

**No. 632,485.**

**Patented Sept. 5, 1899.**

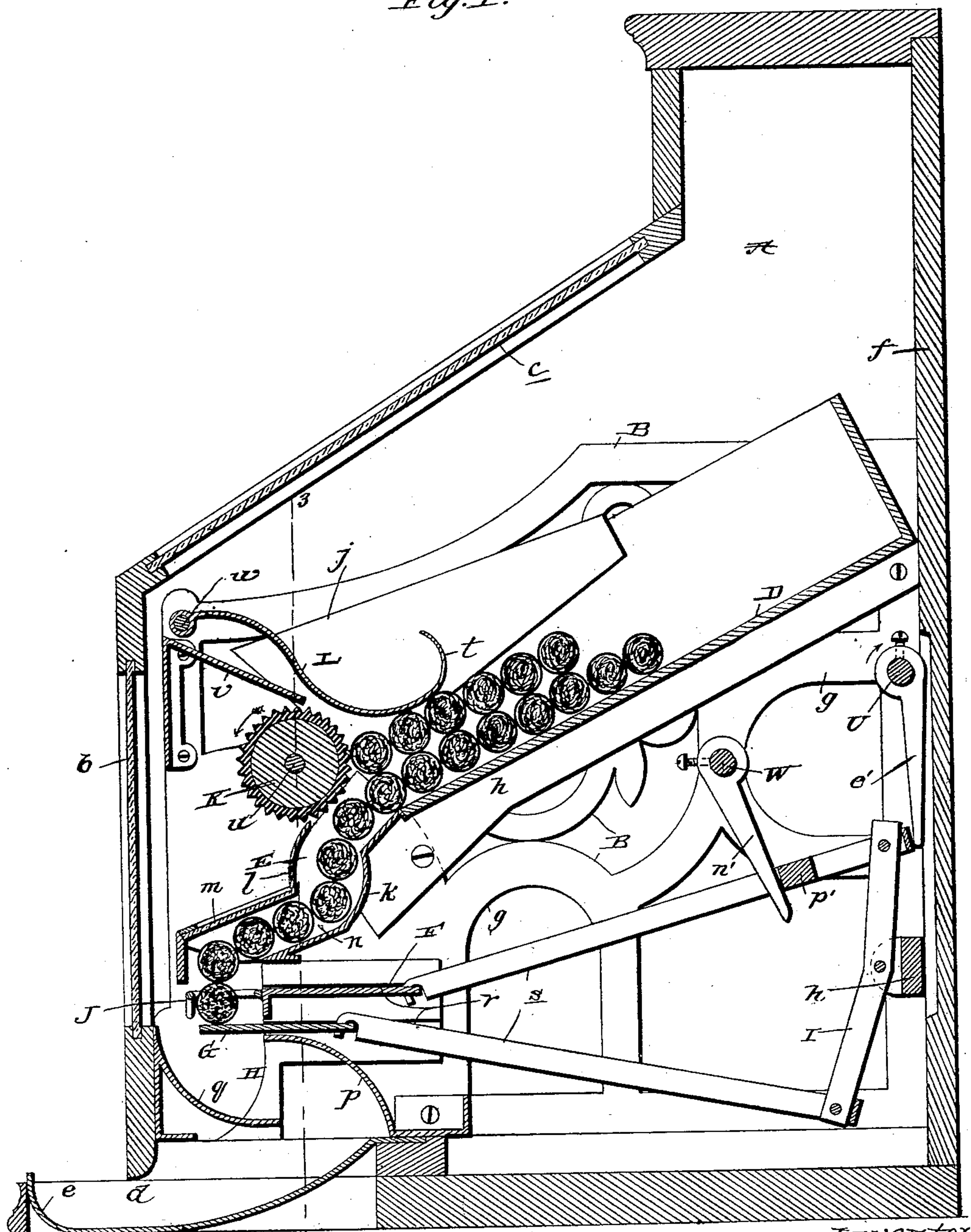
**M. S. CODY.**  
**VENDING APPARATUS.**

(Application filed May 19, 1899.)

3 Sheets—Sheet 1.

(No Model.)

Fig. 1.



