

No. 658,419.

Patented Sept. 25, 1900.

W. E. ARCHER.

EXTINGUISHER FOR LAMPS OR THE LIKE.

(Application filed Aug. 2, 1899.)

(No Model.)

2 Sheets—Sheet 1.

FIG. 1

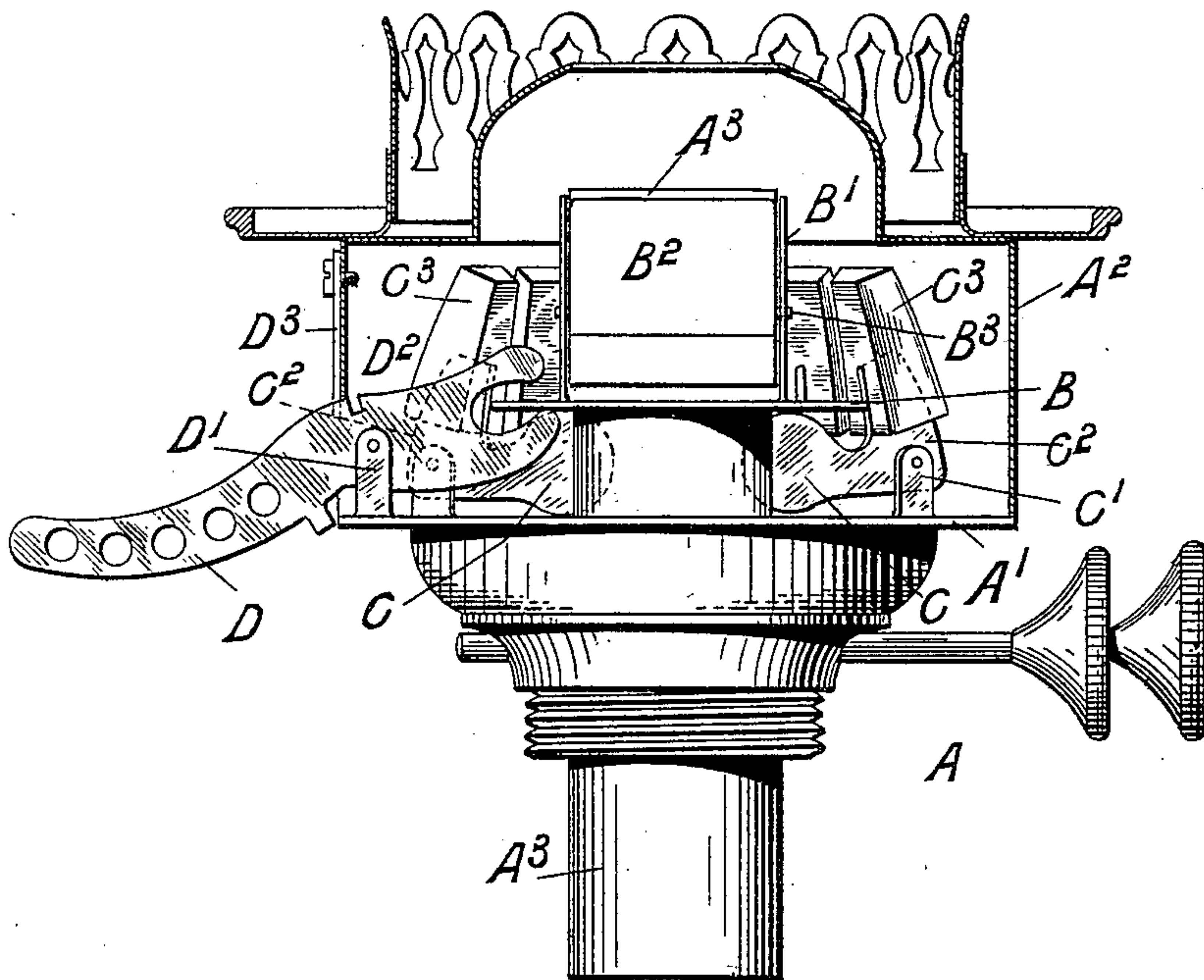
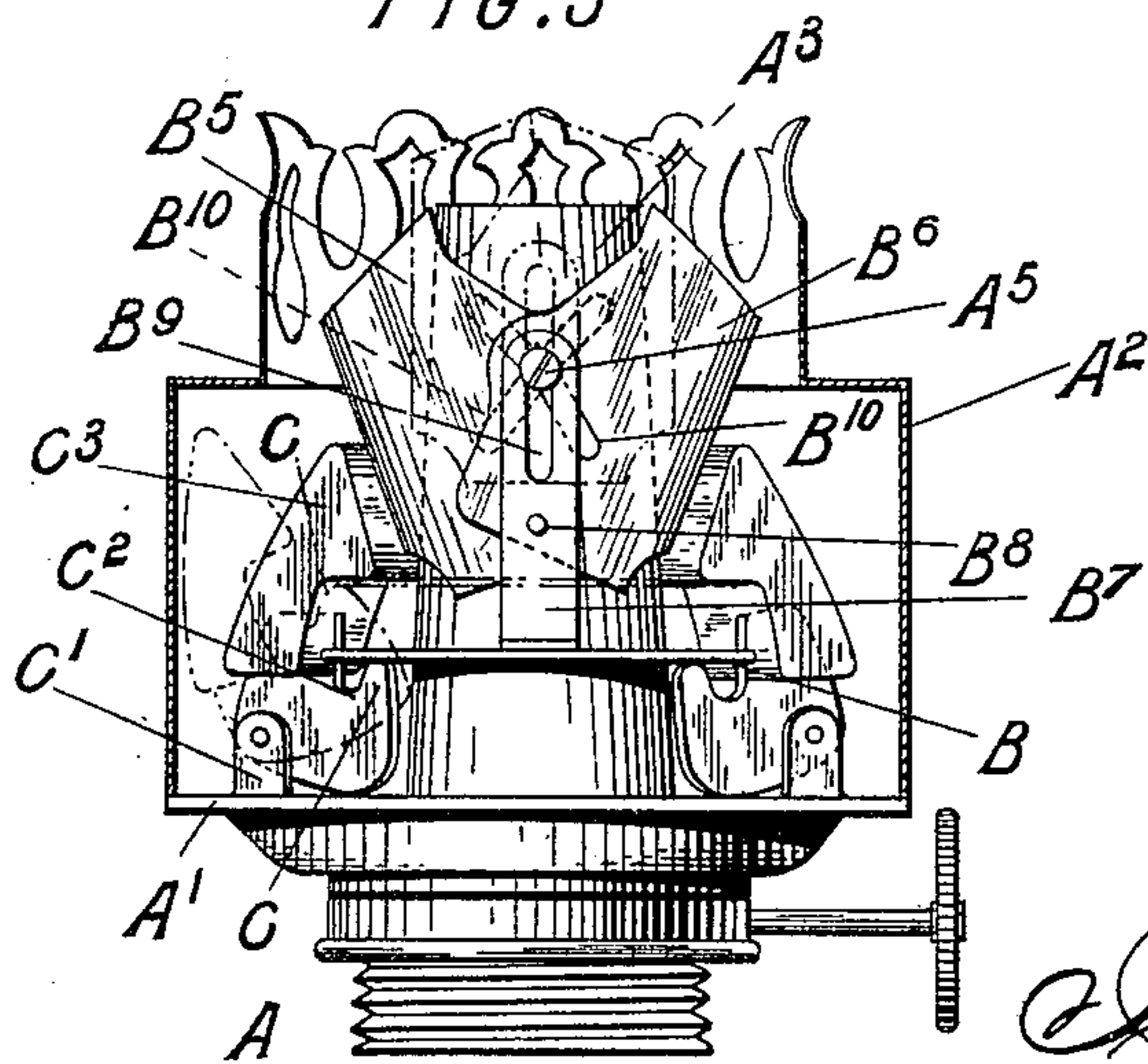


FIG. 5



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2 Sheets--Sheet 2.

