

No. 610,203.

Patented Sept. 6, 1898.

H. REYNOLDS.
FLOWER POT CLEANER.

(Application filed Nov. 15, 1897.)

(No Model.)

2 Sheets—Sheet 1.

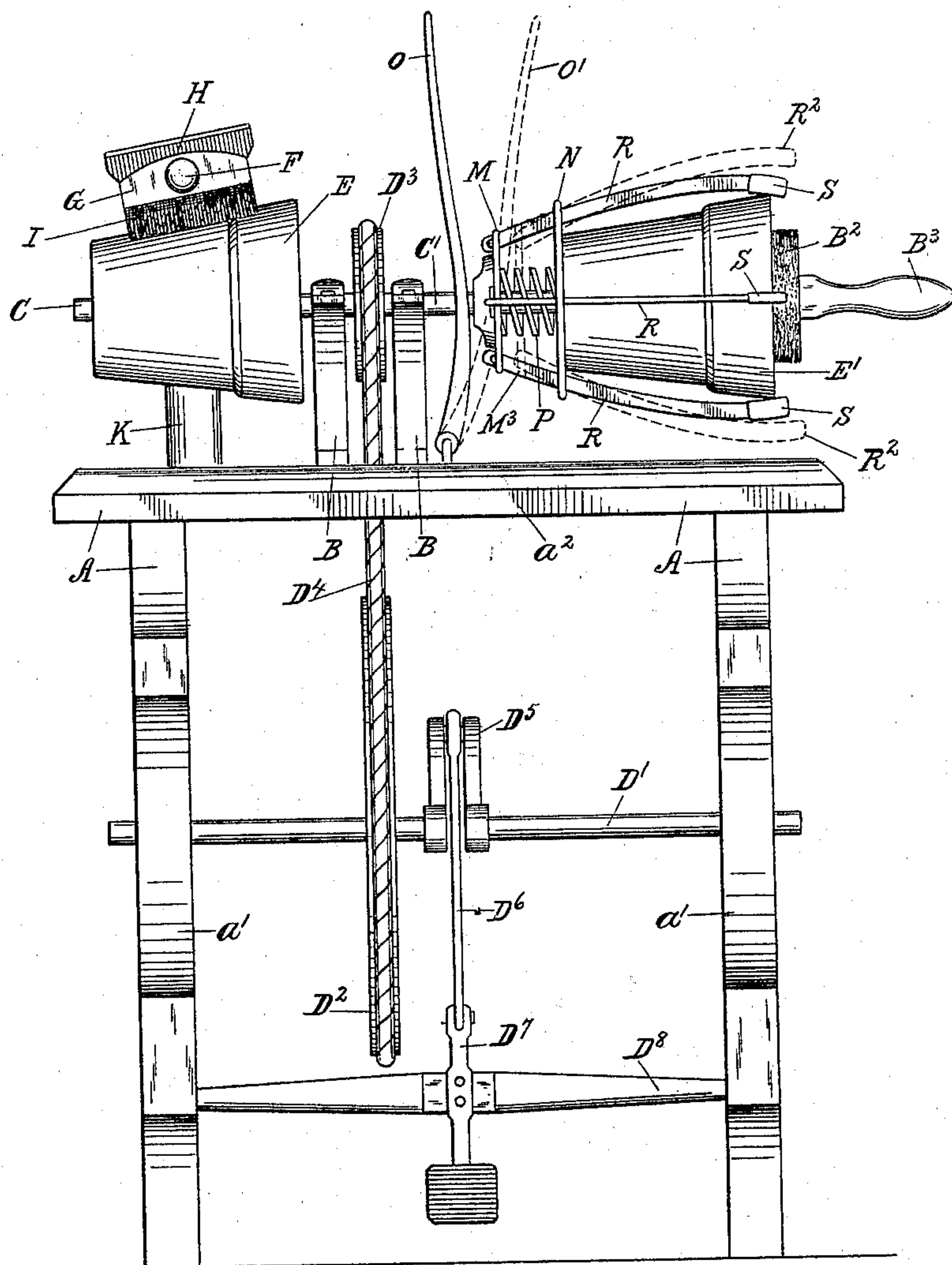


Fig. 1.

