No. 676,391. Patented June 11, 1901.

J. H. COPE.

SIFTING DEVICE.

(Application filed Sept. 4, 1900.)

(No Model.)

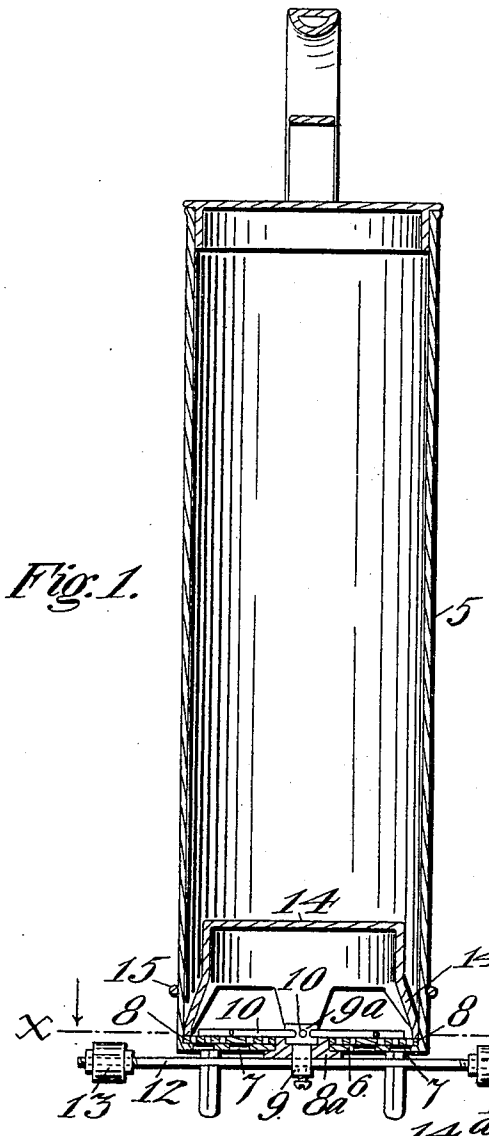


Fig. 1.

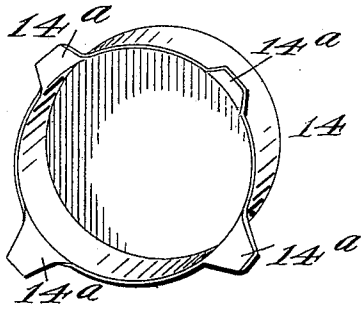
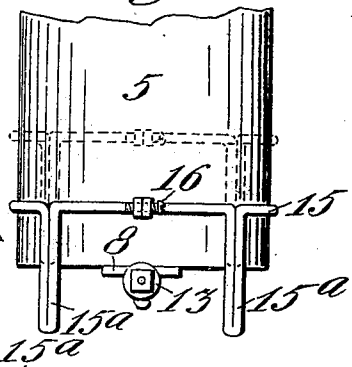


Fig. 4.

Fig. 3.



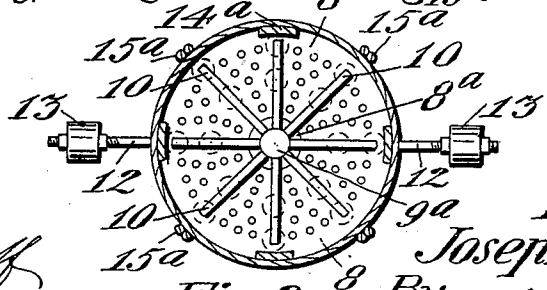


Fig. 2.

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UNITED STATES PATENT OFFICE.

JOSEPH H. COPE, OF NEW WINDSOR, COLORADO.

SIFTING DEVICE.

SPECIFICATION forming part of Letters Patent No. 676,391, dated June 11, 1901.

Application filed September 4, 1900. Serial No. 28,935. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH H. COPE, a citizen of the United States of America, residing at New Windsor, in the county of Weld and State of Colorado, have invented certain new and useful Improvements in Sifting Devices; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

My invention relates to improvements in sifting devices of the class set forth in my application, Serial No. 21,672, filed June 26, 1900.

My present invention comprises certain novel features of construction, which will be fully understood by reference to the accompanying drawings, in which is illustrated an embodiment thereof.

In the drawings, Figure 1 is a vertical longitudinal section taken through the complete device. Fig. 2 is a horizontal section taken on the line *x x*, Fig. 1. Fig. 3 is a fragmentary side elevation viewed from a point at right angles to Fig. 1. Fig. 4 is a perspective view in detail of a shield or cover for the agitator.

The same reference characters indicate the same parts in all the views.

