

No. 754,423.

PATENTED MAR. 15, 1904.

D. E. CHISM.
BOX FOR CASH CARRIERS.
APPLICATION FILED MAR. 9, 1903.

NO MODEL.

3 SHEETS—SHEET 1.

Fig. 1.

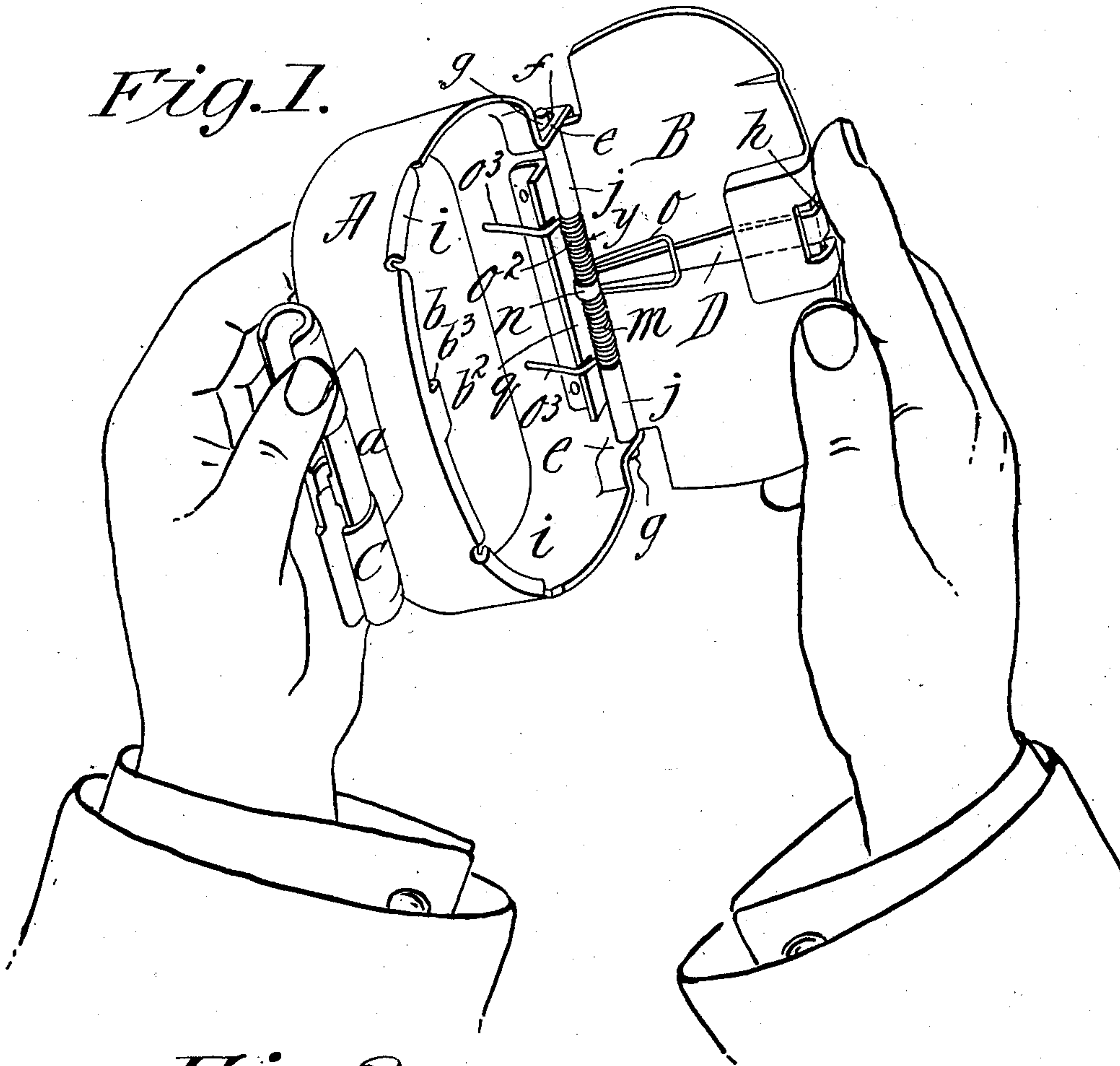
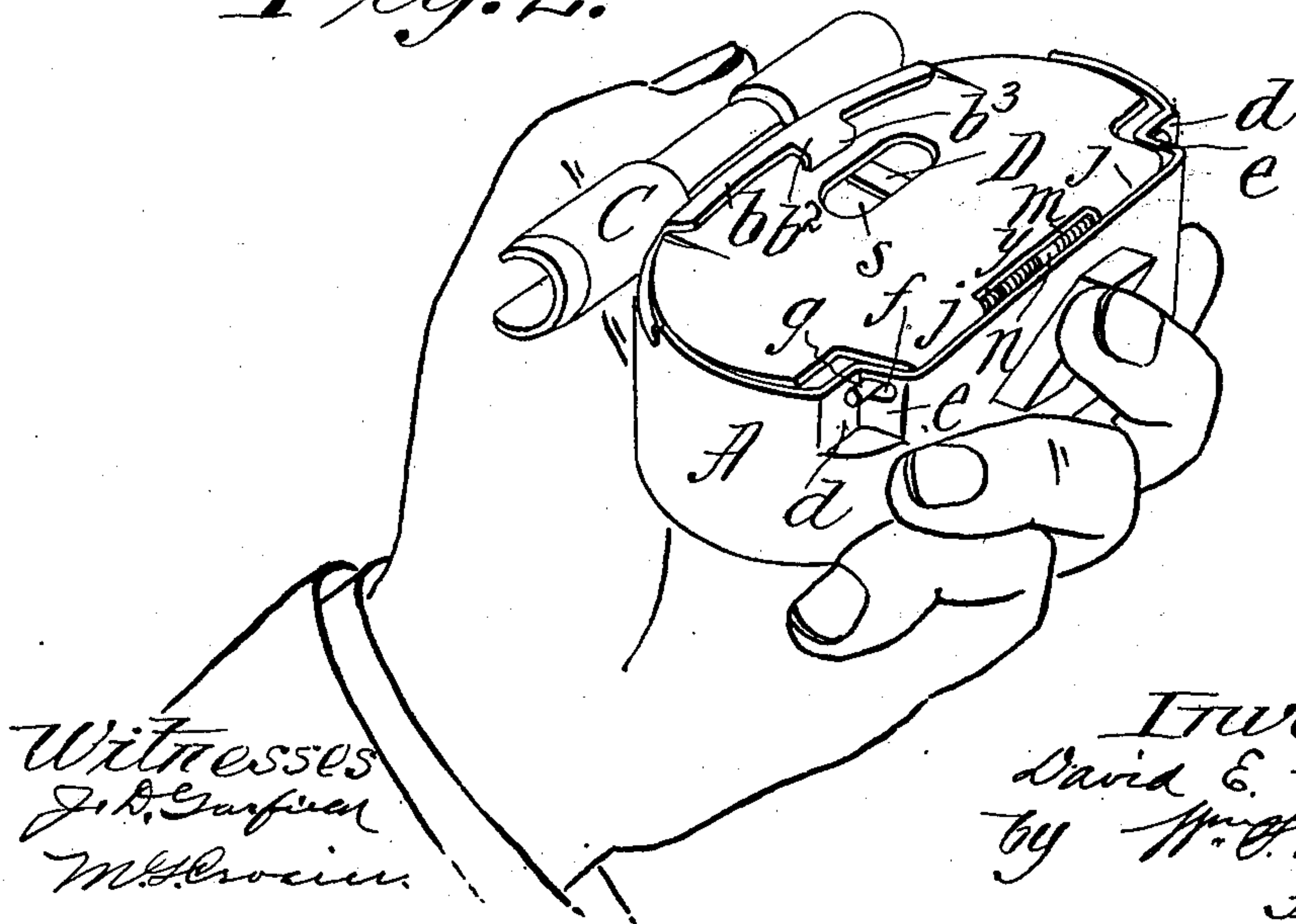


Fig. 2.



