

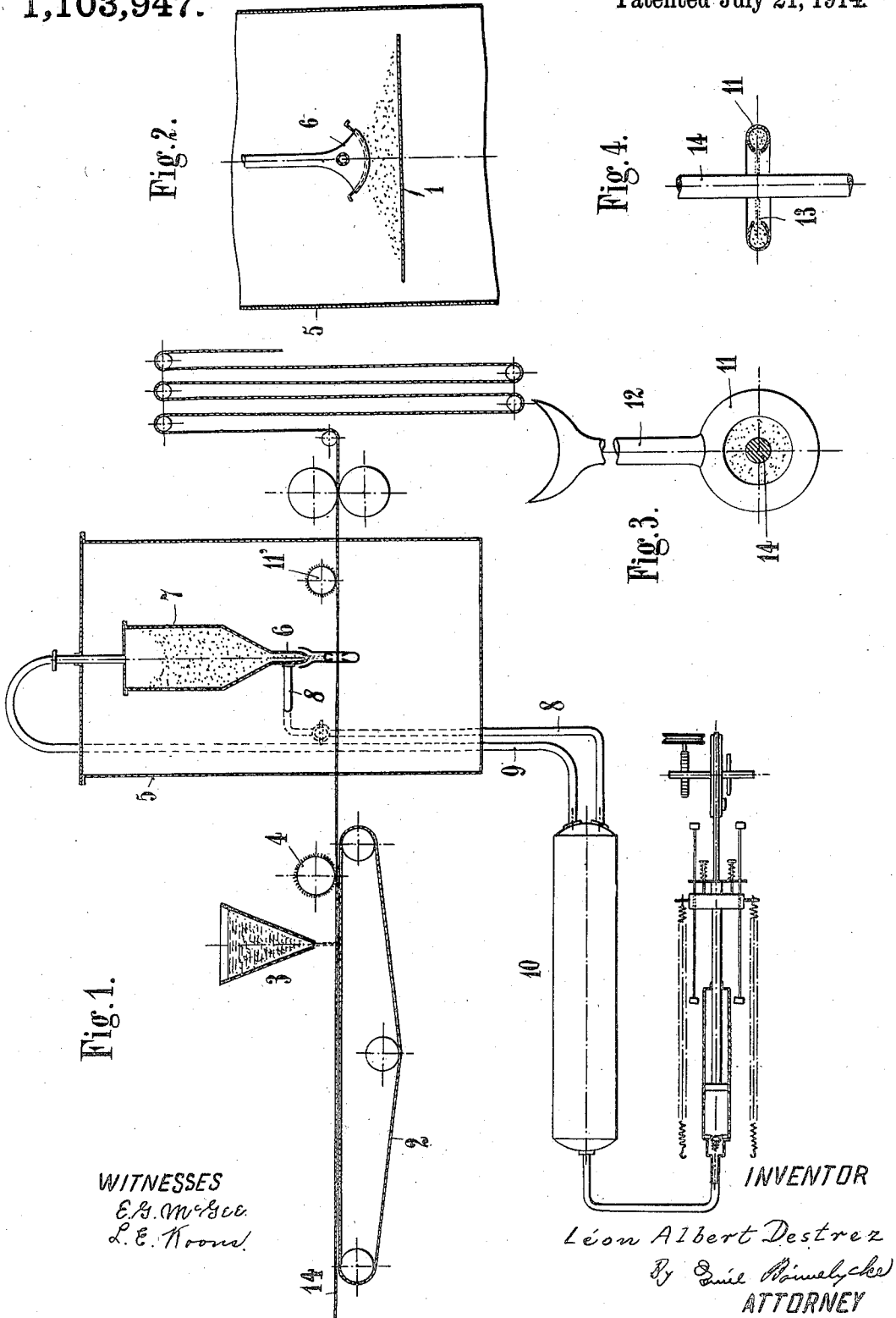
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MACHINE FOR COVERING FABRICS AND OTHER OBJECTS WITH MATERIAL IN THE FORM OF POWDER.

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1,103,947.

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WITNESSES
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Application filed March 2, 1912. Serial No. 681,229.

To all whom it may concern:

Be it known that I, LEON ALBERT DESTREZ, engineer, a citizen of the Republic of France, and resident of Paris, France, have invented new and useful Improvements in Machines for Covering Fabrics and other Objects with Material in the Form of Powder, which improvements are fully set forth in the following specification.

This invention relates to the coating of objects with cork or other material in the form of powder, and it contemplates, briefly, the provision of an improved machine wherein the coating is effected by the direct agency of a blower nozzle that operates in the manner of an injector under the action of compressed air, with which the powder is entrained, as opposed to the ordinary method of simply applying the powder upon an object previously coated with a suitable adhesive substance. More particularly, however, the invention proposes a machine of the class or character above indicated which is specially designed for coating objects of circular or curved section, such as round belts, electric conductors and the like, for which purpose it is provided with an improved form of blower nozzle consisting of an internally-slit ring through whose central opening the object to be powdered travels, so that all parts of the object are thus subjected to the action of the spray.

