H. B. LEACH.

Faucets.

No. 158,593. Patented Jan. 12, 1875.

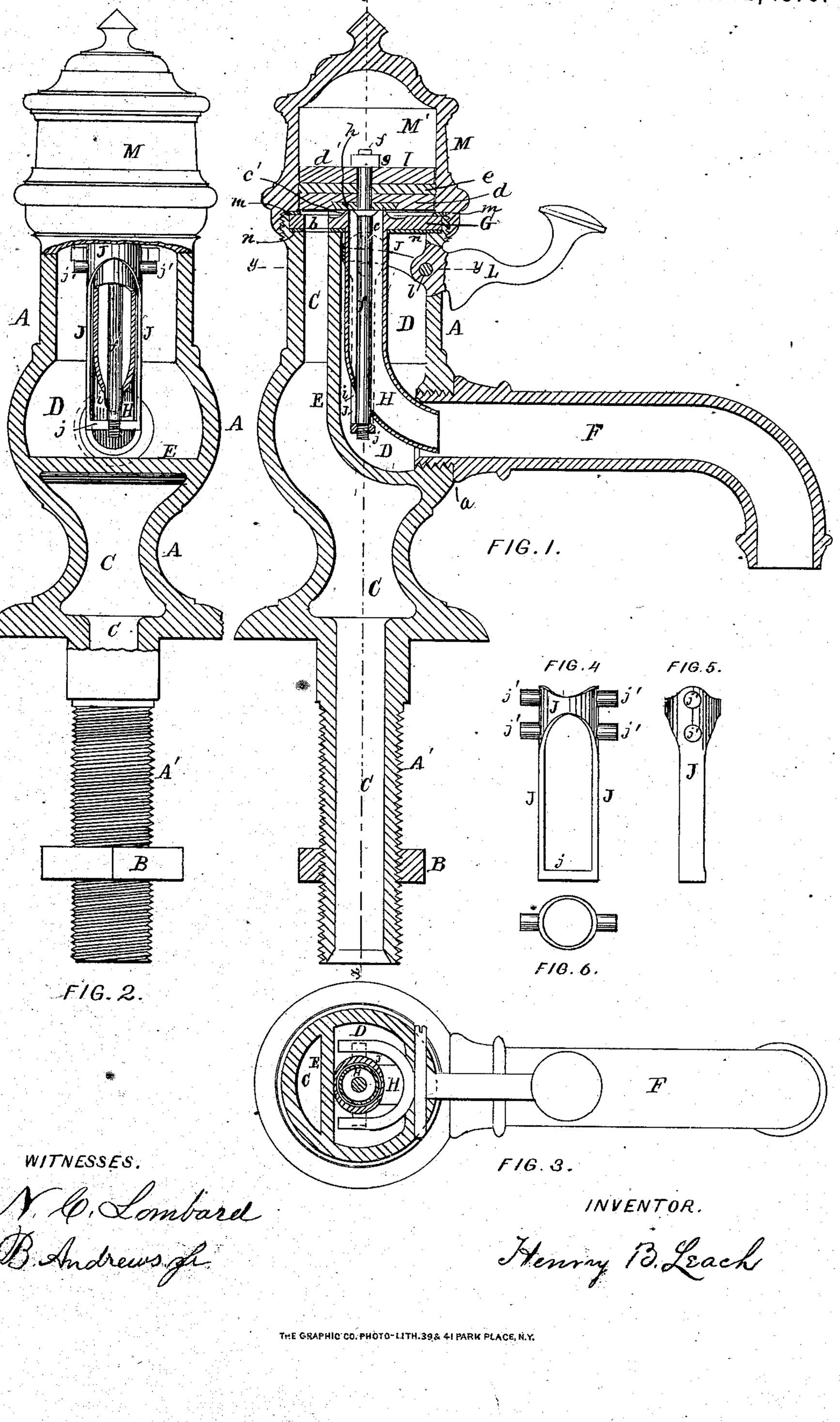

FIG. 1.

FIG. 2.

FIG. 4

FIG. 5.

FIG. 6.

FIG. 3.

WITNESSES.

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HENRY B. LEACH, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN FAUCETS.

Specification forming part of Letters Patent No. **158,593**, dated January 12, 1875; application filed October 28, 1874.

