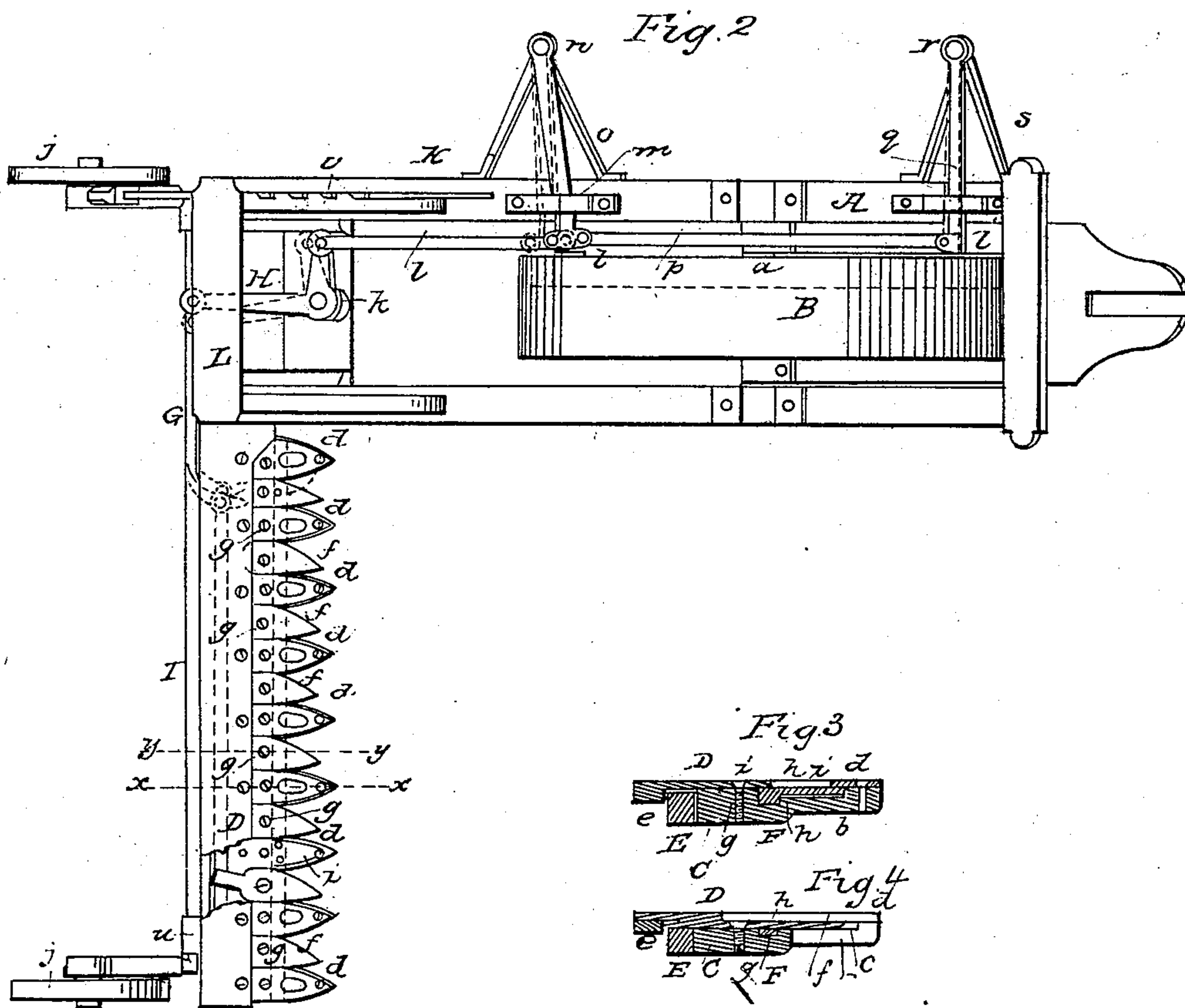
