

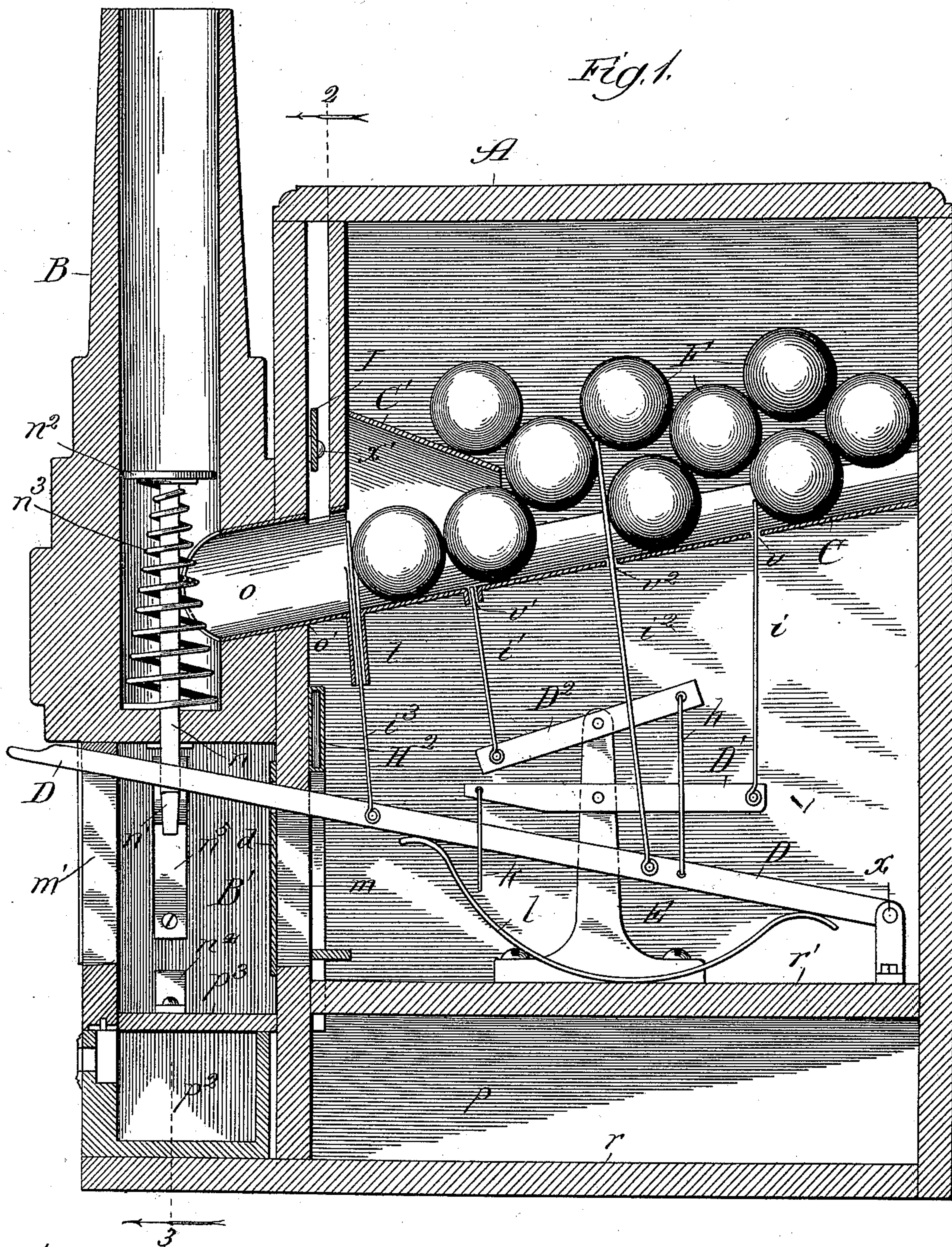
(No Model.)

3 Sheets—Sheet 1.

E. LOHSAND.
COIN CONTROLLED MACHINE.

No. 559,534.

Patented May 5, 1896.



Witnesses:
E. C. Gaylord.
Lute J. Allen.