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3 SHEETS—SHEET 2.

Fig. 3.

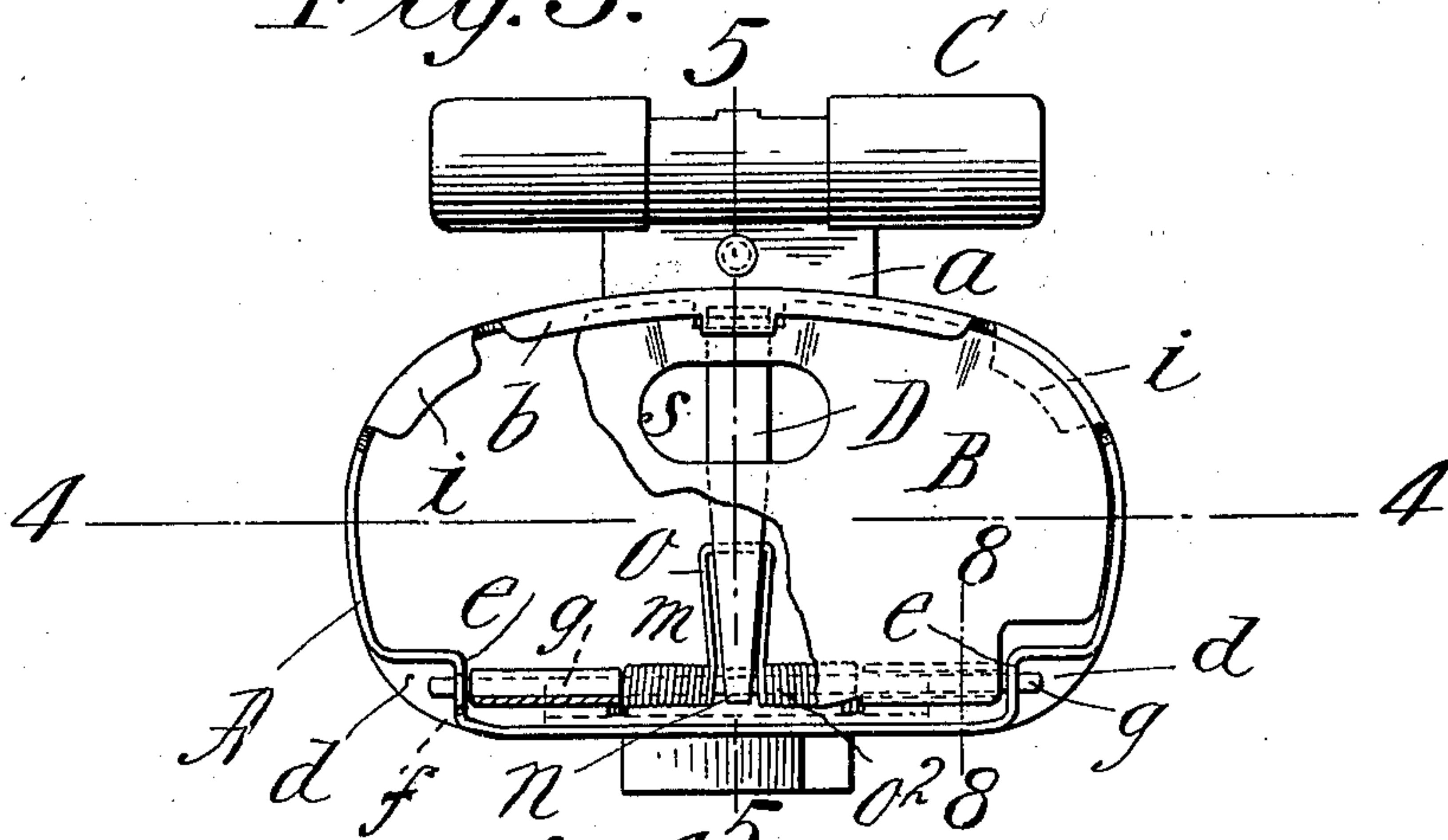


Fig. 4.

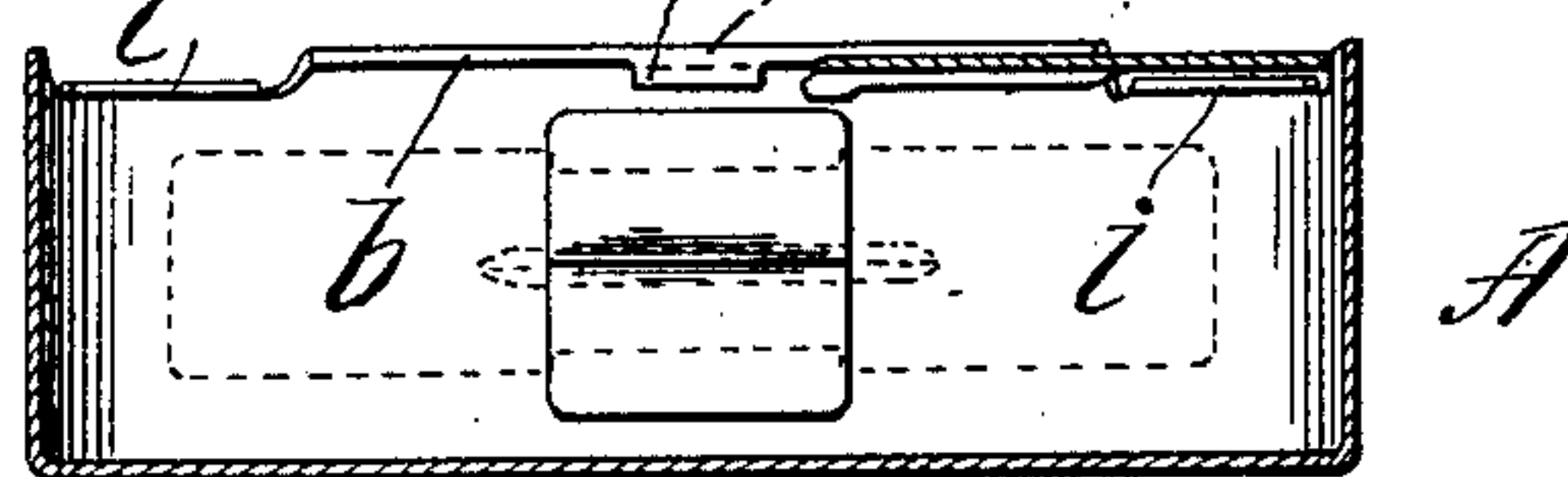


Fig. 5.

