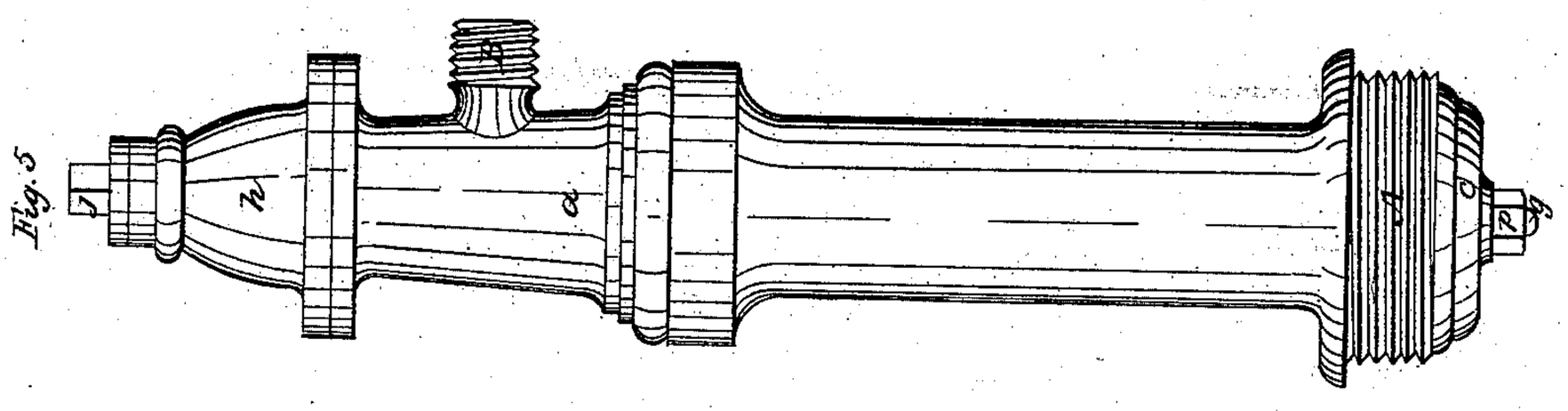
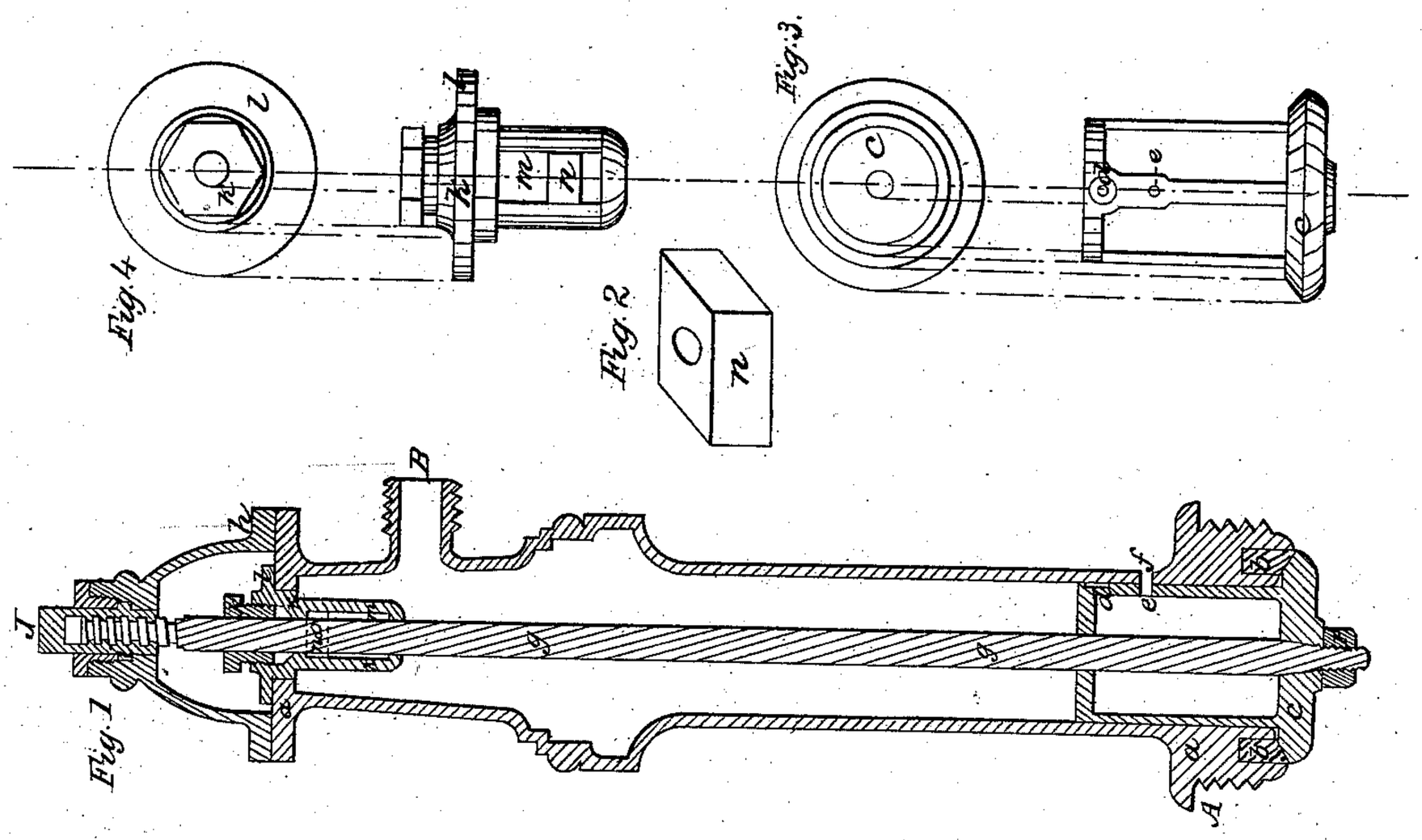
J. P. Cummings,

Fire Plug,

No. 79,960. Patented July 14, 1868.





