No. 803,063. PATENTED OCT. 31, 1905.

F. A. LEE.

STALK CUTTER.

APPLICATION FILED FEB. 7, 1905.

2 SHEETS—SHEET 1.

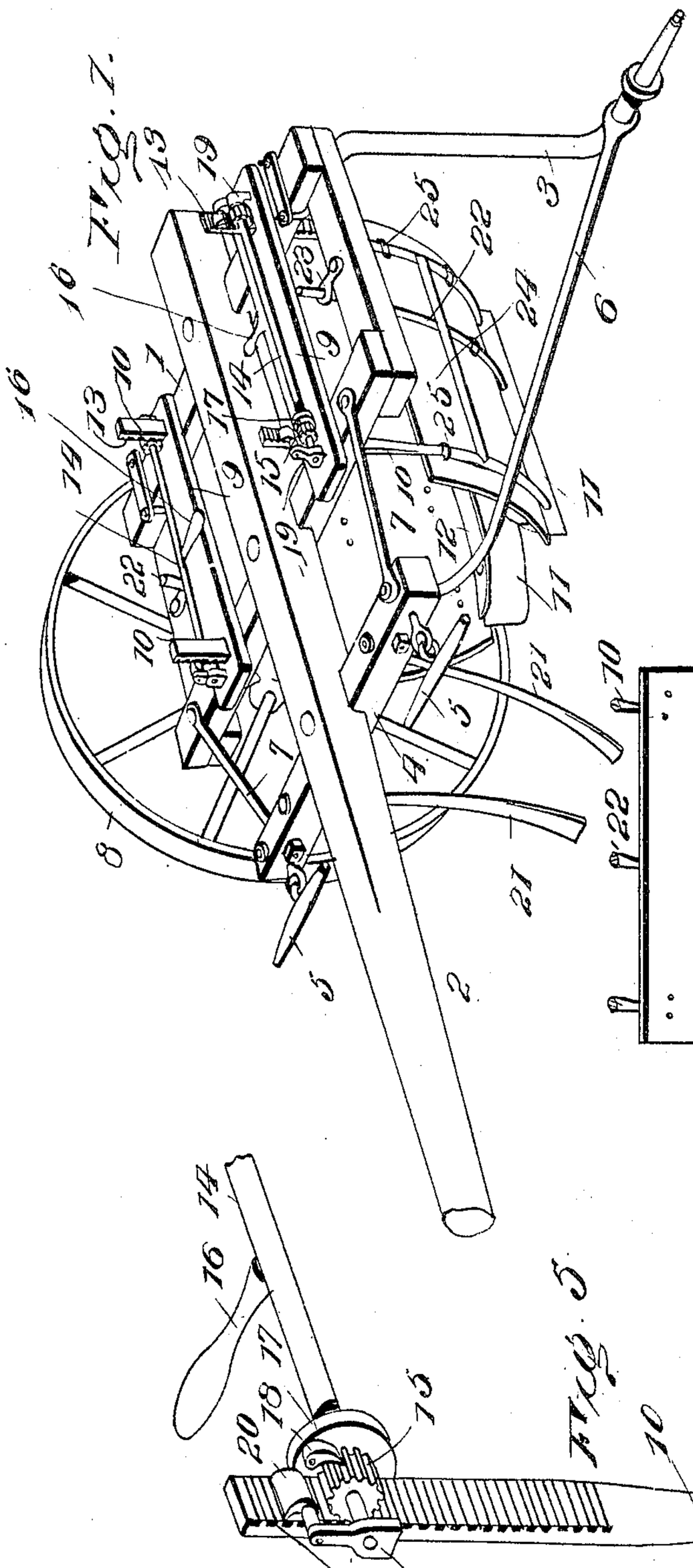

FIG. 1.