Inventor:
Ernest Lohsand,
By Dyrnforth & Dyrnforth,
Attys.

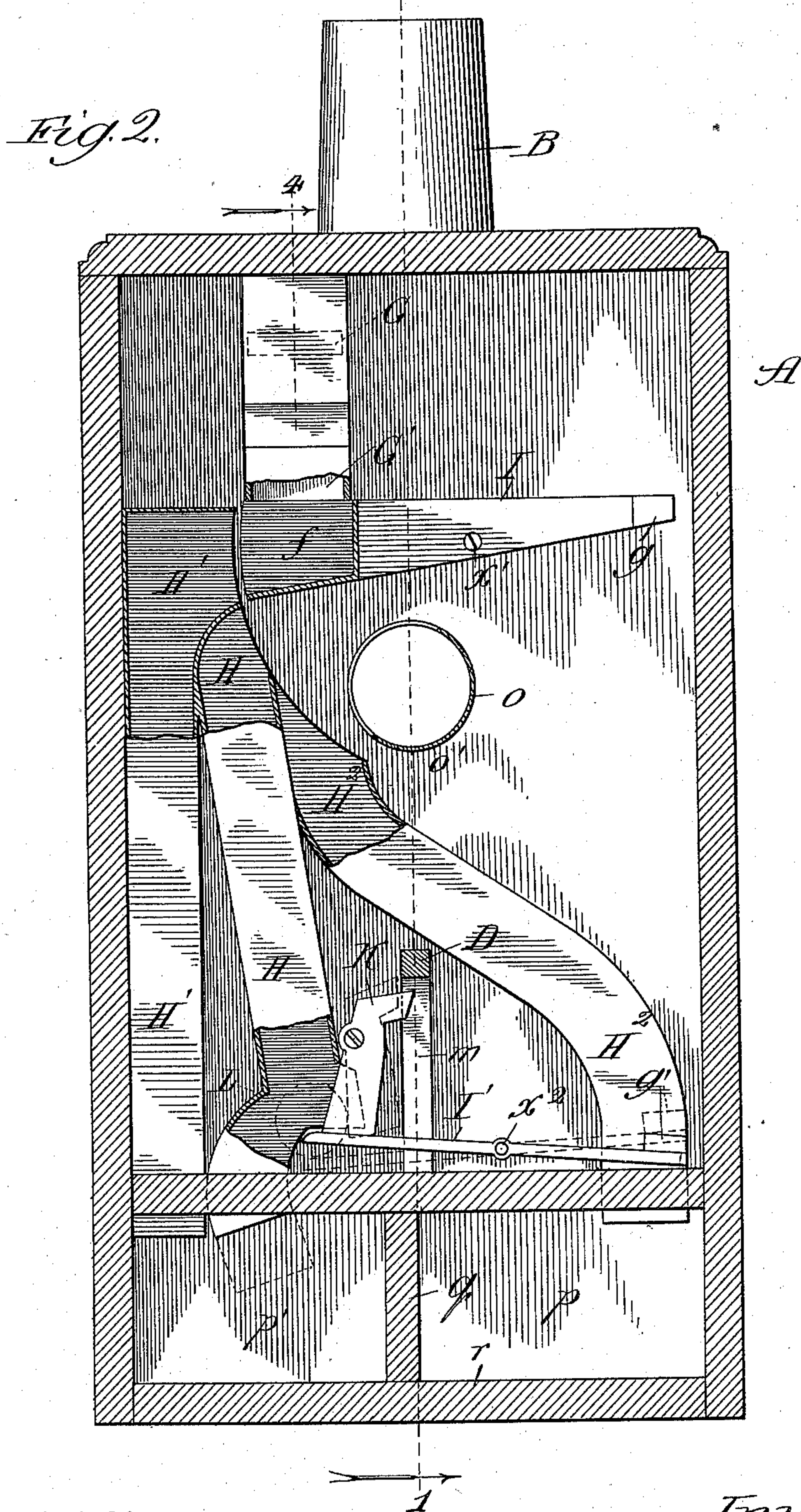