Witnesses:  
 [Signature]  
 J. H. Crony

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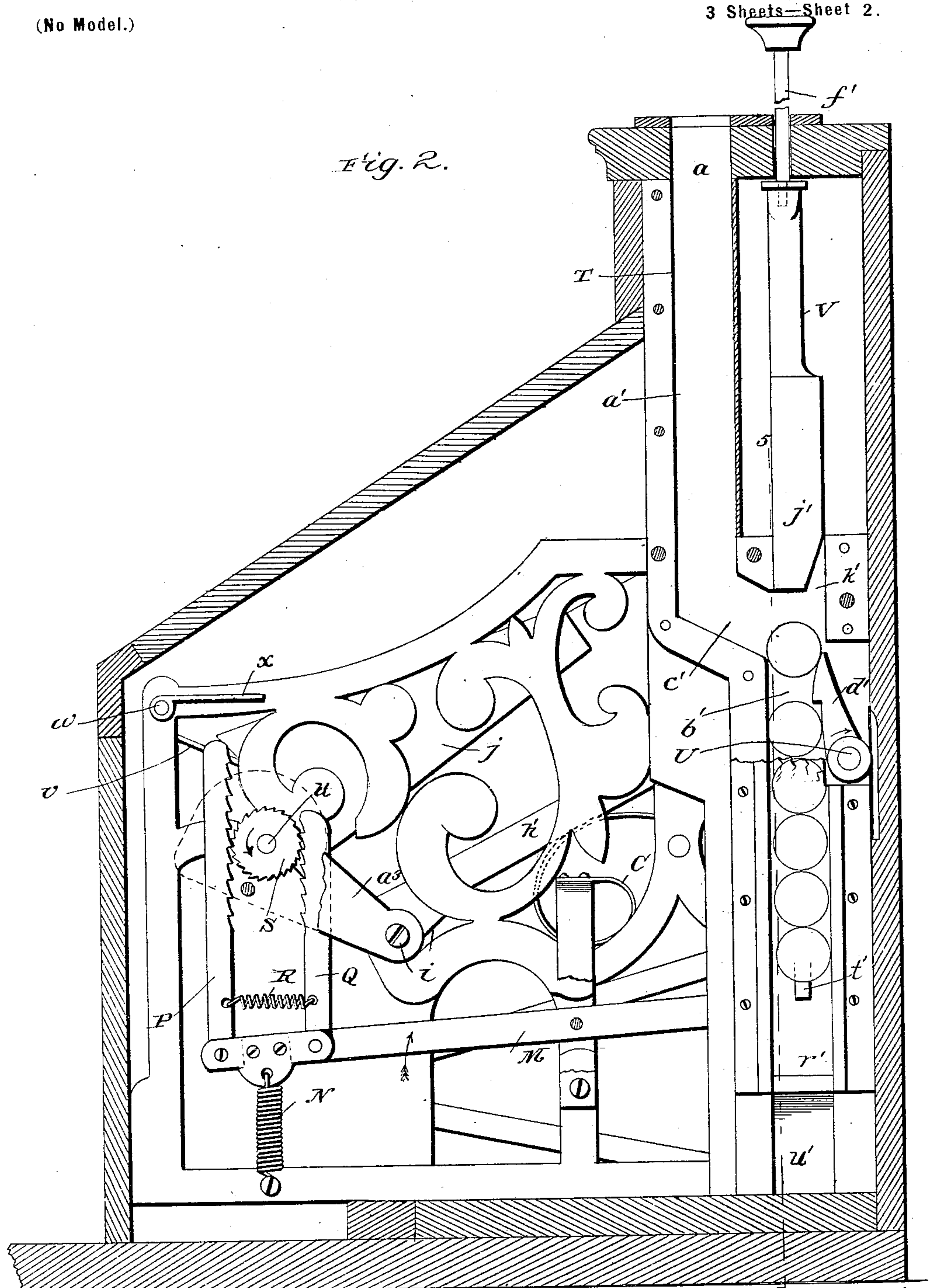
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3 Sheets—Sheet 2.