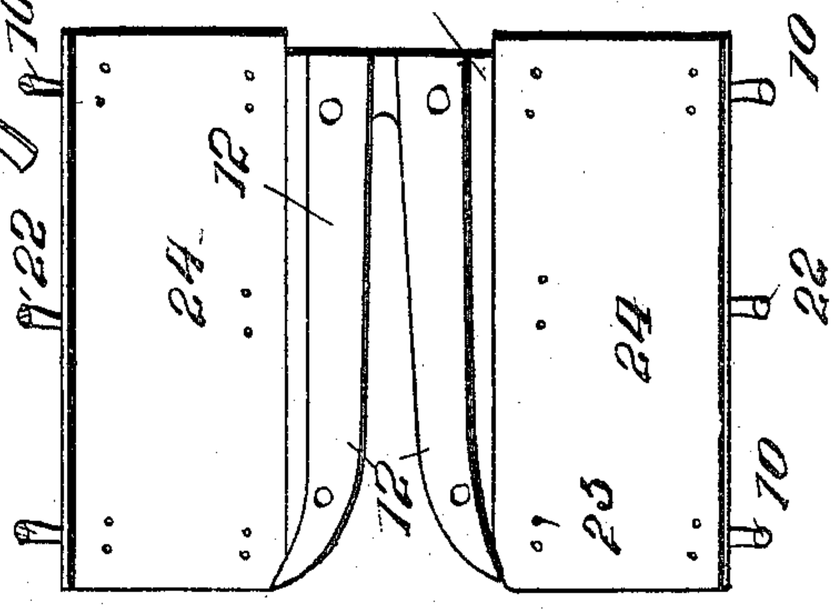

FIG. 4.

FIG. 5.

Witnesses

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2 SHEETS—SHEET 2.

Fig. 2.

