

(No Model.)

B. D. STEVENS.  
LAMP EXTINGUISHER.

No. 403,896.

Patented May 21 1889.

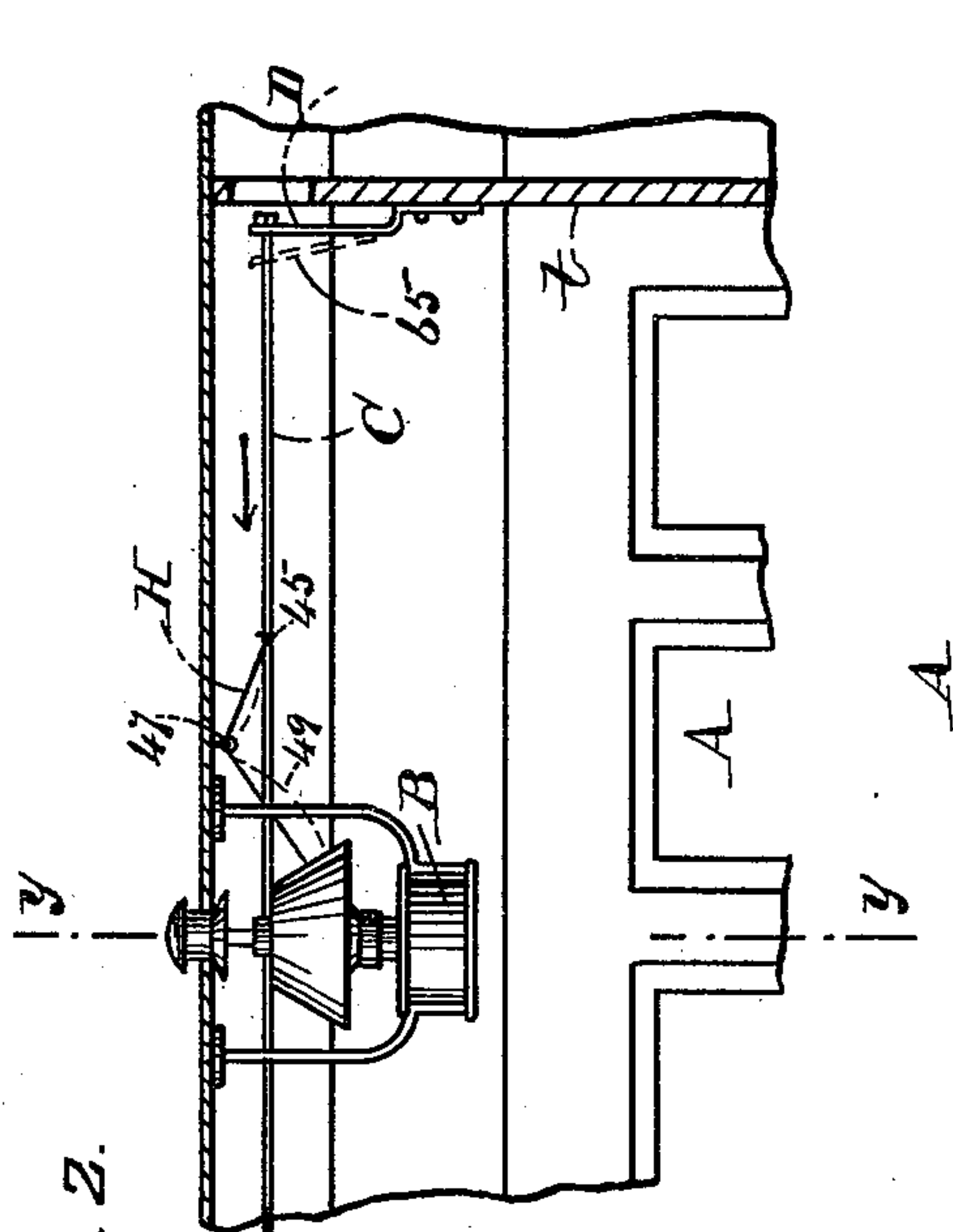


Fig. 2.

