(No Model.) 2 Sheets—Sheet 1.

H. D. BOYER & F. A. PHILLIPPI.

FAUCET.

No. 540,481. Patented June 4, 1895.

FIG. 1

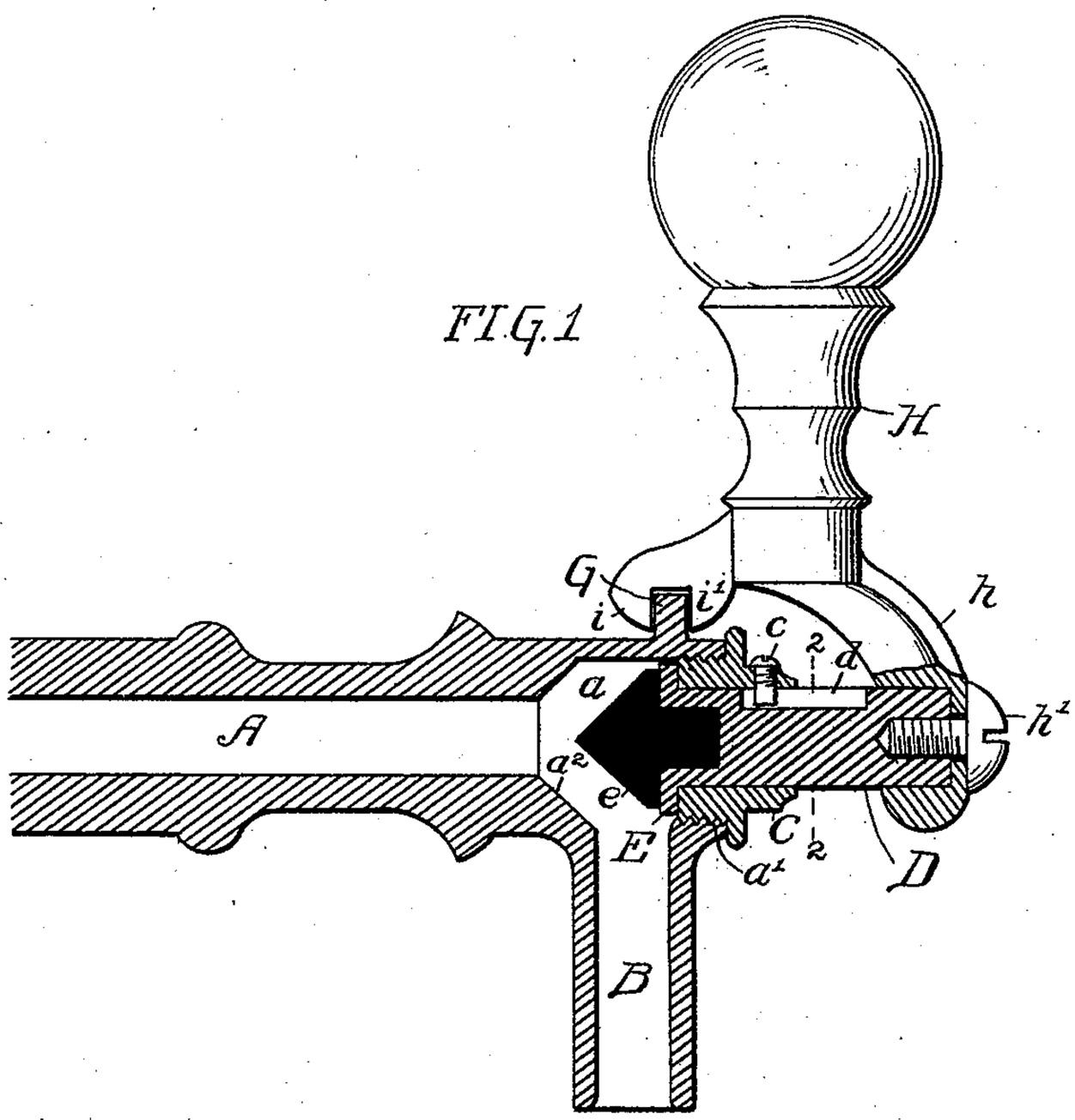
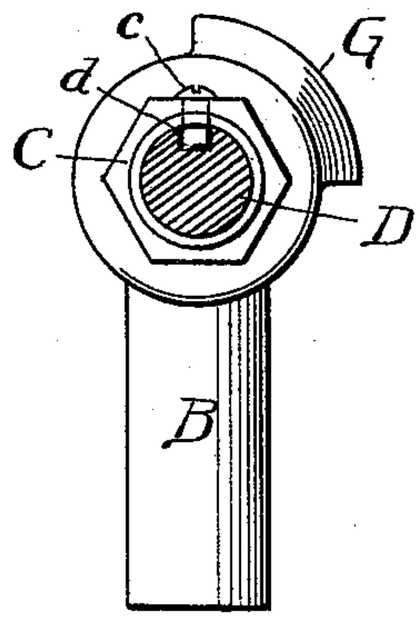


FIG. 2



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(No Model.) 2 Sheets—Sheet 2.

