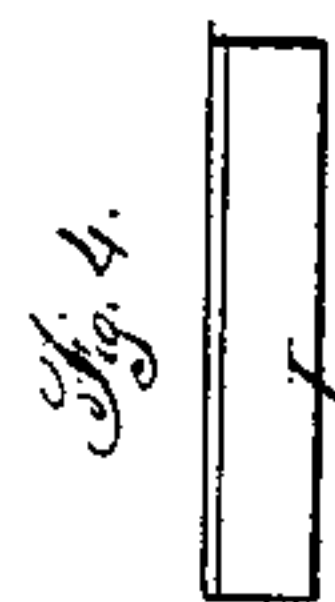
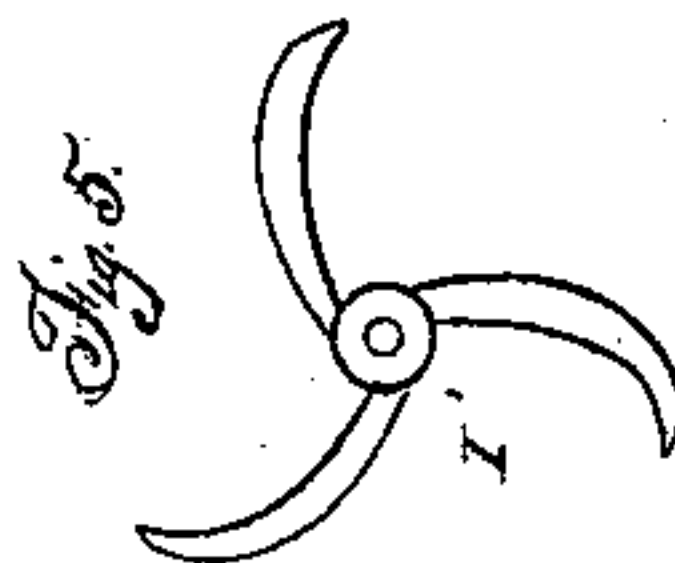
