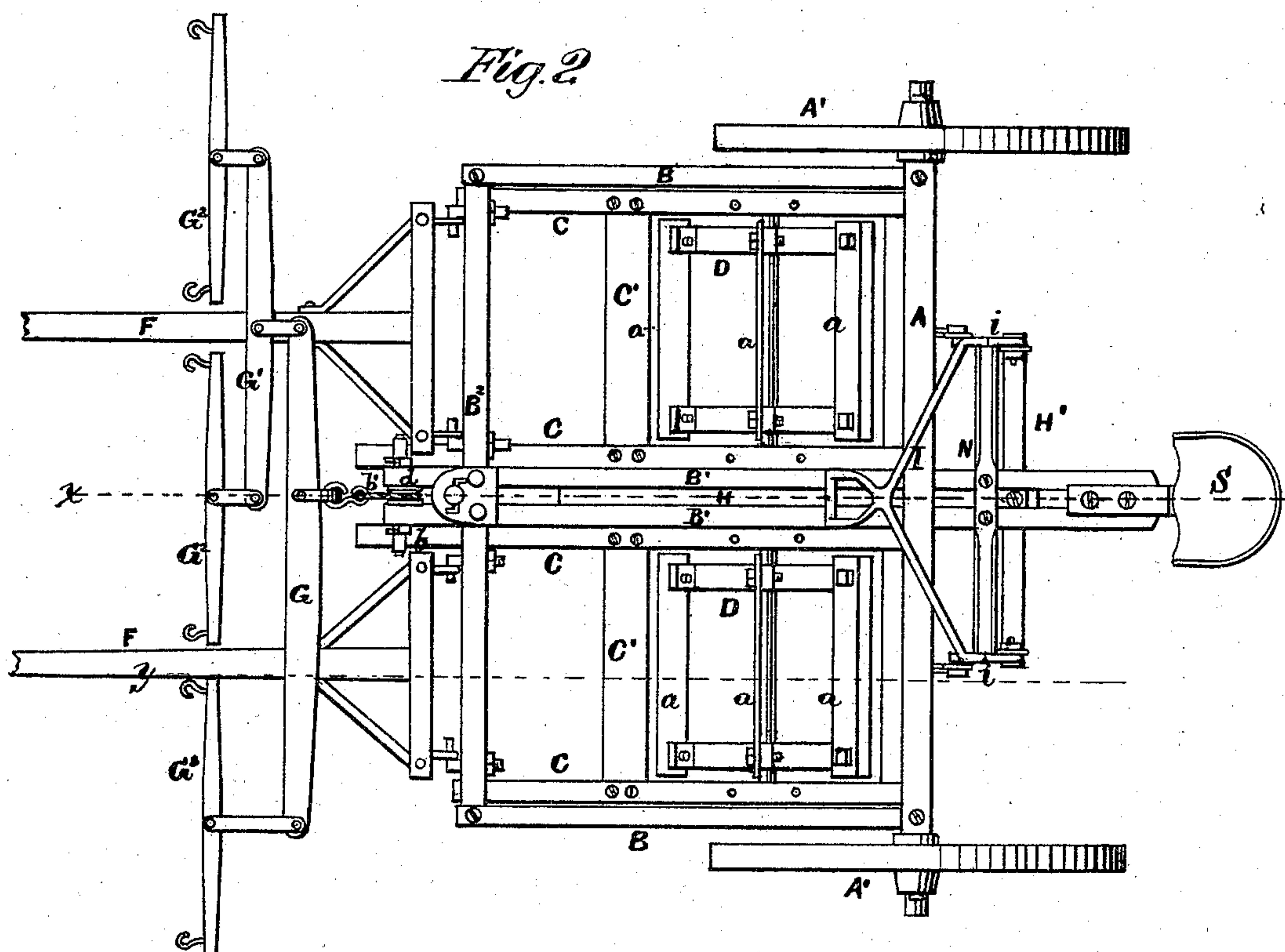
