

No. 609,010.

Patented Aug. 16, 1898.

C. COMSTOCK.

APPARATUS FOR DISTRIBUTING COLOR.

(Application filed Apr. 27, 1897.)

(No Model.)

2 Sheets—Sheet 1.

Fig. 1.

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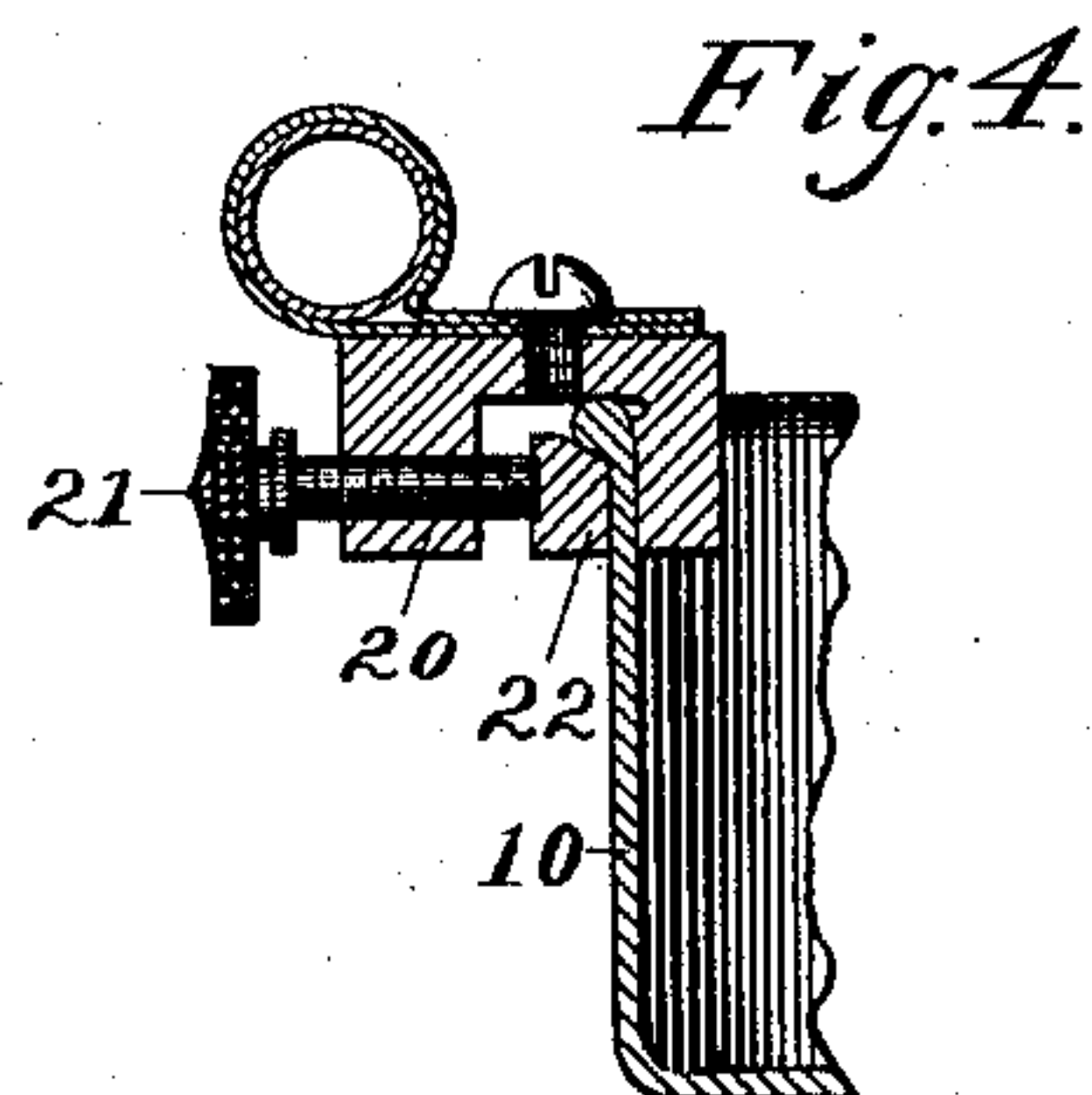
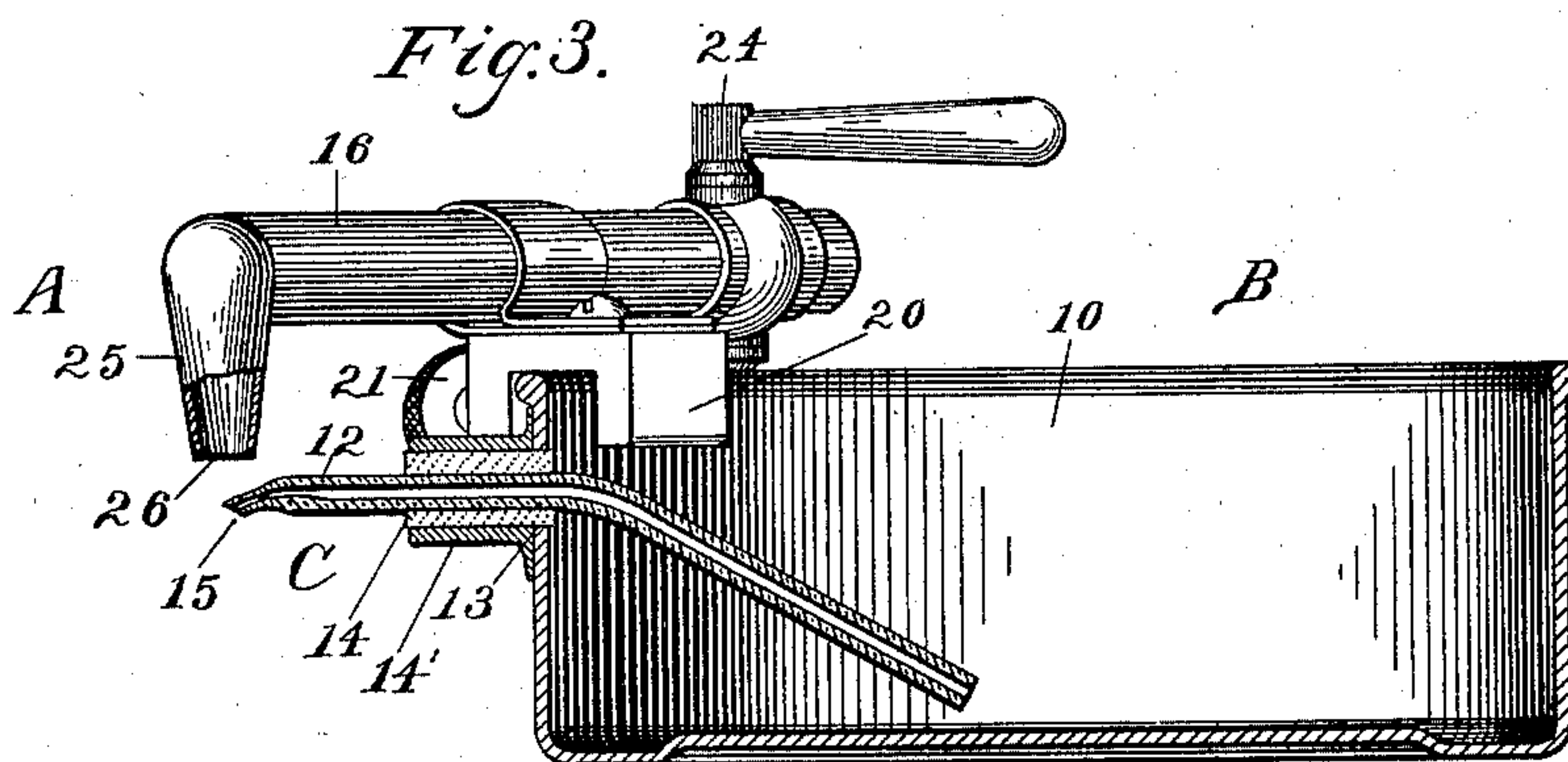
