

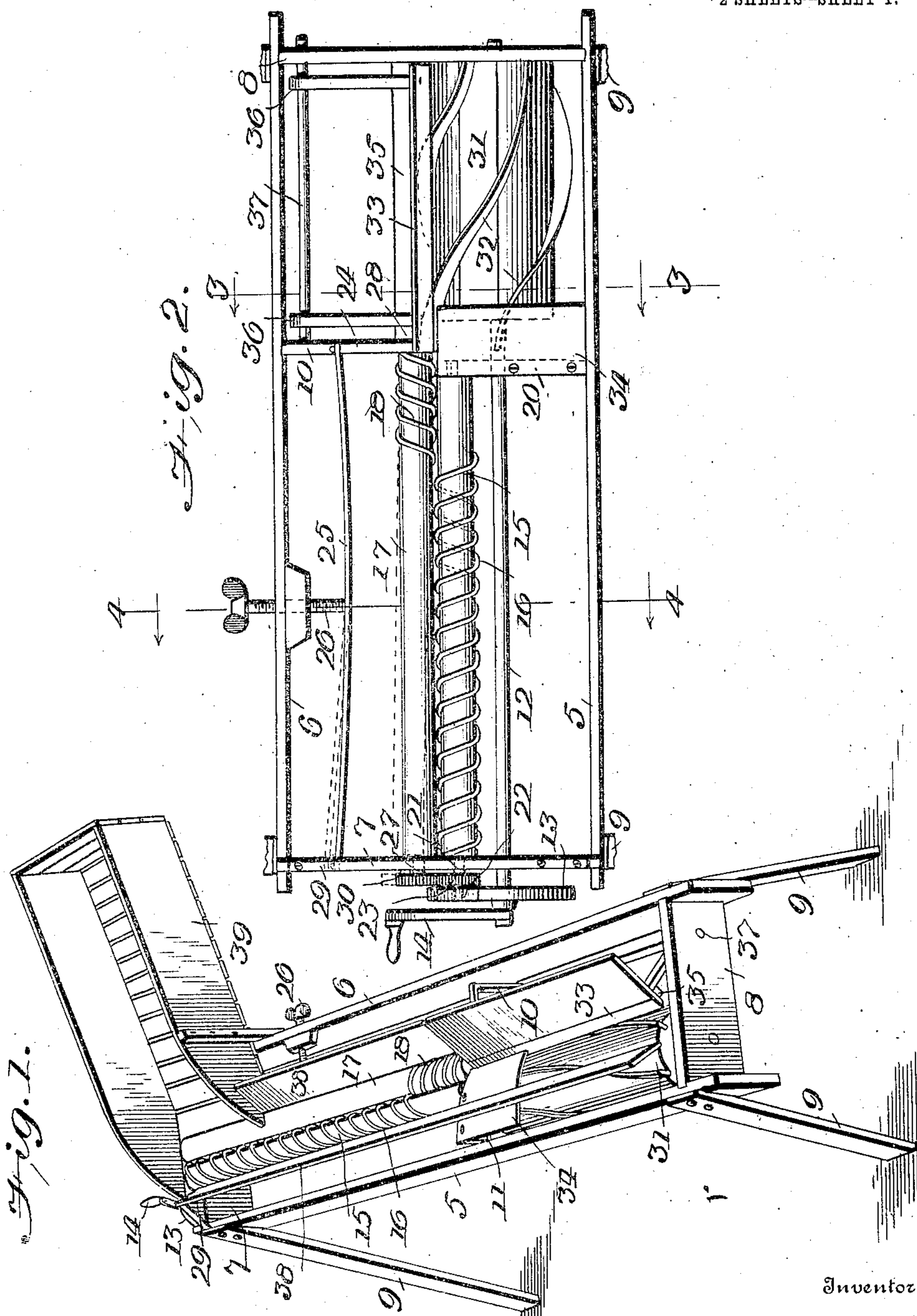
No. 877,670.

PATENTED JAN. 28, 1908.

W. R. SHUFELT.
VEGETABLE TOPPING MACHINE.

APPLICATION FILED APR. 12, 1907.

2 SHEETS—SHEET 1.



Witnesses

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Fig. 3.

