

No. 859,345.

PATENTED JULY 9, 1907.

J. J. SIMON.
POTATO CUTTING MACHINE.
APPLICATION FILED OCT. 13, 1906.

2 SHEETS—SHEET 1.

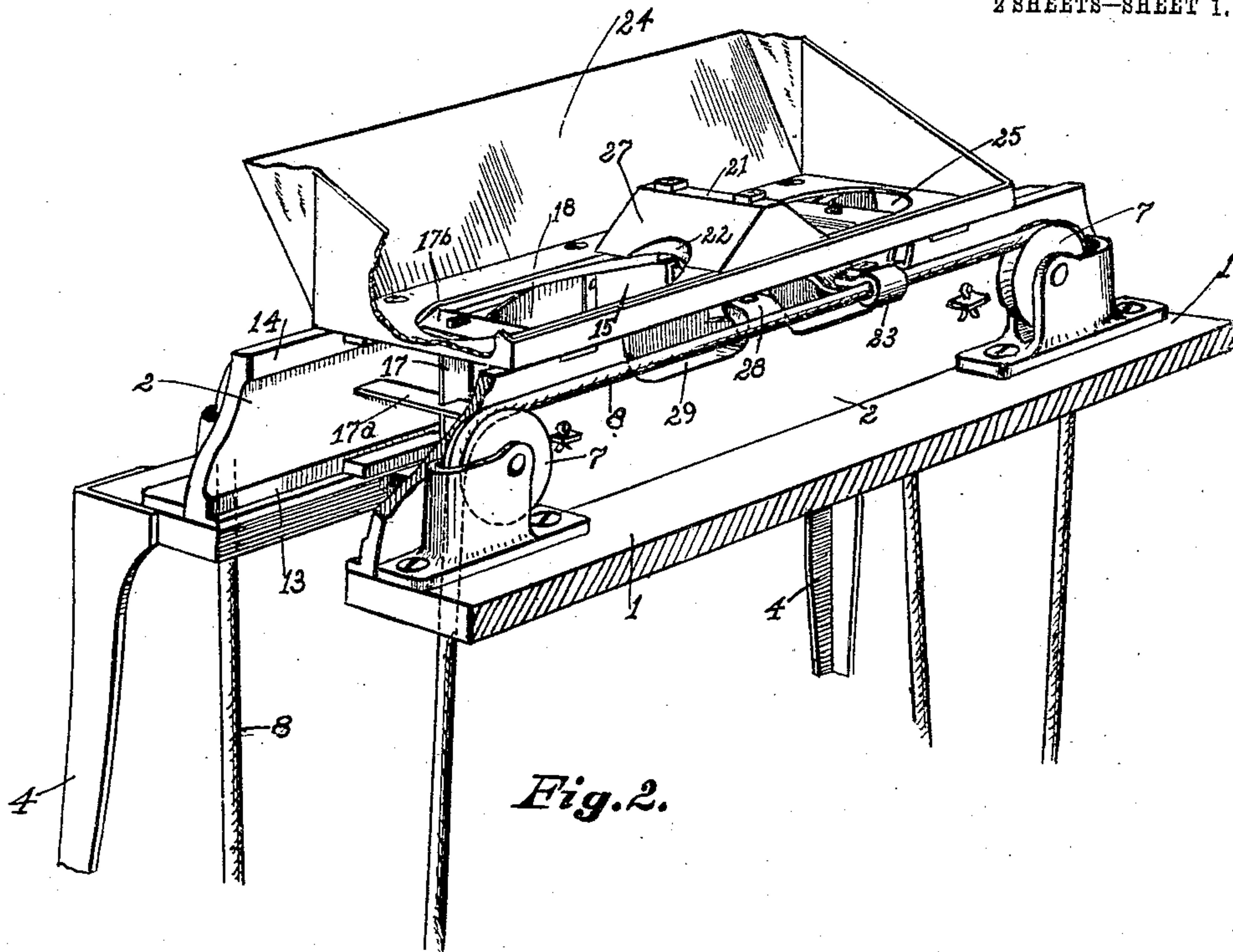


Fig. 2.

