

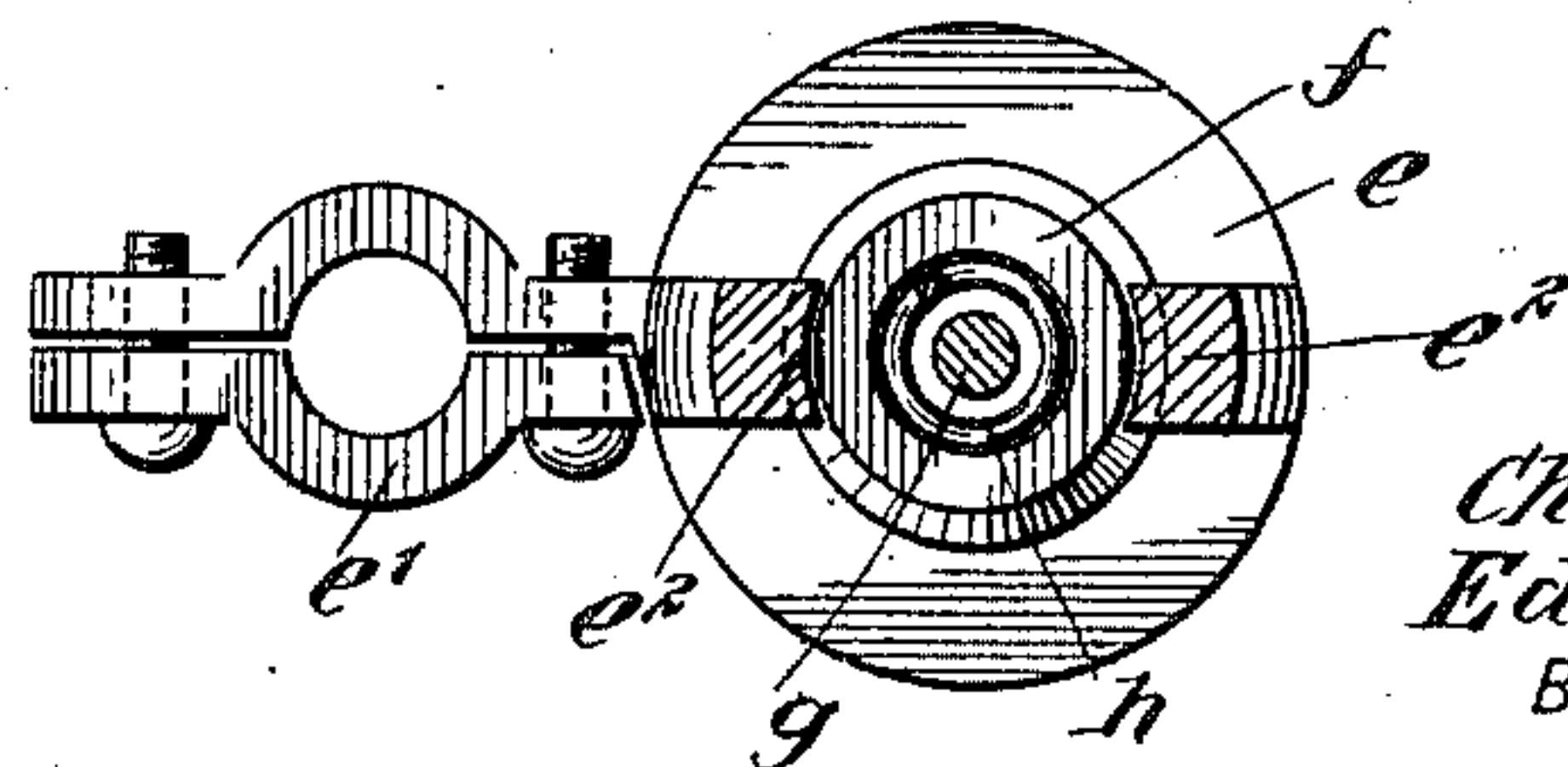
