

961,061.

J. W. ADLER.
ROTARY BRUSH.
APPLICATION FILED MAY 7, 1909.

Patented June 7, 1910.

2 SHEETS—SHEET 1.

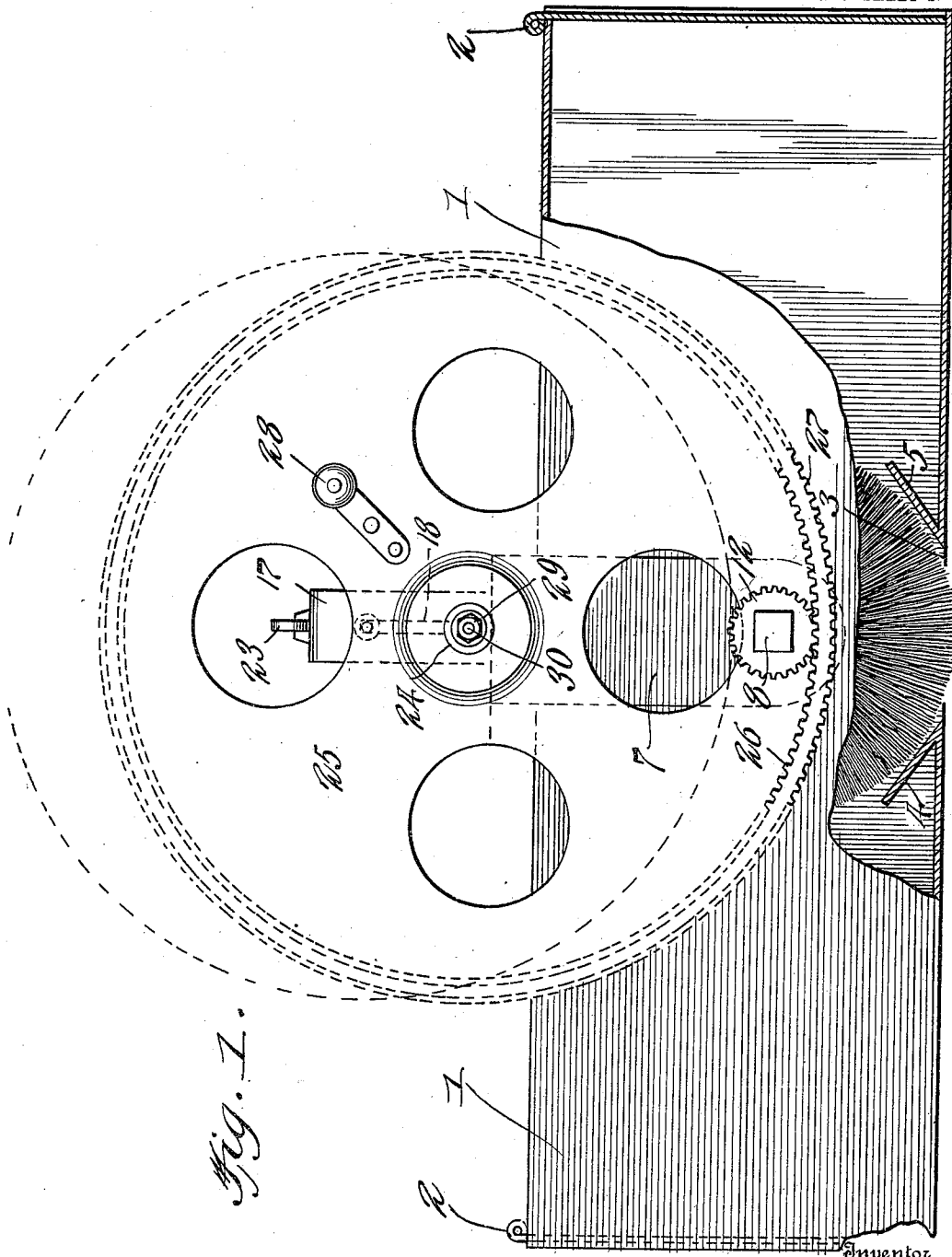


Fig. 1.

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2 SHEETS—SHEET 2.

Fig. 3.

