

Aug. 5, 1924.

1,503,915

A. C. POSNER

DUST COLLECTOR OUTLET

Filed Feb. 28, 1923

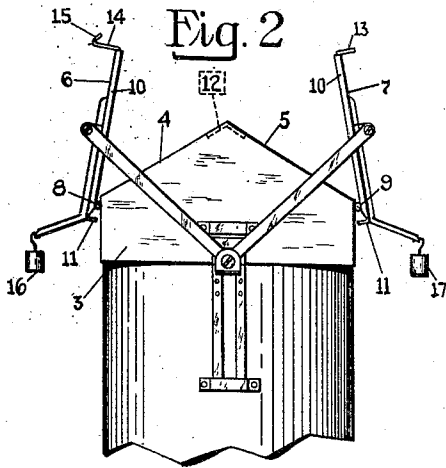
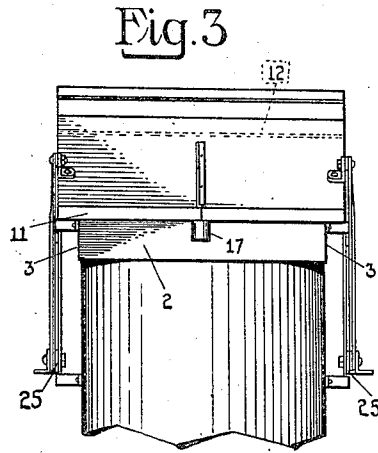
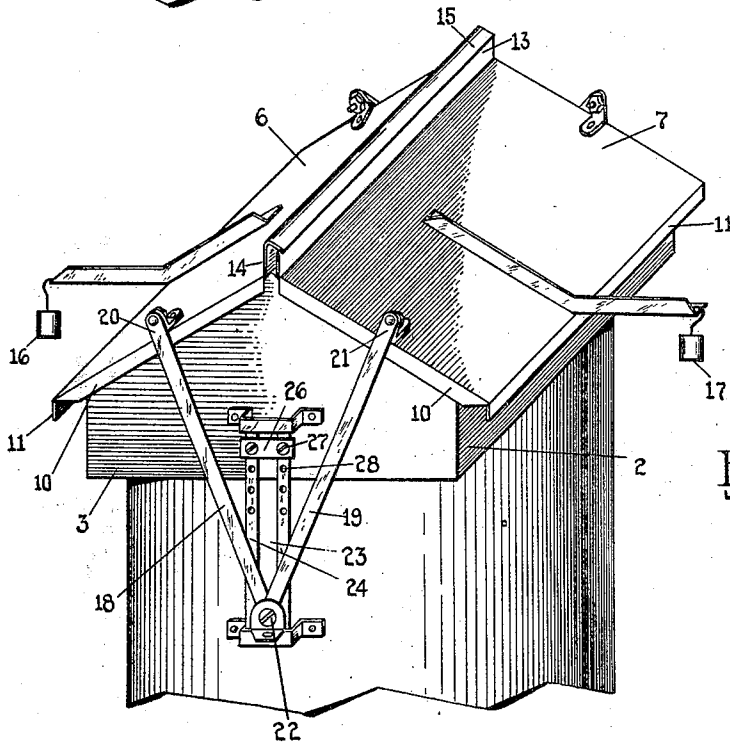


Fig. 1

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UNITED STATES PATENT OFFICE.

AUGUST CHARLS POSNER, OF NEW ORLEANS, LOUISIANA.

DUST-COLLECTOR OUTLET.

Application filed February 28, 1923. Serial No. 621,959.

To all whom it may concern:

Be it known that I, AUGUST CHARLS POSNER, a citizen of the United States, residing in New Orleans, in the parish of Orleans and State of Louisiana, have invented a certain new and useful Improvement in Dust-Collector Outlets which Automatically Open and Close, of which the following is a specification.

It is well known that the outlet for a dust collector must be protected and in many instances a goose neck elbow is used. In others, just an ordinary canopy cover, which really is a rain proof cover, is used. It is absolutely necessary to prevent sparks and rain from getting into the outlet of the duster or any other outlet from a fan in order to prevent fires. In fact in practice I have known of a great many fires due to defective covers or ends because the covers or ends were not shielded to prevent the entrance of a spark when the same was shut down. One of the important features in the dust collector is that all resistance must be eliminated, if possible, in order to get efficiency from the fan and the piping system at the same time.

My invention has for its object to provide a cover which will be automatically self-opening and closing so that when the same is shut down it will completely and entirely close the dust collector outlet, thereby not only preventing the possibility of rain entering the outlet, but as it closes the outlet completely, it makes it impossible for sparks to enter.