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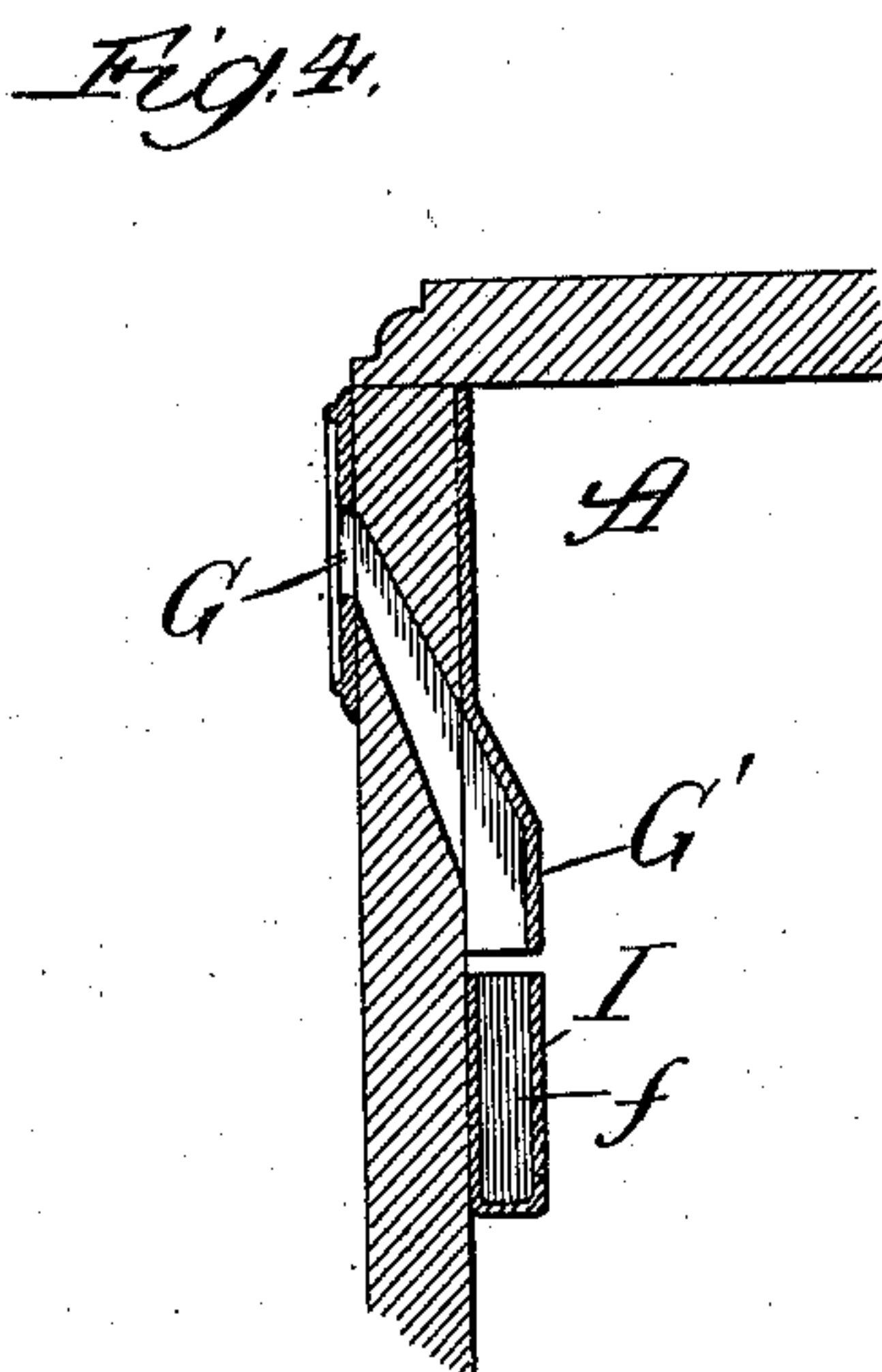