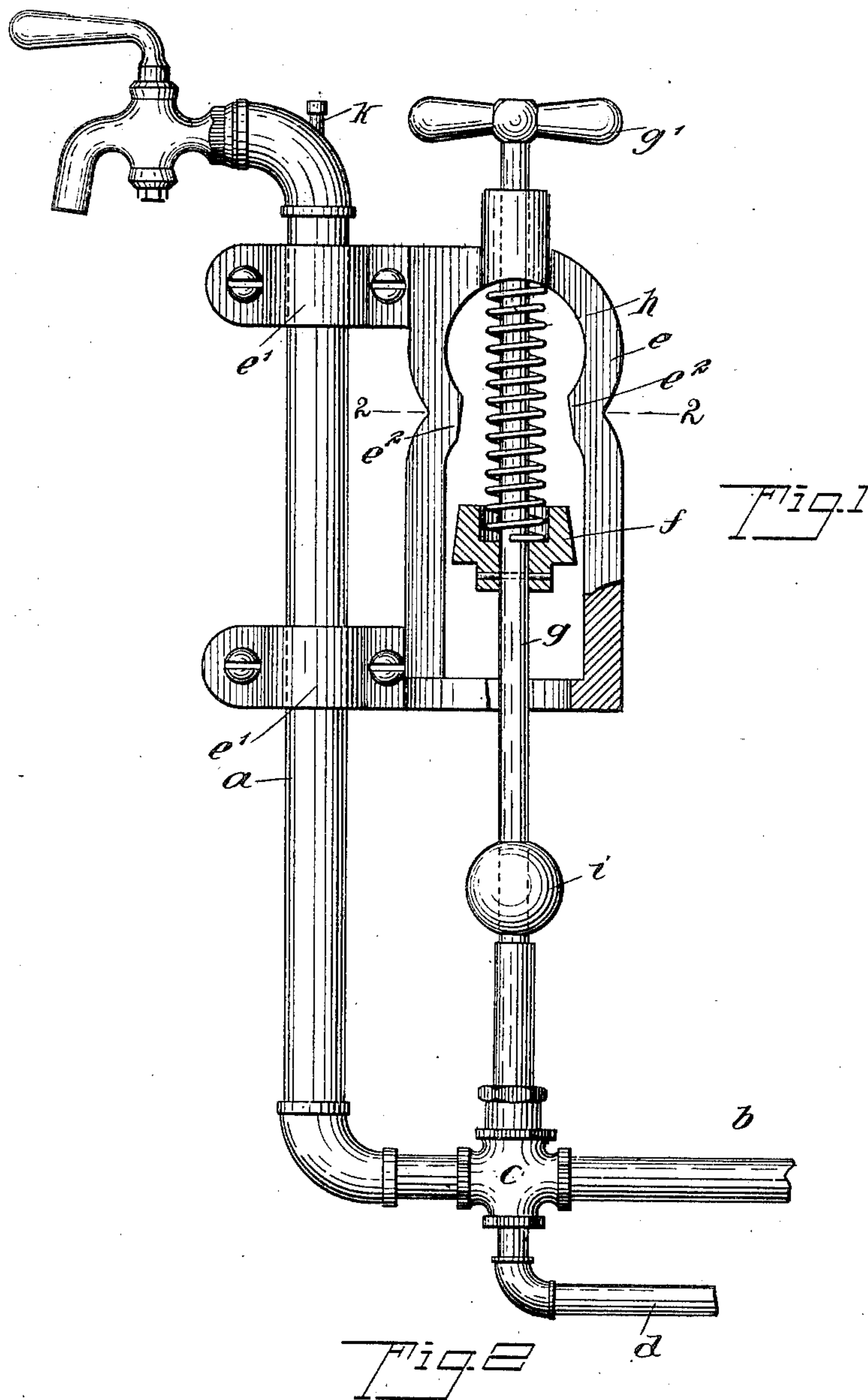
No. 667,952.