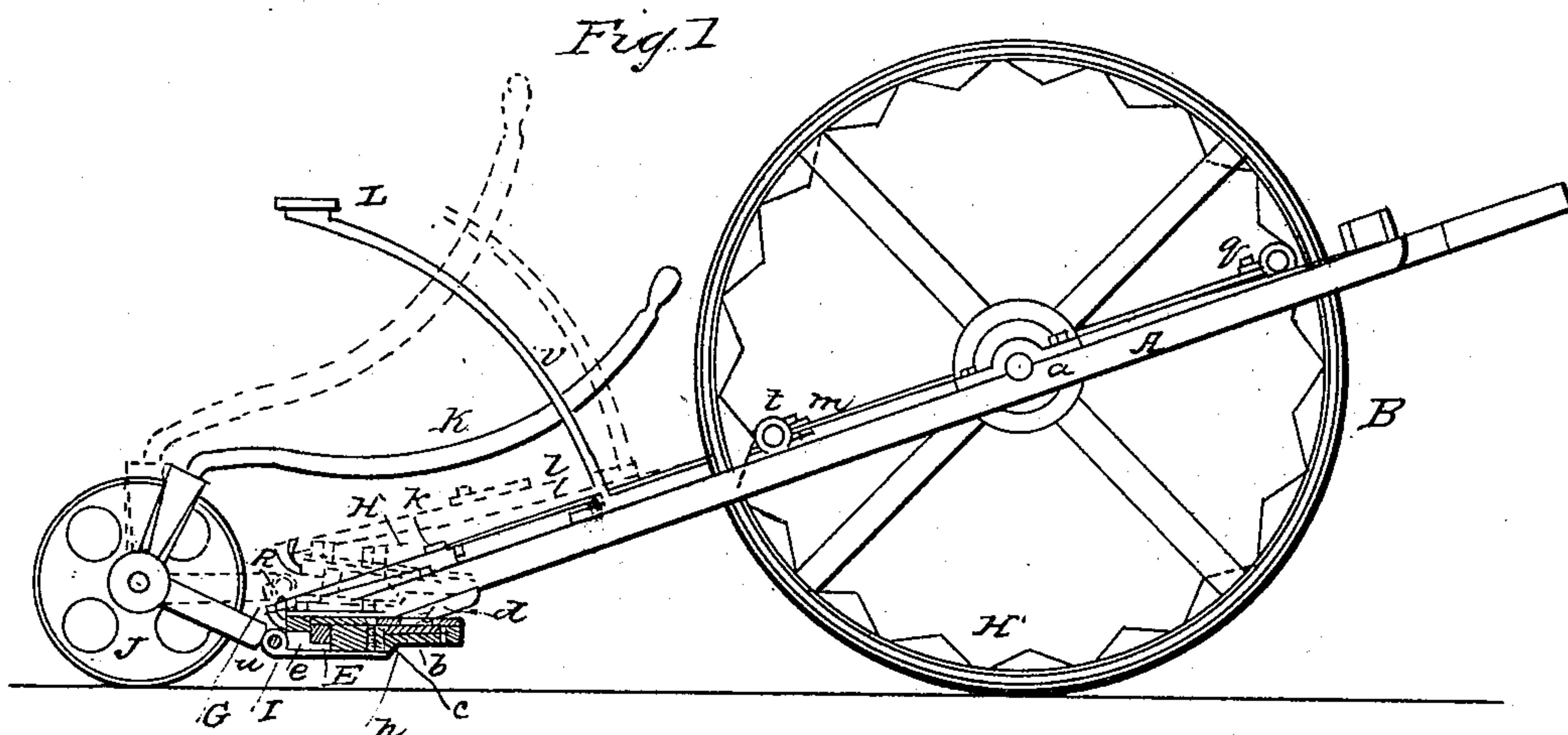