Let the numeral 5 designate a receptacle preferably cylindrical in shape and provided with a bottom 6, having openings 7. Above and in contact with this apertured bottom is located a plate 8, having perforations of smaller size than the openings 7 in the bottom 6. In the center of the bottom, composed of the two perforated plates, is formed an opening in which is located a bearing 8^a, apertured to receive a spindle 9, provided with a hub 9^a, to which are attached radial arms 10, forming an agitator. The spindle 9 projects below its bearing and is provided with a transverse opening through which is passed a rod 12, whose outer portions are provided with weights 13 of such gravity as to have a tendency to maintain the agitator relatively stationary when the receptacle 5 is turned or given a partial rotation in either direction.

My improved sifting device is specially designed for use in applying a poisonous powder, as paris-green, to potato vines or plants for the purpose of destroying the bugs or insects thereon. For this purpose the powder is mixed with flour or other suitable material. Hence it becomes necessary to carry quite a quantity of material in the receptacle, and this quantity of material has a tendency to hold the agitator firmly in place and cause it to turn with the receptacle, thus defeating the function of the device. The tendency of the weights, in conjunction with the rod 12, is to hold the agitator relatively stationary as the receptacle is turned, whereby the perforated bottom is made to turn beneath the agitating-arms, thus causing a quantity of the powder to pass through the openings 8 in the bottom every time the casing is given a partial turn. To prevent the quantity of material in the receptacle from interfering with the proper performance of the function of the device, as heretofore explained, I employ a shield or cover 14, located above the agitator and adapted to support the bulk of the material and prevent it from interfering with the proper independent action of the receptacle, the shield being so arranged as to allow the material in the receptacle to pass to the bottom fast enough for use. As shown in the drawings, the shield consists of an inverted-cup-shaped device of less diameter than the inner diameter of the receptacle and provided with supporting-legs 14^a, which engage the bottom of the receptacle outside the path of the agitator-arms.

It must be understood that I do not limit the invention to the special construction shown in the drawings, as I am aware that many modifications may be employed without departing from the spirit of the invention.

In order to provide supporting-legs for the device and at the same time prevent them from coming in contact with the weighted rod 12 when the device is in operation, I employ a ring 15, adapted to clasp the body of the receptacle and arranged to be adjusted thereon. This ring is formed with legs 15^a. When the device is not in use, the ring is turned to the position shown in full lines in the drawings, whereby the legs are made to form a support therefor. On the other hand,

when the device is in use the ring is raised to the position shown by dotted lines in Fig. 3, whereby the lower extremities of the legs are raised above the plane of the rod 12. As shown in the drawings, the ring 15 and the legs 15^a are formed from an integral piece of wire whose adjacent extremities are provided with apertured lugs adapted to be connected by a set-screw 16. Any other suitable construction may, however, be employed.

As shown in the drawings, the weights 13 of the rod 12 are adjustable, whereby they may be made to occupy a position on the rod nearer or more remote from the center, as may be desired. For this purpose the rod extremities are threaded and a nut is placed on each side of each weight. The openings in the weights may be either plain or threaded, as may be desired.

Having thus described my invention, what I claim is—

1. In a sifting device, the combination of a receptacle having an apertured bottom through which powdered material may be sifted, and a movable agitating device arranged adjacent the bottom, and provided with arms, of a shield located within the receptacle above the agitating device and provided with supporting-legs which engage the bottom of the receptacle outside of the agitator-arms, the shield being constructed to support the bulk of the powdered material in the receptacle and at the same time to allow the said material to pass to the bottom of the receptacle fast enough for use.

2. In a sifting device the combination with a receptacle having an apertured bottom, and an agitating device movable about a vertical axis and having arms arranged to travel in a horizontal plane adjacent the bottom of the receptacle, of an inverted-cup-shaped shield or cover, provided with legs resting on the bottom of the receptacle outside of the movable arms of the agitating device, and arranged to allow the material to pass to the bottom of the receptacle fast enough for use.

3. The combination with a receptacle having a bottom constructed to allow the powdered material to be sifted therethrough, an agitator provided with arms located adjacent said bottom, and a vertical spindle to which said arms are attached, said spindle projecting below the bottom and provided with weighted arms having a tendency to hold the agitator stationary while the receptacle is turned, of a shield located above the agitator and arranged to support the bulk of the material in the receptacle, whereby it is prevented from interfering with the proper independent action of the receptacle during use, the said shield being also constructed to allow the material to pass to the bottom of the receptacle fast enough for use.

4. The combination with a receptacle having a bottom through which powdered material may be sifted, an agitator provided with a vertical spindle, the spindle passing below the bottom of the receptacle, and being provided with weighted arms projecting beyond the side walls of the receptacle, and legs vertically adjustable on the body of the receptacle and arranged to be raised when the sifting device is in use, to prevent them from interfering with the weighted arms.

In testimony whereof I affix my signature in presence of two witnesses.

JOSEPH H. COPE.

Witnesses:

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