

S. S. Bartlett,
Harvester

2 Sheets- Sheet 1.

No 34,545.

Patented Feb. 25, 1862

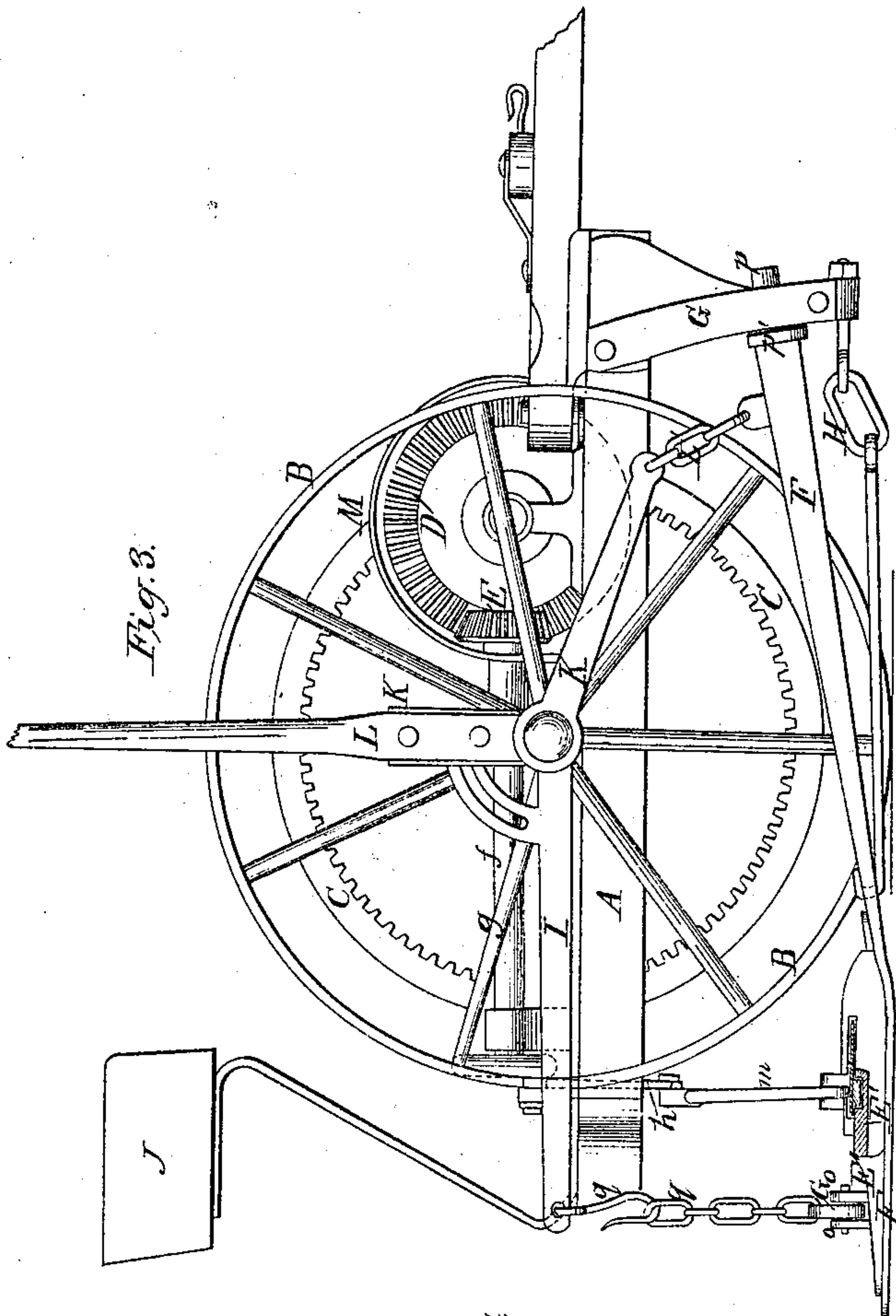


Fig. 3.

