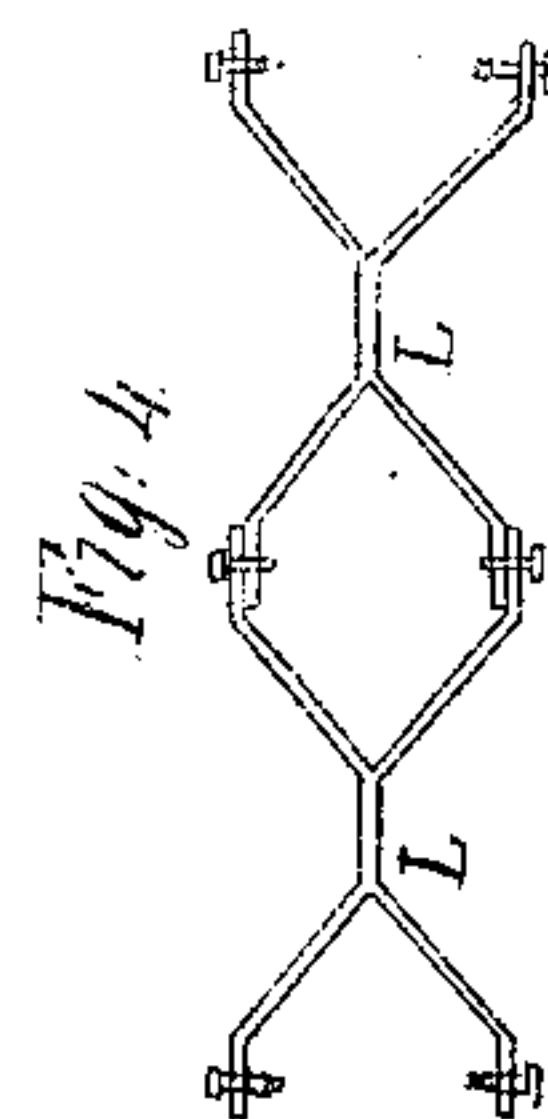
