

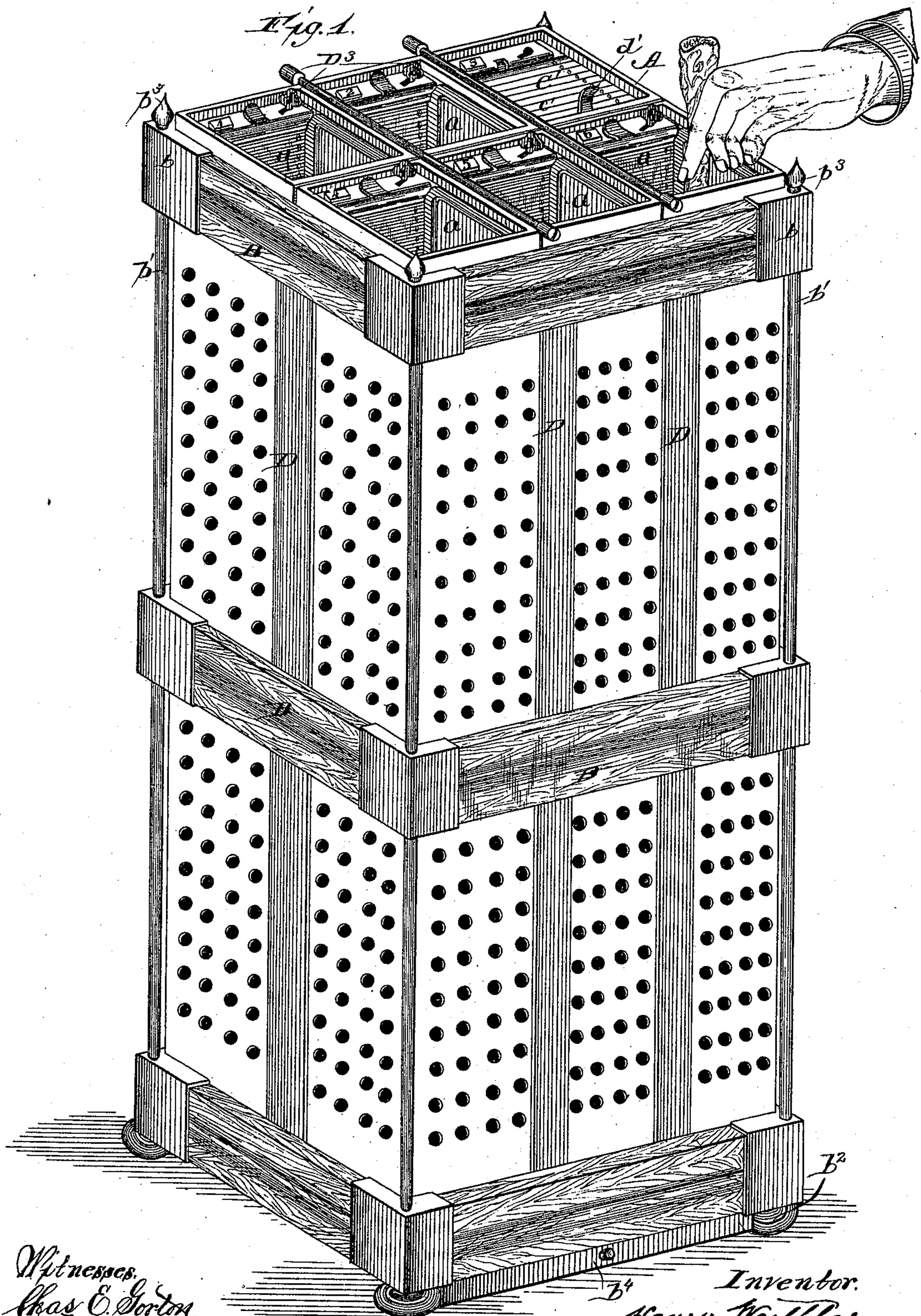
(No Model.)

6 Sheets—Sheet 1.

H. WESTPHAL,
COIN CONTROLLED UMBRELLA STAND.

No. 486,145.

Patented Nov. 15, 1892.



Witnesses.
Chas. E. Dorton
May Judge

Inventor.
Henry Westphal
By Chas. C. Tillman
Atty.