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FAUCET.

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FIG. 4

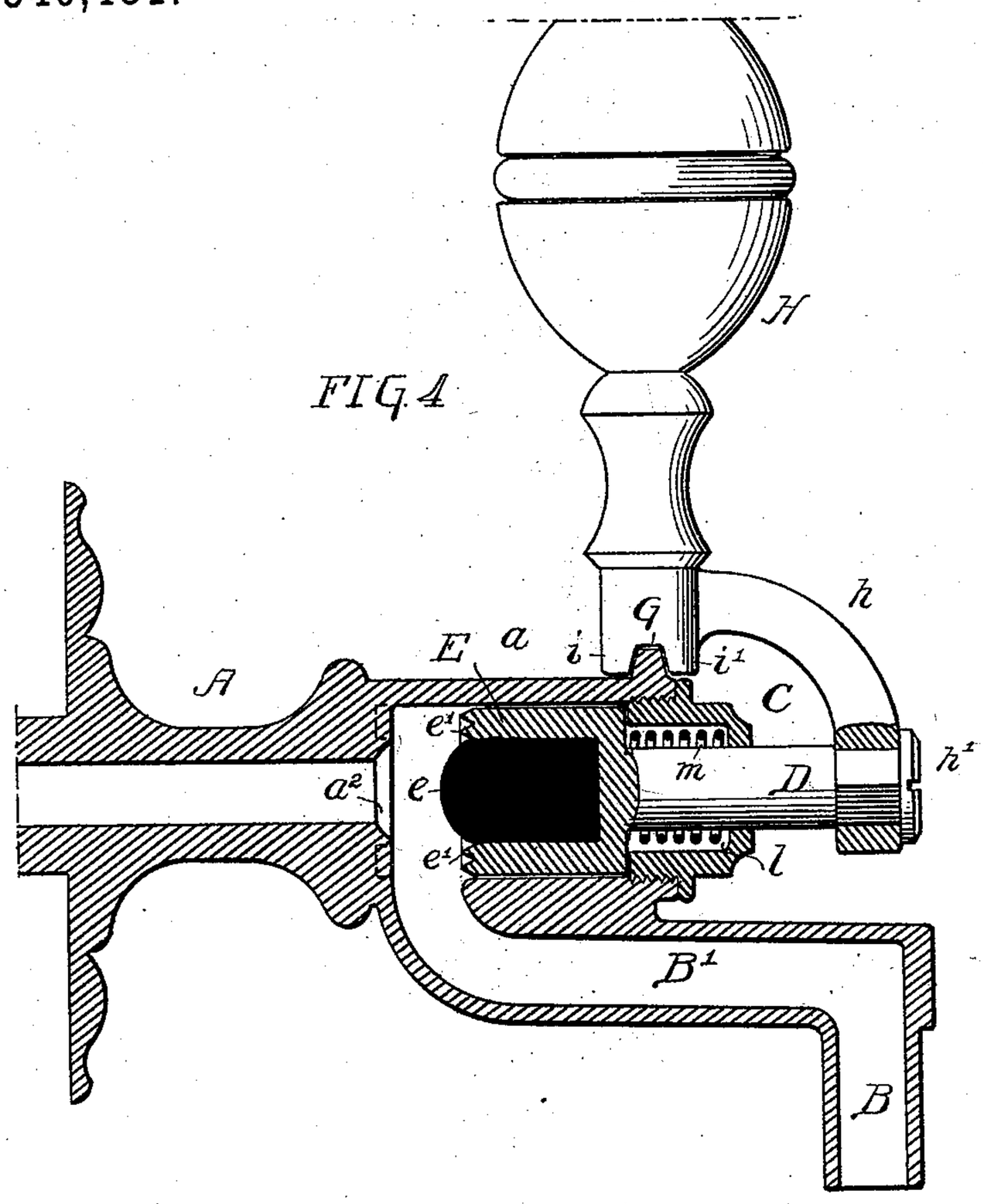
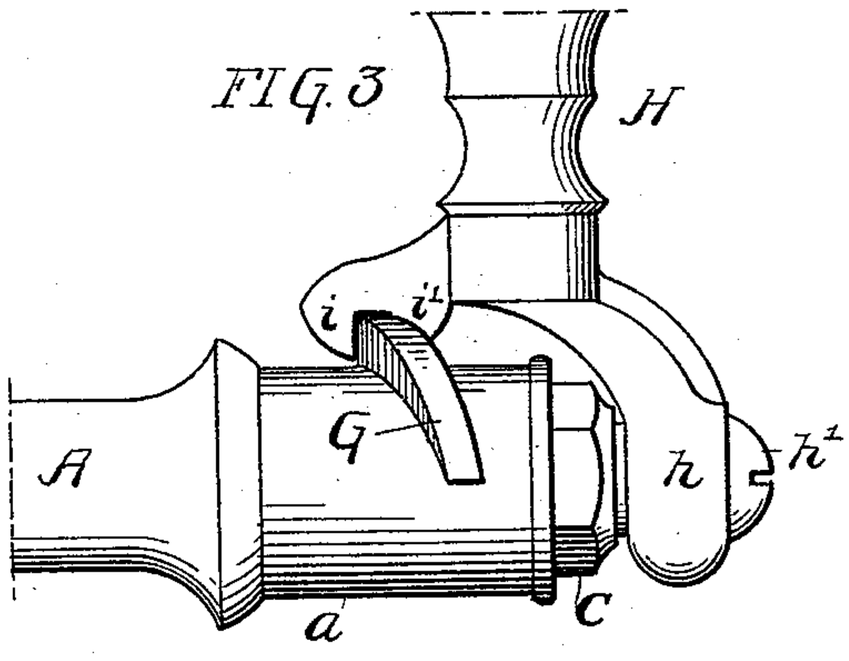