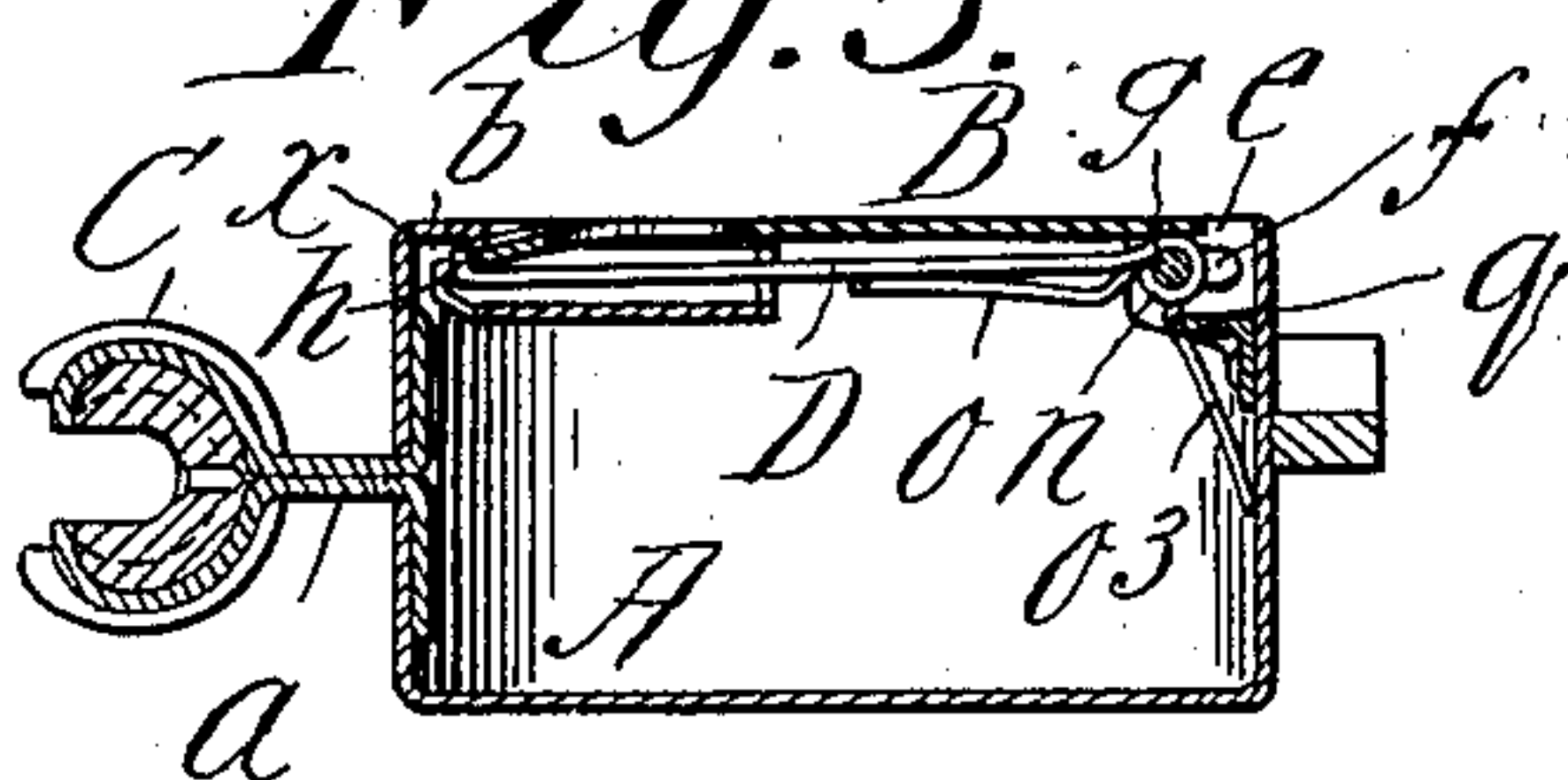


Fig. 6.