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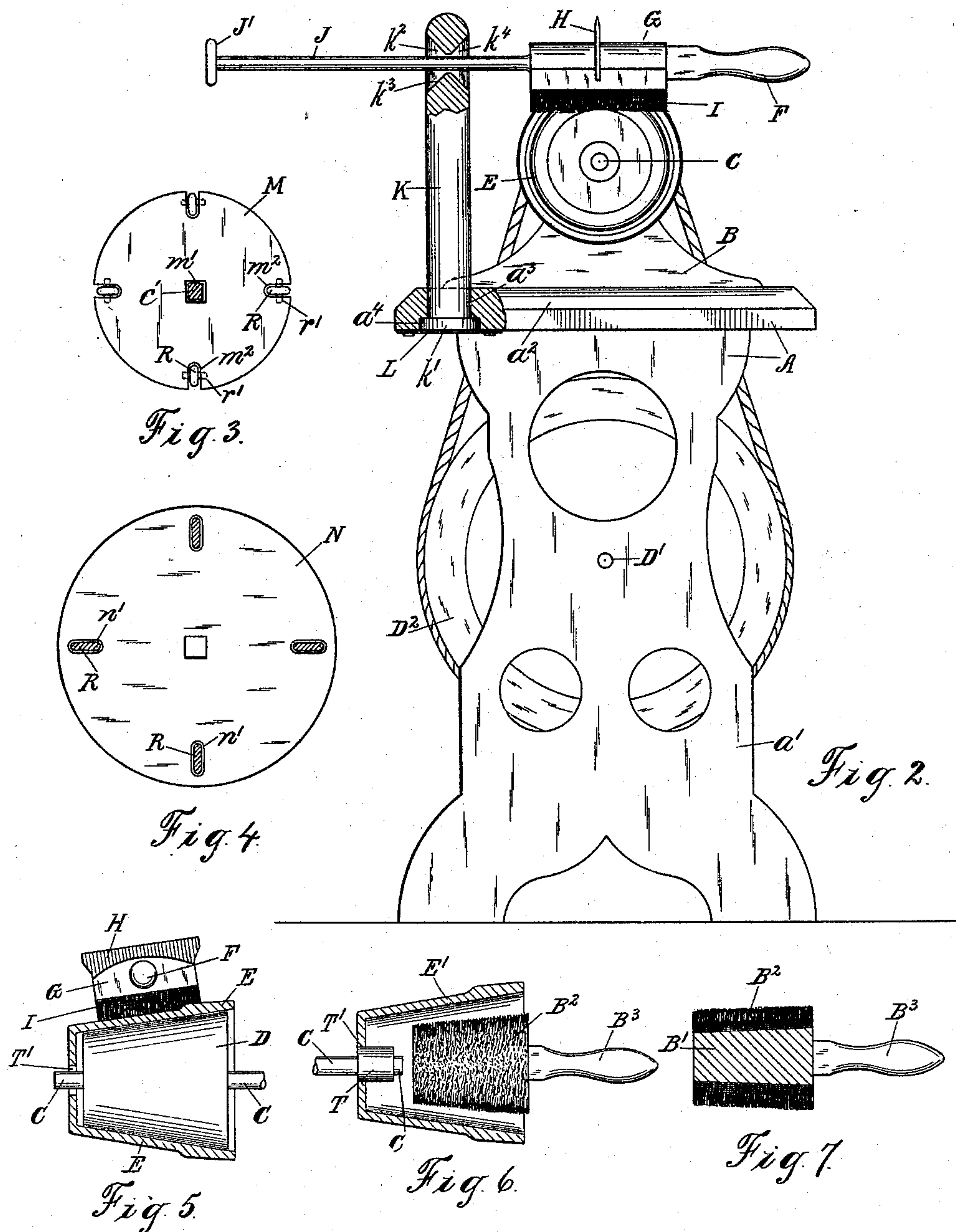
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UNITED STATES PATENT OFFICE.

HOWARD REYNOLDS, OF SARNIA, CANADA.

FLOWER-POT CLEANER.

SPECIFICATION forming part of Letters Patent No. 610,203, dated September 6, 1898.

Application filed November 15, 1897. Serial No. 658,661. (No model.)

