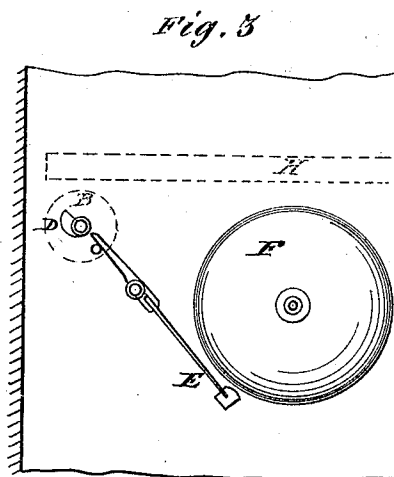
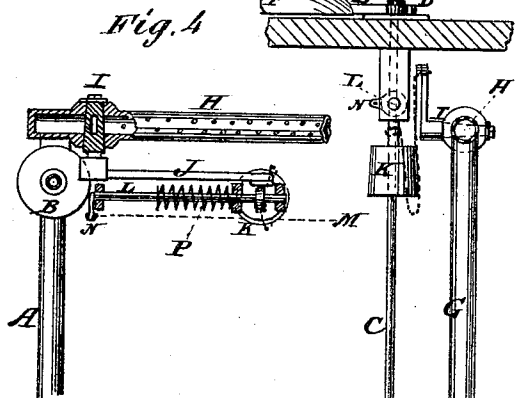
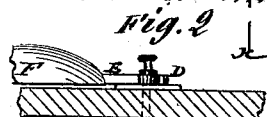
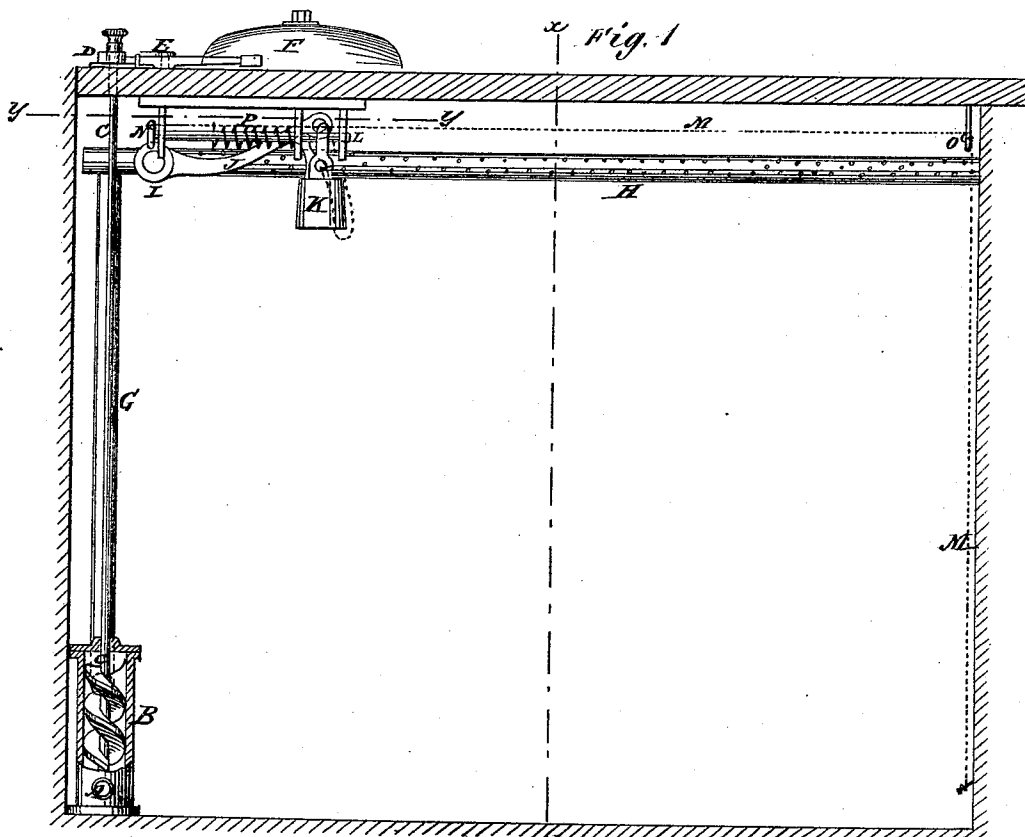


T. F. NEVINS & J. W. SMITH.

FIRE ALARMS AND EXTINGUISHERS.

