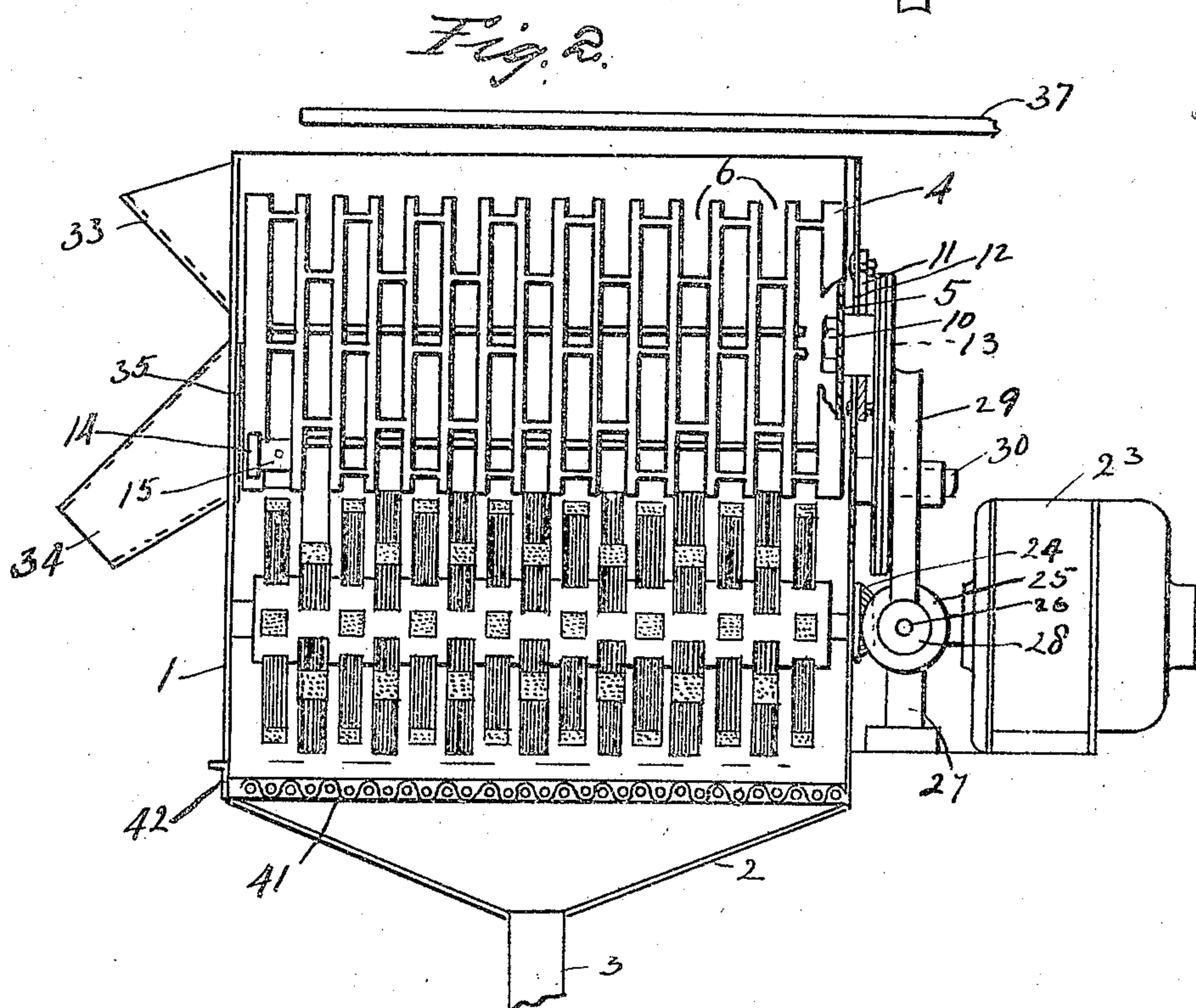