To all whom it may concern:

Be it known that I, HOWARD REYNOLDS, a subject of the Queen of Great Britain, and a resident of Sarnia, in the county of Lambton, in the Province of Ontario, Canada, have invented a new and useful Flower-Pot Cleaner, of which the following is a specification.

This invention relates to a machine for
10 cleansing and removing from flower-pots and the like green mold, dirt, and other extraneous matter, and has for its object the provision of a device simple in construction, cheap in manufacture, and efficient in practical use; and this invention consists of the
15 improved construction and combination of parts of the same, as will be hereinafter first fully set forth and described and then pointed out in the claims.

20 Reference is had to the accompanying drawings, wherein—

Figure 1 is a front elevation of a flower-pot-cleaning machine embodying my invention. Fig. 2 is an end view of same, looking at the
25 machine from the left hand and showing part of the table and rotating post in section. Fig. 3 is a detail side elevation of the adjustable plate to which the rear ends of the adjustable clamping-arms are pivoted. In this
30 view a cross-sectional view of the portion of the shaft square in cross-section is shown. Fig. 4 is a detail side elevation of the stationary plate, through openings in which the adjustable clamping-arms project. In this view
35 the clamping-arms are shown in section. Fig. 5 is a detail view showing a flower-pot in section, a side view of a cone and shaft supporting said flower-pot, and an end view of the apparatus for cleaning the outside thereof.
40 Fig. 6 is a detail view showing a flower-pot in section and a side view of the brush therein for cleaning the interior thereof. Fig. 7 is a detail central sectional view of the brush used for cleaning the inside of the flower-pot.
45 In this view the handle of the brush is not in section.

In the accompanying drawings, A designates the frame of the machine, consisting of the side portions a' and the table portion a^2 .

50 B B designate standards rigidly secured to the table portion a^2 of the frame.

C designates a shaft held in place supported by and revolving perfectly free in bearings in the standards B B.

D designates a cone or chuck, fixed on the
55 shaft C, on which cone the flower-pot E is placed. By placing the flower-pot E on the cone D the inner inclined face of the flower-pot E will frictionally engage with the outer inclined face of the cone D. This will firmly
60 hold said flower-pot in place on said cone against accidental displacement while cleaning the outside of said flower-pot.

E designates a flower-pot the outside of which, as shown in Figs. 1 and 2, is undergoing the process of cleaning.
65

F designates a handle, and G a body rigidly secured thereto.

H designates a scraper formed of metal or other suitable material, and I designates a
70 brush, preferably formed of wool-card; but it may be formed of any other suitable material. This scraper H and brush I are secured to the body G, but on opposite sides, as shown in Figs. 1 and 2.
75

J designates a rod one end of which is rigidly secured in the end of the body G, and the other free end of said rod is provided with a shoulder J' for the purpose of preventing
80 said rod from being accidentally pulled out of or disengaged from the opening k^2 of the post K.

K designates a post provided with a flange k' and an opening k^2 , which post K projects through an opening a^3 in the table portion a^2
85 of the frame, and the flange k' of said post rests in a recess a^4 in the under side of said table portion a^2 of the frame, as shown particularly in Fig. 2.

L designates a plate which is rigidly secured to the table portion a^2 of the frame underneath the post K, which plate L, together with the flange k' , prevents said post K from becoming disengaged from the table portion
90 a^2 of the frame. At the same time the post K and flange k' being round and fitted to an opening a^3 and recess a^4 , circular in cross-section, said post K is permitted to rotate or
95 turn perfectly free.

k^2 designates an opening in the upper end
100 of the post K, through which the rod J is projected before securing the end thereof to the

body G, and this opening k^2 has faces k^3 , beveled vertically, and faces k^4 , beveled laterally, which, together with the rotation of the post K, will freely permit any vertical or lateral movement of the rod J, and thus permit the brush or scraper to engage with the flower-pot at any angle, place, or position in order to thoroughly clean the same.

M designates a plate in which a square central opening m' and the radial openings m^2 are formed, as shown in Fig. 3, and the portion of the shaft C' adjacent to the plate M is formed square in cross-section and fitted to said central opening m' , so that this plate M may be adjusted lengthwise on the shaft C and at the same time rotate or turn therewith. This forms one convenient means of accomplishing this twofold result. At the same time this result may be accomplished in any manner or by any means found most suitable or convenient.