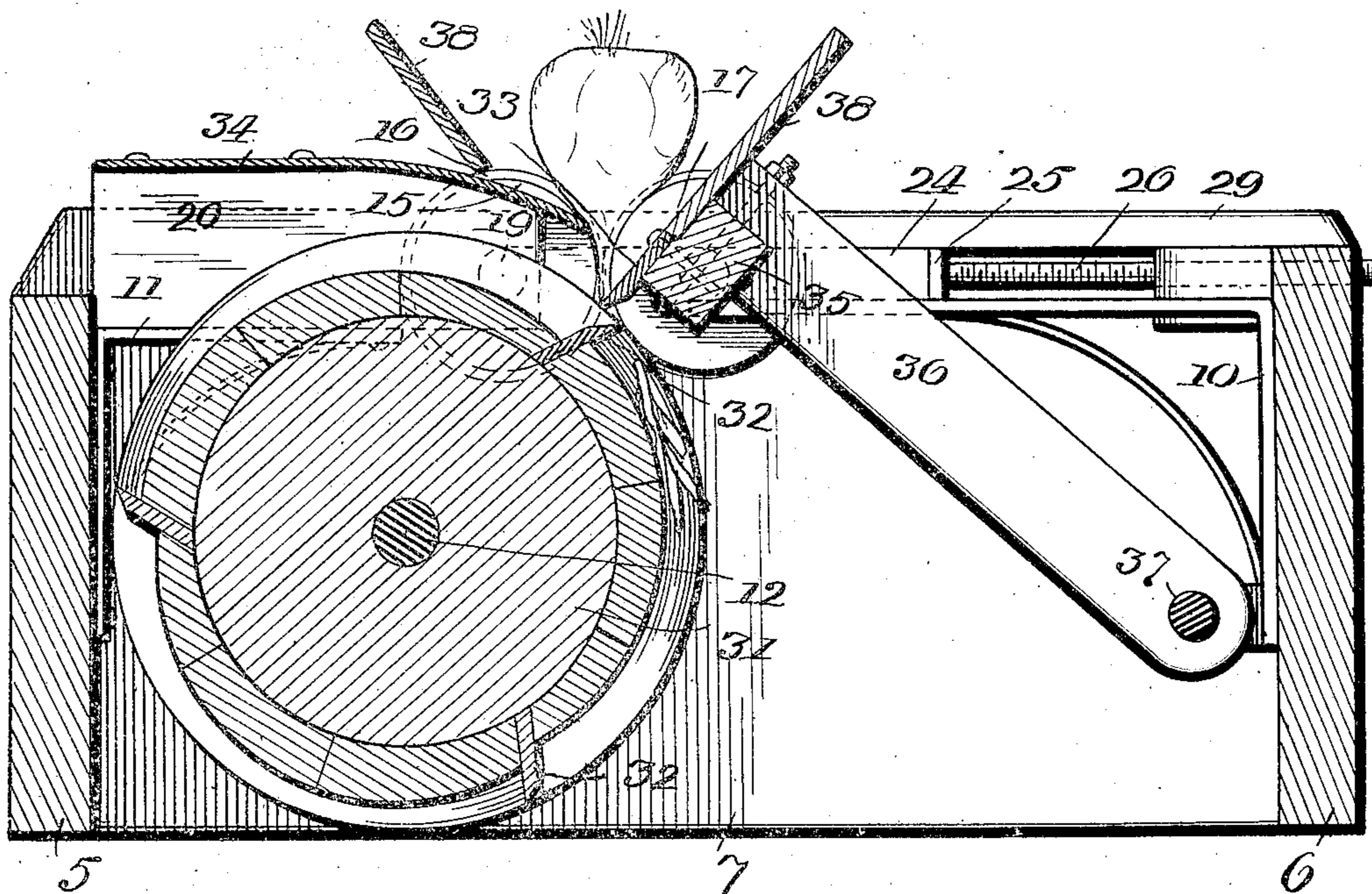