W. H. HOVEY.
Grain and Grass Harvester

No. 13,173.

Patented July 3, 1855.



UNITED STATES PATENT OFFICE.

WM. H. HOVEY, OF SPRINGFIELD, MASSACHUSETTS.

IMPROVEMENT IN GRAIN AND GRASS HARVESTERS.

Specification forming part of Letters Patent No. 13,173, dated July 3, 1855.

To all whom it may concern:

Be it known that I, WILLIAM H. HOVEY, of Springfield, in the county of Hampden and State of Massachusetts, have invented certain new and useful Improvements in Grain and Grass Harvesters; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a side view of my improved harvester, the finger and sickle bars being bisected transversely. Fig. 2 is a plan or top view of the same. Fig. 3 is a transverse section of the finger and sickle bars, taken at the line *x x*, Fig. 2. Fig. 4 is also a transverse section of the finger and sickle bars, taken at the line *y y*, Fig. 2.

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

The nature of my invention consists in the employment of "clearers" which work reciprocally in the slotted fingers, as will be hereinafter explained, for the purpose of preventing the choking or clogging of the sickle.

A represents a rectangular frame, having a wheel, B, at its front part, the axle *a* of said wheel being fitted in suitable bearings on the frame.

To the back part of the frame A the finger-bar C is attached, the fingers *b* of said bar having recesses *c* in their upper surfaces, over which metallic plates *d* are secured. The plates *d* correspond in form to the fingers, and are attached to a plate, D, one end of which is also secured to the back end of the frame A. The back edge of the plate D projects some distance over the back edge of the finger-bar C, as shown in Figs. 1, 3, and 4. Both sides or edges of the plates *d* are beveled, so as to form cutting-edges.

On the under side of the plate D, at its back edge, there is secured a ledge or strip, *e*, between which and the back of the finger-bar C the sickle-bar E is fitted.

To the bar E the back ends of the cutters *f* are attached, the shanks of said cutters fitting in slots in the bar and secured therein by pivots. The cutters are attached to the upper surface of the finger-bar C by pivots *g*, on which the cutters turn or vibrate. The cutters are

placed between the fingers and plates *d*, as shown in Fig. 2.

At the back part of the recesses *c* in the fingers *b* there are grooves *h* made, in which a bar, F, is fitted and works. To this bar F there are attached plates *i*, which may be termed "clearers," which work in the recesses *c* between the plates *d* and fingers *b*. (See Figs. 1, 2, and 3.) The bar F is connected to one or more of the cutters *f* by pivots *j*, one of which is shown in Fig. 2. The inner end of the sickle-bar E has a connecting-rod, G, attached to it. (See Figs. 1 and 2.) The outer end of the connecting-rod is attached to one end of a bent or right-angled lever, H, which works on a pivot, *k*, at the back part of the frame A, and the opposite end of the bent lever is attached to one end of a rod, *l*. The opposite end of the rod *l* is connected to an arm, *m*, the outer end of which works on a pivot, *n*, attached to a projection, *o*, at the side of the frame A. The arm *m* is connected by a rod, *p*, to an arm, *q*, the outer end of which also works on a pivot, *r*, attached to a projection, *s*, at the side of the frame A. The inner ends of the arms *m q* have friction-rollers *t* on their inner ends, and these rollers fit or gear in triangular-shaped teeth H' on the inner periphery of the wheel B, and at opposite sides of the wheel.

To the back part of the plate D and frame A there are attached bearings *u u*, in which a bar, I, is fitted. Both ends of this bar are bent outward at right angles from the main portion, and have wheels J attached to them. A lever, K, is attached to one of the bent ends of the bar I, said lever fitting in notches in the side of a curved bar, *v*, which forms one of the supports for the driver's seat L. The wheel J, being much smaller than the wheel B, causes the frame A to be in an inclined position, as shown in Fig. 1.

As the machine is drawn along the teeth H' on the inner periphery of the wheel B give a vibrating motion to the arms *m q*, which motion, by means of the rods *p l*, is communicated to the bent lever H, which, by means of the connecting-rod G, gives a reciprocating motion to the sickle-bar E, and as the cutters *f* work on the pivots *g* the edges of the cutters act against the edges of the plates *d* and cut the grass or grain similar to shears, while the clear-

ers *i* work in the recesses *c* in consequence of their bar *F* being attached to the cutters by the pivot *j*. The clearers keep the recesses *c* free from grass and prevent the choking or clogging of the sickle.

The sickle is raised or lowered by operating the lever *K* and securing said lever at the desired point in the notched bar *v*.

What I claim as new, and desire to secure by Letters Patent, is—

The employment of the clearers *i*, attached

to the bar *F* and working in the recesses *c* of the fingers *b*, for the purpose of preventing the choking or clogging of the sickle, as herein shown, the bar *F* being connected to one or more of the cutters *f* by pivots *j*, by which motion is communicated to them.

WM. H. HOVEY.

Witnesses:

R. B. HILDRETH,

JOHN F. COMSTOCK.