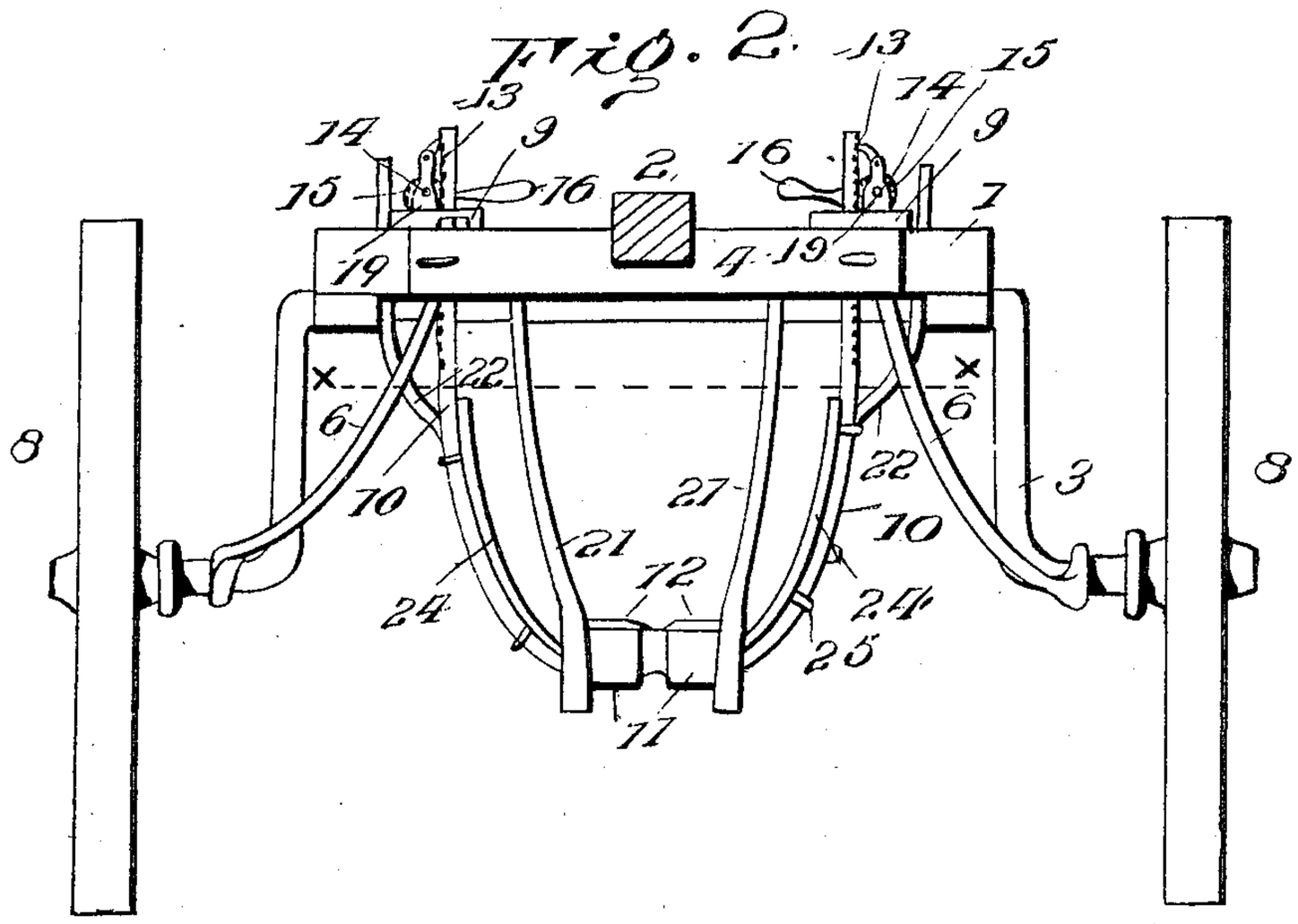
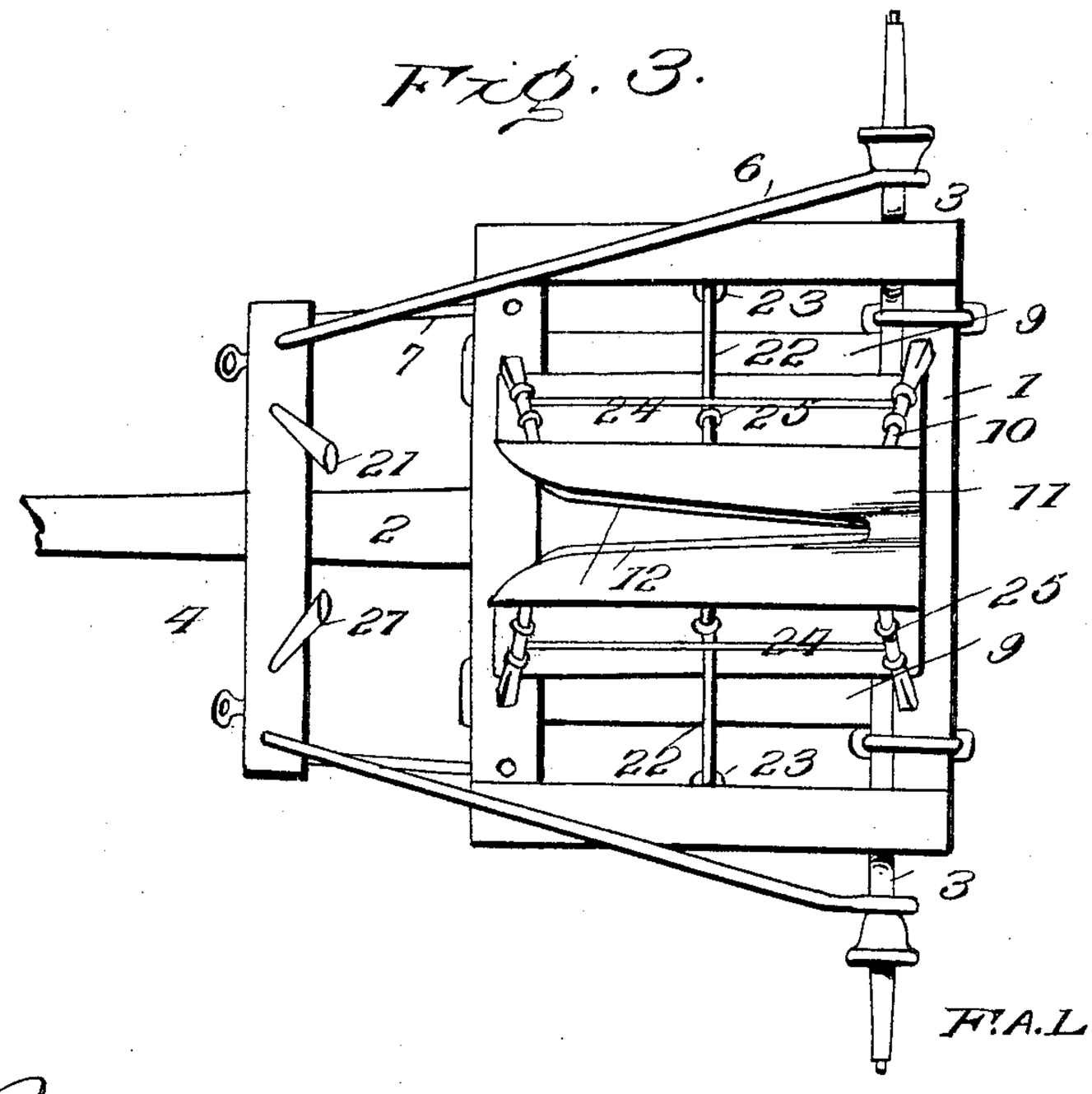