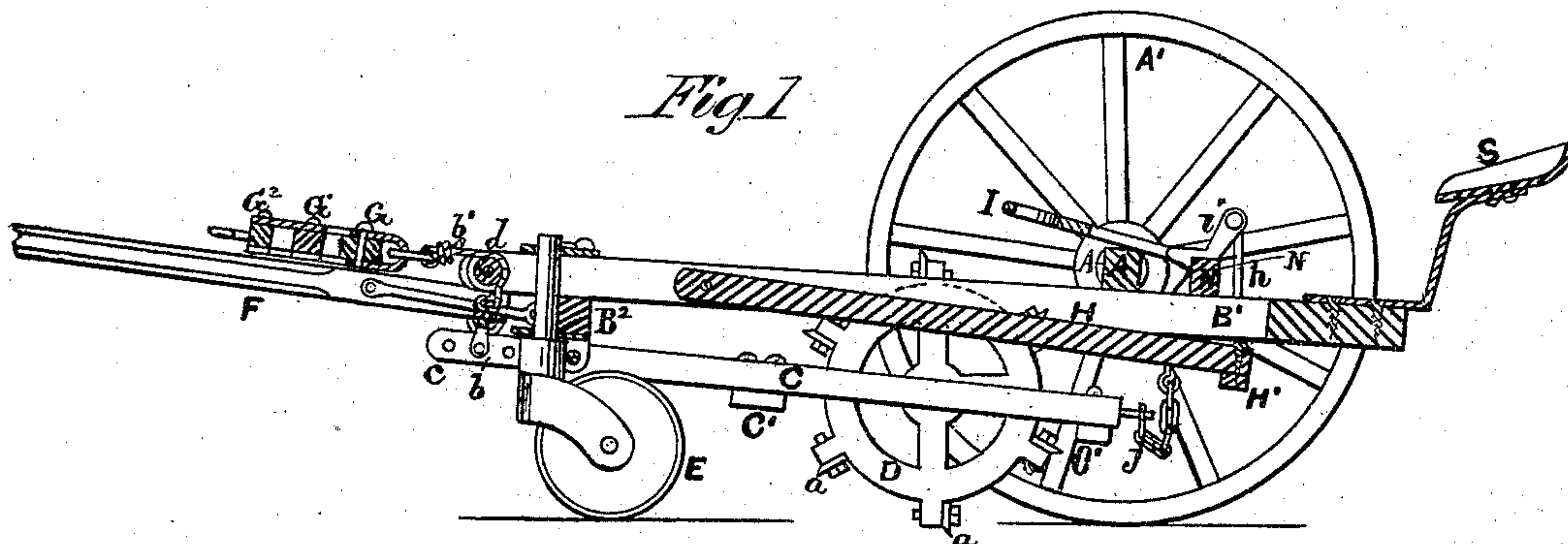


