P. SCHOFIELD.

Faucet.

No. 163,263. Patented May 11, 1875.

Fig. 1.

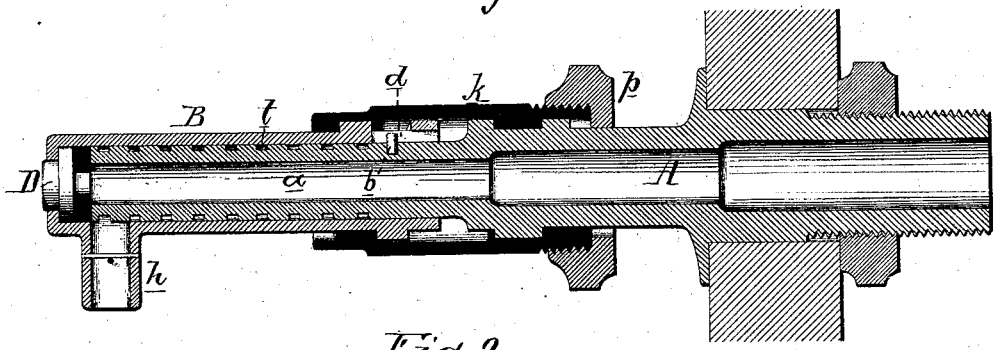


Fig. 2.

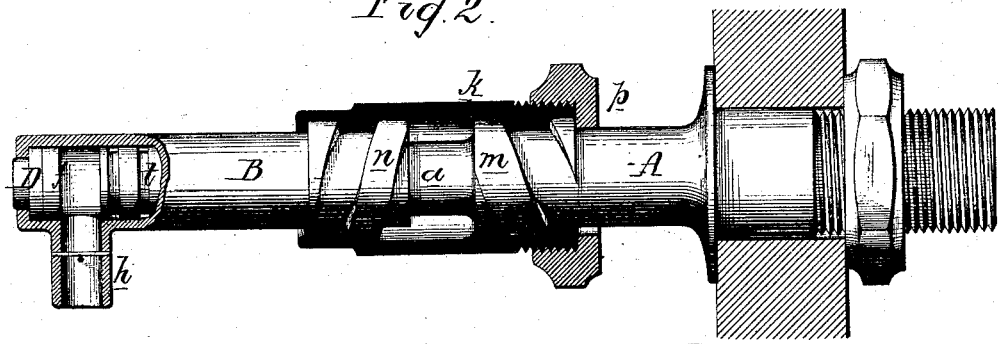


Fig. 4.

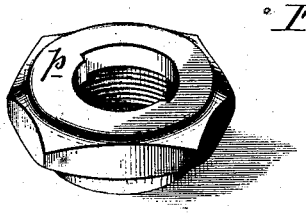


Fig. 3.

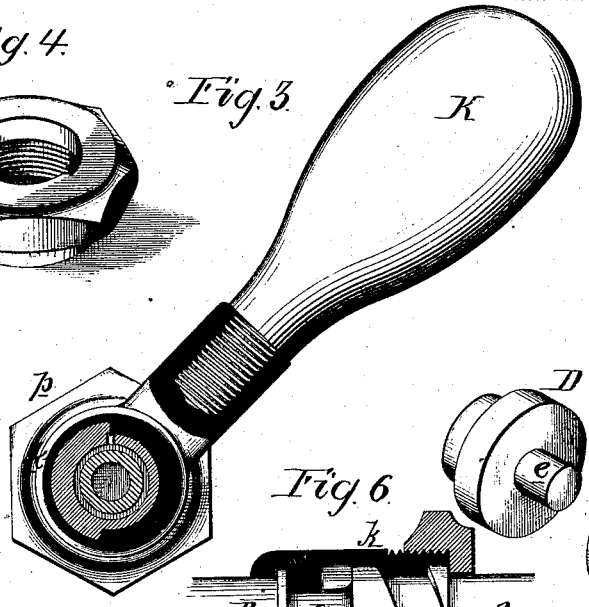


Fig. 5.

