

(No Model.)

J. W. BALDWIN.

APPARATUS FOR DISTRIBUTING BRONZE OR OTHER POWDERS.

No. 351,483.

Patented Oct. 26, 1886.

Fig. 1.

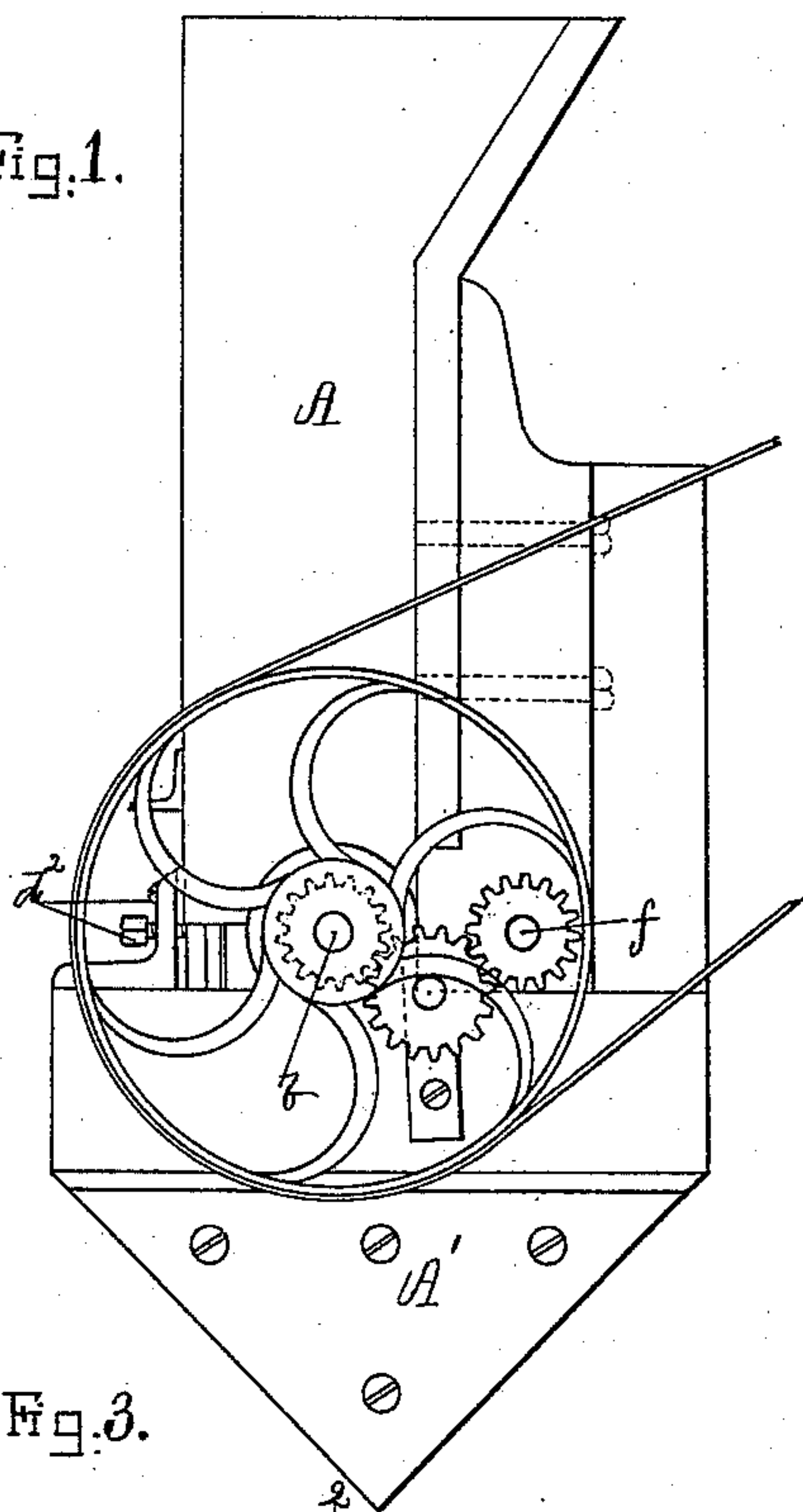


Fig. 2.