J. ARMSTRONG & G. ARMSTRONG.

Stalk-Cutters.

No. 137,281.

Patented April 1, 1873.



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Fig. 3

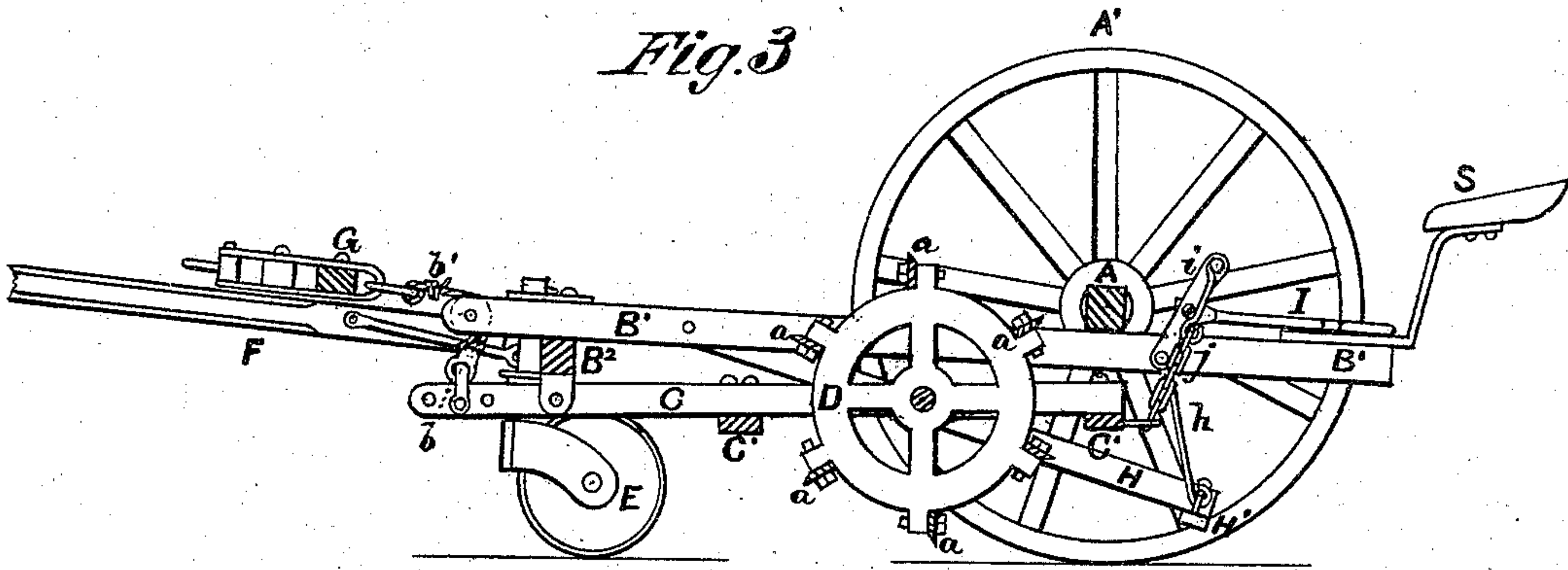


Fig. 4

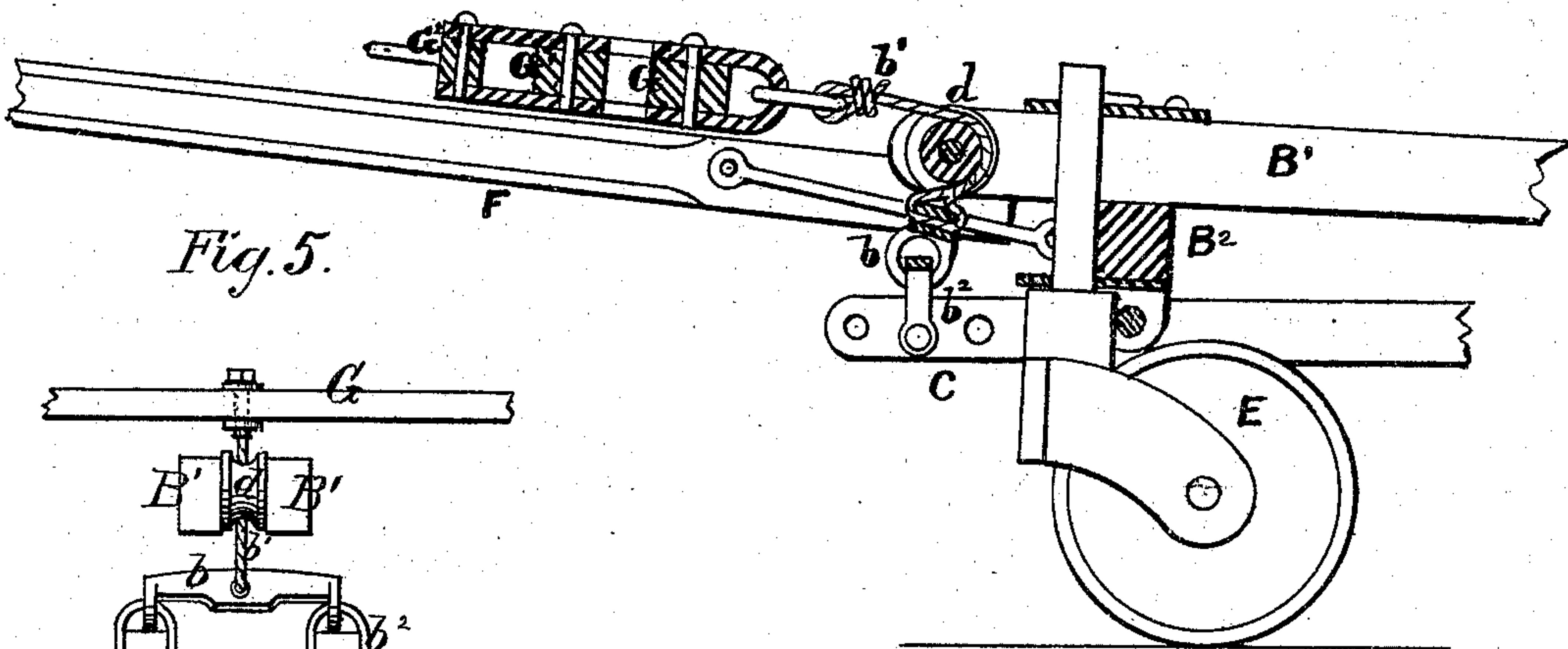
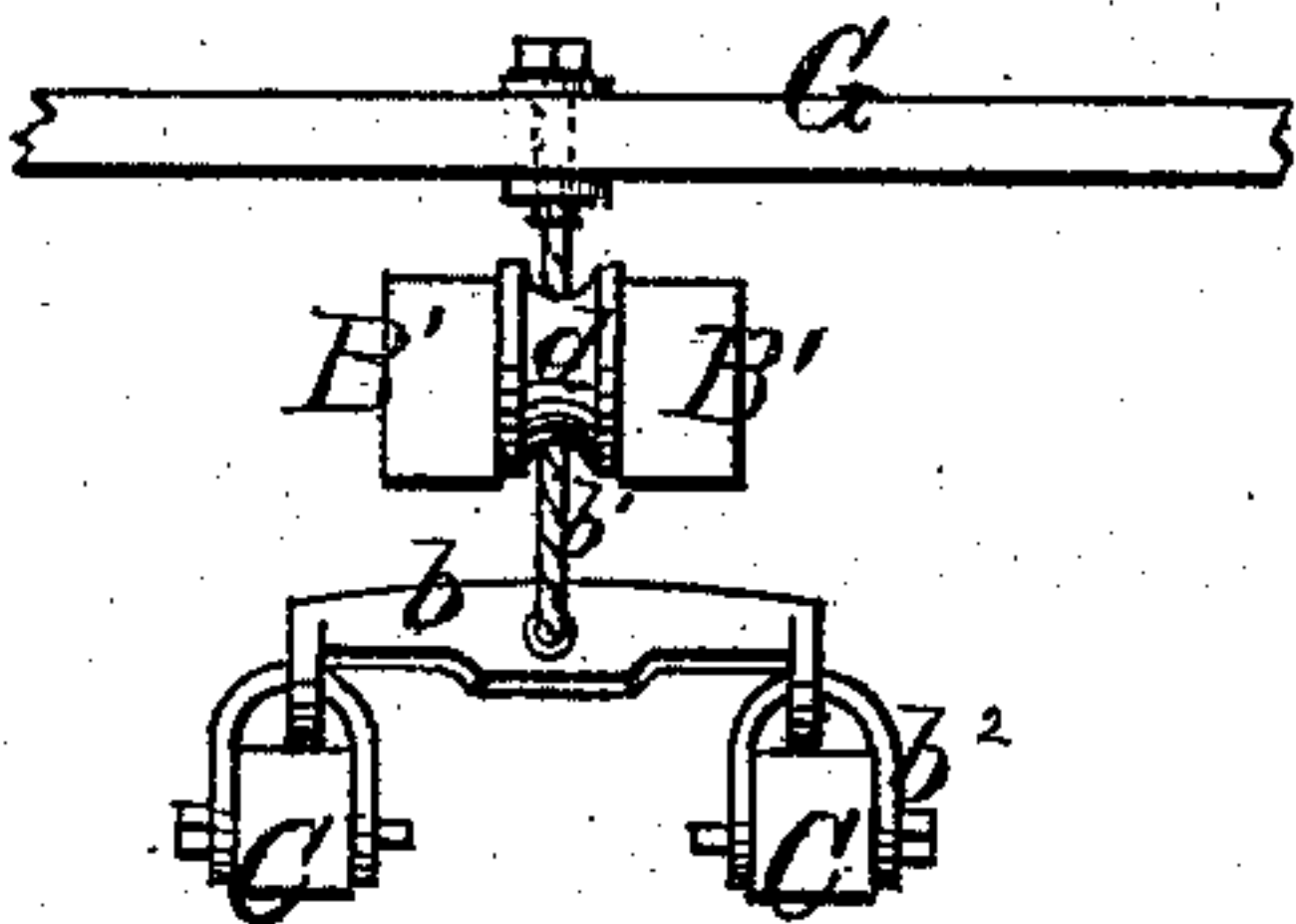


