

No. 669,421.

Patented Mar. 5, 1901.

G. J. LUCE.
AUTOMATIC FIRE EXTINGUISHER.

(Application filed May 2, 1900.)

(No Model.)

Fig. 2.

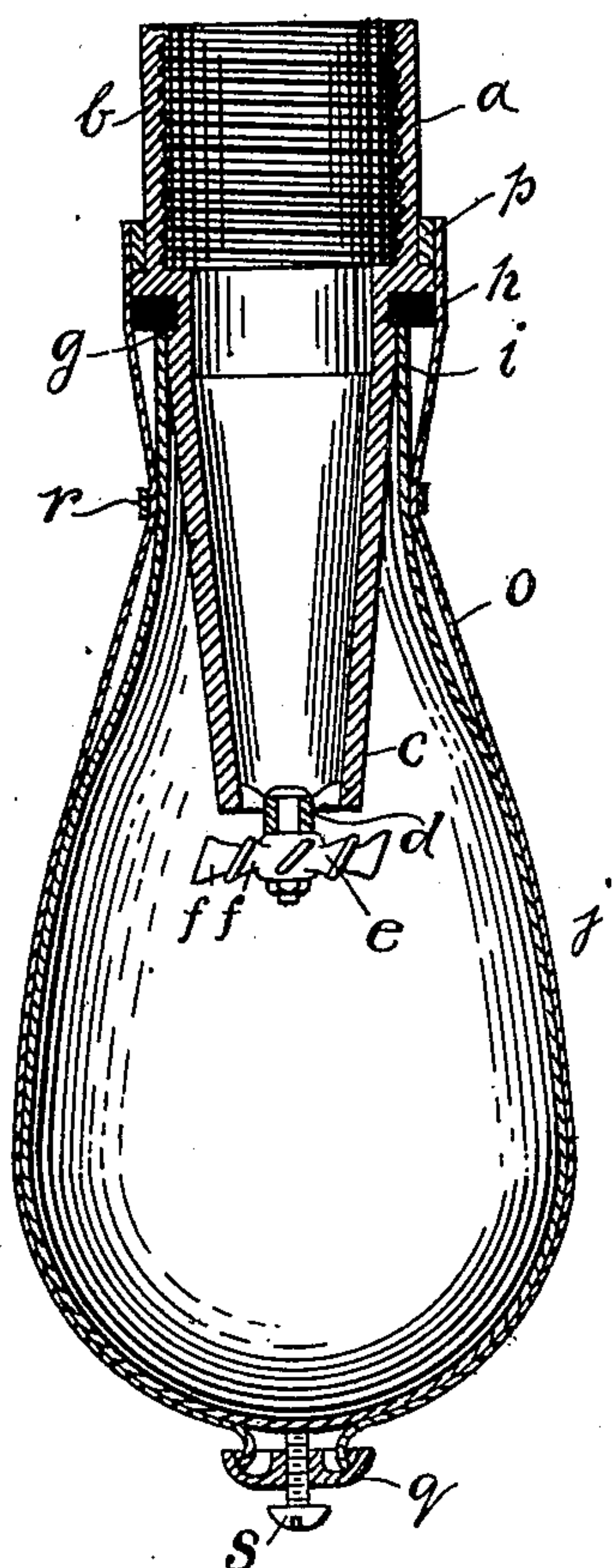
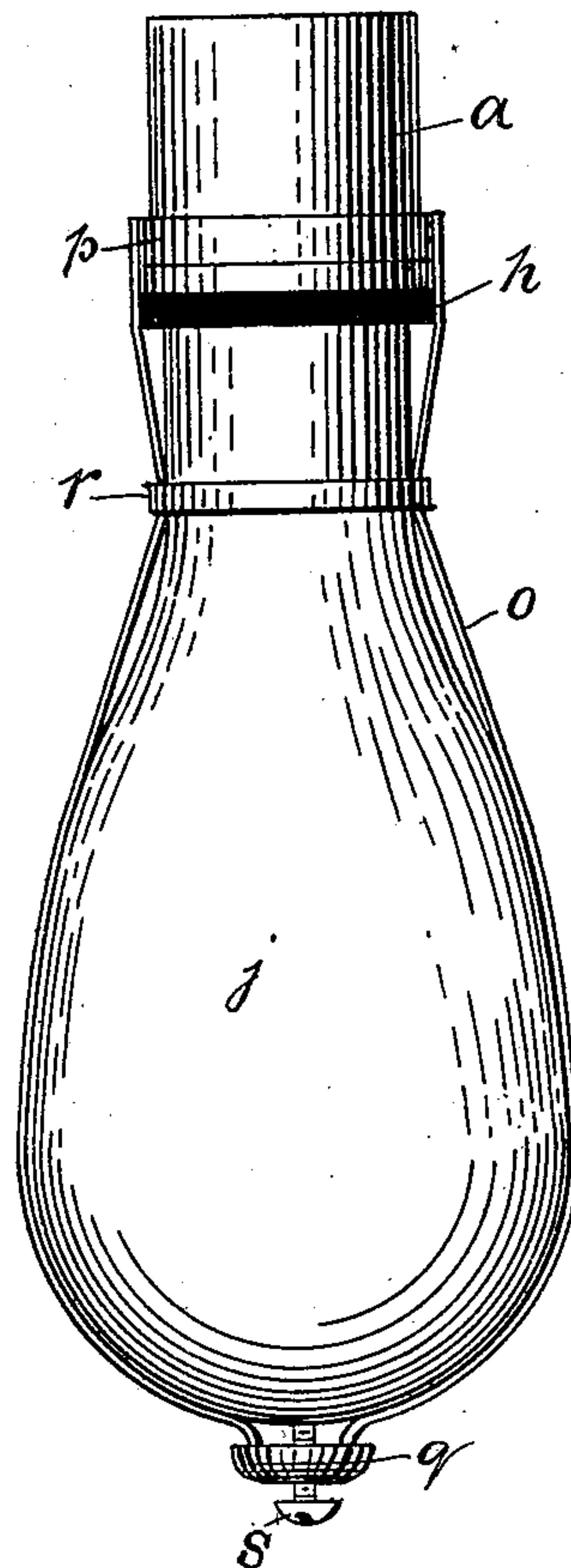