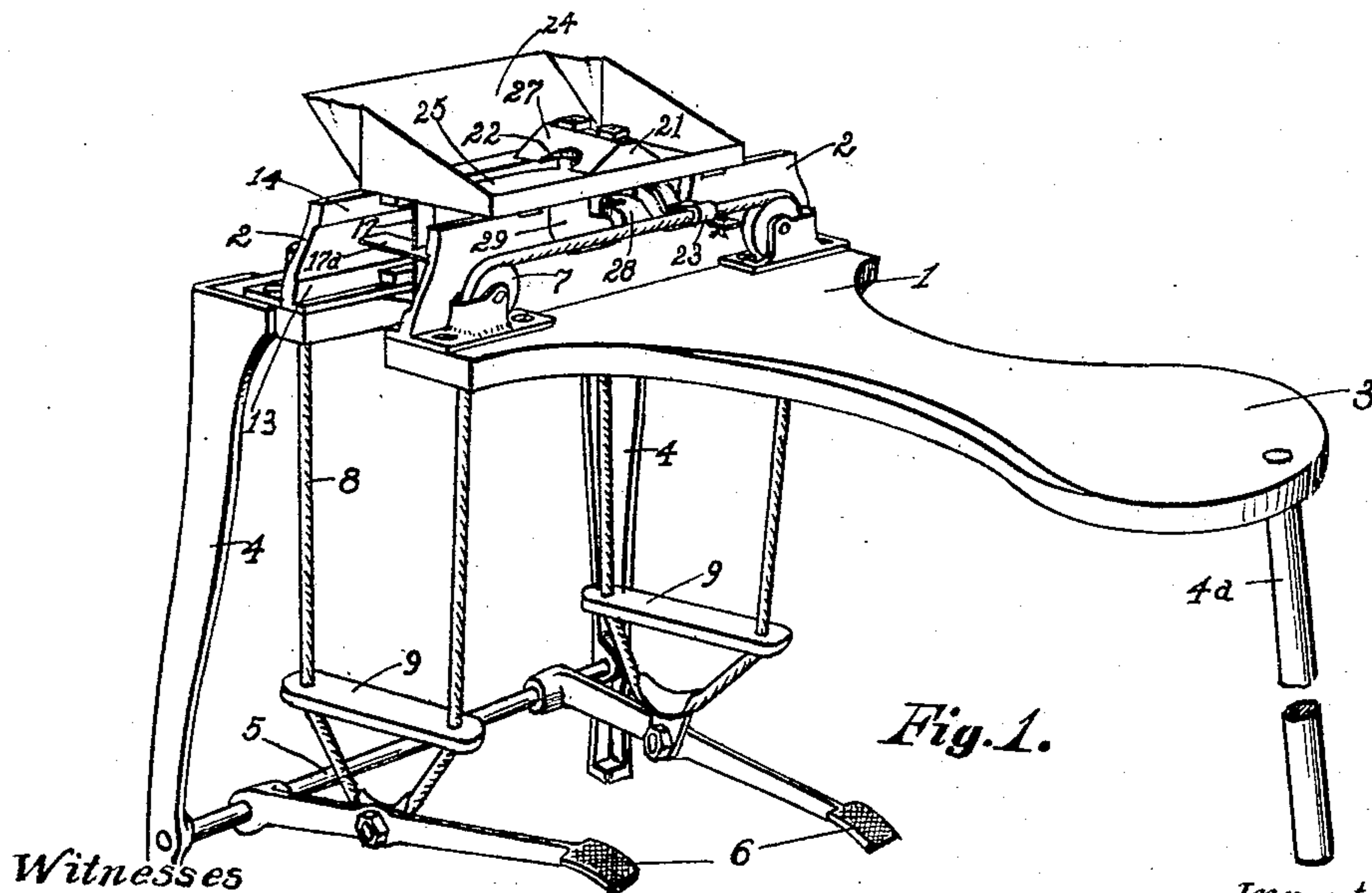


Fig. 1.

Witnesses

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2 SHEETS—SHEET 2.

