

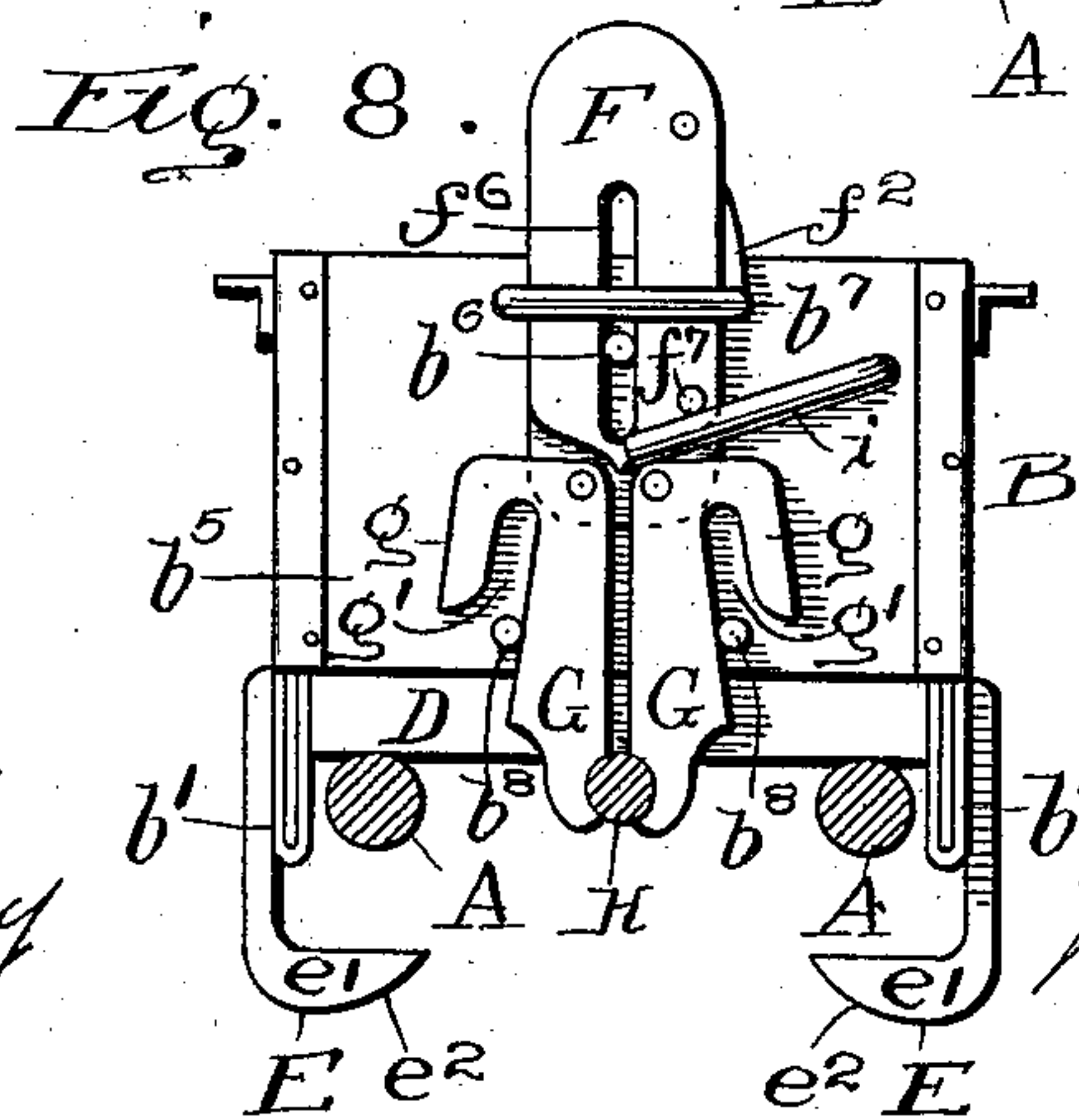
