(No Model.)

W. J. PAYNE.

APPARATUS FOR WITHDRAWING EFFERVESCING OR GASEOUS LIQUIDS FROM CORKED RECEPTACLES.

No. 396,708. Patented Jan. 22, 1889.

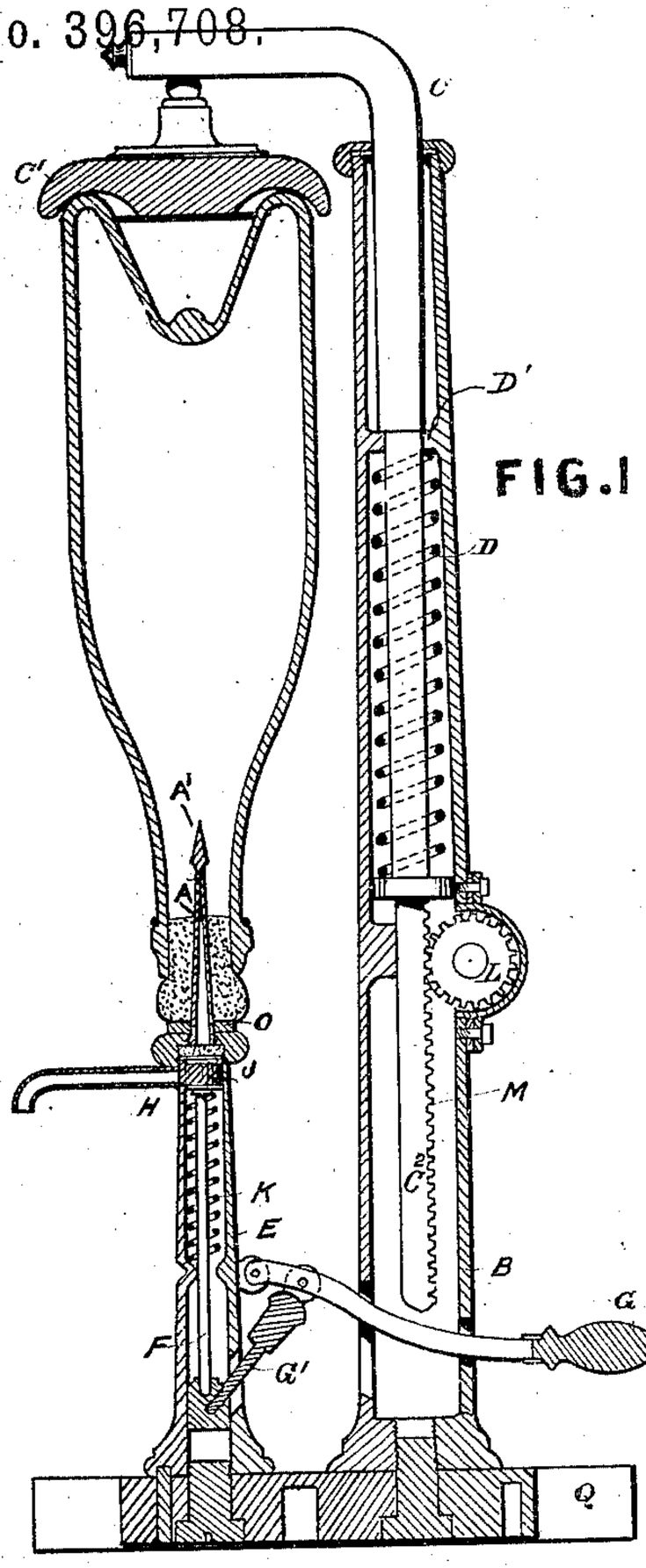

FIG. 1

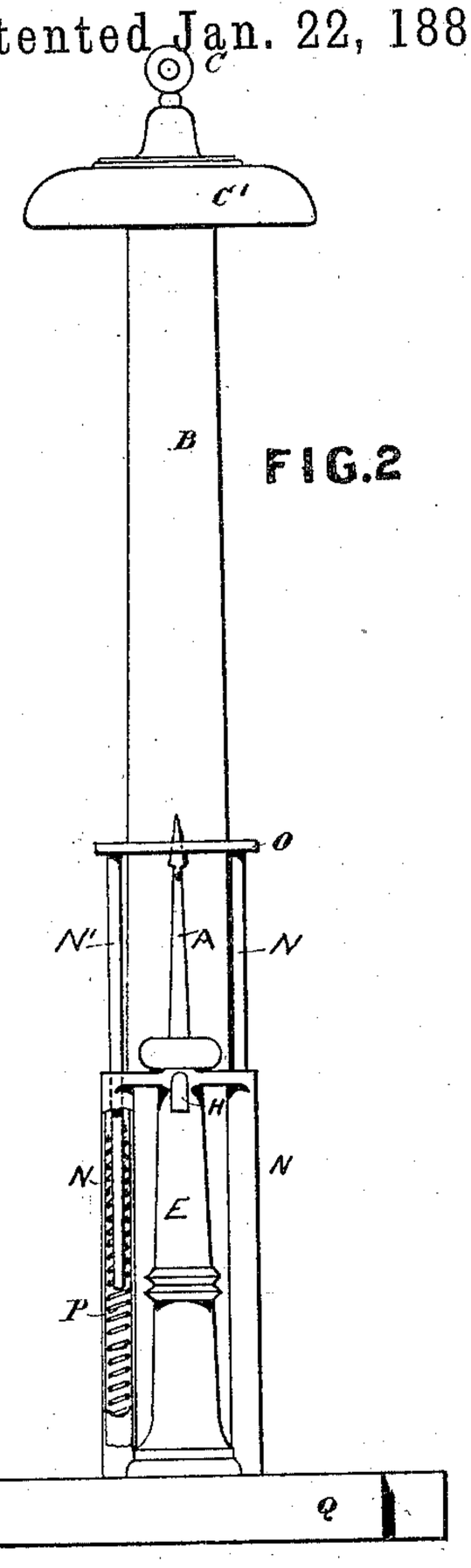

FIG. 2

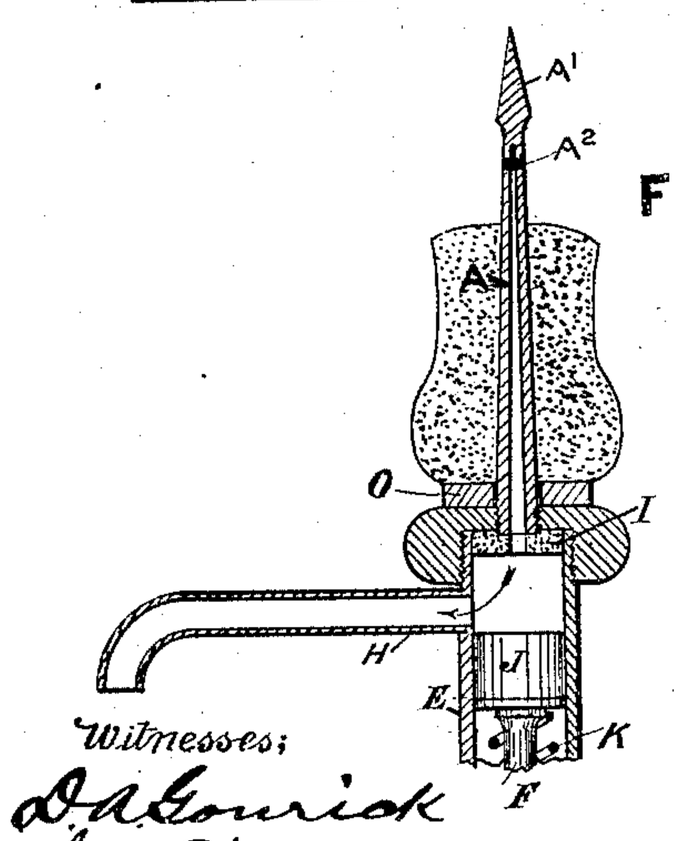

FIG. 3

Witnesses;
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UNITED STATES PATENT OFFICE.

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APPARATUS FOR WITHDRAWING EFFERVESCING OR GASEOUS LIQUIDS FROM CORKED RECEPTACLES.

SPECIFICATION forming part of Letters Patent No. 396,708, dated January 22, 1889.

Application filed April 28, 1888. Serial No. 272,163. (No model.) Patented in England June 30, 1887, No. 9,289.

To all whom it may concern:

Be it known that I, WILLIAM JOHN PAYNE, a subject of the Queen of Great Britain and Ireland, and a resident of the city of London, England, have invented certain new and useful Improvements in Apparatus for Withdrawing Effervescing or Gaseous Liquors from Corked Receptacles, (for which I have obtained a British patent, No. 9,289, June 30, 1887;) and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to an apparatus for permitting and accomplishing the withdrawal of champagnes or other effervescing, aerated, or gaseous liquids or beverages from the bottles in which they are contained without removing the corks and without permitting the entrance of air, and thus the said contents of the bottles are maintained in the desired condition and are prevented from becoming flat or dead.

The apparatus by which I attain the above objects is illustrated in the accompanying sheet of drawings, in which—

Figure 1 is a sectional side elevation of an apparatus suitable for a refreshment-bar with a bottle in position and ready for use; Fig. 2, front elevation of same, part in section and with bottle removed; Fig. 3, enlarged vertical section of part of same apparatus.

In carrying out my invention I make a suitable frame to hold the bottle in position fixed upon a base-plate, as hereinafter more clearly and particularly described.