No. 178,660.

Patented June 13, 1876.



WITNESSES:

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UNITED STATES PATENT OFFICE.

THOMAS F. NEVINS AND JOHN W. SMITH, OF BROOKLYN, NEW YORK.

IMPROVEMENT IN FIRE ALARMS AND EXTINGUISHERS.

Specification forming part of Letters Patent No. 178,660, dated June 13, 1876; application filed March 13, 1876.

To all whom it may concern:

Be it known that we, THOMAS F. NEVINS and JOHN W. SMITH, of Brooklyn, in the county of Kings and State of New York, have invented a new and Improved Automatic Fire Extinguisher and Alarm, of which the following is a specification:

The object of this invention is to provide a means of checking a fire at its commencement and sounding an alarm immediately.

The invention consists in making water flow through a water-wheel whose movement acts upon a bell or other sonorous instrument whereby an alarm is sounded automatically the moment the water commences to flow, all of which will be fully understood from the following description, reference being had to the accompanying drawing, forming part of this specification.

Figure 1 represents an elevation, showing our invention set ready for use. Fig. 2 is a sectional view through the line *x x*. Fig. 3 is a plan of alarm. Fig. 4 is a sectional view through the line *y y*.

Similar letters of reference indicate corresponding parts.

In the case here presented, A is a pipe leading from the water-main to the water-wheel B, which may be of any desired pattern, but, preferably, a spiral blade, as shown, so that the water in flowing through will cause its shaft C to revolve, and thereby cause the cam D on its upper end to trip the hammer E, so as to sound the bell F, thus giving an instantaneous alarm.

It will here be observed that this device remains at rest, ready at all times in case of fire, and the water only flows through such pipe or pipes as may be directly in the locality of the fire.

G is a pipe leading from the water-wheel up to the perforated pipe or pipes H. I is a stop-cock, which is held closed by its arm J resting on the weight K, which hangs loosely on the

bolt L. The said bolt is held drawn forward, as shown in Figs. 1 and 4, by means of the cord M, which is attached to an arm, N, on its rear end, and extends along the ceiling over a pulley, O, and down the wall, where it is fastened, so that as soon as a fire breaks out and the flame licks the cord it will burn and break, and the spring P will throw back the bolt and let the weight fall, the said weight being attached by a chain to the end of stop-cock arm, so as to give it a sufficient fall, which will be certain to open the stop-cock.

The above-described device is also applicable to ships, so that in the event of fire breaking out in the hold from spontaneous combustion or otherwise, which would be inaccessible when laden, it will greatly lessen the danger and risk of fire at sea.

The fall of the weight K may also be used as a means of tilting or upsetting a chemical extinguisher, and thus let its gas escape into and through the perforated pipe or pipes H.

The above-described invention may also be actuated by water supplied from a tank or reservoir on the roof of a building, thus making it applicable for high buildings, or in localities not supplied with water-mains.

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

1. The combination, with spirally-bladed wheel B, of the shaft C, having cam D, the hammer E, and the bell F, all arranged substantially as and for the purpose specified.

2. The combination, with one water-wheel, B, of both a watering and an alarm apparatus, substantially as shown and described, for the purpose set forth.

THOS. F. NEVINS:
JOHN W. SMITH.

Witnesses:

E. H. SHUTES,
JAMES DALE.