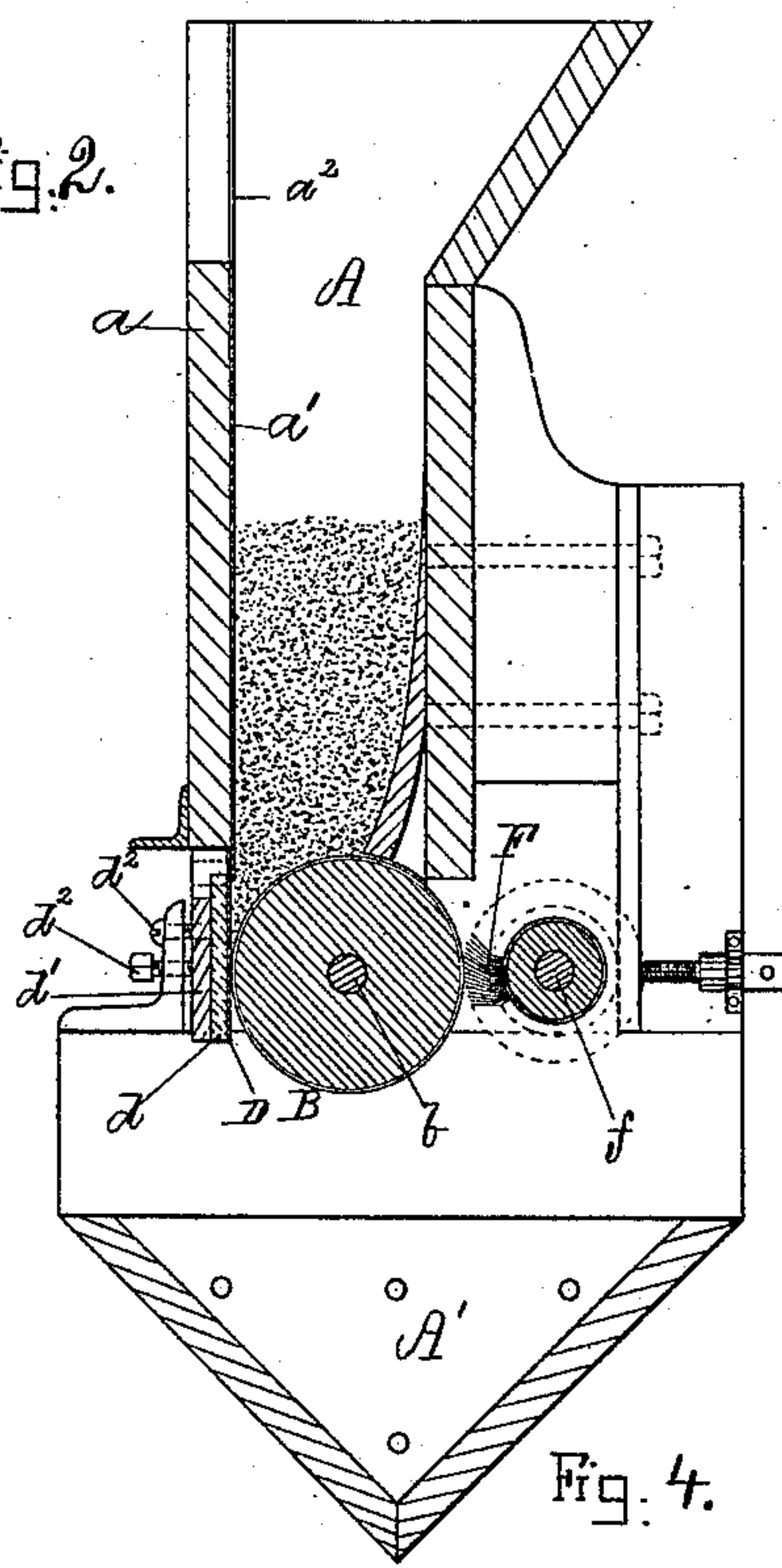


Fig. 3.