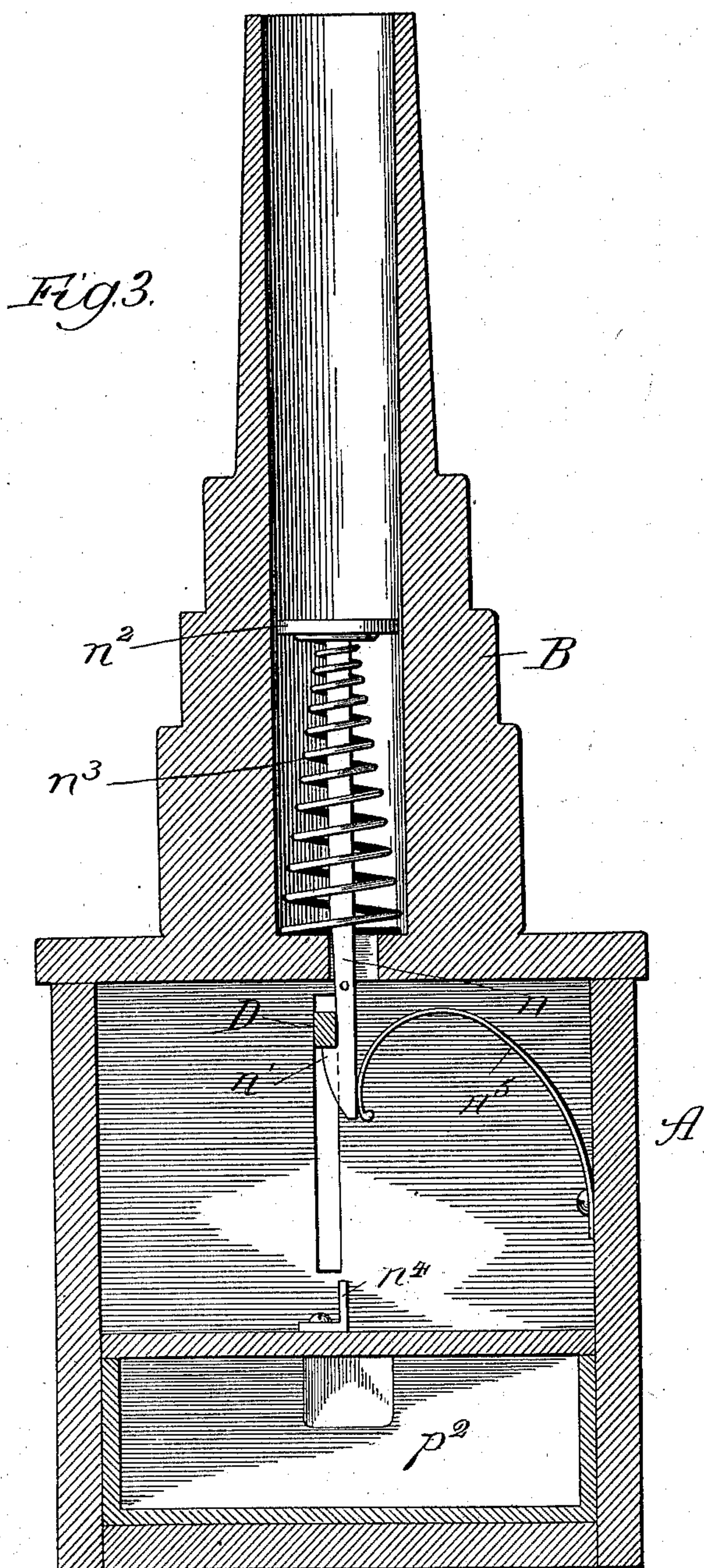
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UNITED STATES PATENT OFFICE.