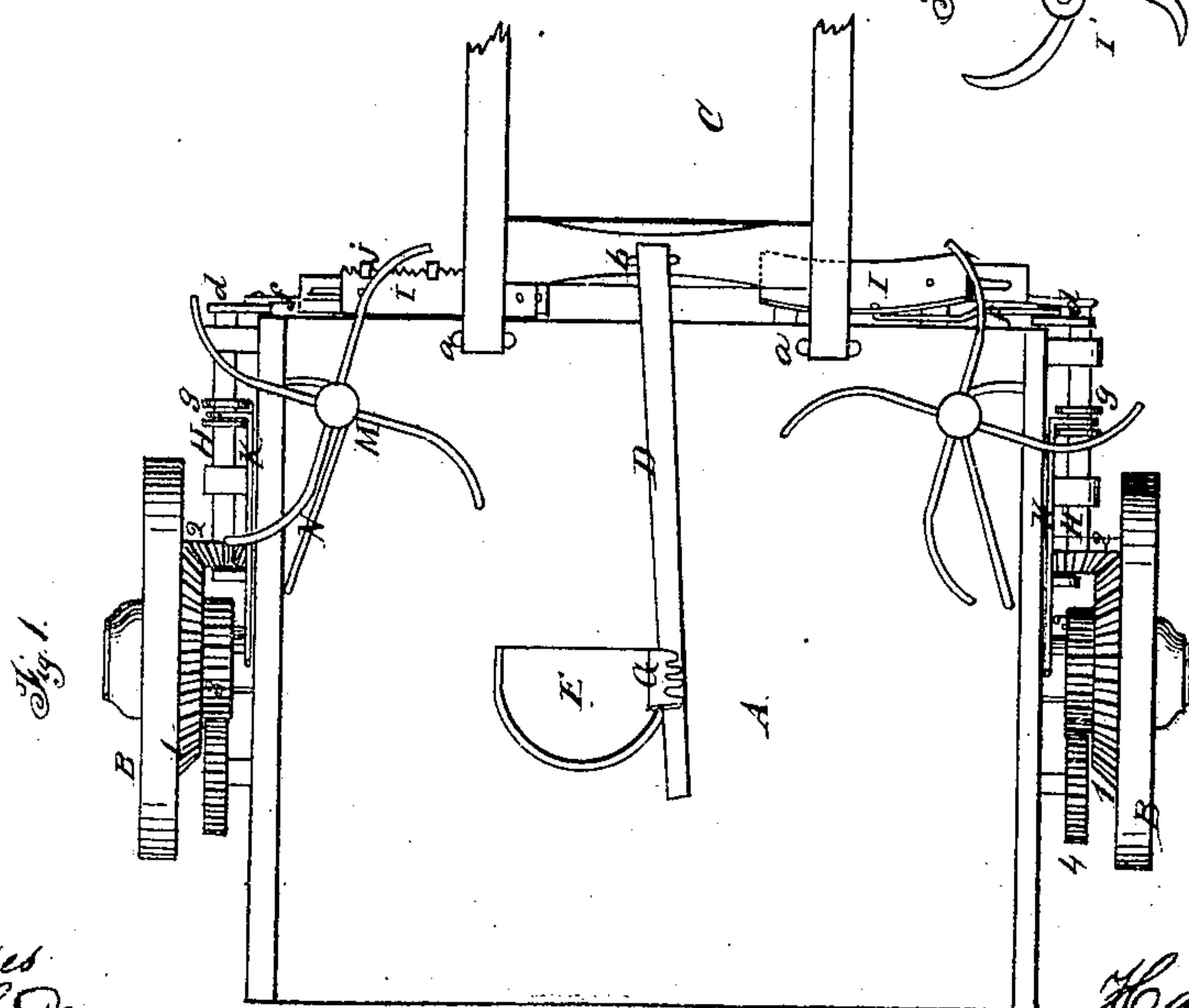