Witnesses:  
*C. H. Baeder*  
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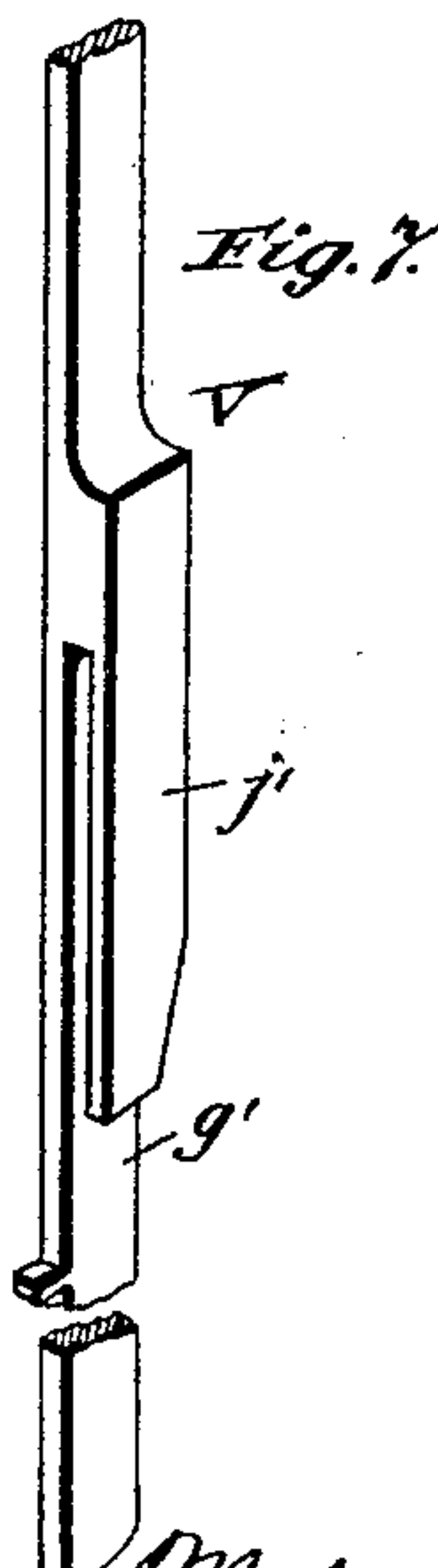
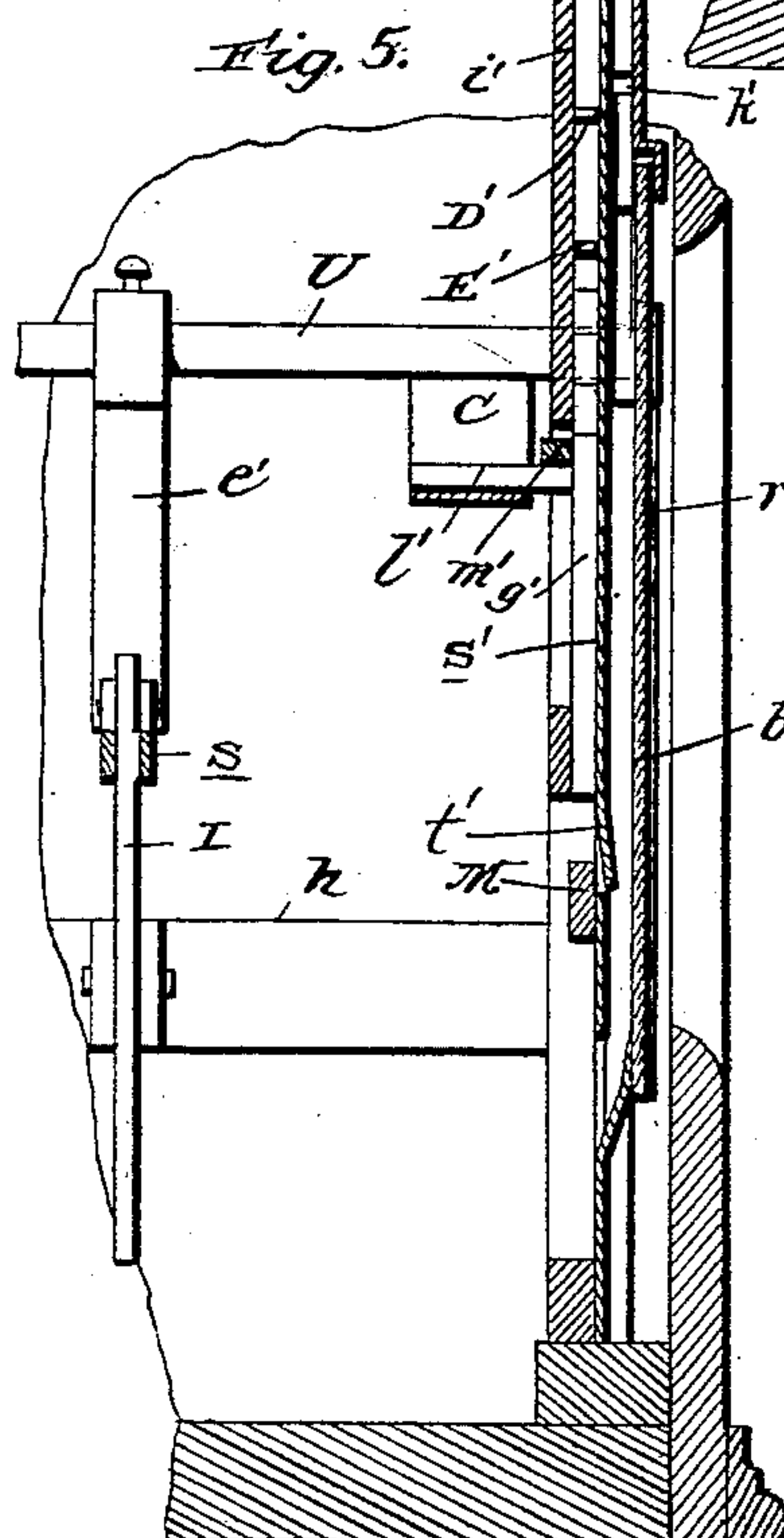