FIG. 2

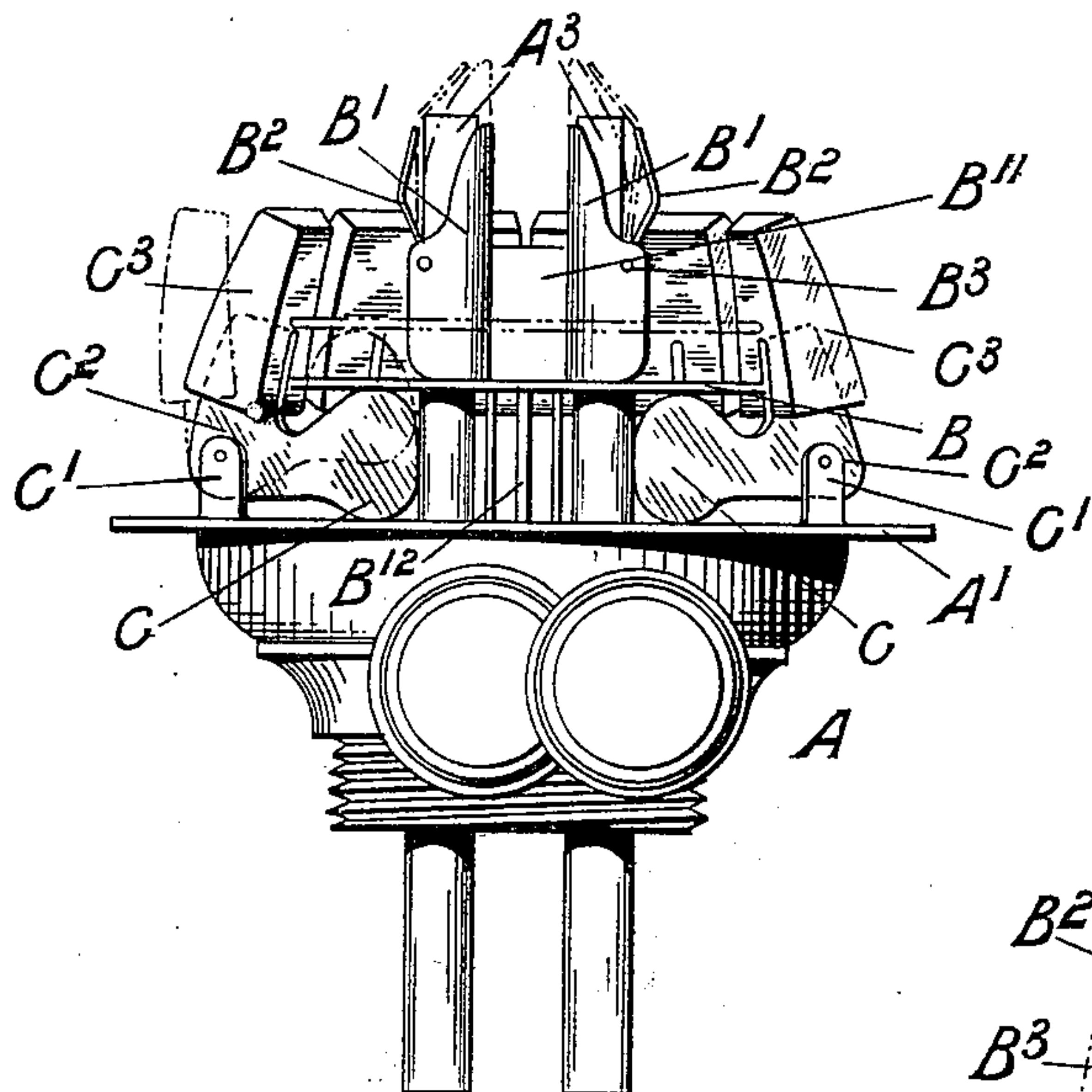