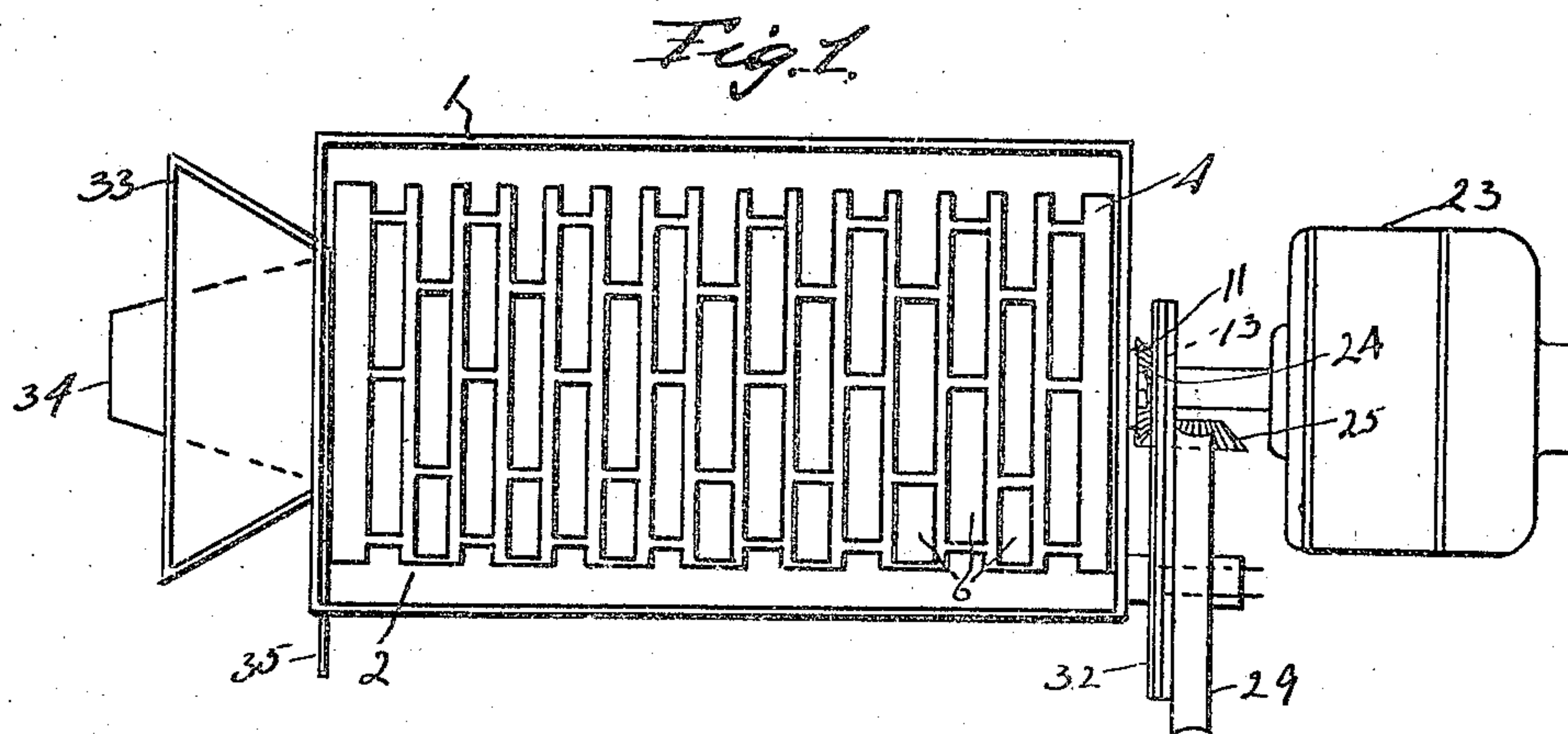


