

(No Model.)

S. W. MARTIN & C. H. PAXSON.
Hose Nozzle.

No. 240,833.

Patented May 3, 1881.

Fig. 1.

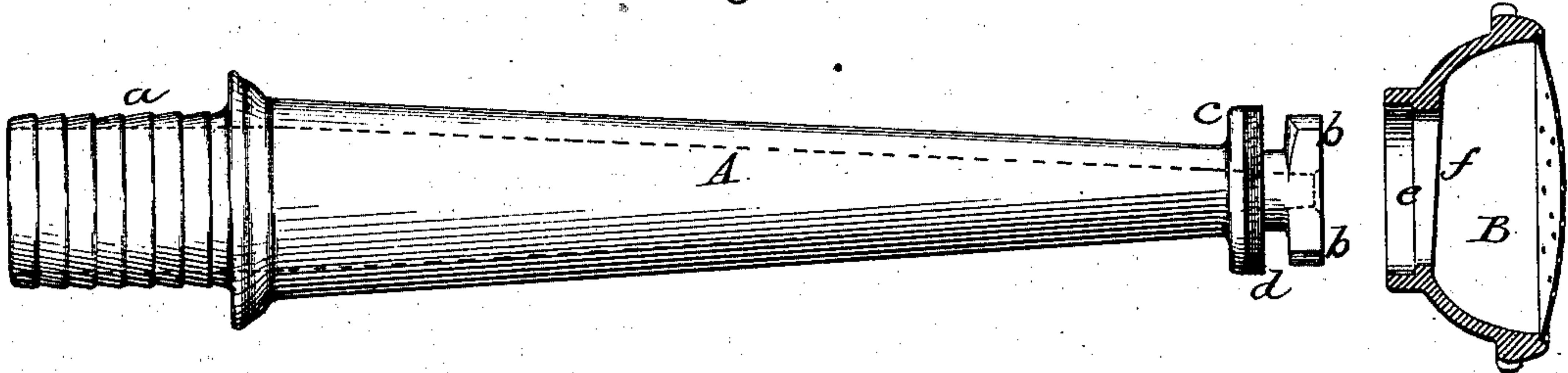


Fig. 2.

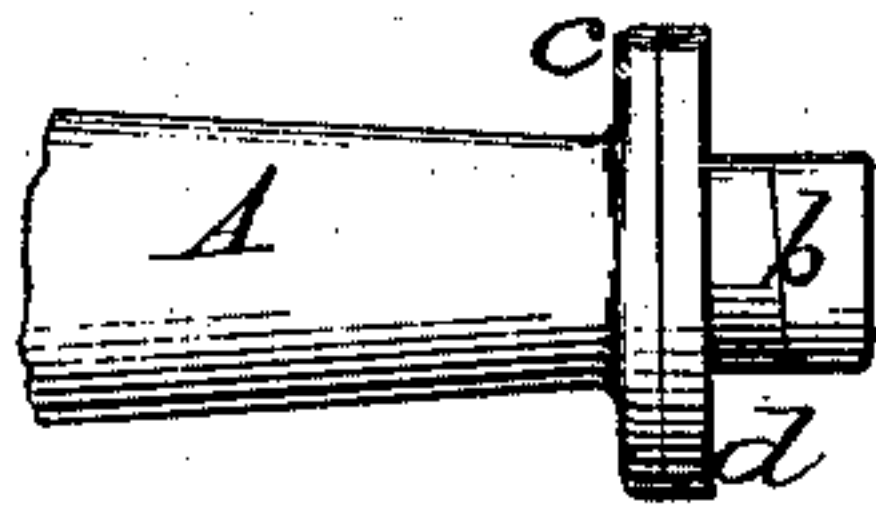


Fig. 3.

