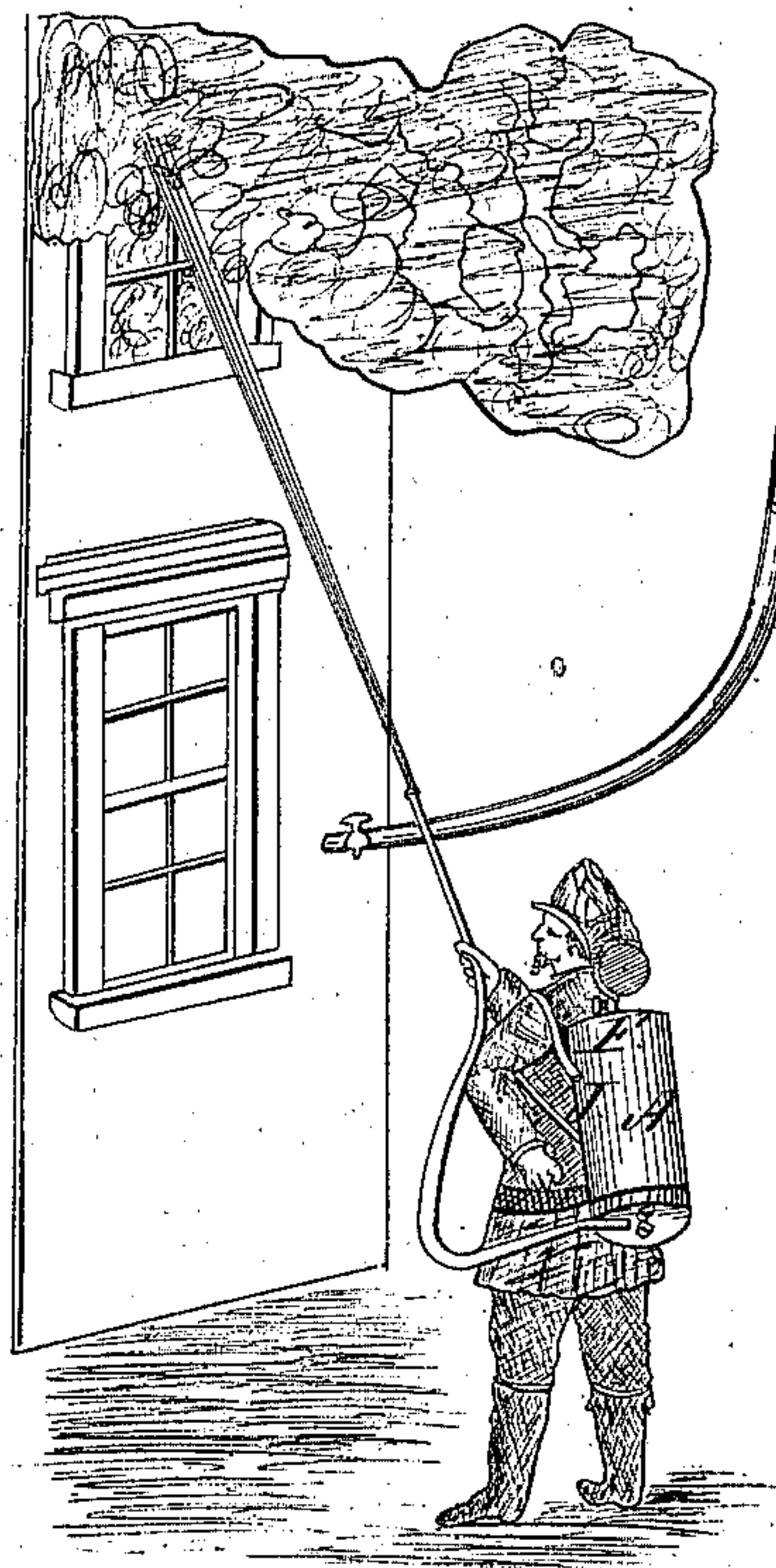


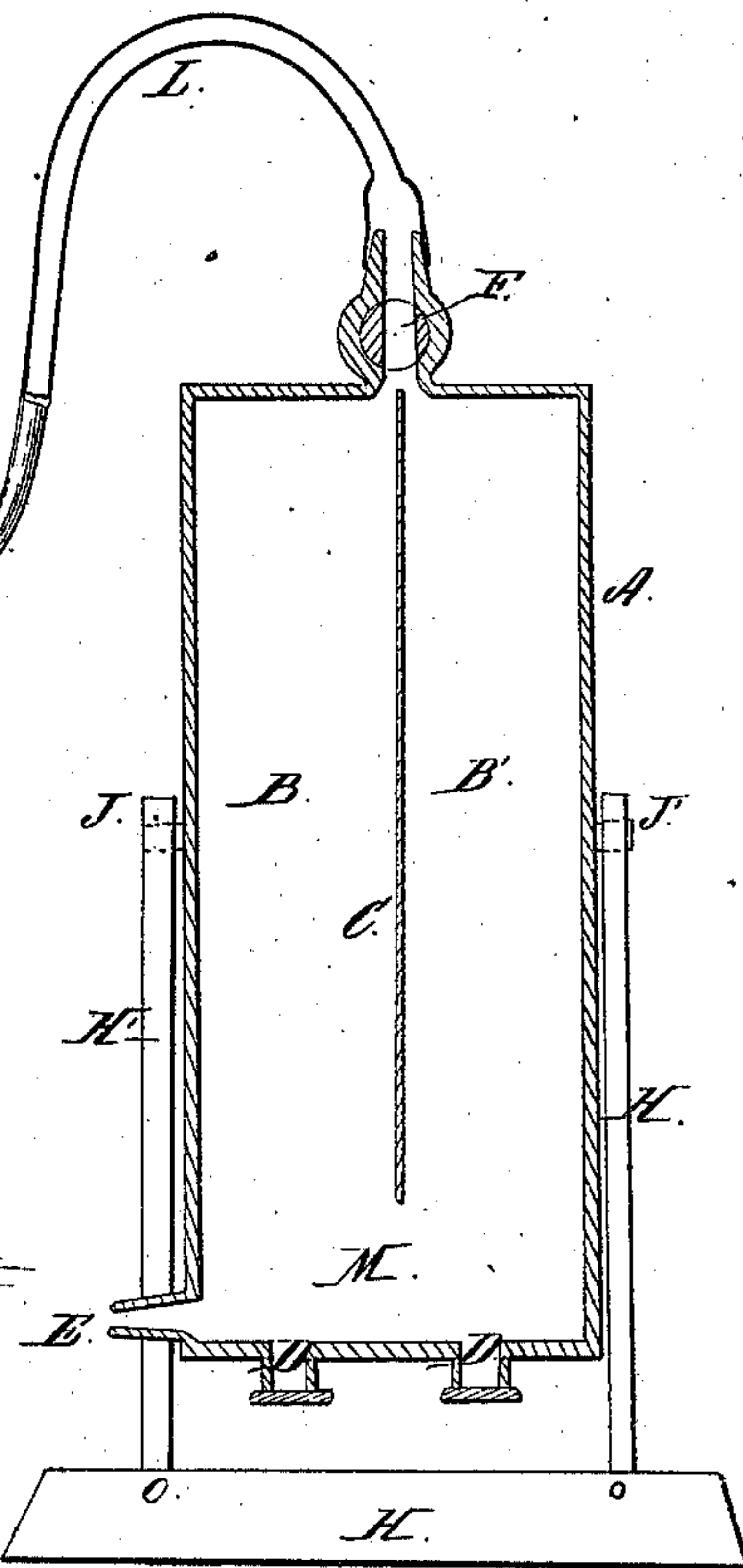
Sheet 1-2 Sheets

*R. Lapham,*  
*Fire Annihilator,*  
*No 81,653,*      *Patented Sep. 1, 1868.*

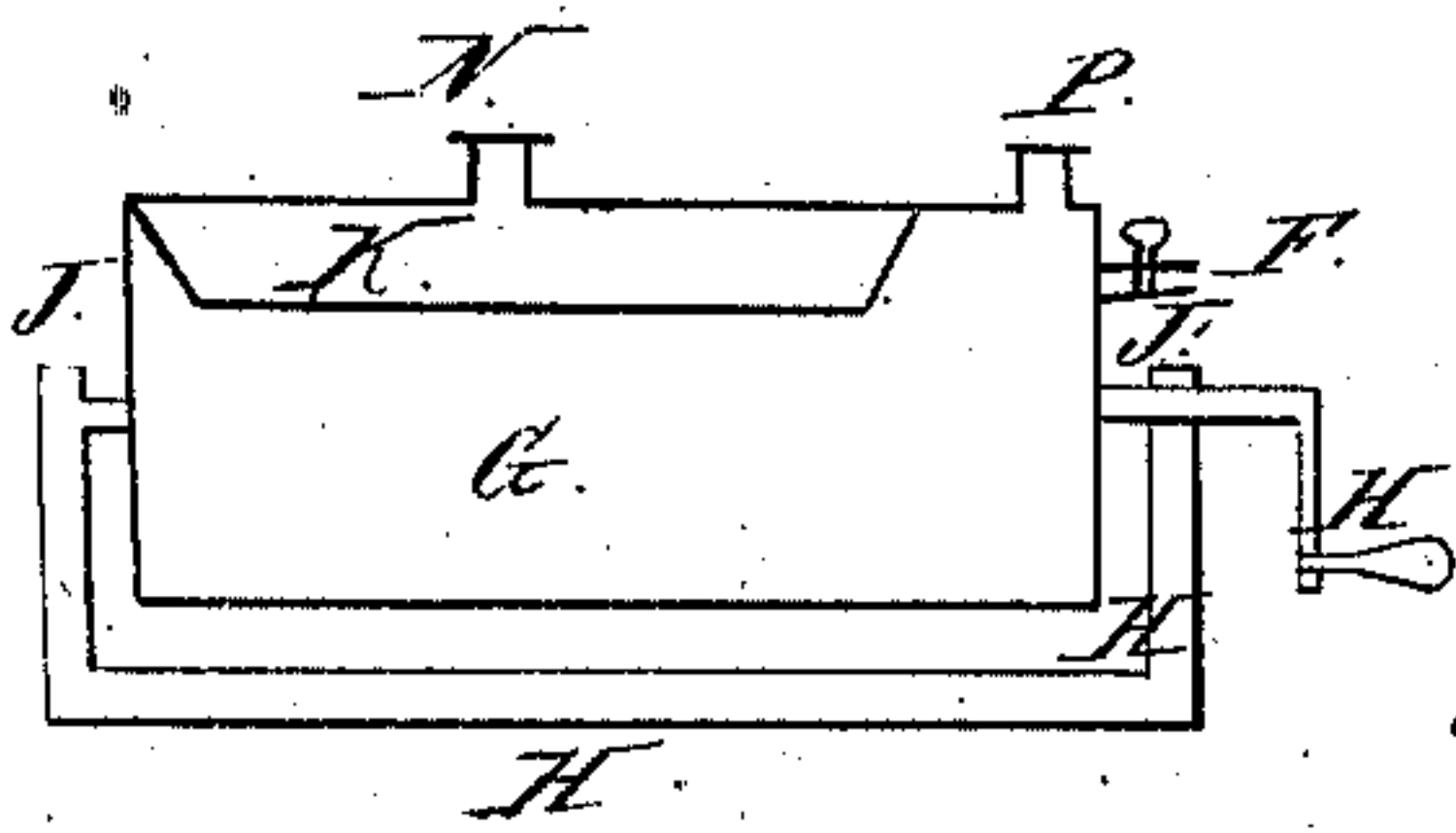
*Fig. 1.*



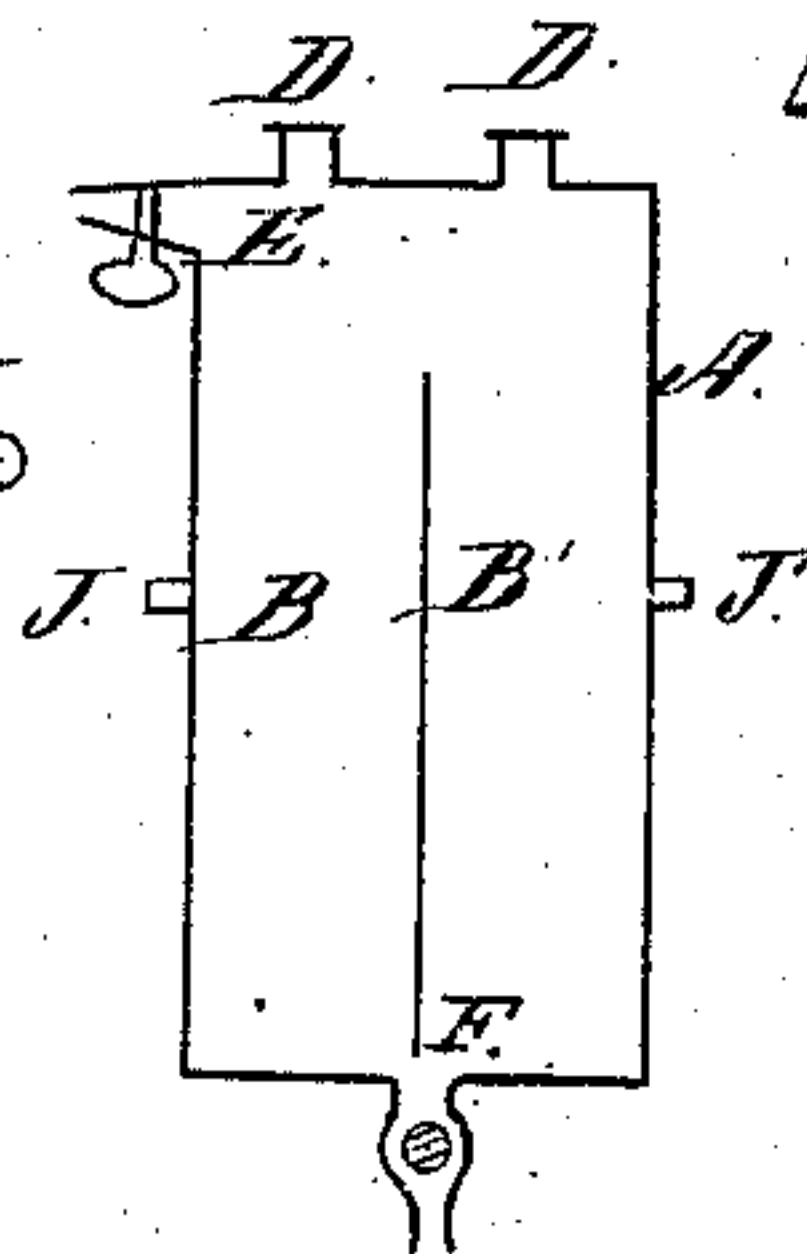
*Fig. 2.*



*Fig. 4.*

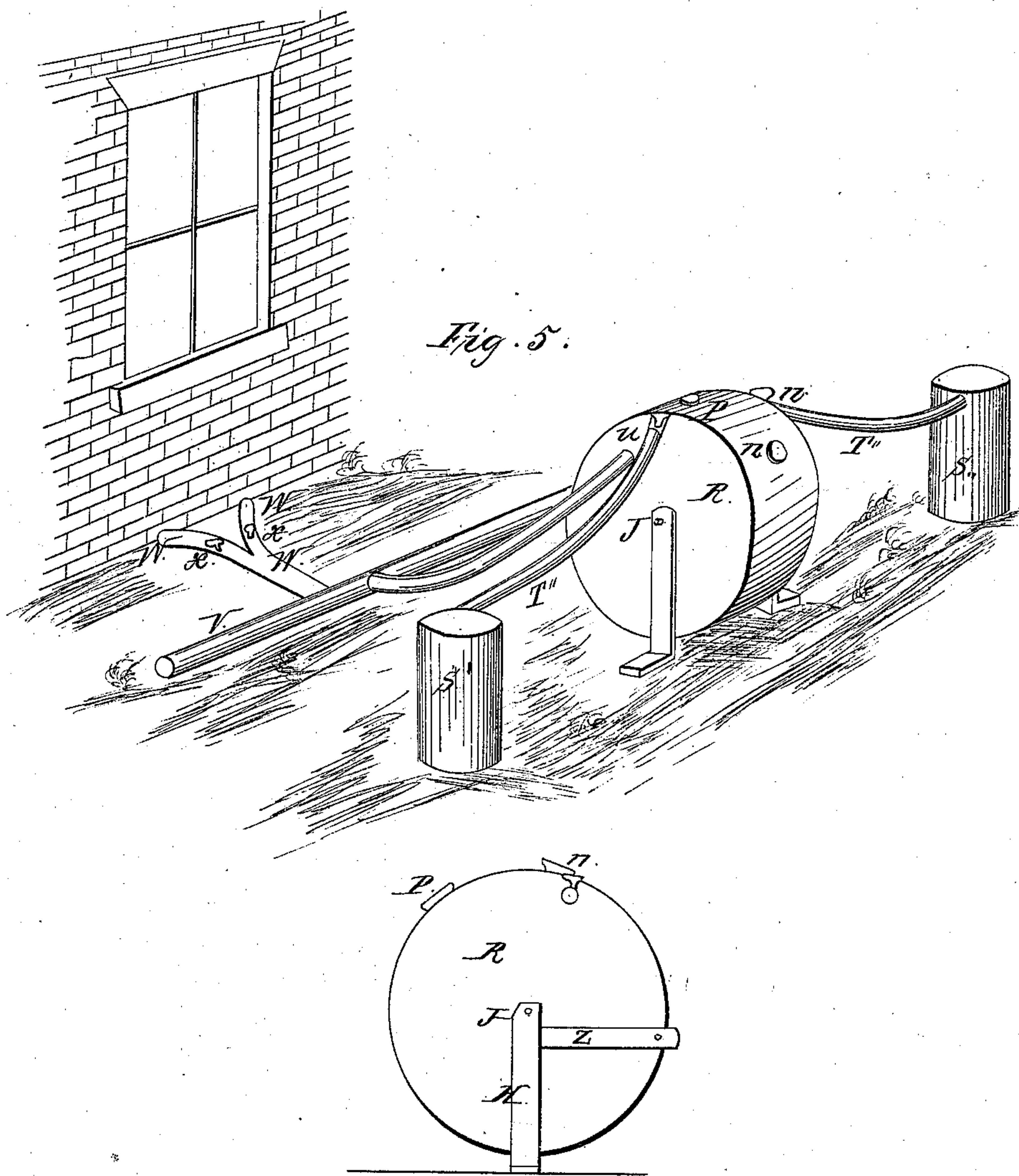


*Fig. 3.*



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*No 81,653, Patented Sep. 1, 1868.*



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# UNITED STATES PATENT OFFICE

RUFUS LAPHAM, OF BOSTON, MASSACHUSETTS.

## IMPROVEMENT IN APPARATUS FOR EXTINGUISHING FIRES.

Specification forming part of Letters Patent No. **81,653**, dated September 1, 1868; antedated August 20, 1868.

*To all whom it may concern:*

Be it known that I, RUFUS LAPHAM, of the city of Boston, State of Massachusetts, have made new and useful Improvements in Apparatus for Extinguishing Fires; and I do hereby declare the following to be a full and exact description of the same, reference being had to the drawings that accompany and form a part of these specifications, in which—

Figure 1 represents a house on fire, with two of my machines in application—the one a portable, the other a stationary, one; Fig. 2, stationary apparatus, with compartments containing chemicals; Fig. 3, longitudinal bisecting of the style of Fig. 2, showing the position when being supplied with the chemicals; Fig. 4, one of my machines of different structure, being intended for a stationary one solely. Fig. 5 represents a stationary revolving reservoir, connected with two auxiliary gas-retorts, and supplied with pipes leading to various buildings.