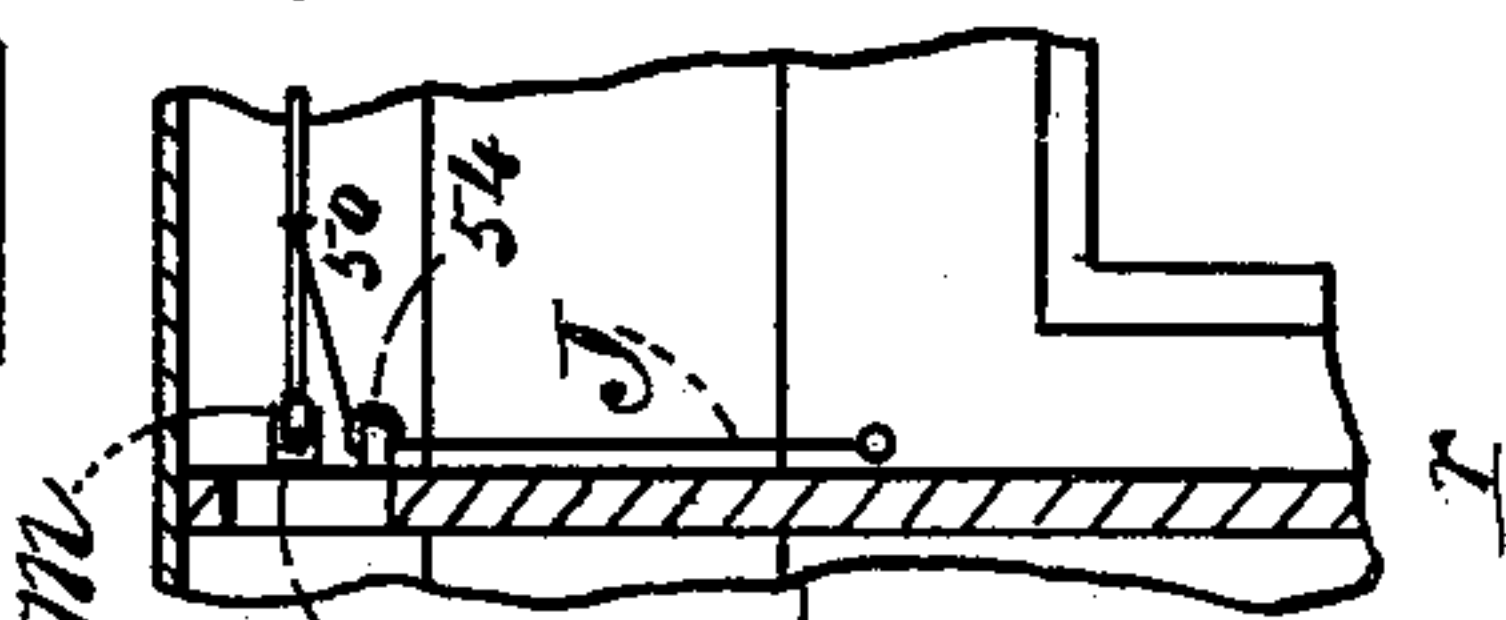


Fig. 3.