Fig. 1.



WITNESSES:

Kate Lockwood Nevins.

J. A. Daniels

INVENTOR.

Geo. J. Luce

BY

Francis M. Wright

ATTORNEY.

UNITED STATES PATENT OFFICE.

GEORGE J. LUCE, OF SAN FRANCISCO, CALIFORNIA.

AUTOMATIC FIRE-EXTINGUISHER.

SPECIFICATION forming part of Letters Patent No. 669,421, dated March 5, 1901.

Application filed May 2, 1900. Serial No. 15,170. (No model.)

To all whom it may concern:

Be it known that I, GEORGE J. LUCE, a citizen of the United States, residing at San Francisco, in the county of San Francisco and State of California, have invented certain new and useful Improvements in Automatic Fire-Extinguishers, of which the following is a specification.

My invention relates to improvements in automatic fire-extinguishers, the object of my invention being to provide a device of this character which shall be certain in its action, cheap and simple in construction, effective in its operation, and which shall not present an unsightly appearance in the room in which it is placed to guard against destruction by fire.

My invention therefore resides in the novel construction, combination, and arrangement of parts for the above ends hereinafter fully specified, and particularly pointed out in the claim.

In the accompanying drawings, Figure 1 is a side elevation of my device, and Fig. 2 is a central longitudinal section thereof.

Referring to the drawings, *a* represents a short cylindrical pipe having an internal screw-thread *b*, adapted to screw on the end of a water-pipe projecting from the ceiling of the room which it is desired to protect. The pipe *a* terminates in a tapering nozzle *c*, open at its lower end and there supporting a bearing *d* for a sprinkler *e*, composed of radiating vanes *f*, arranged obliquely to the axis of the sprinkler. The effect of this arrangement will be that the water emerging from the nozzle *c* and impinging upon said vanes *f* will be projected upwardly and laterally to a considerable distance and thus will descend through the room in the form of a spray, thus more effectually reducing the temperature in the room and extinguishing the fire. Between the cylindrical portion *a* of the pipe and the tapering nozzle *c* is a groove *g*, in which is held a rubber gasket *h*. Against the under side of this gasket is held the mouth *i* of a shell *j*, said shell being preferably pear-shaped in form and when in position depending from the cylindrical portion *a* of the pipe, so that in shape it greatly resembles the incandescent lamp in common use. This

shell may be made either of highly-polished metal or of glass and will thus present an appearance rather ornamental than otherwise. It will normally be filled with water which has passed through the mouth of the nozzle *c*, and to prevent the escape of water from the said shell I provide means for pressing the shell against the rubber gasket. These comprise thin flexible metallic strips *o*, extending down the sides of the shell *j* diametrically opposite to each other, the upper ends being connected with a band *p*, surrounding the pipe *a*, the lower end of said strips *o* being connected to a fusible button *q*. A second band *r* is provided for holding the strips snugly against the neck of the shell *j*. In order to force the shell with a powerful pressure against the rubber gasket and make a water-tight joint at the mouth of the shell, the fusible button *q* is threaded and receives a screw *s*, which when screwed against the bottom of the shell will press said shell upwardly and make a water-tight joint at the mouth thereof.

A rise of temperature in the room due to a fire will melt the fusible button and will thus release the connection between the shell and the pipe *a*. The weight of said shell and the pressure of water therein will force it away from the pipe and the shell will fall down, and the water will then emerge from nozzle *c* against the sprinkler and will be distributed in a fine spray over a large surface.

I claim—

In an automatic fire-extinguisher, the combination of a pipe having an annular shoulder, and extended beyond said shoulder to form a tapering nozzle, a bearing supported at the end of said nozzle, a sprinkler having its axis revolvably supported in said bearing parallel with said nozzle, and having radiating vanes *f* arranged obliquely to the axis of the sprinkler, a rubber gasket on the pipe against the shoulder, a shell having a substantially cylindrical upper end fitting around said pipe, its edge abutting against said gasket, the lower portion of the shell being bulbous or pear-shaped, a ring around said pipe above said shoulder and retained on said pipe thereby, thin flexible metallic strips secured at their upper ends on said ring, a button of

fusible metal connecting the lower ends of
said strips, said lower ends so connected pass-
ing around the lower end of said shell, and
a band surrounding the upper portion of the
5 strips and fitting snugly around said upper
portion to maintain the strips in close prox-
imity to the neck, substantially as described.

In witness whereof I have hereunto set my
hand in the presence of two subscribing wit-
nesses.

GEO. J. LUCE.

Witnesses:

FRANCIS M. WRIGHT,
FLORENCE H. WIGAND.