Fig. 3.



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STALK-CUTTER.

No. 803,063. Specification of Letters Patent. Patented Oct. 31, 1905.

Application filed February 7, 1905. Serial No. 244,656.

To all whom it may concern:

Be it known that I, FRANK A. LEE, a citizen of the United States, residing at Bryan, in the county of Brazos and State of Texas, have invented certain new and useful Improvements in Stalk-Cutters, of which the following is a specification.

This invention relates to improvements in harvesters, and particularly to that class of machines embodying cutting apparatus for severing stalks.

The invention resides particularly in the provision of novel mechanism for adjusting the cutting devices by which the stalks are severed in connection with the general arrangement and structure of adjacent parts of the machine.

For a full description of the invention and the merits thereof and also to acquire a knowledge of the details of construction of the means for effecting the result reference is to be had to the following description and accompanying drawings.

While the invention may be adapted to different forms and constructions by changes in the structure and minor details without departing from the spirit or essential features thereof, still the preferred embodiment thereof is shown in the accompanying drawings, in which—

Figure 1 is a perspective view of a machine embodying the invention. Fig. 2 is a view showing the general structure of the machine in front elevation. Fig. 3 is a bottom plan view. Fig. 4 is a sectional view taken about on the line X X of Fig. 2 looking downward. Fig. 5 is a detail perspective view, partially broken away, showing more clearly the operative devices for adjusting the position of the cutters.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

