

(No Model.)

2 Sheets—Sheet 1.

I. KITSEE.
FIRE EXTINGUISHER.

No. 260,993.

Patented July 11, 1882.

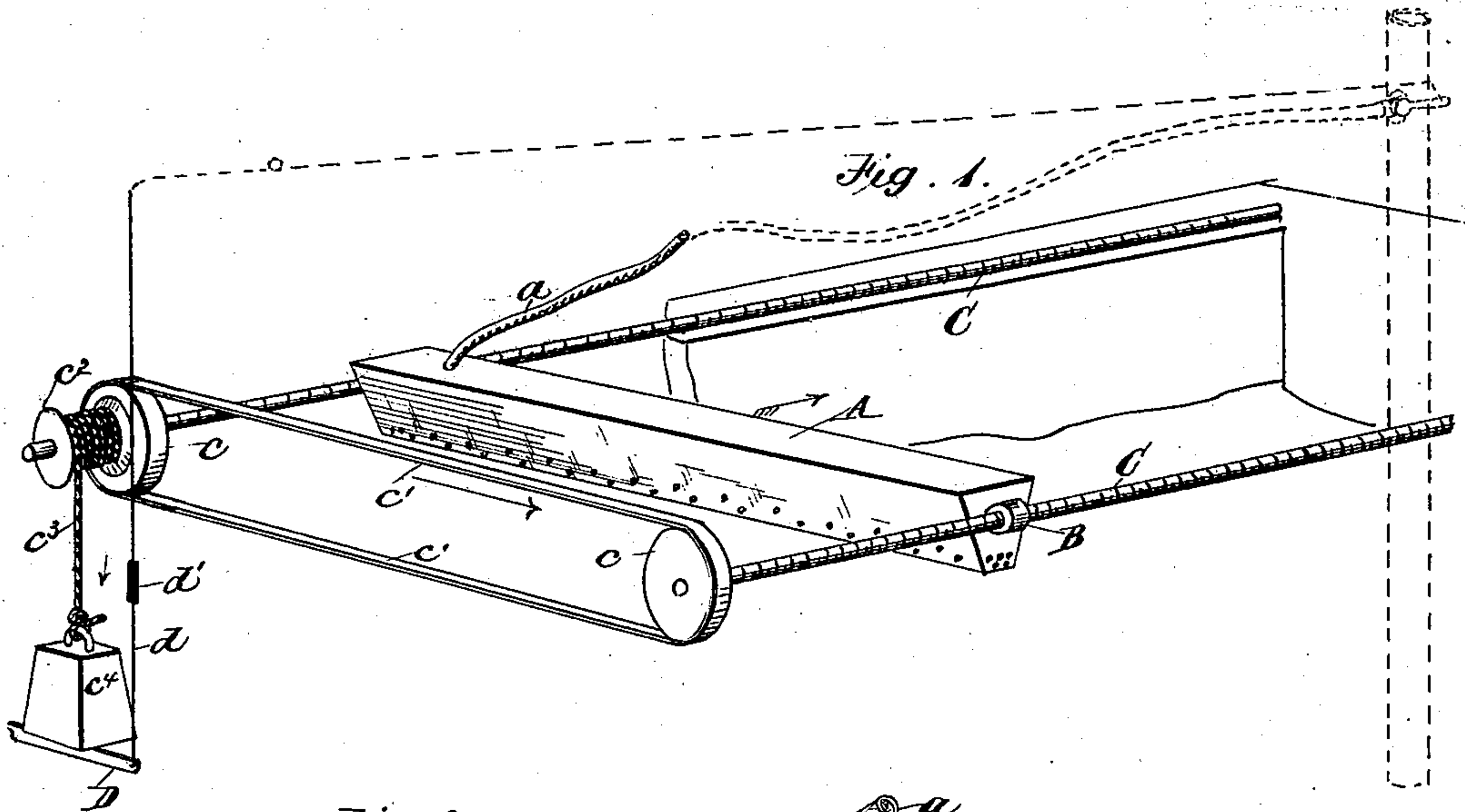


Fig. 2.

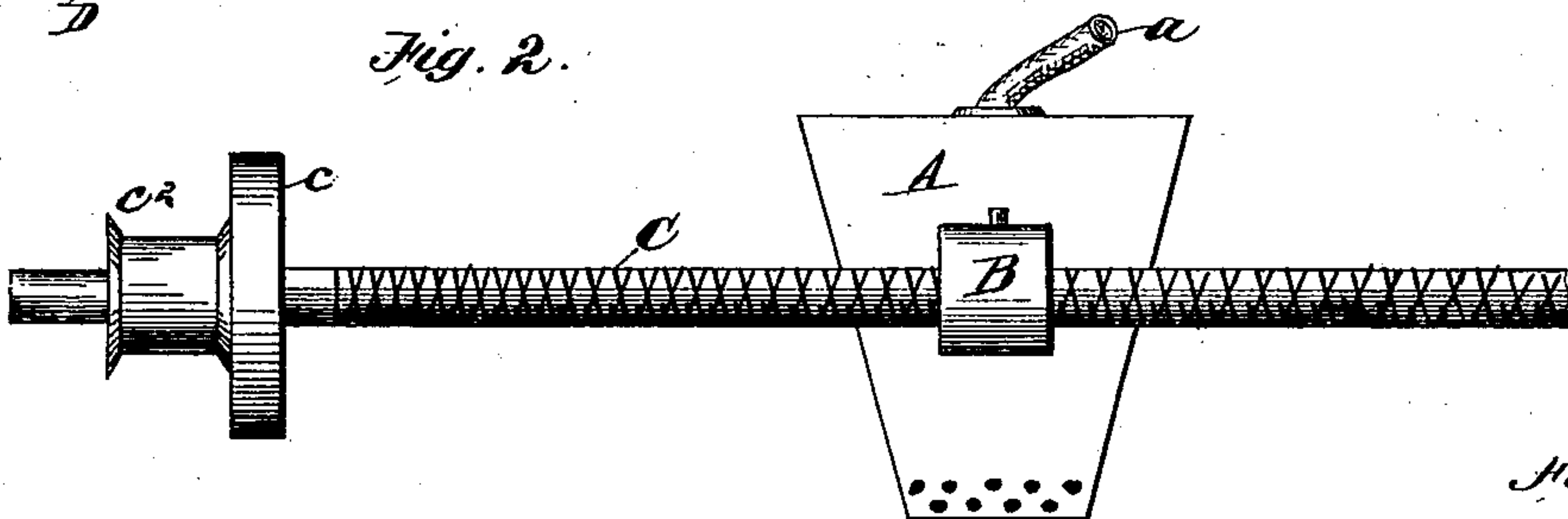


Fig. 4.