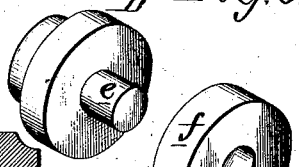
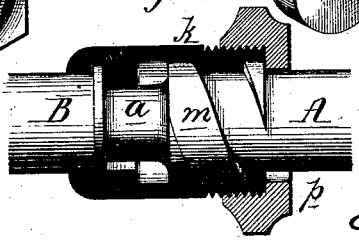


Fig. 6.



Witnesses,
Hubert Howson
Harry Smith

Peter Schofield
by his Attorneys
Howson and Sons

UNITED STATES PATENT OFFICE.

PETER SCHOFIELD, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN FAUCETS.

Specification forming part of Letters Patent No. **163,263**, dated May 11, 1875; application filed April 7, 1875.

To all whom it may concern:

Be it known that I, PETER SCHOFIELD, of Philadelphia, Pennsylvania, have invented certain Improvements in Faucets, of which the following is a specification:

The main object of my invention is to construct a faucet which can be quickly opened or closed by a limited movement of a handle, and without the exercise of more than a slight effort by the operator.

This object I attain in the manner which I will now proceed to describe, reference being had to the accompanying drawing, in which—

Figure 1 is a longitudinal section of my improved faucet; Fig. 2, a side view, partly in section; Fig. 3, a transverse section on the line 1 2, Fig. 1; and Figs. 4 and 5 detached views of parts of the faucet.

A is the fixed tubular stem of the faucet, and is secured in any suitable manner to the cistern or other object, from which liquids have to be drawn from time to time. A cylindrical tube, B, is so adapted to the outer portion *a* of the stem A that while it fits snugly thereon it can be moved to and fro freely, but is incapable of turning, owing to the projection of a pin, *b*, on the stem into an elongated slot, *d*, in the tube B, or the latter may be prevented from turning on the stem by any other device, which will permit the tube to slide and prevent it from turning. The outer end of this tube B is closed by a plug or stud, D, to a pin, *e*, on which is snugly fitted a ring, *f*, of comparatively soft metal or other equivalent material, and this ring constitutes the valve, of which the outer end of the fixed stem A is the seat. Near the outer end of the tube B is a branch or nozzle, *a*, for the discharge of the liquid, when the end of the stem A is exposed by the outward movement of the tube B. A screw-thread, *m*, is formed on the stem A, and a screw-thread, *n*, on the tube B, one thread being right-handed, and the other left-handed, and adapted to similar internal threads in the hub *k* of the handle K. This handle is weighted or acted upon by a spring or other device, so that the valve will be closed as soon as the handle is released. A screw-ring, *p*, adapted to the stem A, bears against the end of the thread when the tube B has been moved outward to the full extent necessary for insuring a proper discharge of the fluid, and the inward movement of the tube is limited by the contact of the valve with its seat.

It will be noticed on reference to Fig. 4 that the flange of the screw-ring *p*, for bearing against the end of the thread *m*, is partly cut away for the purpose of readily passing the ring over the thread *m*.

A single screw-thread only may be used, as shown in the modification, Fig. 6, the hub *k* of the handle in this case being so connected to the sliding tube B that it can turn freely on, but cannot move longitudinally independently of, the said tube, or there may be a single thread on the tube B, and none on the stem; but I prefer two threads, right and left, one on the sliding tube and the other on the stem, for by the two threads I can obtain the desired movement of the handle.

I will be observed that the portion of the stem which is contained within the tube has a series of annular grooves, *t*. I have found that these grooves, without any packing, effectually prevent the penetration of the liquid between the stem and the tube when the valve is open or partly open.

I claim as my invention—

1. A faucet in which a sliding tube, B, containing a valve, is combined with a fixed tubular stem, the end of which forms the seat of the valve, and with devices by which the said tube may be moved to and fro on the stem, all substantially as and for the purpose set forth.

2. The sliding tube B and its valve, the fixed stem A, and a weighted handle having a hub, *k*, in combination with screw-threads, substantially as described, by which the said tube B may be moved to or fro by operating the handle, as set forth.

3. The combination of the hub *k* of the handle with a nut, *p*, for limiting the outward movement of the handle, in the manner specified.

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

PETER SCHOFIELD.

Witnesses:

HUBERT HOWSON,

HARRY SMITH.