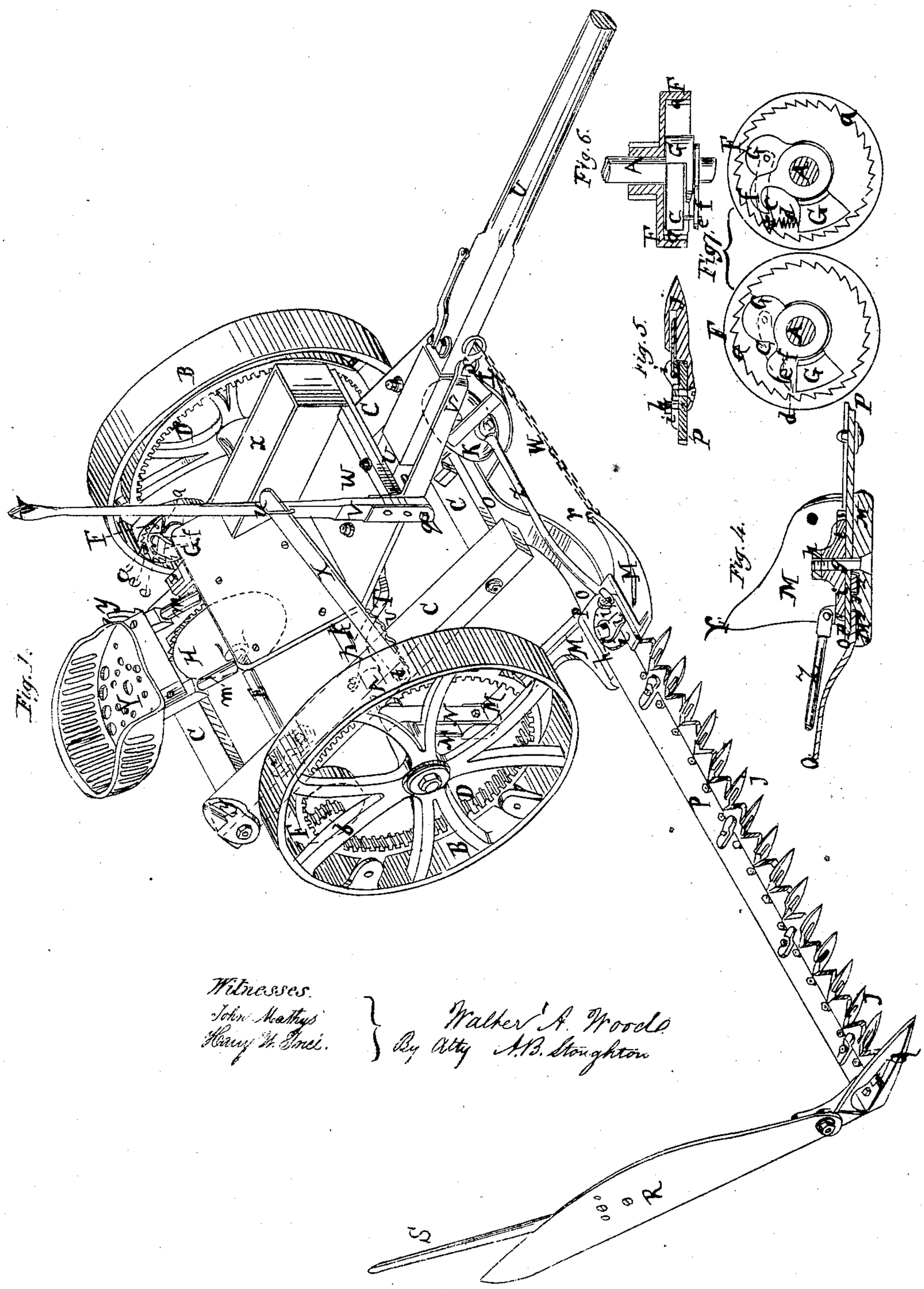
2 Sheets. Sheet 1.

W. A. Wood,
Mower.

No. 34995

Patented. April. 15, 1862.



Witnesses.
John Matthys
Henry H. Bond.

Walter A. Wood
By Atty N. B. Stoughton

2 Sheets Sheet 2.

W. A. Wood,
Mower.

No. 34,995 Patented April 15. 1862.