To all whom it may concern:

Be it known that I, HENRY B. LEACH, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Faucets, of which the following, taken in connection with the accompanying drawings, is a specification:

My invention relates to that class of faucets in which the valve is closed by the combined action of gravity and the pressure of the water acting directly thereon; and it consists, first, in the use of a curved conducting-pipe, leading from the opening in the valve-seat to and emptying into a discharge-pipe of greater capacity, for the purpose of conducting the water to said discharge-pipe and giving direction to the water. My invention further consists in the use of a removable valve-seat having a discharge-orifice through the same opening into a conducting-tube depending from the under side thereof, the lower end of which is curved so as to direct the water into a horizontal direction and discharge it into a delivery-pipe of greater capacity. My invention further consists in the combination, with a removable valve-seat and curved conducting pipe or tube, of a piston-valve fitted to move in a cylinder and provided with a valve-stem depending therefrom, said stem extending downward through the wall of the curved portion of said tube, and being connected at its lower end to suitable devices for lifting said valve, as will be described. My invention further consists in the combination, with said valve-seat, conducting-tube, piston-valve, and stem, of a bifurcated or divided connecting-rod secured at one end to the lower end of the valve-stem, and at its other end embracing said tube, and having a bearing thereon, and provided upon opposite sides thereof with projecting pins to receive the forked end of the operating-lever, by which the valve is raised.

In the drawings, Figure 1 is a vertical section through the center of the body of the faucet and the delivery-nozzle. Fig. 2 is a partial section on line *x x* on Fig. 1, looking toward the delivery-nozzle, with the remaining portions in elevation. Fig. 3 is a horizontal section on line *y y* on Fig. 1. Figs. 4, 5, and 6 are details illustrating the construction of the connecting-rod for operating the valve.

A is the main casing or body of the faucet, provided with the usual threaded stem A′, on which works the nut B for securing the faucet in position. The interior of the casing A is divided into the two chambers C and D by the partition E, as seen in Fig. 1, C extending downward through the stem A′, and D communicating at its lower end with the delivery-nozzle or pipe F, which is screwed into the body of the faucet at *a*. G is a disk fitted to a recess formed for the purpose in the upper end of the casing A, and provided with the opening *b*, corresponding in size and shape to the upper portion of the chamber or passage C, and the circular central opening *c*, around the edge of which is the raised seat *c′*. H is a tube depending from the under side of the disk G, to which it is secured in a position concentric with the central opening through the same, and having its lower end curved so as to partially enter the mouth of the delivery-nozzle F, as shown. This curved pipe is designed to deflect the escaping water from a vertical to a horizontal direction. I is a piston-valve, made up of two disks of metal, *d* and *d′*, and a disk of leather, *e*, secured between them, as shown, the whole being secured together by the stem *f* and nut *g*, the lower disk *d* having set in its under side the disk of rubber packing *h*, which rests upon the valve-seat *c′*. The valve-stem *f* extends downward in the center of the tube H, and through the wall of its curved portion at *i*, and is screwed into or otherwise secured to the cross-bar *j* of the bifurcated or divided connecting-rod J. The rod or connection J is united at its upper end in a ring or short tube, which surrounds and has a bearing upon the tube H, and is provided with the pins *j′ j′* upon opposite sides thereof, which engage with the two prongs of the forked end of the lever L, by which the valve is raised, said lever passing through a slot formed in the side of the casing A and pivoted at *l*. The upper end of the casing A has formed thereon a male screw-thread, upon which is screwed the cap M, having formed therein the cylindrical chamber M′, in which the piston-valve is moved up and down, said valve fitting loosely in said cylinder, in substantially the same manner as described in Letters Patent granted to me January 27, 1874.

By the use of the curved pipe H, in combination with the delivery-pipe F of considerably larger capacity than the conducting tube or pipe H, I am enabled to pass the valve-stem *f* through the wall of said tube without packing it, and still have no water escape around the lever L.

The joints between the disk G and the casing A and cap M are made tight by the rubber packing-ring *m* and disk *n*.

What I claim as new, and desire to secure by Letters Patent of the United States, is—

1. The curved tube H, depending from the under side of the valve-seat concentric with the discharge-orifice through said seat and arranged to change the flow of the water from a vertical to a horizontal direction, and discharge it into a delivery-nozzle of greater capacity, substantially as described.

2. The removable valve-seat disk G, provided with the opening *b*, in combination with the curved tube H depending from the under side thereof, and the valve I, substantially as described.

3. In combination with the valve-seat disk G and curved tube H, the valve I, provided with the stem *f* projecting downward therefrom and passing through the wall of the curved portion of said tube and secured at its lower end to suitable devices for imparting a reciprocating motion thereto, substantially as described.

4. The combination of the valve I, valve-stem *f*, divided connecting-rod J, arranged to embrace and move upon the tube H, and the forked pivoted lever L, all constructed and arranged to operate substantially as described.

Executed at Boston this 24th day of October, 1874.

HENRY B. LEACH.

Witnesses:
N. C. LOMBARD,
B. ANDREWS, Jr.