Fig. 3.

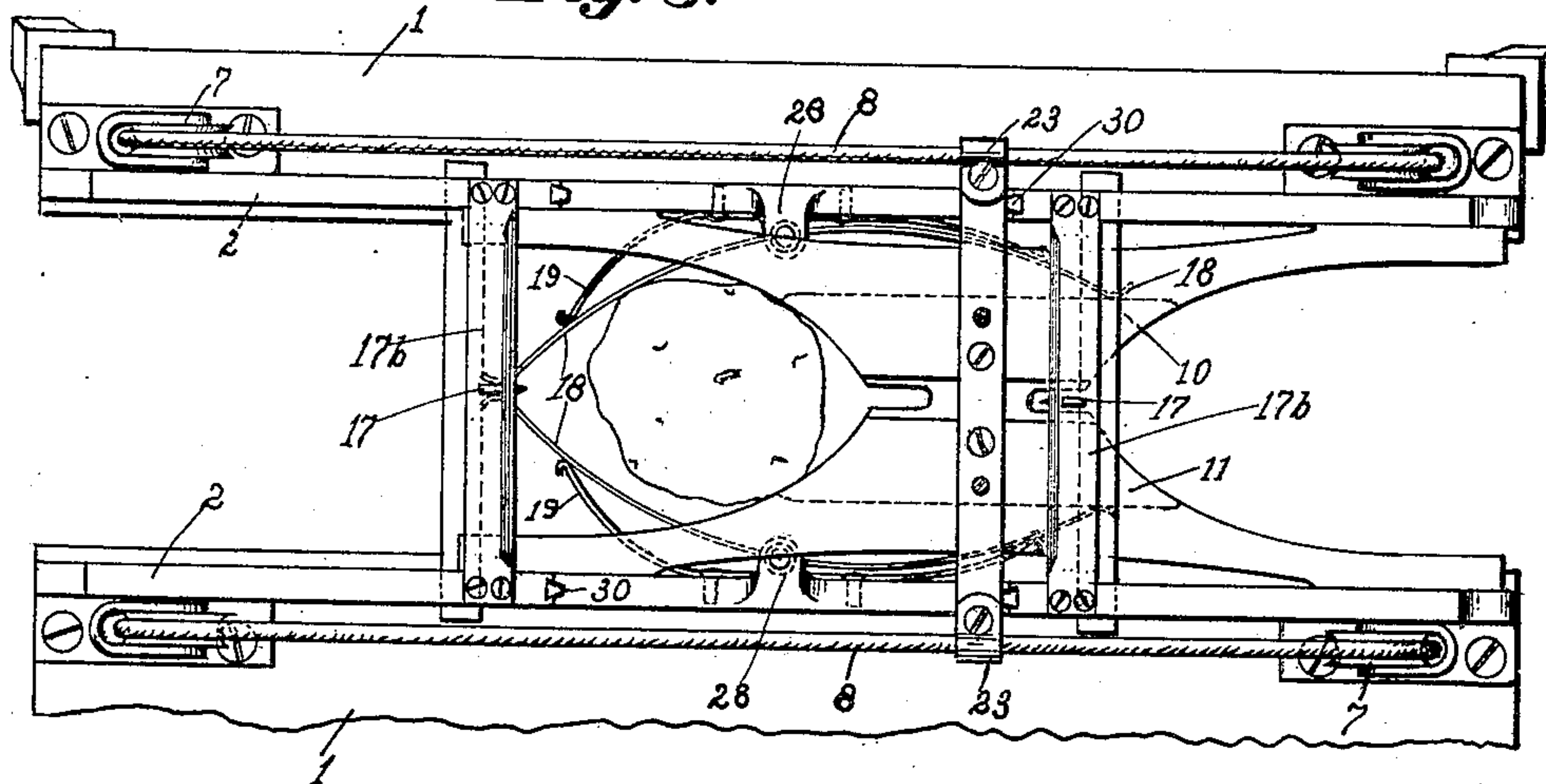


Fig. 4.