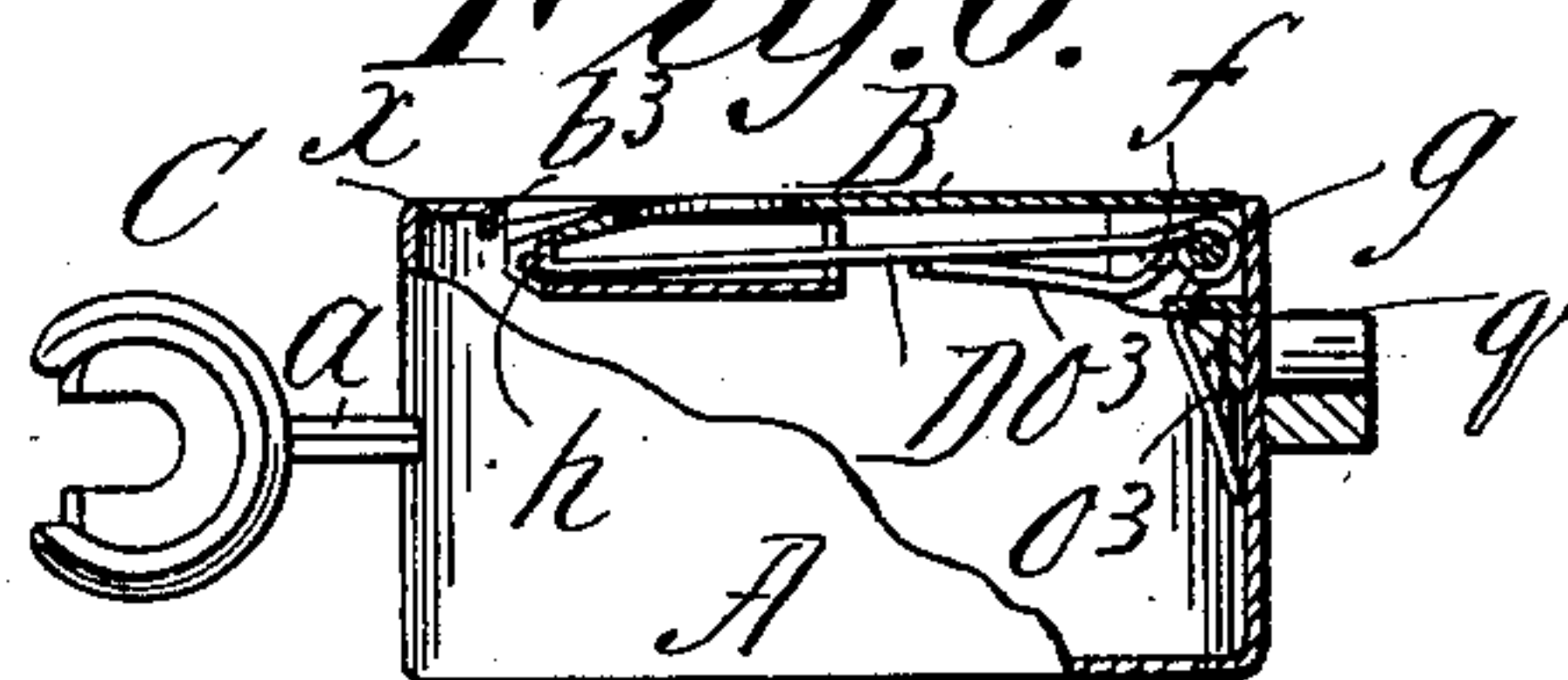
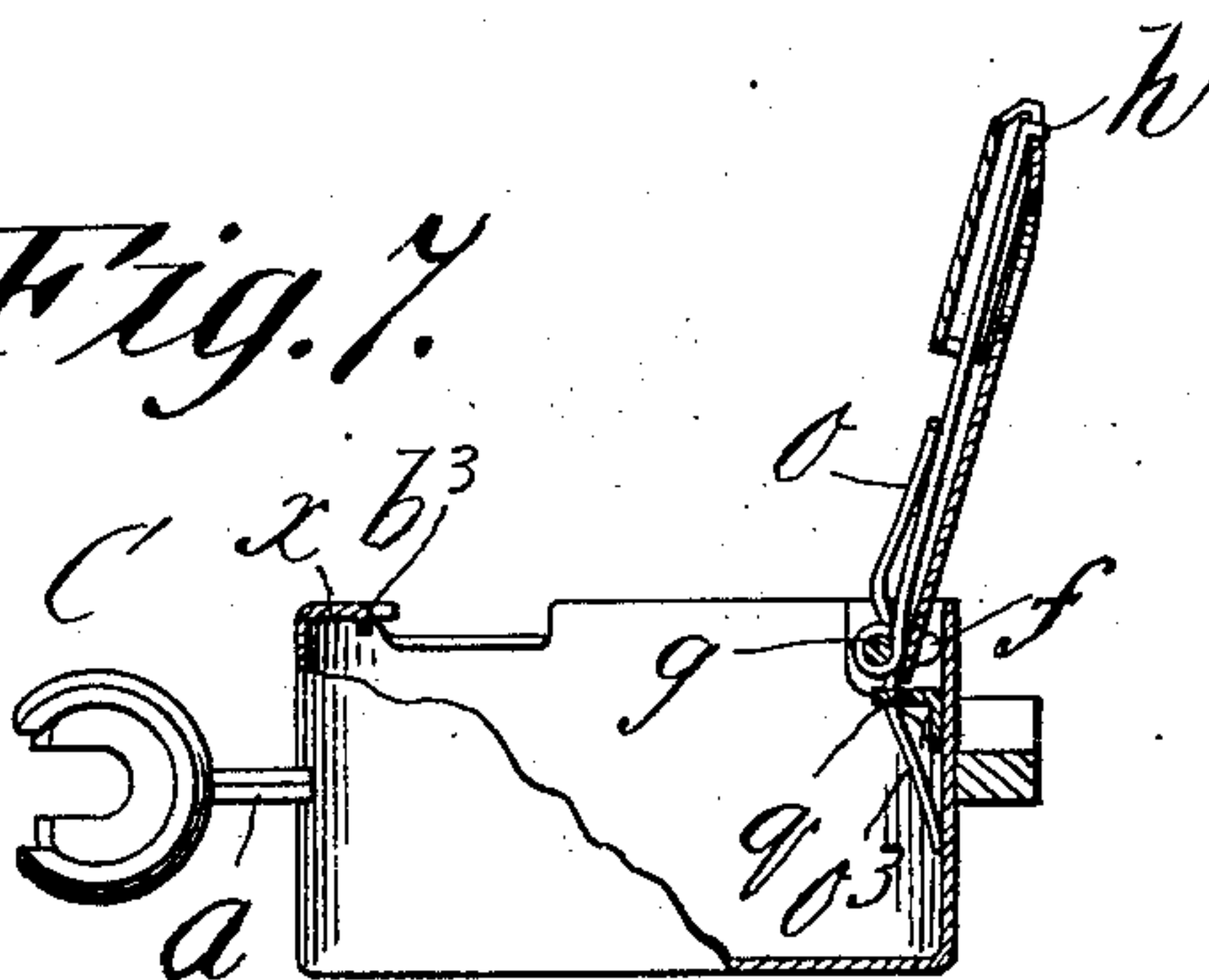


Fig. 7.



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NO MODEL.

3 SHEETS—SHEET 3.

Fig. 8.