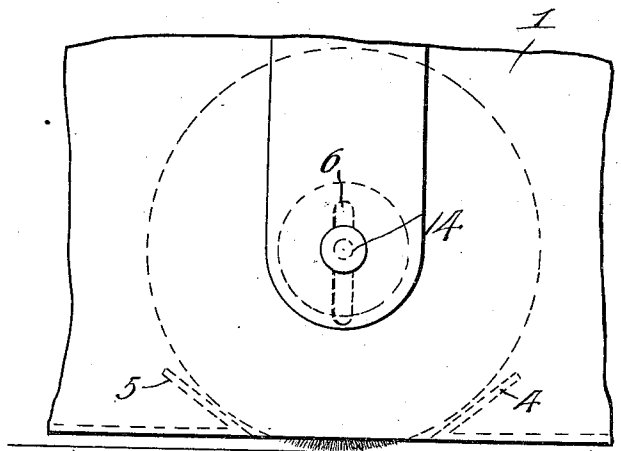
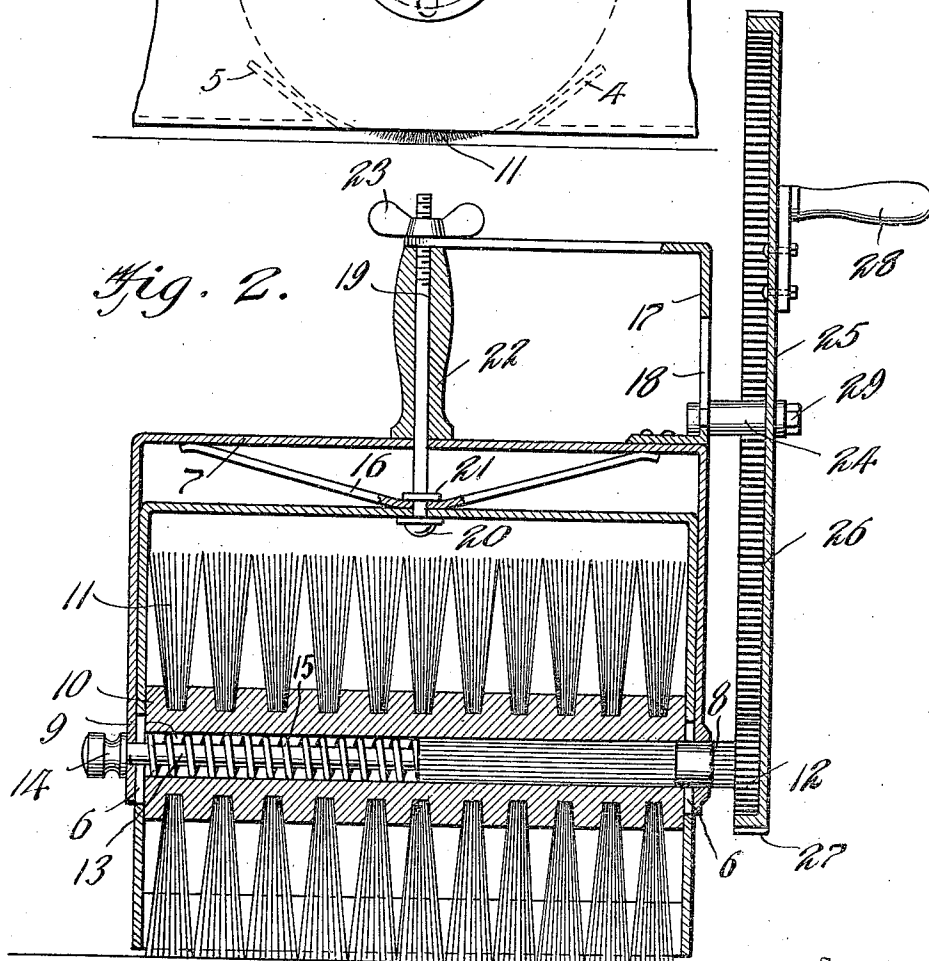


Fig. 2.



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UNITED STATES PATENT OFFICE.

JOHN WILLIAM ADLER, OF WILLIAMSTOWN, OHIO.

ROTARY BRUSH.

961,061.

Specification of Letters Patent.

Patented June 7, 1910.

Application filed May 7, 1909. Serial No. 494,524.