I construct a tapered tube, A, terminating at its smaller end in an enlarged solid and pointed head, A′, the largest part of the head being made a little smaller in diameter than the large end of the said tube, and one or more holes or ports, A^2, communicating with the interior from the outside of the tube, are made close under the head. This tapered hollow "spike" A, by reason of its pointed head, can be driven by the application of sufficient force into and through the cork of a bottle without interfering with the wires or like fastenings until the head A′ and the openings or ports A^2 are clear of the cork and project through its face into the liquid, the several parts being so proportioned that when the head has passed through the cork the tube fits the hole so made with sufficient tightness to prevent the entrance or passage of air into the bottle.

I fix the before-described tube in a vertical position upon the top of a short hollow column, E, rising from the base-plate Q, and provided with a spout, H, by which the contents of the bottle are discharged. The communication between the spout and the tubular spike A may be opened or closed by means of a piston-valve, J, mounted on a rod, F, which can be conveniently operated by means of a lever, G, and intermediate connection, G′, which passes through an opening in the side of the column.

The piston-valve is kept closed by the action of a spring, K, the top face of the valve being preferably pressed against a facing of cork or other elastic material, I. This arrangement is clearly seen in Fig. 3, which represents the piston-valve drawn down by the rod F and leaving a free passage for the contents of the bottle to pass through the ports A^2 into the tubular column E and through the spout H into a wine-glass or other receptacle.

Upon the base-plate Q and at the back or at the side of the first-mentioned column, E, I erect another larger hollow column, B, in which is fitted a vertically-sliding rod, C, to the bent top of which is attached a self-adjusting cap or block, C′, shaped to receive and support in position the bottom end of the bottle.

Inside the column B a spiral spring, D, is coiled round the rod C in such a manner that its action against its point of resistance D′ is to force the rod with the block C′ down to its lowest permitted position.

The lower end of the rod C terminates in a rack, C^2, into which is geared a pinion, L, and upon its axle a cranked handle may be either permanently secured or be made removable. The method of using such an apparatus and its action are as follows: The pinion L, being caused to revolve, by turning the handle before mentioned, raises the rod C, compressing

the spring D, until there is sufficient room to insert the bottom of the bottle under the cap or block C′ and to rest the cork of the said bottle centrally upon the point or head of the tapered tube A, when upon the restraining pressure of the hand of the operator being withdrawn from the pinion the reaction of the spring D forces the pointed head of the tube A through the cork by pressing the bottle down upon it, this action being usually assisted by the operator reversing the action of the pinion L. When the tube A has passed through the cork up to the shoulder, as represented in Figs. 1 and 3, the holes A^2 are clear from the end of the cork and open to the liquid. The lever G may now be pressed down, compressing the spring K and drawing down the valve J, thus opening a free passage through the spout to the interior of the bottle, through which the contents of the bottle will be forced by the action or pressure of the gas. On releasing the lever G the spring K closes the valve, stops the flow of the liquid, and prevents the entrance of air. When the bottle is empty, the block C′ is lifted off the bottle and the bottle drawn off the tube A by hand; but I preferably use the hereinafter-described apparatus, as shown in Fig. 2.

Two tubes or columns, N, are fixed one on each side of the column E, each having a slide-rod, N′, connected with each other at their top ends by a plate, O, having a center hole, through which the tapered tube A passes. These rods are acted upon by the springs P, which force the said rods and plate to the highest position when relieved from the more powerful pressure of the spring D, and will thus raise the bottle, and consequently draw it off the taper tube A.

I wish it to be understood that I do not limit myself to the precise construction shown, as it will be evident that the details and particular arrangement of the apparatus described and shown may be considerably varied or modified without departing from the spirit of the invention—as, for example, instead of one column B there may be two, if desired; or, instead of the rod C, the spring D, the rack and pinion C^2 and L, a direct application of power may be given to the bottle, such as by means of a screw or other equivalent means.

What I wish to secure by means of Letters Patent of the United States is—

1. The ported piercing-spike A and a valvular outlet therefor, combined with the hollow column B, the vertically-sliding rod C in said column, the block C′ on said rod, the spiral spring D, acting on the rod to depress it, and the gearing for controlling the movement of the rod, all constructed and arranged substantially as described.

2. In apparatus for permitting the discharge of gaseous liquids from bottles, the tapered cork-piercing tube A, having ports A^2, the column E, having a chamber into which the tube opens, an outlet-spout, H, for said chamber, the valve J, arranged in said chamber beneath the tube to open and close it, and suitable means for raising and lowering said valve, in combination with a vertically-sliding rod provided with a cap to engage the bottom of the bottle, a column to support the said rod, and suitable means—such as a spring—to draw down the rod and force the cork-piercing tube through the cork, substantially as described.

3. In apparatus for the purpose herein specified, the combination, with a tapered tube A, having an enlarged point, A′, and entrance-ports A^2, and a support for the tube, of the columns N, with the rods and plate O, and springs P, substantially as described and shown.

In testimony that I claim the foregoing as my own I have affixed hereto my signature in presence of two witnesses.

W. J. PAYNE.

Witnesses:
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