Patented Dec. 23, 1924. 1,520,553

UNITED STATES PATENT OFFICE.

HAYES JOHN JAMES ALEXANDER, OF DETROIT, MICHIGAN.

GARMENT PROTECTOR.

Application filed July 9, 1923. Serial No. 650,526.

To all whom it may concern:

Be it known that I, HAYES J. J. ALEXANDER, a citizen of the United States, residing at Detroit, in the county of Wayne and State of Michigan, have invented new and useful Improvements in Garment Protectors, of which the following is a specification.

This invention relates to a clothes holder, the general object of the invention being to provide a casing having means therein for supporting garments and also provided with means for attaching curtains to its lower edges, the curtains acting to cover up the garments.

Another object of the invention is to make the front of the casing removable with the front curtain so as to provide access to the interior of the device.

This invention also consists in certain other features of construction and in the combination and arrangement of the several parts, to be hereinafter fully described, illustrated in the accompanying drawings and specifically pointed out in the appended claim.

In describing my invention in detail, reference will be had to the accompanying drawings wherein like characters denote like or corresponding parts throughout the several views, and in which:—

Figure 1 is a front view of the device with the front partly open.

Figure 2 is a section on line 2—2 of Figure 1.

Figure 3 is a side view.

Figure 4 is a view of the other side.

Figure 5 is a rear elevation thereof with the curtains and rod thereof removed.

Figure 6 is a sectional view taken on line 6—6 of Figure 3.

Figure 7 is a sectional view taken on line 7—7 of Figure 2.

Figure 8 is a view of the device in folded position.

Figure 9 is a perspective view of the rear rod employed by the device.

As shown in these views the casing A consists of a top 1, the two side pieces 2, the rear piece 3 and the front piece 4. The side and rear pieces are hinged to the top by the hinges 5 and the front piece 4 is hinged to one side piece by the hinges 6. The rear piece is provided with grooves 7 for receiving the rear ends of the side pieces and suitable latch means 8 may be provided for connecting the pieces together. Horizontal grooves 9 are formed adjacent the lower edges of the rear and side pieces for receiving the rod 10 which has its ends bent at right angles, these ends engaging the grooves in the end pieces while the main part of the body engages the groove in the rear piece. This part is held in place by the holders 11. A groove 12 is formed in the lower edge of the front 4 for receiving a bar 13 which is held within the groove by clip 11′ as shown. This bar is provided with an extension 14 at one end having a bent part 15 for engaging a stud 16 on one of the side pieces so that this part of the bar will act as a latch for holding the front piece in closed position. Curtains 17 are threaded on the bars 10 and 13, these curtains being of a length to extend to the floor so that the casing and curtains will form a closure for garments which may be hung on the brackets 18 which are suitably secured to parts of the casing. These brackets 18 are located diagonally across from each other and are swingingly supported so that they can be swung outwardly in order to facilitate the placing of the garments in the device or removing them therefrom, the garments being placed on hangers of any desired type.

From the foregoing it will be seen that when the casing is supported in an elevated position and the curtains attached a closure will be formed which will not only hide garments placed therein from view but also protect the garments from dirt and dust. Access to the closure can easily be had by opening the front 4 which will cause the front curtain to swing outwardly like a door. This front piece 4 is of less width than the rear and side pieces with its groove arranged above the grooves in said pieces. Thus the front curtain extends above the other curtains so that its edges can be made to overlap the side curtains and thus prevent openings from appearing at the edges of the front curtain. By making the device foldable it can be easily knocked down and placed in a trunk or placed in storage.

It is thought from the foregoing description that the advantages and novel features of my invention will be readily apparent.

I desire it to be understood that I may make changes in the construction and in the