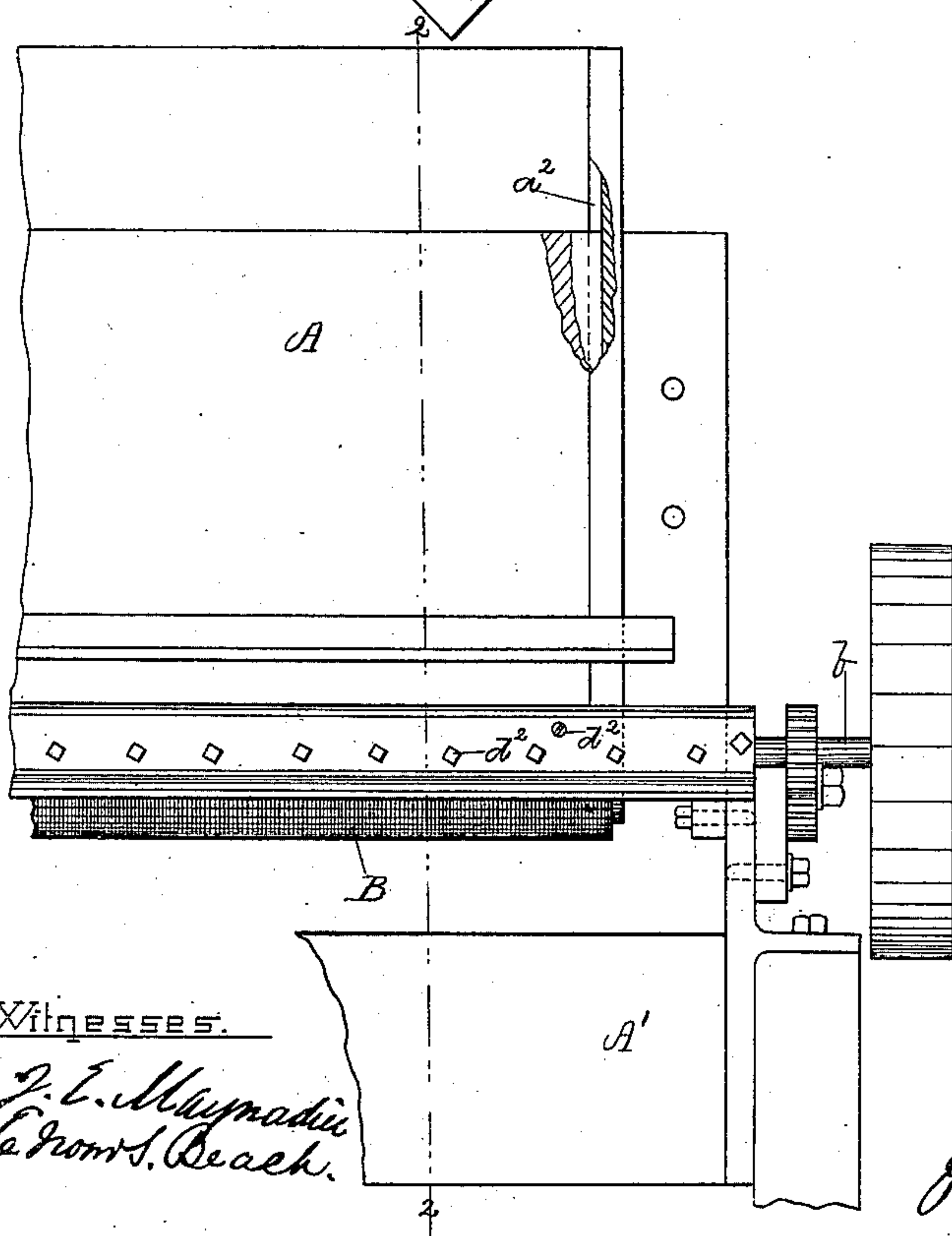
