(No Model.) 2 Sheets—Sheet 1.

T. EVANS.

FIRE EXTINGUISHING APPARATUS.

No. 326,962. Patented Sept. 29, 1885.

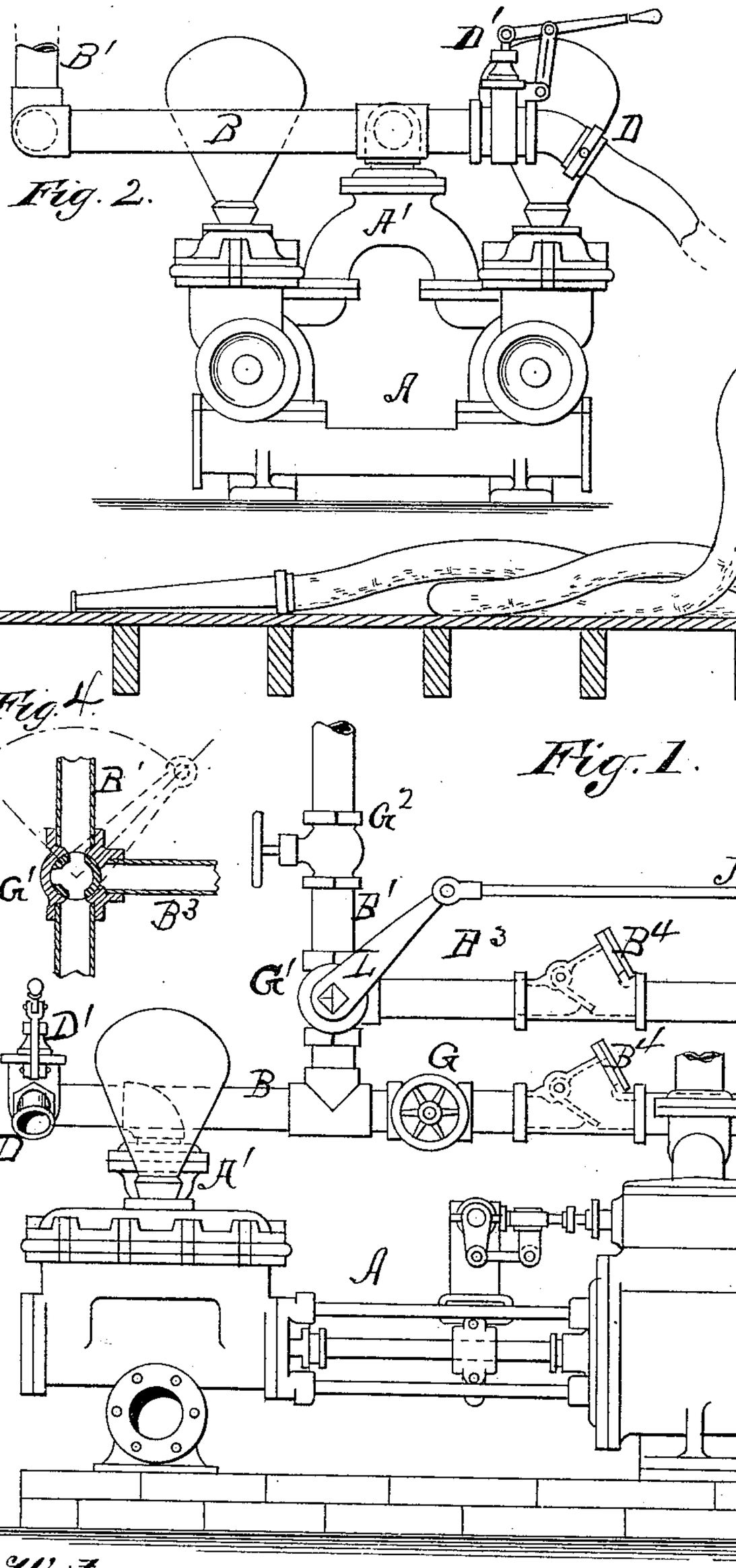

Fig. 2.

