E. W. Skinner.

Mower.

No. 81221 Patented Aug. 18, 1868.

Fig. 1

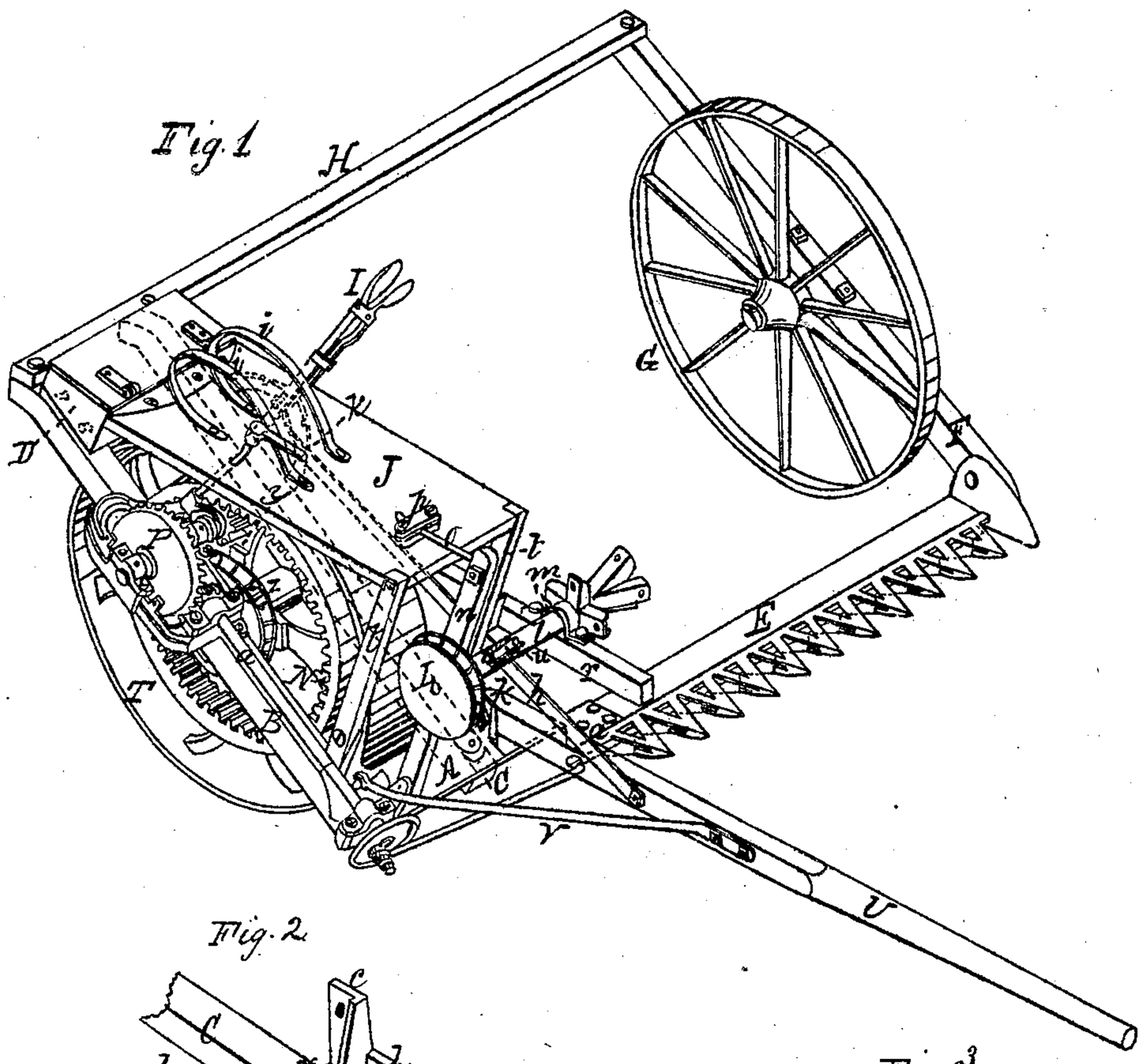


Fig. 2.