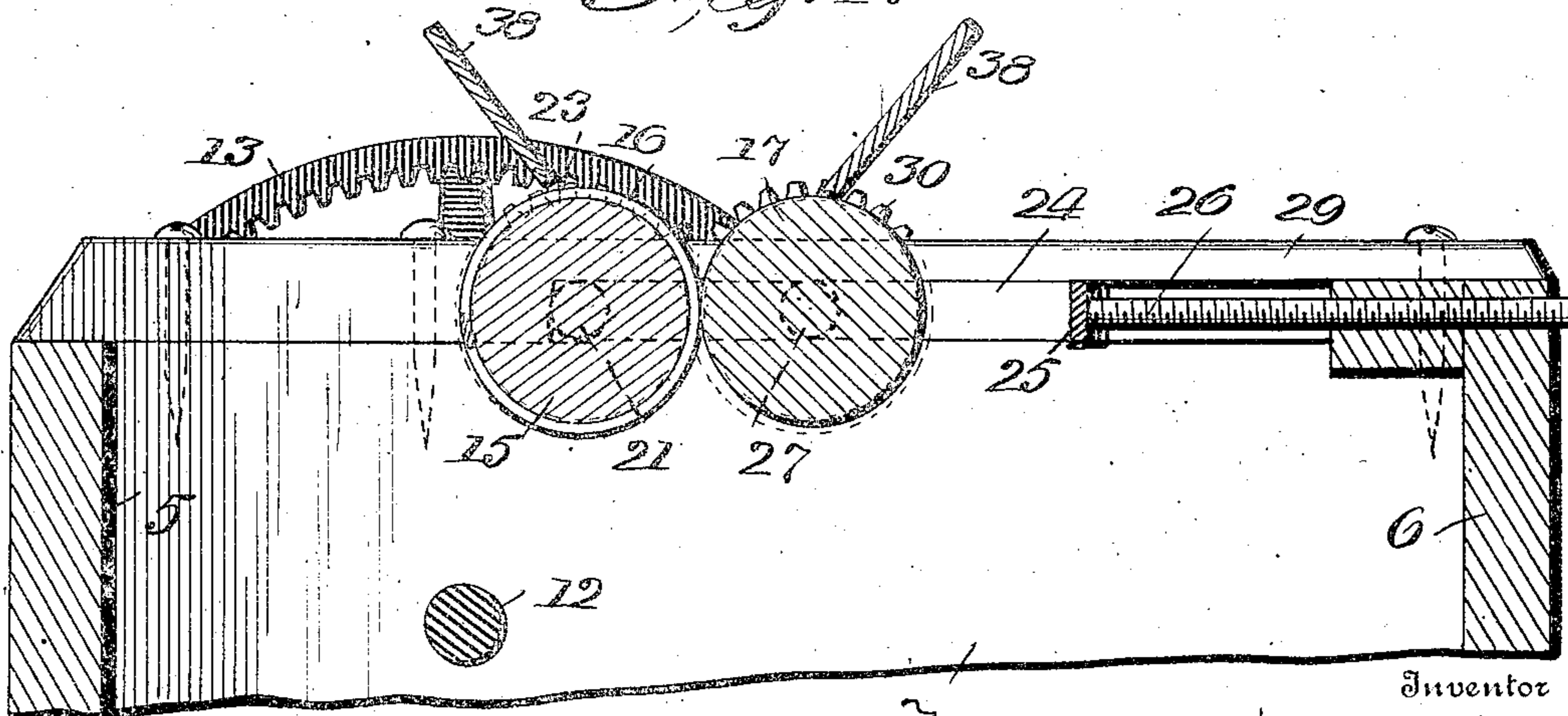


