(No Model.)

G. A. WATKINS.

CEMENTING DEVICE.

No. 588,517. Patented Aug. 17, 1897.

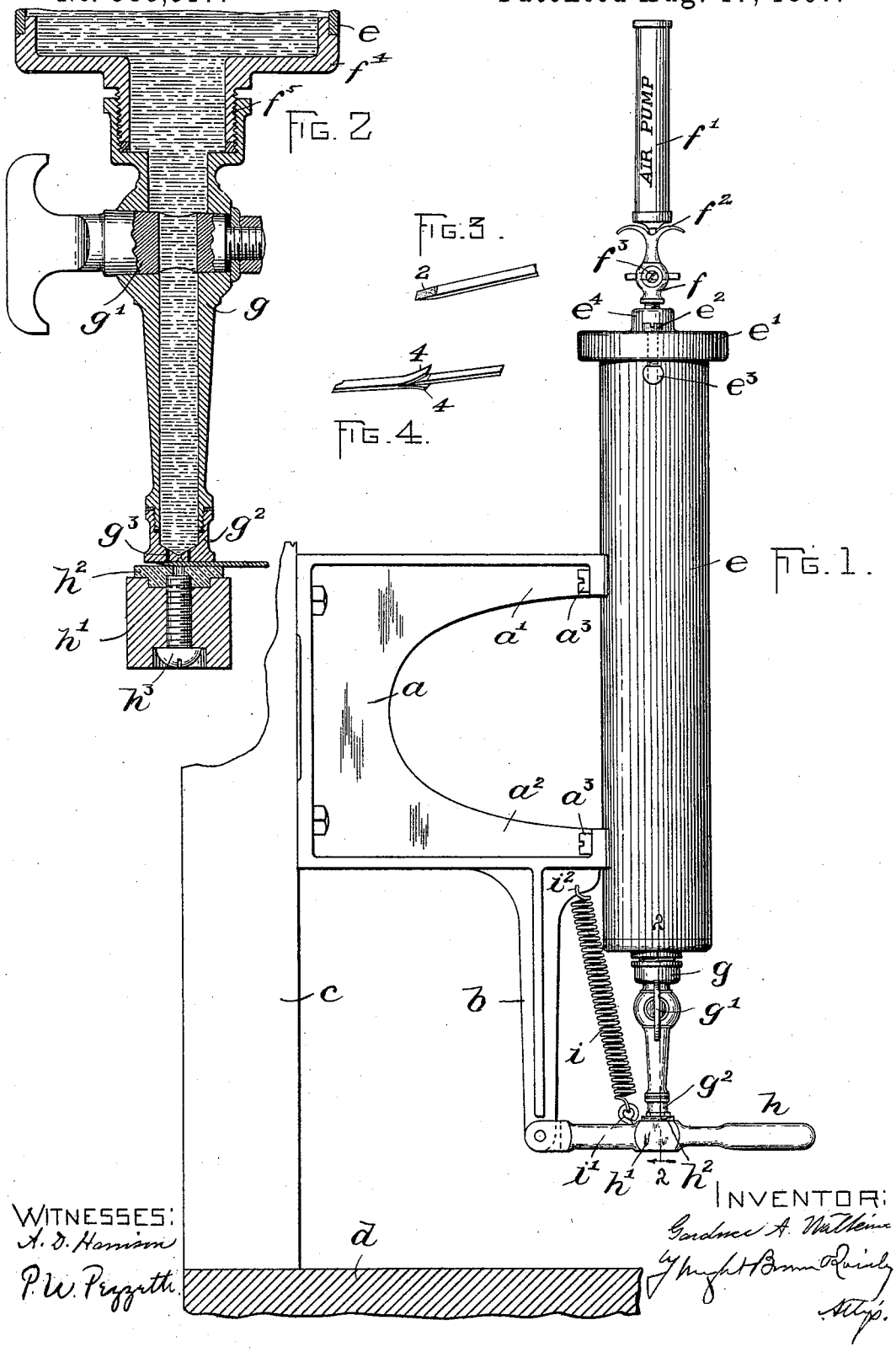


FIG. 2.