Fig. 2.

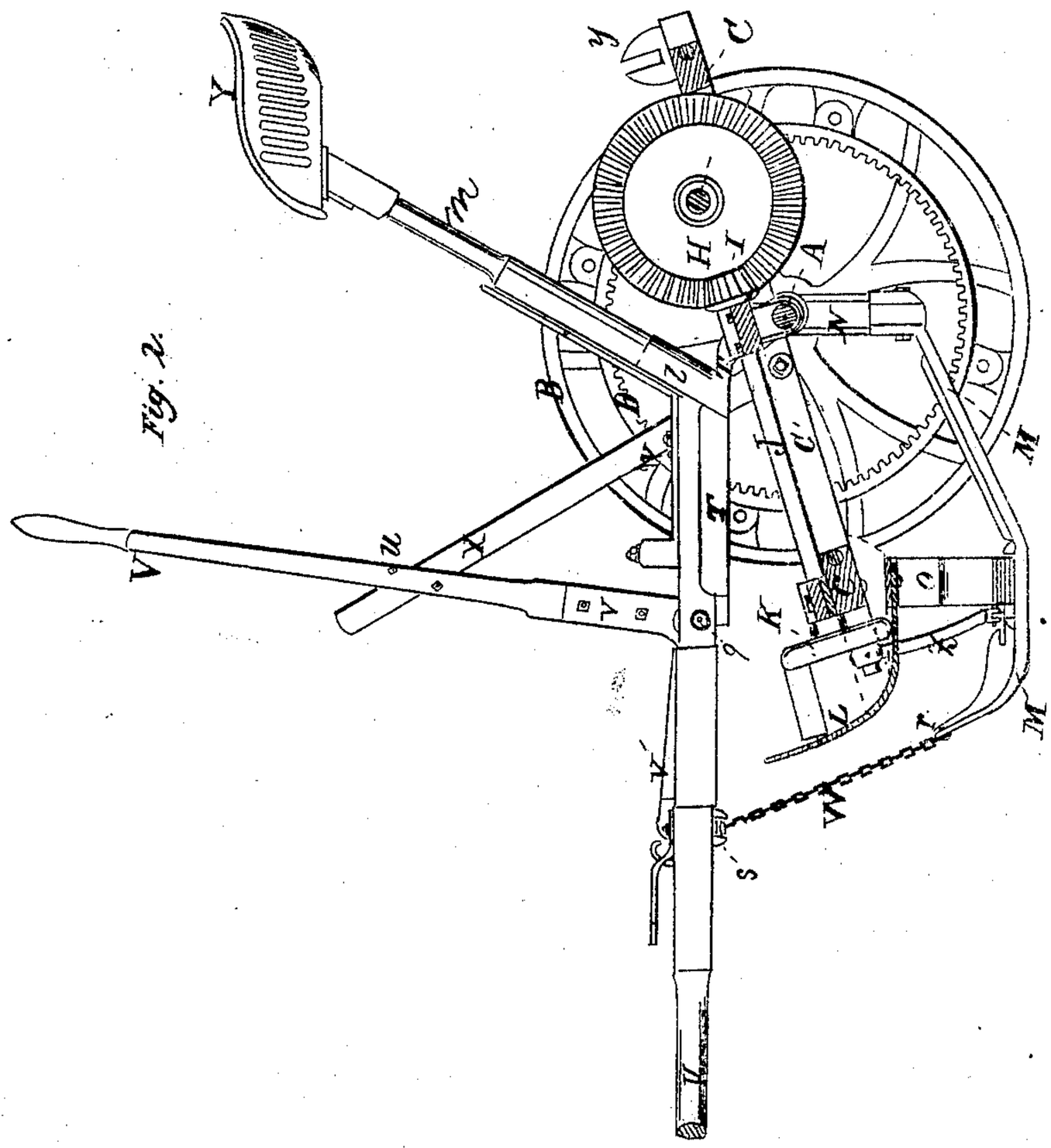
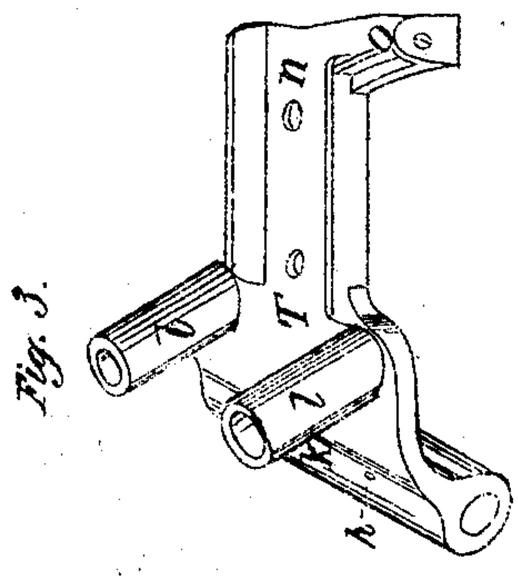