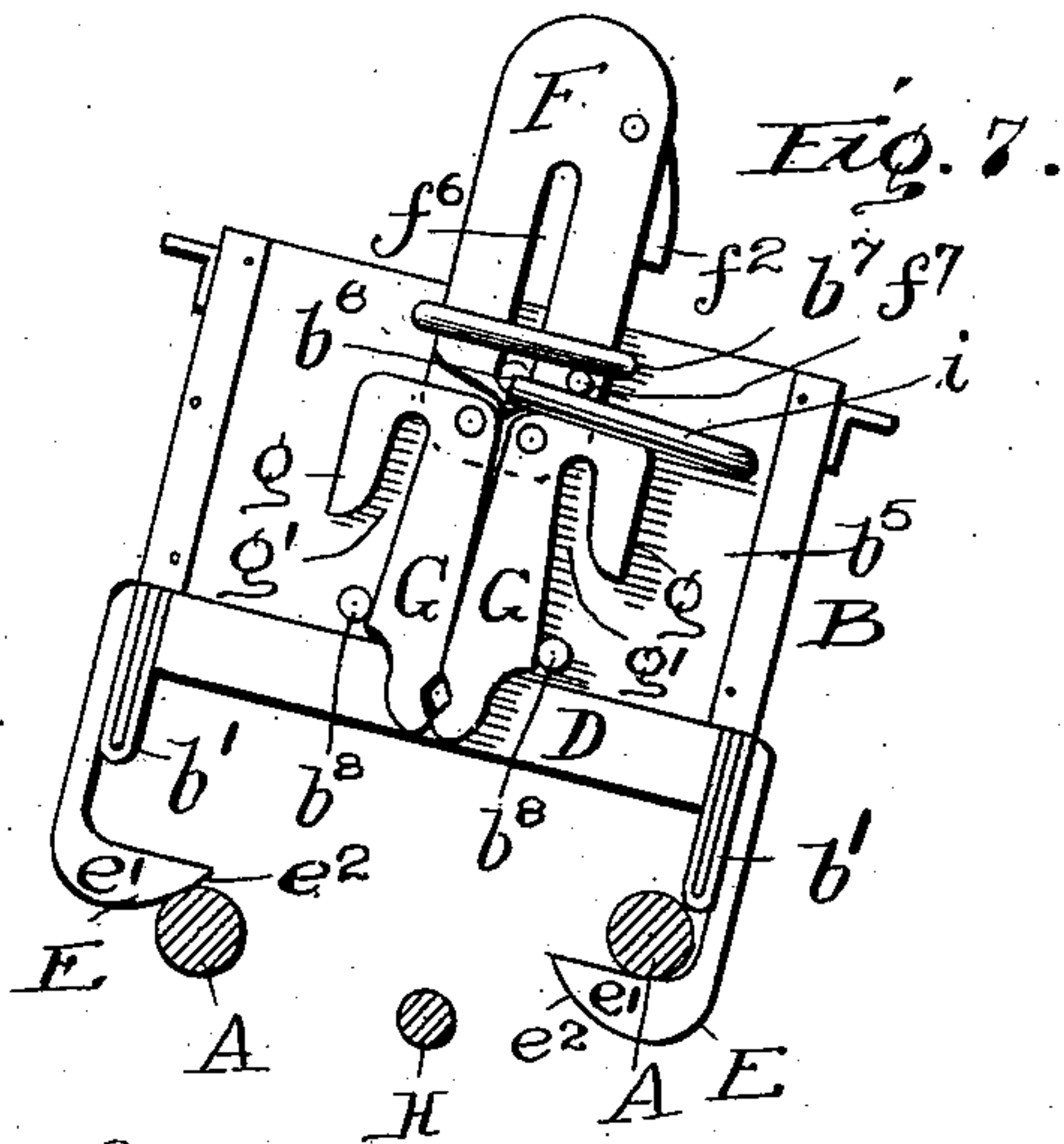
