

(No Model.)

C. NERACHER, Dec'd.

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AUTOMATIC SPRINKLER.

No. 538,739.

Patented May 7, 1895.

Fig 1.

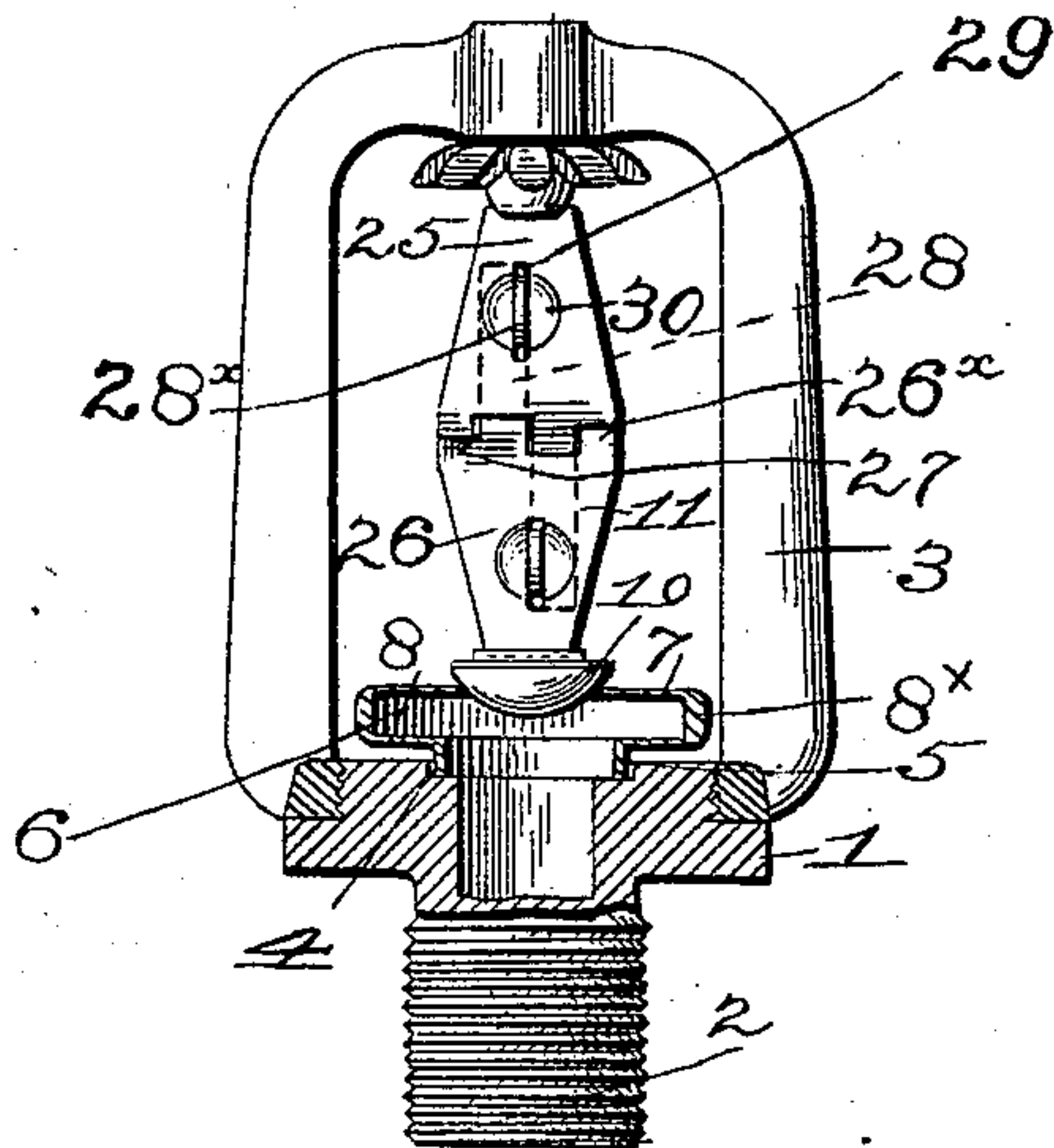


Fig 2.