ERNEST LOHSAND, OF CHICAGO, ILLINOIS.

COIN-CONTROLLED MACHINE.

SPECIFICATION forming part of Letters Patent No. 559,534, dated May 5, 1896.

Application filed February 18, 1896. Serial No. 579,750. (No model.)

To all whom it may concern:

Be it known that I, ERNEST LOHSAND, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Coin-Controlled Machines, of which the following is a specification.

My invention relates to an improvement in the class of machines adapted to be operated to deliver articles they contain by inserting coins into the machines.

My object is to provide improved mechanism for controlling the delivery irrespective of the nature of the article to be delivered by it or of the particular method of discharging it out of the machine. I have especially devised, however, as a feature to be used with my improvement, means for forcibly throwing out the article purchased by inserting a coin into the machine, and the preferred form for this discharging mechanism, by reason of its novelty, is that of a cannon, into which the article may be fed, after inserting the coin, by withdrawing a spring-plunger to admit the article and thereupon discharge it by the recoil of the spring.

Referring to the accompanying drawings, Figure 1 is a vertical sectional view of my improved machine, taken at the line 1 on Fig. 2 and viewed in the direction of the arrow; Fig. 2, a section taken at the line 2 on Fig. 1 and viewed in the direction of the arrow; Fig. 3, a section taken at the line 3 on Fig. 1 and viewed in the direction of the arrow, and Fig. 4 a broken section taken at the line 4 on Fig. 2 and viewed in the direction of the arrow.

A is the case, shown as rectangular in shape, though it may involve any desired shape and be formed of any suitable material. In the case I show a false bottom r' , affording a compartment, which is subdivided by a partition q into the compartments p and p' , and the base r of the case is extended beyond its front side to support a drawer p^2 under a cover p^3 , and which should be provided with a suitable lock. Each compartment p and p' may also contain a drawer. (Not shown.) Above the drawer p^2 , at the front of the case, is supported on a hollow base B' and in upright position a tubular body, preferably in a form to represent a cannon B, or the like, in

the side of which is a feed-opening o , and through the base of which extends a plunger-rod n , terminating at its lower end in a hook or catch n' within the base B' , and at its upper end in a plunger n^2 within the bore of the cannon, the plunger-rod being controlled by a spring n^3 , confined between the plunger and base of the bore.

C is a feed trough or chute supported in the upper portion of the case A to incline in a downward direction from its rear side through an opening o' in the front side of the case, and which coincides with the opening o in the side of the bore of the cannon, and adjacent to the opening o' the trough is covered for a short distance by a backwardly-tapering hood C' .

D is the operating-lever, fulcrumed at one end, as shown at x , inside the case A and extending thence out of the case through a vertical slot m in its front side and through a vertical slot m' in the front side of the hollow base B' , the lever being supported by a spring l , which operates to return it to its normal position when depressed. On a standard E, supported in the case, is fulcrumed between its ends the lever D' , from one end of which depends a yoke k to loosely surround the lever D, and from the opposite end of which there extends a stop i upward through a slot v in the base of the trough C into the path of the articles F therein, hereinafter described. Above the lever D' is fulcrumed between its ends on the standard E another lever D^2 , connected at one end by a depending link h with the lever D and carrying at its opposite end a stop i' , which projects upward into the trough through a slot v' in its base. The lever D, moreover, has pivotally connected with it a stop i^2 , which projects upward into the trough through a slot v^2 in its base, and near the front side of the case there extends upward from the lever D a pivotal stop i^3 through a depending guide extension t , which opens into the base of the trough or chute.

G is the insertion-slot, shown to be provided in the front side of the case, on the rear surface of which side are provided the coin-chute H' , which discharges at its lower end into the compartment p' , the coin-chute H, which passes at its lower end through the front side of the case to discharge into the

drawer p^2 , and the coin-chute H^2 , which discharges at its lower end into the compartment p . A lever I , carrying at one end a weight g , is pivoted between its ends at x' to the rear side of the front of the case to extend at its opposite end, which is formed with a socket f , into alinement with the inlet-opening or coin-duct G' , leading downward from the insertion-slot; and the socket end of the weighted lever is adjacent to the inlet end of the chute H' and adjacent to the arc through which this socket end is adapted to be swung downward are the inlet ends of the chutes H and H^2 .