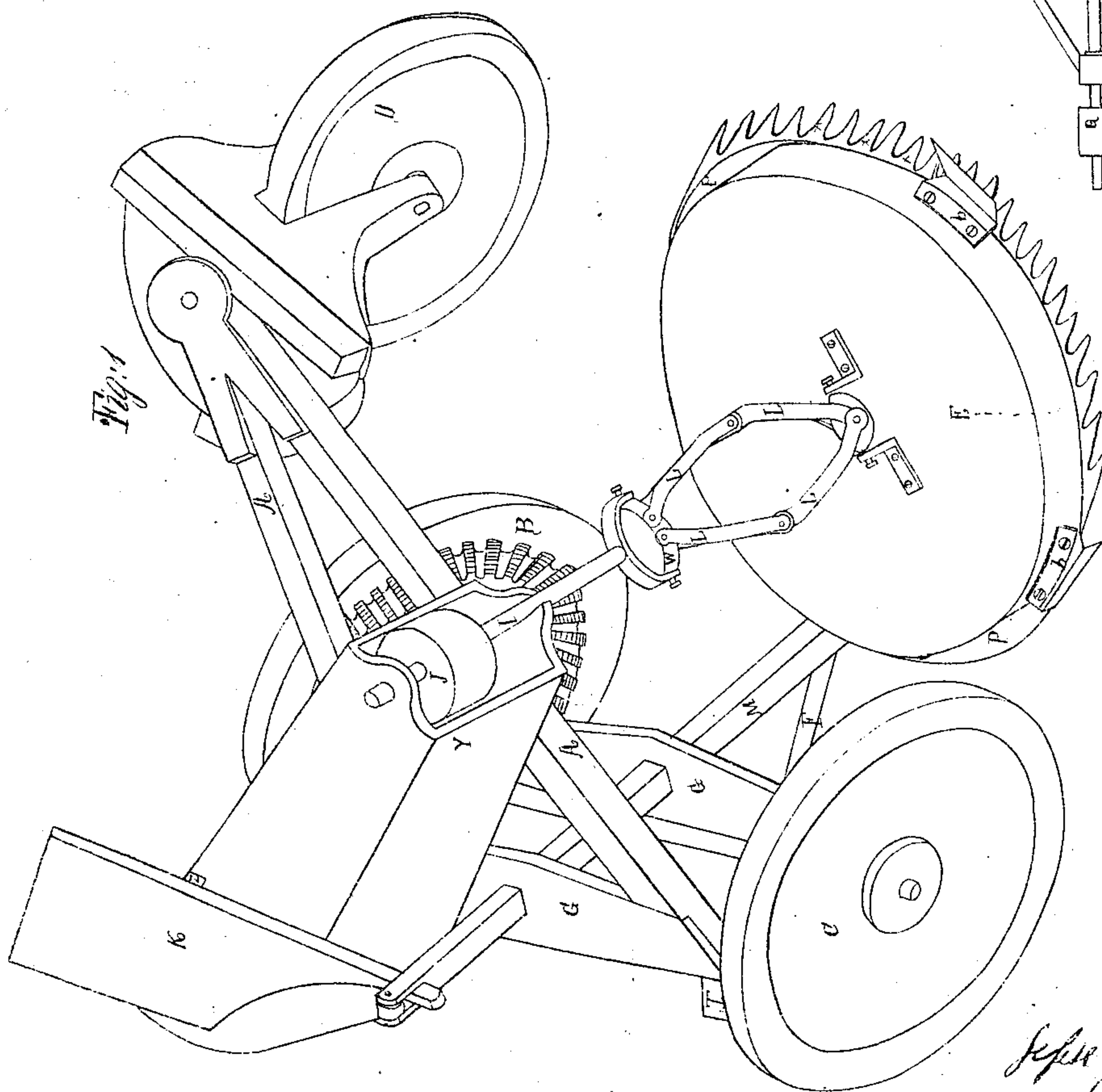
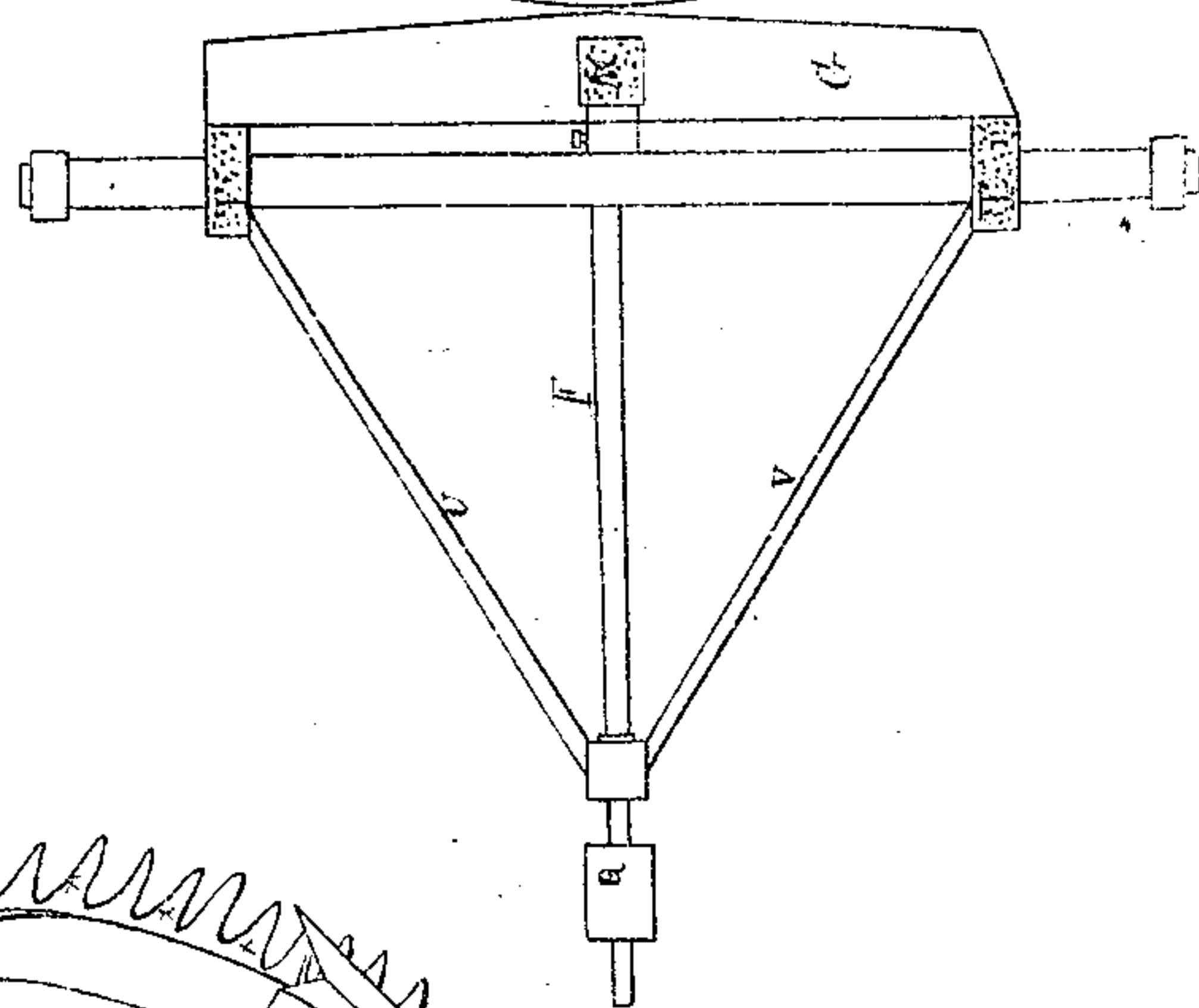