Jan. 2, 1923.

W. M. McCABE.
CLEANER FOR POTATOES AND THE LIKE.
FILED MAY 27, 1922.

1,441,161.

3 SHEETS—SHEET 1.



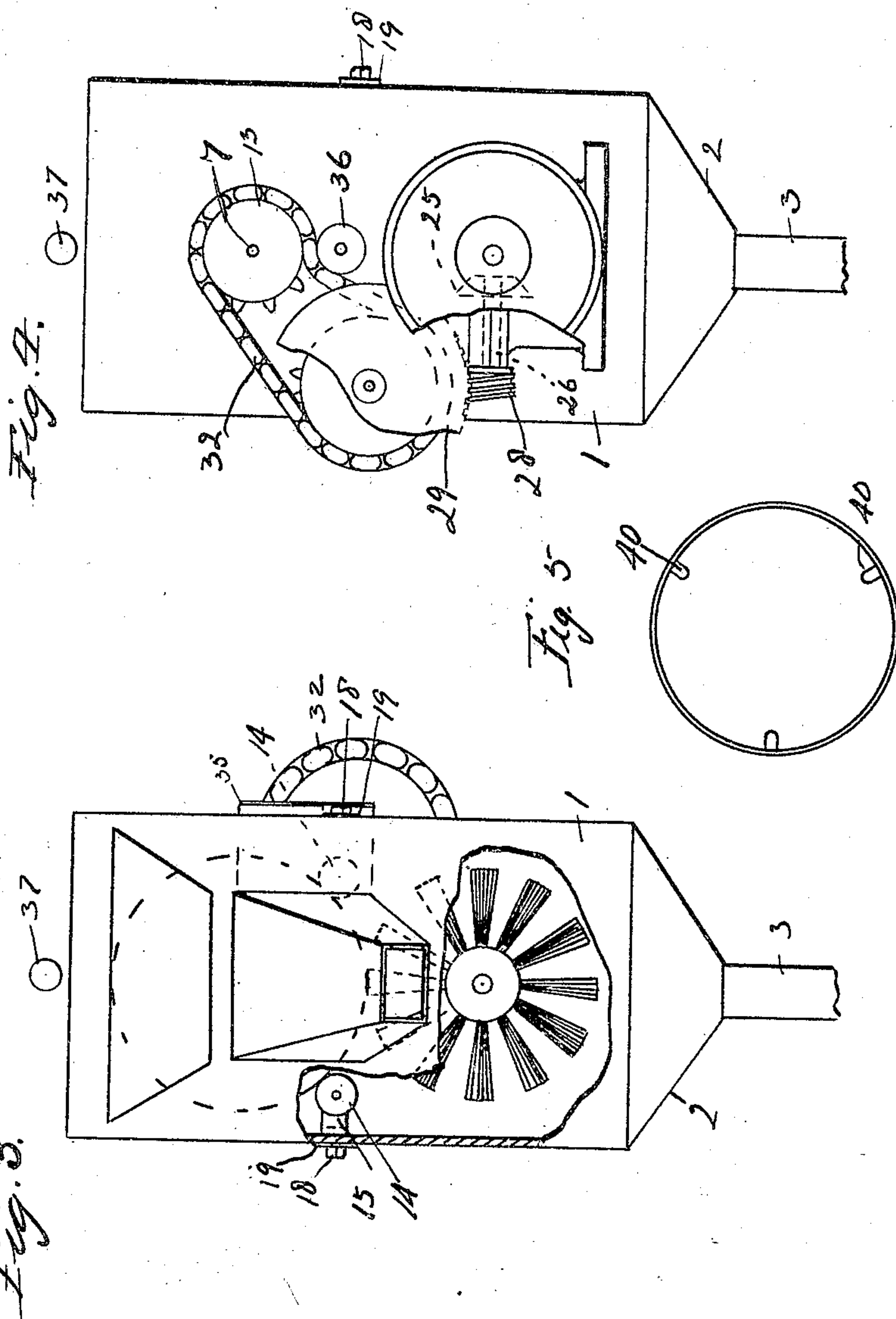
Inventor
William M. McCabe
By W. W. Williamson