Fig. 3.

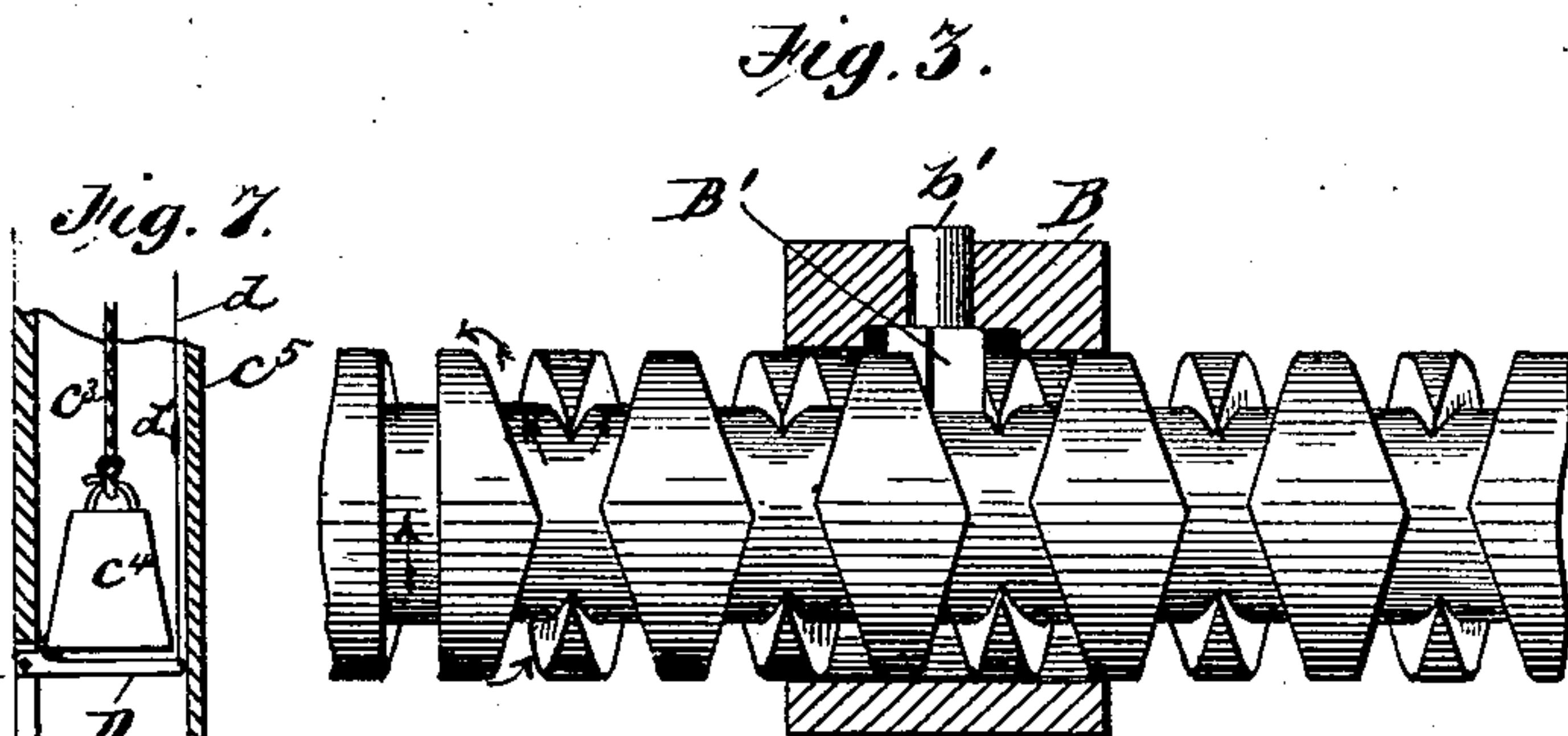


Fig. 7.

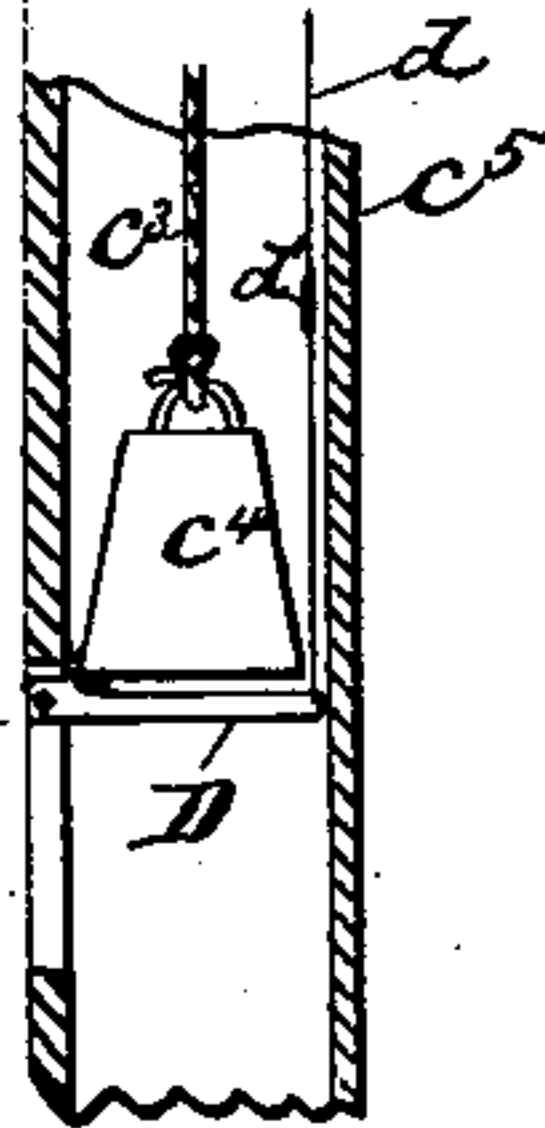


Fig. 5.