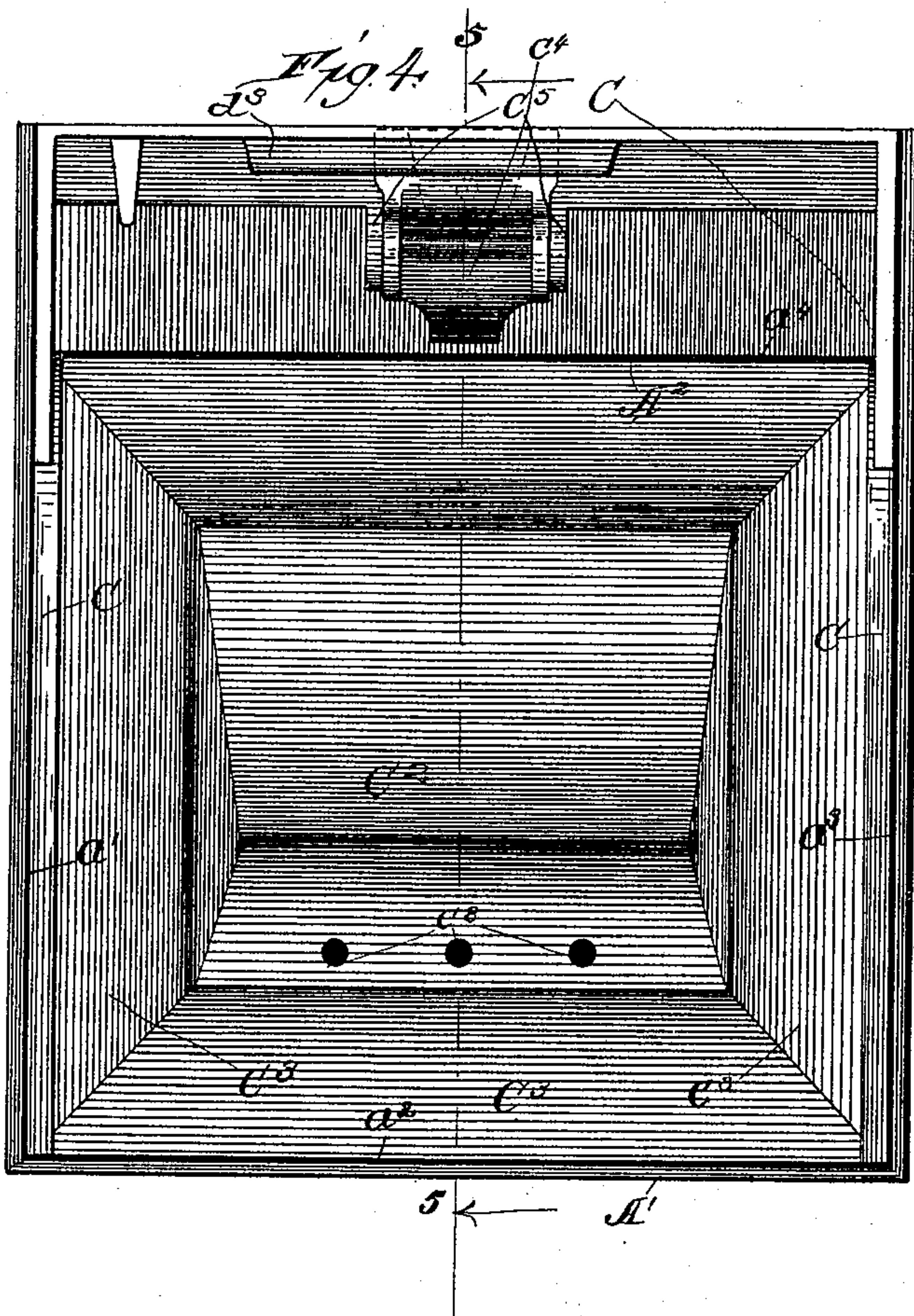
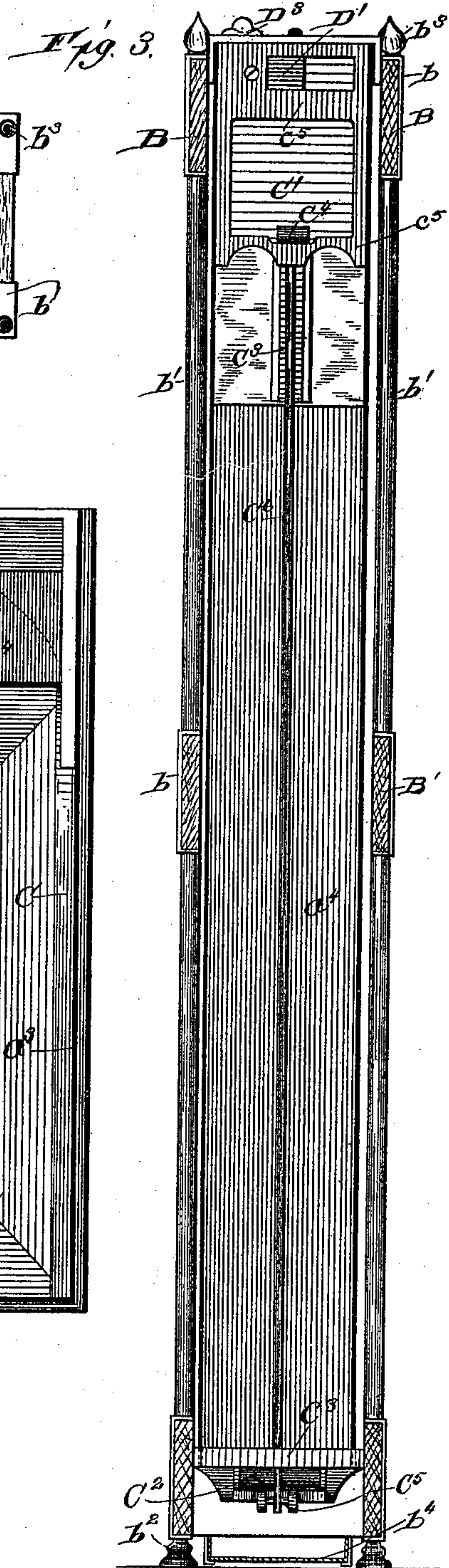