My invention has for its further object to provide an adjustable means to regulate the amount which the doors may open.

My invention may be more readily understood by having reference to the drawings which are hereunto annexed and which are a part of the specification in which:

Fig. 1 is an isometric perspective view of a dust collector outlet equipped with my improved cover.

Fig. 2 is an end elevation of the same showing the covers open.

Fig. 3 is a side elevation of the device as shown in view 2, showing covers closed.

Similar reference numerals refer to similar parts throughout the entire description.

As shown in the drawings the dust collector outlet is provided with a square cap 2, the end walls 3 of which are provided with inclined edges 4 and 5. Doors 6 and

7, are secured by means of hinges 8 and 9, to the cap 2 at the bottom of the inclined edges 4 and 5 respectively. These covers are provided with flanges 10 on their ends and flanges 11 at the lower edge, these flanges extending down over the ends 4 and 5 of the walls 3. These ends 4 and 5 may, if desired, be bent outwardly so as to provide a shoulder upon which the doors 6 and 7 may rest perfectly. The end walls 3 are connected to each other by a strut 12 to aid in strengthening the cap 2 and holding the ends true. The upper edge of the door 7 is provided with an upwardly extending flange 13 which mates with the flange 14, on the door 6, when the doors are closed. This flange 14 is then bent a little more than at right angles, as at 15, so as to extend over the top edge of the flange 13. In this manner it effectively shields the covers from the entrance of rain. The added inclination bent at more than right angles serves to shed the rain from the flange 15. The doors 6 and 7 are provided with counter weights 16 and 17 which balance the said doors so that the opening of the covers is accomplished with the least possible resistance.

It is apparent that the air currents from the fan or blower will operate to open the two covers simultaneously and that when the fan is shut down both of the covers will automatically close.

By means of two sliding bars 18 and 19 I provide means to insure their closing at the correct time with relation to each other so that the flange 13 will mate with the flange 14 and be located below the flange 15. The upper ends 20 and 21 of these bars are pivotally attached to the covers 6 and 7; the lower ends are secured to a pin or pivot 22 which extends through a slot 23 formed in a vertical guide 24 suitably mounted upon the wall of the dust collector outlet and on the end wall of the cap 2. Suitable washers 25 may be employed to permit the pin 22 to slide in the slot 23.

In the smaller sizes a single set of these sliding bars will be sufficient. I have found in practice that it is better to equip both of these doors with the sliding bars in order to keep them in shape and to cause them to open and close readily. My means for regulating the amount for opening of the doors comprises a bar 26 which is secured to the vertical guide 24 by means of screws 27 or any

other suitable means. These screws extend through holes 28 which are mounted at spaced intervals in the vertical guide 24. In this manner by shifting the bar 26 the movement of the pin 22 may be regulated and this in turn varies the amount that the doors may open.

Having described my invention, what I desire to secure by Letters Patent, is:

- 10 1. A dust collector outlet comprising a cap mounted upon the outlet, the upper edges of the end walls of which are inclined, a pair of doors hinged to the said cap, adjacent the lower part of the inclined edges,
15 flanges on said doors adapted to extend over the edges on which they rest, upwardly extending flanges at the mating edges of said doors one of which flanges extends over the other, counter balance weights secured to
20 said doors, pivoted bars attached to said doors, a pivot which secures said bars together at the lower ends, a guide in which pivot slides and means to vary the length of said guide.
- 25 2. A dust collector outlet comprising a cap mounted upon the outlet, the upper edges of the end walls of which are inclined, a pair of doors hinged to said cap adjacent the lower part of the inclined edges, flanges

on said doors adapted to extend over the edges on which they rest, upwardly extending mating flanges at the top edge of said doors one of which flanges extends over the other, counter balance weights secured to said doors, pivoted bars attached to said doors, a pivot which secures said bars together at their lower ends, and a guide in which said pivot slides.

3. A dust collector outlet comprising a cap mounted upon the outlet, the upper edges of the end walls of which are inclined, a pair of doors hinged to said cap adjacent the lower part of the inclined edges, flanges on said doors adapted to extend over the edges on which they rest, upwardly extending mating flanges at the top edge of said doors, one of which flanges extends over the other, counter balance weights secured to said doors, pivoted bars attached to said doors, a pivot which secures said bars together at their lower ends, a guide in which said pivot slides, a cross-bar detachably secured to said guide, there being holes in said guide whereby the position of said bar can be shifted.

In testimony whereof I have signed the foregoing specification.

AUGUST CHARLS POSNER.