FIG. 3.

FIG. 4.

FIG. 1.

WITNESSES:
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UNITED STATES PATENT OFFICE.

GARDNER A. WATKINS, OF GARDNER, MASSACHUSETTS, ASSIGNOR, BY MESNE ASSIGNMENTS, TO THE HEYWOOD BROTHERS & WAKEFIELD COMPANY, OF SAME PLACE.

CEMENTING DEVICE.

SPECIFICATION forming part of Letters Patent No. 588,517, dated August 17, 1897.

Application filed November 16, 1896. Serial No. 612,314. (No model.)

To all whom it may concern:

Be it known that I, GARDNER A. WATKINS, of Gardner, in the county of Worcester and State of Massachusetts, have invented certain new and useful Improvements in Cementing Devices, of which the following is a specification.

This invention has for its object to produce a device for coating the end of a cane strip with glue for securing to the end of another strip; and it consists of a gluing device having those features of construction and arrangement which are illustrated on the drawings, and which I shall now proceed to describe in detail and then point out in the claims hereto appended.

Reference is to be had to the accompanying drawings, and to the letters and figures marked thereon, forming a part of this specification, the same letters and figures designating the same parts or features, as the case may be, wherever they occur.

Of the drawings, Figure 1 is a side elevation of a device embodying my invention. Fig. 2 is an enlarged section of the same on the line 2 2 of Fig. 1. Fig. 3 shows a strip of cane having a wedge-shaped end coated with glue by my device. Fig. 4 illustrates the manner of securing the two strips of cane together by gluing the wedge-shaped end of one between the split portions of the end of the other.

In carrying out my invention I employ an ordinary supporting-bracket a, having a depending arm b and secured to an upright or standard c, rising from a work-bench or other base d.

The bracket is formed with a recess, so as to provide two arms a' a^2, to which is secured a metallic cylindrical receptacle e by means of screws a^3 or in any other convenient manner. The receptacle has a top cap e', secured thereon by screws e^2, passed through the edge of the cap into studs e^3, projecting out from the periphery of the receptacle, the cap having an apertured boss e^4, into which is threaded the nozzle f of an air-pump.

For the sake of illustration I have shown an ordinary cylindrical pump, such as employed in inflating the pneumatic tires of bicycle-wheels, it having a reciprocatory valved cylinder f' and a stationary piston (not shown) connected to the handles f^2.

The nozzle f is provided with a valve f^3, so that when air has been forced into the receptacle the valve may be shut off, so as to prevent its escape.

The lower end of the receptacle is provided with a head f^4, suitably secured therein, as by sweating, and has an outlet f^5, on which is threaded a nozzle g, having a valve g' and a lower externally-threaded end. To the said threaded end is screwed a tip g^2, which has a flat bottom surface with a small number of minute perforations g^3.

To the extreme lower end of the arm b is pivoted a forwardly-extending handle h, having a flat enlargement h', located directly under the tip, upon which enlargement is secured a flat washer h^2, of leather or other suitable material, by means of a screw h^3 or by any other suitable means. The washer is pressed against the flat surface of the tip g^2, so as to close the apertures g^3, by a spring i, having one end attached to an eye i' of the handle and the other end at i^2 to the upper end of the arm b.