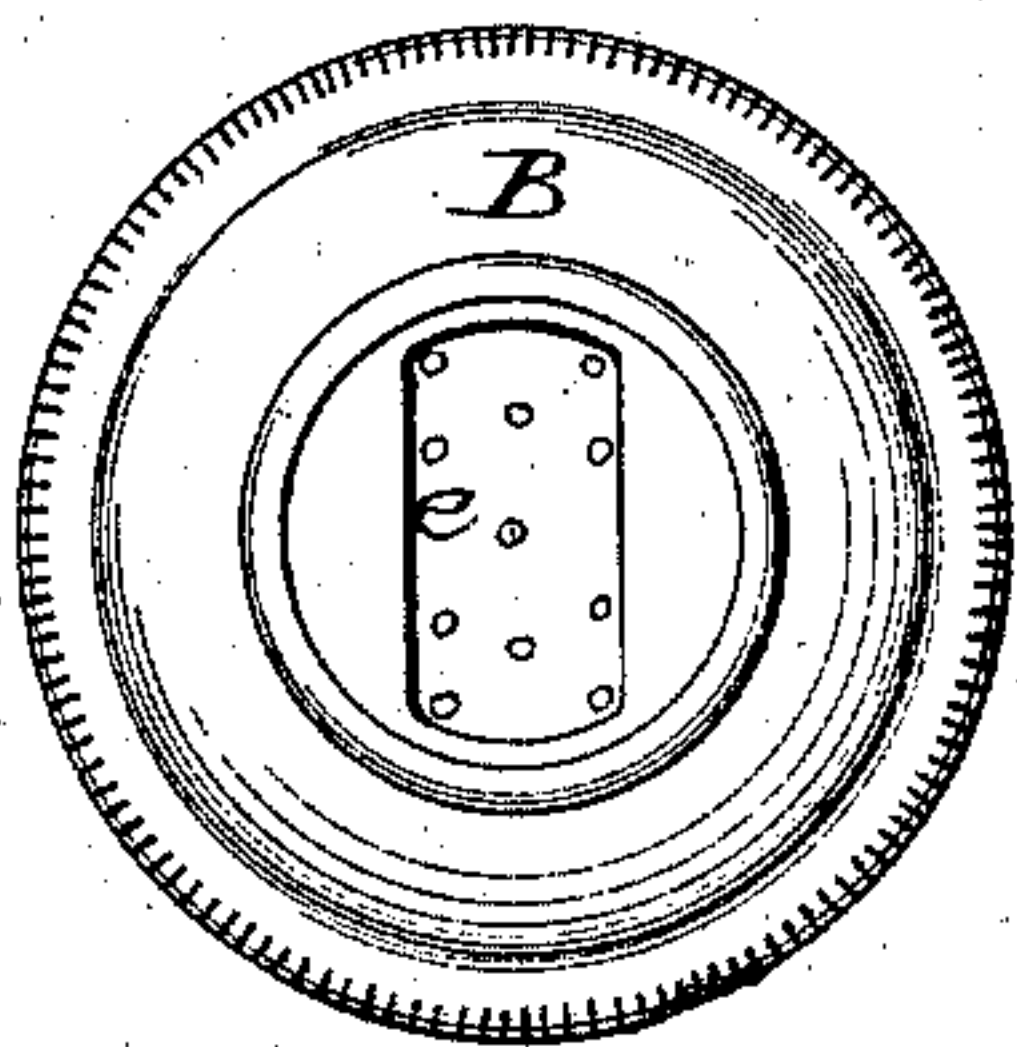


Fig. 4.