Fig. 5.



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UNITED STATES PATENT OFFICE.

JAMES ARMSTRONG AND GEORGE ARMSTRONG, OF ELMIRA, ILLINOIS.

IMPROVEMENT IN STALK-CUTTERS.

Specification forming part of Letters Patent No. 137,281, dated April 1, 1873; application filed October 28, 1872.

To all whom it may concern:

Be it known that we, JAMES ARMSTRONG and GEORGE ARMSTRONG, of Elmira, Stark county, State of Illinois, have invented certain novel Improvements on Two-Row Stalk-Cutters; and we do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing making part of this specification, in which—

Figure 1, Plate 1, is a section taken longitudinally and vertically through the center of the machine. Fig. 2, Plate 1, is a top view of the machine complete. Fig. 3, Plate 2, is a section taken longitudinally and vertically through the machine in the plane indicated by dotted line *y*. Fig. 4, Plate 2, is an enlarged sectional view of the triple-tree and its attachment to a yoke which connects the inner beams of the two cutter-carrying frames. Fig. 5, Plate 2, is a front end view, showing how the yoke is connected to the inner beams of the two cutter-carrying frames.

Similar letters of reference indicate corresponding parts in the several figures.

This invention relates to certain novel improvements on machines for chopping up cornstalks in the field, so that they can be easily plowed in, wherein we employ a carriage, which is mounted on three wheels, one of which is a caster or swivel wheel, and combine therewith rotary chopping-blades applied to circular heads, which are mounted on independent vertically-vibrating frames, which are raised and lowered by means of a compound lever, all as will be hereinafter explained.

The following description of our invention will enable others skilled in the art to understand it.

In the accompanying drawing, A represents the axle-tree of two transporting-wheels, A' A', and B B B¹ B¹ represent four beams, which are secured rigidly to the axle-tree, and which extend forward thereof, and are connected together by means of a transverse beam, B². These parts constitute a carriage-frame, which is supported at its front end by a caster or swivel wheel, E. To the lower edge of the front beam B² four bearings are secured, to which two cutter-carrying frames, C C, are

hinged. These frames extend back as far as the axle-tree A below the same, and are strengthened by transverse pieces C' C', between which rotary cutters are applied. The cutters or choppers are narrow blades *a* secured to lugs on the peripheries of circular heads D D, which heads are secured by horizontal transverse shafts, that have their bearings in the longitudinal beams of their respective frames. The cutter-drums, with their frames, are thus allowed to rise and descend and accommodate themselves to inequalities of surface passed over independently of each other. The cutters are held down to their work by their own gravity, and also by the following means: The two inner longitudinal beams C C of the cutter-carrying frames extend forward of the front beam B² of the main frame, and have attached to them, by means of loops *b*², a transverse yoke, *b*. This yoke *b* is connected to a triple-tree, G, by means of a chain, *b*¹, which passes over a pulley, *d*, that is between the front ends of the two frame-beams B¹ B¹. These two beams B¹ are arranged on each side of the transverse center of the main frame and extend a short distance in front of the transverse beam B², as shown in the drawing.