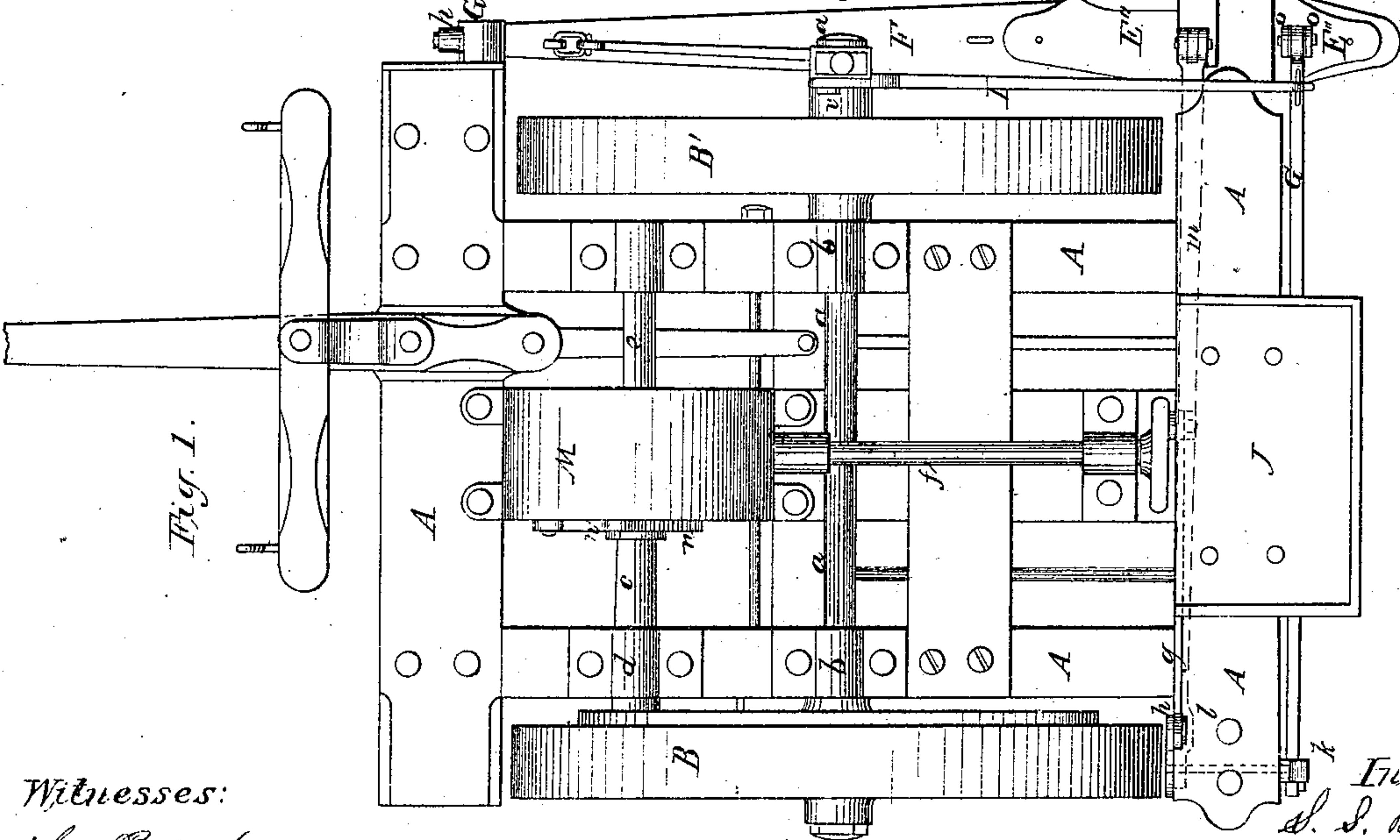


Fig. 1.