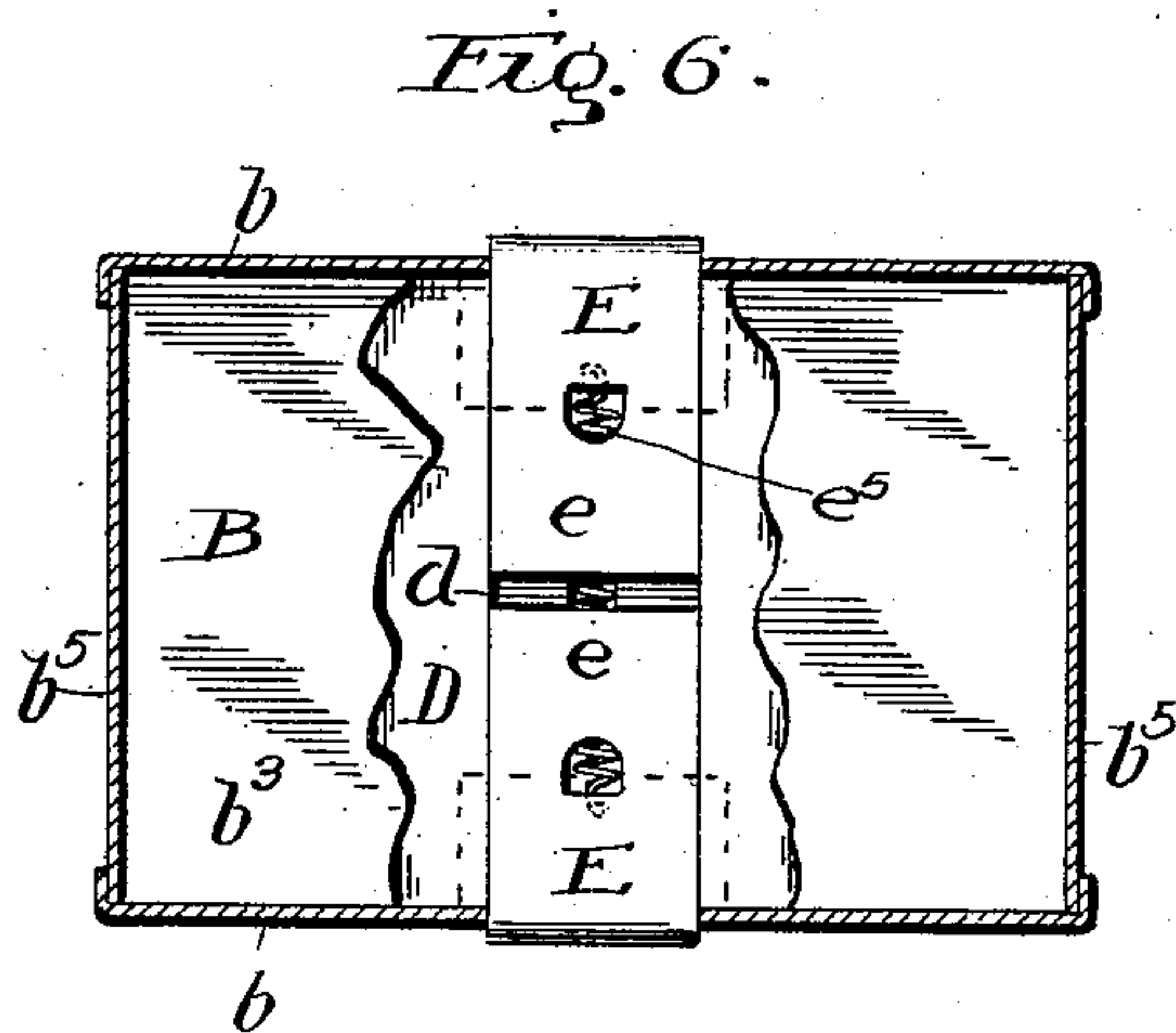