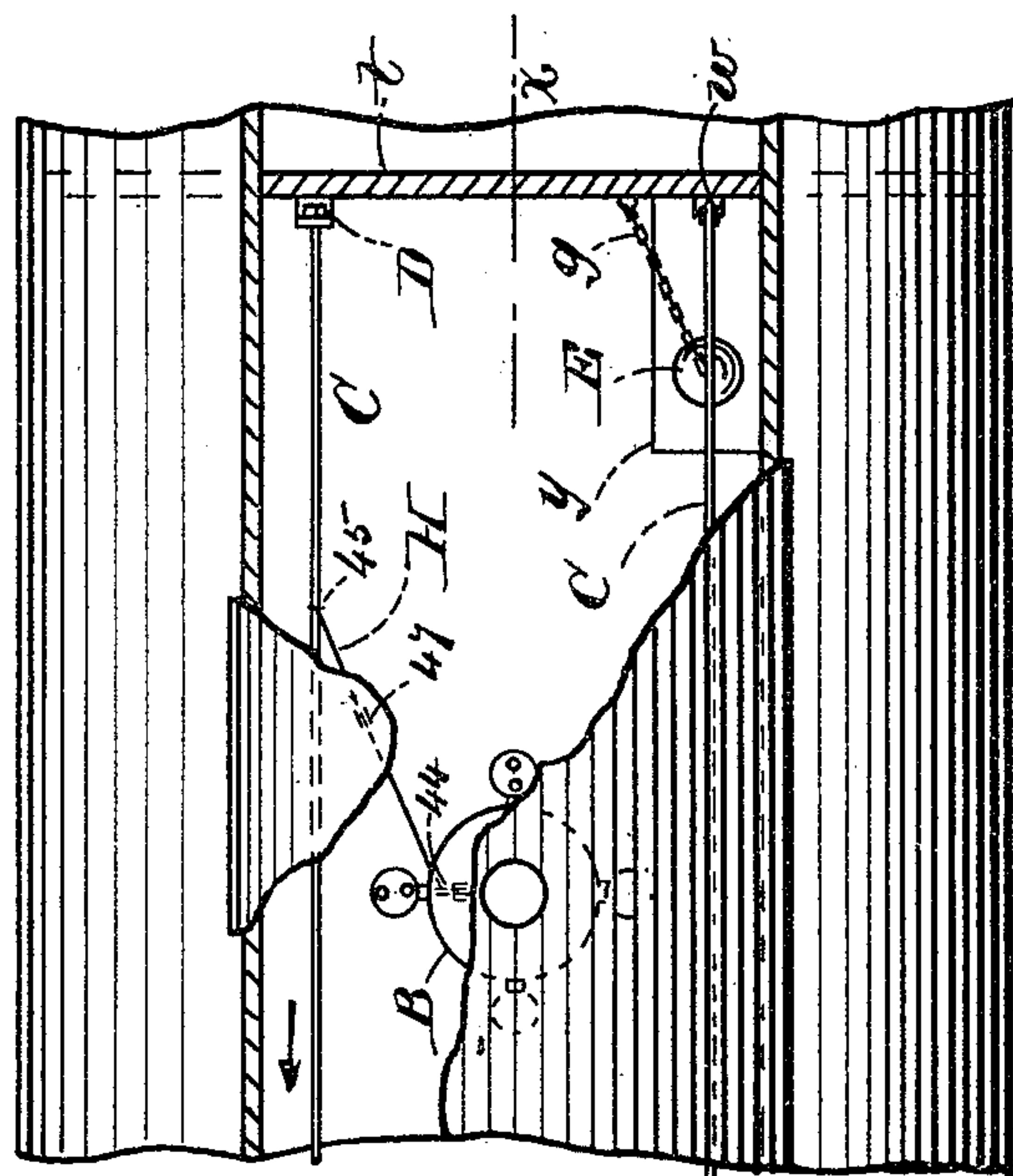