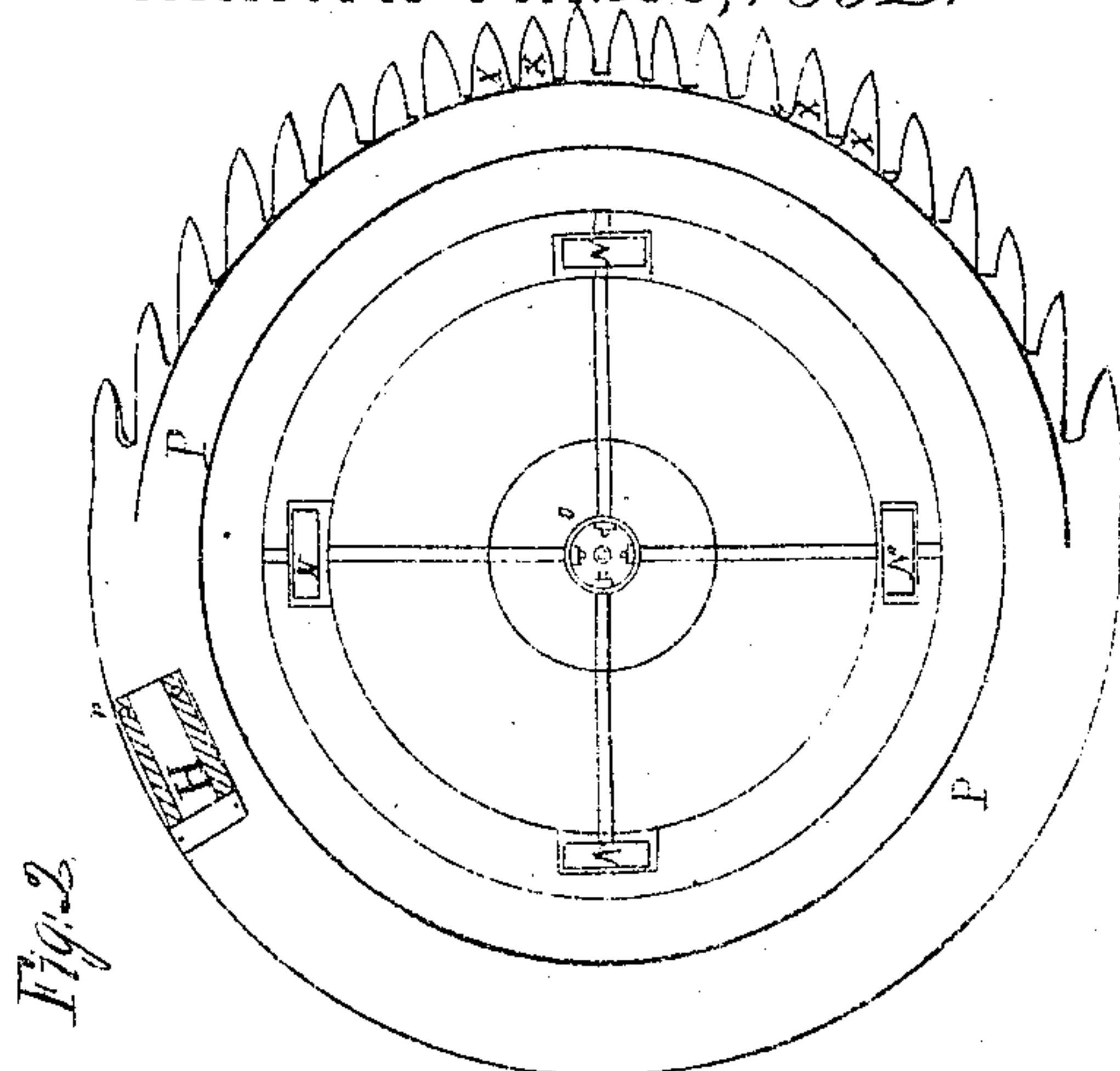