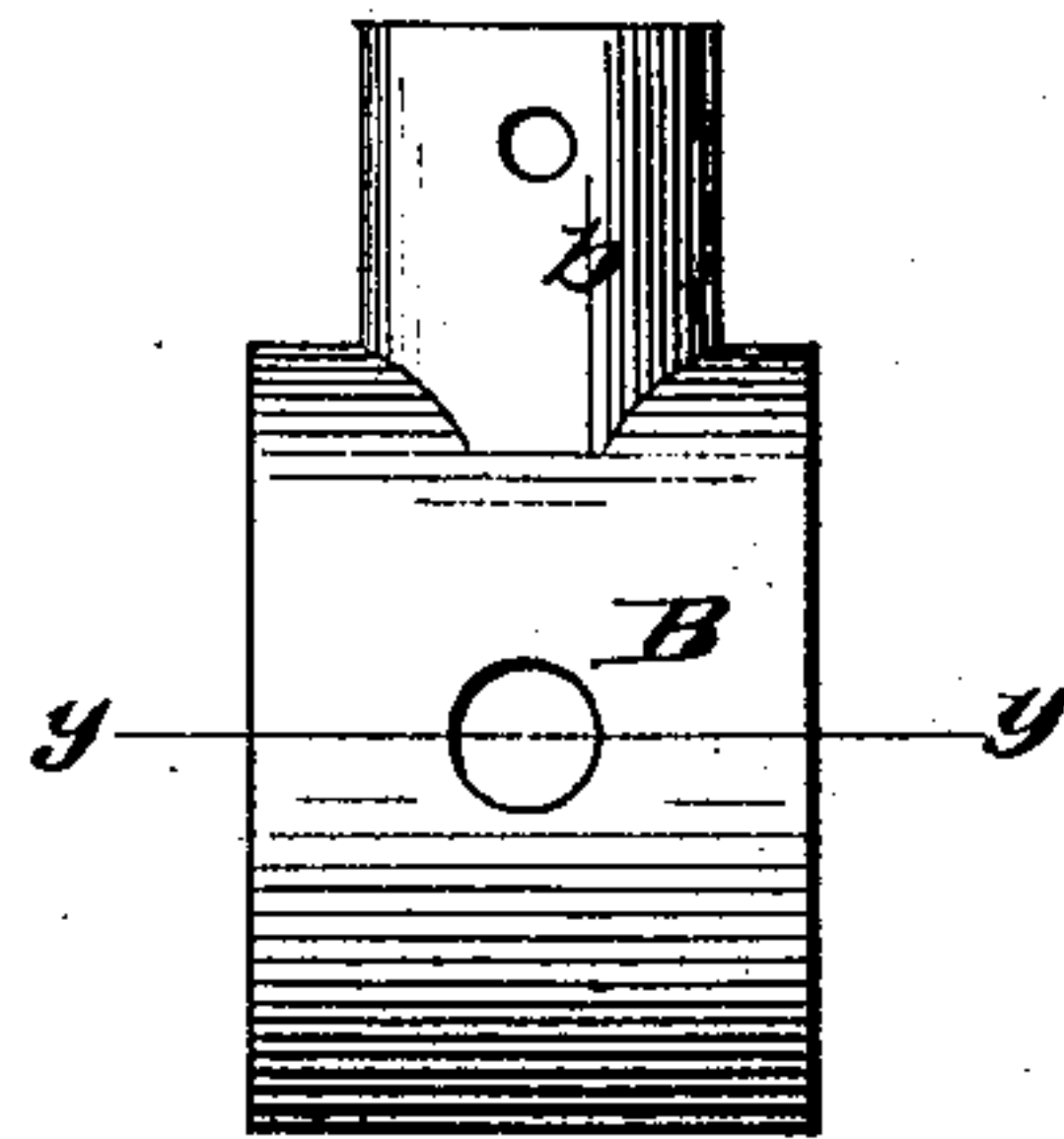
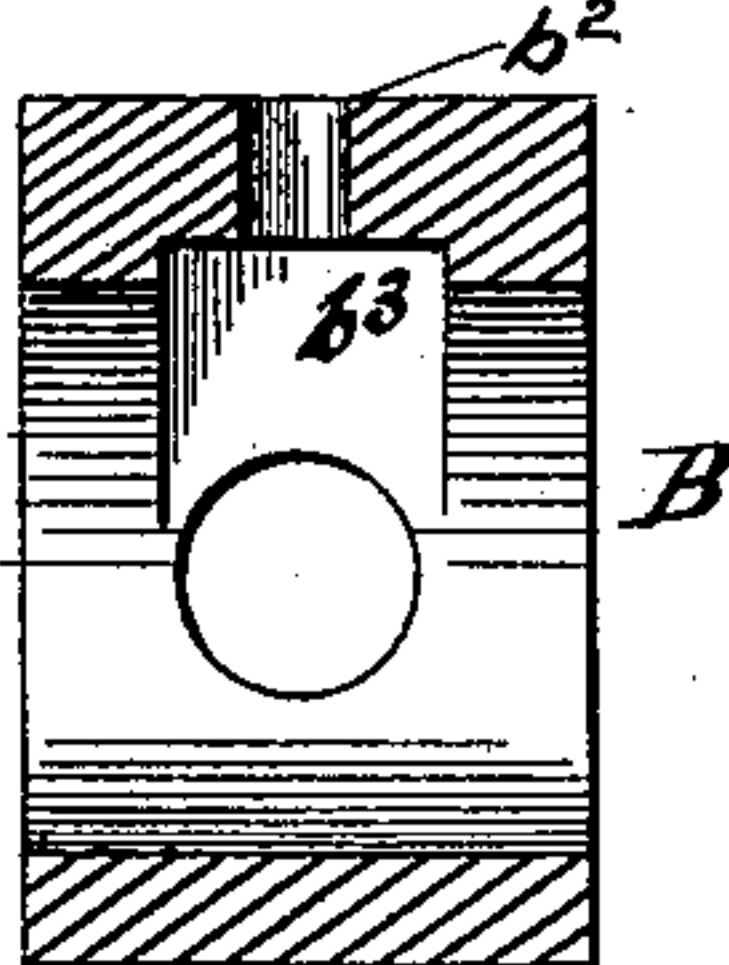
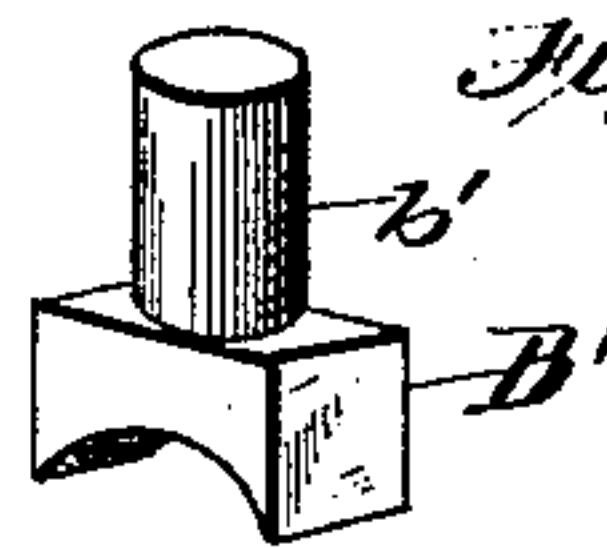


Fig. 6.