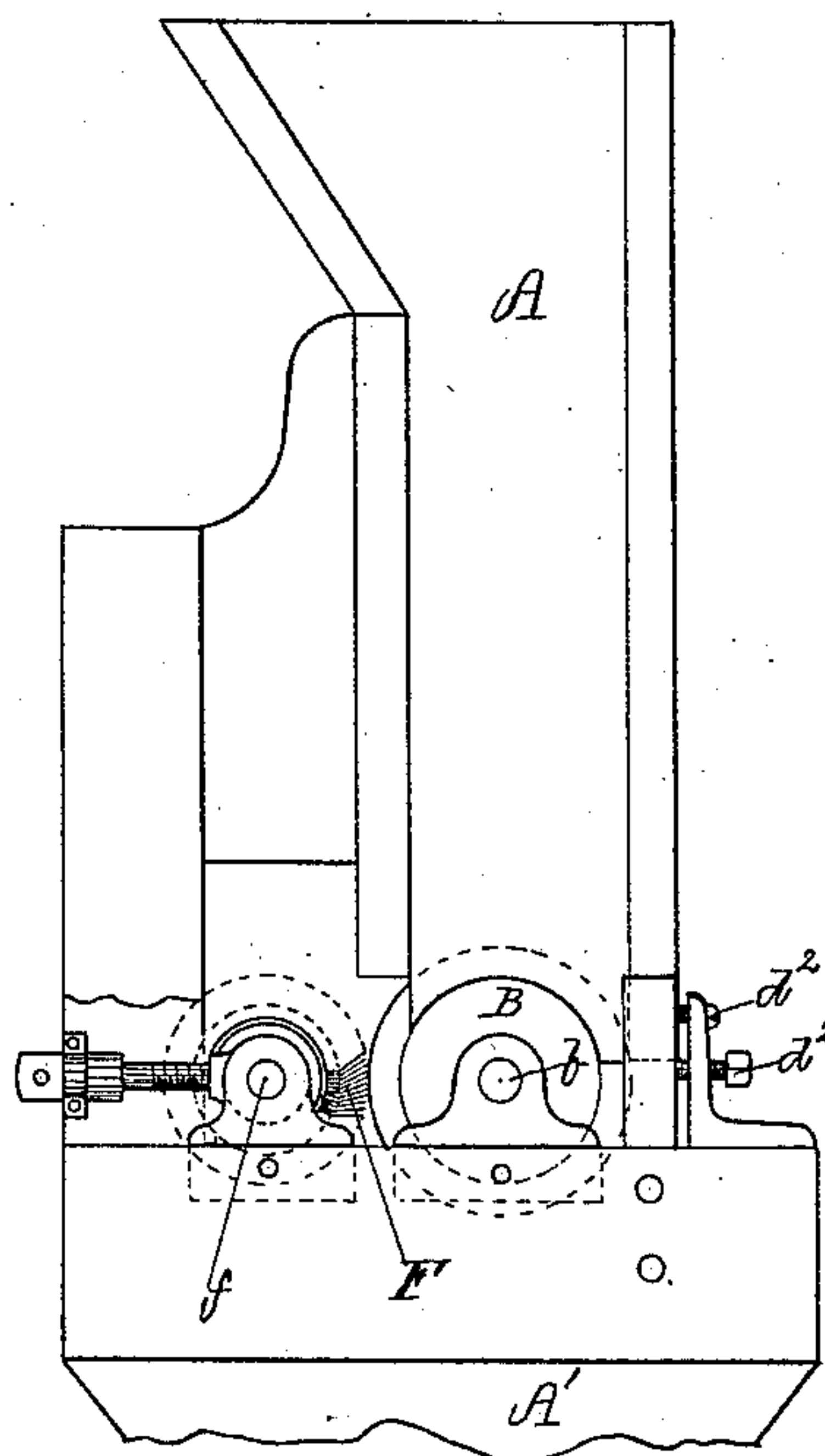