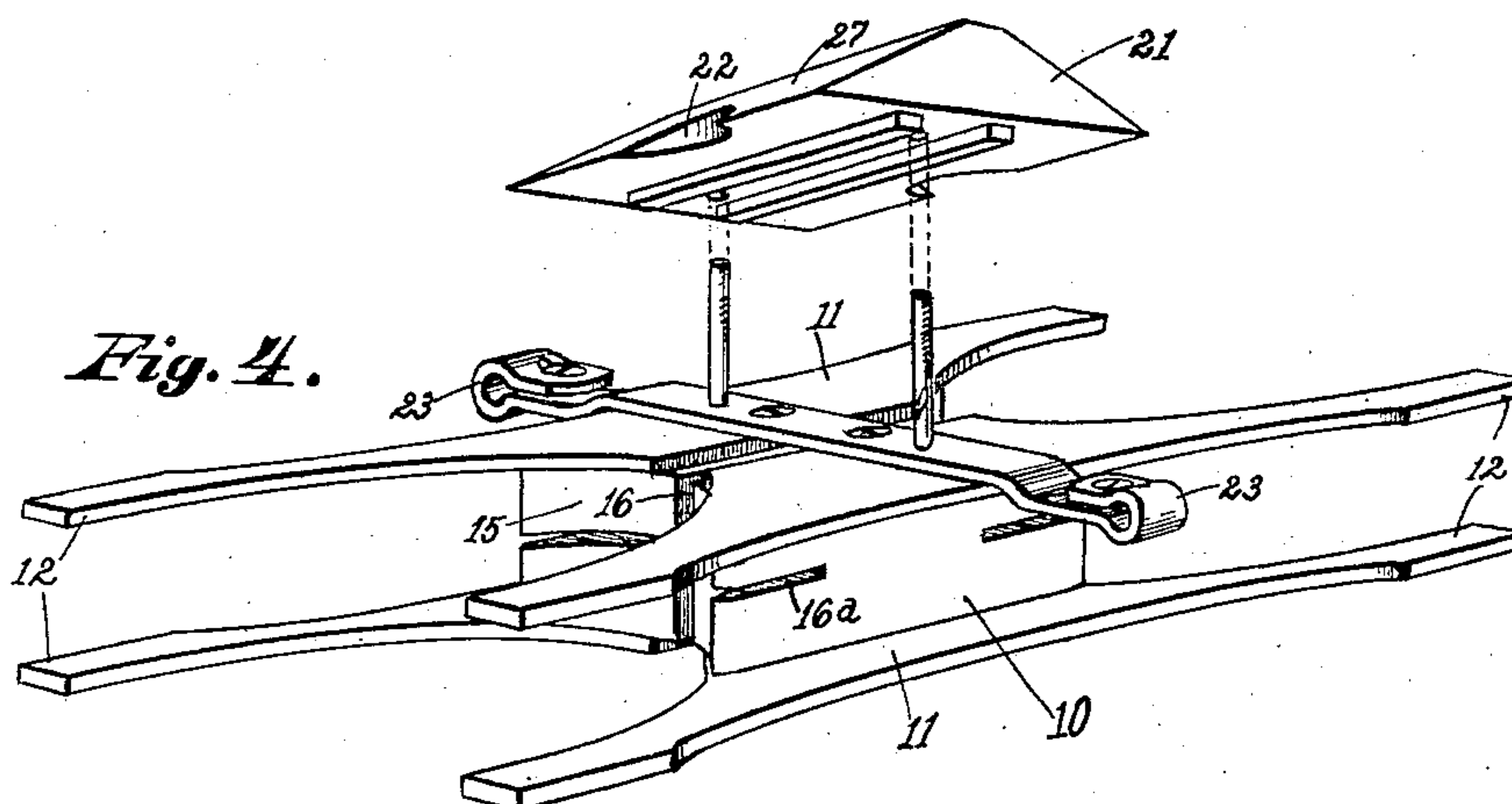


Fig. 6.