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A. W. ANKENY ET AL

VENTILATOR ATTACHMENT FOR WATER CLOSETS

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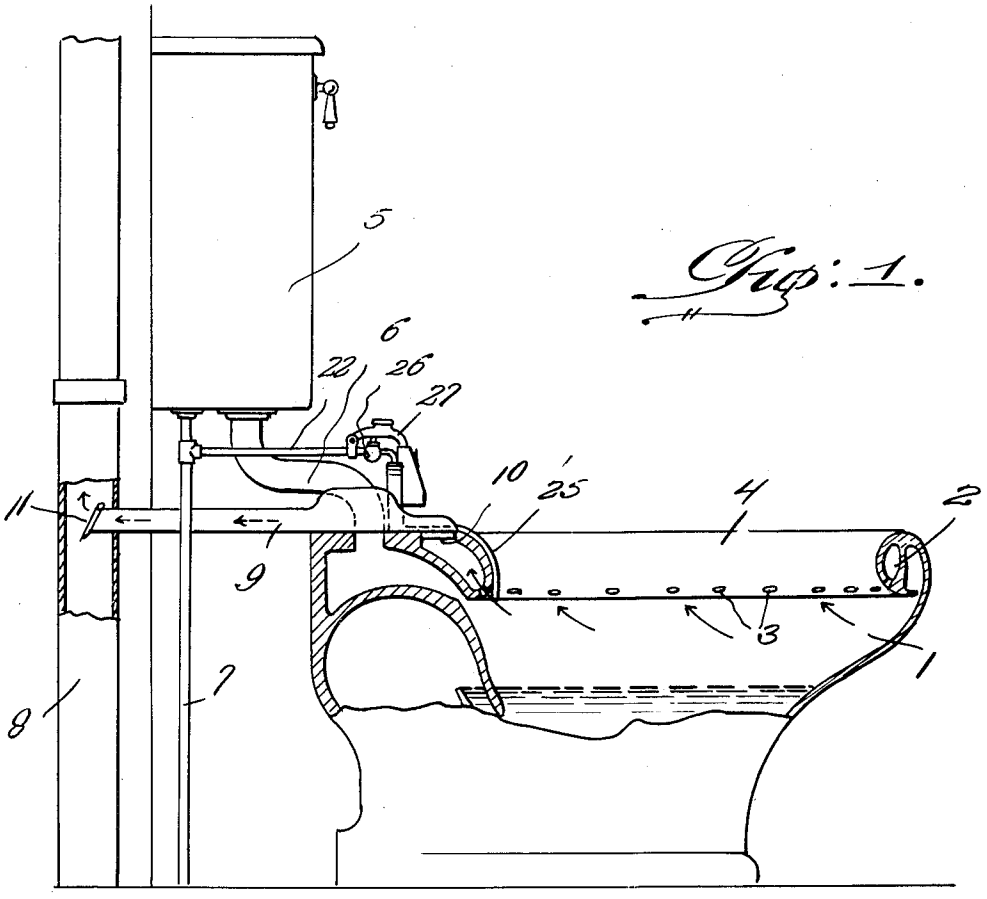

Fig: 1.

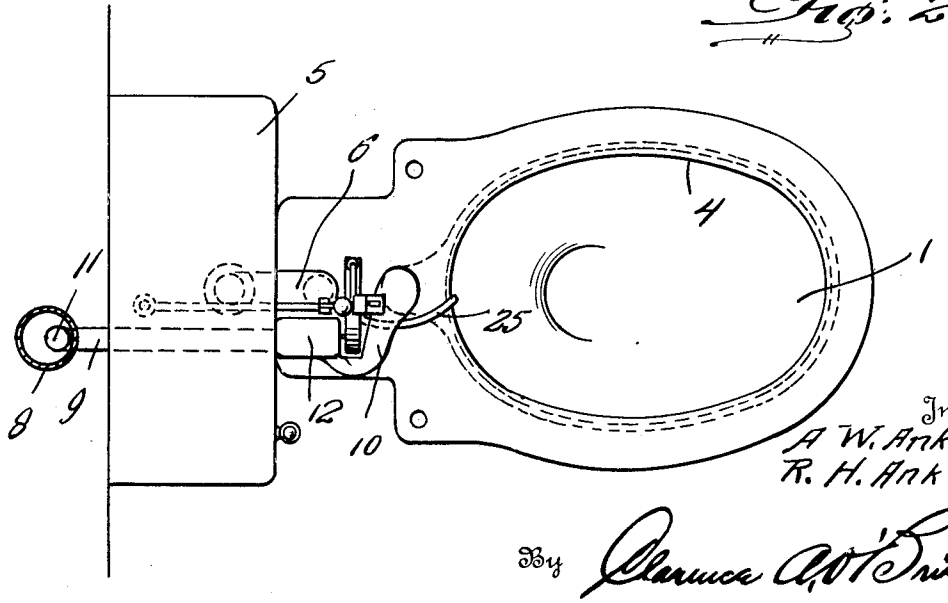

Fig: 2.