Witnesses:
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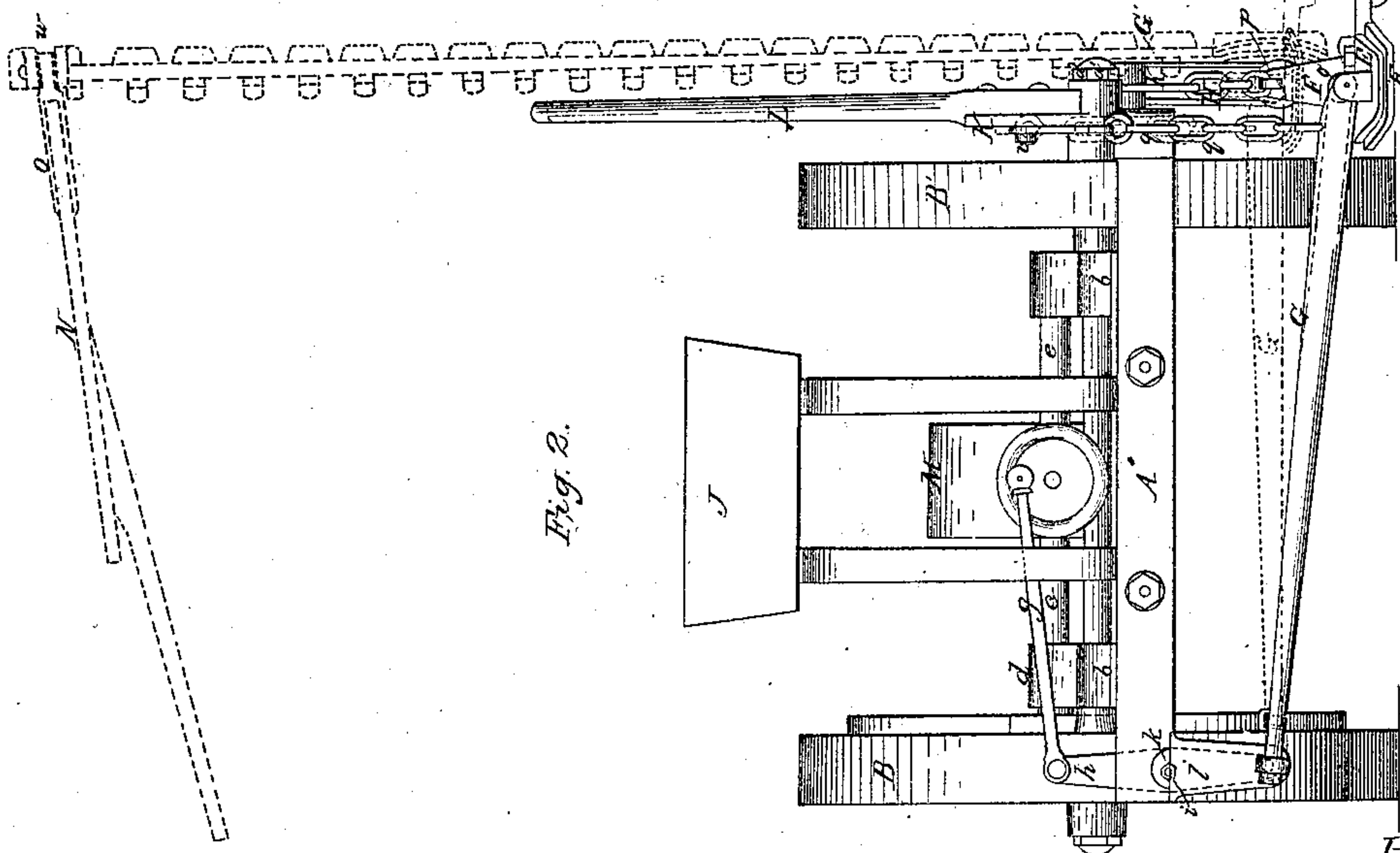
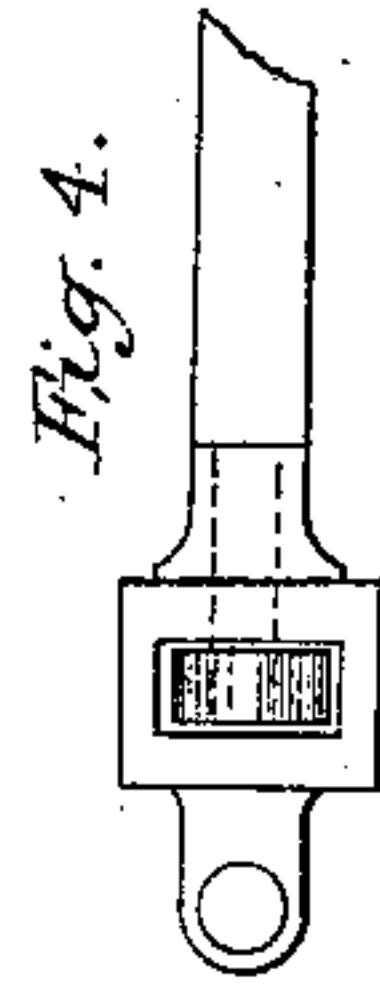