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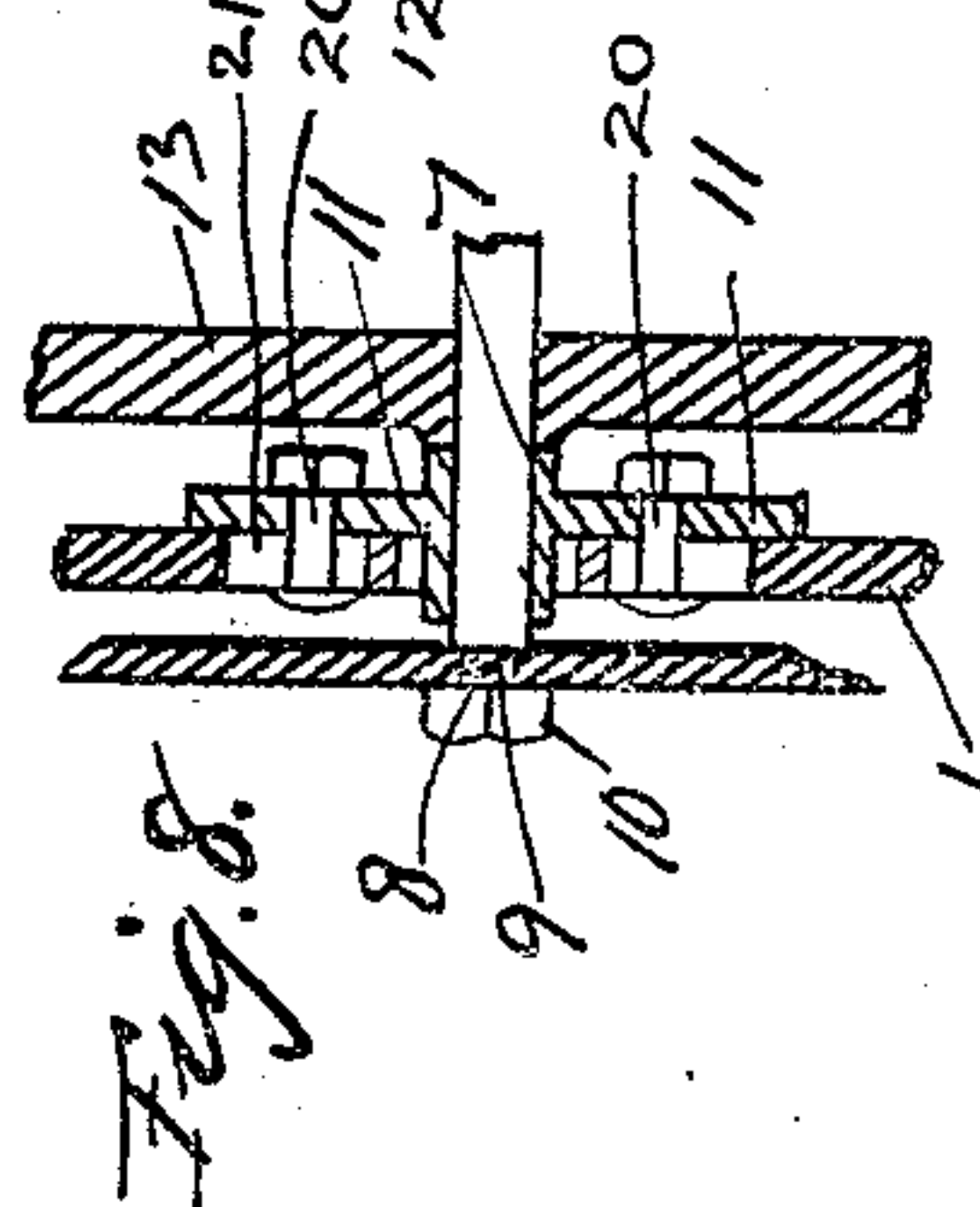