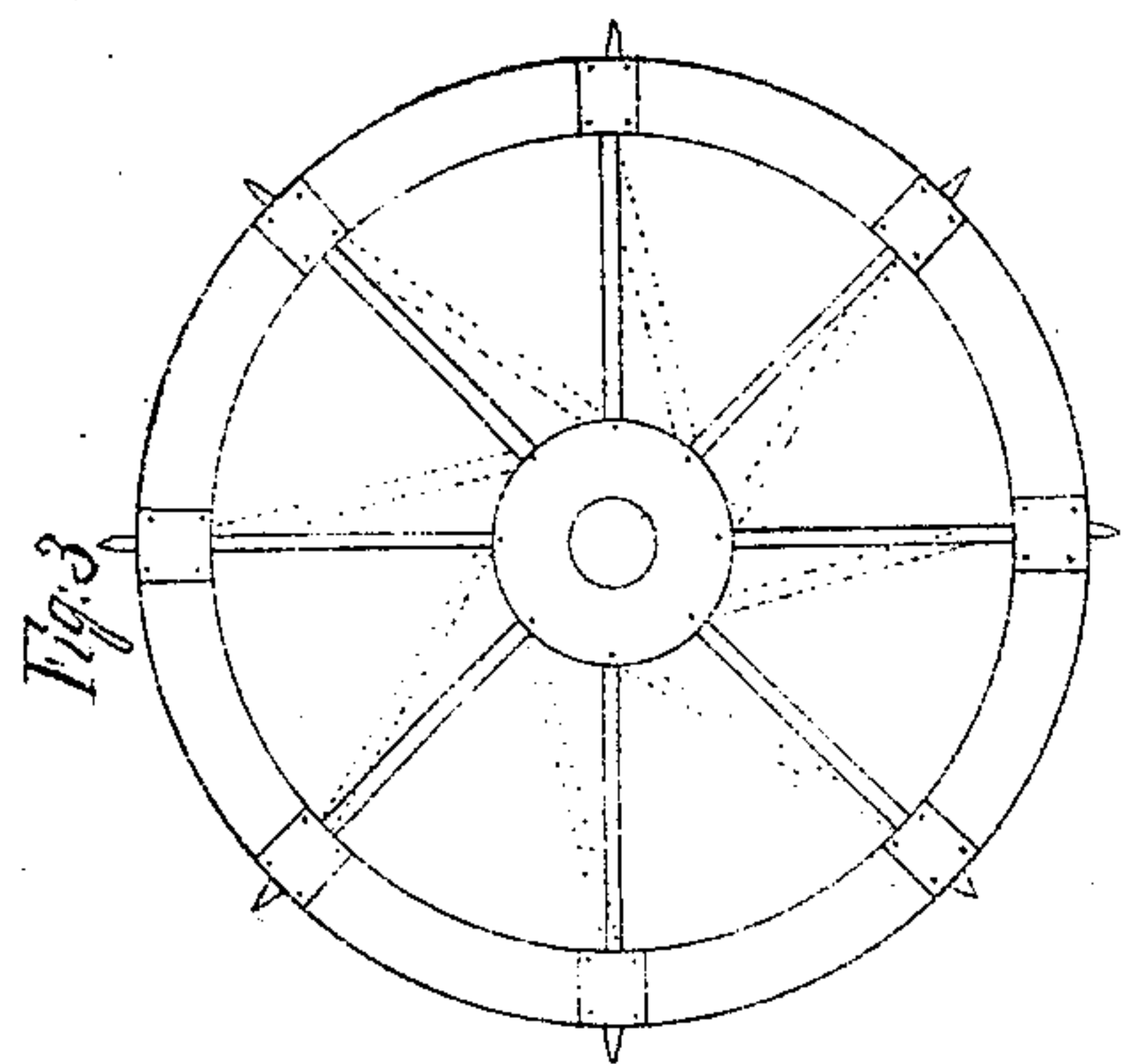