Attest,
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Inventor,
Idor Kitsee,
by his attorneys
Abraham & Mayer.

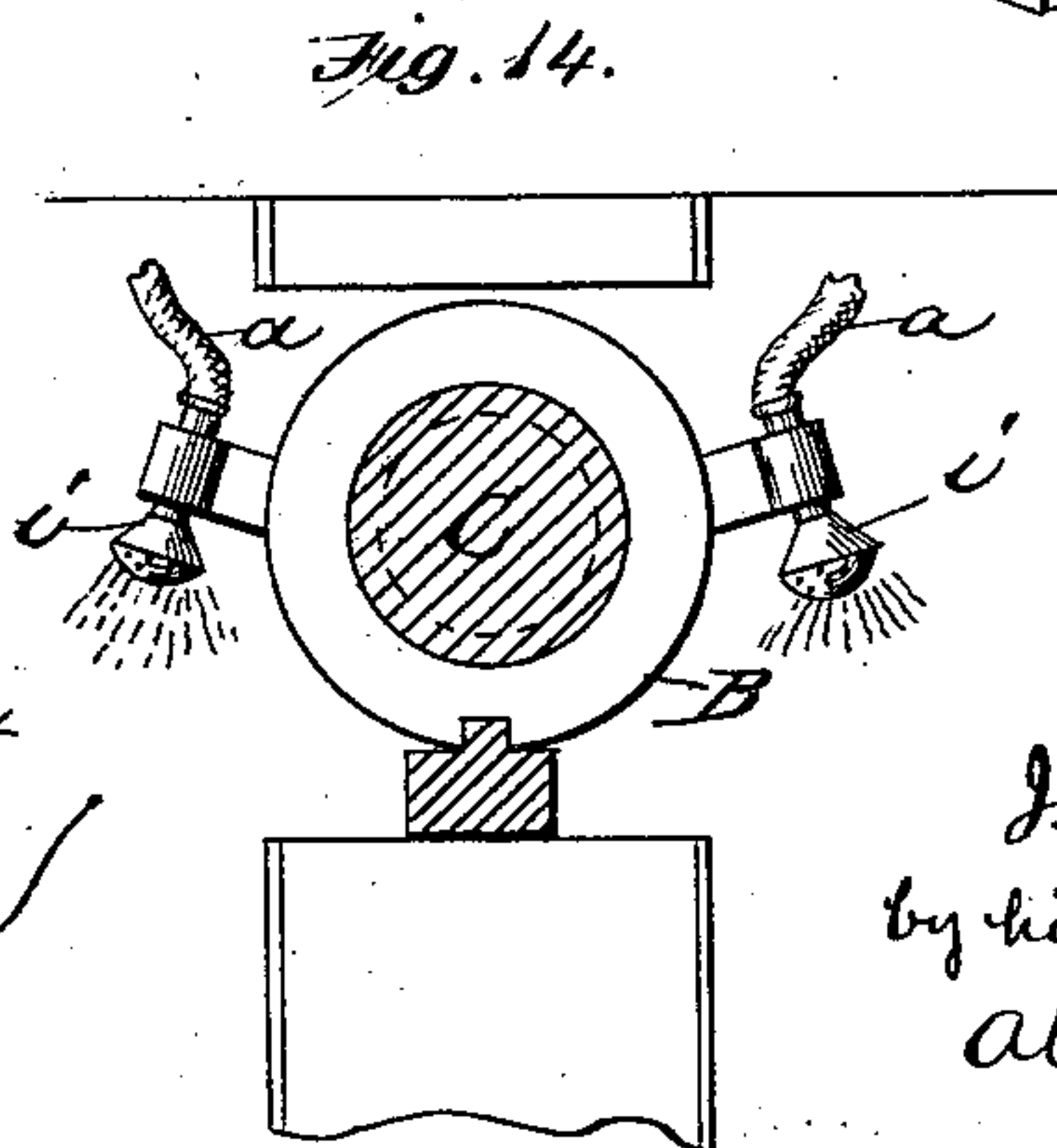