Fig. 4.



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UNITED STATES PATENT OFFICE.

WILLIAM R. SHUFELT, OF NIVERVILLE, NEW YORK.

VEGETABLE-TOPPING MACHINE.

No. 877,670.

Specification of Letters Patent.

Patented Jan. 28, 1908.

Application filed April 12, 1907. Serial No. 367,785.

To all whom it may concern:

Be it known that I, WILLIAM R. SHUFELT, a citizen of the United States, residing at Niverville, in the county of Columbia and State of New York, have invented certain new and useful Improvements in Vegetable-Topping Machines, of which the following is a specification.

This invention is a machine for removing the tops from onions and other vegetables, and has for its object to provide a machine of this kind which is simple in construction and can be easily operated.

A further object of the invention is to provide an improved cutting mechanism, and means for feeding the onions to the cutter with their tops properly presented thereto. The feeding mechanism is also so constructed that it will reject stones or other foreign matter liable to injure the cutter.

In the accompanying drawing, Figure 1 is a perspective view of the machine. Fig. 2 is a top plan view with the feed hopper and trough removed. Fig. 3 is a transverse section on the line 3—3 of Fig. 2. Fig. 4 is a transverse section on the line 4—4 of Fig. 2.

The supporting frame of the machine comprises side pieces 5 and 6, end pieces 7 and 8, and legs 9. The frame is inclined by making its legs at one end shorter than the legs at the other end. To the side pieces, inside the frame are secured brackets 10 and 11, respectively. In the end piece 7 (which is at the highest or upper end of the frame) and the end piece 8, is journaled a shaft 12 having outside the end piece 7 an internal gear 13 provided with a crank 14 by means of which the machine may be manually operated.

Adjacent the shaft 12 and arranged parallel thereto is a feed roller 15 which is wound spirally with two strands of wire 16 throughout its entire length with the exception of a short portion at the lower end. Arranged parallel to the roller 15 is a second feed roller 17 which is smooth throughout its entire length except a short portion at its lower end which has a spiral 18 formed in the same manner as the spiral 16, and located directly opposite the smooth portion of the roller 15.

The gudgeon 19 of the roller 15 is supported in a bearing block 20 secured to the bracket 11. The other gudgeon 21 of said roller is supported on the end piece 7 and outside the latter is fitted with pinions 22 and 23, the former meshing with the gear 13. The bearings of the roller 15 are fixed whereas those

of the roller 17 are made yielding for a purpose to be hereinafter described.

On top of the end piece 7 and the bracket 10 are blocks 24 which are connected at one end by a flexible strip 25, and through the side piece 6 is threaded a screw 26 which bears on said strip. The gudgeons 27 and 28 of the roller 17 are supported on top of the end piece 7 and the bracket 10 and are engaged by the blocks 24, the outer ends thereof being made concave to fit the gudgeons. On the end piece 7 is a cap 29 which extends over the gudgeons 21 and 27. The gudgeon 27 extends beyond the end piece 7 and outside the latter is fitted with a gear wheel 30 meshing with the pinion 23.

In use, the feed rollers will be spaced according to the size of the onions by moving the screw 26 in or out which carries the roller 17 toward or from the roller 15. If a stone or other hard substance gets between the rollers, the roller 17 will be pushed away from the roller 15 as shown by dotted lines in Fig. 2 so that the stone can drop down from between the rollers, and at the same time the gears 23 and 30 are thrown out of mesh and the feed stops. This arrangement prevents the stone from being fed to the cutting mechanism and injuring the same.

The cutting mechanism comprises a revolving cylinder 31 armed with three spiral knives 32 which work in contact with an inclined stationary cutting blade 33. The cylinder is mounted on the shaft 12 between the bracket 11 and the end piece 8. The knives 32 project a short distance from the upper end of the cylinder, and to prevent the onions from falling in the open space thus formed between the feed rollers and the cutting cylinder, a plate 34 is fastened on top of the bearing block 20. The plate is concentric with the cutting cylinder, the block 20 being curved to match. The plate is located slightly below the top of the roller 15. The blade 33 is bolted to a cross-bar 35 connecting the free ends of arms 36 which are pivoted on a rod 37 extending between and secured to the bracket 10 and the end piece 8. The upper end of the cross-bar 35 is cut away to permit the blade 33 to come close to the lower end of the roller 17. The blade 33 is held in contact with the knives 32 by gravity. The periphery of the cylinder 31, between the knives 32 is cam-shaped, its radius being smallest just back of the knives. The object of this arrangement is to permit the

onion tops to get under the blade 33 after which the onion is raised out of the way of the knives 32 and the tops are then cut off without cutting or bruising the onion.

5 Above the feed rollers 15 and 17 are arranged sloping boards 38 which form a trough for keeping the onions on the rollers. This trough is continued over the cutting mechanism and to the lower end of the machine from which the topped onions are discharged into a suitable receptacle. The 10 trough-board above the blade 33 is secured to the cross-bar 35. The onions are fed to the machine from a chute or hopper 39 arranged at the upper end thereof and discharging into the trough. The tops after 15 they are cut off drop to the floor or into a suitable receptacle placed under the cutting

mechanism. The machine is operated by turning the crank 14 which through the gear- 20 ing herein described operates the feed and cutting mechanism simultaneously.

I claim:—

In a vegetable topping machine, a cutting mechanism comprising a revoluble cyl- 25 inder armed with spiral knives, the periphery of the cylinder being cam-shaped, its radius being smallest back of the knives, and a stationary cutting blade in contact with the knives. 30

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

WILLIAM R. SHUFELT.

Witnesses:

JASPER A. SMITH,
ESTELLA SHUFELT.