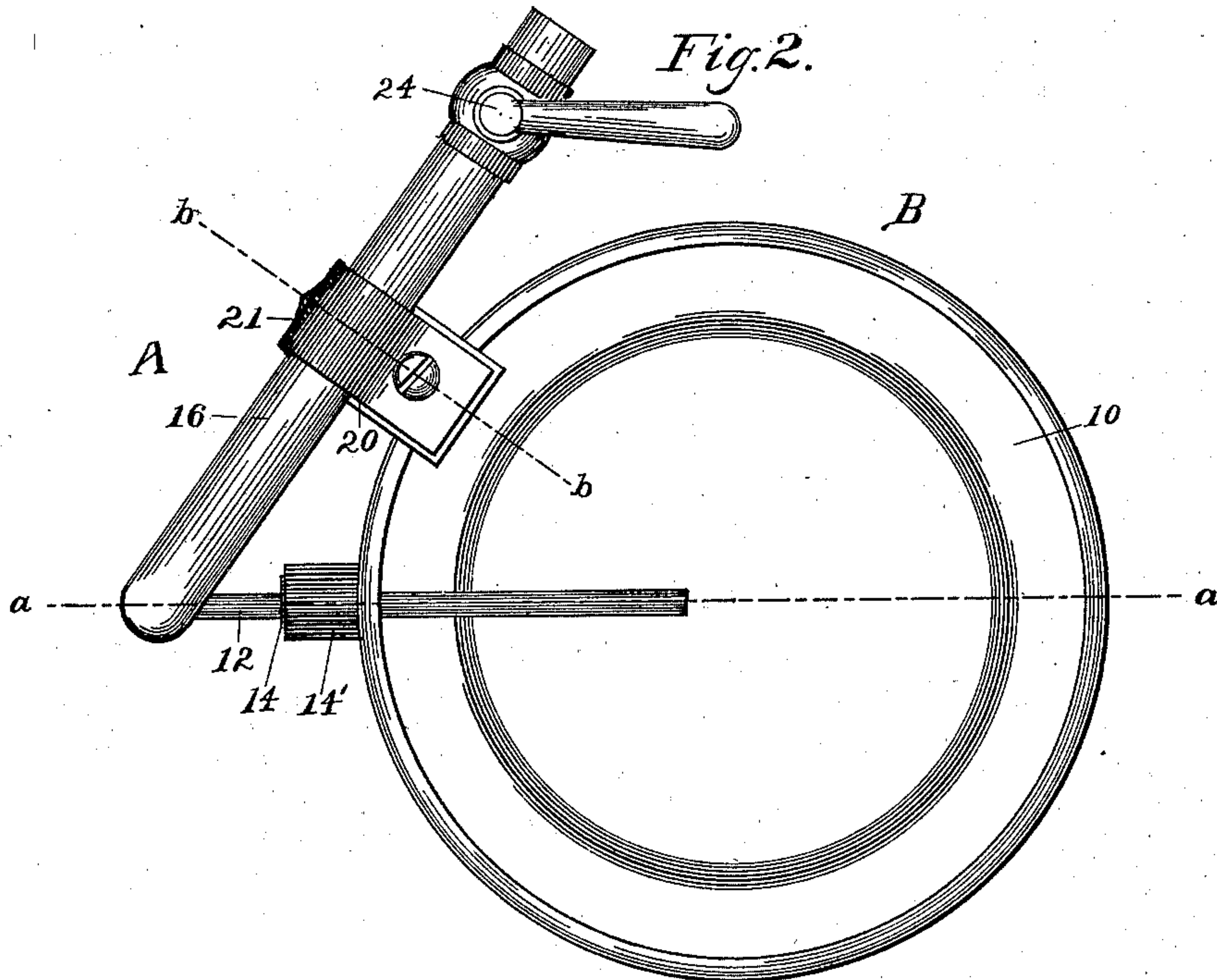
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UNITED STATES PATENT OFFICE.