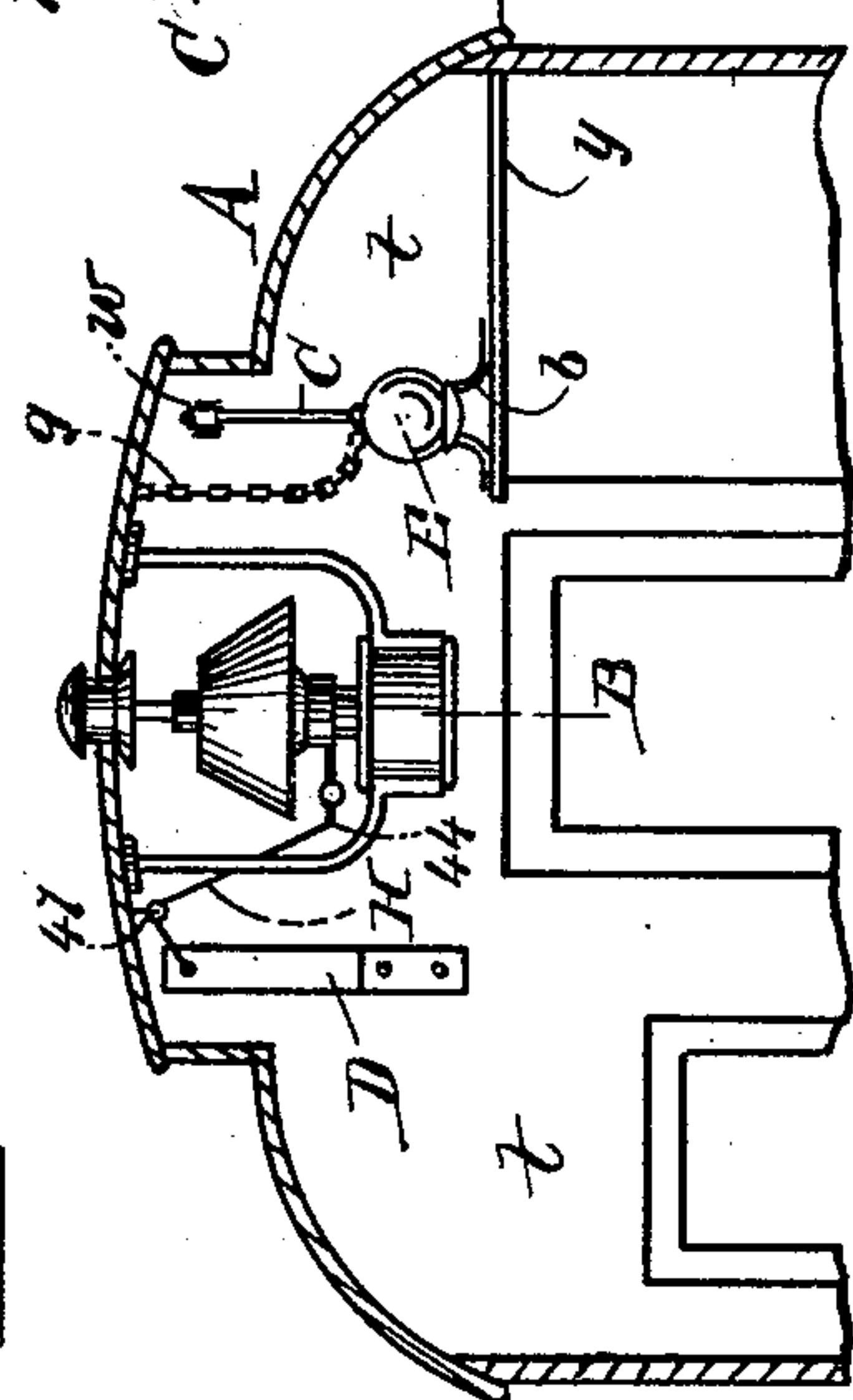