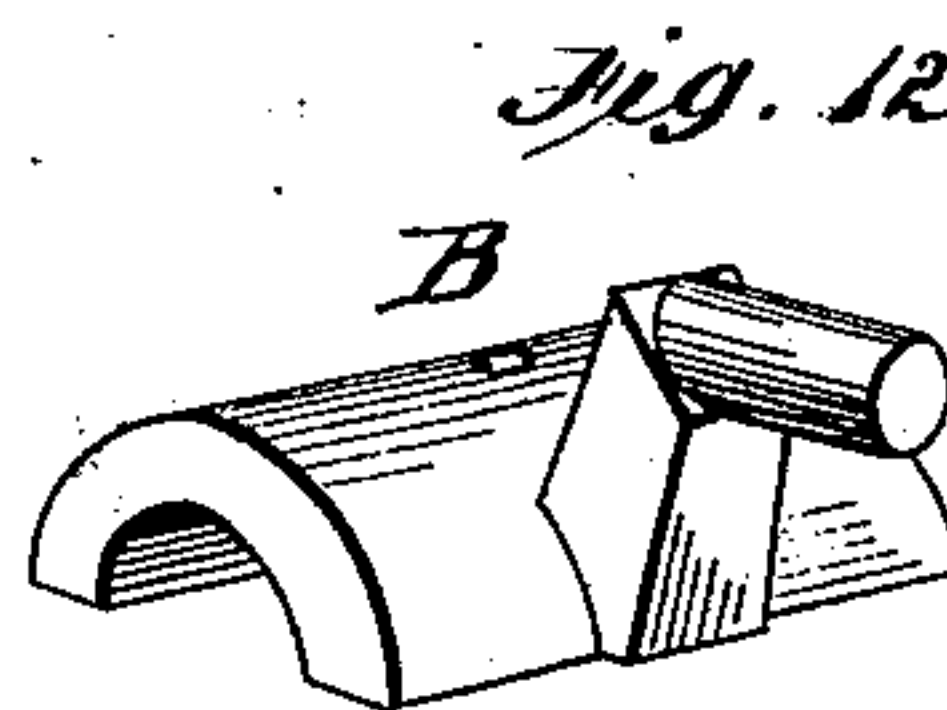
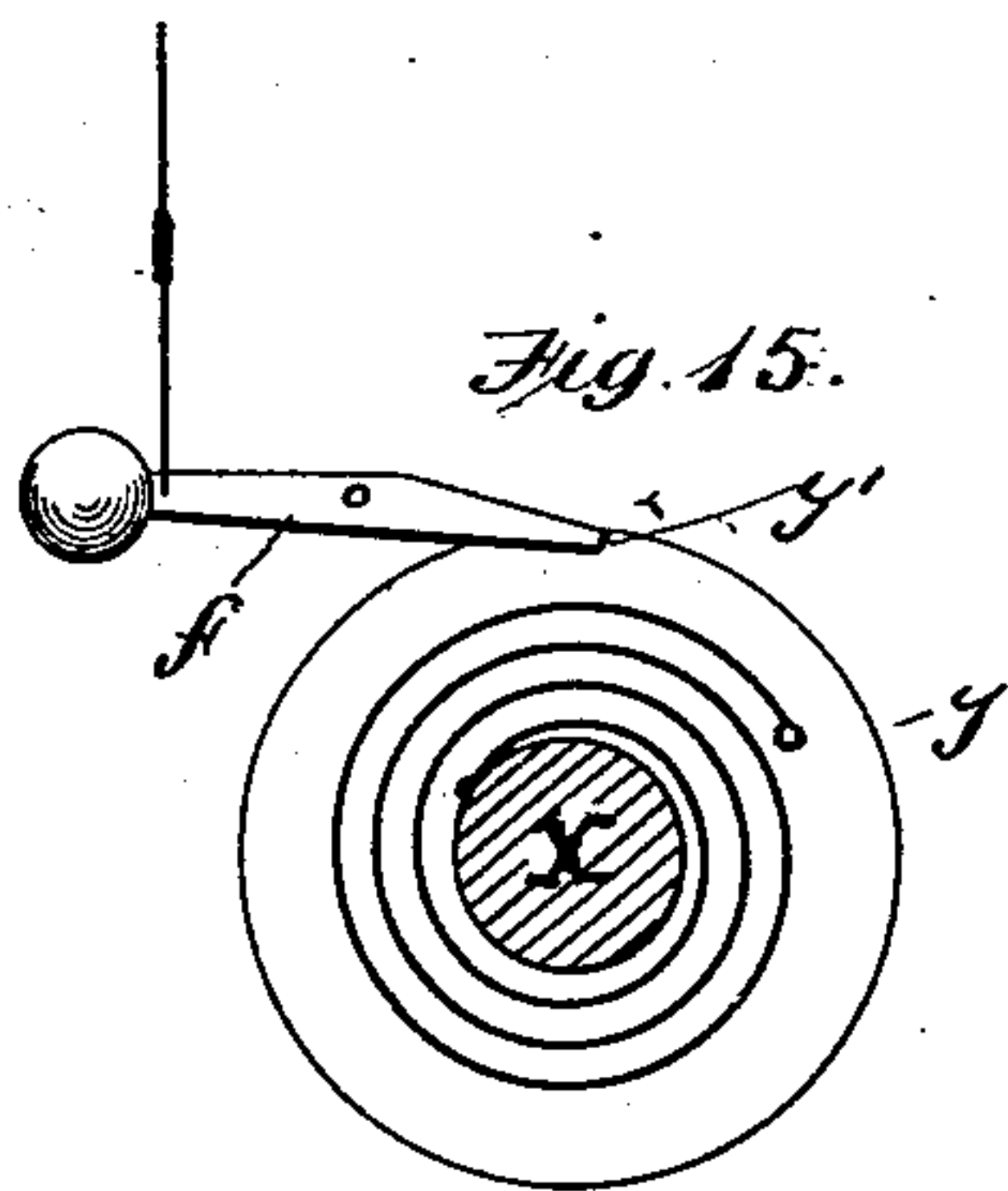
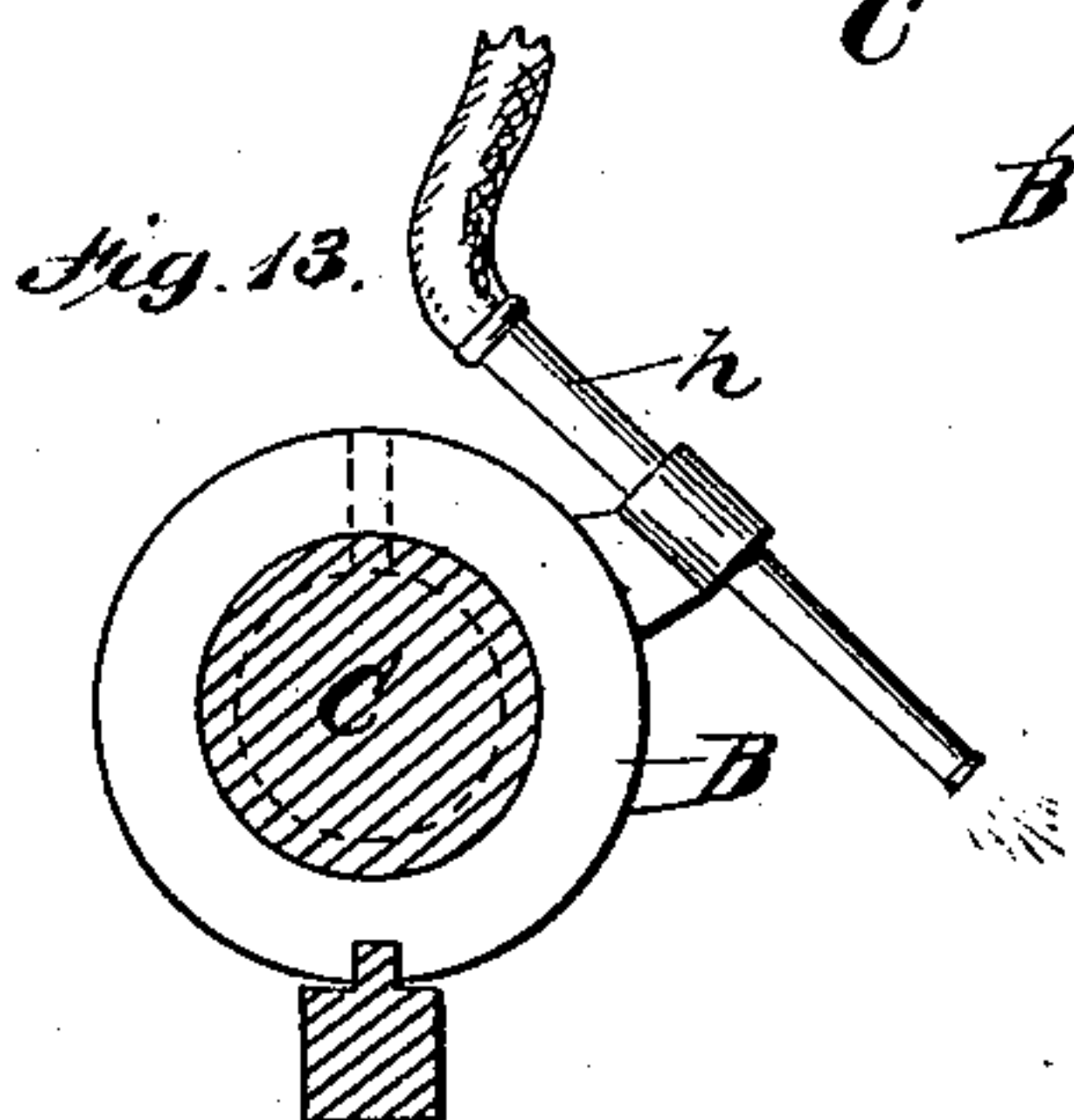