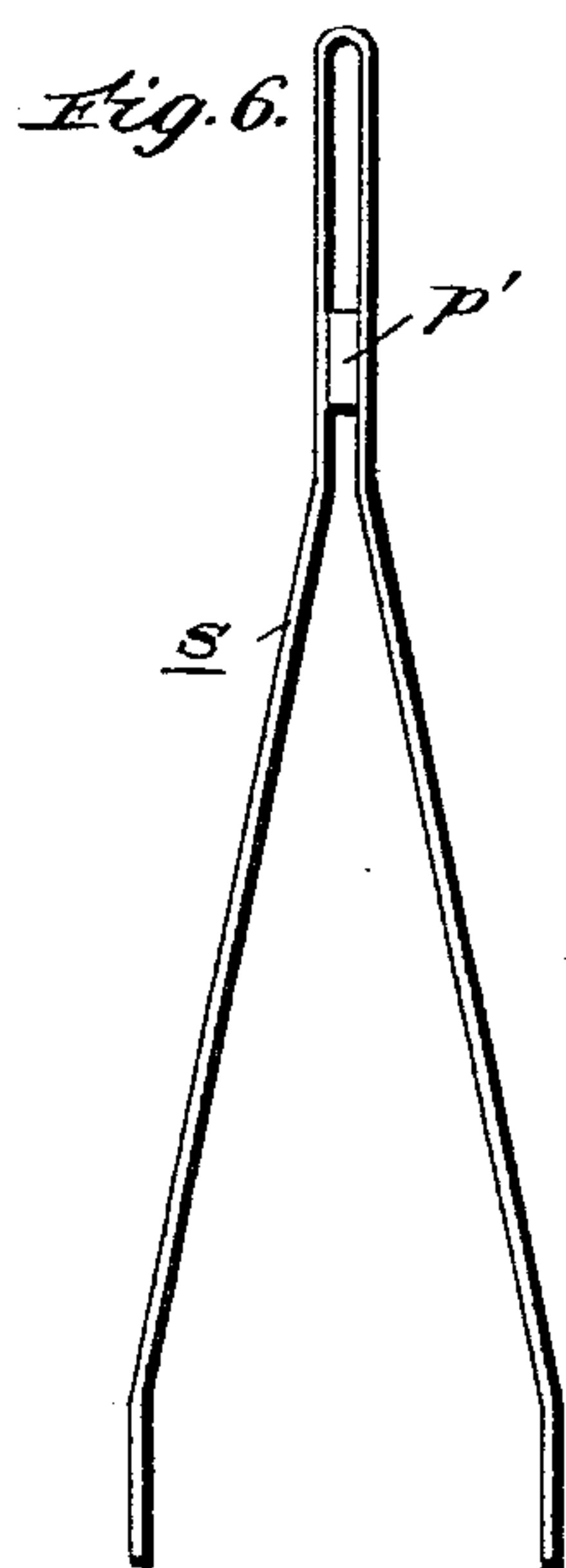
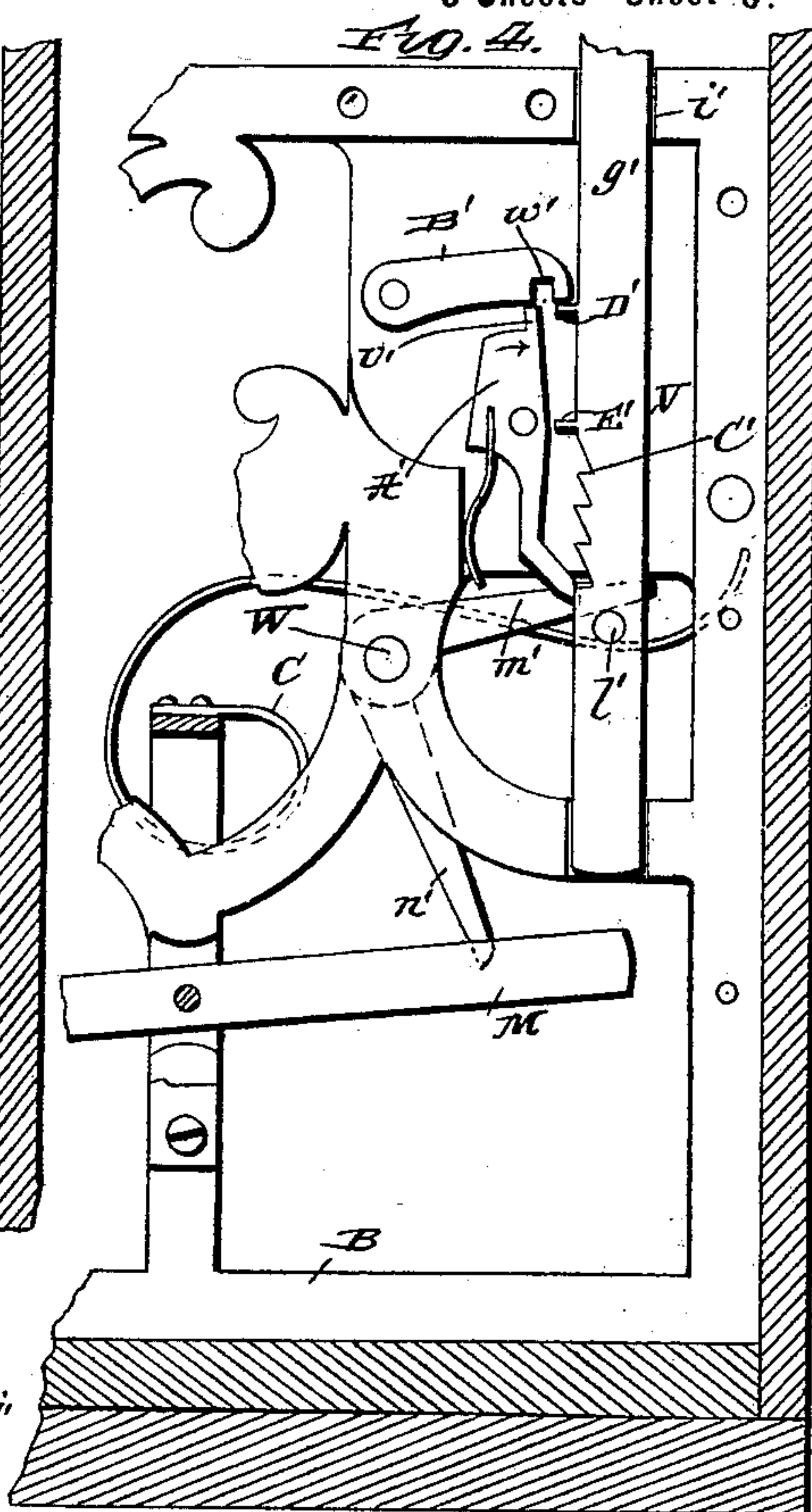
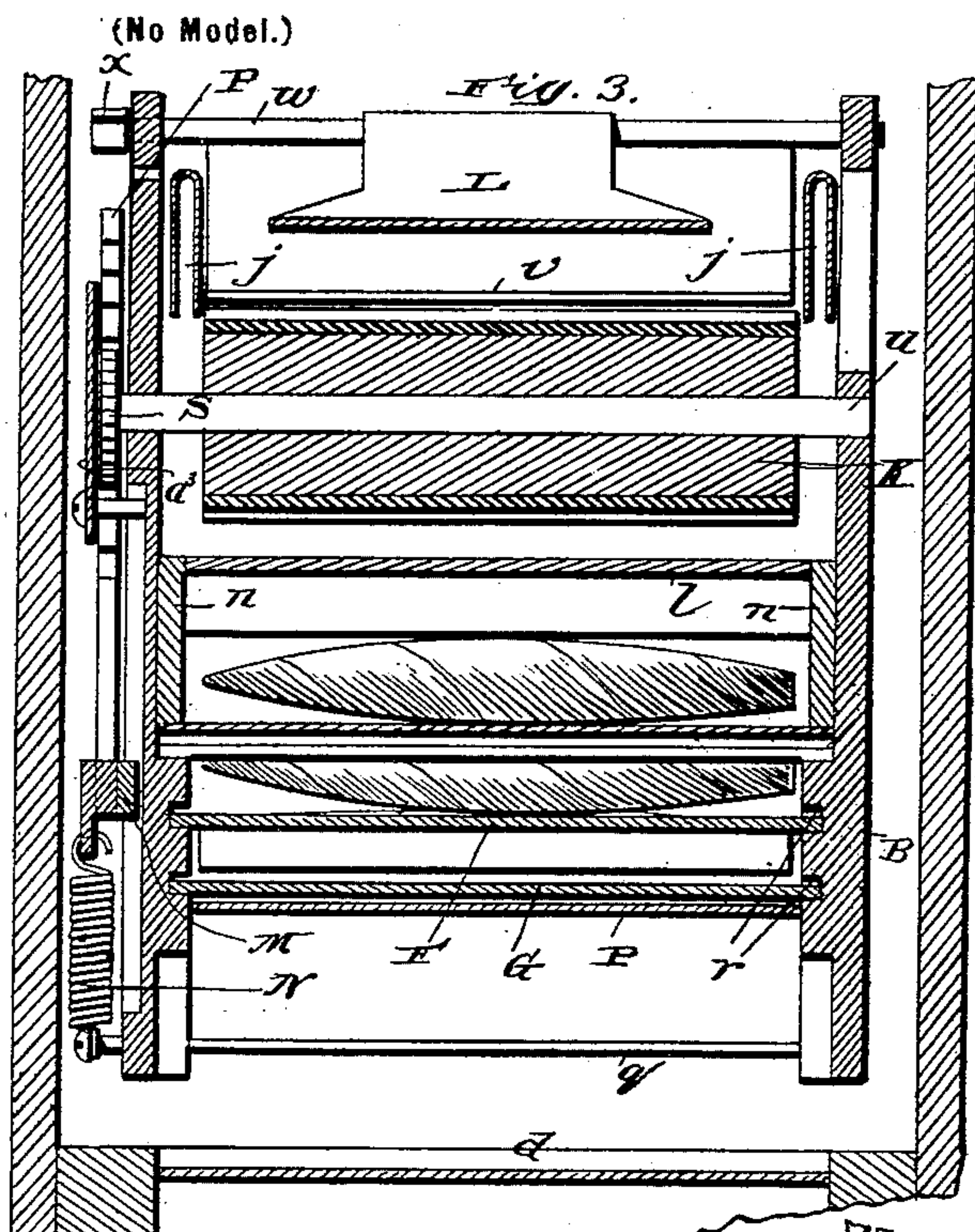
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**3 Sheets—Sheet 3.**