Fig. 1.

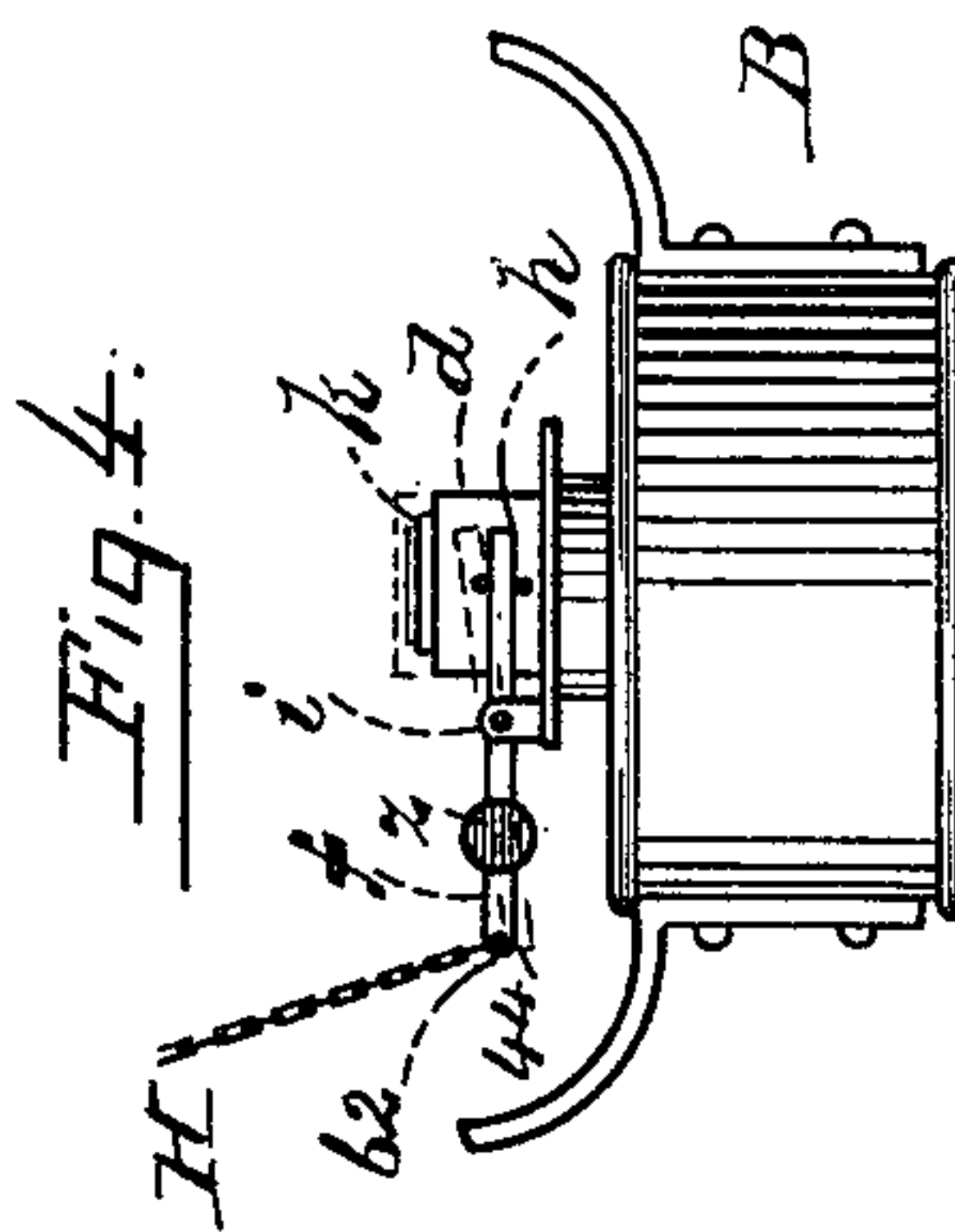
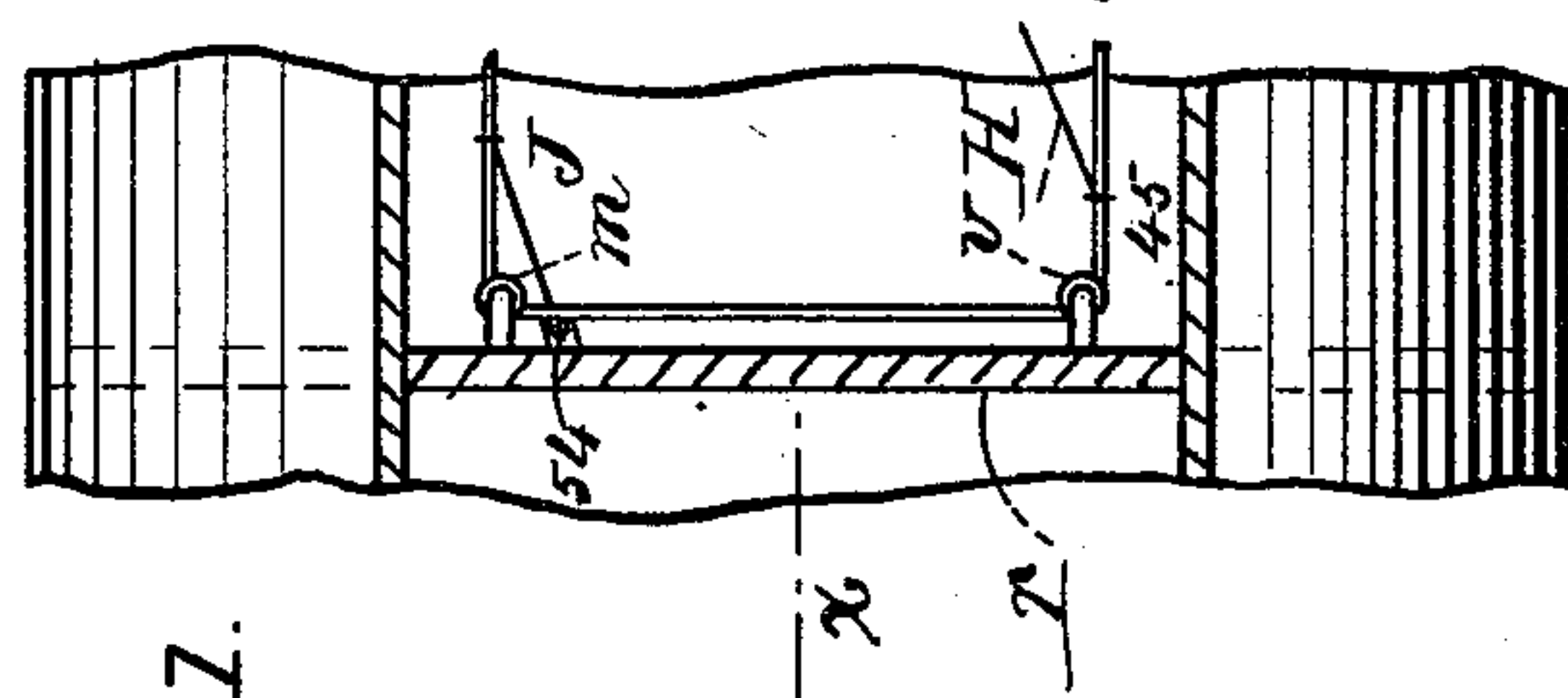


Fig. 4.