CHESTER COMSTOCK, OF NEW YORK, N. Y., ASSIGNOR TO THE IRONCLAD MANUFACTURING COMPANY, OF SAME PLACE.

APPARATUS FOR DISTRIBUTING COLOR.

SPECIFICATION forming part of Letters Patent No. 609,010, dated August 16, 1898.

Application filed April 27, 1897. Serial No. 634,090. (No model.)

To all whom it may concern:

Be it known that I, CHESTER COMSTOCK, a citizen of the United States, residing in New York, (Brooklyn,) in the county of Kings and State of New York, have invented certain new and useful Improvements in Apparatus for Distributing Ornamenting or Enameling Material, of which the following is a specification.

This invention relates to apparatus for applying or distributing ornamenting or enameling material on surfaces or ware.

The object of the invention is to provide a simple and efficient apparatus of this character for applying or distributing ornamenting or enameling material for the purpose of mottling, clouding, shading, marking, or ornamenting ware or other surfaces having a vitrified or other coating thereon.

In the drawings accompanying and forming part of this specification, Figure 1 is a side elevation of one form of this apparatus, with parts thereof broken away and in section and illustrating an article in position to be treated with ornamenting material applied by means of this mechanism. Fig. 2 is a top view thereof. Fig. 3 is a detail sectional view taken in line *a a*, Fig. 2; and Fig. 4 is also a detail sectional view taken in line *b b*, Fig. 2.

Similar characters of reference designate like parts in all the figures of the drawings.

In the manufacture of enameled ware it is now deemed preferable and to a certain extent necessary, in order to produce salable articles, to provide such ware with an ornamented or decorated surface, the ornamentations thereof, which in some species of this ware are called "mottlings," being obtained by various processes. Among others is that in which a metallic salt is applied to a previously-dried and unfused enamel coating, and also that in which a second contrasting enamel coating is applied in a fluid condition to a previously-applied enamel coating, whereby enameled articles having beautiful and highly-ornamental appearances can be obtained, such ornamentations depending upon the ornamenting material used and the manner of applying the same, and for the purpose of applying such ornamenting material I have provided an improved apparatus.

This apparatus in one preferred form there-

of herein shown and described comprises a suitable supporting frame or framework, (designated generally by F,) which may be of any desired construction adapted to support the mechanism herein shown and described. Supported on this framework is some suitable means for holding the ornamenting material, shown herein as a receptacle 10, removably secured to said framework. It will be understood that this receptacle may be constructed of any material adapted for the purpose and of any desired size and shape.

For the purpose of carrying or conducting the ornamenting material from the receptacle suitable conduit means is provided and which may be supported in any desired manner, with one part thereof in communication with the ornamenting material in the receptacle, while the discharge orifice or mouth thereof is in position to permit such material to be distributed or applied on the article to be decorated, and in the preferred construction thereof this conduit preferably comprehends a non-corrosive tube 12, preferably of glass, whereby corrosion of the same, especially at its discharge-mouth, as would be the case with an ordinary metal tube, by the ornamenting material is prevented. While this tube may be supported to extend over the upper edge of the receptacle when an uncovered vessel is used, it is shown herein projecting through an aperture or opening 13 in the side wall thereof and removably and adjustably held in position by suitable packing 14, through which said tube projects, this packing being preferably held by a spout or tubular protuberance 14', fixed on the receptacle. By having this tube adjustable its position relative to the discharge end of the compressed-fluid conduit can be regulated. This conduit-tube is so formed or shaped that its inner end preferably communicates with the ornamenting material adjacent to the bottom of the receptacle, whereby all appreciable amount of such material can be withdrawn from the receptacle before the refilling thereof becomes necessary.

Adjacent to the discharge-orifice 15 of this conduit-tube the internal diameter thereof is preferably somewhat less than that of the major portion of said tube, such discharge

end being so curved or constructed that the ornamenting material will have no tendency to work its way rearwardly on the under side of the tube, thereby to form in drops and drip on the article being treated, and, if desired, the discharge end may be cut away at an angle, to thereby permit the ornamenting material to be more easily carried downward and distributed.

In order to draw the ornamenting material from the receptacle 10 through this conduit 12 and then distribute the same on the surface or article to be decorated, a suitable instrumentality is provided, which in the form shown comprises a fluid or air forcing apparatus embodying an air-conduit 16 and suitable means for forcing a volume of compressed fluid or air therethrough, and which in the construction shown preferably comprehends a blower 17, connected in any desired manner, as by a belt 18, with suitable power. (Not shown.) This air-conduit 16, such as a tube or pipe, is supported in position in any desired manner to have its discharge mouth or orifice 26 adjacent to the discharge-mouth of the conduit 12; but, as illustrated herein, it is supported on the receptacle by a suitable clamp device, which in its preferred form comprises a furcated member 20, carrying a clamp-screw 21. One part of this clamping member 20 engages the inner face of the receptacle-wall, while a complementary separate clamping member 22 engages the outer face of said wall, being clamped thereon by the clamp-screw 21, whereby the compressed-air conduit may be adjusted on the receptacle to bring its discharge-orifice into position adjacent to the discharge-orifice of the material-conduit. On the clamping member 20 the compressed-air conduit is shown removably supported, preferably with its discharge end diverging from the receptacle, thereby to permit the better adjustment in the present structure of the material-conduit toward and from said compressed-air conduit. This compressed-air conduit is connected with the blower 17 in any desired way, such as by flexible tubing 23.