witnesses  
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# UNITED STATES PATENT OFFICE.

MILES S. CODY, OF WASHINGTON, DISTRICT OF COLUMBIA.

## VENDING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 632,485, dated September 5, 1899.

Application filed May 19, 1899. Serial No. 717,431. (No model.)

*To all whom it may concern:*

Be it known that I, MILES S. CODY, a citizen of the United States, residing at Washington, in the District of Columbia, have invented  
5 new and useful Improvements in Vending Apparatus, of which the following is a specification.

My invention relates to coin-controlled vending apparatus, and more particularly to  
10 coin-controlled apparatus for vending cigars and the like.

It contemplates the provision of a simple and inexpensive apparatus for vending cigars and similar articles and one which is highly  
15 reliable in operation, and yet is not liable to break or otherwise injure the cigars.

With the foregoing in mind the preferred embodiment of the invention will be fully understood from the following description and  
20 claims, when taken in conjunction with the accompanying drawings, in which—

Figure 1 is a vertical longitudinal central section of my improved apparatus. Fig. 2 is a longitudinal vertical section taken in a  
25 plane between one side wall of the case and one side of the main frame of the apparatus. Fig. 3 is a detail transverse section taken in the plane indicated by the broken line 3 3 of Fig. 1. Fig. 4 is a detail longitudinal section  
30 illustrating the mechanism for returning the handle to its normal position, together with the mechanism for preventing such return of the handle until after it is fully depressed. Fig. 5 is a detail transverse section taken in  
35 the plane indicated by the broken line 5 5 of Fig. 2. Fig. 6 is a plan view of one of the pitmen embraced in the apparatus. Fig. 7 is a broken perspective view of the handle.

In the said drawings similar letters designate corresponding parts in all of the several  
40 views.

The case A of the apparatus is preferably of the shape illustrated and is provided with a slot *a* for coins, glass panels *b c* for the purpose of enabling a prospective purchaser to  
45 view its contents, an opening *d* for the exit of cigars, a receptacle *e* for the discharged cigars, and a hinged back door *f* for permitting of access being readily gained to its interior  
50 when it is necessary to replenish the supply of cigars or repair any of the parts.

In the case A is arranged a frame B, which

is preferably made up of upright side castings *g* and a cross-bar *h*, connecting the rear ends of the same, as best shown in Fig. 1. At  
55 the inner side of the side castings of the frame are arranged ledges *h h'*, the ledge *h* being rigidly connected to one side casting, as shown in Fig. 1, and the ledge *h'* being pivotally connected at *i* to the other side casting and designed to rest on a spring C, presently described, as shown in Fig. 2. The said ledges  
60 *h h'* are designed to support in an inclined position an ordinary cigar-box D, from which the top and one end wall are removed. This box is designed to contain the cigars to be  
65 vended and is equipped on the forward portions of its side walls with extensions *j*, designed to prevent casual displacement of cigars when the box is full or almost full. The  
70 said extensions *j* are respectively formed of a single piece of sheet metal bent into loop form upon itself, as shown in Fig. 3, and they are therefore adapted to be readily clipped on and removed from the side walls of the box.  
75

It follows from the foregoing that when it is desired to supply my improved apparatus with cigars it is simply necessary to remove the top and one end wall of a full box, mount the extensions *j* on the side walls of the box,  
80 and place said box in the apparatus upon the ledges *h h'*. When the box is emptied, it is replaced by another full box prepared in the manner stated or, if preferred, is supplied with cigars taken from another box.  
85

When placed on the ledges *h h'* in the manner stated, the box D bears at its lower end against the upper end of a throat E. This throat is formed by a lower transverse wall  
90 *k*, interposed between and connected to the side castings *g* of frame B, an upper transverse wall *l*, also interposed between and connected to the side castings and provided with a glass panel *m* to expose the cigars to view, and side walls, which may be formed by the  
95 side castings *g* or metallic strips *n*, connected thereto, as desired. Said throat is of a width to loosely receive a single layer or series of cigars, and its lower end is controlled by cut-offs F G, interposed between it and a discharge-pass  
100 age H, which is formed by walls *p q* and leads to the cup or receptacle *e*, as shown in Fig. 1.