Fig. 3.



UNITED STATES PATENT OFFICE.

WALTER A. WOOD, OF HOOSICK FALLS, NEW YORK.

IMPROVEMENT IN HARVESTERS.

Specification forming part of Letters Patent No. **34,995**, dated April 15, 1862.

To all whom it may concern:

Be it known that I, WALTER A. WOOD, of Hoosick Falls, in the county of Rensselaer and State of New York, have invented certain new and useful Improvements in Grass-Mowing or Harvesting Machines; I do hereby declare the following to be a full, clear, and exact description of the construction and operation of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 represents a perspective view of the machine. Fig. 2 represents a longitudinal vertical section through the machine. Fig. 3 represents, in perspective and detached from the machine, the tongue and seat-plate. Fig. 4 represents a section through the inner shoe and the finger-bar and extension-bar, to show their attachments to each other, and on an enlarged scale. Fig. 5 represents a transverse section through the finger, finger-bar, sickle, and sickle-bar. Figs. 6 and 7 represent detached views of the clutching and unclutching mechanism detached from the machine, and on an enlarged scale, to better show its construction and operation.

Similar letters of reference, where they occur in the separate figures, denote like parts of the machine in all the figures.

My invention relates, first, to the manner in which I unite the extension-bar and the finger-bar to the inner shoe or runner; and it further consists in a seat and tongue-plate, made in one piece and hinged to the main axle, so as to freely move thereon.

To enable others skilled in the art to make and use my invention, I will proceed to describe the same with reference to the drawings.

A is a main axle, upon which are placed the two driving and supporting wheels B B, said wheels turning independent of the axle, like ordinary carriage-wheels. C is a rectangular main frame firmly connected to the main axle A, so that it can only turn as the axle turns in its supporting-wheels. The wheels B are furnished with internal gears, D, for giving motion to the sickle, as will be described.

On the rear portion of the main frame, and on the top thereof, is hung, in suitable boxes or bearings, (a shaft, E, which carries at each of its ends a drum, F, that has an internal ratchet, *a*, in it, and a spur-gear wheel, *b*, on its outer side,) which gears with the drive-wheel on that side of the machine. The drums F are loose on the axle or shaft E, but are made to turn with it under certain circumstances by means of a pawl that takes into the ratch-teeth thereof.

On the shaft E, so as to come within the drums F and be protected by them, there are secured in a permanent manner two blocks, G G, which blocks have pawls *c c* pivoted to them, that are, by means of springs *d d*, held into action with the ratchets *a a*, the inclination of the ratchets and pawls being such that as the machine is moved forward the drums will be held fast to and turn with the shaft E, but when moved backward the ratchets will slip over or past the pawls, the springs *d* readily yielding for this purpose.

The pawls *c c* have pins *e* set in them, and upon the shaft E are hung loose hooks *f*, which will take over said pins and hold the pawls out of gear with the ratchets, and thus the machine may be moved to or from the field without running the gearing. The object in making the hooks *f* loose is that they may be easily and readily swung to and around the pins to hold the pawls. The operation of these hooks may be seen in Fig. 7, where one of them is shown as connected with and another as disconnected from the pins. The power is taken from the main drive-wheels behind the main axle, because it tends to keep down the front of the frame, and the parts carried there close to the ground. The shaft E is hung above the main axle and on top of the main frame, so that the spur-gears and the ratchets may be high enough not to wind in or be clogged by the cut or other grass.