To all whom it may concern:

Be it known that I, JOHN WILLIAM ADLER, a citizen of the United States, residing at Williamstown, in the county of Hancock and State of Ohio, have invented new and useful Improvements in Rotary Brushes, of which the following is a specification.

This invention relates to rotary brushes, and is primarily directed to a brush employed for cleaning animals, and the object of the invention is to provide a device of this character comprising a brush inclosed in a suitable casing which is adapted to cover the space operated upon and whereby the dust created by the rotation of the brush is struck directly within the casing.

Another object of the invention is to provide a device of this character with mechanism whereby the brush may be rotated in different directions and at a slightly variable speed without necessitating a change in the direction in which the brush wheel is rotated.

With the above, and other objects in view which will appear as the description progresses, the invention resides in the novel construction and arrangement of parts herein after fully described and claimed.

In the accompanying drawings there has been illustrated a simple and preferred embodiment of the invention as it now appears to me; and in which—

Figure 1 is a side elevation of a rotary currying brush constructed in accordance with the present invention, parts of the casing being broken away to more clearly illustrate the details of the device. Fig. 2 is a transverse sectional view taken through the brush and operating means. Fig. 3 is a fragmentary side elevation of the device.

In the accompanying drawings the numeral 1 designates a substantially rectangular casing. This casing has both of its ends open and provided with suitable doors 2. The bottom of the casing is provided, preferably at the center, with a transversely arranged opening 3. The edges of the bottom adjacent this cut-away portion 3 are provided with transversely arranged inclined partitions 4 and 5. The sides of the casing 1 directly above the central part of the opening 3 are each provided with a vertical extending slot or opening 6 the purpose of which will also hereinafter be set forth.

Positioned within the casing 1 is a brush member 11, substantially circular in cross section, and this brush is provided with a centrally arranged hub 10 having a centrally arranged and non-circular bore or opening 9. The bore 9 is adapted for the reception of a non-circular shaft 8 having a reduced extending portion 13.

The numeral 7 designates a substantially U-shaped bail. The said bail has its vertical or offset arms provided with circular openings adjacent their ends, and one of these ends is adapted for the reception of the circular portion of a substantially non-circular shaft 8, while the opposite opening is adapted for the cross sectionally circular reduced projecting portion 13 of the said shaft 8. This reduced member 13 may have its outer extremity threaded and provided with a suitable cap 14, while positioned upon the reduced portion or member 13 between its point of extension from the squared or non-circular shaft 8 and one of the walls of the casing 1 is a helical spring 15, which is adapted to exert outward pressure to force the non-circular shaft through its opening provided in the arm of the bail. The outer extremity of the shaft 8 is provided with a toothed wheel 12 the purpose of which will be fully set forth. Interposed between the top of the bail 7 and of the top of the casing 1 is a flanged resilient member 16. The said member 16 is adapted to exert upward pressure upon the bail 7 so as to force the latter away from the top of the casing 1. The central portion of the bail and the top of the casing are each provided with alining openings as is the resilient member 16, and these openings are adapted for the reception of a threaded rod 19 which is movable in the opening provided by the bail, but which is sustained rigidly upon the resilient member 16 and the top of the casing by means of a head 20 and a washer 21.

The numeral 17 designates a substantially L-shaped member connected upon one side of the bail 7. This member 17 has its horizontal portion extending a suitable distance over the bail and is provided with a suitable perforation adapted for the reception of the threaded member 19. The member 19 between this horizontal arm and the top of the U-shaped member 7 is provided with a suitable handle 22 which is securely retained between the bail and the said arm

through the medium of a wing nut 23. The vertical arm of the L-shaped member 17 is provided with a suitable slot 18 and the walls provided by this slot are adapted for the reception of a reduced portion of a shaft 24. Mounted upon this shaft 24 is an operating wheel 25. This wheel 25 is provided with internal teeth 26 and external teeth 27, both of which being adapted to engage the toothed wheel 12 carried by the rotary brush as will be presently described.

The brush operating wheel 25 is provided with a handle 28 whereby the same may be rotated so as to cause the brush to revolve. It is to be understood that the resilient element 16 exerting pressure between the top of the bail 7 and the casing 1 forces the said casing away from the bail and the brush within the casing partly through the opening 3 within the bottom of the casing.