Fig. 1.

Fig. 4.

Fig 5

Witnesses:
H. F. Parker.
Louis Matthaeus

Inventor:
Thomas Evans
by Adam E. Schatz
Atty

(No Model.) 2 Sheets—Sheet 2.

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Fig. 3.

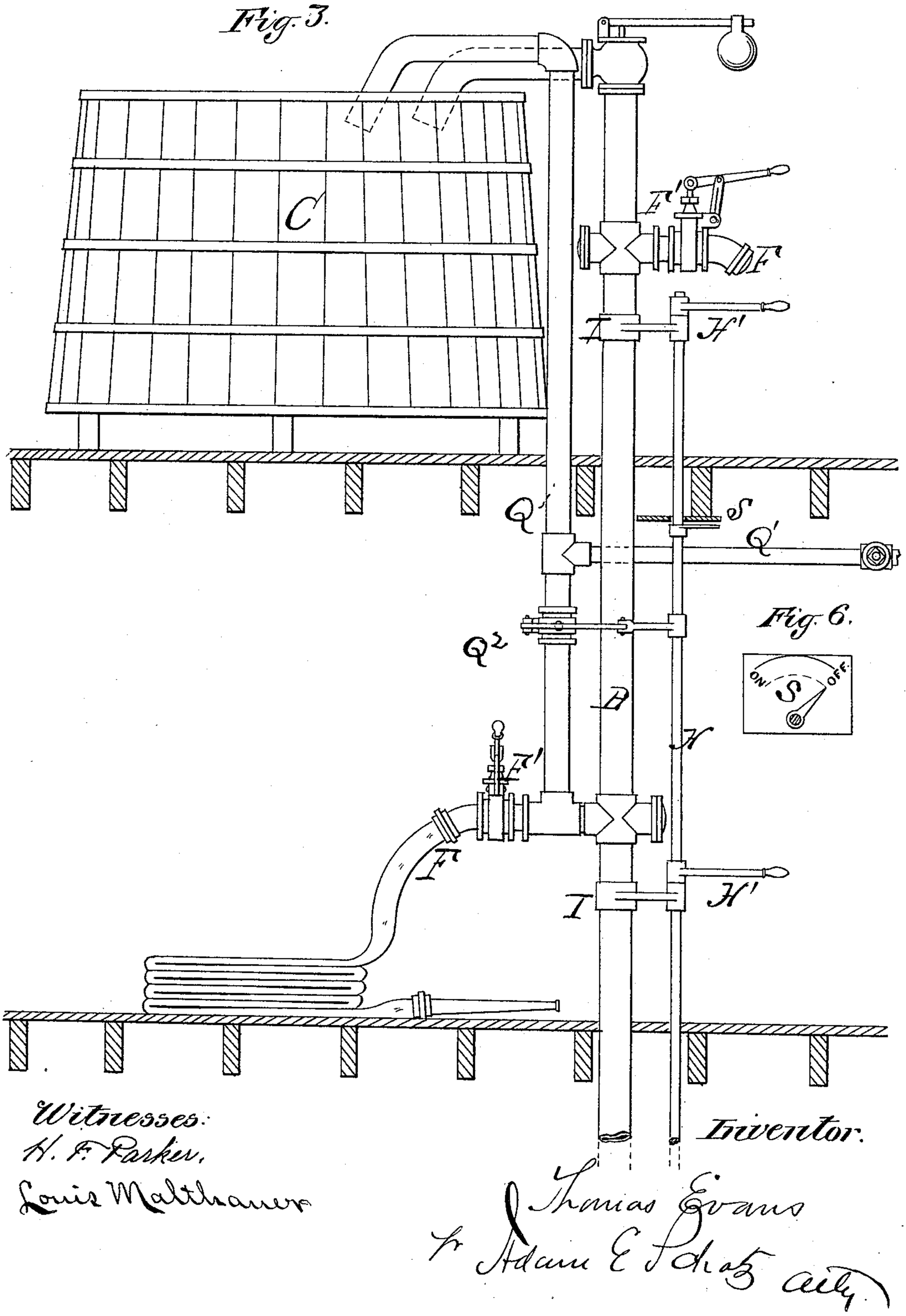

Fig. 6.