N designates a plate fixed centrally to the shaft C and formed with the radial openings n' .

O designates a lever pivotally secured to the table portion a^2 of the frame or other suitable support and adjusted so that it will engage with the plate M.

P designates a coil-spring encircling the shaft C and interposed between the plates M N.

R R designate adjustable clamping-arms, any number of which may be used, which clamping-arms are pivotally secured in the radial openings m^2 of the adjustable plate M and on pivot-pins r' , the ends of which are rigidly secured to said plate on the opposite sides of the opening m^2 , as shown in Fig. 3. These adjustable clamping-arms R R are first pivotally secured to the adjustable plate M and then projected through the openings n' of the stationary plate N, as shown in Figs. 1 and 4.

S designates a rubber tip, one of which is secured to the outer end of each of the adjustable clamping-arms R, as shown in Fig. 1. These tips S cause the outer end of the clamping-arms R to firmly engage with and rigidly hold the outer end of the flower-pot E' while cleaning the interior.

T designates a collar or enlargement on the end of the shaft C, which is fitted to the opening T' in the bottom of the flower-pot, so that when the flower-pot is placed in the position shown at E' in Fig. 1 the collar T prevents the accidental lateral adjustment and the clamps R and the plate N the accidental longitudinal adjustment of the flower-pot while cleaning the interior thereof.

B' designates a cone or chuck covered with a piece of wool-card B² or other suitable material and provided with a handle B³. This forms a slightly-conical brush for the purpose of cleaning the inside of the flower-pot. A piece of wool-card, however, held in the hand will more or less successfully accomplish the same result.

D' designates a shaft the ends of which are

held in place supported by and revolving perfectly free in bearings in the side portions a' of the frame A. D² is a grooved wheel fixed on this shaft D', and D³ is a grooved wheel fixed on the shaft C, and D⁴ is a belt passing over and communicating motion from the shaft D' to the shaft C.

D⁵ designates a crank on the shaft D', and D⁶ a connecting-rod which is pivotally connected to the crank D⁵ and the treadle D⁷, and the latter is fixed to the cross-bar D⁸, the ends of which are pivotally supported in the side pieces a' of the frame A.

Motion is communicated to this machine by foot-power applied to the treadle D⁷ or by a belt passing over a pulley (not shown) on the shaft D'.

In the foregoing a machine has been described in which the flower-pots are held on a shaft in a horizontal position; but these devices may be applied with equal advantage to flower-pots held on a shaft or shafts in a vertical position, so that while I prefer the construction herein shown and described I do not wish to limit myself to the details thereof, as they may be modified in various ways without departing from the spirit of my invention.

The process of cleaning a flower-pot with this machine is as follows: The flower-pot E is adjusted on the chuck or cone D, as described and as shown in Figs. 1 and 5. The machine is put in operation, and the operator grasps the handle F and removes the green mold, dirt, and other extraneous matter from the outside of the flower-pot by means of the scraper H and brush I, the thick dirt, green mold, &c., being removed by the scraper H, after which the remainder is scoured off by the brush I, which removes every particle of dirt, green mold, or other extraneous matter from the outside of the pot no matter how compactly it may have adhered thereto. In this operation the rod J projects through the opening k^2 in the post K. The latter thus serves as a fulcrum, and the scraper and brush being located between this post or fulcrum K and the handle F any pressure necessary may be applied to said scraper and brush, so that any dirt, green mold, &c., no matter how compactly or tightly it may adhere to the flower-pot, will be thoroughly and completely removed. In cleaning the inside of the flower-pot the lever O is engaged with the adjustable plate M and adjusted to the position shown by dotted line o' in Fig. 1. This compresses the spring P and adjusts the plate M lengthwise on the shaft C to the position shown by dotted line M³, and the clamping-arms R, extending through the openings n' of the stationary plate N, are expanded to the position shown by dotted line R² in Fig. 1. This permits the flower-pot E' to be placed between the clamping-arms R until the bottom of said flower-pot rests against the stationary plate N and the enlargement T rests in the opening T', as shown in Fig. 6. When the flower-pot E' is in the position just de-

scribed, by releasing the lever O the coil-spring P expands and returns the lever O, plate M, and clamping-arms R to their normal position, or to the position shown by solid line in Fig. 1. This adjustment of these parts to this position firmly holds the flower-pot while rotating with the shaft C and while a brush B² or a piece of wool-card held in the hand is applied to the inside of said flower-pot to scour and thus thoroughly and completely remove the dirt, &c., from the inside thereof.

