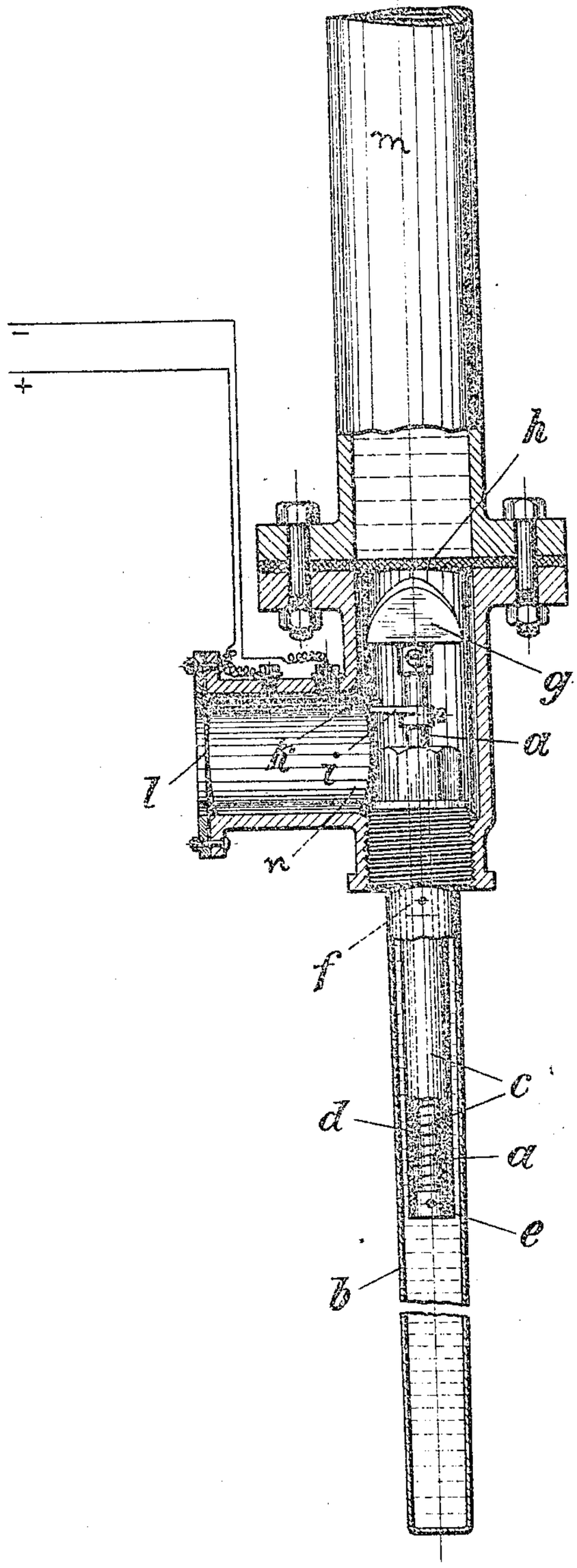
No. 843,847. PATENTED FEB. 12, 1907.

H. SANDVOSS.

RELEASE FOR FIRE EXTINGUISHING APPARATUS.

APPLICATION FILED JULY 13, 1906.



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UNITED STATES PATENT OFFICE.

HERMANN SANDVOSS, OF NEUSS, GERMANY.

RELEASE FOR FIRE-EXTINGUISHING APPARATUS.

No. 843,847. Specification of Letters Patent. Patented Feb. 12, 1907.

Application filed July 13, 1906. Serial No. 326,000.

To all whom it may concern:

Be it known that I, HERMANN SANDVOSS, Neuss-on-the-Rhine, Germany, a subject of the German Empire, have invented a new and useful Releasing Device for Fire-Extinguishing Apparatus, of which the following is a full and complete specification.

This invention relates to an automatic release for fire-extinguishing apparatus, which differs from others of its kind in its simplicity and absolute reliability in case of fire.

The accompanying drawing represents a longitudinal section of my improved releasing device.

A piston *a* plays in a cylinder *b*, filled with mercury or other suitable material. In order to insure the secure packing of the neck through which this piston passes and in order not to hamper the piston's movements by a packing-box, it is encircled by an elastic body *c*. Between pipe and piston there is a spiral spring *d*, which rests against the head *e*, to which the pipe is attached, and at the top against the screw end or other suitable point. On the piston *a* is fixed outside the knife-like body *g*, which may be of any shape.

The fire-extinguishing medium, such as water or gas, is delivered from a pipe *m*, the outlet end of which is normally closed by a diaphragm *h*. This diaphragm is adapted to be broke or punctured by cutter *g*. From pipe *m* the extinguishing medium flows through an elbow *n*, that also serves to couple cylinder *b* to pipe *m*. The outlet of elbow *n* is protected by a destructible covering *l*. If now the room in which the apparatus is fixed becomes heated, so that the mercury in the cylinder expands, the piston is expelled. The hose-like insulator or packing contracting, the knife *g* is forced against the disk *h*, which is impervious to and holds the extinguishing fluid in check, pierces it, and so allows the liquid to escape. The displaced piston could also be made to open a special reservoir containing a liquid capable of destroying the retaining-disk *h*. In order that simultaneously an alarm may be sounded, there is furnished an electric contact. In this case a spring *k*, connected with a wire, is actuated by a tappet *i* of stem *a* and closes a current before the retaining-disk *h* is destroyed.

As it does not appear advantageous when water or a mixture of water or similar liquid is used as extinguishing agent to let it stand in the pipes in case it may freeze, the electric current can be used to open a water-cock placed in a protected position, whereby the water is allowed to enter the pipes when the fire breaks out. The piston could also be employed to turn the fire-cock.

The moving of the water-cock can be effected if a powerful current be switched on and a solenoid actuated or by other suitable method. The knife-like instrument could also be replaced by a striking-pin which is kept compressed and freed direct by the piston, thereby destroying the retaining disk or wall. Finally, air can be pumped in the usual manner into the pipes to retain the extinguishing fluid when it is not to remain in them. When the retaining wall or disk is broken, it is freed and the extinguisher allowed to escape.

Having now fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a controlling device for fire-extinguishers, a mercury-tube, an inclosed stem, a diaphragm, and means carried by the stem for breaking the diaphragm, substantially as specified.

2. In a controlling device for fire-extinguishers, a mercury-tube, an inclosed stem, a cutter carried thereby, and a diaphragm adapted to be engaged by the cutter, substantially as specified.

3. In a controlling device for fire-extinguishers, a mercury-tube, an inclosed stem, a flexible bag within the tube that embraces the stem, a cutter carried by the stem, and a diaphragm adapted to be engaged by the cutter, substantially as specified.

4. In a controlling device for fire-extinguishers, a mercury-tube, an inclosed stem, a diaphragm, means carried by the stem for breaking the diaphragm, and an alarm-contact controlled by the stem, substantially as specified.

Signed by me at Düsseldorf, Germany, this 26th day of June, 1906.

HERMANN SANDVOSS.

Witnesses:
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