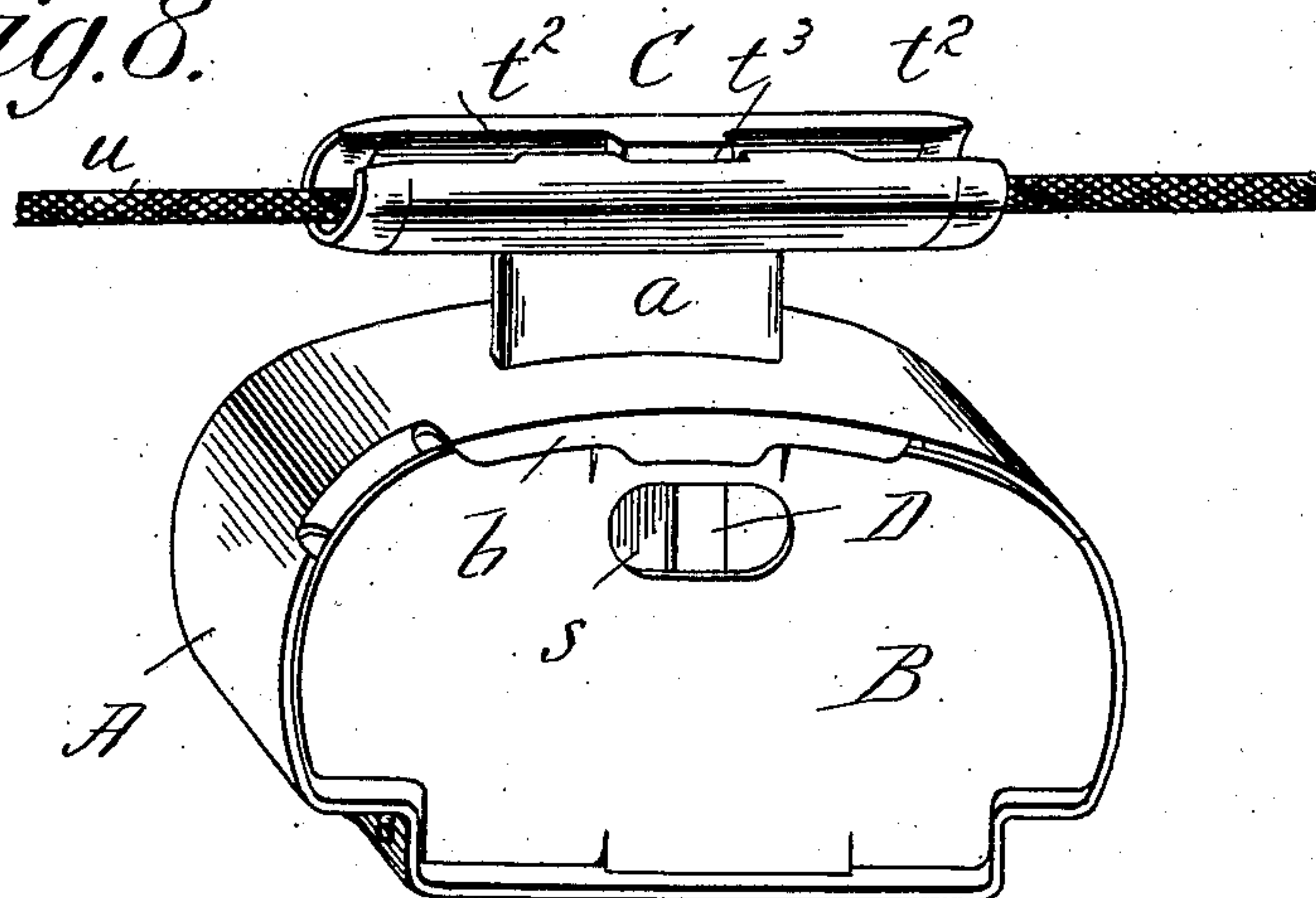


Fig. 9.

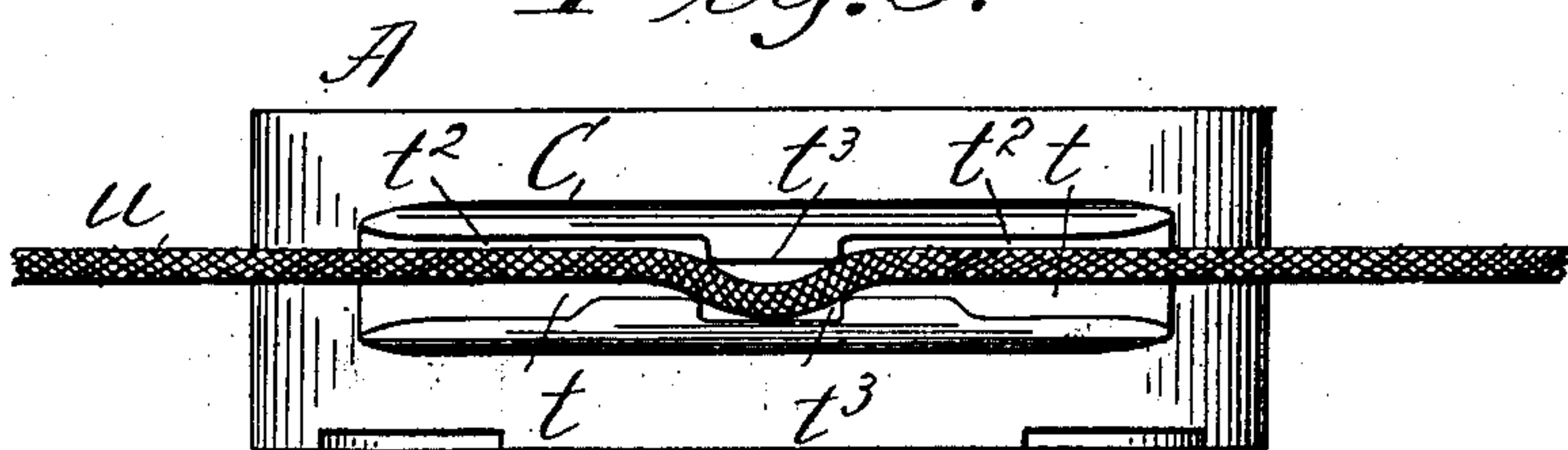


Fig. 10.

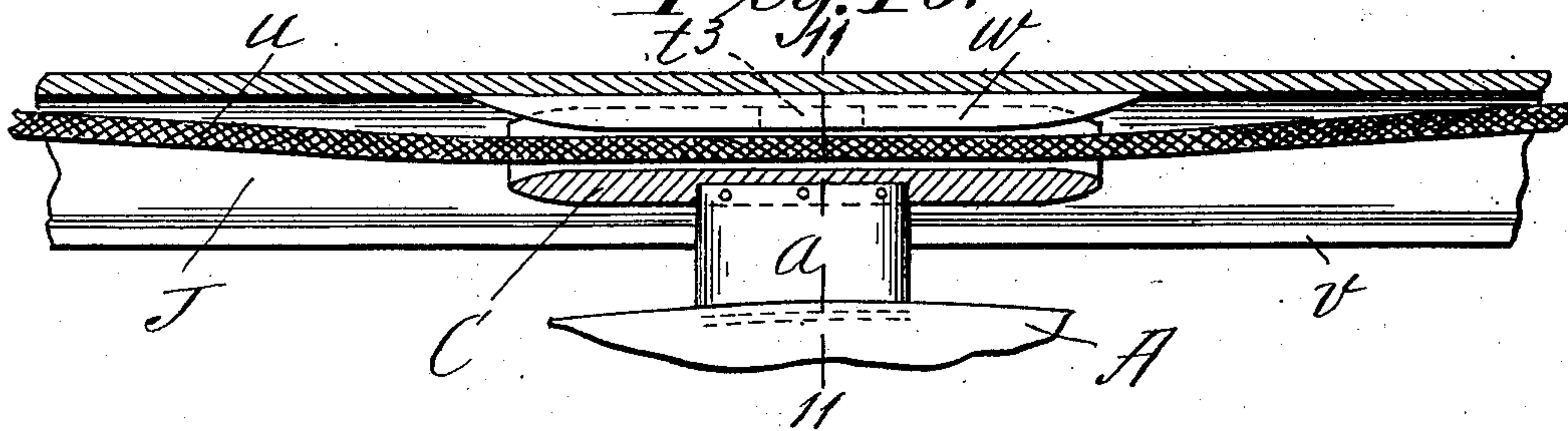
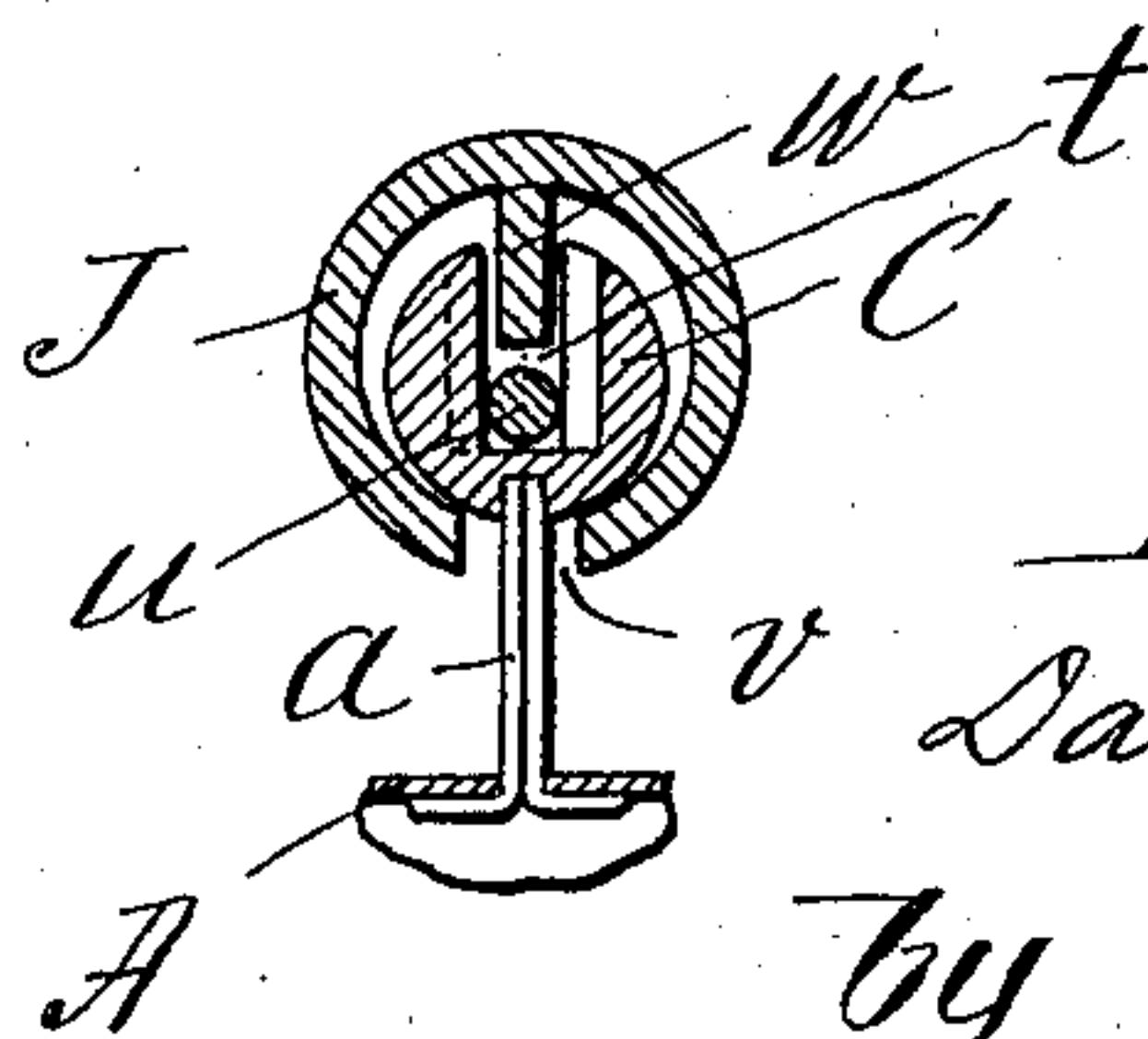