A suitable quantity of liquid glue or cement, preferably of a kind that will set or harden quickly, is placed in the receptacle and the valve g' is turned so as to allow it to run down through the nozzle g into the perforated tip, it peing prevented from passing through the perforations by the pressure of the washer h^2. Then the upper part of the receptacle is filled with compressed air until the pressure on the glue or cement is sufficient to cause it to flow freely through the minute perforations when the handle is depressed so as to move the washer away from them. The device is then ready for use. A number of canes having been previously prepared by cutting one end of each wedge-shaped, as at 2, and by splitting the other end, as at 4 4, the wedge-shaped end of one is placed between the washer and the delivery-tip, the handle having been previously depressed to permit this. The cement or glue oozes through the minute perforations as soon as the handle

is depressed, so that the end of the cane is coated, and the surplus glue is wiped off by drawing the cane from between the washer and the tip. Then the coated end is quickly inserted between the split halves of the end of another cane, as shown in Fig. 4, and the said halves are pressed against it, so as to cement them firmly together. As soon as the pressure of air is reduced by the withdrawal of the glue or cement the pressure is increased by means of the air-pump to the desired extent.

When the device is not in use, the valve g', through the nozzle, may be closed, so as to shut off the glue.

My invention is not limited to the details of construction hereinbefore described, as it may be embodied in devices constructed in other ways. For instance, while it is desirable for obvious reasons to force the glue or cement through the tip by air-pressure, yet I have contemplated producing the pressure by other means, as by a weighted piston, and, if desired, the minute quantities of glue may be fed to the cane through a sponge instead of through perforations in the tip, since the only object of employing the perforated tip is to secure the flow of a small quantity of the glue, and any other device for securing the same result may be used in its stead thereof.

Having thus explained the nature of the invention and described a way of constructing and using the same, though without attempting to set forth all of the forms in which it may be made or all of the modes of its use, I declare that what I claim is—

1. A device of the character described, comprising a receptacle to contain the liquid glue, means for delivering the glue from the same in minute quantities, a depressible device for cutting off the delivery of the glue and means for regulating the flow of glue to the delivering means.

2. A device of the character described, comprising a receptacle to contain the liquid glue, means for delivering the glue from the same in minute quantities, and a spring-held wiper for cutting off the delivery of the glue, said delivering means and said wiper being constructed and arranged to coat with glue both sides of an article inserted between them.

3. A device of the character described, comprising a stationarily-supported receptacle to contain the liquid glue, a nozzle leading from the same and having a delivery-tip, means for regulating the flow of glue through said nozzle and yielding means for closing said tip, said yielding means consisting of a pivoted spring-held bar.

4. A device of the character described, comprising a receptacle to contain the liquid glue, a nozzle leading from the same and having a delivery-tip, means for regulating the flow of glue through said nozzle and a depressible handle having a washer for closing said delivery-tip.

5. A device of the character described, comprising a stationarily-mounted receptacle to contain the liquid glue, a nozzle having a delivery-tip, a cut-off valve in said nozzle, a yielding flat wiper arranged below the tip to receive between it and the nozzle the end of a cane and means for moving the wiper away from the said tip.

6. A device of the character described, comprising a stationarily-mounted receptacle, adapted to contain a quantity of glue, a reduced delivery-nozzle projecting downward from said receptacle and having a flat tip, means for varying the flow of glue through said nozzle, a flat wiper held yieldingly against the flat tip so as to be constantly coated with glue, and a pivoted handle for depressing said wiper.

7. A device of the character described comprising a closed casing to contain glue, a delivery-nozzle leading from said receptacle, means for regulating the flow of glue through said nozzle, yielding means for closing said nozzle, and means for maintaining a pressure upon the body of glue.

8. A device of the character described comprising a closed casing to contain glue, a delivery-nozzle leading from said receptacle, yielding means for closing said nozzle, and an air-pump attached to the cylinder for maintaining the body of glue under a continuous pressure.

9. A device of the character described, comprising an air-tight receptacle to contain the glue, an air-pump for maintaining a pressure of air upon the glue, a delivery-nozzle having a flat tip with minute perforations, means for regulating the flow of glue through said nozzle, and a yielding wiper normally pressed against the tip to close the perforations.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 27th day of October, A. D. 1896.

GARDNER A. WATKINS.

Witnesses:

EDWARD G. WATKINS,

JAMES A. STILES.