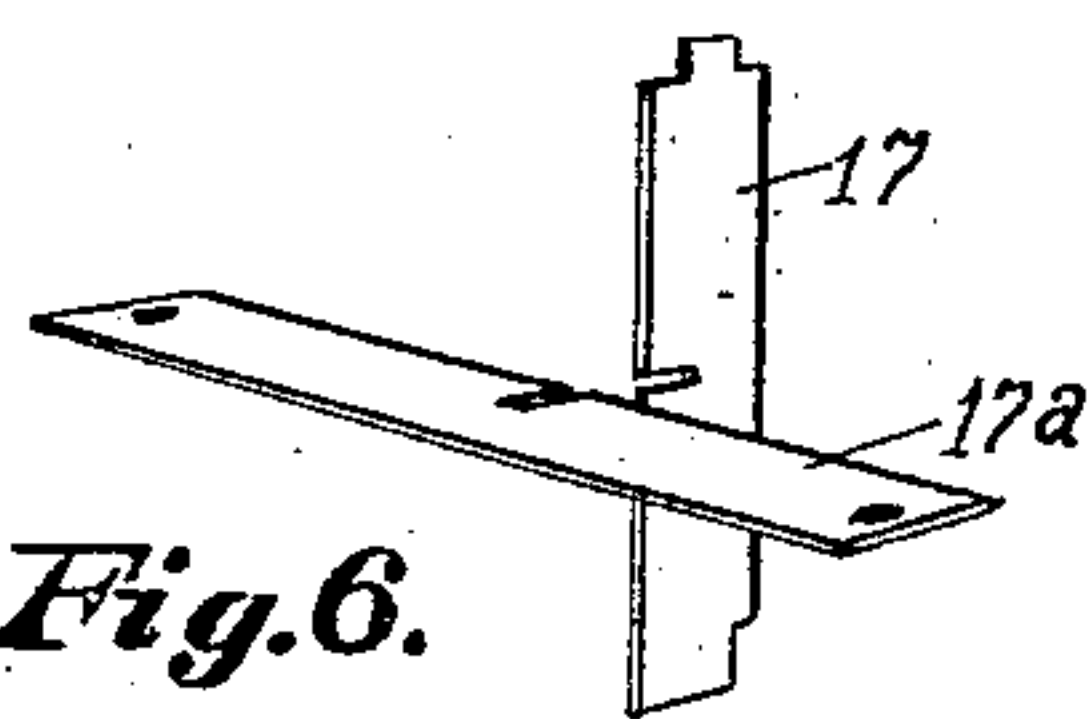
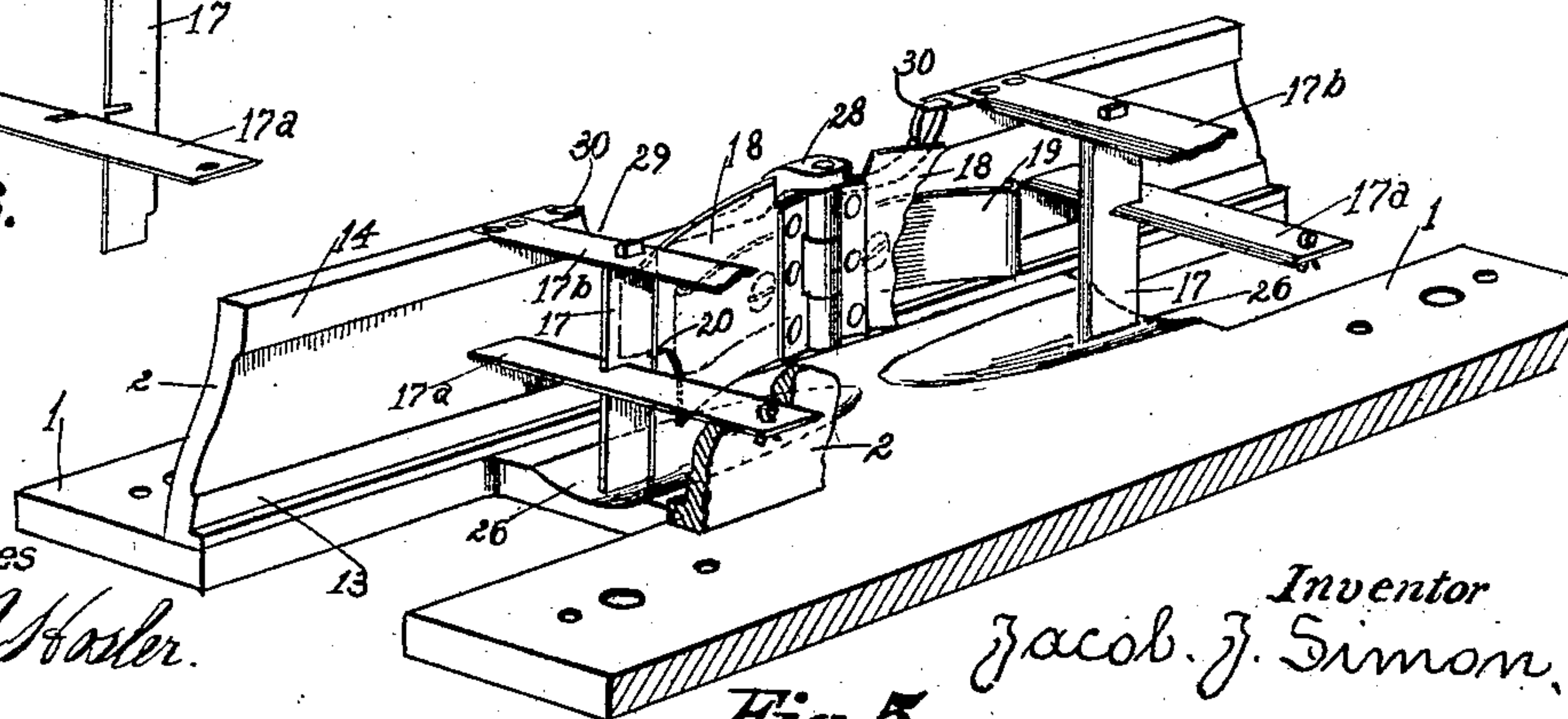


