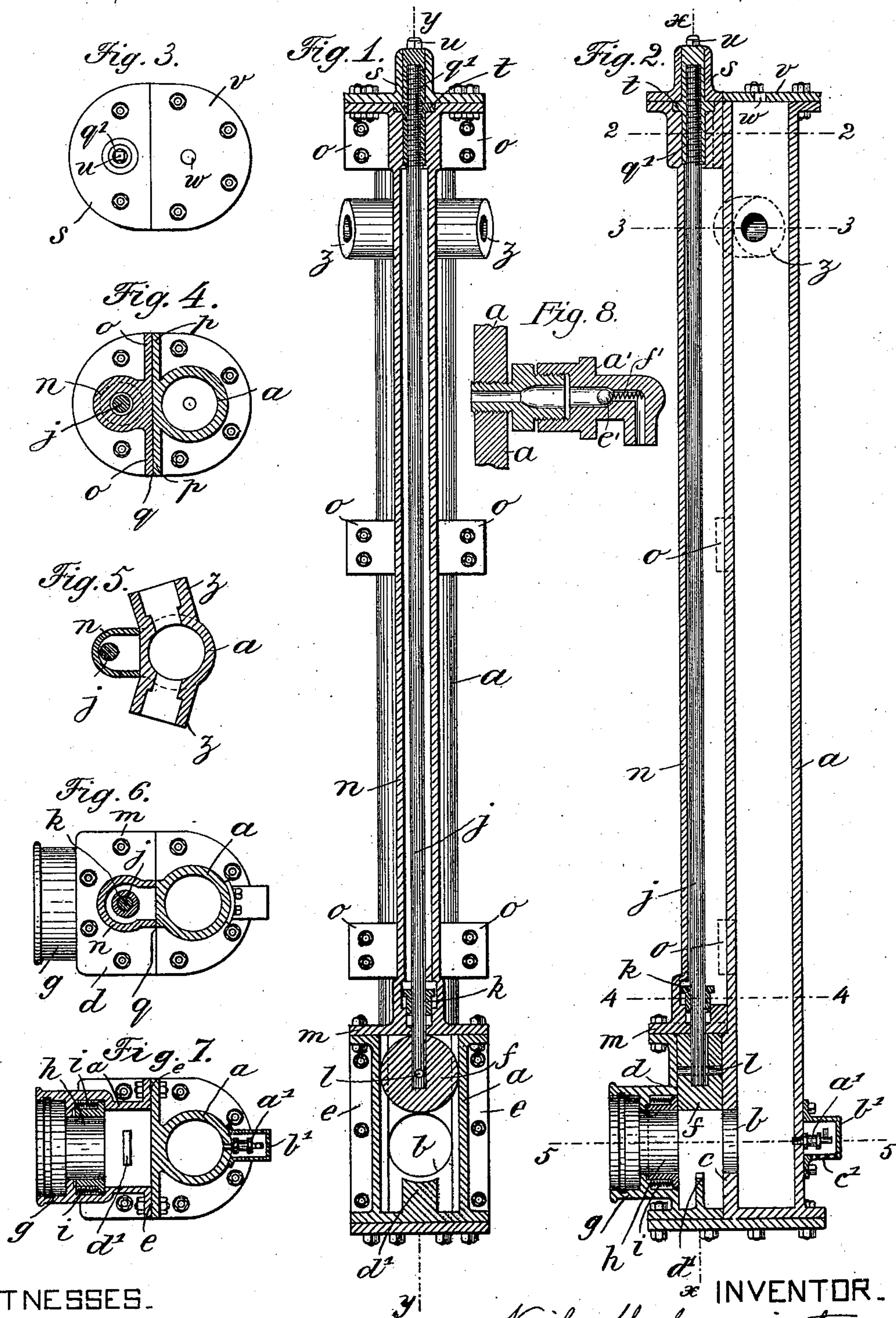


(No Model.)

N. MALMQVIST.
HYDRANT.

No. 574,744.

Patented Jan. 5, 1897.



WITNESSES.

Ch. Morgan
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UNITED STATES PATENT OFFICE.

NEIL MALMQVIST, OF BROOKLYN, NEW YORK.

HYDRANT.

SPECIFICATION forming part of Letters Patent No. 574,744, dated January 5, 1897.

Application filed December 12, 1895. Serial No. 571,913. (No model.)

To all whom it may concern:

Be it known that I, NEIL MALMQVIST, a citizen of the United States, and a resident of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Hydrants, of which the following is a specification.