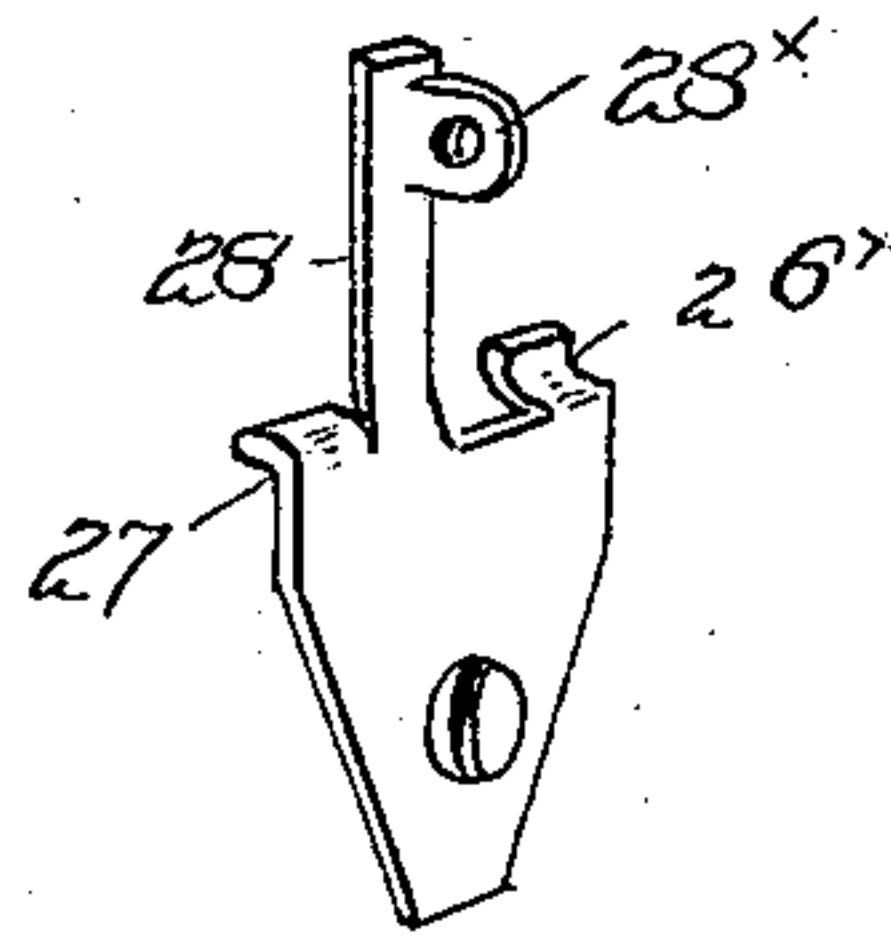
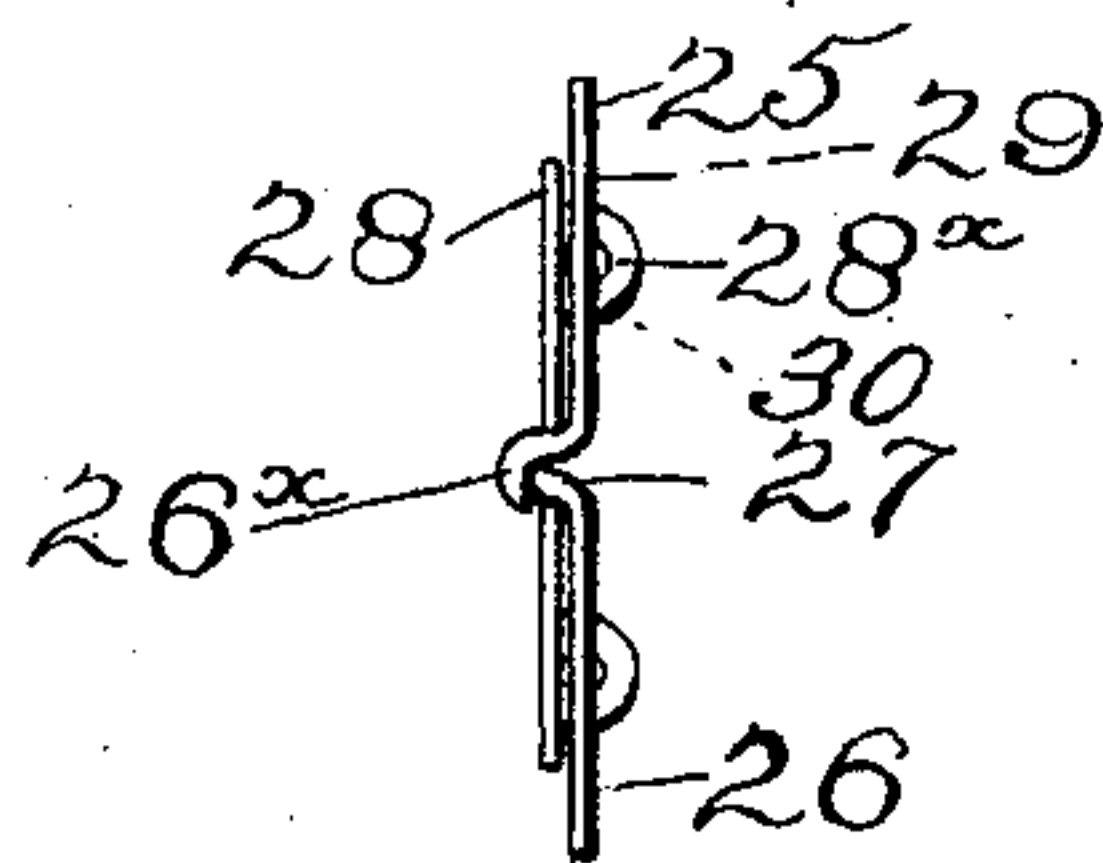


Fig. 3.