Fig. 5.



Witnesses

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UNITED STATES PATENT OFFICE.

JACOB J. SIMON, OF McDONALDSVILLE, OHIO.

POTATO-CUTTING MACHINE.

No. 859,345.

Specification of Letters Patent.

Patented July 9, 1907.

Application filed October 13, 1906. Serial No. 338,836.

To all whom it may concern:

Be it known that I, JACOB J. SIMON, a citizen of the United States, residing at McDonaldsville, in the county of Stark and State of Ohio, have invented a new and useful Potato-Cutting Machine, of which the following is a specification.

The invention relates to a machine for cutting potatoes and other vegetables and fruits into small pieces, as for use in planting; and the objects of the invention are to provide a machine in which the plunger reciprocates between opposing cutting knives with means for automatically feeding the machine from the hopper and for operating it with foot or other power, thus leaving the operator's hands free for filling the hopper or for removing the cuttings. These general objects and other minor ones are attained by the construction, arrangement and mechanism illustrated in the accompanying drawings, in which

Figure 1 is a perspective view of the entire machine; Fig. 2, an enlarged similar view of the machine proper with parts broken away to show some details; Fig. 3, a plain view of the machine proper with the hopper and ridge-block removed; Fig. 4, a detached perspective view of the plunger showing the ridge-block separated therefrom; Fig. 5, a similar view of machine head with parts broken away to show some details; and Fig. 6, a similar view of two of the knives slightly separated.

Similar numerals refer to similar parts throughout the drawings.

The head of the machine may be composed of the table plate 1 on which are formed or attached the side walls 2, and the plate may be extended on one side to form the seat 3.

The machine is preferably supported on legs, as 4 and 4^a, and on the bar 5 connecting the legs 4 may be pivotally mounted the pedals 6, which are thus in convenient location to be manipulated by the feet of the operator on the seat. The pulleys 7 are journaled preferably on the outer sides of the walls at each end of the head, over which pulleys an operating cord or cable 8 is passed, one along each of the side walls, thence down at each end to a connection with the respective pedals, the separating struts 9 being preferably provided to hold the cords in line with the pulleys.