Fig. 11.



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UNITED STATES PATENT OFFICE.

DAVID E. CHISM, OF STAFFORD SPRINGS, CONNECTICUT, ASSIGNOR TO
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BOX FOR CASH-CARRIERS.

SPECIFICATION forming part of Letters Patent No. 754,423, dated March 15, 1904.

Application filed March 9, 1903. Serial No. 146,850. (No model.)

To all whom it may concern:

Be it known that I, DAVID E. CHISM, a citizen of the United States of America, and a resident of Stafford Springs, in the county of Tolland and State of Connecticut, have invented certain new and useful Improvements in Boxes for Cash-Carriers, of which the following is a full, clear, and exact description.

This invention relates to improvements in boxes, more especially used as the cash-containing receptacles in cash-carriers for store service.

One object of the invention is to provide a construction of box more especially in respect of its hinge-cover and devices therewith combined whereby the box when closed will remain effectually closed without liability of becoming accidentally opened from cause, and yet whereby the box may be opened instantly by the person at the station or by the cashier as the result of an intelligently-applied force to the cover.

Another object of the invention is to provide a construction of box for a cash-carrying apparatus to be propelled along a suitable trackway therefor by a continuously-running cable having a head adapted to receive the engagement therewith of the cable in such a manner as to insure certainty of the making and retention of the cable engagement without necessitating the employment of buttons or shoulders on the cable, a feature of the invention being comprised in a simple lug or rib as an equipment to the trackway structure coöperative with the cable for exerting a crowding of the latter into the peculiarly longitudinally channeled or apertured head of the box.

The invention is rendered manifest in and by the following description in conjunction with the accompanying drawings, and is defined and covered in and by the claims.

In the drawings, Figure 1 is a perspective view showing the box as in its opened position. Fig. 2 is a perspective view showing the box as in its closed position. Fig. 3 is a front view of the box, a portion of the closed cover being broken away to disclose appliances coacting with the cover. Fig. 4 is a longitudinal sec-

tional view on the line 4 4, Fig. 3. Fig. 5 is a cross-sectional view on the line 5 5, Fig. 3, the cover of the box being closed and locked closed. Fig. 6 is a view substantially similar to Fig. 5, but showing the cover as having been bodily moved relatively to its hinge and its locking-catch released, whereby the box-cover may be automatically sprung open. Fig. 7 is a view showing all of the parts as in their relations when the box-cover has been automatically sprung open. Fig. 8 is a perspective view showing the box having the improved cable-engaging head. Fig. 9 is a plan view of the same. Fig. 10 is a sectional view longitudinally through the head and through the portion of a tubular-formed runner-way for the head-provided box and showing the means for insuring the engagement between the running cable and box-head; and Fig. 11 is a cross-sectional view on line 11 11, Fig. 10.

Similar characters of reference indicate corresponding parts in all of the views.

The cash-box, as shown, comprises the box proper, A, having the hinge-cover B, longitudinally-ranging cylindrical head C, connected by a thin neck *a* and adapted for employment to be cable-propelled in a cash-carrier equipment for stores—such, for instance, as described in Letters Patent of the United States granted to Chamberlain, Chism, and Cooper, November 5, 1901, No. 685,740—although the novel devices and arrangements pertaining to the equipments for the box-cover are applicable on other descriptions of hinge-covered boxes. As the box here shown is connected and arranged, a single spring serves to retain the cover, as it may have been bodily slid with its edge opposite from its hinge, under and in engagement with a marginal lip or flange *b* at the front of the box to maintain the cover-catch normally in a position of interlocking between the box and the cover, so that the cover cannot be either swung or slid for disengagement, whereby it might be accidentally opened, and, thirdly, to automatically throw the cover into the open position indicated in Figs. 1 and 7 when an intelligently-applied pressure is imparted to the cover-catch and to the cover for

a bodily-sliding movement of these parts in a direction toward the hinge.