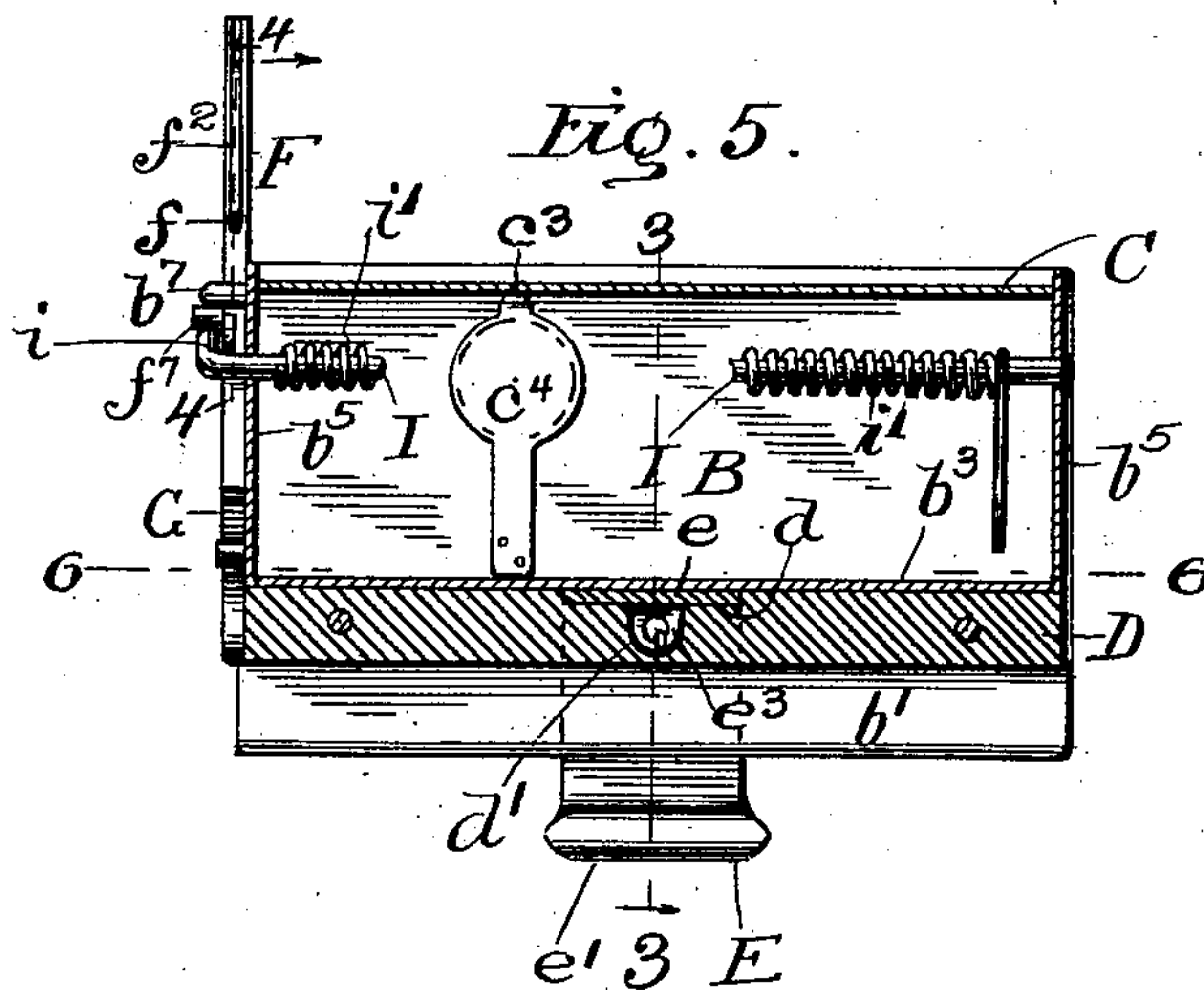
W. L. CHURCHILL.