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VENTILATOR ATTACHMENT FOR WATER CLOSETS

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Fig: 3.

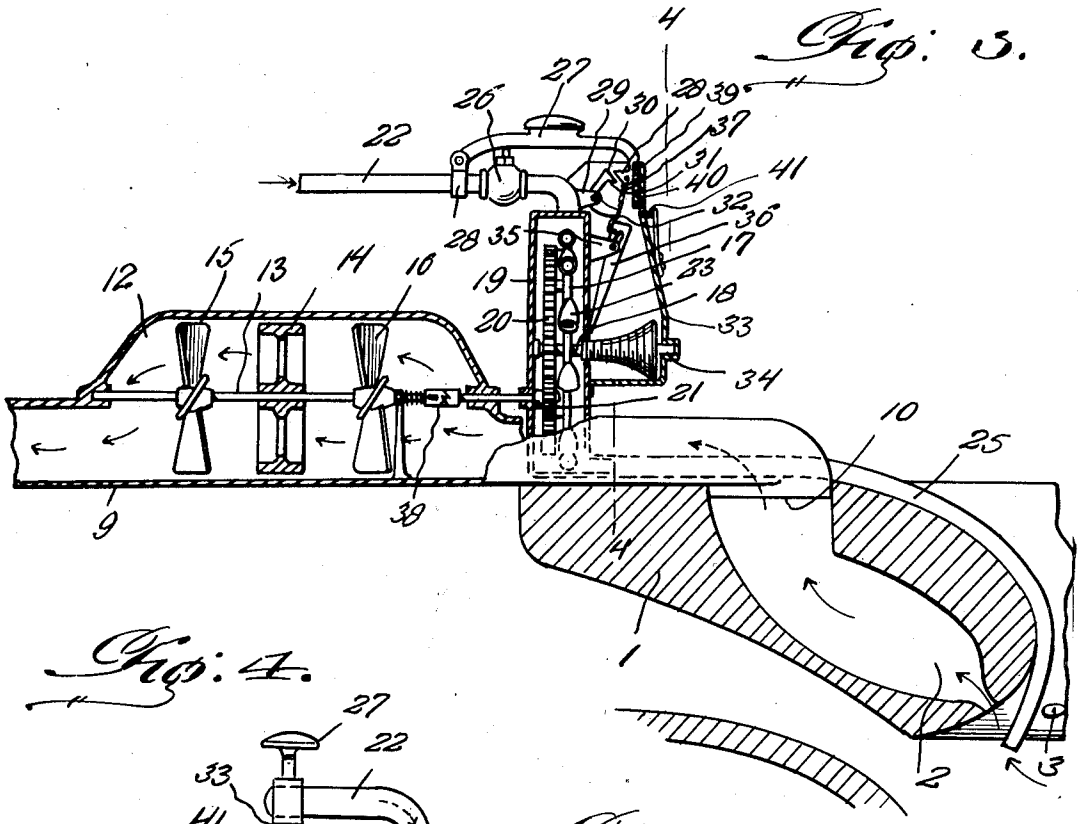


Fig: 4.

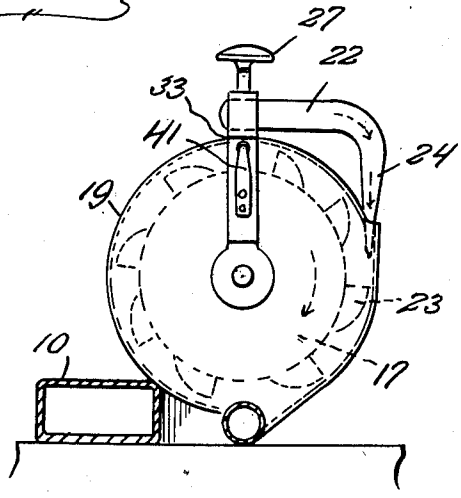


Fig: 5.