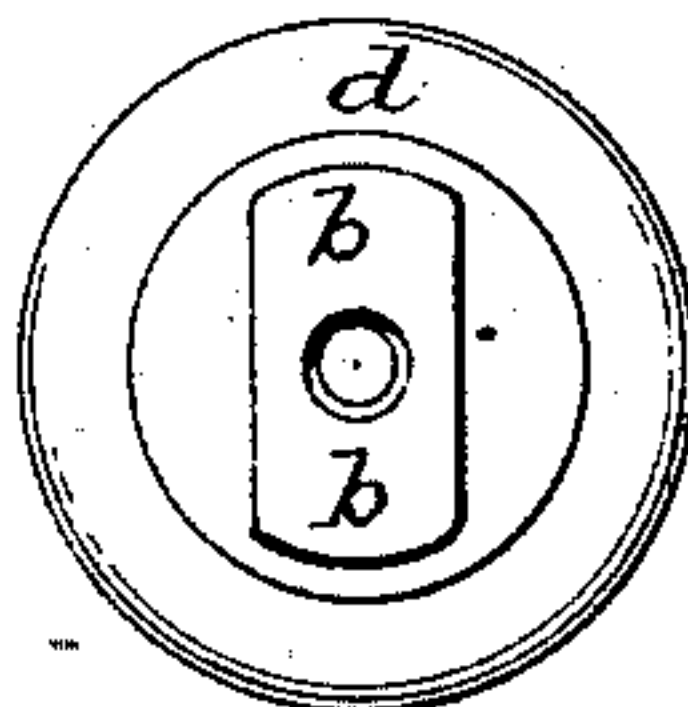
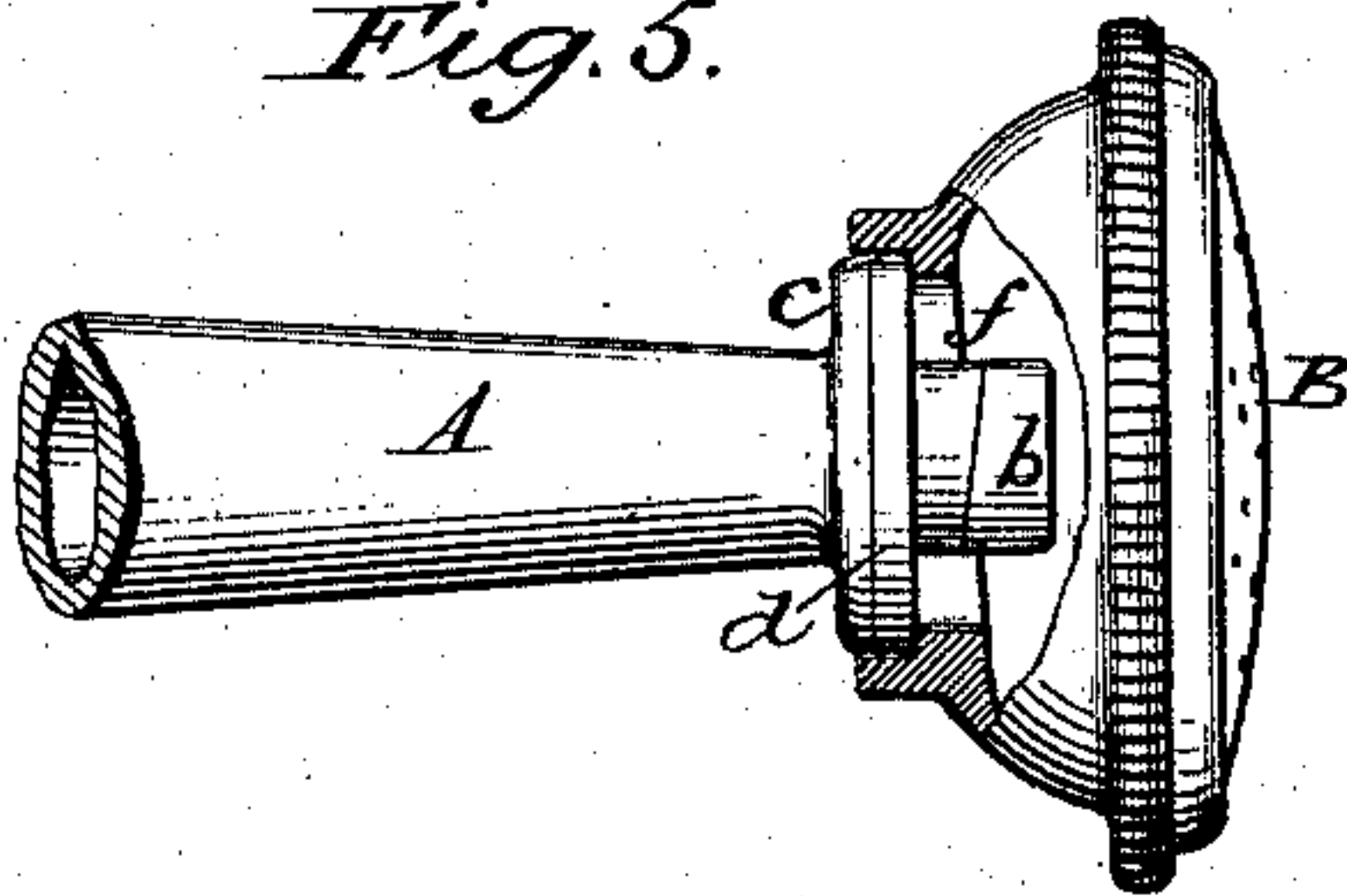


Fig. 5.



Attest.

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UNITED STATES PATENT OFFICE.

SAMUEL W. MARTIN AND CHARLES H. PAXSON, OF SPRINGFIELD, OHIO,
ASSIGNORS TO MAST, FOOS & CO., OF SAME PLACE.

HOSE-NOZZLE.

SPECIFICATION forming part of Letters Patent No. 240,833, dated May 3, 1881.

Application filed October 27, 1880. (No model.)

To all whom it may concern:

Be it known that we, SAMUEL W. MARTIN and CHARLES H. PAXSON, of Springfield, in the county of Clarke and State of Ohio, have
5 invented certain Improvements in Hose-Nozzles, of which the following is a specification.

The object of this invention is to produce for domestic use an exceedingly cheap and convenient nozzle, adapted, like those in general
10 use, to produce a jet or spray at will, as occasion may require.