FIG. 4

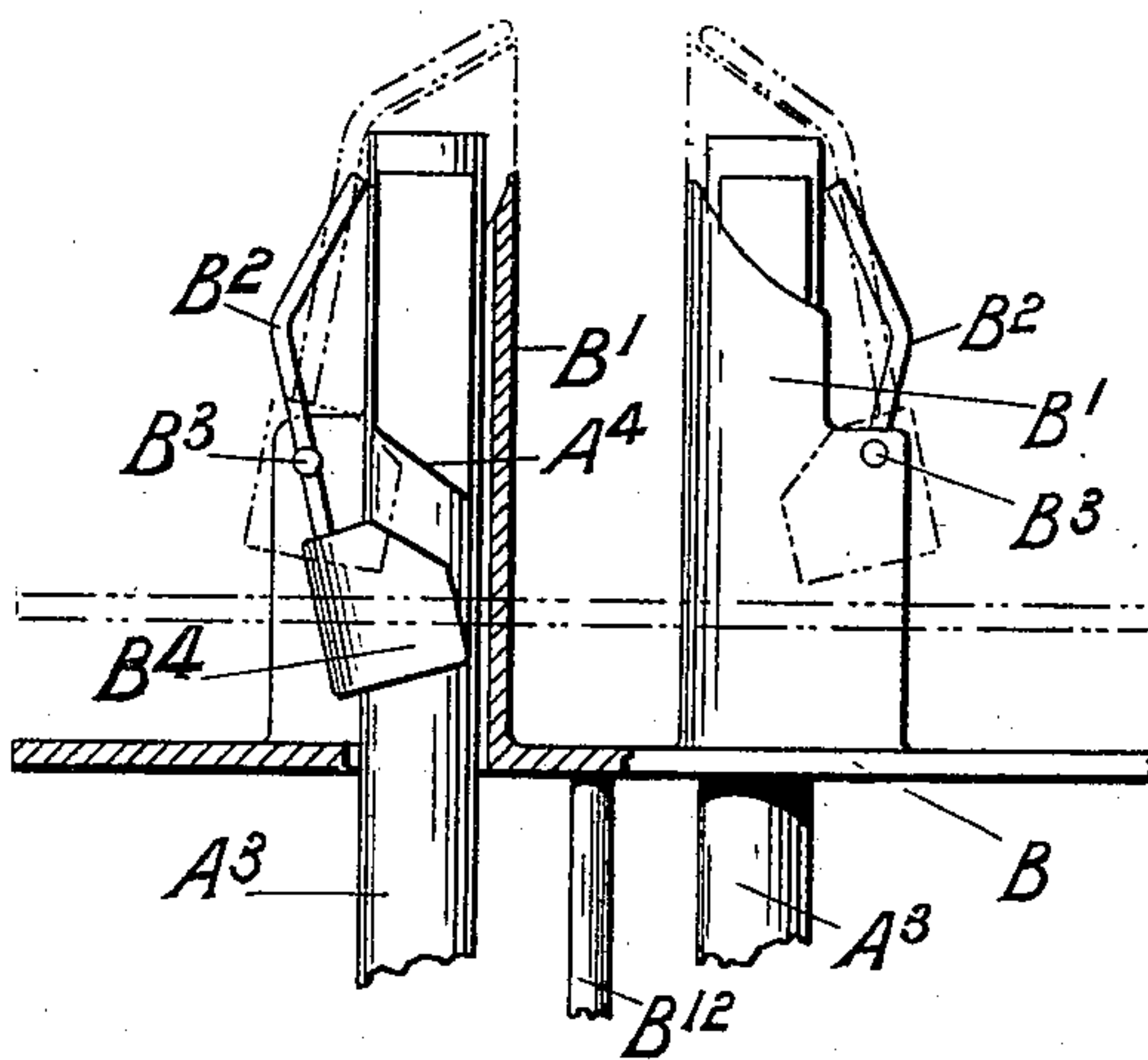