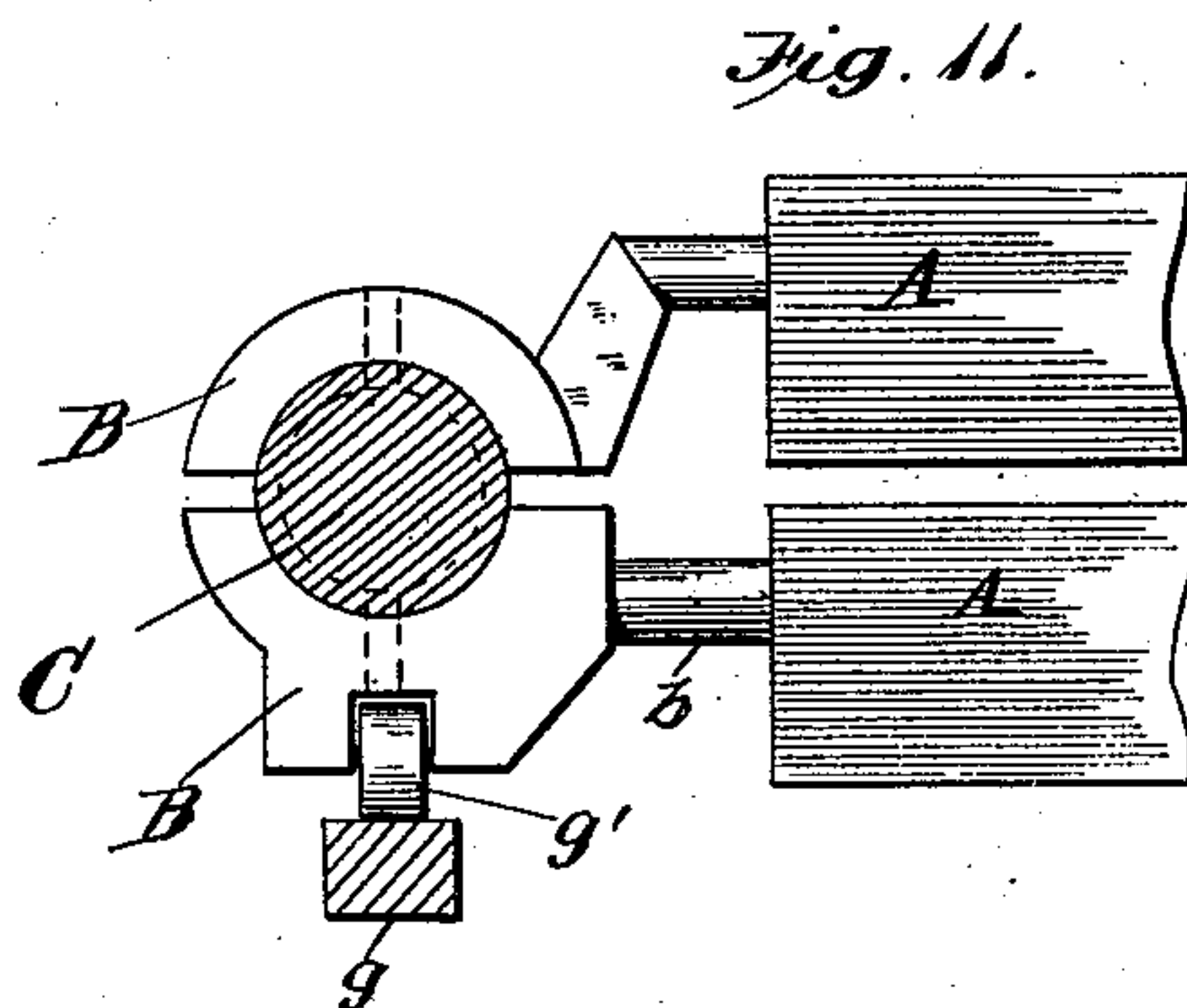
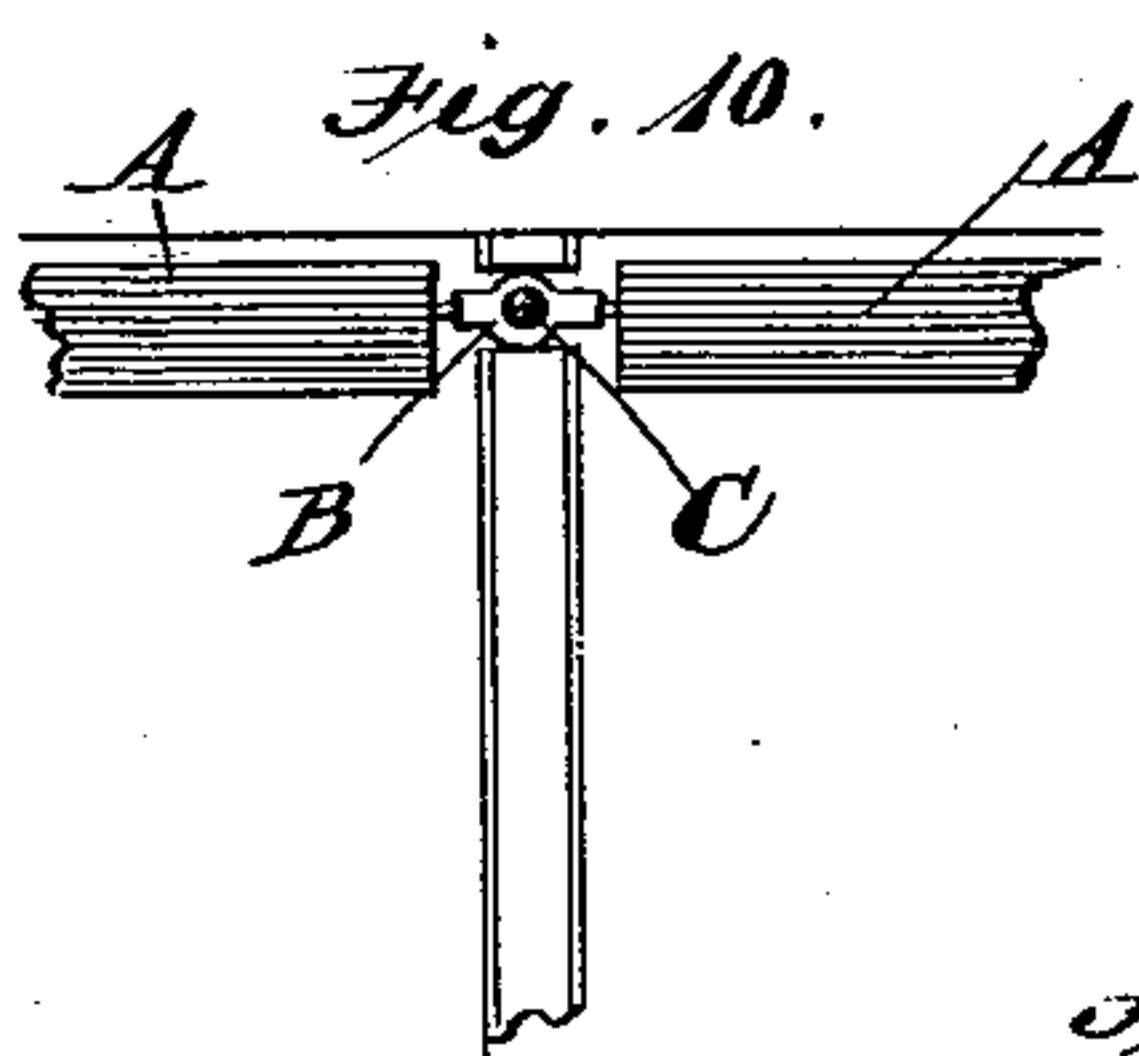
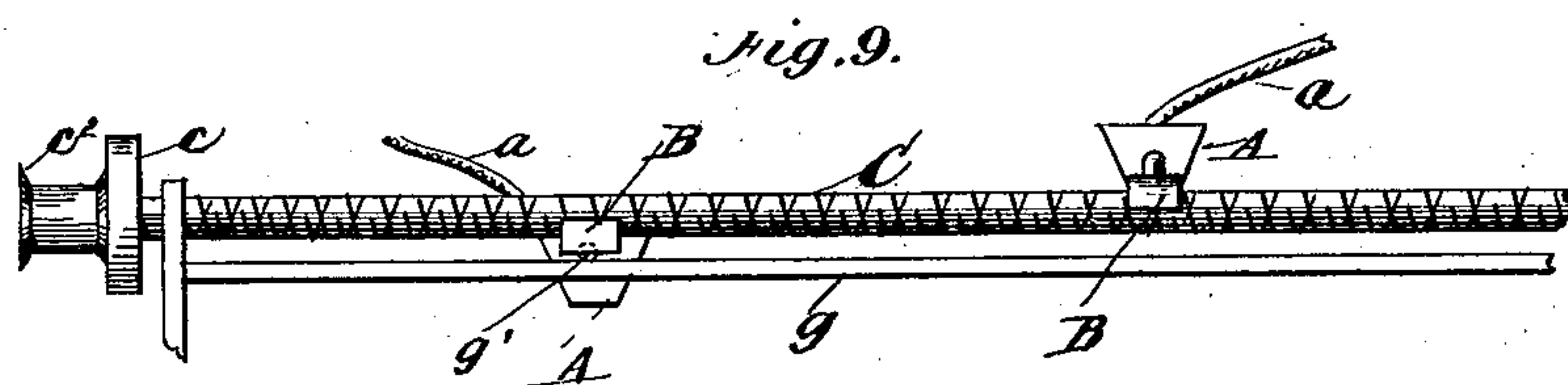
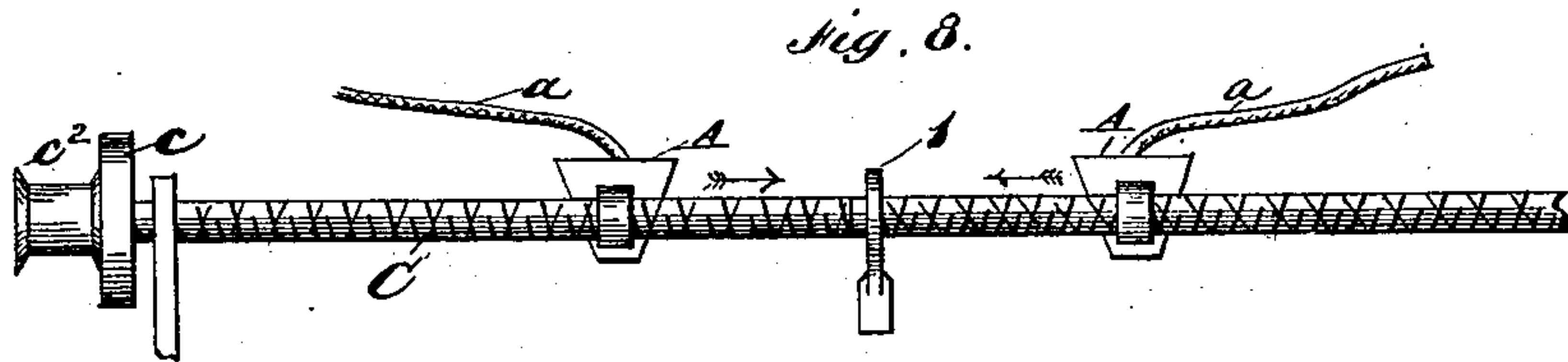
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by his attorneys
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UNITED STATES PATENT OFFICE.

