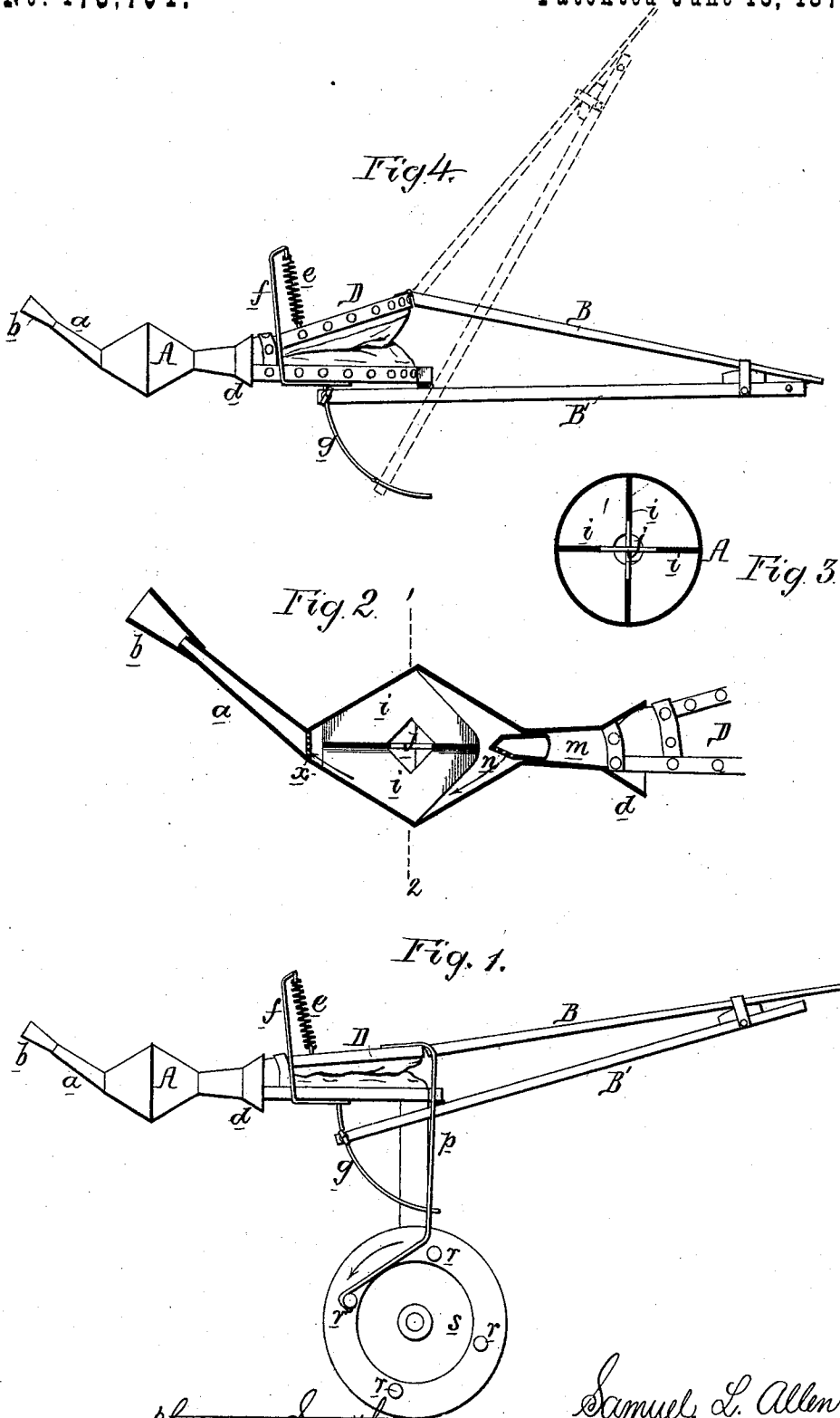


S. L. ALLEN.

APPARATUS FOR DISTRIBUTING POWDERED SUBSTANCES.

No. 178,704.