The cut-offs F G are arranged in guideways



7 on the side castings *g* and are connected by pitmen *s* to the opposite ends of a lever *I*, whereby it will be seen that when the said lever is rocked the cut-offs will be moved in  
5 opposite directions. The upper cut-off *F* is provided at its forward end with a cigar-retainer or retaining-frame *J*, which has for its purpose to receive the lowermost cigar of the series and hold it against casual movement  
10 or displacement off the lower cut-off *G*, which normally rests in the position shown in Fig. 1, and in such position serves as a support for the cigars in the throat *E*.

*K* is an agitator in the form of a roller, which  
15 serves to prevent more than a single layer of cigars from entering the throat *E* at one time and also serves by loosening the cigars to accelerate the passage of the same to said throat, and *L* is a gravitating presser, which is preferably in the form of a curved plate provided  
20 with an upwardly-extending lip *t* at its free end, and has for its purpose to retain the cigars in layers and prevent them from massing at the lower portion of the box. The  
25 roller *K* is provided with a corrugated or roughened periphery of rubber or other yielding material, so as to enable it to engage the cigars without breaking or otherwise injuring the same, and is fixed on a shaft *u*, journaled in the side castings *g* at points between  
30 the upper wall *l* of the throat *E* and an inclined plate *v*. This plate *v* is connected with the frame *B*, and its free edge rests over the roller *K*, whereby it is enabled to support  
35 the foremost cigars of the upper layer of a full box.

The gravitating presser *L* is fixed on a transverse rock-shaft *w*, which is journaled in the side castings *g* and is provided with an  
40 arm *x* at one end for a purpose presently described.

*M* is a lever fulcrumed at an intermediate point of its length on one of the side castings *g*. *N* is a spring for returning said lever to  
45 and normally holding it in the position shown in Fig. 2, and *P* *Q* are rack-bars pivotally connected to the lever *M* and having oppositely-disposed teeth. The said rack-bars are guided in their movements by a plate *a*<sup>3</sup> and  
50 are held by a spring *R*, interposed between them, in engagement with a ratchet-wheel *S*, fixed on the shaft *u* of roller *K*, whereby it will be seen that when the lever *M* is rocked the roller *K* will be rotated in the direction  
55 indicated by arrow in Fig. 1 to loosen the cigars in the box *D* and accelerate the passage of the same to the throat *E*, as before described. The rack-bar *P* is of the proportional length illustrated, and hence it will be  
60 observed that when the forward end of lever *M* is raised it will strike against the arm *x*, and thereby lift the presser *L* and prevent it from interfering with the loosening of the cigars or the passage of the same to the  
65 throat *E*.

*T* is a coin-chute, which comprises upper and lower vertical portions *a'* *b'*, arranged in

parallel planes, and an intermediate inclined portion *c'* between the portions *a'* *b'*.

*U* is a transverse rock-shaft journaled in  
70 the side castings of frame *B* and equipped with a beveled arm *d'*, which normally extends into the lower portion *b'* of the coin-chute, and with a tappet *e'*, arranged to engage the rear  
75 end of the upper pitman *s*, and *V* is a handle in the form of a plunger, through the medium of which the apparatus is manually actuated. The said handle or plunger is equipped with a finger-piece *f'*, arranged to  
80 extend loosely through the top of case *A*, and is made up of a main portion *g'*, movable in a vertically-disposed guideway *i'* and arranged to engage the rear end of lever *M* when the  
85 plunger is depressed, and an offset portion *j'*, movable in a guideway *k'* above and coincident with the lower portion *b'* of the coin-chute *T*.

The spring *C*, before described, is connected to one of the side castings *g* of frame *B*, and its free portion is arranged beneath a lug *l'*,  
90 so as to enable it to raise the plunger *V* to its normal position when said plunger is released subsequent to a depression thereof. The said lug *l'* of the plunger is arranged in turn below  
95 an arm *m'* on a rock-shaft *W*, which has another arm *n'*, (see Figs. 1 and 4,) arranged to bear against a portion *p'* of the upper pitman *s*.

By virtue of the construction described it will be observed that when a coin of prede-  
100 termined denomination is depressed in chute *T* and assumes a position against the arm *d'* of shaft *U* and the plunger *V* is depressed the offset portion *j'* of said plunger, acting  
105 against the said coin, swings the arm *d'* and rocks the shaft *U* in the direction indicated by arrow in Figs. 1 and 2, and through the medium of the tappet *e'* on said shaft rocks the lever *I* and moves the upper cut-off *F* forwardly and the lower cut-off *G* rearwardly.  
110 When the cut-offs are thus moved, the cigar held in the retainer *J* of the upper cut-off is released and drops through the passage *H* into the receptacle *e*, from whence it may be readily removed by the purchaser. The cigars  
115 above that held in the retainer *J* are, however, supported by the upper cut-off, and hence it will be seen that but a single cigar will be discharged incident to each operation of the apparatus. When the plunger is re-  
120 leased and is raised by the spring *C*, its lug *l'*, acting against the arm *m'* of shaft *W*, rocks said shaft, and through the medium of the arm *n'* acting against the portion *p'* of the upper pitman *s* moves the upper cut-off rear-  
125 wardly and the lower cut-off forwardly to their normal positions. When the cut-offs are thus returned to their normal positions, the cigars in the throat *E* will move downwardly and the lowermost one thereof will  
130 assume a position in the retainer *J* and rest upon the lower cut-off *G*, as illustrated in Fig. 1. Coincident with the depression of the plunger *V* and the forward movement of the