ISIDOR KITSEE, OF CINCINNATI, OHIO.

FIRE-EXTINGUISHER.

SPECIFICATION forming part of Letters Patent No. 260,993, dated July 11, 1832.

Application filed January 17, 1882. (No model.)

To all whom it may concern:

Be it known that I, ISIDOR KITSEE, a citizen of the United States, residing at Cincinnati, in the county of Hamilton and State of Ohio, have invented a new and useful Improvement in Fire-Extinguishers, of which the following is a specification.

In the drawings, Figure 1 is a perspective view of my improved automatic traveling sprinkler or fire-extinguisher in position for operation, together with the means for operating the same. Fig. 2 is an end elevation of the water-trough, showing said trough in place upon one of the operating-screws. Fig. 3 is a view showing a portion of the screw enlarged, together with a section of the movable trough bearings or box. Figs. 4 and 5 represent views of one of the trough bearings or boxes detached from its operating-screw. Fig. 6 represents a perspective view of the pin or tooth that takes into the operating-screw. Fig. 7 represents a detail view of the weight for operating the screws and the means for holding the same elevated when the device is at rest. Figs. 8 and 9 are views showing the manner of arranging and operating two troughs upon and by the same screws. Fig. 10 is a view showing my invention as applied to two adjoining rooms, wherein two troughs have at one of their ends a common bearing in the same box. Figs. 11 and 12 are detail views of the trough-bearings shown in Fig. 9. Figs. 13 and 14 are views showing the movable box or bearings provided with a pipe and rose-sprinkler, respectively. Fig. 15 represents a modified form of the means for operating the screw.

Similar letters of reference in the several drawings denote the same parts.

This invention has for its object the provision of water troughs or sprinklers for extinguishing fire in buildings, said troughs or sprinklers hung upon suitable movable bearings and adapted to be set in motion by heat, and when so set in motion the troughs or sprinklers shall move back and forth in the rooms wherein they are located, whereby the floors and walls of said rooms are thoroughly and quickly saturated and the fire therein extinguished.

To the accomplishment of the above-named purpose, it consists in a trough or troughs provided with eduction-perforations (or perfo-

rated pipe may be substituted for the troughs without departing from the scope of my invention) and adapted to be fed from any suitable supply system, said trough or troughs extending a required distance across a room and adapted to be moved along said room.

I will describe my invention as operated by means of the mechanism shown in the accompanying drawings, which consists in screws having right-and-left-hand threads, said screws located near the ceiling at each side of the room and provided with boxes that support and carry the ends of the troughs, said screws being arranged to be rotated in unison and in the same direction, substantially as hereinafter described.

It further consists in suitable weights connected to the screws by cords and pulleys, said weights arranged to be kept in elevated position by cords or wires having fusible joints, the melting of which joints releases the weight and sets the screws in motion, substantially as described, and for the purpose hereinafter set forth.

It further consists in the means employed to enable two troughs arranged upon the same screws to travel back and forth from end to end of the screws, passing each other at or about the center of the room, substantially as hereinafter described; and it finally consists in the combination of parts, as hereinafter described and set forth.

Referring to the drawings, A represents a trough or troughs, provided at each end with lugs that rest within the projecting parts *b* of the boxes B. The troughs A are provided with flexible pipe *a*, that extends to a tank or water-feed, the valves, faucets, or stop-cocks that control the supply being opened by the same means that operate the troughs, as hereinafter described.

C C are screws that extend along the room, preferably in suitable recesses in the side walls, near the ceiling thereof, said screws being journaled in bearings at each end. The screws C have each a right-and-left-hand cut thread, as shown in Fig. 3, and are each provided at one of their ends with pulleys *c*, connected by a belt, *c'*. One of the screws is also provided with a drum, *c*², secured to the outer face of the pulley *c*, about which is wound a rope, *c*³, one end of which is attached to a weight, *c*⁴,

that moves up or down in a chute or case, c^5 , as shown in Fig. 7. The weight c^4 is normally kept raised by means of the cord or wire d , which cord or wire extends from the outer end of a small lever, D, upon which the weight rests, through the various rooms of the building, and is provided at different points with fusible joints d' .

The boxes B are not provided with screw-threads, the place of said thread being supplied by a single tooth or spur, B' , having an upward projection, b' , that fits into an aperture, b^2 , at the top of the box B, and at the upper side thereof is a rectangular recess, b^3 , the purpose of said recess being to allow the tooth to freely turn in its bearing b^2 . It will be readily understood that when the screws are rotated the boxes B will travel from one end to the other. Then the tooth B' , taking into the opposite cut thread on the screw, will cause said box to move back, thus carrying the trough to and fro.

In Figs. 8 and 9 I have shown two troughs in place upon the same screws. In Fig. 8 the troughs A move to the center 1 of the screws C, then back to the ends, the troughs being in the same plane. In Fig. 9 the troughs are placed upon their bearings in such manner as to enable them to pass each other, one above the other. When so used and placed the boxes B are split in halves longitudinally, as shown, each of said halves being provided with a tooth or spur, B' . The upper one of the boxes rests upon the screw, while the lower rests upon a rail or track, g , a small friction-wheel, g' , being interposed between the rail and box. Figs. 11 and 12 show detail views of this form.

When desired, the partition between two rooms may be cut away at the top, a screw, C, and movable box, B, placed in such cut-away part, and the end of the troughs in the two adjoining rooms connected to such box, as shown in Fig. 10.

The troughs A or perforated pipe may also be dispensed with, if desired, in which case a pipe, h , as shown in Fig. 13, or a rose-sprinkler, as shown in Fig. 14 at i , may be attached to lugs formed on the side of the movable box B.

Fig. 15 shows a flat, bent, or coiled spring, attached at one end to a stud, x , fixed to the partition, and at the other end to a disk, y , fixed

to the shaft or screw C, and provided at one edge with a tooth or detent, y' , into which a weighted pawl, f , takes. The spring is kept under tension by the pawl, said pawl being held in place by the cord d , having fusible joints d' , as shown, and when said cord is parted by heat the outer weighted end of the lever or pawl f drops, thus releasing the spring, which then operates to rotate the screws.

It will be understood that short screws C may be used, if desired, it not being necessary that the screws extend the entire length of the room, it only being necessary that the threads of such screws be cut right and left. Any system of sounding-alarm may be connected with the within device.

What I claim is—

1. In a fire-extinguisher, a distributor combined with means whereby it is caused to automatically move forward and backward upon suitable supports, substantially as set forth.

2. In a fire-extinguisher, one or more distributors, each provided with a flexible supply-pipe, a , combined with means whereby the distributors are adapted to move back and forth, substantially as described.

3. In a fire-extinguisher, the traveling distributors A, in combination with screws C, having each right-and-left-hand threads, and means whereby said screws are arranged to rotate in unison, substantially as described.

4. In a fire-extinguisher, the-right-and-left hand cut screws C, in combination with the boxes B, provided with teeth B' and means for communicating motion to said screws, substantially as described.

5. In a fire-extinguisher, the combination of the screws C and distributors adapted to travel on said screws, pulleys c , belt c' , with the drum c^2 , cord c^3 , and weight c^4 , substantially as described.

6. In a traveling fire-extinguisher, the combination of the screws C, having pulleys c , belt c' , drum c^2 , cord c^3 , and weight c^4 , with the lever D and cord d , having fusible joints d' , substantially as described.

ISIDOR KITSEE.

Witnesses:

GEORGE SIEFKE,
W. C. FIEDELDEY.