The chute H' is provided to receive coins of smaller denomination than is required as the purchase-price of the article to be delivered by the machine, such as pennies, a penny being, accordingly, too light to overcome the weight g and depress the socket end of the lever I . When, therefore, a penny is inserted into the slot G , it enters the lever-socket f , which inclines at its base toward the inlet of the chute H' and the penny rolls into the penny-chute. The chute H is provided to receive coins of the proper denomination for the purchase-price of the article to be delivered, such as nickels, and the gravity of the weight g is such that when a nickel is inserted into the slot G and falls into the socket f it will overcome the weight and tilt the lever I sufficiently to discharge the coin into the mouth of the chute H . The chute H^2 is provided to receive spurious articles heavier than coins of the denomination representing the purchase-price of the article, such as disks of lead, one of which, when it is inserted into the slot G and falls into the socket f overcomes the weight g to tilt the lever I sufficiently to direct the coin substitute into the mouth of the chute H^2 .

It is only a coin which enters the chute H which can render the machine operative to deliver an article F , since adjacent to the slot m in the front side of the case is so fulcrumed a substantially L-shaped lever K that one arm normally extends across the slot in the downward path of the lever D , while the other arm projects into the chute H , through its side, into the path of the coin. Accordingly, unless the proper coin (indicated at L in Fig. 2) be dropped into the chute H the lever D cannot be depressed, owing to the obstructing-arm of the stop or lever K in its path; but the weight of the coin against the arm of the lever it encounters in the chute H is sufficient to turn that lever on its fulcrum and withdraw the arm normally in the path of the operating-lever D from the slot m , when the operating-lever may be depressed without obstruction until it strikes a lever I' , fulcrumed at x^2 on the front side of the case to extend across the base of the slot m into the path of the coin L in the chute H , and carrying a weight g' at its opposite end. Not until the lever D encounters (it being depressed) the lever I' can the coin escape from the chute H , but

when it does so encounter the lower weighted lever it depresses the end of the latter, which normally obstructs the coin-passage and turns it out of the way of the coin to permit the latter to continue its course to the drawer p^2 , into which, accordingly, the coin cannot drop till the lever D shall have been properly actuated.

The effect of depressing the operating-lever D is, by engagement with the hook n' on the plunger-rod n , to lower the plunger n^2 past the base of the opening o and permit an article F to roll or fall into the bore of the cannon B on top of the plunger, and when the operator, in thus depressing the lever D , upon having inserted the proper coin L into the machine, causes the beveled side of the hook n' , which is resiliently held straight by a spring n^5 , to engage a deflecting stop n^4 in the path of the hook the plunger is released to permit the recoil of the spring n^3 to throw the article out of the end of the bore some distance into the air, where it may in falling be caught by the purchaser.

The articles F are represented as balls, and it is my primary intention that they shall be hollow sectional balls affording boxes for containing candy or the like, though they need not be of ball shape, as they may be egg-shaped, star-shaped, or of other suitable shape, and it is not necessary, so far as the invention in my improved machine is concerned, that they be boxes at all, as they may be articles to be vended in any desired form.

The stops i and i^2 are in the nature of stirrers so arranged to work through the base of the feed-chute C that when the lever D is actuated they will be reciprocated through or between the articles F in a manner to loosen them should they become clogged or packed.

The arrangement of the stops i' and i^3 prevents more than one of the articles F at a time from being fed to the bore of the device B or out of the chute C when the lever D is depressed. Thus on depressing under the conditions described the operating-lever D the stop i^3 is lowered out of the path in the chute to permit an article F to roll through the openings o' and o ; but as this stop descends the depression of the lever D effects raising of the end of the lever D^2 , carrying the stop i' , which is accordingly raised into the path of the article behind the first one and stops the flow while the operating-lever is depressed, while when it is released and resumes its normal condition the stop i^3 affords the obstructing medium for the articles in the chute C .

In front of the slot m and suspended on the lever D to move with it I show a guard-plate d for covering the slot below the lever to prevent access through the slot to the interior mechanism with any instrument by means of which the stop K might be moved without inserting a coin for the purpose.

The mechanism for controlling the discharge of the articles from the case A may be used to advantage without providing any

means, such as the cannon representation B, for throwing them out. Hence I do not wish to be understood as limiting my invention to the employment of ejecting means.