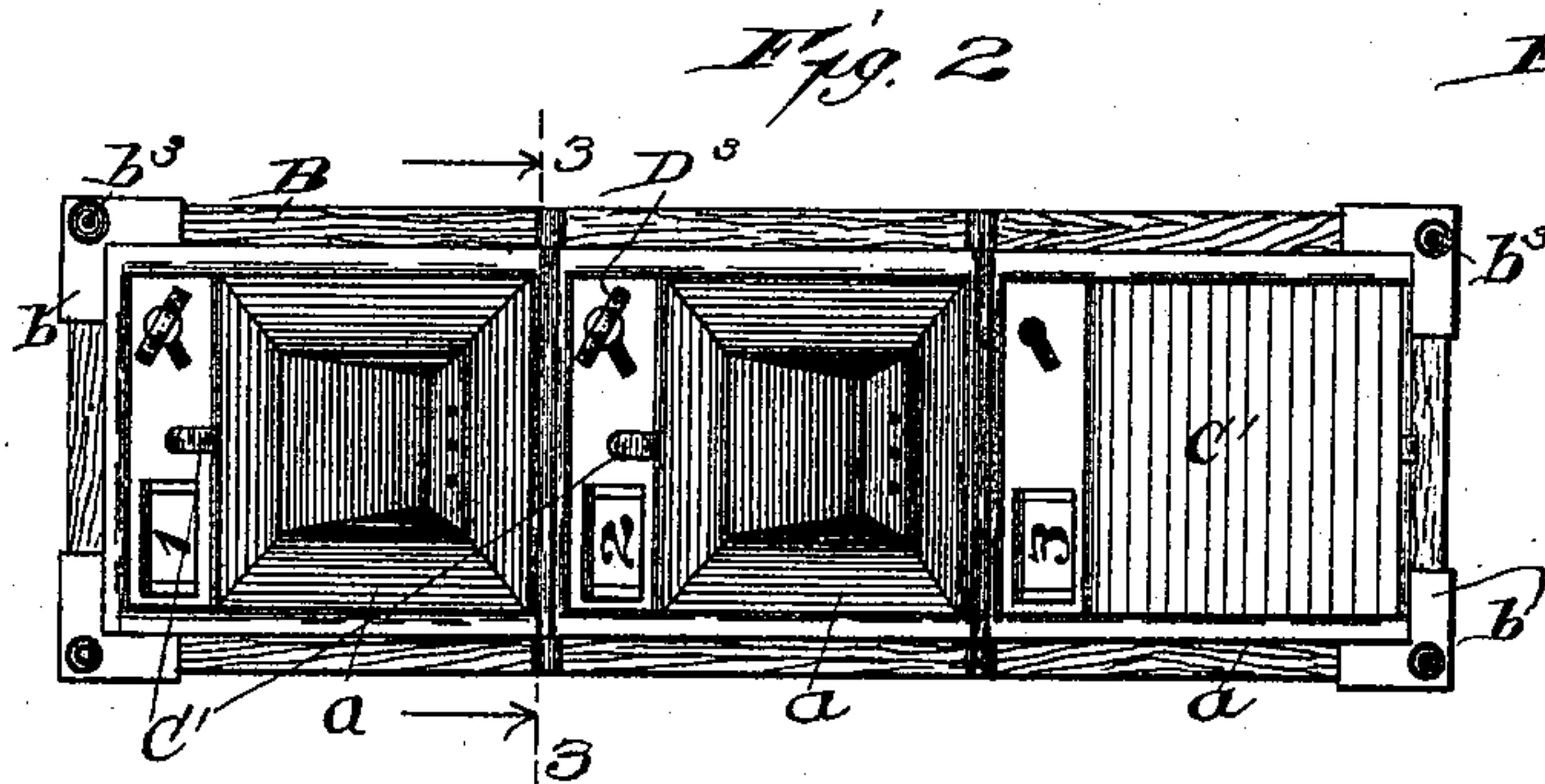
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6 Sheets—Sheet 2.