On the shaft E there is fastened a bevel cog-wheel, H, that takes into and turns a bevel-pinion, I, on a shaft, J, that extends forward, and has upon its forward end a crank-wheel, K. It will be perceived that the main frame C inclines very much from rear to front. This is done, as before stated, for the purpose of getting a good position for the shaft E, where its gears will not get choked by winding up the grass, and then sloping it, (the frame,) so as to be able to gear directly from the crank-wheel to the sickle-bar, and as nearly on a

plane with the sickle-bar as possible, having due regard to the protection of the crank-wheel from the grass or any intervening obstacle in its path. This steep inclination of the main frame gives a corresponding inclination to the shaft J, supported upon it, said shaft getting its motion high up on the frame, where the gears are out of the way of the grass, and transmitting motion to the sickle-bar low down and as nearly in the plane of said bar as it is safe to go and avoid stones, stumps, &c.; and, as a further protection to the crank-wheel, a shield-plate, L, may be used under and in front of it.

M is a shoe or runner, the rear of which is suspended to the axle A by a stirrup-strap, N, that will allow it some vertical motion or play. An extension-bar, O, is secured to the stubble side of the main frame, and underneath said main frame, and curving downward and outward toward the shoe M, and fits into a recess, 2, Fig. 4, formed in the shoe, a dowel-pin, 3, formed in the shoe and in the recess, passing through that end of the extension-bar, which gives it a firm position in the shoe. The finger-bar P is then laid in its recess and overlies the end of the extension-bar O, and by passing through the shoe and through the finger-bar, the screw *g*, and running down the nut *h*, a firm union of the finger-bar, extension-bar, and shoe or runner is made, the washer *i*, between the nut and finger-bar, being of considerable breadth and affording a back bearing to the sickle-bar, as also a top support to keep it from rising from the finger-bar.

The sickle-bar, as shown in Fig. 5, rests and moves upon the finger-bar, and the flanges on the guards *j* close up the space in front of the sickle-bar, so that no grass or other material can work in under the sickle-bar.

Q is an outside shoe, and R a track-clearer hinged thereto, having a handle or lever, S, for raising it up, and also for directing the grass farther away from the next return swath of the machine.

T is a seat and tongue-plate, cast in one piece, and having a sleeve, *k*, thereon, which slips over the main axle A. This plate is shown separate and detached in Fig. 3. It has sockets *l l* to receive the seat-supports *m m*, and a recess, *n*, to receive the end of the tongue U; and it may have an arm, *o*, to which the lever V is hung, for raising and lowering the cutting apparatus. The sleeve *k* serves to hinge the plate to the main axle, and may have oil-holes *p* for oiling it and allowing it to move freely thereon. The lever V is pivoted at *q* to the seat and tongue-plate T, and has an arm, V′, projecting from it, to the point of which arm a chain, W, is connected by one of its ends, the other end thereof being connected to the turned-up point *r* of the shoe or runner M. The point of the arm V′ of the lever V rests upon a support, *s*, attached to the tongue, and thus, by means of the chain W, which can be lengthened or shortened by letting out or taking up its links, defines the extent to which the cutting apparatus may be let down, while it may be raised up at any time by the lever V. A brace, X, is pivoted to the main frame, as at *t*, and it passes through a staple, *u*, on the side of the lever V, and has near its heel a series of catches, *v*, which, when the lever is brought down to raise up the cutting apparatus, will bring the staple *u* down, so that it may be caught and held by one of the hooks or catches *v*, and thus hold up the cutting apparatus. The driver from his seat Y may thus raise up and the brace X hold up the cutting apparatus; or he may, by detaching the lever from the brace, let down the cutting apparatus to its proper cutting position.

w is the foot-board; *x*, the tool-box; and *y y* are two slotted bolsters or brackets for carrying the finger-bar when it is desirable to detach it from the shoe and carry it on the main frame.

z is the pitman for connecting the sickle-bar to the crank-wheel to give it its motion.

Having thus fully described the nature and object of my improvements, what I claim therein as new, and desire to secure by Letters Patent, is—

1. Uniting the exension-bar to the shoe by means of a socket and pin, so as to underlie the finger-bar, that is also united to said shoe, substantially as described.

2. The tongue-plate T, provided with a sleeve, *k*, and sockets *l l* or seat-supports, cast in one piece, as herein described and represented, and for the purpose stated.

WALTER A. WOOD.

Witnesses:
W. HOWARD BURCHARD,
LEONARD KING.