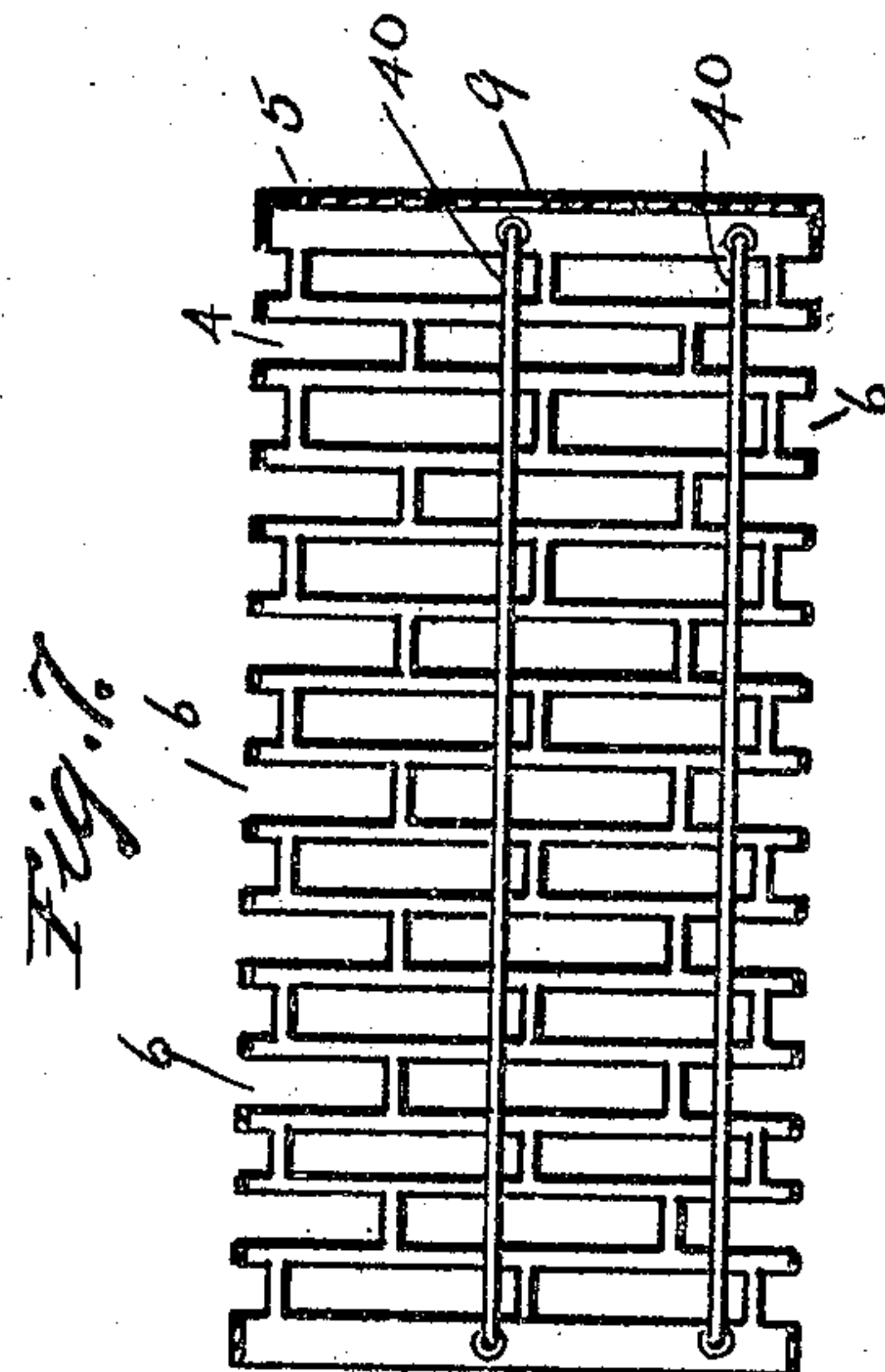
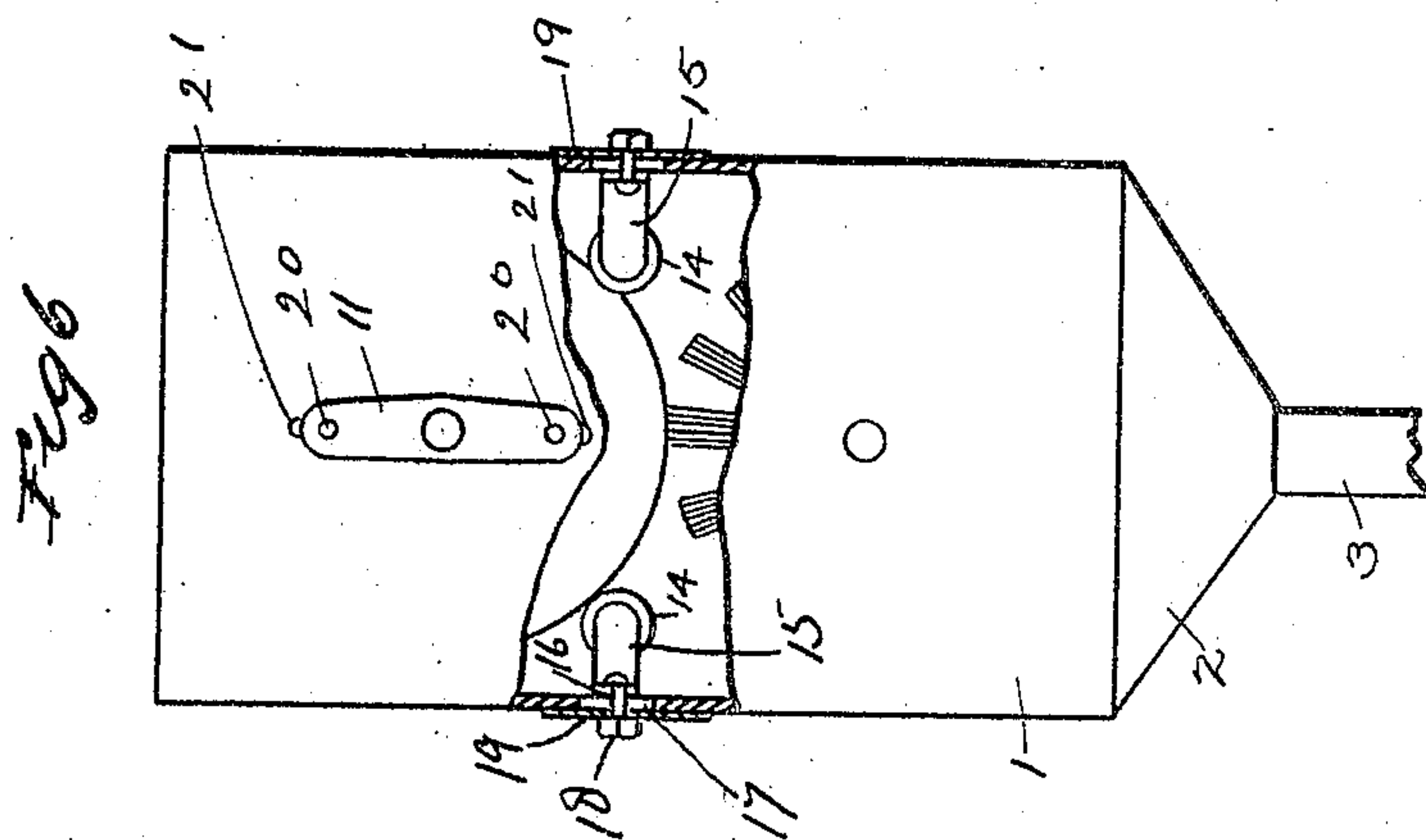
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Att. N.