The plunger 10 is provided above and below with the guide plates 11 on the ends of which are extended the diverging shaped runners 12, the lower pairs of which are adapted to travel in the ways 13 and the upper pairs against the way guides 14 longitudinally formed respectively on the inner faces of the side walls 2. The ends 15 of the plungers are preferably laterally concaved to conform to the U shape of the guide plates; and the ends are also slotted, as at 16 and 16^a to receive the

knives 17 and 17^a, which with the knives 17^b are formed or attached between the side walls of the head at the respective ends of the stroke of the plunger.

The swinging plates or gates 18 are hinged in the transverse median line to the side walls on each side of the plunger, and extend endwise in both directions between the guide plate of the plunger. The gates are preferably curved inward, and the springs 19 which are attached to the walls on each side are arranged to press the free ends of the wings together in the longitudinal median line at or near the respective knives, the ends of the wings being properly notched as at 20, if necessary, to receive the knives.

The ridge-block 21 is formed or attached in the transverse median line on the upper side of the plunger and its edges are preferably notched as at 22 to conform to the U shape of the guide plates; and an attachment is made, between the plunger and the operating cord on each side, as by means of the clamps 23, so that the plunger can be operated endwise between the side walls, by a proper manipulation of the pedals.

The hopper 24 is formed or attached on top of the side walls, in the bottom of which hopper is provided the elongated opening 25 through which the potatoes are free to drop between the gates on alternate sides of the ridge block. When the hopper is filled with potatoes and the plunger is moved to one end of its stroke, one of the potatoes is free to drop at the other end onto table plate between the U shaped runners and the spring gates, as shown in Fig. 3. The plunger can then be operated to the other end of its stroke thus forcing the potato against the knives, in so doing spreading the gates apart, whereupon the potato is sliced into small pieces and the cuttings are free to drop through the opening 26, one of which is provided for that purpose in each end of the table plates.

It is evident that by reason of the lateral concavity of the ends of the plunger, assisted if necessary by the spring gates, the potato is positively presented in proper position to the knives to be cut into the exact number and size of pieces predetermined by the location and arrangement of the knives; that is to say, the presentation of each potato to the knives is not left to chance, but is completely controlled by the machine.

In the operation of the machine the inclined faces 27 of the ridge block separates and holds up the superimposed potatoes in the hopper, and one or more potatoes are free to drop onto the table plate at the other end of the plunger, when the operation of cutting can be repeated by a reverse movement of the plunger. The opening in the bottom of the hopper is preferably extended to a short distance beyond the knives so that if a piece of potato is cut off above the upper knife it

can drop down beyond it. The side walls are preferably cut away in their middle parts and the clamp-bar 28 is adapted to operate in the recesses 29 thus formed, and the elastic stops 30 are preferably provided at the ends of these recesses against which stops the clamp bar is adapted to butt when the plunger is at the respective ends of its reciprocating movements.

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

- 10 1. A vegetable cutting machine comprising a head having longitudinal ways in the side walls and opposing knives in the end parts thereof, a plunger between the knives with laterally concaved ends and having runners on its sides adapted to operate in and along the ways,
- 15 there being an inclined faced ridge block on the transverse median line of the plunger, a hopper on the head having an opening in its bottom spanning the space between the knives, and means mounted on the head for operating the plunger to and fro between the knives.

2. A vegetable cutting machine comprising a head having longitudinal ways in the side walls and opposing knives in the end parts thereof and a reciprocating plunger between the knives with concaved ends and having runners on its sides adapted to operate in and along the ways, and spring gates on each side at the ends of the plunger.

3. A vegetable cutting machine comprising a head, a plunger in the head having a concaved end, knives in the head presented to the plunger, spring gates on each side of the plunger at its concaved end, and means mounted on the head for operating the plunger to and from the knives.

In testimony whereof, I have hereunto signed my name to this specification in the presence of two subscribing witnesses.

JACOB J. SIMON.

In presence of—

MARY A. CAVANAUGH,
JOSEPH FREASE.