Fig. 4.



Witnesses.

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# UNITED STATES PATENT OFFICE.

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## APPARATUS FOR DISTRIBUTING BRONZE OR OTHER POWDERS.

SPECIFICATION forming part of Letters Patent No. 351,483, dated October 26, 1886.

Application filed May 19, 1886. Serial No. 202,698. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN W. BALDWIN, of Boston, in the county of Suffolk and State of Massachusetts, have invented a new and useful  
5 Apparatus for Distributing Bronze and other Powders, of which the following is a specification, reference being had to the accompanying drawings, making a part hereof, in which—

10 Figure 1 is an end elevation of a hopper and its trough supplied with one form of my apparatus. Fig. 2 is a section on line 2 2 of Fig. 3. Fig. 3 is a partial front elevation. Fig. 4 is an end view showing the end opposite that shown in Fig. 1.

15 In the practical manufacture of certain goods it is necessary that powdered substances be dusted on them, and the object of my invention is to effect this with economy and with regularity. One grave defect in all other  
20 methods of distributing powders is that the amount discharged varies so much that there is sometimes a waste, and sometimes less than is desired is discharged, the result being not only a waste of the powder when too much is  
25 discharged, but a damage to the goods, the goods being injured more or less, either by too much or too little.

My invention consists in the combination of a hopper with a roll having grooves in its  
30 surface, and of a strip against which the roll runs, so that the roll takes from its hopper for distribution a fixed quantity of powder, depending on the capacity of its grooves.

In the drawings, the hopper A is provided  
35 with a distributing-roll, B, which is mounted on a shaft, *b*, and so arranged that when rotated its surface bears against striker D, which is preferably made of a sheet of leatheroid, though other material may be used for it.  
40 Shaft *b* may be made hollow, for the admission of steam, in a well-known way, when it is desirable to have the roll heated for certain powders. Striker D is backed up with a strip, *d*, of rubber and a metal plate, *d'*, and is  
45 made adjustable in respect of the distributing-roll B by means of screws *d*<sup>2</sup>.

The surface of roll B is threaded or otherwise recessed to retain a desired quantity of the powder, which is pressed into the recesses  
50 of the roll when the roll rotates against the striker D. Various ways may be devised for discharging the powder from the recesses in

the roll after the roll passes the striker, though in some cases, when dry powders are used, the roll will discharge itself; but I have found it  
55 best to use the rotary brush F, preferably of card-clothing, and so arranged as to convey the powder from the roll upon the goods underneath. Brush F is mounted on a shaft, *f*, journaled in brackets, which are slotted and  
60 provided with clamping-screws, so that shaft *f* is adjustable away from and toward the roll B, as will be readily understood. Shafts *b* and *f* are adapted to be driven simultaneously by means shown, but too well known to re-  
65 quire description. To prevent the powder from sifting down upon the brush, I slant one side of the hopper toward the axis of roll B, with its lower edge just grazing the roll; and as it is often convenient to have one side of  
70 the hopper removable, I make the hopper A with the side *a* removable, and provide the slide *a'*, moving in the grooves *a*<sup>2</sup>, which are sufficiently long to let the slide pass by the striker D, to keep the powder from falling out. 75

The practical advantages of my machine are that the roll B takes up a regular quantity of powder, according to the capacity of its recesses, and no more, and that the stock fed over the trough A' underneath is evenly dust-  
80 ed, without waste of powder.

I am aware of the patents of Battermann (No. 161,734) and Mason, (No. 307,130,) and dis-  
claim all that is shown in them, my apparatus herein described differing essentially from the  
85 bronzing-machines described by Battermann and Mason, in having the roll which forms the bottom of its hopper grooved, pitted, or the like, to receive a fixed quantity of powder, depending on the capacity of its recesses. Neither  
90 Battermann nor Mason has such a measuring-roll.

What I claim is—

1. The combination of hopper A with striker D and roll B, whose periphery is recessed, sub-  
95 stantially as and for the purpose set forth.

2. In combination, the hopper A, the distributing-roll B, the striker D, and cleaning-brush F, substantially as described.

JOHN W. BALDWIN.

Witnesses:

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JOHN R. SNOW.