Witnesses:
H. F. Parker,
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Inventor:
Thomas Evans
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UNITED STATES PATENT OFFICE.

THOMAS EVANS, OF NEW YORK, N. Y.

FIRE-EXTINGUISHING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 326,962, dated September 29, 1885.

Application filed January 22, 1885. (No model.)

To all whom it may concern:

Be it known that I, THOMAS EVANS, a citizen of the United States of America, and a resident of the city, county, and State of New York, have invented a new and useful Improvement in Fire-Extinguishing Apparatus, of which the following is a specification.

My invention relates to fire-extinguishing apparatus to be used in conjunction with a steam-pump in breweries or other buildings, and especially when such pump is used for supplying water to a tank or for other general purposes, the object being to provide for disestablishing the communication of the pump with the tank or other place and establishing a communication thereof solely with the fire-extinguishing medium from either floor, so that the water issuing from the pump may be utilized entirely for extinguishing purposes, another object being to furnish steam to the pump in the operations above named, and independently of the usual steam-supply power, for the purpose of starting the pump in the event of its being at rest. These objects I have accomplished by the novel means hereinafter described, and illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of a portion of my apparatus, showing its connection with a pump. Fig. 2 is an end view of the pump. Fig. 3 is a side view of another portion of my apparatus, showing its connection with a tank. Figs. 4, 5, and 6 are detail views of parts.

Similar letters indicate similar parts.

The letter A designates the pump, which may be of any usual or suitable construction, and to the delivery-port A′ of which is connected one of two pipes, B B′, communicating with each other, and both serving under normal condition to convey water to a tank or to any other desired place in a building, Fig. 3 showing the arrangement of the pipe B in relation to a tank, C, located in the upper part of the building. To said delivery-port of the pump is also connected a hose-coupling, D, which is provided with a valve, D′, while to the pipe B, which, for convenience, I shall denominate the "main" pipe, in distinction from the other or supplemental pipe, B′, are connected a series of hose-couplings, F, each of which is provided with a valve, F′, the couplings last named being located on the different floors of the building, and varying with the number of the floors.

In the main pipe B is a valve, G, and in the supplemental pipe B′ two valves, G′ G², one, G′, of which is a three-way valve, as shown on Fig. 4, and from which extends a branch, B³, to the ascending portion of the main pipe B, this branch, as well as the main pipe, being provided with a check-valve, B⁴, opening in a direction away from the pump.

Adjacent to the ascending portion of the main pipe B is a spindle, H, which has its bearings in brackets I, attached to the main pipe, and is provided on each of the floors with a handle, H′, for turning it, this spindle, like the pipe, extending to the top of the building.

The lower end of the spindle H is geared with a lever, J, by means of bevel-pinions J′, and to said lever is connected by means of a rod, K, a second lever, L, which is mounted on the stem of the three-way valve G′ in the supplemental pipe B′, so that this valve may be set by means of the spindle.

To an intermediate portion of the spindle H is connected a valve, N, to be set by its means, this valve being concomitant to a steam-pipe, O, which is auxiliary to another or main steam-pipe, O′, whereby steam is supplied to the pump under normal conditions, said connections of the spindle with the valve being effected by means of levers N′ N² and a link, N³, as clearly shown in Fig. 5.