5 What I claim as new, and desire to secure by Letters Patent, is—

1. In a coin-controlled machine, the combination with the inclosing case having an outlet for the articles to be delivered, of a chute for said articles leading to said outlet, a coin-
10 chute, an operating-lever, a stop normally projecting into the path through said article-chute and controlled by the operating-lever, and a stop normally extending into the path
15 of the operating-lever and into the path through said coin-chute, whereby the weight of a coin in its chute withdraws said stop from obstructing said operating-lever, substantially as and for the purpose set forth.

2. In a coin-controlled machine, the combination with the inclosing-case having an outlet for the articles to be delivered, of a chute for said articles leading to said outlet, a coin-
20 chute, an operating-lever, stops controlled by operating said lever alternately to project into the path through said article-chute at different points therein, and a stop normally
25 extending into the path of the operating-lever and into the path through said coin-chute, whereby the weight of a coin in its chute withdraws said stop from obstructing said
30 operating-lever, substantially as and for the purpose set forth.

3. In a coin-controlled machine, the combination with the inclosing case having an outlet for the articles to be delivered, of a chute
35 C for said articles leading to said outlet, a coin-chute, a spring-controlled operating-lever D extending at one end through a slot in the case, a standard E in the case, a lever D'
40 fulcrumed on said standard and having at one end a yoke connection with the operating-lever and carrying at its opposite end a stop i projecting upward through the base of said chute C, a lever D² fulcrumed on said
45 standard and connected at one end with the operating-lever and carrying at its opposite end a stop i' projecting upward through the base of said chute C, stops i^2 and i^3 extending
50 upward from the operating-lever through said chute-base, and a lever K fulcrumed to extend normally into the path of the operating-lever through said slot and into the path through said coin-chute, substantially as and
55 for the purpose set forth.

4. In a coin-controlled machine, the combination with the inclosing case having an outlet for the articles to be delivered and a coin-
60 insertion slot leading to a coin-duct, of a chute for said articles leading to said outlet, an operating-lever extending through a slot in the

case, coin-chutes having their inlet ends adjacent to the discharge end of said duct, a lever I weighted at one end and fulcrumed to extend at its opposite end between said
65 coin-duct and said inlet ends of the coin-chutes, a stop-lever K fulcrumed to extend normally into the path of the operating-lever in said slot and into the path through one of said chutes, and a lever I' fulcrumed to extend
70 at one end across the path of said operating-lever into the path through said chute into which said stop-lever projects, substantially as and for the purpose set forth.

5. In a coin-controlled machine, the combination with the inclosing case having an outlet for the articles to be delivered, of a chute
75 for said articles leading to said outlet, a coin-chute, an operating-lever, a stop normally extending into the path of the operating-lever
80 and into the path through said coin-chute, and an ejector device communicating with said outlet and operatively connected with said lever, substantially as and for the purpose set forth.

6. In a coin-controlled machine, the combination with the inclosing case having an outlet for the articles to be delivered, of a chute
85 for said articles leading to said outlet, a coin-chute, an operating-lever, a stop normally extending into the path of the operating-lever
90 and into the path through said coin-chute, and an ejector device having a tubular chamber communicating with said outlet and containing a spring-controlled plunger having
95 its rod engaged by said operating-lever, substantially as and for the purpose set forth.

7. A coin-controlled machine comprising, in combination, the case A containing a chute
100 C leading to an outlet in the case, a coin-insertion slot G leading to a coin-duct G', coin-chutes H, H' and H², a weighted lever I fulcrumed to control the introduction of the coin or other token into one or the other of said coin-chutes, an operating-lever D extending
105 through a slot in said case and carrying stops projecting into the path through said chute C, a stop-lever K fulcrumed to extend normally into the path of said lever and into the chute H, a lever I' fulcrumed to extend
110 past said slot below the lever and into the chute H, and a cannon-like ejector device B communicating at its base with said delivery-outlet and containing a spring-controlled
115 plunger with which the operating-lever engages toward its outer end, the whole being constructed and arranged to operate substantially as described.

ERNEST LOHSAND.

In presence of—

M. J. FROST,
J. H. LEE.