J. S & D. Lake.

Mower.

Nº 9137

Patented Jul. 20, 1852.



Inventors
John S. Lake
Daniel Lake

UNITED STATES PATENT OFFICE.

JESSE S. LAKE AND DAVID LAKE, OF SMITH'S LANDING, NEW JERSEY.

IMPROVEMENT IN GRASS-HARVESTERS.

Specification forming part of Letters Patent No. 9,137, dated July 20, 1852.

To all whom it may concern:

Be it known that we, JESSE S. LAKE and DAVID LAKE, both of Smith's Landing, in the county of Atlantic and State of New Jersey, have invented a new and useful Machine for Mowing, which we call a "Rotary Mowing-Machine;" and we hereby declare the following to be a full and clear description thereof, reference being had to drawings herewith presented, which drawings constitute a part of said description, viz:

Figure 1 is an oblique view of the whole machine.

A A is a triangular frame mounted on three wheels, B C D. Wheel B is the bearing-wheel, that takes the principal part of the weight, and which gives motion to the revolving cutters.

D is the forward wheel, placed in a swivel-frame, and leads a little to the left, or outside of the wheel B, for reasons hereinafter to be noticed. The wheel B has cogs on its inner side, driving a pinion on an upright shaft, (not seen by reason of the box Y,) which shaft has a belt-wheel driving the shaft I by the pulley J; or the motion may be communicated from B to I by any convenient mode.

E is the wheel that carries the cutters *b b*. These are screwed on the outer edge of the wheel, and, as they may wear away, can be moved down, so as to come near to the top of the fingers of the platform X X. The cutters are formed of plates of steel, forked and bent so that the edge forms an angle of about eighty or ninety degrees. These edges are brought to correspond nearly with the plane of the platform, and their corners are turned a little upward to avoid their striking under the clearer H, Fig. 2. The wheel E rests on friction-rolls N, which run on shafts that radiate from the central ring, O. (Shown in Fig. 2.)