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3 SHEETS—SHEET 3.



Inventor
William M. McCabe
By W. Williamson
7/14.

UNITED STATES PATENT OFFICE.

WILLIAM M. McCABE, OF PHILADELPHIA, PENNSYLVANIA.

CLEANER FOR POTATOES AND THE LIKE.

Application filed May 27, 1922. Serial No. 564,045.

To all whom it may concern:

Be it known that I, WILLIAM M. McCABE, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented new and useful Improvements in Cleaners for Potatoes and the like, of which the following is a specification.

My invention relates to new and useful improvements in cleaners for potatoes and the like, and has for its object to provide an exceedingly simple and effective machine so constructed as to carry out the intended operations in a convenient and effective manner.

A further object of my invention is to provide a slotted cylinder for receiving the potatoes or other article to be cleaned, through the slots of which said articles will sufficiently protrude to permit the surfaces thereof to be acted upon by a suitable brush.

A still further object of my invention is to provide for the convenient charging and discharging of the cylinder, and also to subject the articles within the cylinder to a constant application of flowing water.

A final object of my invention is to provide a peculiar arrangement of gearing for operating the brush and the cylinder.

With these ends in view, this invention consists in the details of construction and combination of elements hereinafter set forth and then specifically designated by the claims.

Fig. 1, is a plan view of a machine made in accordance with my invention.

Fig. 2, is a side elevation of Fig. 1, the side of the casing being removed to show the operating parts within said casing.

Fig. 3, is an end view of Fig. 1, a portion of the casing being broken away to show the brush.

Fig. 4, is a view taken from the opposite end of the machine of Fig. 3, a portion of the motor being broken away to more clearly show the gearing.

Fig. 5, is a cross section of the cylinder.

Fig. 6, is an end view of the machine similar to Fig. 4, the motor and gearing being removed and a portion of the casing being broken away to clearly show the arrangement of the roller bearing by which one end of the cylinder is supported.

Fig. 7, is a longitudinal section of the cylinder.

Fig. 8, is a detail section of the head of the cylinder showing the manner of securing the sprocket wheel thereto.

In carrying out my invention as here embodied 1, represents the casing which may be of any convenient size or shape to house the operating parts, this casing here being shown as rectangular having an inclined bottom 2 from which leads a drain 3.

4 represents the containing cylinder one end of which is closed by the head 5 while the other end is open and the circular walls of this cylinder are slotted as indicated at 6 for the purpose hereinafter set forth. To the head of this cylinder is secured a short shaft 7 by means of the threaded shank 8 which passes through the hole 9 in said head and has threaded thereon the nut 10 thus holding said head between the shoulder of the short shaft and the nut as clearly shown in Fig. 8.

11 represents a bearing plate which fits over the opening 12 formed in the end wall of the casing, and in this plate is journaled the short shaft 7 the outer end of which carries the sprocket wheel 13. By this arrangement the closed end of the cylinder is supported and driven, while the opposite end thereof is supported by the rolls 14 each of said rolls being journaled in a bracket 15 having the shank 16 which extends through a slot 17 formed in the walls of the casing, said shanks being threaded to receive the nuts 18 which when set up against the washers 19 will hold the brackets in any adjustment; as the bearing plate 11 is secured to the casing by bolts 20 which pass through the slots 21 in said casing, the head of said bolts bearing upon inner surface of the casing or suitable washers interposed there between, it follows that said plate can be adjusted vertically to effect a vertical adjustment of one end of this cylinder. The opposite end of this cylinder may be adjusted vertically by the adjustment of the brackets 15 as just described.

22 represents the power shaft which extends lengthwise through the casing and is journaled in the end walls thereof in any suitable manner, and upon this shaft is mounted the cleaning brush 25, said brush preferably being composed of wire bristles which are adapted to impinge against the periphery of the cylinder and the contents of said cylinder exposed through the slots 6.

23 represents a motor adapted to revolve the power shaft directly and consequently the brush, and upon this shaft is secured a bevel-gear 24, said gear meshing with the
 5 corresponding bevel-gear 25 carried by the worm shaft 26 journaled in the standard 27. The opposite end of this worm shaft carries the worm 28 which meshes with the worm
 10 wheel 29 journaled upon stud 30, and to this worm wheel is attached a sprocket wheel 31 over which the sprocket chain or link belt 32 runs, said belt also running over the sprocket wheel 13, thereby transmitting
 15 motion from the power shaft to the cylinder and reducing the speed of the power thus transmitted in order that the cylinder may be revolved at a much lower rate of speed than the brush.

For convenience in filling or charging the
 20 cylinder with potatoes or other articles to be cleaned I provide a hopper 33 which opens into the casing in front of the open end of this cylinder so that the potatoes poured into said cylinder will readily pass
 25 to the interior of the cylinder as will be readily understood. In order that the potatoes after they have been cleaned may be readily removed from the cylinder I provide a spout 34 which opens through the
 30 casing immediately in front of the open end of the cylinder and extending to or below the bottom thereof and when this spout is open the contents of the cylinder will flow therefrom through said spout. To prevent
 35 the out flowing of the potatoes when undergoing the cleaning operation a slide gate 35 is mounted inside of the casing over the outlet of the spout, said gate being intended to be closed when the machine is in operation
 40 and opened for the removal of the contents of the cylinder.