Letter A, a reservoir with compartments B B', C being the dividing-partition; F, the outlet; J J, the bearings on which the reservoir rests, and is turned to position in Fig. 3; D D, the openings through which the substances from which the extinguishing gas or liquid is produced are to be supplied, the position being as in Fig. 3; E, an outlet for the acidulated water to be poured on the fire when it is thought preferable to use this instead of gas; F, escape-cock for gas when it is to be poured on the fire; G, a reservoir with an upper chamber or shelf, on which one of the chemicals is placed, and so arranged as to empty its contents into the main body of the reservoir, when desired, simply by turning it on its bearings; H, a frame, in which hangs the box or reservoir G, as illustrated in Fig. 4; K, the upper compartment of G; P and N, openings for inserting the chemicals; L, pipe with stop-cock F for letting off the gas.

On second sheet of drawings is represented one or more stationary retorts and rotating reservoirs, with pipes in the street, from which branches may lead to one or more buildings.

Letter R represents a retort or reservoir, hung on the bearings J J, on which it may be revolved. Within are two compartments, as in G on the first sheet of drawings, P' and N'

being the two supply-orifices; S S, stationary retorts, with screw-caps and pipes T T, with stop-cocks *u u*; V, street-pipe; W W, branches to pipe V, and may lead to the various rooms of the house, and be supplied with as many of the stop-cocks *x*, and at such points, as may be advisable; Z, an arm sustained by the frame H, with an opening at *i*, into which enters a short pin projecting from the side of the retort R. This keeps R stationary.

The nature of my invention relates to placing a reservoir of a chemical fire-extinguishing agent, or materials for generating such, in some suitable, out-of-the-way place, and connecting therewith conducting-pipes leading to one or more buildings, said pipes having branches leading to the different compartments of the building, or terminating outside, so that short hose may be used, if more safe or convenient; and, further, in the use of auxiliary retorts in the vicinity of, and to supply, the main reservoir.

The manner of rendering my invention applicable will be readily understood from the drawings. On Sheet 1, Fig. 3 shows the position of the reservoir A when at rest. The chemicals, being put in at D and D', will fall into B and B'. Whenever occasion calls for use the reservoir is turned on its bearings, as in Fig. 2, when the chemicals, brought in contact at *m*, will give off a gaseous antiphlogistic, which, through the cock F and pipe L, may be thrown upon the fire; or, if the relative situations of the fire and the reservoir A are such that the stream or jet cannot be made to reach the devouring flames, the reservoir may be taken from its frame or support, and carried upon a man's back, as in Fig. 1. My apparatus is also such that, should it be deemed advisable to throw a saline liquid upon the burning timbers of a building instead of gas, the leading-hose may be attached at E instead of F, and this is represented in the portable reservoir in Fig. 1.

In the arrangement exhibited on the second sheet of drawings, whenever a fire occurs in any of the buildings furnished with the branch pipes W, as soon as the inmates are out, the cocks *x* may be turned, the reservoir R turned on its bearings to give the chemicals opportunity to unite, and a stream of gas will fill



the room or house, extinguishing the fire as if by magic. When a supply of the fire-extinguishing gas is required additional to that in the reservoir R, one or more retorts, S, may be charged, and their auxiliary aid secured through the pipes T. The cocks *x* may be concealed and protected in a suitable box with lock, whose key shall be in keeping of the master of the house, or proper guardian of the building.

I do not claim any particular form of apparatus, nor particular chemical ingredients. Water acidulated with tartaric, sulphuric, or other acid should be used in one compartment of the retort or reservoir, and some carbonaceous substance — as, for instance, carbonate of soda—in the other, in proportion about four pounds of acid to seven gallons of water in one, and five pounds of soda in the other compartment. When these are brought in contact an anti-combustive gas is rapidly produced. When the gas is retained

in the retort, and the saline water from the cock E is thrown on the burning timbers, they are instantly covered with a non-combustible incrustation and the fire ceases.

What I claim as of my invention is—

1. A placed reservoir, containing and holding a chemical fire-extinguishing agent, or materials for readily generating such, when provided with pipes leading to one or more buildings, for the purposes specified.

2. The application of pipes to connect said reservoir with one or more buildings, and the various rooms of buildings, for the purposes set forth.

3. The auxiliary gas-generating retorts S, one or more, used in connection with the placed reservoir R, for the purposes specified.

RUFUS LAPHAM.

Witnesses:

FRANK A. NICHOLS,  
D. C. COLBY.