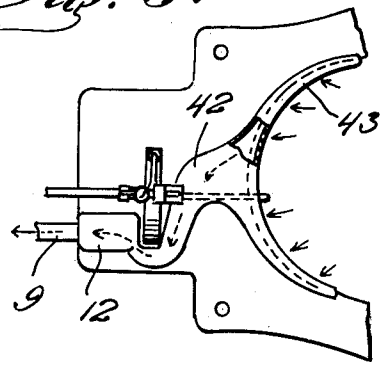
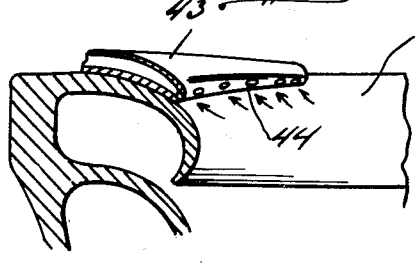


Fig: 6.



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UNITED STATES PATENT OFFICE.

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VENTILATOR ATTACHMENT FOR WATER CLOSETS.

Application filed July 21, 1924. Serial No. 727,247.

To all whom it may concern:

Be it known that we, ARTHUR W. ANKENY and ROY H. ANKENY, citizens of the United States, residing at Indiana and Apollo, in the counties of Indiana and Armstrong and State of Pennsylvania, respectively, have invented certain new and useful Improvements in a Ventilator Attachment for Water Closets, of which the following is a specification.

This invention relates to new and useful improvements in ventilators and is more particularly adapted to be used in connection with a water closet.

One of the important objects of the present invention is to provide a ventilator attachment of the above mentioned character, which will withdraw the gases from the water closet bowl by suction and discharging the gases into the usual vent pipe employed for conveying the gases outwardly from a house.

A further object of the invention is to provide a ventilator attachment for water closets of the above mentioned character, wherein means is provided for creating a suction in an air pipe for removing impure gases from the water closet bowl, means being further provided for automatically cutting off the suction operating means after the latter has been caused to operate for a suitable length of time.

A still further object of the invention is to provide a ventilator attachment for water closets of the above mentioned character, which will not only withhold the gases from the water closet bowl but will also remove the impure gases collecting in the bath room as well as in the other parts of the house in a comparatively simple and efficient manner.

A further object is to provide a ventilator attachment for water closets of the above mentioned character, which is simple in construction, inexpensive, strong and durable and furthermore adapted for the purposes for which it is designated.

Other objects and advantages of this invention will become apparent during the course of the following description.

In the accompanying drawings forming a part of this specification and in which like numerals designate like parts throughout the same:

Figure 1 is a side elevation of our improved attachment showing the same in position with respect to a water closet bowl and the other part usually associated therewith.

Figure 2 is a top plan view thereof.

Figure 3 is an enlarged sectional view through portions of the attachment illustrating the suction device, the operating means therefor and the automatically control means associated with the suction operating means.

Figure 4 is a front elevation of the turbine casing.

Figure 5 is a plan view of a modification of the air inlet, and

Figure 6 is a fragmentary sectional view of the modification illustrating the manner in which the air inlet is positioned on the water closet bowl.

In the drawings wherein for the purpose of illustration is shown the preferred embodiment of our invention, the numeral 1 designates a water closet bowl and the same is provided in its upper portion with the air passage 2 in the inner periphery thereof, suitable air openings 3 being arranged in the lower portion of the flange 4 and affording a communication between the air passage 2 and the interior of the water closet bowl 1. The openings 3 are arranged in spaced relation around the lower portion of the flange in the manner clearly illustrated in Figure 1. The flush tank 5 which is of the usual construction is associated with the water closet bowl through the medium of the connection 6 and a suitable water supply pipe 7 is connected to the flush tank 5 in the usual manner. The vent pipe 8 which is associated with water closets for the purpose of conveying the gases from the bowl out through the house is also shown in Figure 1 and the purpose thereof in connection with the present invention will hereinafter be more fully described.

Our improved ventilator attachment comprises a horizontally extending air pipe 9, the inner end thereof having communication with the air passage 2 provided in the upper portion of the water closet bowl 1 in the manner as shown at 10 in Figure 3 of the drawings. The opposite end of the pipe 9 extends into the vent pipe 8 and has a pivoted closure 11 associated with the discharge end of the pipe. The portion of the pipe 9 adjacent the inlet end thereof is enlarged as illustrated at 10 and provides a means whereby the suction creating device may be dis-

posed within the pipe 9 and will properly and efficiently operate therein.