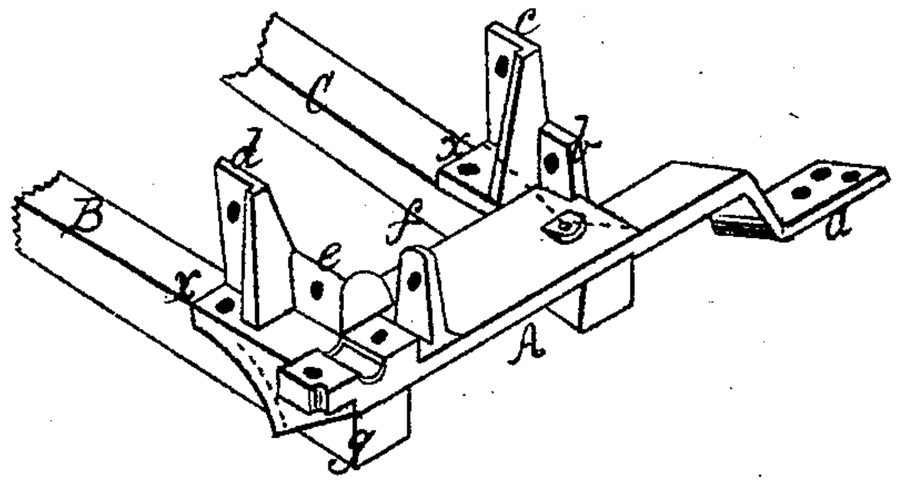


Fig. 3.

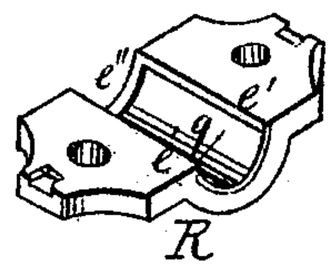
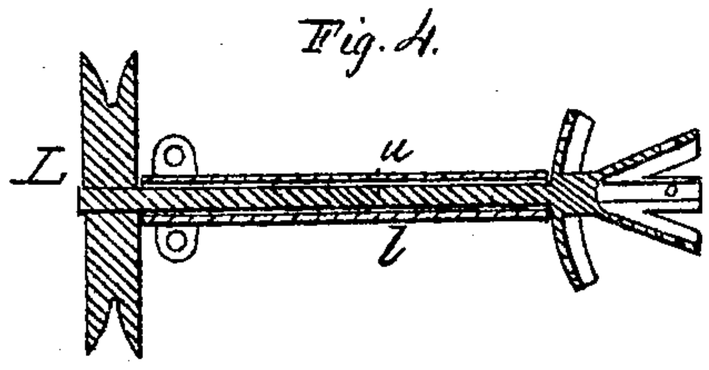


Fig. 4.



Witnesses
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UNITED STATES PATENT OFFICE.

ELISHA W. SKINNER, OF MADISON, WISCONSIN.

IMPROVEMENT IN HARVESTERS.

Specification forming part of Letters Patent No. **81,221,** dated August 18, 1868.

To all whom it may concern:

Be it known that I, ELISHA W. SKINNER, of Madison, in the county of Dane and State of Wisconsin, have invented certain new and useful Improvements in the Construction of Reaping-Machines; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making part of this specification, and to the letters of reference marked thereon, like letters indicating like parts wherever they occur.

To enable others skilled in the art to construct and use my invention, I will proceed to describe it.

My invention consists in certain improvements in the construction of various parts of reaping-machines, as hereinafter more fully explained.

Figure 1 is a perspective view of a complete machine. Fig. 2 is a perspective view of a cast-iron plate to which the rest of the frame is secured. Fig. 3 is a perspective view of a half-box for the journals; and Fig. 4 is a longitudinal section of the reel-shaft and its bearing.

In constructing my improved machine, I first cast the plate A, as represented in Fig. 2, this plate being the bed or basis of all the rest of the frame, the other parts being attached to this. The plate A is constructed, as shown, with a bent arm, *a*, to the end of which the sickle-bar is bolted; and it has also two horizontal rearwardly-projecting flanges, *x*, by which it is firmly bolted to the two timbers B and C, which constitute the main frame, and between which is located the main or driving wheel T, as shown in Fig. 1. The plate A is also provided with five vertical flanges or projections, *b*, *c*, *d*, *e*, and *f*, as shown in Fig. 2. To the projection *b* the tongue U is pivoted, so as to play up and down independently of the frame, it being stayed or braced sidewise by a rod, V, the rear end of which is pivoted to the projection *e* of plate A. To the two projections *c* and *d* are rigidly bolted two upright posts, *t*, which support the front end of a platform, J, on which the driver rides on a seat resting on the springs *i*, (shown in Fig. 1;) and to the remaining projection, *f*, is pivoted an upright post, *n*, which supports the outer end of the reel-shaft *u*, with its pulley L.