The practical advantages of this machine are that by means of a device of this kind large numbers of flower-pots may be easily and rapidly cleaned and the green mold, dirt, and other extraneous matter will be thoroughly and completely removed from the flower-pots, a result which is impossible to accomplish when cleaning them by hand, and in proportion a machine such as hereinbefore described will clean more flower-pots in an hour and more thoroughly and completely than a person can clean by hand in a day, and being scoured and thoroughly and completely cleaned the flower-pots present a much better appearance than they did when new. Thus a machine is provided simple in construction, cheap in manufacture, and efficient in practical use.

Having thus described my invention, I claim—

1. The shaft, C, and means for supporting and operating the same, and the chuck or cone, D, fixed thereon, in combination with a body, G, scraper, H, handle, F, rod, J, and post, K, in which an opening, k^2 , is formed, substantially as and for the purpose set forth.

2. The shaft, C, and means for supporting and operating the same, and the chuck or cone, D, fixed thereon, in combination with a body, G, brush, I, handle, F, rod, J, and post, K, in which an opening, k^2 , is formed, substantially as and for the purpose set forth.

3. The shaft, C, and means for supporting and operating the same, and the chuck or cone, D, fixed thereon, in combination with a body, G, scraper, H, brush, I, handle, F, rod, J, and post, K, in which an opening, k^2 , is formed, substantially as and for the purpose set forth.

4. The shaft, C, and means for supporting and operating the same, and the chuck or cone, D, in combination with the body, G, the scraper, H, the handle, F, the rod, J, provided with the shoulder, J', the post, K, provided with the flange, k' , and in which the opening, k^2 , is formed, having the beveled faces, k^3 , and, k^4 , the table portion, a^2 , of the frame in which the opening, a^3 , and recess, a^4 , are

formed, and the plate, L, substantially as and for the purpose set forth.

5. The shaft, C, and means for supporting and operating the same, and the chuck or cone, D, in combination with the body, G, the brush, I, the handle, F, the rod, J, provided with the shoulder, J', the post, K, provided with the flange, k' , and in which the opening, k^2 , is formed, having the beveled faces, k^3 , and, k^4 , the table portion, a^2 , of the frame, in which the opening, a^3 , and recess, a^4 , are formed, and the plate, L, substantially as and for the purpose set forth.

6. The shaft, C, and means for supporting and operating the same, and the chuck or cone, D, in combination with the body, G, the scraper, H, the brush, I, the handle, F, the rod, J, provided with the shoulder, J', the post, K, provided with the flange, k' , and in which the opening, k^2 , is formed, having the beveled faces, k^3 , and, k^4 , the table portion, a^2 , of the frame, in which the opening, a^3 , and recess, a^4 , are formed, and the plate, L, substantially as and for the purpose set forth.

7. The shaft, C, and means for supporting and operating the same, and the lever, O, in combination with the plate, M, which is adjustable lengthwise on, at the same time rotates with the shaft, C, and in which the radial openings, m^2 , are formed, the stationary plate, N, in which the radial openings, n' , are formed, and the clamping-arms, R, substantially as and for the purpose set forth.

8. The shaft, C, and means for supporting and operating the same, collar, T, and the lever, O, in combination with the plate, M, which is adjustable lengthwise on, at the same time rotates with the shaft, C, and in which the radial openings, m^2 , are formed, the stationary plate, N, in which the radial openings, n' , are formed, and the clamping-arms, R, substantially as and for the purpose set forth.

9. The shaft, C, and means for supporting and operating the same, and the lever, O, in combination with the plate, M, which is adjustable lengthwise on, at the same time rotates with the shaft, C, and in which the radial openings, m^2 , are formed, the stationary plate, N, in which the radial openings, n' , are formed, the clamping-arms, R, and the tips, S, substantially as and for the purpose set forth.

In testimony whereof I have signed in the presence of the two undersigned witnesses.

HOWARD REYNOLDS.

Witnesses:

P. J. EDMUNDS,
S. MCBAIN.