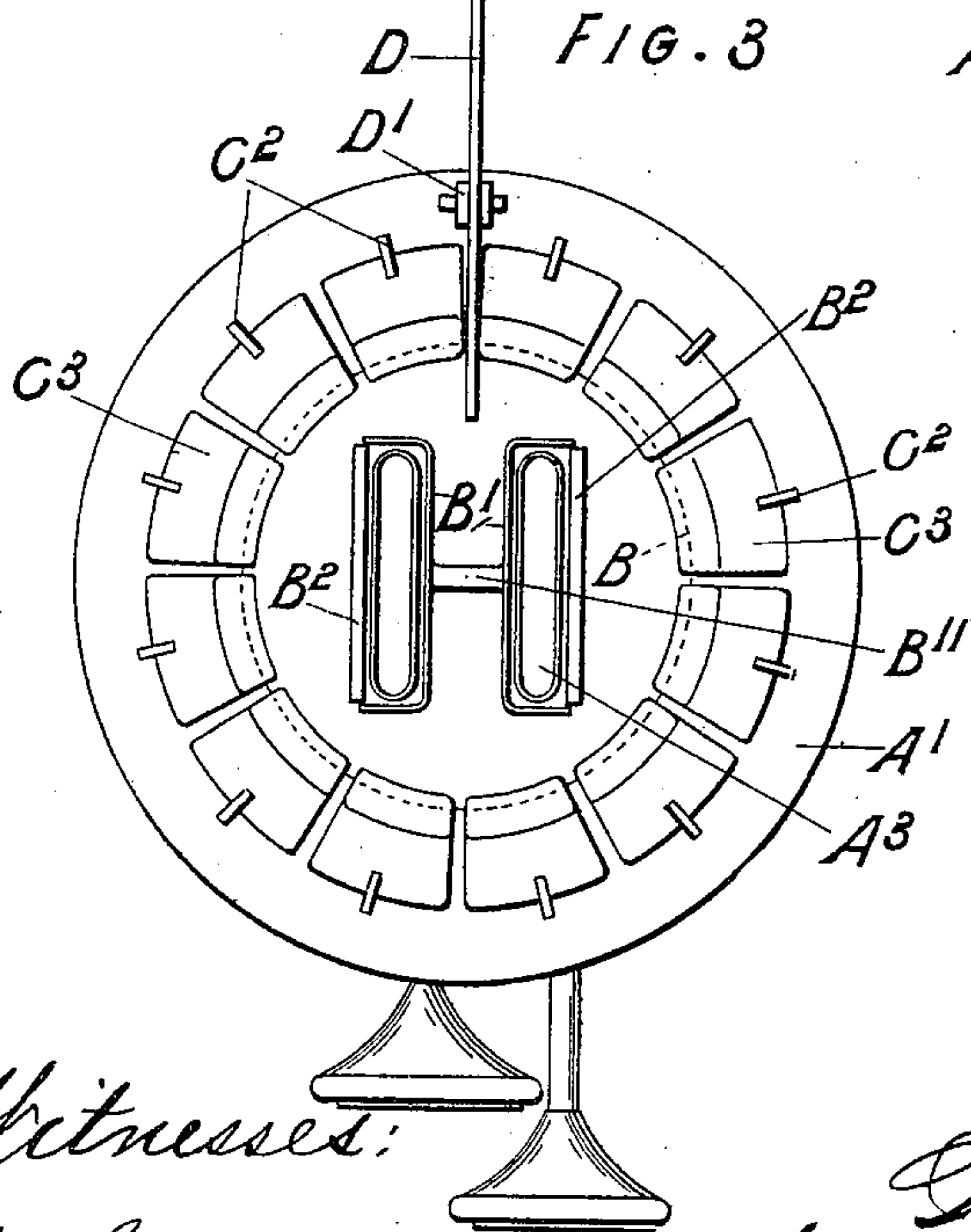


