

W. LINDSAY.
ENAMELING POWDER DISTRIBUTER.
APPLICATION FILED JULY 6, 1909.

939,918.

Patented Nov. 9, 1909.

Fig. 1

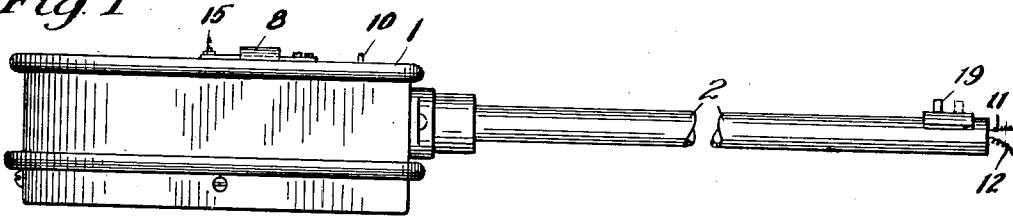


Fig. 2

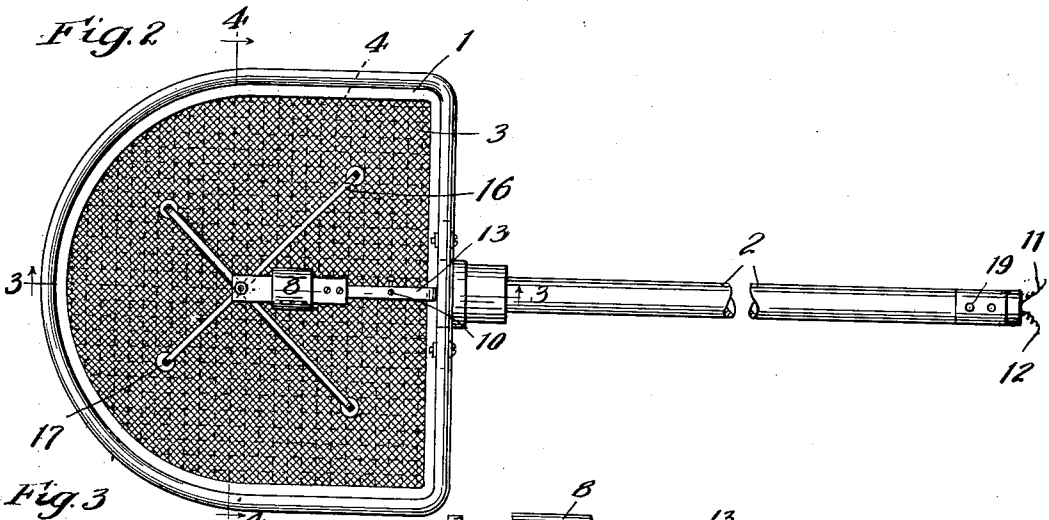


Fig. 3

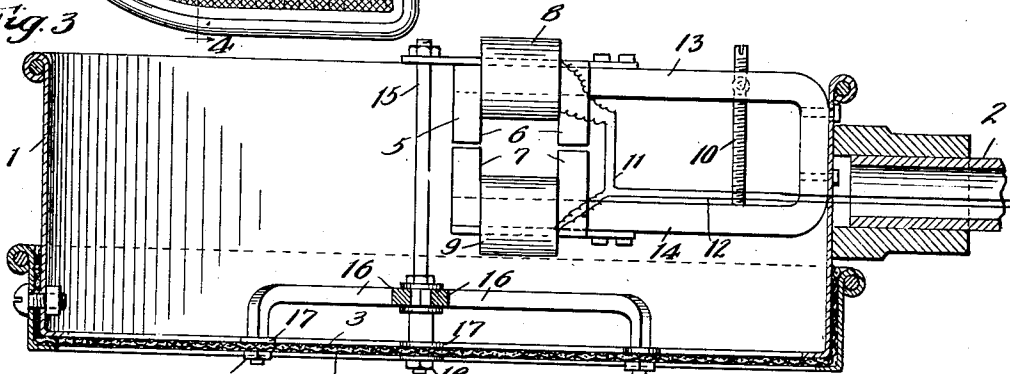
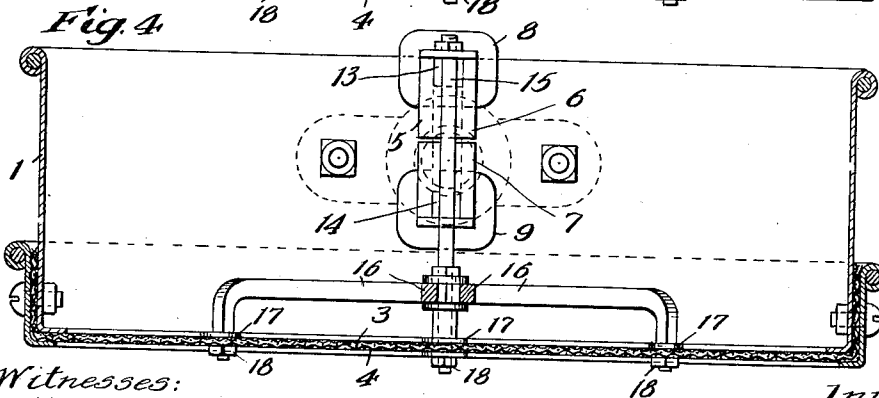