CASH CARRIER.

(Application filed Mar. 26, 1902.)

(No Model.)

2 Sheets—Sheet 2.



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UNITED STATES PATENT OFFICE.

WILLIAM L. CHURCHILL, OF CHICAGO, ILLINOIS, ASSIGNOR TO NATIONAL PNEUMATIC SERVICE COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS.

CASH-CARRIER.

SPECIFICATION forming part of Letters Patent No. 713,059, dated November 11, 1902.

Application filed March 26, 1902. Serial No. 100,026. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM L. CHURCHILL, a citizen of the United States of America, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Cash-Carriers, of which the following is a specification.

My invention relates to certain new and useful improvements in cash-carriers of the type wherein a closed box-carrier slides upon suitably-suspended rails, being propelled by a driven cable substantially in line with the rails; and its object is to produce a cash-carrier of this type which shall be cheap, light, and simple for use primarily in connection with an entire system of this type of store service designed by me; but the carrier can also be used in any other systems.

To these ends my invention consists in certain novel features of construction, which are fully described herein and illustrated in the drawings.

In said drawings, Figure 1 is a perspective view of my improved carrier. Fig. 2 is a front elevation showing the carrier in place upon the track. Fig. 3 is a cross-section in line 3 3 of Fig. 5. Fig. 4 is a section through the sliding member of the cable-gripping mechanism in the line 4 4 of Fig. 5 looking in the direction of the arrow. Fig. 5 is a section in line 5 5 of Figs. 2 and 3. Fig. 6 is a section in the line 6 6 of Fig. 5 looking downward. Fig. 7 is a front view of the carrier, showing the same in the act of being placed on the track; and Fig. 8 is a front elevation of the carrier similar to Fig. 2 and differing from it only in the fact that the cable is in the grasp of the cable-jaws.

Referring to the drawings, A A are two rails, preferably circular in cross-section, upon which the carrier runs and which are supported or suspended, as may be desired.

B is the box of the carrier. It is constructed of metal, preferably in the particular way shown herein. In this construction two side pieces $b\ b$ are used, and they are carried down below the desired lower line of the box and sharply recurved, as shown in cross-section in Fig. 3, thereby forming lugs $b' b'$, extending below the lower line of the box. The bottom

of the box consists of a single piece of sheet metal b^3 , bent downward on the two sides to form the downwardly-projecting portions b^4 b^4 , these downwardly-projecting portions $b^4 b^4$ being inserted in the space left within the lugs $b' b'$ by the recurving of the sides and there riveted or otherwise secured, as may be desired. The end pieces of the box $b^5 b^5$ are riveted to the ends of the side pieces $b\ b$, which are bent over upon the front and the rear of the box for this purpose, as is clearly shown in Fig. 6. The top C of the box consists of a plate of metal hinged at c' and provided with a coiled spring c^2 , which tends to open it. Upon the edge of the cover opposite to the spring is a loop or lug c^3 , adapted to engage a spring-catch c^4 on the inside of the box, this spring-catch when in engagement with the loop or lug keeping the cover closed against the force of the spring c^2 . The spring-catch c^4 can be reached and released through a hole c^5 in the side of the box. In order to prevent the box from rattling and jangling when running along the rails, it is desirable to provide a non-metallic surface for contact with the tracks. For this reason the plate D, of gutta-percha or some similar compound, is secured upon the bottom of the box B between the lugs $b' b'$ and is secured in place upon the box, as may be desired. It will be observed that this plate comes into contact with the rails, and all vibrations which pass to the box must necessarily pass through it, their effect being consequently greatly lessened.