The suction creating device comprises a longitudinally extending divided driven shaft 13 which is journaled at its ends in suitable sockets provided at the junction of the pipe 9 and the enlargement 12 thereof and the forward end of the shaft 13 extends through the enlarged portion 12 for the purposes hereinafter to be more fully described. Carried on the intermediate portion of the shaft 13 is the fly wheel 14 also mounted on the shaft 13 on opposite sides of the fly wheel and spaced therefrom are the suction fans 15 and 16 respectively.

A turbine 17 is carried by the shaft 18 which extends centrally through a suitable casing 19 provided for the turbine and cooperating with the turbine and rotating therewith is the gear wheel 20 which meshes with a pinion 21 carried by the forward end of the driven shaft 13 which extends into the casing 19 and whereby a means is provided for rotating the shaft and the suction fans and fly wheel carried thereby when the turbine is operated. A branch pipe 22 extends from the supply pipe 7 to the top of the casing 19 whereby water will be caused to flow into the buckets 23 arranged on the turbine 17 for causing the operation of the latter. The branch pipe 22 terminates in the nozzle 24, the latter extending into a suitable opening provided in the side of the casing and whereby the water will be discharged directly into the bucket of the turbine so that the same may be properly and efficiently operated. The water from the bucket 23 will be discharged into the lower portion of the casing 19 and out through the discharge pipe 25, the end of which extends into the bowl 1. In order to control the supply of water to the turbine whereby the latter may be operated at the will of the person, a reciprocating valve shown generally at 26 is arranged in the pipe 22 and the actuating means therefor comprises a lever 27 which is pivotally supported at one end on a suitable bracket 28 extending around the pipe 22. The valve 26 is preferably of the spring actuated type wherein the spring normally holds the valve closed so that water will be prevented from being supplied from the pipe 22 to the buckets 23 of the turbine wheel 17. The free end of the lever 27 extends forwardly of the pipe 22 which terminates in the hook 28 as is more clearly illustrated in Figure 3 of the drawings. Carried by the forward end of the pipe 22 is a suitable bracket 29 and pivotally supported thereon is the bell crank lever 30, the end of the upwardly extending arm thereof terminating in a hook or dog 31 which is adapted for cooperation with the hook 28 formed on the free end of the lever 27 while the other arm of the bell crank lever is somewhat curved as illustrated at 32.

The forward end of the lever 27 and the pipe 22 are housed in a suitable casing 33 which cooperates with the outer wall of the casing 19 and the lower portion of the casing 33 provides a means for supporting the outer end of the drive shaft 18 and also the substantially concaved cone 34 which is threaded, the enlarged end of the cone being disposed adjacent the outer wall of the casing 33. Pivotally supported at its upper end in a suitable bracket 34 extending into the casing 33 from the upper portion of the casing 19 is the enlarged end of the wedge 36. The upper end thereof is slotted in order to permit the upward and downward movement of the wedge, the upper portion of the wedge being connected to the hook 28 of the lever 27 through the medium of a chain 37. The smaller end of the wedge 36 engages the threads in the concaved cone shaped member 34 and the operation thereof will be presently described.

The operation of the ventilator may be briefly stated as follows. The lever 27 is depressed so that the valve 26 will be opened whereby a supply of water from the pipe 7 will flow through the pipe 22 and through the nozzle 24 into the casing 19 when the same comes in contact with the cup 23 of the turbine 17 rotating the latter and simultaneously operating the gear wheels 21 and 20 respectively. For the purpose of holding the lever 27 in a depressed position so that the valve will remain open, the hook 28 on the free end of the lever 27 engages the hook 31 of the bell crank lever simultaneously permitting the lower end of the wedge 36 to engage the smaller end of the concaved threaded cone 34. The driven shaft 13 will be rotated causing the flow wheel and suction fans thereon to also rotate whereby a suction is created in the pipe 9 so that the gases and impurities may be drawn up through the openings 3 in the flange 4 and in the air passage and discharged out through the pipe 9 and into the vent pipe 8. The suction fan will rotate until the lower end of the wedge 36 has traveled the full length of the concave threaded cone 34 whereupon the upper end of the wedge will engage the curved arm 32 of the bell crank lever 30 causing the same to be raised upwardly and out of engagement with the hook 28 on the free end of the lever 27 whereupon the lever 27 will be returned to its normal position and the valve 26 will be closed thereby cutting off a further supply of water to the turbine and preventing the operation of the latter. As heretofore set forth, the water from the turbine will be discharged through the pipe 25 into the bowl 1. The water supply cut off will be entirely automatic and