Patented Feb. 12, 1901.

C. T. RANDALL & E. G. HOLDEN.
COMBINATION KEY AND AUTOMATIC STOP COCK.

(Application filed May 7, 1900.)

(No Model.)



WITNESSES:

J. A. Brophy
J. B. Owens.

INVENTORS
Charles T. Randall.
Edward G. Holden.

BY

Manly
ATTORNEYS

UNITED STATES PATENT OFFICE.

CHARLES THOS. RANDALL AND EDWARD GWYNN HOLDEN, OF DALLAS,
TEXAS.

COMBINATION KEY AND AUTOMATIC STOP-COCK.

SPECIFICATION forming part of Letters Patent No. 667,952, dated February 12, 1901.

Application filed May 7, 1900. Serial No. 15,819. (No model.)

To all whom it may concern:

Be it known that we, CHARLES THOS. RANDALL and EDWARD GWYNN HOLDEN, citizens of the United States, and residents of Dallas, in the county of Dallas and State of Texas, have invented a new and Improved Combination Key and Automatic Stop-Cock, of which the following is a full, clear, and exact description.

10 The purpose of this invention is to provide an automatic arrangement for cutting off the water-supply in hydrants and like appliances when the weather becomes so cold as to endanger the freezing of the water. To this
15 end we employ a device for actuating a cut-off valve, which device is controlled by the expansion and contraction of metals, due to temperature surrounding the same.

20 This specification is the disclosure of one form of the invention, while the claims define the actual scope thereof.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in both views.

25 Figure 1 is a side view of the invention with parts in section; and Fig. 2 is a top plan view, with parts in section, on the line 2 2 of Fig. 1.

30 The invention is shown as used in connection with a hydrant *a*, which is fed from a supply-pipe *b*, the feed being commanded by a valve (preferably a gate-valve) *c*. From the valve-casing *c'* leads a drain-pipe *d* for
35 draining the hydrant to avoid the accumulation of water therein when in danger of freezing. Fastened to the hydrant by clamps *e'* is a frame *e*, which is held rigidly in place and which is provided with oppositely-situated diagonally-disposed surfaces *e²*. These
40 surfaces are preferably concave to conform with a collar *f*, shaped as a frustum of a cone, and which is carried rigidly on a rod *g*, the rod being mounted to slide in the frame *e* and
45 provided at its top with a handle *g'*. An expansive spring *h* encircles the rod *g* and bears between the top of the frame *e* and the collar *f* to push the rod *g* down into the position shown in Fig. 1. A weight *i* is also applied
50 to the rod *g* to assist the spring *h*, or, if desired, either the weight or the spring may be

removed, permitting the other to be used alone for the purpose of throwing down the rod *g*. The rod *g* has connection at its lower end with the gate-valve *c*, so that by raising 55 or lowering the rod the valve is opened or closed. The rod *g* is capable of being wedged between the surfaces of the ring *e*, thus holding the rod *g* raised in opposition to the spring *h* and weight *i*, and in this position 60 the valve *c* is opened. Assuming that the weather is warm, the metallic parts *e* and *f* will be expanded and held securely together, thus keeping the valve *c* in open position, and of course the water may pass freely 65 through the pipe *b* and hydrant *a*. Should the weather become cold and approach the freezing-point this will cause the metallic parts *e* and *f* to contract, and then the collar *f* will be released from the diagonally-dis- 70 posed surfaces *e²*, and the spring *h* and weight *i*, or either one of the two, will then throw the rod *g* down and close the valve *c*, thus cutting off the water-supply.

The hydrant may be provided with a check 75 *k*, which may be placed in control of the drain-pipe *d* by any suitable means which do not enter into our invention, and by operating this check communication between the hydrant *a* and pipe *d* may be opened, thus 80 permitting the pipe *d* to carry off the water which stands in the hydrant.

While we have shown this invention as applied to a hydrant and the frame *e* constructed particularly with respect thereto, it 85 will be obvious to persons skilled in the art that our invention is not confined to this use, since by very slight changes in the form of the frame and the other parts associated therewith the device may be adapted to an 90 ordinary stop-cock, or it may be used in any way to control a valve or other instrument commanding a water-supply, so that the parts will operate according to the principle of the invention as expressed in this specification. 95

Having thus described our invention, we claim as new and desire to secure by Letters Patent—

1. A device for controlling water-supplies, comprising a fixed frame having metallic 100 portions, a member mounted to move relatively to the frame and adapted for connec-

tion with a valve, said member having a metallic part capable of being wedged between the metallic portions of the frame to hold the valve in the open position, said member being released to close the valve, by the contraction of the metal parts, substantially as set forth.

2. A device for controlling water-supplies, comprising a frame with two oppositely-situated diagonally-disposed metal portions, a rod mounted to slide on the frame and adapted to have connection with a valve or the like, and a metallic collar shaped as a frustum of a cone, and carried on the rod and capable of being wedged between the metallic portions of the frame, for the purpose specified.

3. A device for controlling water-supplies,

comprising a frame provided with clamps for fastening it to a hydrant or other support, the said frame being provided with two oppositely-situated metal portions, a rod mounted to slide on the frame and adapted to have connection with a valve or the like, a metallic member carried on the rod and capable of being wedged between the metallic portions of the frame, and means for moving said rod when released, for the purpose specified.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

CHARLES THOS. RANDALL.

EDWARD GWYNN HOLDEN.

Witnesses:

P. C. VINES,

CHAS. E. BRYAN.