Fig. 4



Witnesses:

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UNITED STATES PATENT OFFICE.

WILLIAM LINDSAY, OF CHICAGO, ILLINOIS.

ENAMELING-POWDER DISTRIBUTER.

939,918.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, WILLIAM LINDSAY, a citizen of the United States, residing in Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Enameling-Powder Distributers, of which the following is a specification.

My invention relates to devices for sifting powdered enameling material over the surface of bath tubs and other vessels in the manufacture of enameled iron bath tubs or other articles.

Heretofore in sifting and distributing enameling powder over heated bath tubs or other vessels to be enameled, the whole sifter including the body or vessel and its long handle has been generally shaken by a pneumatic hammer operating to rapidly tap upon the handle of the sifter; and considerable difficulty, annoyance and discomfort are experienced by the operator, owing to the constant and rapid vibrations to which the instrument which he holds in his hands is subjected, the same also rendering it difficult for the workman to properly and evenly distribute the enameling powder. The necessity of shaking or vibrating the whole sifter and its contents also materially increases the power necessary for the work.

The object of my invention is to provide an enameling powder distributing device in which the sifter vessel itself, (including the handle thereof) will be free from vibration, thus rendering it more convenient and comfortable for holding in the hands, and also enabling the workman to have better control over the sifting operation, and also enabling the work to be done with a minimum of power.

My invention also consists in the novel construction of parts and devices and in the novel combinations of parts and devices herein shown and described.

In the accompanying drawing forming a part of this specification, Figure 1 is a side elevation of an enameling powder distributing device embodying my invention. Fig. 2 is a plan view. Figs. 3 and 4 are sections on lines 3-3 and 4-4 of Fig. 2.

In the drawing, 1 represents an enameling powder container having the customary long handle 2, preferably rigidly secured thereto, by which the workman holds the container in his hands and moves it about over the hot bath tub or other article to be

enameled. The container 1 is provided with a fine mesh wire sieve bottom 3, and also below said sieve or distributor bottom 3 with a flexible coarse mesh wire support 4 for said sieve or distributor bottom 3.

Mounted rigidly upon the container 1 and preferably inside the same and above the sieve or distributor bottom 3, I mount an electromagnet 5, preferably of horse shoe type, and adapted to have its two poles 6, 7 momentarily brought in contact to break the electric circuit. The two arms of the electromagnet have the customary windings 8, 9 and are also furnished with an adjusting screw 10 for regulating and adjusting the distance apart of the poles 6, 7.

11, 12 are the electric circuit wires connecting with the windings 8, 9 on the cores or arms 13, 14 of the electromagnet. The horse shoe electromagnet is preferably vertically arranged or substantially at right-angles to the plane of the sieve or distributor bottom 3 of the container. The movable member armature or pole of the electromagnet, preferably the upper pole, is connected to the flexible coarse wire support 4 by means of a rod or other connection 15, preferably having a plurality of divergent arms 16 at its lower end furnished with buttons 17 to bear upon the sieve or distributor bottom 3 and with nuts 18 which clamp the flexible wire coarse mesh support 4 to the connection 15, and thus cause minute up and down vibrations to be communicated thereto and to the fine mesh wire sieve bottom 3 and to the enameling powder in the container by the action of the electromagnet. The electric circuit is preferably an alternating one, as this renders unnecessary any contact maker or breaker other than the poles of the electromagnet because with an alternating current the reversing of the current also reverses the polarity of the limbs of the horseshoe magnet, and at the minute interval between each reversal the limbs of the magnet are left substantially without polarity or magnetic property so that they tend to spring back to their normal position, or their position when the current is entirely cut off. The handle of the container is preferably furnished with an electric switch 19 for connecting and disconnecting the electric current.