upper cut-off and rearward movement of the lower cut-off the portion  $g'$  of said plunger rocks the lever M in the direction indicated by arrow in Fig. 2. When said lever is thus  
 5 rocked, the rack-bar P, acting against arm  $x$ , raises the gravitating presser L to release the cigars, while the rack-bar Q, acting against ratchet-wheel S, rotates the wheel K in the direction indicated by arrow, and thereby  
 10 loosens the cigars. On the up movement of the said plunger V the spring N (see Fig. 2) rocks the lever M in the direction opposite to that indicated by arrow, when the rack-bar P, moving downwardly, releases the presser  
 15 L and at the same time rotates the roller K, which again loosens or agitates the cigars and insures the movement of the same down the throat E.

The outer wall  $r'$  of the lower portion  $b'$  of the coin-chute T is preferably of glass or other transparent material and is arranged opposite a glass panel (not shown) in the case A, so as to expose the coins in said portion of the chute to view. The inner wall  $s'$  of said  
 25 chute portion  $b'$  is preferably of sheet metal and has a downwardly-disposed resilient tongue  $t'$  struck therefrom, as best shown in Figs. 2 and 5. This tongue  $t'$ , which extends into the chute portion  $b'$ , has for its purpose  
 30 to support the coins above it in said chute portion, so that in the event of the machine being operated with the aid of a spurious coin said spurious coin will be exposed to view after the machine is operated and will  
 35 aid in the detection of the party who used it.

When the chute portion  $b'$  is filled with coins, as shown in Fig. 2, and the machine is operated, the coin engaged by the tongue  $t'$  will be pressed past said tongue and will fall  
 40 down the chute into the receptacle  $u'$  at the lower end thereof.

In order to prevent the plunger V from returning or moving upwardly until after it has been fully depressed and effected the discharge of a cigar into the receptacle  $e$ , I  
 45 provide the mechanism best shown in Fig. 4. This mechanism is controlled by the plunger and comprises a spring-backed dog A', pivotally connected to the frame B, and a gravitating keeper B' therefor, also pivotally connected to frame B, said dog and keeper being designed to operate in conjunction with beveled teeth C' and lugs D' E' on the portion  $g'$  of the plunger V. The teeth C' of the  
 55 plunger are normally engaged by the dog A', and hence said dog is enabled to prevent upward movement of the plunger. At the completion of the depression of the plunger, however, its lug E' engages the dog and disengages the same from the teeth C' and also moves the upper end of the dog in the direction of the arrow, (see Fig. 4,) with the result that a toe  $v'$  at the upper end of the dog enters a notch  $w'$  in the gravitating keeper.  
 65 This engagement between the dog and keeper permits free upward movement of the plunger

V and continues until the plunger has almost completed its upward movement, when the lug D' on said plunger raises the keeper B' and releases the same from the dog A' and  
 70 permits said dog to return to its normal position in engagement with the teeth C'.

The prevention of upward movement of the plunger until after it is fully depressed is highly advantageous, because it insures the  
 75 proper operation of the machine when a coin of proper denomination is placed in chute T, and the plunger V is actuated and prevents the loss of the coin to the purchaser in the event of the plunger being depressed sufficiently far to carry the coin past the arm  $d'$ ,  
 80 but not far enough to properly actuate the roller K and presser L and insure the feed of cigars through the throat E.

It will be appreciated from the foregoing  
 85 that notwithstanding the simplicity and cheapness of its construction my improved apparatus is reliable in operation and is calculated to discharge one cigar and preclude the discharge of more than one when a coin  
 90 of proper denomination is deposited in chute T and the plunger V is depressed. It will also be appreciated that the disposition of the discharge-passage H with respect to the opening  $d$  and cut-offs F G is such as to preclude the cut-offs being operated by a finger  
 95 or by an instrument inserted through said opening  $d$ .

I prefer to employ a cigar-box in the apparatus as a receptacle for the cigars, but do  
 100 not desire to be understood as confining myself to the same, as any other preferred receptacle may be employed. I also do not desire to be understood as confining myself to the specific construction and relative arrangement of parts embraced in this the preferred  
 105 embodiment of my invention, as such changes or modifications may be made in practice as fairly fall within the scope of my invention.

Having thus described my invention, what  
 110 I claim is—

1. In a coin-controlled vending apparatus, the combination of a receptacle having a discharge-opening, a handle, a roller arranged adjacent to the discharge-opening for loosening the cigars and accelerating the passage of the same to said opening, a pivoted, gravitating presser arranged in rear of the roller for keeping the articles in proper order; said roller and presser being controlled by the handle, and means, for controlling the discharge of articles, adapted to be operated by the handle when a coin is interposed between it and said handle, substantially as specified.  
 115

2. In a coin-controlled vending apparatus, the combination of a throat or passage, lower and upper movable cut-offs; the upper cut-off being provided with an article-retainer at its forward handle, a connection between the cut-offs whereby when one is moved in one direction the other is simultaneously moved in the opposite direction, a handle, and means for  
 125  
 130



moving the cut-offs adapted to be operated by the handle when a coin is interposed between it and said handle, substantially as specified.

3. In a coin-controlled vending apparatus, the combination of a receptacle for the articles to be vended, a handle, an agitator for loosening the articles and accelerating the discharge of the same, and a presser for keeping the articles in proper order; said agitator and presser being controlled by the handle, and means, for controlling the discharge of articles, adapted to be operated by the handle when a coin is interposed between it and said handle, substantially as specified.

