is, the great ease with which the machine is arranged to operate to either side of the direct line of draft; also, in the facility furnished for increasing or diminishing the number of chopping-hoes, or exchanging those which may be broken for others; also, in many minor points of construction, which enable me to present to the public a tool unsurpassed for the purposes for which it is designed.

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

1. In combination with shaft *l* the flanges *z* and chopping-hoes *e*, the flanges being provided with recesses for the reception of the enlarged end of the stems or arms of the hoes, in the manner shown and described, and for the purpose set forth.

2. The shovel plow *v*, spring-shoes *w*, and arms *p*, in combination with the serrated bar *x* and key *y*, substantially as and for the purpose specified.

3. The shaft *l* and rods *r r'*, in combination with the perforated draw-bar *s* and tongue *t*, substantially as and for the purpose set forth.

In testimony that I claim the foregoing I have hereunto set my hand.

WHITMAN PRICE.

Witnesses:

WM. R. SINGLETON,
M. K. CHANDLER.