FIG. 3



Witnesses:

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UNITED STATES PATENT OFFICE.

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EXTINGUISHER FOR LAMPS OR THE LIKE.

SPECIFICATION forming part of Letters Patent No. 658,419, dated September 25, 1900.

Application filed August 2, 1899. Serial No. 725,910. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM EBENEZER ARCHER, a subject of the Queen of England, residing at Upper Holloway, London, England, have invented certain new and useful Improvements in or Relating to Extinguishers for Lamps or the Like, (for which I have applied for Letters Patent in Great Britain, under No. 1,593, dated January 23, 1899,) of which the following is a specification.

This invention relates to extinguishers for lamps and the like, and has for its object to construct an extinguisher which will operate automatically and with certainty in the event of the lamp being overturned or otherwise caused to assume an abnormal position. This invention is particularly applicable to oil-lamps.

According to this invention the burner is constructed in the usual way, but provided with an extinguisher comprising, preferably, two members which are so constructed and connected to a platform situated below them that upon raising the platform the members of the extinguisher rise and close in over the top of the wick-holder, thus putting out the light. Around and preferably below the level of the top of the wick-holder in some suitable position is arranged a series of pivoted levers. One arm of each lever is weighted, while the other arm bears against or is connected to the extinguisher-platform. The levers are so arranged that so long as the lamp remains vertical in its normal position the levers do not act upon the platform; but as soon as the lamp is tilted out of the vertical or upset the weighted end of one or more of the levers falls over and raises the platform, which by operating the extinguisher puts out the lamp. The weighted levers are preferably of bell-crank form and arranged in a circle around the platform for operating the extinguisher, the weighted ends of the levers in the normal position of the lamp being directed upward and turned slightly inward over the periphery of the platform. The other ends of the levers bear against the under surface of the platform. The levers may conveniently be formed of some suitable metal, with the weights, which are preferably of lead, attached to the ends in some suitable manner, or the weights and levers may be formed in

one piece out of the same metal. Preferably the parts are so constructed that each weight is by itself sufficient to raise the platform and operate the extinguisher.

In the accompanying drawings, Figure 1 is a side view, partly in section and with parts removed, of a duplex burner provided with extinguishers and operating mechanism according to this invention. Fig. 2 is a similar view at right angles to Fig. 1. Fig. 3 is a plan view; Fig. 4, an enlarged elevation of the extinguishers and wick-holders detached. Fig. 5 is a side view of a circular burner fitted with an extinguisher according to this invention.

Like letters indicate like parts in all figures.

Referring first to Figs. 1 to 4, A is a duplex burner of ordinary construction, comprising a body with a flat circular floor A' and a top casing A², the latter being only shown in Fig. 1. A³ A³ are the two wick-holders, each provided with a separate extinguisher, carried on a common platform or disk B. Each extinguisher is formed of two members. One member B' is formed with or affixed to the table and incloses one side and both ends of the wick-holder. The other member B² covers the other side of the wick-holder and is pivoted at B³ by a pin in each end of the member B'. The top of the member B² is curved, and on each side at its lower part is a lug B⁴, forming a projection to engage a cam-surface A⁴, provided on the end of the wick-holder conveniently by soldering a piece of metal thereon. This construction of the extinguisher is shown in Fig. 4, in which one end of the member B' is cut away from the left-hand wick-holder. The members B' of the extinguishers may be strengthened by a connecting-piece B¹¹, and the platform is preferably provided with a guide-rod B¹². Arranged in a circle near the edge of the floor A' is a series of slotted standards C', in each of which is pivoted a bell-crank lever, of which the lower arm C projects beneath the extinguisher-platform B, while the upper arm C² is provided with a weight C³.

The action of the apparatus is as follows: When the lamp is in an upright or normal position, the lower edge of the arm C rests on the floor A', its upper edge merely engaging the under side of the platform B, and the arm

C² and weight C³ are turned slightly inward toward a common center and may project over the periphery of the platform, as shown in Figs. 1 and 3 and in full lines in Fig. 2. As soon as the lamp is tilted out of the vertical or upset the weighted end C³ of one or more of the levers on the side to which the lamp is inclined falls over into the position shown in dotted lines in Fig. 2, causing the lower arm C to raise the platform B, and with it the extinguishers, into the position shown in dotted lines in Figs. 2 and 4. As the extinguishers are raised the lug B⁴ of the member B² comes in contact with the cam-surface A⁴, throwing the curved top of the member B² over toward the member B', thus inclosing the wick and extinguishing the flame.

In Fig. 5 is shown a convenient construction of the invention as applied to a burner having a circular wick-holder. The arrangement of the weighted levers C C² C³ and extinguisher-platform B is similar to that just before described; but the extinguisher is formed of two semicylindrical parts or members B⁵ B⁶, pivoted at each side by a pin B⁸, common to both, to a standard B⁷, fixed on the platform B. Each standard B⁷ is preferably slotted at B⁹, the slot engaging a pin A⁵, projecting from the wick-holder, enabling these standards to serve as guides for the platform B. Each pin A⁵ likewise engages a cam-slot B¹⁰ in each side of each of the members B⁵ B⁶, these slots being so shaped that as the platform is raised by the movement of the levers C C² C³, as previously described, the two members of the extinguisher in being forced upward will be caused to close in over the top of the wick-holder, taking the position shown in dotted lines in the figure, and extinguish the flame.