In applying my apparatus to use for other than fire-extinguishing purposes, the valves G G², either or both, of the water-pipes are opened, the valves D′ F′ of the various hose-couplings are closed, and the spindle H is turned to set the valve-lever L to the position shown in Fig. 1, thereby bringing the three-way valve G′ to the position shown in Fig. 4. The water from the pump is now permitted to flow freely into and through pipes B B′, or either of such pipes, as the case may be, and consequently the water may be conveyed to any desired place for general use. When, on the other hand, the apparatus is to be used for extinguishing a fire on either floor of the building, the spindle H is turned to reverse the position of the three-way valve G′, whereby the communication of the supplemental pipe B′ with the main pipe B and thence with the pump is shut off, and the branch B³ is

brought into communication with the main pipe, causing water to flow in the main pipe, both directly and through said branch, or, in case the valve G should be closed, through the branch alone. The valve F′ of the hose coupling on the proper floor is now opened, when the entire supply of water may be drawn off from the main pipe and thrown on the fire through a hose properly attached to the coupling, as indicated in the drawings, the hose-coupling D of the pump being likewise used for putting out a fire originating on the floor where the pump is located. When the spindle H is turned to shut off the supplemental pipe B′, by means of the three-way valve G′, the valve N of the auxiliary steam-pipe O is opened and steam is admitted to the pump through said pipe independently of the main steam-pipe O′, so that the operation of the pump is insured.

To the upper portion of the main pipe B is connected a pipe, Q, (see Fig. 3,) which has an outlet into the tank C, and is also provided with a branch, Q′, for conveying water to another place, this pipe Q being further provided with a valve, Q^2, which is connected to the spindle H, to be closed by its means when the fire-extinguishing devices are in use.

For the purpose of showing the position of the spindle H, it may be provided with an indicator, S, (see Figs. 3 and 6,) on either or all the floors of the building.

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

1. In a fire-extinguishing apparatus for buildings, the combination, with a steam-pump, of the main water-pipe B, having a series of hose-couplings, F, provided with valves F′, the supplemental water-pipe B′, having the three-way valve G′, the branch B^3, extending from the three-way valve to the main water-pipe, and a revolving vertically-operating spindle, H, provided with the bevel-pinion J′, substantially such as herein described, for adjusting said three-way valve from either floor of the building.

2. In a fire-extinguishing apparatus for buildings, the combination, with a steam-pump, of the auxiliary steam-pipe O′, having the valve N, the main water-pipe B, having a series of hose-couplings, F, provided with valves F′, the supplemental water-pipe B′, having the three-way valve G′, the branch B^3, extending from the three-way valve to the main water-pipe, and a revolving vertically-operating spindle, H, provided with the bevel-pinion J′, substantially such as herein described, for adjusting both said three-way valve and the valve of the auxiliary steam-pipe from either floor of the building.

3. In a fire-extinguishing apparatus for buildings, the combination, with a steam-pump, of the main water-pipe B, having a series of hose-couplings, F, provided with valves F′, and having the valve G, the supplemental water-pipe B′, having the valve G^2 and the three-way valve G′, and a revolving vertically-operating spindle, H, provided with the bevel-pinion J′, substantially such as herein described, for adjusting said three-way valve from either floor of the building.

4. In a fire-extinguishing apparatus for buildings, the combination, with a steam-pump, of the main water-pipe B, having a series of hose-couplings, F, the supplemental water-pipe B′, having the three-way valve G′, the levers J L, one mounted on the stem of the three-way valve, the connecting-rod K, and the spindle H, geared with the lever J, for the purpose set forth.

5. In a fire-extinguishing apparatus for buildings, the combination, with a steam-pump, of the auxiliary steam-pipe O′, having the valve N, the main water-pipe having a series of hose-couplings, F, the supplemental water-pipe B′, having the three-way valve G′, the levers J L, one mounted on the stem of the three-way valve, the connecting-rod K, and the spindle H, geared with the lever J, and connected to said valve of the auxiliary steam-pipe.

In testimony that I claim the foregoing as my invention, I have signed my name, in presence of two witnesses, this 13th day of December, 1884.

THOMAS EVANS.

Witnesses:
LOUIS MALTHANER,
JOS. STRACKE, Jr.