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# UNITED STATES PATENT OFFICE.

BENJAMIN D. STEVENS, OF BURLINGTON, VERMONT.

## LAMP-EXTINGUISHER.

SPECIFICATION forming part of Letters Patent No. 403,896, dated May 21, 1889.

Application filed March 26, 1888. Serial No. 268,487. (No model.)

*To all whom it may concern:*

Be it known that I, BENJAMIN D. STEVENS, of Burlington, in the county of Chittenden, State of Vermont, have invented a certain new and useful Improvement in Lamp-Extinguishers, of which the following is a description sufficiently full, clear, and exact to enable any person skilled in the art or science to which said invention appertains to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a top plan view, partly in section, showing a railway-car provided with my improvement; Fig. 2, a vertical longitudinal section on line *xx* in Fig. 1; Fig. 3, a vertical transverse section on line *yy* in Fig. 2, and Fig. 4 a side elevation of the lamp detached.

Like letters and figures of reference indicate corresponding parts in the different figures of the drawings.

My invention relates to that class of lamp-extinguishers which are employed for extinguishing the lamps in railway-cars to prevent the burning of the cars in case of an accident; and it consists in certain novel features, as hereinafter fully set forth and claimed, the object being to produce a simpler, cheaper, and more effective device of this character than is now in ordinary use.

The nature and operation of the improvement will be readily understood by all conversant with such matters from the following explanation.

In the drawings, *A* represents the railway-car, and *B* the lamp, both of which are of the ordinary form and construction, excepting as hereinafter specified, the lamp being secured, in the usual manner, in the upper portion or "monitor" of the body of the car, although, if preferred, it may be placed in any other suitable position.

A horizontally-arranged cord, *C*, is secured to a spring, *D*, which is attached to an end wall, *t*, of the car and extends to an opposite end wall, *r*, where it passes around guide-pulleys *m* *v* and is carried back to the wall *t*, where it passes over a pulley, *w*, and is secured to a gravitative weight or ball, *E*. This ball is placed in a shallow dish-shaped rest or stand, *b*, which may be mounted on any convenient support, in the present instance

being shown as disposed on the top or ceiling of the toilet-room *y*. The stand *b* is of such depth as to prevent the ball from escaping while the car is in its normal position on the rails; but when it is derailed or upset the ball will be thrown from the stand and actuate mechanism to extinguish the lamp, as hereinafter described. The lamp is provided with an ordinary wick-tube, *k*, on which a sleeve, *d*, is fitted to slide in such a manner that when raised above the tube the flame of the lamp will be extinguished.

A horizontally-arranged lever, *f*, is pivoted at *i* to the lamp, one of its ends being fitted to work between laterally-projecting pins *h* on the sleeve *d*, and the other provided with a weight, *z*. A chain, *H*, has one of its ends secured to the end of the lever *f*, as shown at 44, (see Fig. 4,) and the other to the cord *C* adjacent to the lamp *B*, as shown at 45, (see Figs. 1, 2, and 3,) said chain passing over a pulley, 47, secured to the upper portion of the car, and being held taut when the cord *C* is in its normal position, and permitted to slack, as shown by the dotted lines 49, when the ball *E* drops and pulls on said cord, as hereinafter described. A short cord, *J*, is connected with the cord *C* at 50 and passes over a pulley, 54, on the end wall, *r*, said short cord serving as a pull by which the cord *C* may be actuated independently of the ball *E*. A guard-chain, *g*, connected with the wall *t* is secured to the ball *E*, and serves to prevent the ball from falling to the floor or dropping onto the heads of the passengers when dislodged from the stand *b*. The guard-chain is of sufficient length to remain slack when the ball is in the stand *b*, and hence does not prevent the ball from falling from the stand in case of an accident to the car.