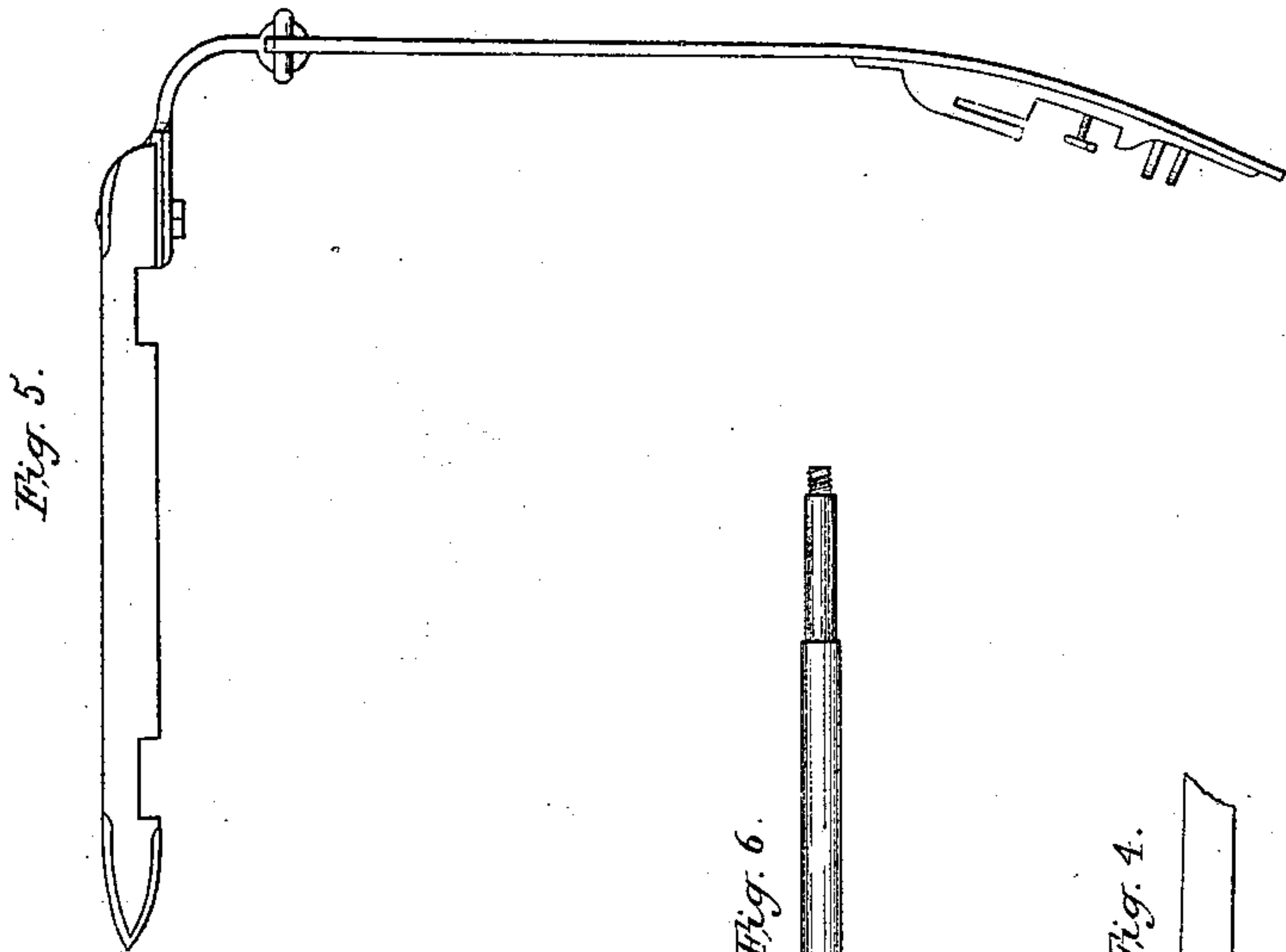
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2 Sheets - Sheet 2