4. In a coin-controlled vending apparatus, the combination of a receptacle for the articles to be vended, a throat communicating therewith, an agitator for loosening the articles and accelerating the passage of the same to the throat, a movable cut-off controlling the throat, a presser for keeping the articles in proper order, a handle, means operated by the handle for actuating the agitator and relieving the articles of the pressure of the presser, and means for moving the cut-off adapted to be operated by the handle when a coin is interposed between it and said handle, substantially as specified.

5. In a coin-controlled vending apparatus, the combination of a receptacle for the articles to be vended, an agitator for loosening the articles and accelerating the passage of the same to the throat, a movable presser for keeping the articles in proper order in the receptacle, a handle, means operated by the handle for actuating the agitator and relieving the articles of the pressure of the presser, and means for controlling the discharge of articles adapted to be operated by the handle when a coin is interposed between it and said handle, substantially as specified.

6. In a coin-controlled cigar-vending apparatus, the combination of a cigar-receptacle, a throat communicating therewith, a roller arranged adjacent to the throat and having a yielding and roughened periphery, a gravitating presser arranged to bear on the cigars in the receptacle and keep the same in proper order, a handle, means operated by the handle for rotating the roller and raising the presser, and means, for controlling the discharge of cigars, adapted to be operated by the handle when a coin is interposed between it and said handle, substantially as specified.

7. In a coin-controlled, cigar-vending apparatus, the combination of a cigar-receptacle, a throat communicating therewith, a roller arranged adjacent to the throat and having a yielding and roughened periphery, a gravitating presser arranged to bear on the cigars in the receptacle and keep the same in proper order, a movable cut-off controlling the throat, a handle, means operated by the handle for rotating the roller and raising the presser, and means for moving the cut-off adapted to be operated by the handle when

a coin is interposed between it and said handle, substantially as specified.

8. In a coin-controlled, cigar-vending apparatus, the combination of an inclined cigar-receptacle open at its lower end, a throat leading from said end of the receptacle, a roller arranged at the lower end of the receptacle and adjacent to the throat; said roller having a yielding and roughened periphery, a gravitating presser arranged to bear on the cigars in the receptacle and keep the same in proper order, a fixed plate arranged above the roller, a movable cut-off controlling the throat, a handle, means operated by the handle for rotating the roller and raising the presser, and means for moving the cut-off adapted to be operated by the handle when a coin is interposed between it and said handle, substantially as specified.

9. In a coin-controlled vending apparatus, the combination of a throat or passage, lower and upper movable cut-offs located below the discharge of the throat or passage, the upper cut-off being provided with an article-retainer at its forward end, a lever, pitmen connecting the opposite ends of said lever and the cut-offs, a handle, means for rocking the lever in one direction and adapted to be operated by the handle when a coin is interposed between it and said handle, and means operated by the handle for rocking said lever in the opposite direction, substantially as specified.

10. In a coin-controlled vending apparatus, the combination of a throat or passage, lower and upper movable cut-offs, a lever, pitmen connecting the opposite ends of said lever and the cut-offs, a handle, means for rocking the lever in one direction and adapted to be operated by the handle when a coin is interposed between it and said handle, means operated by the handle for rocking said lever in the opposite direction, a roller, a lever arranged to be engaged by the handle, and means operated by said lever for rotating the roller, substantially as specified.

11. In a coin-controlled vending apparatus, the combination of a frame, a roller journaled therein and having a ratchet-wheel, a lever, rack-bars pivotally connected to the lever and disposed at opposite sides of the ratchet-wheel and having oppositely-disposed teeth, a coiled spring connecting said rack-bars, a handle for rocking the lever, and means, for controlling the discharge of articles, adapted to be operated by the handle when a coin is interposed between it and said handle, substantially as specified.

12. In a coin-controlled vending apparatus, the combination of a frame, a roller journaled therein and having a ratchet-wheel, a lever, rack-bars pivotally connected to the lever and disposed at opposite sides of the ratchet-wheel and having oppositely-disposed teeth, a coiled spring connecting said rack-bars, a rock-shaft journaled in the frame and having



5 a presser-plate and also having an arm arranged to be engaged by one of the rack-bars, a handle, and means, for controlling the discharge of articles, adapted to be operated by the handle when a coin is interposed between it and said handle, substantially as specified.

10 13. In a coin-controlled vending apparatus, the combination of cut-offs, a lever, upper and lower pitmen connecting the cut-offs and the opposite ends of said lever, a coin-chute, a plunger movable in said chute and having a lug, a spring bearing upwardly against the lug, a rock-shaft having an arm extending into the chute and an arm arranged to bear  
15 against the rear end of the upper pitman, and a second rock-shaft having an arm arranged above the lug of the plunger and a second arm arranged to engage the upper pitman, substantially as specified.

20 14. In a coin-controlled vending apparatus, the combination of a reciprocatory handle having a series of beveled teeth and also having lugs, a dog adapted to normally bear against the handle and engage the teeth and  
25 be engaged by one of the lugs thereof, a keeper

for the dog adapted to be engaged by the other lug of the handle, and means, for controlling the discharge of articles, adapted to be operated by the handle when a coin is interposed between it and said handle, substantially as specified.

15. In a coin-controlled vending apparatus, the combination of a receptacle for the articles to be vended, extensions respectively comprising a piece of resilient sheet metal bent into loop form upon itself; the said extensions being clipped on walls of the receptacle, a handle, and means for controlling the discharge of articles adapted to be operated by the handle when a coin is interposed between it and said handle, substantially as specified.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

MILES S. CODY.

Witnesses:

JESSIE G. CRONEY,  
THOMAS E. TURPIN.