In the use of my improvement, when the car is accidentally overturned or partially overturned, the ball *E* will be thrown from the stand *b* and caused to pull on the cord *C* and slacken the chain *H*, thereby permitting the weight *z* on the lever *f* to drop and force the sleeve *d* upward over the wick-tube *k* and extinguish the lamp, in a manner that will be readily understood by all conversant with such matters without a more explicit description.

When the ball *E* is dislodged from its stand



*b* and pulls on the cord *C*, the spring *D* yields, as shown by the dotted lines 65, thus permitting said cord to be drawn in the direction of its arrows and the tension removed from the chain *H*, which thereupon drops into the position shown by the dotted lines 49, whereupon the gravitative weight *z* forces the tube *d* upward over the wick-tube and extinguishes the flame.

10 The chain *H* should be secured to the cord *C* at a point between the spring *D* and lamp *B*, in order that the tension on the chain may be removed when the cord is pulled by the ball *E*.

15 It will be understood that the cord *C* is of such length that it will remain taut when attached to the ball *E* and said ball is in the stand *b* without causing the spring *D* to yield but slightly.

20 The object in carrying the cord *C* around the pulleys *m v* and returning it to the wall *t* is to enable it to be connected by a chain, *H*, with a lamp at the opposite side of the car.

In the drawings but one lamp is shown; but it will be understood that all of the lamps in the car are to be connected by chains *H* to the cord *C* in substantially the same manner as described for the lamp *B*; also, that two or more cords *C*, each provided with a ball *E*, supported on a stand *b*, may be employed, if found necessary, without departing from the spirit of my invention.

30 Instead of the spring *D*, a ball of less weight than the ball *E* may be employed, the end of the cord represented as attached to the spring being in that case elongated and carried over a suitable pulley near the wall *t* to render it operative.

I do not confine myself to the use of the chains *H*, as cords or wires may be substituted therefor; neither do I confine myself to mounting the weight *z* on the lever *f*, as it may be placed in any other suitable position to perform its functions properly, or a spring used in its stead; nor to employing any specific extinguisher proper for the lamp, as instead of the sleeve *d* an ordinary hinged disk or disks adapted to smother and extinguish the flame may be employed, said disk or disks being of course connected by suitable intermediate mechanism with the chain *H*; nor strictly to the use of the cord *C*, as a chain or wire may be substituted therefor, if preferred. A rod may also be employed instead of said cord, said rod being fitted to slide or

be moved longitudinally in suitable bearings and connected with a chain or chains *H* and the ball *E*.

By pulling on the cord *J* the cord *C* may be actuated and all of the lamps in the car extinguished simultaneously without dislodging the ball *E*; but the pulley 54 for said cord may be omitted, if desired. The pulley 47 may also be omitted in some instances.

The chain *H* is provided with a hook, 62, for securing it to the lever *f*, thus rendering it readily detachable from said lever when necessary to remove the lamp.

Having thus explained my invention, what I claim is—

1. In a device for extinguishing lamps in a railway-car, the combination of the following instrumentalities, to wit: a lamp disposed within said car and provided with an extinguisher proper, a cord mounted adjacent to said lamp, a tension-spring connected with said cord, a chain connecting said cord with the extinguisher proper of the lamp, a weight for actuating the extinguisher proper when said chain is slackened, and a pull connected with said cord, whereby the cord may be moved to slacken the chain and extinguish the lamp, substantially as described.

2. In a device for extinguishing lamps in a railway-car, the combination of the following instrumentalities, to wit: a lamp disposed within said car and provided with an extinguisher proper, a cord mounted adjacent to said lamp, a tension-spring connected with said cord, a gravitative bail connected with said cord, a stand or support for said ball, from which it may be dislodged by the overturning or partial overturning of the car, a chain connecting said cord with the extinguisher proper of the lamp, a weight for actuating the extinguisher proper when said chain is slackened, and a guide pulley or pulleys for the cord, substantially as set forth.

3. In a device for extinguishing the lamps in a railway-car, the cord *C*, spring *D*, pulleys *m v w*, ball *E*, stand *b*, lamp *B*, provided with the pivoted lever *f* and sleeve *d*, weight *z*, for actuating said lever, and the chain *H*, connecting said lever and the cord *C*, combined and arranged to operate substantially as set forth.

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Witnesses:

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O. M. SHAW.