In systems of this general type the cash-carrier travels in all positions upon the rails. It may be inclined at any angle, it may run vertically, and it may run upside down, hanging from the rails. In order to act well in all these positions, there must be provided some special means for keeping the carrier upon the rails. For this purpose I prefer track-engaging devices extending downward from the box and under the rails, so as to keep the box in position, these devices being laterally movable to permit the box to be placed upon and removed from the rails at any point, as may be desired. The particular construction of this device is clearly shown

in Figs. 3 and 6. The plate D upon the bottom of the carrier is provided with a shallow slot d , running across the whole width of the plate at its center. In the bottom of this slot is cut a groove d' , the relative length of which with respect to the slot d is clearly shown in the section shown in Fig. 3. The two hooks which engage the tracks are designated by the reference-letters E E and are provided with inwardly-extending flat portions $e e$, which run in the slot d and almost meet at its center. The hooks extend downward along the sides of the carrier and the lugs $b' b'$ to a point some distance below the bottom of said lugs and thence inward, ending in the heavy-hooked portions $e' e'$, having the beveled surfaces $e^2 e^2$. The flat inwardly-extending portions $e e$ have each a downwardly-stamped tongue e^3 , which enters the groove d' in the center of the slot d . It will be seen that if the hooks E E are pulled outward these tongues will eventually come in contact with the ends of this groove, thereby limiting the lateral motion of the hooks. These two tongues are connected by a spring e^5 , which tends to draw the hooks together and normally holds them in contact with the sides of the box. The hooks, however, may be readily drawn apart, either by hand or by any spreading mechanism, to permit the carrier to be removed from the rails, and they are also spread apart in placing the carrier on the rails, as is shown in Fig. 7. In placing the carrier on the rails one of the hooks is placed over one of the rails, and the beveled portion e^2 of the other is placed upon the opposite rail and the box pushed downward. The wedging action of the rail upon the beveled surfaces forces the hook outward, and the box slips readily into place, the hook springing back immediately and securing the box firmly upon the rails. This means for holding the carrier upon the rails is particularly desirable, because it permits the box or carrier to be placed upon and removed from the rails at any point in their length.

Upon the front of the box B is the cable-engaging portion of the device, and its construction and operation will now be described. As shown, it consists of a vertical slide upon the front of the box, two cable-engaging jaws pivoted upon the slide, and some means for holding the jaws firmly together and the slide in its uppermost position. The slide proper, F, is channeled to form a depression f and cut away at its lower end to form a thinner portion f' . (See Fig. 4.) Within the channeled space f is a dog f^2 , firmly held in the position shown in the figures by means of a small spring f^3 , the dog being pivoted upon a pin f^4 , passing through the slide, and its outward motion being limited by the engagement of the end portion f^5 of said dog with the portion of the channel. The slide is provided with a central longitudinal slot f^6 , which runs over a projecting pin b^6 upon the box, and the vertical movement of the slide is guided by this