FIG. 3



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UNITED STATES PATENT OFFICE.

HARRISON D. BOYER AND FRANK A. PHILLIPPI, OF PHILADELPHIA, PENNSYLVANIA.

FAUCET.

SPECIFICATION forming part of Letters Patent No. 540,481, dated June 4, 1895.

Application filed January 2, 1895. Serial No. 533,678. (No model.)

To all whom it may concern:

Be it known that we, HARRISON D. BOYER and FRANK A. PHILLIPPI, citizens of the United States, and residents of the city of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Faucets, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

Our invention relates to certain improvements in that class of faucets more especially adapted for use in governing the flow of beer and similar beverages, and has for its object to provide a faucet of simple and economical construction which when necessary may be readily taken apart for examination or repairs and which will cut off the flow of the liquid in such manner as to prevent any drip or the collection of drippings in the discharge nozzle, as more fully set forth hereinafter.

In the accompanying drawings, Figure 1 is a sectional elevation of a faucet constructed in accordance with our invention. Fig. 2 is a transverse sectional elevation of the same on the line 2 2, Fig. 1. Fig. 3 is a plan view of the faucet, and Fig. 4 is a longitudinal sectional view illustrating some further features of the invention.

Referring to the drawings A represents the main pipe or body of the faucet terminating at its forward end in a valve chamber, *a*, from which leads a nozzle, B, extending in a direct vertical line from the valve chamber, or, as shown in Fig. 4, being provided with an auxiliary horizontal passage, B′, which serves to connect the valve chamber to the nozzle proper, the passage, B′, being preferably slightly inclined so that the liquid will flow through toward the nozzle and not collect therein after the valve has been closed. The forward end of the valve chamber, which in diameter is somewhat larger than the inner diameter of the pipe, A, is open and is provided with an internal screwthread, a', in which is screwed a sleeve or follower, C, having a central opening for the passage of the valve spindle, D. The upper surface of the valve spindle, D, is provided with a longitudinal groove, *d*, to which is adapted a guiding pin, *c*, screwed into the follower, C, so that circumferential movement of the spindle is prevented.

On the inner end of the spindle, D, is an enlarged cup-shaped head, E, of a diameter nearly equal to that of the inner diameter of the valve chamber, *a*, and within the cup-shaped head is fitted a valve, *e*, of rubber, or similar elastic material, which is adapted to be forced into contact with a valve seat, a^2, formed at the junction of the main pipe, A, and the valve chamber and to the rear of the mouth of the nozzle, B. The shape of this rubber block may vary somewhat in accordance with the shape of the valve seat, a^2, and may be conical, as shown in Fig. 1, to accommodate itself to the conical seat, a^2, or as shown in Fig. 4 its outer end may be rounded to accommodate the concave valve seat shown in said figure. As a further precaution the extreme end of the cup-shaped head, E, may be provided with one, or more, annular ribs, e', of V-shape in cross section which ribs may make contact with that portion of the end of the valve chamber immediately surrounding the valve seat, a^2, and if necessary a ring of rubber, vulcanized fiber, or other material, may be placed immediately around the valve seat as shown by dotted lines in Fig. 4.