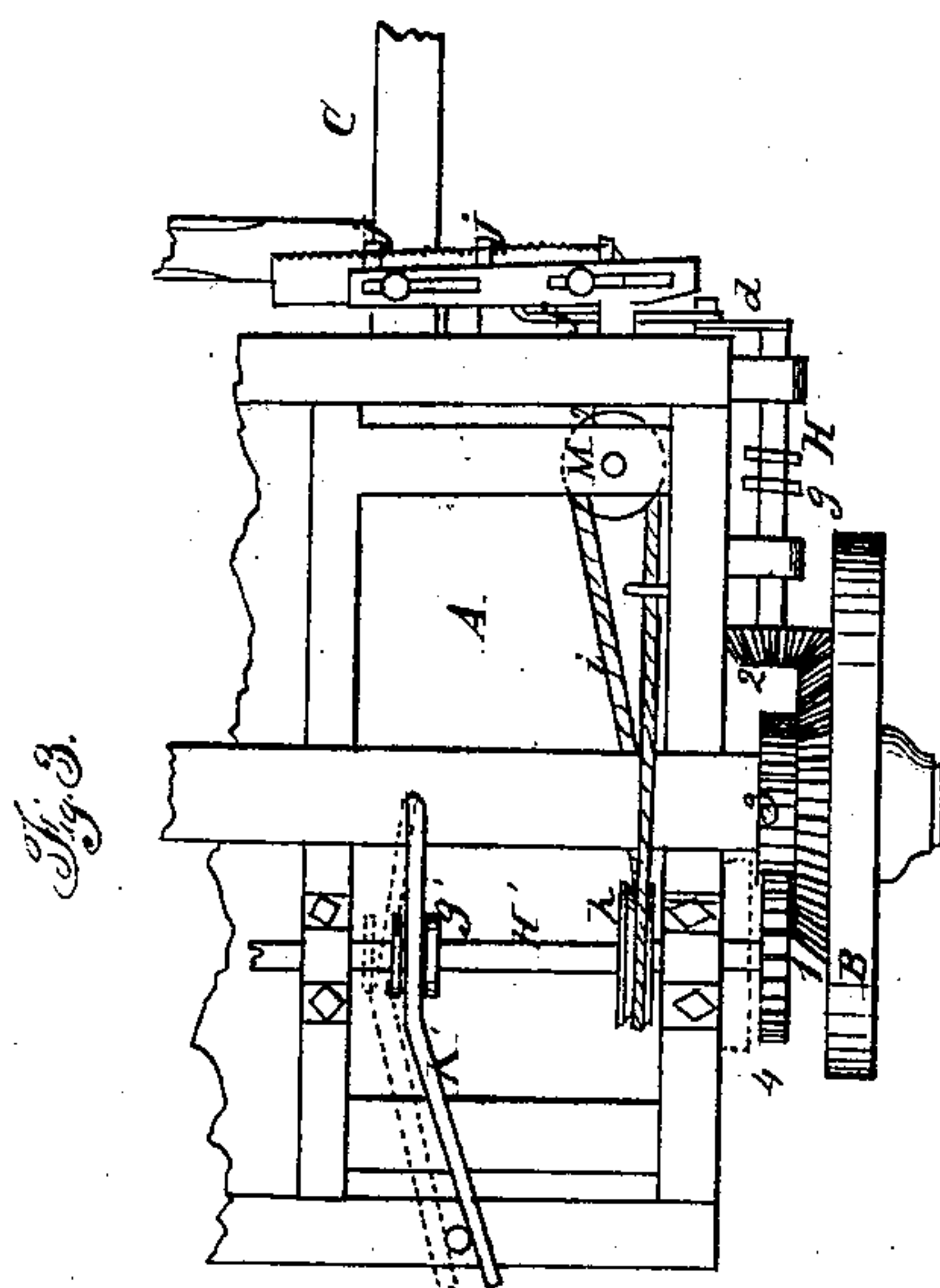
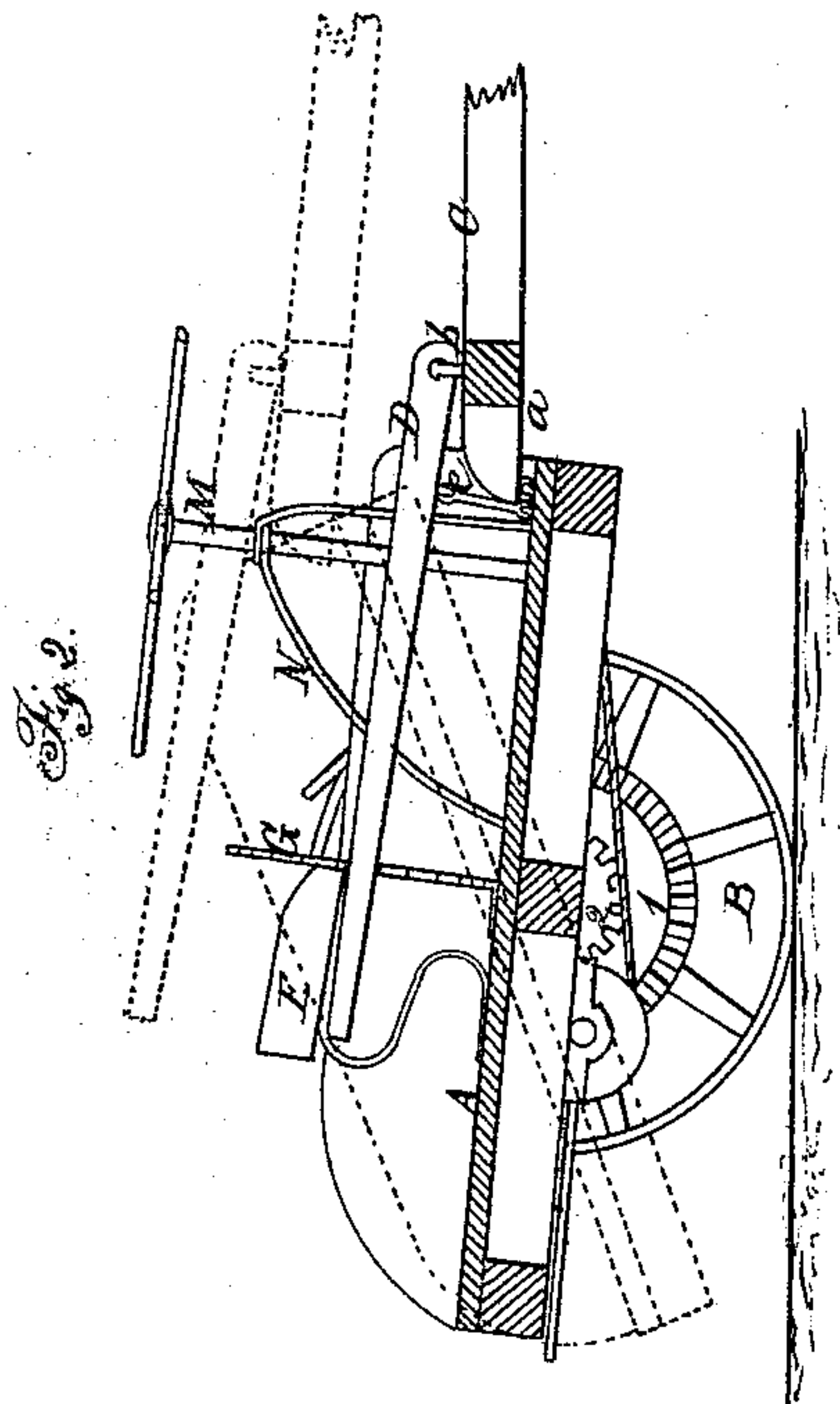