My invention consists of improvements in hydrants whereby it is designed to simplify the construction, cheapen the cost, and improve the operation, as hereinafter described, reference being made to the accompanying drawings, in which—

Figure 1 is a sectional elevation of my improved hydrant, the section being taken on line *xx*, Fig. 2. Fig. 2 is a sectional elevation on line *yy*, Fig. 1. Fig. 3 is a top view. Fig. 4 is a horizontal section on line 2 2, Fig. 2. Fig. 5 is a horizontal section on line 3 3, Fig. 2. Fig. 6 is a horizontal section on line 4 4, Fig. 2; and Fig. 7 is a horizontal section on line 5 5, Fig. 2. Fig. 8 is a section of the waste-valve.

The stand-pipe *a* has an inlet-opening *b* for the water at one side near the lower end, and a valve-face *c* surrounds said opening on the outside of the tube. This valve-face is inclosed in valve-chest *d*, bolted on, as at *e*, said chest being faced on the inside for a gate-valve *f* and having the pipe-connecting nozzle *g* on the back for connection with the water-main. On the back of the valve is a tubular packing-follower *h*, closely fitted in the bore of the nozzle and having springs *i* to keep it in contact with the valve to prevent leaking into the box. The valve is connected to the rod *j*, which enters the valve-box through the stuffing-box *k*, and is secured by a pin *l*, the joint being made a little slack to favor close contact of the valve with the face *c*.

The stuffing-box for the valve-rod is formed on the end cover *m* of the valve-chest, together with a protective guard-tube *n* for the valve-rod, extending to the top of the stand-pipe along and in contact with the stand-pipe and having flanges *o* at intervals along it for bolting on to corresponding flanges *p* of the stand-pipe, said protective tube having a slot for the most part of its length on the side next to the stand-pipe and being faced to fit a corresponding face of the stand-pipe, as shown at *q*, sufficiently to exclude surface water and protect

against freezing. In the top of this rod-protecting tube is a nut *q'*, screwing on the rod, to open and close the valve, said nut being confined under cap *s* by the collar *t* and having a spur *u* extending up through the cap for the application of a wrench for turning the nut. The slot in the protective tube facilitates inserting the valve-rod and adjusting the stuffing-box before said tube is attached to the stand-pipe.

The stand-pipe *a* is closed at the top by a removable cover *v*, which may be taken off to open the pipe for any purpose, and a hole *w* is made through the cover for inserting a rod which may sometimes be required to stir up any collections of matter that may settle in the bottom. The hole will be closed by any suitable plug. The discharge-nozzles *z* are formed on the stand-pipe near the top.

Over the waste-valve *a'*, employed for the discharge of the water remaining in the stand-pipe *a* after the valve *f* is closed, I provide a protective case *b'*, inclosing it in a chamber of larger dimensions than the case of said valve to prevent it from being clogged with soil, which would otherwise pack closely around it, said case being perforated, as at *c'*, in the lower portion for the escape of the water. *d'* is a stop for the valve.

It will be seen that the construction of my improved hydrant is very simple, that it is not liable to get out of order, and that it is simple and reliable in operation.

The construction and operation of the waste-valve are same as in common use and form no part of my claim, but a section of such a valve is shown in Fig. 8 for illustration of the same. The ball *e'* is pressed against its seat and prevents waste of water when valve *f* is open. The spring *f'* unseats the ball when valve *f* is closed and opens the discharge-passage *g'* for the water remaining in the stand-pipe.

I am aware that a protective sheathing of sheet metal has been applied over the lower portion of the rod of a waste-valve and over said valve, fitted in an independent part attached to the stand-pipe, as in Patent No. 485,409, and I make no claim to such device, my invention being an improved construction of the main-valve case exterior to the stand-pipe, with an integral protective tube for the main-valve rod extending to the top of the

stand-pipe and containing the nut for operating the valve.

I claim—

1. In a hydrant having a gate-valve in a
5 valve-inclosing case exterior to the stand-pipe
and detachably attached thereto, said case
formed with a protective cover for the valve-
rod consisting of an integral vertical exten-
sion of the valve-rod stuffing-box along in con-
10 tact with and bolted to the side of the stand-
pipe, said cover chambered in the side bear-
ing against the stand-pipe for the rod and the
stuffing-box gland, and being extended to the
top of the stand-pipe and having the rod-actu-
15 ating nut fitted in the top substantially as
described.

2. The combination in a hydrant, of the

stand-pipe having the exterior valve-face sur-
rounding the inlet-opening in the side, near
the lower end, the valve-chest covering said 20
face, the gate-valve inclosed in said face, the
packing-follower within said case and on the
exterior face of the valve, and the rod for
working the valve, said rod being exterior to
the stand-pipe and connected with the valve 25
through the stuffing-box on the top of the
valve-case substantially as described.

Signed at New York city, in the county and
State of New York, this 17th day of Septem-
ber, A. D. 1895.

NEIL MALMQVIST.

Witnesses:

W. J. MORGAN,
EMORY CUMMINGS.