The invention consists in a cast-iron nozzle provided with lugs which retain a removable rose or sprinkler in place thereon, and coated
15 in the interior with japan, asphalt-varnish, porcelain-enamel, or other coating capable of being applied in a fluid condition, to render the surface smooth and facilitate the flow of the water.

Hitherto it has been customary to cast nozzles of brass and finish them at a considerable expense, connecting them to the hose by means of a corrugated neck, and providing them at the forward end with a threaded neck to receive a mouth-piece or a rose, according to the requirements of the occasion. Our construction is far less expensive, avoids the difficulties incident to the frequent mutilation of the screw-thread, and gives a freer vent to the
30 water.

Figure 1 represents a side view of our improved nozzle, with the rose disconnected and shown in section; Fig. 2, a side view of the front end of the nozzle, showing the lugs thereon; Fig. 3, an inside face view of the rose or sprinkler; Fig. 4, an end view of the nozzle; Fig. 5, a side view of the nozzle, with the rose secured thereon, the latter being shown partly in section, to illustrate the manner in which
40 it is fastened.

A represents the body of the nozzle, cast complete in one piece, with the corrugated neck *a* at the rear end to enter the hose, and with the two side lugs *b* on the forward end.
45 The hole or opening through the end of the body is made of such size as to produce a jet of the size ordinarily required, thus avoiding the necessity of using the ordinary removable tip on the end. The rear sides of the lugs *b* are inclined or beveled, as shown, and the nozzle provided in rear of the lugs with a collar or

shoulder, *c*, and a washer, *d*, of rubber or other elastic material seated against the shoulder.

The rose or sprinkler B is made of substantially the ordinary form; but instead of having a screw-thread tapped in its rear side, as usual,
55 it is provided with an oblong opening, *e*, to admit the end of the nozzle and the lugs thereon, and with internal inclined shoulders *f*, which pass behind the lugs of the nozzle
60 when the rose is rotated thereon, as shown in Fig. 5, so as to hold the rose securely upon the nozzle, and tightly against the elastic packing. The packing serves not only to produce a water-tight joint between the nozzle and the rose,
65 but also to prevent the latter from working loose.

In order to secure the full effect of the water-pressure it is important that the interior of the nozzle be smooth and even, so that the water may pass through steadily and without interruption. This end we secure by coating the interior of the nozzle with japan, asphalt-varnish, porcelain-enamel, or other suitable substance or material capable of being applied
75 in a fluid condition. The coating, being thus applied in liquid or fluid condition, fills all the depressions and covers all the inequalities, and presents, when hard, a perfectly smooth, unbroken surface. The nozzle, being made of
80 iron, is also coated on the outside with material the same as, or other than, that used for the interior, to prevent oxidation.

The lugs on the forward end of the nozzle, unlike the ordinary screw-thread, are not liable
85 to injury when the nozzle is thrown down or dragged about upon the pavement, as so frequently happens in practice.

The nozzle constructed as above can be manufactured very cheaply. In durability it is the
90 equal of those made in the ordinary manner, and in convenience of adjustment it is their superior.

We are aware that a metal pipe has been provided with a glass lining secured in place
95 by means of an intermediate filling.

We are also aware that it has been proposed to preserve wood and also gas and other metal pipes by first coating them with litharge, Venetian red, and pine-varnish, and then applying
100 thereon a coating of composite enamel.

Our invention relates especially and pecu-

liarly to hose-nozzles, and its primary object is to render the interior of the same perfectly smooth, so that the water may pass through the same steadily without undue friction, and without being diverted from its straight course, it being a well-known fact that the force of the water and the distance to which the stream can be thrown are greatly diminished by any irregularity or roughness in the surface of the nozzle. In constructing our nozzle the enamel is applied directly to, and is retained firmly by, the rough surface of the cast metal, and is applied with special reference to its producing a smooth and true inner surface. Of course the enamel serves incidentally to protect the metal from oxidation; but this is of secondary importance.

What we claim is—

1. As a new article of manufacture, a tapering cast-metal hose-nozzle having a smooth interior surface produced by a coating of enamel, or its described equivalent, applied directly to the surface of the metal.

2. The combination of the nozzle or jet-pipe having the lugs thereon and the rose or sprinkler connected and arranged to interlock with the lugs, as shown.

3. The combination of the cast-metal nozzle having the lugs thereon, the elastic washer applied thereto, and the removable rose seated against the packing and secured by the lugs.

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CHAS. H. PAXSON.

Witnesses:

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J. D. HURD.