It will thus be seen that the force exerted by the team in drawing the machine will operate to lift the front ends of the inner longitudinal beams C C, and of course depress the two cutter-carrying frames back of their pivotal connection to the beam B².

Supplemental holes are made through the front ends of the inner beams C C, by which the loop *b*¹ of yoke *b* can be adjusted forward or backward, increasing or diminishing the depression on the rear portions of the cutter-carrying frames, as circumstances may require. The triple-tree G has attached to one end a double-tree, G¹, and to the other end a single-tree, G³. To the ends of the double-tree single-trees G² are attached, and beneath this double-tree a pole or tongue, F, is connected by hinges to the front beam B² of the main frame, so that the two horses which are hitched to the single-trees G² G² will be yoked to the tongue, and will thereby be afforded a purchase in guiding the machine and turning it at corners. By means of

the swivel-wheel E and hinging the tongue F, the weight of the front part of the machine is taken off the horses' necks. The chain b^1 is attached to the triple-tree nearest that end to which the double-tree is attached, so that three horses are used for drawing the machine, and arranged so as to walk between the rows of standing stalks.

The arrangement of the triple-tree, double-tree, and single-trees is such that the draft is equalized on the animals, although all pull on the central chain b^1 . Another tongue can also be used on the other side of the machine, thus using two tongues equally as well as one for three horses, if desired, as shown in Fig. 2.

If only two horses are used it will be necessary to attach the tongue to the beam B^2 , and employ a long evener and neck-yoke so as to allow the horses to walk outside of the two rows of stalks which are being cut.

For the purpose of enabling a person sitting upon the seat s to readily raise or lower the rear ends of the cutter-carrying frames C, we employ the following means: H represents a lever, which is pivoted at its front end near the front ends of the beams C C of the draft-frame and between these beams. This lever extends back, and has a cross-bar or treadle, H' , secured to it, to the extremities of which rods $h h$ are linked the upper ends of arms $i i$. Arms $i i$ are formed on a yoked or arched lever, I, which is pivoted to the extremities of a cross-bar, N, and which has a looped handle formed centrally on it. The upper ends of the arms $i i$ are connected by chains j to the rear cross-beams C' of the two frames C C.

The words upper and lower, used above, refer to the positions of the ends of the arms $i i$ when the cutter-frames C C are raised.

The fulcrum-bar N is so arranged that when

the arched lever I is drawn back and depressed, as shown in Fig. 3, it will be locked in this position by reason of the chains j or the weight of the cutter-frames C falling back of the pivots of said arched lever.

It will be seen that the attendant can exercise his own weight on the treadle H' ; at the same time employ the lever I to raise the cutters and their frames free from the ground.

It is obvious that the machine would turn as well if the caster-wheel E was arranged in rear of the cutters, and the axle-tree of the two large transporting-wheels A' was arranged in front of the cutters.

What we claim as our invention, and desire to secure by Letters Patent, is—

1. A foot-lever in combination with a self-locking hand-lever, I, for the purpose and substantially as described.

2. The tongue hinged directly to the main frame, in combination with the swivel-wheel, the tongue and swivel-wheel being on the same end of the frame, so as to turn the machine bodily when the cutter-heads are raised, substantially as described.

3. The loops b^2 and yoke or coupling b attached to the front ends of both cutter-carrying frames C, in combination with the draft-chain b^1 and pulley d , whereby the draft of the team will act to depress the cutters, substantially as described.

4. The main frame mounted on three transporting-wheels, the forward and middle one of which is a swivel-wheel, and runs in the center between the rows which are being cut, substantially as described.

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