In the case of a lamp having a single flat wick the extinguisher is preferably composed of two suitably-shaped parts slotted, pivoted, and operating in substantially the same way as in the case of the circular burner.

In some cases, particularly in lamps of the larger type, it is convenient to have some means of operating the extinguisher without necessarily tilting the lamp. A convenient form of such an arrangement is shown in Figs. 1 and 3 applied to a duplex lamp.

A lever D is pivoted at some convenient point on the burner-casing, say in a slotted standard D' on the floor A'. The end of the lever within the casing is forked, one arm of the fork lying above and the other arm below the platform B. The outer end of the lever projects on the exterior in some position where it may be readily got at and depressed by hand, this depression causing the raising of the platform, and pressure from beneath will cause the platform to descend in the event of its jamming or accidentally being retained in its raised position.

In order to enable the extinguisher to be retained, if desired, over the wick-holder, a notch D² may be provided in the upper edge

of the lever D in such a position that when it has been depressed so as to extinguish the lamp the notch D² will be brought outside the casing and into the path of a detent or lever D³, pivoted on the exterior of the burner-casing. The detent when in engagement with the notch will retain the lever in its depressed position, and consequently the extinguisher will remain over the wick. The detent can be readily moved out of operation by the finger or by a specially-arranged lever, cord, or the like.

If desired, the weighted levers may be combined with other forms of extinguisher than those described above, such other forms being attached so as to be put in operation by the falling from their normal position of the weights directly the lamp is tilted. The weighted levers are preferably inclosed within the casing A², so as to prevent their being tampered with or accidentally held so as to prevent them operating. The invention may be applied to other kinds of burners than those described above.

I claim—

1. In a lamp, the combination with the wick-holder, of a movable extinguisher and a plurality of levers each of which is pivoted to the lamp and operatively engaged with the extinguisher, each of said levers having, when in its normal position, its center of gravity above the fulcrum upon a radius inclined upward from the fulcrum toward the wick-tube and a stop to limit the motion of the lever toward the wick-tube, substantially as set forth.

2. In a lamp, the combination with a wick-holder, of a movable platform, an extinguisher carried by the platform, and a plurality of levers each of which is pivoted to the lamp and operatively engaged with the movable platform, each of said levers having, when in its normal position, its center of gravity above the fulcrum upon a radius inclined upward from the fulcrum toward the wick-tube, and a stop to limit the motion of the lever toward the wick-tube, substantially as set forth.

3. In a lamp, the combination with the wick-holder, of two members pivoted together, surrounding the wick-tube and free to slide thereon, means by which the members when raised are brought together above the wick-tube, and a plurality of levers, each of which is pivoted to the lamp and operatively engaged with the members surrounding the wick-tube, each of said levers having, when in its normal position, its center of gravity above the fulcrum upon a radius inclined upward from the fulcrum toward the wick-tube and a stop to limit the motion of the lever toward the wick-tube, substantially as set forth.

4. In a lamp, the combination with the wick-holder, of a movable platform, a member carried by the platform in close proximity to the wick-tube, a second member pivoted

to the first and with the former surrounding,
while free to slide upon the wick-tube, means
by which the members when raised are
brought together above the wick-tube and a
5 plurality of levers, each of which is pivoted
to the lamp and operatively engaged with the
movable platform, each of said levers having,
when in its normal position, its center of
gravity above the fulcrum upon a radius in-
10 clined upward from the fulcrum toward the

wick-tube and a stop to limit the motion of
the lever toward the wick-tube, substantially
as set forth.

In testimony whereof I have hereto set my
hand in the presence of the two subscribing 15
witnesses.

WILLIAM EBENEZER ARCHER.

Witnesses:

ALFRED D. DONNISON,

HERBERT JESSE COLEMAN.