Witnesses:

N. Marchand

C. Grundy

Inventor:

Jas P. Cummings

United States Patent Office.

JAMES P. CUMMINGS, OF NEWPORT, KENTUCKY.

Letters Patent No. 79,960, *dated July* 14, 1868.

IMPROVEMENT IN FIRE-PLUGS.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, JAMES P. CUMMINGS, of Newport, in the county of Campbell, and State of Kentucky, have invented a new and useful Improvement in Fire-Plugs; and I do hereby declare the following to be a full, clear, and exact description of the construction and operation of the same, reference being had to the accompanying drawings, forming part of this specification, and in which—

Figure 1 represents a longitudinal section of a fire-plug embodying my improvements.

Figure 2, a perspective view of the block.

Figure 3, a perspective view of the valve.

Figure 4, a perspective view of the stuffing-box, guide, and stop; and

Figure 5 an elevation of the stock.

a may represent the stock; *b*, the valve-seat; *c*, the valve; *d*, the waste-stop; *e*, the waste-hole in the leg of the valve; *f*, the waste-hole in the stock; *g*, the rod; *h*, the cap; *i*, the nut; *j*, the end of the nut, projecting above the cap; *k*, the stuffing-box, guide, and stop; *l*, the flange on the stuffing-box; *m*, the slot in the guide; *n*, the block in the slot; *o*, the pin holding the block on the rod; and *p*, the nut holding the valve on the rod.

The stock *a* is made of cast iron or other metal, of any desired size or design as to outside appearance, and is connected to the water-pipe in the ground at A, and may be either screwed fast, as shown in the drawing, or bolted. Upon the lower end, or that which is connected to the water-pipe, is placed the valve-seat *b*, formed by fitting a wood or gum ring into a groove turned in the end of the stock.

The upper end of the stock above ground is formed with a flange, to which is fitted the cap, *h*, which is held in place by bolts. In the top of the cap a recess is made to receive the nut *i*, in which is a thread to fit the screw on the upper end of the rod *g*. The nut *i* has a collar, upon which it rests on the bottom of the recess in the cap, and is long enough to allow it to project out of the top of the cap, and form a square on the end at *j*, for the reception of a wrench by which to operate the valve. In the recess in the cap is cut a thread, into which is screwed a washer, passing over the nut until it bears upon the collar on the nut. The nut is thus held in place, and allowed to revolve between the washer and bottom of the recess.

Under the cap is placed the combined stuffing-box, guide, and stop *k*, which are formed all in one piece, having a flange on the upper end, *l*, and held in place by bolts passing through the flange on the stock *a*. Its lower part projects down into the stock, and has an elongated slot, *m*, cast in it, which forms the guide and stop.

The rod *g* passes through the stuffing-box and guide in the centre. Upon the rod *g* and in the slot *m* is placed the block *n*, through which the rod also passes, the block being held fast to the rod by the pin *o* passing through them. On the lower end of the rod is placed the valve *c*, made of brass or other metal, and having four legs or wings, connected at their upper ends by a ring, in order to strengthen them. The end of the stock is bored out, and the valve-legs turned off, so as to make a fit.

Formed in a widened portion of one of the legs is a depression, about one inch in diameter and one-quarter deep, communicating with the interior of the valve by means of a contracted aperture. A disk, of gum, leather, or other suitable substance, being placed in the depression, forms the waste-stop *d*, and below said waste-stop is drilled the waste-hole *e*, the distance between said waste-stop and waste-hole being determined by the distance the valve moves. Directly opposite the waste-hole *e*, when the valve is closed, or opposite the waste-stop *d* when the valve is opened, is drilled the waste-hole *f* in the stock. The rod *g* passes through the centre of the valve, and is held by the nut *p* on the end of the rod, and closes against the valve-seat *b*.

The plug being closed, a wrench is applied at the square on the end of the nut *i*, by turning which the valve *c* is made to open, the block *n* sliding down the slot *m*. The block, being held fast to the rod *g* by the pin *o*, the rod is prevented from turning or getting out of place. The block, being screwed down to the bottom of the slot, stops against the guide. The waste-stop *d* being brought opposite the waste-hole *f*, in the stock *a*, the pressure of the water passing through the plug, and out of the discharge-screw B, acting against the leather or gum in said

waste-stop through the small hole in the bottom of its containing-depression, pressing it up tight against the waste-hole *f* in the stock, and thus preventing any water from wasting. In closing, the waste-hole *e* in the leg of the valve will be brought up opposite the waste-hole *f* in the stock, and the water remaining in the stock allowed to run out, and thus prevent the freezing up of the plug in cold weather.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The stuffing-box, guide, and stop *k*, in combination with the block *n* and rod *g*, substantially as described.

2. The stop *d* and waste-hole *e*, formed in one of the legs of the valve in the manner explained, and arranged relatively to the waste-opening *f* in the stock, and the valve-seat *b*, to operate in the manner and for the purpose specified.

3. The stuffing-box, guide, and stop *k*, and block *n*, as arranged in relation to the valve *c*, substantially as described.

JAS. P. CUMMINGS.

Witnesses:

N. MARCHANT,

I. FRENCH.