It will be noted that the spring 15 tending to exert pressure between the casing 1 and the squared end of the shaft 8 forces the wheel 12 tightly against the inner face of the wheel 25 and into engagement with the inner teeth 26 carried thereby. By reference to Figs. 1 and 2 of the drawings it will be seen that the shaft 24 is retained in position upon the wheel 25 by means of a nut member 29 contacting the threaded extremity 30 of the said axle. By this arrangement it will be noted that the wheel 25 may be readily disconnected from its shaft if desired, and it will be further noted that when the wheel is thus disconnected the shaft may be raised in the slot 18 of the member 17 and the wheel 25 again secured upon the shaft 24 bringing the teeth 27 of the same into engagement with the toothed wheel 12.

From the above description, taken in connection with the accompanying drawings, it will be noted that I have provided a comparatively simple, cheap and durable device for the purposes intended, one which may be readily and easily operated and one in which the brush member may have its motion easily and quickly reversed and wherein the dust created is deposited within a suitable receptacle without danger of the same flying into the nostrils of the operator, and from which the accumulated dust may be readily removed when desired. The preferred method, however, of engaging the outer teeth 27 with the wheel 12 is to exert lateral pressure upon the handle 14, thereby causing the shaft 8 to be slid within the bore 9 of the hub 10 so as to cause the wheel 12 to be drawn out of engagement with the teeth 26. The wheel 25 has its shaft 24 then drawn upwardly in the slot 18 of the member 17 and when the teeth 27 are brought into proper engagement with the wheel 12, the nut 29 may be tightened so as to sustain the said wheel 25 in proper engagement, it

being understood that the handle 14 of the axle 8 has been released so as to allow the wheel 12 to be forced outwardly, and it will be further understood that the outward movement of the said wheel 12 may be regulated by means of the internally threaded handle 14 engaging the externally threaded reduced extension 13 of the shaft 8.

It will be noted that the casing may be readily adjusted upon the bail 7 against the tension of the spring 16 through the medium of the member 19 and the nut 23 co-acting therewith, so that the brush member may be forced through the opening 3 within the base of said casing 1 to a desired depth, the elongated slots 6 permitting the said adjustment.

I claim:—

1. The combination with a casing, having open ends and a partly open bottom, doors for the ends, inclined partitions adjacent the opening in the bottom, a cylindrical brush provided with a hub within the casing, the hub of the brush being provided with a non-cylindrical opening, a shaft having a non-cylindrical portion provided with a toothed wheel and a reduced portion within the bore, a U-shaped bail engaging the shaft and the sides of the casing, a resilient member upon the reduced portion of the shaft exerting outward pressure thereon, a flexible element between the top of the casing and the U-shaped bail, means for regulating the tension of this member, an operating wheel provided with inner and outer teeth upon the bail, and means for bringing either the inner or the outer teeth into engagement with the toothed wheel carried by the non-circular shaft.

2. The combination with a substantially rectangular casing having open ends and a partly open bottom, doors for the ends, the casing being provided with inclined aprons alining with the edges of the opening in the bottom therein, a cylindrical brush within the casing having its lower end projecting through the opening, the hub of the brush having a longitudinally extending bore, a substantially U-shaped bail upon the casing, a non-cylindrical shaft carried by the bail and extending through the bore of the hub of the brush, said shaft having one of its ends provided with a toothed wheel and having a reduced extending portion provided with a threaded end, a cap for the end, a resilient element upon the reduced portion of the shaft between one side of the casing and the enlarged portion of the shaft, a resilient member between the bail and the top of the casing, a threaded member secured to the top of the casing and the resilient member and projecting through the bail, a handle for this threaded member, an L-shaped offset member carried by the bail and engaging the threaded extending mem-

ber, a wing nut for the threaded member, the
vertical arm of the L-shaped member being
provided with a slot, an axle having a re-
duced portion engaging the walls provided
5 by this slot, and a removable operating
wheel provided with inner and outer teeth
secured upon the axle.

In testimony whereof I affix my signa-
ture in presence of two witnesses.

JOHN WILLIAM ADLER.

Witnesses:

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DORA E. ADLER.