Attest

Wm. F. Hall
Master in Chancery

Inventor

Charles Neracher
by Wm. F. Hall
Atty

UNITED STATES PATENT OFFICE.

CHARLES NERACHER, OF CLEVELAND, OHIO; OTTO J. FREY ADMINISTRATOR
OF SAID NERACHER, DECEASED.

AUTOMATIC SPRINKLER.

SPECIFICATION forming part of Letters Patent No. 538,739, dated May 7, 1895.

Application filed April 6, 1894. Serial No. 506,559. (No model.)

To all whom it may concern:

Be it known that I, CHARLES NERACHER, a citizen of the United States of America, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Automatic Sprinklers, of which the following is a specification.

It is the object of my invention to provide a double form of valve for a fire extinguishing sprinkler with a view to increasing the certainty of the quick opening of said valve for the escape of the water and at the same time to form a perfectly water tight joint at the valve to prevent leakage.

My invention consists of a sprinkler having a double valve composed of a hollow expandible body adapted to rest on the valve seat of the base of the sprinkler with an opening to register with the inlet opening and a second upper opening adapted to receive a supplemental valve disk which is held removably in place by the strut, the latter being in turn held by the fusible solder.

In the accompanying drawings I show, in Figure 1, the sprinkler partly in section and partly in side elevation, with the double valve in place, the hollow or expandible portion being in sections. Fig. 2 is a detail view of the strut. Fig. 3 is a detail view of one of the members of the strut.

The base 1 having the inlet nipple 2 and the frame 3 having the distributor may be of the form shown. A seat 4 on the base receives the mouth 5 of the chambered main valve 6 which has annular portions extending about the central mouth formed by the thin upper and lower walls 7, 8 connected by the thicker edge portions 8^x, the whole of the chambered valve being formed in one piece with the upper and lower walls sufficiently thin to be expandible, and thus expand under the pressure of the water which fills the chamber when the valve is closed. The upper flexible wall has an opening to receive the supplemental valve disk 10 which is solid and which is held in place by the strut 11. This disk closes the opening in the chambered valve and the pressure of the water acting on the expandible wall not only insures a firm and

water tight joint between the chambered valve and the base of the sprinkler but between the chambered valve and the supplemental valve disk. When the strut is released by the melting of the solder, the disk valve is released and the pressure of the water will force it away from its seat in the chambered valve and the chambered valve will also be forced from its seat provided the valve works properly. In some cases however, due to corrosion or other causes the valve will stick and either not open promptly or not at all and this defect I remedy by my double arrangement as either one valve or the other will be released and the release of either one will effect the desired result. The expansion of the chambered valve may take place either from air or water pressure and in either case the disk valve will be more firmly seated by the expansion of the walls and the mouth of the chambered valve itself will be more firmly seated to prevent the escape of the air or water pressure, the said expansion of course depending on the amount of pressure in the system.

The strut consists of two parts each having a bent shoulder 27 and a hook end 26^x engaging the shoulder on the opposite part to form a pivotal connection between them, said pivot being out of line with the points of contact of the ends of the strut so that the moment the solder joint is fused the two parts will spring aside turning for this purpose on their pivots and releasing the valve. Each part of the strut has an arm 28 extending along the face of the opposing part of the strut with an eye 28^x passing through an opening 29 in the said opposing part about which opening there is a depression 30 to receive the fusible solder which fills the same and passes through the eye so that the parts will be held securely until the heat of the fire fuses the solder.

I claim as my invention—

1. A sprinkler comprising the frame, the double valve comprising the expandible chamber having upper and lower openings and the supplemental valve disk fitted to the upper opening and the means for holding said supplemental valve disk in place, both the main

and supplemental valves being adapted to be forced away from the valve seat substantially as described.

2. A sprinkler comprising the frame, the
5 double valve comprising the expansible chamber having the upper and lower expansible walls with openings therein, said chamber being formed in one piece and the supplemental
10 disk valve fitted to the upper opening in the chamber with means for holding it in place, substantially as described.

3. In combination in a sprinkler, the frame, the valve and the strut composed of two parts

25—26 each having the shoulder and the hook end to form the pivotal connections between 15 them, one of said parts having an extension with an eye thereon passing through an opening in the other part to be held by solder, substantially as described.

In testimony whereof I affix my signature 20 in presence of two witnesses.

CHARLES NERACHER.

Witnesses:

M. MILLARD,
ANDREW DREXLER.