N^o 34,545.

Patented Feb. 25, 1862.



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UNITED STATES PATENT OFFICE.

STEPHEN S. BARTLETT, OF PROVIDENCE, RHODE ISLAND, ASSIGNOR TO HIMSELF AND THOMAS H. DODGE, OF WASHINGTON, D. C.

IMPROVEMENT IN HARVESTERS.

Specification forming part of Letters Patent No. 34,545, dated February 25, 1862.

To all whom it may concern:

Be it known that I, STEPHEN S. BARTLETT, of Providence, in the county of Providence and State of Rhode Island, have invented certain new and useful Improvements in Harvesters; and I do hereby declare that the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 represents a plan view of a machine embracing my said improvements. Fig. 2 represents a rear view of said machine, the finger-beam being shown in three different positions. Fig. 3 represents a side view of the machine, the finger-beam in section; Fig. 4, a detached part in section; Figs. 5 and 6, modifications of some of the parts.

In the accompanying drawings, A A A A represents the main frame, supported by two wheels, B B', the frame being fast on axle *a*, which turns in bearings or boxes *b b*, while the latter, B', turns loose on the end of axle *a*. To the inside of wheel B is fast a spur-gear, C, which gears into a small spur-gear on a tubular shaft, *c*, which turns in box *d*, and on one end of shaft *c*, to the middle of which is fast a bevel-gear, D, which gears into a small bevel-gear, E, on the front end of crank-shaft *f*, which operates connecting-rod *g*, connected at its outer end to the top of a rocker-arm, *h*, fast on a spindle, *i*, which is free to turn in the upper part of the metal stand *j*, and being held therein by a nut, *k*, on its rear end. To the lower end of rocker-arm *h* is hinged the swiveled end *l* of the pitman *m*, which operates the cutter-bar and cutters.

On the inner end of tubular shaft *c* is a ratchet-wheel, *n*, into which a pawl, *n'*, on the outside of the bevel-gear D, takes, so that gear D, its shaft, and the cutters are operated only when the machine advances, the ratchet-wheel slipping under the pawl when the machine is backed.

The team is to be attached to a rigid tongue, fastened to the front of the frame, and which in the drawings is represented broken off.

The heel of the finger-beam E' is fastened in a slot in a piece, E'', fastened on the rear top of the drag-bar F, while one end of a brace-bar, G, is hinged between ears *o o* of the piece E''. The

other end of said brace-bar extends along in rear of the machine, and is fast in a wrist that turns in the lower end of stand *j*. The front end of drag-bar F is inclined upward, as seen in the drawings, and having a tubular friction-collar, *p*, which plays or works in a curved slot in a metal guide-piece, G', fastened to the inner projecting end of the main frame. A link device, H, is fastened to the lower end of G', and also hooked into or fastened to the rear of the drag-bar, the link device H being loose, when the machine is backed, as indicated in Fig. 3, and in which case the rear of G' comes in contact with the collar part *p'* of *p*, but when the machine is drawn forward the link device is straightened, and the drag-bar draws back just enough to let collar part *p'* play free of G', so that only the tubular part of *p* comes in contact with G', thus obviating friction. The finger-beam thus connected to the main frame can rock or roll on a line at right angles to the line of motion of the machine, and also on a line parallel to the motion of the machine; or the finger-beam can rise bodily, or at either end, to conform to the inequalities of the ground over which it may be drawn, and that, too, independent of the up and down motion of the main frame.