The box A may be made of comparatively thin metal by being struck up, the same having, however, sufficient rigidity, and it is constructed of an approximately elliptical form having its rear edge or side obliterated, and the metal near its ends is inwardly forced, as indicated at *d*, whereby endwise opposite parallel portions *e e* of the box-wall are provided, the same having each the elongated slot *f*, extending in a horizontal line in a direction from the rear to the front and receiving the engagement therein of the straight hinge-rod *g*. The front edge wall of the box has at its intermediate portion the aforementioned inwardly-turned lip or flange *b*, the same having at its central part the further inward continuation *b*² with the downturned margin *b*³ to make the socket *x* for the catch D, which is mounted at the inner side of the cover, swing bodily therewith and to have its angularly-turned end lip *h* engage in and disengage from said socket *x*. In addition to the lip *b* at the plane of the outer open edge of the box the front wall of the box has toward the ends thereof the inturned lips *i i*, the plane of which is below that of the lip *b*, so as to constitute a ledge or rest against which the cover may close. The cover has at its rear edge toward the ends thereof the portions *j j*, bent around into tubular form and to closely surround the straight hinge-rod *g*, there being the space *y* between the two hinge-rod tubular connections *j*, giving space for occupancy of the coil-spring *m*. The catch D, shown as constituted by a flat metal strip, has its inner end formed with an eye *n*, which encircles the middle of the hinge-rod, and this catch extends crosswise of the inner face of the cover and normally has a yielding bearing in an outward direction against such inner face of the cover, so that it will normally when the cover is properly closed and disposed toward the forward edge of the box have its outer end lip maintained in engagement in the aforementioned socket *x* therefor.

The spring *m*, as shown, is constituted by a single length of tempered wire having its middle portion formed into a loop *o*, its portions outside of said part being coiled, as at *o*², while its extremities *o*³ are extended away from the axis of the coils, and in the assembly of the parts the coils encircle the hinge-rod, the loop *o* is in bearing to force the catch D against the inner face of the cover, while the legs or extremities *o*³ have bearings against the inner back wall of the box, the spring being arranged as just mentioned and shown under more or less compression, so that it has its proper reactions for the aforementioned three services, viz: first, to keep the cover when closed, as in Fig. 5, forwardly slid, so that the hinge-rod *g* is at the forward end of the elongated slots *f* and so that the

cover front edge is under and in engagement with the front edge inturned lip *b* of the box; second, to keep the cover-catch D with its outturned end projection *h* within the socket *x* therefor; and, third, to by its reaction throw the cover to the opened position shown in Fig. 7, when the spring-catch D is pressed inwardly and the cover is bodily swung toward the edge of the box at which it is hinged.

In order to manipulate the cover and cover-catch D, the cover has therein near its forward edge the recess or depression *s*, into which the thumb may be inserted to force the catch D inwardly and out of engagement with the catch-socket *x*, whereupon by the thumb and by almost a simultaneous action with the catch releasing the cover may be slid in the plane of its closed position rearward, its hinge-rod moving to the rear boundaries of the elongated slots *f*, whereupon the front edge of the cover is freed from the engagement of the box edge lip, under which conditions, of course, the cover is free to be opened and the spring reactive, as described, will open it.

While I have hereinabove described the cover-catch D in cooperative combination with the spring and socketed portion *x* of the cover and have shown the same throughout the drawings, the employment of this cover-catch may be dispensed with, as a fairly-efficient box may be provided in its absence, there being under any ordinary utilization of the box very little liability of any such pressure being accidentally brought against the cover as to cause the sliding movement thereof toward its hinged edge to disengage its front edge from under the lip *b*; but for cash-carrier service in which there might be some remote possibility of the cover of the box so being brought to contact with some part of the equipment as to bring about its disengagement whereby the contents of the box might become lost the cover-catch is considered of advantage in proportion exceeding the expense and labor attendant on its provision.

The box is shown as constructed at its back wall near the cover-hinge with a guard-flange lip or ledge *q*, the same constituting a closure at the rear upper edge of the box, insuring that the contents of the box may not become dislodged back of the hinge-rod at the times when the cover is in its forward spring-pressed disposition with its front edge engaged with the box thereof, as hereinabove described. This guard-lip *q* is shown as constituted by a metallic angle-piece riveted in place; but it might be made by inwardly forcing a portion of the back wall of the box, the accomplishment thereof being the matter of detail and of election by the manufacturer.

As shown in Sheet 3 of the drawings, the head C is constructed with an upwardly-opening longitudinal channel *t*, the portions *t*² *t*² at the opposite ends thereof being in the median

longitudinal line, while the inner walls of the intermediate portion of the channel are offset, as indicated at t^3 , whereby the channel is rendered tortuous, so that the cable u and the cash-carrier in order to have its disposition and engagement in the channel shaped as aforesaid must have a crimp or bight whereby the box will be bound to move with the running cable. This arrangement avoids the necessity of using buttons or shoulders at intervals on the cable, and the box may be instantaneously brought into the engagement, as explained, there being no extent of running of the cable until a button has come to the place of the head, as heretofore, and the so-channeled box-head may be readily brought into the engagement and may be disengaged from the cable when the station is reached, and the course of running of the box is deflected from the line of the cable. In order that the cable may be compelled to engage down into the base of the tortuous channel in the box-head, the trackway structure J (which is here shown as in the form of a tube having a longitudinal median slot v at its bottom) has at a station or other place where engagement is desired a lug or lip w , affixed to and depending below the top wall centrally and longitudinally of the trackway structure, the same being inclined and narrowed from its middle portion to its ends, whereby it is practically a cam for downwardly deflecting the running-cord adjacent thereto. This structural feature may be provided at bends in the trackway at which there might be a tendency of the cable to draw away from the box-head as well as at stations where the box-head is to be initially brought into engagement with the cord.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. A box having at the upper edge of its front wall an immovably-affixed inward projection, and having a flat cover pivotally engaged at an upper portion of the rear wall of the box, and also slidably engaged thereat, whereby the cover may, in addition to its swinging movement, relatively to its pivot, have a bodily-sliding movement crosswise at the top of the box, and arranged so that when swung closed the cover may be forwardly moved to have its forward edge engaged under said immovable projection at the front of the box.

2. A box having at the upper edge of its front wall an immovably-affixed inward projection, and having a flat cover pivotally engaged at an upper portion of the rear wall of the box, and also slidably engaged thereat, whereby the cover may, in addition to its swinging movement, relatively to its pivot, have a bodily-sliding movement crosswise at the top of the box, and arranged so that when swung closed the cover may be forwardly

moved to have its forward edge engaged under said immovable projection at the front of the box, and a spring applied for reaction in a direction to swing the cover to its open position.

3. A box having at the upper edge of its front wall an immovably-affixed inward projection, and having a flat cover pivotally engaged at an upper portion of the rear wall of the box, and also slidably engaged thereat, whereby the cover may, in addition to its swinging movement, relatively to its pivot, have a bodily-sliding movement crosswise at the top of the box, and arranged so that when swung closed the cover may be forwardly moved to have its forward edge engaged under said immovable projection at the front of the box, and a spring applied for reaction against the cover in a direction to automatically bodily move it crosswise of the top of the box, for the purpose set forth.