Patented June 13, 1876.



Witnesses, Harry Smith
Thomas McKean

Samuel L. Allen
by his attorneys
Housman and

UNITED STATES PATENT OFFICE.

SAMUEL L. ALLEN, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN APPARATUS FOR DISTRIBUTING POWDERED SUBSTANCES.

Specification forming part of Letters Patent No. **178,704**, dated June 13, 1876; application filed July 8, 1875.

To all whom it may concern:

Be it known that I, SAMUEL L. ALLEN, of Philadelphia, Pennsylvania, have invented an Apparatus for Distributing Powdered Substances, of which the following is a specification:

The object of my invention is to construct a device for distributing any poisonous compound over the leaves of plants, trees, vines, &c., for the purpose of destroying bugs and insects, and this object I attain in the manner which I will now proceed to describe, reference being had to the accompanying drawing, in which—

Figure 1 is a side view of the device; Fig. 2, an enlarged vertical sectional view of part of the same; Fig. 3, a transverse section on the line 1 2, Fig. 2, and Fig. 4 a view of a modification.

The poisoning compound is contained in a reservoir, A, and is forced in small quantities at a time through a spout, *a*, by means of air forced into the reservoir from a pair of bellows, D, or other blowing mechanism, to which are connected arms B B', by means of which the bellows may be operated, a spring, *e*, being attached to the end of an upright, *f*, to serve or assist in distending the bellows. The apparatus is mounted on a wheel, *s*, which imparts motion to the bellows through the medium of a rod, *p*, and studs, *n*, on the wheel. By each stud the rod is drawn downward until it is freed by springing away from the stud, when it will rise by the action of the spring *e*. The outer end of the lower arm B' is adapted to a segmental rod, *g*, and is provided with a set-screw, by tightening which the arms and bellows may be confined in any relative position to which they may be adjusted—as shown, for instance, by dotted lines in Fig. 1. The reservoir A is provided at one end with a funnel, *d*, through which the material is introduced into the reservoir, and at the opposite end is an inclined spout, *a*, over the end of which is fitted a funnel-shaped guard or shield, *b*, which protects the end of the spout, and prevents the clogging up of the same when used among wet foliage.

The object of making the spout inclined, as shown, is to enable it to discharge either up or down, or on either side, as desired, without changing the position of the bellows D, the change being effected by merely turning the reservoir around on the nozzle *m* of the bel-

lows until the spout is pointed in the proper direction.

The reservoir A is divided in the present instance by two longitudinal partitions, *i i*, which break up the contents of the reservoir, and prevent them from accumulating in the lower portion of the same—openings *j j*, however, allowing such communication as will permit the entrance of sufficient material into the lower portion of the reservoir to supply the place of that expelled at each blast of the bellows, thus insuring an even discharge of the whole contents of the reservoir.

In order to cause the air to act only on the portion contained in this lower division, the nozzle has an inclined face, *n*, in which the perforations for the escape of the air are formed, the air being thus directed against the bottom of the reservoir, and carrying with it a small quantity of the contents, which are expelled through the spout *a*. A perforated disk, *x*, is inserted into the entrance of this spout, to assist in distributing the contents evenly.

Fig. 4 illustrates a modification in which the traction-wheel is dispensed with, the bellows being operated by the arms B B'.

I claim as my invention—

1. The combination of a reservoir, A, its spout and blowing mechanism, with a traction-wheel or wheels, and appliances for imparting motion from said wheel to the blower, as set forth.

2. The reservoir A divided into compartments by partitions *i i*, in combination with an air-inlet passage inclined to direct the air to the lower compartments, for the purpose described.

3. The partitions *i i*, combined with the reservoir A, and having openings *j j*, arranged as and for the purpose specified.

4. The reservoir A having at one end a rigid spout, *a*, inclined in respect to the axis of the reservoir, and at the opposite end a funnel, *d*, adapted to the nozzle of a blower, all as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

SAMUEL L. ALLEN.

Witnesses:

EDWARD H. ROCKFELDT,
HARRY SMITH.