The coarse wire mesh support 4 is made of a large comparatively stiff though slightly flexible wire, preferably of 20 gage

and the mesh is preferably about one quarter inch mesh so as to give support to the fine mesh wire sieve bottom 3 of the container at numerous points and communicate
5 to said fine wire mesh sieve bottom the extremely minute and rapid vibrations imparted to the wire support 4 by the electromagnet.

The sieve bottom 3 is preferably of very
10 fine wire about No. 33 wire gage and it is preferably of about 40 mesh or 40 wires to the inch. The mesh of the sieve bottom 3 may, however, be varied according to the nature of the enameling powder to be sifted.

15 I claim:—

1. An enameling powder distributor consisting in a container having a long rigid handle adapting it to be held in the hands of the workman and moved about over the
20 heated bath-tub or article to be enameled, and provided with a fine mesh wire sieve bottom and a coarse mesh support therefor, an electromagnet having a movable member and a connection between the movable member of the electromagnet and said coarse
25 mesh support, substantially as specified.

2. An enameling powder distributor consisting in a container having a long rigid handle adapting it to be held in the hands
30 of the workman and moved about over the heated bath tub or article to be enameled, and provided with a fine mesh wire sieve bottom and a coarse mesh support therefor, an electromagnet having a movable member
35 and a connection between the movable member of the electromagnet and said coarse mesh support, said connection having a plurality of divergent arms, substantially as specified.

3. An enameling powder distributor consisting in a container having a long rigid handle adapting it to be held in the hands of the workman and moved about over the
40 heated bath tub or article to be enameled, and provided with a fine mesh wire sieve bottom and a coarse mesh support therefor, an electromagnet and a connection between the movable member of the electromagnet and said coarse mesh support, said electro-
45 magnet being of horse-shoe type, and one of its poles being a movable member to which said connection is attached, substantially as specified.

4. An enameling powder distributor consisting in a container having a long rigid handle adapting it to be held in the hands of the workman and moved about over the
50 heated bath tub or article to be enameled, and provided with a fine mesh wire sieve bottom and a coarse mesh support therefor, an electromagnet and a connection between
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the movable member of the electromagnet and said coarse mesh support, said electromagnet being of horse shoe type, and one of its poles being a movable member to which
65 said connection is attached, and an adjusting means between the two arms of said horse shoe magnet, substantially as specified.

5. An enameling powder distributor consisting in a container having a long rigid
70 handle adapting it to be held in the hands of the workman and moved about over the heated bath tub or article to be enameled, and provided with a fine mesh wire sieve bottom and a coarse mesh support therefor, an electromagnet and a connection between the movable member of the electromagnet and said coarse mesh support, said electro-
75 magnet being of horse shoe type, and one of its poles being a movable member to which said connection is attached, and an alternating current electric circuit for said magnet to cause the limbs of said magnet to be alternately and reversely polarized at each reversal of the current, substantially as
80 specified.

6. An enameling powder distributor comprising in combination, a container having a handle and a fine mesh sieve bottom and a movable support for said bottom contacting
90 therewith at a plurality of points, an electromagnet having a movable member and a connection between the movable member of the magnet and said support, substantially as specified.

7. An enameling powder distributor comprising in combination, a container having a handle and a fine mesh sieve bottom and a movable support for said bottom contacting
100 therewith at a plurality of points, an electromagnet having a movable member and a connection between the movable member of the magnet and said support, said electromagnet being a horse shoe one arranged in a vertical plane in the container above said
105 support, substantially as specified.

8. An enameling powder distributor comprising in combination, a container having a handle and a fine mesh sieve bottom and a movable support for said bottom contacting
110 therewith at a plurality of points, an electromagnet having a movable member and a connection between the movable member of the magnet and said support, said electromagnet being a horse shoe one arranged in a vertical plane in the container above said
115 support, and an alternating electric circuit for said magnet, substantially as specified.

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Witnesses:

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H. M. MUNDAY.