4. The box having at the upper edge of its front wall a fixed projection and having a cover hinge-engaged at the rear wall of the box and also slidably engaged with said rear wall and thereby rendered bodily movable crosswise of the box, automatically-operative means for exerting a yielding forwardly-sliding pressure to the cover, and automatically-operative means for exerting a pressure against the cover to swing it outwardly open, relatively to its hinge.

5. A box having a hinged cover which is slidable crosswise relatively to the box, and said box and cover being constructed for interlocking engagements relatively between the front wall of the box and front edge of the cover and a spring applied between the box and the cover under compression and reactive on the cover imparting a yielding force thereto both crosswise of the box and in a direction outwardly therefrom.

6. A box having at opposite portions of its wall near its rear elongated sockets, the cover having endwise-projecting hinge members engaged in said elongated sockets, whereby the cover is rendered both slidable in a direction across the box and capable of swinging on its hinge, the front wall and front edge of the box and cover being respectively and relatively constructed for sliding engagements and disengagements.

7. A box having at opposite portions of its wall near its rear elongated sockets, the cover having endwise-projecting hinge members engaged in said elongated sockets, whereby the cover is rendered both slidable in a direction across the box and capable of swinging on its hinge, the front wall and front edge of the box and cover being respectively and relatively constructed for sliding engagements and disengagements, and a spring reactive on the cover for imparting a forwardly-sliding force thereto.

8. A box having at opposite portions of its

wall near its rear elongated sockets, the cover
 having endwise-projecting hinge members en-
 gaged in said elongated sockets, whereby the
 cover is rendered both slidable in a direction
 5 across the box and capable of swinging on its
 hinge, the front wall and front edge of the
 box and cover being respectively and rela-
 tively constructed for sliding engagements
 and disengagements, and a spring reactive
 10 against the cover to impart automatically an
 opening swinging movement thereto.

9. A box having at opposite portions of its
 wall near its rear elongated sockets, the cover
 having endwise-projecting hinge members en-
 15 gaged in said elongated sockets, whereby the
 cover is rendered both slidable in a direction
 across the box and capable of swinging on its
 hinge, the front wall and front edge of the
 box and cover being respectively and rela-
 20 tively constructed for sliding engagements
 and disengagements, and a spring applied in
 compression between the box and cover and
 reactive yieldingly against the cover in direc-
 tions to impart to the latter both a forwardly-
 25 shifting bodily movement and an outwardly-
 swinging movement.

10. A box having at the upper edge of its
 front wall an inward projection having a
 socket, a cover hinged to the box and slidable
 30 crosswise thereof, a cover-catch bodily mov-
 able in unison with the cover and having a
 movement away from and back toward the
 face of the cover and adapted for engagement
 in said socket, and a spring for maintaining
 35 the catch normally disposed, adjacent the in-
 ner face of the box.

11. A box having at the upper edge of its
 front wall an inward projection having a
 socket and provided with the aperture *s* there-
 40 through, a cover hinged to the box and slid-
 able crosswise thereof, a cover-catch bodily
 movable in unison with the cover and having
 a movement away from and back toward the
 inner face of the cover adapted for engage-
 45 ment in said socket, and arranged crosswise
 of said aperture *s*, and a spring for maintain-
 ing the catch normally disposed adjacent the
 inner face of the box.

12. A box having at the upper edge of its
 50 front wall an inward projection having the
 downturned extremity *b*³ constituting a socket
a, a cover having at its rear oppositely end-
 wise extending hinge projections engaging in
 transversely-elongated sockets in the box-
 55 walls, a cover-catch bodily movable in unison
 with the cover and having a movement toward
 and away from the inner face thereof and
 having at its extremity an angularly-turned
 projection for engagement in said socket *a*,
 60 means for shifting the cover automatically
 forwardly and spring means for maintaining
 the catch normally in proximity to the inner
 face of the cover.

13. A box having at its rear portion oppo-
 65 site slots which extend forwardly and a cover

adapted for an interlocking engagement with
 the upper edge of the front wall of the box,
 said cover being hinged to the box and slid-
 able crosswise thereof, a hinge-rod engaged
 with the cover, a spring having coils surround- 70
 ing the hinge-rod having a member bearing
 under tension against the box-back and react-
 ing on the hinge-rod forwardly and having a
 member projected from the axis of the coils
 and exerting an outward bearing against the 75
 inner side of the cover.

14. A box having at the upper edge of its
 front wall an inward projection *b* and having
 also at its front wall one or more additional
 inward projections in a plane below the pro- 80
 jection *b*, and having a cover hinged to the
 box and slidable relatively to the box in a for-
 ward direction, whereby when swung closed
 the cover may be seated on the projection *i*
 and forwardly slid and edgewise engaged un- 85
 der said projection *b*.

15. A box made of thin metal having near its
 rear and end portions the metal inwardly dis-
 placed constituting angular niches *d* having
 the parallel walls *ee* in which are the slots *ff* 90
 in lines crosswise of the box, the cover and
 the hinge-rod engaged with the rear of the
 cover and having its opposite extremities pro-
 jecting through said slots *f*, and said cover
 and the front wall of the box being construct- 95
 ed for interlocking engagements as described,
 a spring having its middle portion formed into
 a loop, portions outwardly beyond such loop
 formed into coils surrounding the hinge-rod,
 and having its extremities extended to bear- 100
 ing under tension against the back of the box,
 for the purposes set forth.

16. The cash-box having an elongated head
 joined to the box proper by a neck and said
 head having a circumferential opening chan- 105
 nel extending from end to end, and devious in
 its length.

17. The combination with a track or run-
 ner way and propulsion-cable running there-
 along, of a cash-box having a head provided 110
 with an upwardly-opening and longitudinal de-
 vious channel for the purpose set forth.

18. The combination with a track or run-
 ner way and a propulsion-cable running there-
 along, of a cash-box having a head provided 115
 with an upwardly-opening and longitudinally-
 extending devious channel, and an inclined
 rib supported by an upper portion of the track-
 way structure against which the cable im-
 pinges and by which it is deflected for engag- 120
 ing in the devious channel in the cash-box
 head.

19. In a cash-box, in combination, the box
 proper having at its front the inwardly-pro-
 jecting lip *b* having at its central portion *b*² 125
 the downward projection *b*³ and having the
 ledges *i i* in a plane below the lip *b*, and hav-
 ing at its back the transversely-extending slots
ff, the cover and hinge-rod thereto connect-
 ed, the extremities of the latter slidably en- 130

gaging in said slots, the cover-catch D having
the upturned end projection *h*, pivotally con-
nected at its end opposite said projection on
the hinge-rod, the spiral spring comprising
5 coils encircling the hinge-rod having the mem-
ber extended from its axis to pressure bear-
ing against the cover-catch and exerting force
upon the latter outwardly against the cover,
and said spring having another member ex-
10 tended and engaged in compression against

the back of the box and reacting to force the
hinge-rod, the cover, and the cover-catch
bodily in a direction crosswise of the box.

Signed by me at Springfield, Massachusetts,
in presence of two subscribing witnesses.

DAVID E. CHISM.

Witnesses:

A. V. LEAHY,
WM. S. BELLOWS.