On the outer surface of the valve chamber, *a*, and extending for a distance of about one quarter of its circumference is a helical or inclined cam, G, preferably formed integral with the valve chamber.

To the outer end of the valve spindle, D, is secured an arm, *h*, forming part of a weighted handle, H, the arm, *h*, being secured to the spindle by a screw, h'. Near the lower end of the handle are two lugs, *i*, i', at a distance from each other corresponding to the width of the cam, G, and having their faces inclined at the same angle as the cam so that when the handle is moved to assume either a vertical or horizontal position the lugs will readily follow on the cam and, owing to the inclination given to the latter, the valve spindle will be moved longitudinally to effect the opening or closing of the valve.

In Fig. 1 the slot, *d*, in the valve spindle, D, and the pin, *c*, will prevent the circumferen-

tial movement of the spindle and the outer end of the spindle is therefore circular in cross section and the opening in the arm, *h*, of the handle, H, is of corresponding shape so as to permit the turning of the handle without effecting the turning of the spindle. In the construction shown in Fig. 4, the slot and pin are not employed and the valve spindle turns with the handle so that the ribs, *e'*, on the end of the cup-shaped head, E, may more effectively bind on the seat.

If at any time it becomes necessary to examine, cleanse or repair the faucet it is merely necessary to unscrew the follower, C, when all the parts of the valve are readily removed.

To aid in keeping the valve tightly to its seat we may provide a recess, *l*, in the follower, C, and insert therein a coiled spring, *m*, one end of which will bear against the enlarged head, E, and keep the latter firmly to its seat. This precaution, however, is not a necessary one if the handle, H, be heavily weighted.

Having thus described our invention, what we claim, and desire to secure by Letters Patent, is—

1. The combination of the main pipe having at its outer end an open ended valve chamber, a valve seat formed at the junction of the main pipe and the valve chamber, a nozzle extending from said valve chamber, a valve spindle, an enlarged head thereon situated within the valve chamber, an elastic valve carried by said head, a follower surrounding the spindle and screwed in the threaded open end of the valve chamber, a handle having one arm connected to the valve spindle, a cam on the periphery of the valve chamber, and lugs carried by the handle and situated one on either side of said cam, substantially as specified.

2. The combination in a faucet, of the main pipe or body terminating at its outer end in an open ended valve chamber, a nozzle leading from said valve chamber, a valve seat formed at the junction of the valve chamber and the pipe and to the rear of the nozzle, screwthreads, *a'*, provided at the open end of the valve chamber, a follower, C, adapted to said threads, a valve spindle, D, extending through the follower, an elastic valve provided in the end of said valve spindle, a helical cam, G, on the periphery of the valve chamber, a handle having one arm connected to the valve spindle and lugs provided on said handle and under the control of the cam, substantially as specified.

3. The combination in a faucet, of a main pipe or body terminating at its outer end in an open ended valve chamber, a valve seat formed at the junction of the valve chamber and the pipe, a follower, C, a valve spindle extending therethrough, an enlarged head on said valve spindle, an elastic valve provided in said head, annular ribs provided on the end of the enlarged head and adapted to engage with the end wall of the valve chamber immediately around the valve seat, a cam on the periphery of the valve chamber, and a handle operatively connected to the spindle and under the control of said cam, substantially as specified.

4. The combination in a faucet, of a main pipe or body terminating at its outer end in an open ended valve chamber, a valve seat formed at the junction of the valve chamber and the pipe, a follower, C, a valve spindle extending therethrough, an enlarged head on said valve spindle, an elastic valve provided in said head, a recess, *l* provided in the follower, a coiled spring surrounding the valve spindle within the recess and adapted to press the valve against its seat, a cam on the periphery of the valve chamber, and a handle operatively connected to the spindle and under control of said cam, substantially as specified.

In testimony whereof we have hereunto set our hands in the presence of two subscribing witnesses.

HARRISON D. BOYER.
FRANK A. PHILLIPPI.

Witnesses to signature of H. D. Boyer:
JNO. E. PARKER,
J. HENDERSON,

Witnesses to signature of F. A. Phillippi:
W. H. REIFSNYDER, Jr.,
M. A. PHILLIPPI.