G G are two cross-pieces secured to the posts T and T, and through these passes the sliding piece M.

F is a lever passing through near the bottom of the sliding piece, and on this lever the platform and wheel are supported. In the top of this piece M there is a small roller, under which the end of lever K presses upward. This lever widens out at the other end, forming a seat for the driver, whose weight serves as a counter-balance for the platform, and by adjusting his position nearer or farther from the fulcrum Z he can cause the platform to press

with more or less force on the stubble. The wheel runs on a pintle in the center of the platform, and the cutters or knives pass over a clearer, H. (See Fig. 2, which is a top view of the platform P, the wheel being removed to show the rolls N and clearer H.)

Similar letters refer to similar parts in all the figures.

The clearer is a sort of knife or blade, attached to two springs (shaded red) screwed down in grooves in the platform, so that the blade lies nearly even with the surface. (See Fig. 5. This is a vertical section of a part of the platform cut through the clearer.) At the end of the spring is seen a screw, *r*, by which it is secured down. Near the middle is shown a screw, S, pushing up from below. The edge of the clearer lies a little above the platform. The knives cut across the edge of the clearer, and this cuts away any grass that may stick to the cutters, and has a tendency to sharpen them. When this is not sufficient to keep them sharp we use also a whetstone set in and adjusted in the manner of the clearer. Under the clearer is an aperture, cut through to allow any matter to pass off. The lever which carries the platform is braced by rods U and V, leading from the bottom of the post T and partly balanced by the movable weight Q.

It may be observed that the shaft I has a bow at its lower end, in which is a ring, *w*, secured by screw-pins in the common form of universal joints. To this is attached a double set of formed and jointed levers, L L, which, being connected to a similar ring at bottom secured to the wheel E, forms a double universal joint—that is, a joint at top and at bottom of the levers—and by the bending of the levers the two couplings are brought nearer or farther apart, allowing the wheel to rise or fall without affecting its rotary motion. (See Fig. 4, which shows one pair of these levers with their respective screws.) These couplings are so well known as not to need a minute description of their several parts. The wheel D runs outside the standing grass. The cutter-wheel E runs on the platform P, fixed on the lever F, which passes through the sliding piece M near the ground. The sliding of this piece M allows the wheel and platform to rise and fall, and the rolling of the lever, which is round and loose in the slide-piece, allows it to rock to the right or left and to adapt itself to the

surface of the earth. The cross-pieces G and G are secured to the posts T T. Now, to enable the shaft I to give uniform rotary motion to the wheel it must be coupled with a universal joint. The coupling must also be capable of being lengthened or shortened while in operation. This may be effected by a sliding shaft with groove and feather, or by joint-levers, as seen in Figs. 1 and 4. We prefer the latter on account of the levers causing the least friction. The knives or cutters are secured on the outside of the wheel, so as to revolve close to the upper side of the fingers of the platform.

The next essential improvement is the clearer H. This is a sort of knife set on springs in the platform, so as to be adjusted by screws and to cut across the edges of the knives as they revolve over it. (See Fig. 2.) These springs are shaded red.

Fig. 5 shows a vertical section of a part of the platform cut through the clearer. Near the end of the spring may be seen a screw, r, by which it is screwed down. Near the middle of the spring is seen the screw S, pushing up from below. The head of this is sunk in a recess in the bottom of the platform.

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

The clearer, as above described, when combined and arranged for the purpose and in manner above described.

In testimony whereof we hereto subscribe our names in presence of two witnesses.

JESSE S. LAKE.
DAVID LAKE.

Witnesses:

ENOCH INGERSOLL,
BENJAMIN BARRETT.