To provide for the vertical adjustment of the cylinder to compensate for wear of the brush I mount an adjustable idler 36 in such
 45 manner that it may be utilized to take up or let out the slack in the sprocket chain 32 when the cylinder is adjusted vertically.

37 represents a perforated pipe extending over the top of the casing for the purpose
 50 of supplying water in jet form to the cylinder to wash away the refuse when the machine is in operation; the water and refuse passing down through the drain 3.

From the foregoing description operation
 55 will be obviously as follows:—

Potatoes have been introduced into the cylinder and machine put in operation, the brush will be revolved at a high rate of speed while the cylinder will rotate at a
 60 relatively slow rate and the brush impinging upon the potatoes exposed through the slots 6 will remove the outer surface of said potatoes, and as the potatoes are tumbled by the revolving of the cylinder within a comparatively short time the outer surface of

each potato will have been acted upon and cleaned.

When it is desired to clean potatoes of widely varying sizes the cylinder may be removed by removing the nut 10 and lifting
 70 cylinder from the casing when another of larger or smaller mesh may be substituted therefor.

One of the great advantages of my improvement is that the potatoes being housed
 75 within the cylinder and their surfaces being exposed through the slots thereof the circular wall of the cylinder surface is a gauge to limit the extent to which the brush can reach and act upon said potatoes. 80

Since it is essential to thoroughly mix up the potatoes within the cylinder when the machine is in operation to prevent the same surfaces being too often exposed to the
 85 action of the brush, the rods 40 are secured within the cylinder running lengthwise thereof and spaced a short distance from the inner walls so that when the cylinder is revolved the potatoes will be caught by these
 90 rods, lifted to a certain height and then permitted to fall back away from the slots.

If found desirable a catch screen 41 in the form of a drawer having a front 42
 95 may be adapted to slide within the casing beneath the brush so as to catch the refuse to prevent the clogging of the drain. By the withdrawal of this screen the accumulated refuse may be readily removed.

Of course I do not wish to be limited to the exact details of construction as herein
 100 shown as these may be varied within the limits of the appended claims without departing from the spirit of my invention.

Having thus fully described my invention what I claim as new and useful is:— 105

1. In a machine for cleaning potatoes and the like, a cylinder having slots formed in the walls of said cylinder for exposing the contents thereof to a limited degree, means
 110 for revolving said cylinder, and a brush so mounted relative to said cylinder as to impinge upon the exposed surfaces of the contents thereof.

2. In a machine of the character described a suitable casing, a slotted cylinder mounted
 115 and revolved within said casing, a brush also mounted within said casing and adapted to impinge upon the contents of said cylinder through said slots, and means for revolving the brush and cylinder simultaneously at
 120 different speeds.

3. In a machine of the character described a slotted cylinder and casing in which said cylinder is removably mounted, means for
 125 adjusting the cylinder vertically, a brush mounted within said casing beneath said cylinder and adapted to contact therewith, a power shaft by which said brush is secured, a motor attached to said shaft and the train of gearing connecting the power 130

shaft with the cylinder, whereby when the brush is revolved the cylinder will be revolved at a lower rate of speed.

4. In a machine of the character described
5 a casing, a brush mounted in said casing, a power shaft for revolving the brush, a slot-
ted cylinder also mounted within the casing upon said brush, means for adjusting said
cylinder vertically for maintaining the
10 proper relation between it and said brush, a hopper leading to the open end of the

cylinder and spout leading from said open end, a slide gate for controlling the outflow of the contents of the cylinder through the spout, a sprinkler pipe for supplying water 15 to the casing, and a drain for the removal of the refuse and the water supplied by the sprinkler.

In testimony whereof, I have hereunto affixed my signature.

WILLIAM M. McCABE.