pin and by a staple b^7 , also projecting from the front of the box and encircling the slide. The dog f^2 normally engages this staple and prevents the slide from being forced downward; but when the dog is pressed inward, either by hand or by suitable mechanical means, the slide can pass downward. Upon the lower end of the slide are pivoted two jaws G G, having the recurved and downwardly-projecting ears $g g$, the same forming between themselves and the jaws two notches $g' g'$. Upon the front of the box B are two pins b^8 , which when the jaws are in their upper position hold them together by engagement with their tapered sides. As the slide F and jaws G are forced downward these pins slide relatively upward on the tapered sides of the jaws G and of course permit them to be slightly separated. When, however, the jaws reach such a position that the pins b^8 reach the tops of the notches $g' g'$, the jaws are swung widely apart to the position shown by the dotted lines in Fig. 2, and they are then in a position to clasp the cable. The propelling-cable of this system, which is shown in the figures, is designated by the letter H. The operation of this portion of the device is substantially as follows: The dog f^2 is forced inward, and the slide is depressed when it is desired to engage the cable. The jaws G pass downward and are permitted slight lateral motion, but are still kept substantially together. Before they reach the lower limit of their motion their lower ends come in contact with the moving cable H and force it downward, the separation of the ends of the jaws not being sufficient to admit it. The downward motion being continued, the jaws are separated, as heretofore explained, and the cable by its elasticity enters their path. Upon releasing and raising the slide the jaws close, and the cable being now within their path is grasped tightly by them, and as they rise the jaws are drawn more and more tightly together upon it by the pressure of the pins b^8 upon their beveled sides until they reach the position shown in Fig. 8, which shows the carrier in engagement with the cable and in ordinary running shape. A pin f^7 projects from the slide F and by engagement with the staple b^5 limits the upward motion of the slide, and this pin is in permanent engagement with the end i of an L-shaped rod I, which passes through the box B from end to end and is pivoted in the end pieces. Upward force is given to this projecting end by means of a coiled spring i^7 , and it therefore tends to hold the slide in its upper position. To release the cable, the dog is forced inward and the sliding jaws released, therefore, by some device in the path of the dog on the track. At the points where it is desired to have the carriers drop cable the cable runs at a slightly-greater distance below the track than it does at the transmitting-stations, and for this reason when the slide is released the cable pulls it down until the jaws open it and then spring

from them of its own accord and the jaws rise and come together under the influence of the spring.

I have in this application claimed only the cable-grasping portion of the device, inasmuch as the other portions are claimed in two other copending applications, Serial Nos. 100,027 and 100,028.

I realize that considerable changes can be made in the details of this construction, and I do not intend to limit myself to the specific form herein set forth.

I claim as new and desire to secure by Letters Patent—

1. In a device of the class described, the combination with a suitable box and cover thereon, adapted to slide on a track, of a vertically-moving slide upon the front of said box, two cable-engaging jaws pivoted upon said slide, means for holding said slide normally in its upper position and said jaws normally together, substantially as described.

2. In a device of the class described, the combination with a suitable box and cover thereon, of a vertically-moving, longitudinally-slotted slide on the front of said box, a staple on said box surrounding said slide, a pin also on said box extending through said slide, said pin and staple being adapted to guide said slide vertically, two cable-engaging jaws pivoted upon said slide, means for holding said slide normally in its upper position and said jaws together, and means for separating said jaws when said slide is depressed, substantially as described.

3. In a device of the class described, the combination with a box and cover thereon, and a vertically-guided slide on the front of said box, of two tapered and recurved cable-engaging jaws on said slide and two project-

ing pieces upon said box adapted to hold said jaws together when said slide is in its upper position and to separate them in its lower position, substantially as described.

4. In a device of the class described, the combination with a suitable box and cover thereon, of a vertically-guided slide on the front of said box, having pivoted to it two cable-engaging jaws, a staple surrounding said slide, a projecting dog pivoted in said slide and adapted to engage said staple and hold said slide in its upper position, and a spring adapted to hold said dog firmly in engagement with said staple, substantially as described.

5. In a device of the class described, the combination with a box and cover thereon, a vertically-moving slide on the front of said box having two cable-engaging jaws pivoted to it, of a spring adapted to exert upward pressure upon said slide, substantially as described.

6. In a device of the class described, the combination with a suitable box and cover thereon, of a vertically-moving slide on the front of said box, having cable-engaging jaws pivoted thereto, a pin on said slide, an L-shaped rod passing through said box having its end in engagement with said pin and a coiled spring surrounding said rod and adapted to exert upward force upon said slide through said rod and pin, substantially as described.

In witness whereof I have hereunto set my hand, at Chicago, in the county of Cook and State of Illinois, this 21st day of March, A. D. 1902.

WILLIAM L. CHURCHILL.

Witnesses:

CHAS O. SHERVEY,
S. BLISS.