*H. L. Smith.*  
*Corn-Harvester.*

*N<sup>o</sup> 72236*

*Patented Dec. 17, 1867.*



*Witnesses*  
*Charles H. Spencer*  
*J. H. Davis*

*Inventor*  
*Harman L. Smith*  
*By J. F. Tracey & Co.*  
*Attys.*

# United States Patent Office.

HARMON L. SMITH, OF WATKINS, NEW YORK.

Letters Patent No. 72,236, dated December 17, 1867.

## IMPROVEMENT IN CORN-HARVESTERS.

The Schedule referred to in these Letters Patent and making part of the same.

### TO ALL WHOM IT MAY CONCERN:

Be it known that I, HARMON L. SMITH, of Watkins, in the county of Schuyler, and State of New York, have invented a certain new and useful Improvement in Corn and Cane-Harvesters; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings making part of this specification.

Figure 1 is a plan of my improved harvester.

Figure 2, a longitudinal vertical section.

Figure 3, a plan of a portion of the under side of the harvester, the remaining portion being broken away.

Figures 4 and 5, views of modified arrangements of the knives.

Like letters of reference indicate corresponding parts in all the figures.

My invention consists in combining with the platform and the thills a hand-lever, so arranged that by raising the same the platform is tilted for throwing off the stalks that have collected. Also, in combination with these parts, a special arrangement of the gearing and connecting-devices for giving motion to the knives and reels, and disengaging the same.

As represented in the drawings, A is the platform, mounted on driving-wheels B B, and C the ordinary thills, which are hinged, at *a a*, directly to the front end of the platform. A lever, D, is jointed at *b* to the cross-bar of the thills, and is connected in the rear of this with the front end of the platform by a link or jointed connection, *c*, as clearly shown in fig. 2. The lever extends back to the driver's seat, E, where it is secured in any desired position in a notched standard, G.

The driver, holding this lever in his hand while the machine goes forward, has perfect control of the gauge of cut, for by raising and lowering the same the front end of the platform that holds the knives is correspondingly raised or lowered. In this manner the operator can adapt his knives exactly to the height of the corn or the irregularity of the ground he goes over. In addition to this, when a sufficient quantity of the stalks has collected on the platform to form a shock, the raising of the lever high will tilt the platform in the rear sufficiently to slide the stalks off, as indicated by red lines in fig. 2. This arrangement of connecting the platform directly with the thills by the lever, without intermediate parts, is exceedingly simple, obviating the necessity of a secondary or auxiliary platform, as in other machines, for dumping the load. I am aware of no other machine where the main platform itself is dumped by the action of a simple lever connecting it with the thills.

To the driving-wheels are secured bevel-gears 1 1, with which mesh pinions 2 2; on side crank-shafts H H. With the cranks *d d* connect pitmen *f f*, in the ordinary way for running the knives I I. These knives may be either serrated or sickle-edged, as shown at the top in fig. 1, so as to rasp through the stalks, or made with a smooth, concave edge, as at the bottom in the same figure, or they may be straight-edged, as shown in fig. 4. With the straight knives I prefer to employ guards, *j j*, as shown. If desired, also, the three-pointed knives I' I', fig. 5, may be employed in addition, attached to the reel-shafts hereinafter described. The crank-shafts are provided with grooved collars, *g g*, in which grooves rest the bent heads *e* of levers K K, which, by moving the said shafts endwise, throw the pinions out of gear with the cog-wheels, and consequently disengage the knives. With the driving-wheels are also connected spur-gears, 3 3, with which engage similar wheels, 4 4, on transverse shafts H' H', beneath the platform, as shown most clearly in fig. 3. On these shafts are pulleys, *h h*, having bands, *i i*, which pass forward and around similar pulleys, *k k*, secured to the shafts M M of the reels. The shafts H' H' have also grooved collars, *g' g'*, in which rest levers K' K', projecting out behind, by moving which in the proper direction at any time the shafts will be drawn out endwise, thereby disengaging the gears and stopping the motion of the reels. The reels consist simply of bent arms overhanging the front end of the platform, and revolving in such a direction as to draw the stalks up to the knives and on to the platform. With the reel-shafts are connected bent stays or guards N N, of the form shown in figs. 1 and 2. These serve to prevent the stalks from being carried off the platform by the reels, and also serve as stays to the reel-shafts.

By the special arrangement of the gearing above described, I can run the knives and the reels, or disconnect them, at pleasure, and without interfering in the least with the tilting of the platform. The tilting of the platform in the manner described could not be accomplished in the use of any ordinary gearing.

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



1. The combination of the hand-lever D with the platform A and thills C, without intermediate parts, so arranged that the platform is tilted by simply raising the lever, as herein set forth.

2. The arrangement, with the tilting-platform, of the parts constituting the gearing operating the knives I and reels M, the same consisting of the gears 1, 2, 3, 4, the shafts H H', with the collars *g g'*, operated by levers K K', and the pulleys and bands *k k, i*, the whole constructed and operating in the manner and for the purpose specified.

In witness whereof, I have hereunto signed my name in the presence of two subscribing witnesses.

HARMON L. SMITH.

Witnesses:

D. C. WHITE,

M. T. BARNES.