In carrying out the invention a suitable supporting-frame 1 is provided, said frame embodying transverse and longitudinal bars. From the frame 1 extends a tongue 2, to which the draft is applied, and said frame is mounted upon an axle 3 of arched formation, such as is commonly employed in machines of the type to which the invention relates. The tongue 2 is provided near its rear end with a draft-bar 4, to which the swingletrees are attached in the customary manner. The axle 3 is mounted upon the frame 1 in any substantial way and is preferably reinforced by braces 6, which extend from a point near the spindle of the axle to the end portions of the draft-bar 4, other braces 7 connecting the end portions of the member 4 with the forward portion of the frame 1, the whole construction with relation to the brace means being adapted to subserve the general rigidity of the structure. Ground-wheels 8 are mounted upon axles, and the cutting apparatus is supported by the frame 1 in a manner which will now be pointed out. Longitudinal bars 9 are disposed near opposite ends of the frame 1, connecting the front and rear portions thereof, and extending downwardly from said bars 9 are supporting-bars 10, the upper portions of which pass through the bars 9, being movably mounted upon the latter. The lower extremities of the supporting members 10 are attached to the sides of the cutter-frame 11, said frame 11 being of somewhat U form and having the cutters or knives 12 secured thereto upon the upper side thereof, as shown most clearly in Fig. 4 of the drawings. The supporting members 10 are adjustably mounted upon the frame 1, and to admit of adjustment of these members for the purpose of elevating the frame 11 to effect cutting action of the cutters 12 nearer or farther from the base of the stalks peculiar means are utilized. The upper end portions of the members 10 are provided upon one side with a plurality of teeth 13, so as to form racks, and upon opposite end portions of the frame are mounted shafts 14. Each of the shafts 14 is arranged lengthwise of the bar 9, and said shafts are provided near their ends with pinions 15, keyed or otherwise secured thereto. The pinions 15 mesh with the rack-teeth of each of the supporting members 10, so that when the shafts 14 are rotated the coöperation of the pinions 15 with the members 10 will effect a raising or lowering movement of the latter, and thereby correspondingly adjust the position of the cutter-frame 11. The shafts 14 are preferably actuated by means of handles 16, extending therefrom at a point between the ends thereof, and near the ends of the shafts 14 are mounted wheels or disks 17, carrying pawls 18, normally in engagement with the pinions 15. The shafts 14 are mounted in members 19, having suitable bearings therefor, and when the shafts 14 are actuated by the operator the pinions 15 will effect raising or lowering movement of the bars 10 in a manner readily apparent.

In order to hold the cutter-frame 11 at an ascertained adjustment, engaging dogs 20 are provided, the latter being suitably mounted upon the bars 9 at the ends thereof and adapted to engage the rack-teeth 13 of the members 10, so as to prevent lowering of the latter after the cutters 12 have been raised by actuation of the shafts 14.

Extending downwardly from the draft-bar 4 are spaced guide-fingers 21, which curve toward each other at the lower extremities, and these guide members serve to direct the stalks into the space between the cutters 12 as the machine advances over the field in actual operation thereof.

The cutter-frame 11 is braced from lateral stress by means of vertically-arranged braces 22, connected at the lower ends thereof with the cutter-frame, the upper portions of the braces 22 passing through plates 23, attached to the sides of the frame 1, the braces being freely movable through the plates 23 as the cutter-frame is adjusted by raising and lowering the same.

At the sides of the cutter-frame 11 and extending upwardly therefrom are mounted side plates 24, which curve between the upper and lower edges thereof. The side plates 24 are attached to the members 10 and the braces 22 by suitable securing members 25, and these plates form a sort of hopper or hood above the cutter-frame. The members 24 of course are elevated and lowered by the adjusting devices, which accomplish the same result in varying the positions of the cutters 12.

Having thus described the invention, what is claimed as new is—

In a harvester, the combination of a supporting-frame, supporting members mounted upon said frame and provided at their upper portions with a plurality of rack-teeth, a cutter-frame carried by the lower ends of the supporting members aforesaid, cutters mounted upon the cutter-frame, shafts mounted upon the supporting-frame, pinions carried by said shafts and in mesh with the rack-teeth of the supporting members for coöperation with the latter to effect adjustment of the cutters, dogs disposed above the pinions and arranged to engage the rack-teeth aforesaid, and curved plates carried by the supporting members at opposite sides of the cutting-frame.

In testimony whereof I affix my signature in presence of two witnesses.

FRANK A. LEE. [L. S.]

Witnesses:

G. B. ABERCROMBIE,

JNO. M. WILSON.