In order to prevent the heel end of the finger-beam from dropping too low, and also to enable the attendant to adjust the pressure thereof on the stubble and ground, a lever, I, is hinged at its forward end by being slipped onto the end of the shaft or axle *a*, which projects beyond the hub of wheel B' for that purpose, while the rear end of said lever I extends back over and rests on the rear inner corner of frame A, and is provided with a hook, *q*, into which one of the links of chain *q'* can be hooked, the lower end of the chain being fastened to the brace-bar G in any suitable manner. It will thus be seen that the height of the heel of the finger-beam can be regulated at pleasure by simply changing the hook from one link to another.

For the purpose of enabling the driver from his seat J to raise the heel of the finger-beam, or to turn up the front of the guards and drag-bar, the front end of lever I is provided with a circular slot, *s*, in which works a pin projecting from the inner side of a right-angled

lever-piece, K, which is also loose on shaft *a*, nut *a'* on the end of shaft *a* preventing both levers from working off. The upper outer side of K is cast with a recess to receive the long arm or lever L, which is bolted or fastened thereto, while the outer arm K' extends forward, and is connected to the front of the drag-bar by a chain device, L', whereby the driver, by taking hold of the upper end of lever L and drawing it back, can elevate the front of the drag-bar to the top of the slot in the piece G', which may be of any desired height, in this case it being quite as high as the bottom side of the frame A. This arrangement provides for elevating the points of the cutters and fingers to pass over slight elevations in the ground, while the heel of the finger-beam is sustained by arm or lever I, resting on the rear of the frame. During the above operation the pin *v* moves back freely in the curved slot *s*, but when lever L is turned in the opposite direction or forward, the pin moves back in said slot until it fetches up against its upper end, when the rear end of lever I is raised, together with the heel of the finger-beam and cutter-bar.

The chain device L' may be arranged similarly to that at the rear end of I, so that the height or elevation of the front of the drag-bar and the fingers can be adjusted for continued use on rough or very uneven ground.

M is a shield to protect the gearing.

In Fig. 4 the outer swiveled end of the pitman is shown on an enlarged scale.

Fig. 5 represents another mode of connecting a drag-bar to the front piece of the machine, the parts being shown turned up edgewise. In the use of this device the front piece of frame A, as shown in Fig. 1, is to be removed, together with the axle *a*, and a shorter axle (seen in Fig. 6) substituted therefor. The

arrangement of elevating-levers above described would in this last case be removed and not used.

The track-board N is fastened in a slot or recess in the metal hinged piece O, which has a knuckle, *w*, on its lower side to strike against the shoe to which O is hinged, and thus prevent the rear end of the track-board N from falling into deep holes or from hanging down too low when the finger-beam is raised. One mode of applying said improvements has now been described.

What I claim under this patent is—

1. Supporting the rear end of a drag-bar arranged to run on the ground at the side of the machine, with its rear end free to rise and fall by means of an adjustable arm or lever, whose front end is supported by the axle or journal of the main wheels, and on the outside of the inner wheel, substantially as described.

2. The combination, with the inner end of the axle or journal of the main supporting-wheels of a grass-harvester, of an elevating arm or lever, whereby the rear end of its hinged drag-bar can be raised and lowered, together with the heel of the finger-beam, by the driver from his seat on the machine, while the elevating arm or lever has a firm support independent of the frame, substantially as described.

3. The combination of the drag-bar and compound-lever arrangement with the main frame and finger-beam of the machine, substantially as and for the purposes set forth.

In witness whereof I have hereunto subscribed my name.

STEPHEN S. BARTLETT.

In presence of—

F. W. MINER,
M. D. DRAKE.