An embodiment of the invention is illustrated in the accompanying drawing, whereof:—

Figure 1 is a diagrammatic view of the machine; Fig. 2 is an enlarged side elevation of the form of blower nozzle used for spraying plane-surfaced objects; and Figs. 3 and 4 are, respectively, a side elevation and a transverse section of the afore-mentioned annular nozzle used for spraying round-surfaced objects.

Referring to said drawing, the material to be powdered, which may be either the cable or round belt 14, (Figs. 1, 3 and 4), or the flat belt 1, (Fig. 2), passes over an endless band 2 which draws it underneath a vessel 3 containing a rubber solution or other adhesive preparation. The preparation contained in this vessel flows out through an orifice in the bottom thereof and drops on the material to be coated which advances through the machine at a suitable speed.

After having thus been coated with the ad-

hesive, the material enters a closed chamber 5 and passes beneath a receptacle 7 wherein the powdered cork is contained, through the top of which container leads one end of a pipe 9 whose other end is connected to a compressed air reservoir 10 supplied from a suitable compressor. The bottom of this container is equipped with the blower nozzle by which the powdered cork is sprayed upon the material. Where the material to be powdered is in the nature of a fabric, flat belt or other plane-surfaced object 1, the fan-shaped nozzle 6, best shown in Fig. 2, is utilized, this nozzle being disposed at the proper distance above the fabric and being provided with a bottom slit or discharge orifice that is disposed transversely of the fabric and is regulatable as to its effective or working length by means of movable end plates to conform to the width of the fabric. The said nozzle 6 has also connected to it one end of an air-supply pipe 8 which is likewise connected at its other end to the reservoir, the arrangement being such, therefore, that the powder forced by the pressure of the air supplied to the container through pipe 9 into the nozzle becomes entrained with the air supplied thereto through pipe 8 and is blown through the discharge orifice of the nozzle, so that the action is comparable, in effect to that of an injector.

When a cable, conductor, or similar round-surfaced object 14 is to be coated, the nozzle 11, represented in detail in Figs. 3 and 4 is employed, said nozzle being constructed, as therein shown, in the form of a ring or annulus, the inner peripheral wall of which is provided with a continuous slit or discharge orifice 13. The upper portion of this nozzle is formed with a straight, tubular extension 12 which may be connected in any desired manner with the bottom portion of the powder container 7.

In the construction illustrated, the said extension is shown as removably attached at its upper end to the nozzle 6, (Fig. 1), but obviously no limitation to that precise form of connection is contemplated. Where the annular nozzle is used, it projects sufficiently far below the container to permit the cable to advance concentrically to and through it, so that the powder is thus blown against said cable from all sides, owing to the continuous character of slit 13.

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In the construction just described, it is to be assumed that the pipe 8 is connected to nozzle 6, as in the first form, so that for both forms the action is substantially the same, the powder sprayed under pressure not only adhering to the coated surface of the material undergoing treatment but also penetrating the interstices of the material to a greater or less extent, according to the character or composition of the material itself and to the degree of air pressure. After having thus been treated, the material passes beneath a brush 11' serving to wipe off the excess powder, and, on leaving the chamber 5, may be calendered and dried, and finally vulcanized in any desired manner.

Having now described my invention what I claim as new and desire to secure by Letters Patent is:—

1. In a machine for coating round-surfaced material with powder, the combination of a conveyer for feeding the material, means for applying adhesive material to the surface to be coated, a powder container provided at its bottom with an annular blower nozzle through which said material is fed concentrically, said nozzle having an internal peripheral delivery slit which faces said surface, a source of compressed air supply, and separate pipes leading from said air supply source and in continuous communication with the top of said container and said nozzle, whereby the powder is entrained with the air entering the nozzle, sprayed under pressure against the said adhesive-coated

surface and forced by such pressure to enter the interstices of said material.

2. In a machine for coating round-surfaced material with powder, the combination of a powder container provided at its bottom with an annular blower nozzle having a continuous internal peripheral delivery slit, means for feeding the material concentrically through said nozzle, a source of compressed air supply, and a pipe leading from said air-supply source into said container for spraying the powder under pressure through said slit against said material.

3. In a machine for coating round-surfaced material with powder, the combination of means for feeding the material, means for applying adhesive material to the surface to be coated, a powder container provided at its bottom with an annular blower nozzle through which said material is fed concentrically, said nozzle having an internal peripheral delivery slit which faces said surface, a source of compressed air supply, and a pipe leading from said air-supply source into said container for spraying the powder under pressure against the said adhesive-coated surface.

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

LEON ALBERT DESTREZ.

Witnesses:

EMILE LEDRET,
GEORGE E. LIGHT.