The two timbers B and C extend in an upward-inclining position to the rear part of the machine, where they are held rigidly in place by being firmly bolted to the under side of a cast-iron tool-box, D, as represented in Fig. 1, this box D being made of the proper size for this purpose, and also provided with a flange or projection, to which the rear end of the platform J is firmly fastened. Thus, by means of the plate A and box D, with the two timbers B and C, I construct a very simple yet strong and durable frame.

At the opposite end of the sickle-bar E, which is rigidly attached to the plate A, I firmly bolt another timber, F, as represented in Fig. 1, this timber being of equal length with B and C, and united at its rear end to the latter by a cross-bar, H, as shown in Fig. 1.

Near the center of the timber or bar F is secured a wheel, G, which supports the outer end of the sickle-bar, this wheel, and also the driving-wheel T, being so located as to have the machine nearly balanced on them, whereby the front of the machine may be easily raised or lowered, to elevate or depress the sickle. These movements are effected by means of a lever, I, pivoted at its lower end to the timber C, and connected to the tongue U by a rod, *h*, the lever I being provided with a spring-catch, which engages in notches in a curved rack, suitably arranged, so as to lock it in position, and thus hold the front of the machine either up or down and at varying heights, as may be desired.

By moving the lever I back the sickle is lowered, and by moving it forward the sickle is raised, the front end of the tongue being, of course, held at a uniform height by the neck-yoke of the team.

The reel-shaft *u* consists of a round iron rod, inserted and turning loosely in a wrought-iron tube, *l*, which I make of a piece of gas-pipe of suitable length, these parts being more clearly shown in Fig. 4. This tube *l*, I attach at its outer end to the upright post *n*, and at its inner end it is secured by a clasp, *m*, upon a horizontal bar, *r*, which is bolted to the timber C and the inner post *t*, the clasp *m* being so constructed as to permit the tube to turn slightly in a horizontal plane, for the purpose of changing the position of the reel, and incline

its opposite end either forward or backward, to cause the reel to stand parallel with or oblique to the sickle-bar. This change of position is effected by moving the upper end of the outer reel-post *n* either forward or back, as desired, the lower end of said post being pivoted to the projection *f*, as previously stated, and its upper end being held by a rod, *o*, which is secured in any desired position between two plates, *p*, on the platform J, as represented in Fig. 1.

The operating mechanism consists of a wheel, N, provided with internal cogs, which wheel is secured concentrically upon the driving-wheel T, and gears into a sliding pinion, *y*, mounted on a horizontal shaft, having a bevel-gear, P, attached to its outer end, this gear-wheel P gearing into a bevel-pinion on the end of shaft *a'*, to the front end of which is connected the pitman that operates the sickle.

A lever, *k*, is arranged near the right-hand side of the seat, above the platform J, by which the operator can at any time throw the machine in or out of gear by sliding the pinion *y* in or out on its shaft, there being a recess on its inner face, which engages with projections on the inner end of its shaft when shoved in, the pinion turning loosely on its shaft when thrown out away from the projections on the inner end of the shaft. These parts are mainly, if not entirely, the same as heretofore used by me in the construction of my machines, and do not form any part of my present invention.

I use a peculiarly-constructed journal-box for the journals of my machine, as represented in Fig. 3, but which, being the subject of a separate application for a patent, need not be further described.

By this method of constructing reapers and mowers I am enabled to produce a very simple yet strong and durable machine, one that can be cheaply made and easily operated.

Having thus described my invention, what I claim is—

1. The plate A, provided with the projections or flanges for attaching the parts to, and otherwise constructed as shown and described.

2. The main frame, consisting of the plate A, bars B and C, and the iron box D, all constructed and arranged substantially as set forth.

3. The tubular reel-support *l*, attached at its outer end to the adjustable post *n*, and resting at its inner end upon the bar *r*, in such a manner as to permit the inner end of the reel to be adjusted forward or backward, as described.

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