For the purpose of regulating the volume of air or other fluid passing through the conduit 16 suitable regulating means is provided, such as a cock 24, shown carried by such conduit, whereby in manipulating the same the compressed air may be partially or entirely cut off. This conduit 16 is illustrated provided at its working end with a downwardly-extending preferably gradually-converging spout 25, forming a discharge orifice or mouth 26, shown of larger diameter than the orifice of the material-conduit, and in position in this structure of apparatus directly above the discharge-orifice 15 of the conduit 12, whereby the discharge-orifices 15 and 26 are in such positions relatively to each other that the volume of the compressed air is directed across the material-conduit orifice 15 and over and around the same, whereby it will not only

draw a portion of the ornamenting material from the receptacle through its conduit 12, but will also completely envelop and encircle the same, such ornamenting material being thus carried in the center of such volume of ejected air, and thereby distributed in the form of a spray directly on the article to be decorated, and which spray will be in the nature of drops or globules, which may be so fine as to be practically imperceptible to the eye or may be larger, as desired, the size of such drops or globules being determined by the character and size of the article to be decorated and the manner in which the same is to be ornamented. Variation in the size of these drops or globules may be obtained by varying the size of the discharge-orifice 15 of the conduit 12, which may be done in any desired manner—as, for instance, by means of interchangeable conduits and by regulating the volume of compressed air forced through the air-conduit 16.

It will be understood that any ornamenting material which can be distributed in the manner set forth may be used with this apparatus.

In the distribution of the ornamenting material on the article which is held in the path of the same by the operator more or less of such material drops off, and hence in order to guard against waste a suitable catch-receptacle 27 is provided and supported by the framework in position beneath the conduit discharge-orifices 15 and 26, and preferably has a converging bottom 28, whereby the superfluous material is caught and waste thereof prevented.

In the operation of this improved apparatus when it is desired to ornament or decorate an article or vessel the operator manipulates the same below, in this construction of apparatus, the material-discharge orifice 15, the regulating device having previously been adjusted, whereupon the volume of compressed air or fluid forced through the conduit 26 draws the ornamenting material from the receptacle and enwraps the same and distributes it in the form of a spray comprising large or small drops or globules, as the case may be, on the article at any desired stage in the process of enameling the same, whereby a highly and beautifully ornamented appearance is obtained, varying according to the ornamenting material used, the regulation of the apparatus, and the manipulation of the article to be decorated.

Having thus described my invention, I claim—

1. In an ornamenting apparatus, the combination of a receptacle for holding ornamenting material; a fluid-conduit; a removable ornamenting-material conduit in position to convey material from said receptacle; the discharge end thereof having a concaved or curved under face thereby to prevent the ornamenting material from working its way rearwardly and forming in drops on the under side of said conduit; said conduits being

in such position, relatively to each other, that the fluid from the fluid-conduit will draw the ornamenting material from said receptacle and completely envelop and surround such ornamenting material and distribute it in the form of a spray on the surface to be treated, substantially as described.

2. In an ornamenting apparatus, the combination of a receptacle adapted to hold ornamenting material; an adjustable fluid-conduit removably carried by said receptacle, and having its discharge end diverging therefrom and provided with a depending spout having a relatively large discharge-orifice for the discharge of a relatively large volume of fluid; a material-conduit adjustably and removably carried directly by said receptacle, and having its discharge end curved down-

wardly in the direction of the depending spout, and provided with an orifice of relatively small diameter as compared with the orifice of the fluid-conduit, and in position below and underneath the discharge-orifice of said spout, whereby the volume of fluid will cross the material-discharge orifice and pass over and around the same, thereby to draw the ornamenting material through its conduit and completely envelop and force the same in a direction at right angles to the normal level of said ornamenting material in said receptacle and in the form of a spray on the article to be treated.

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Witnesses:

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