H. WESTPHAL.
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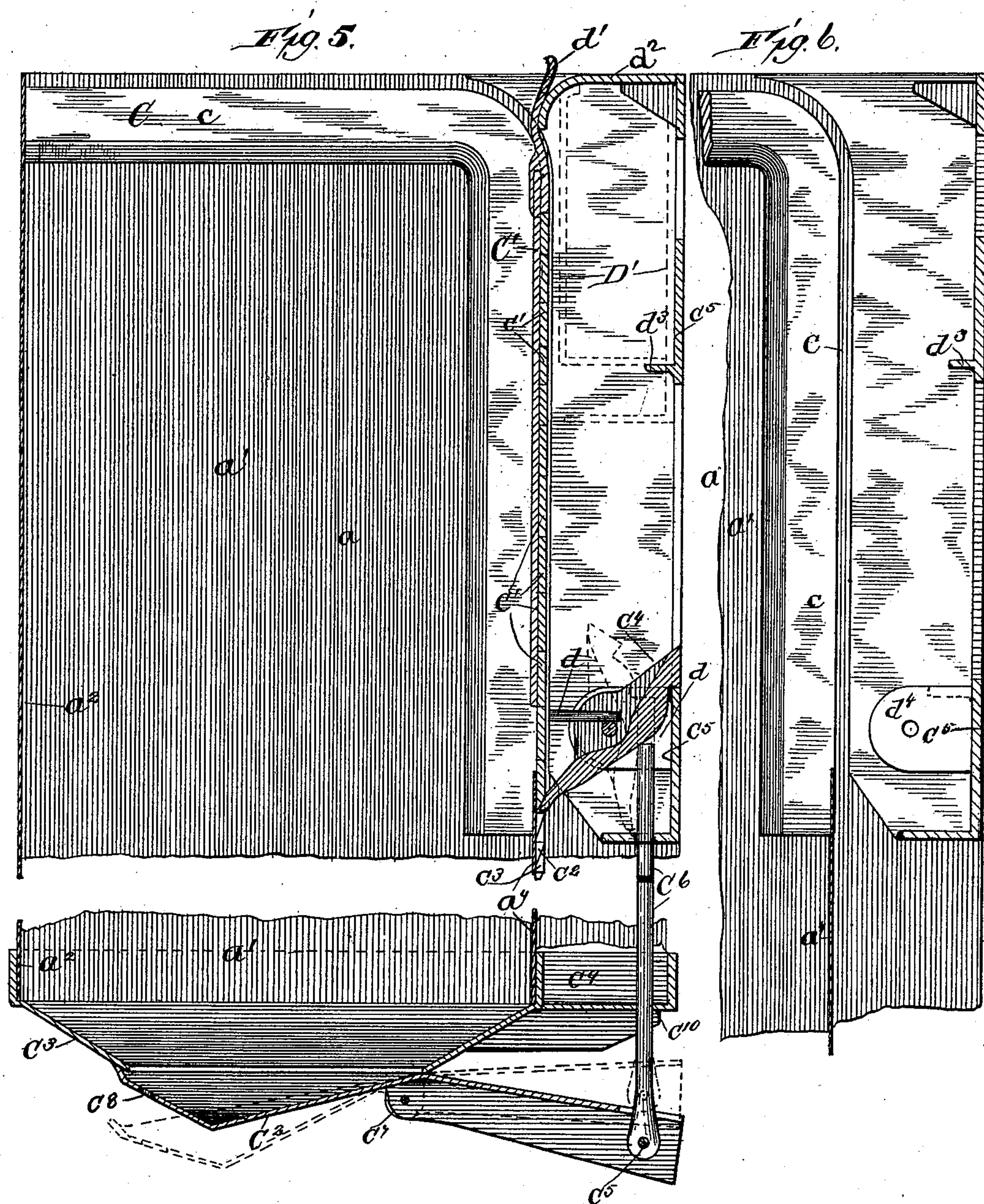
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6 Sheets—Sheet 3.

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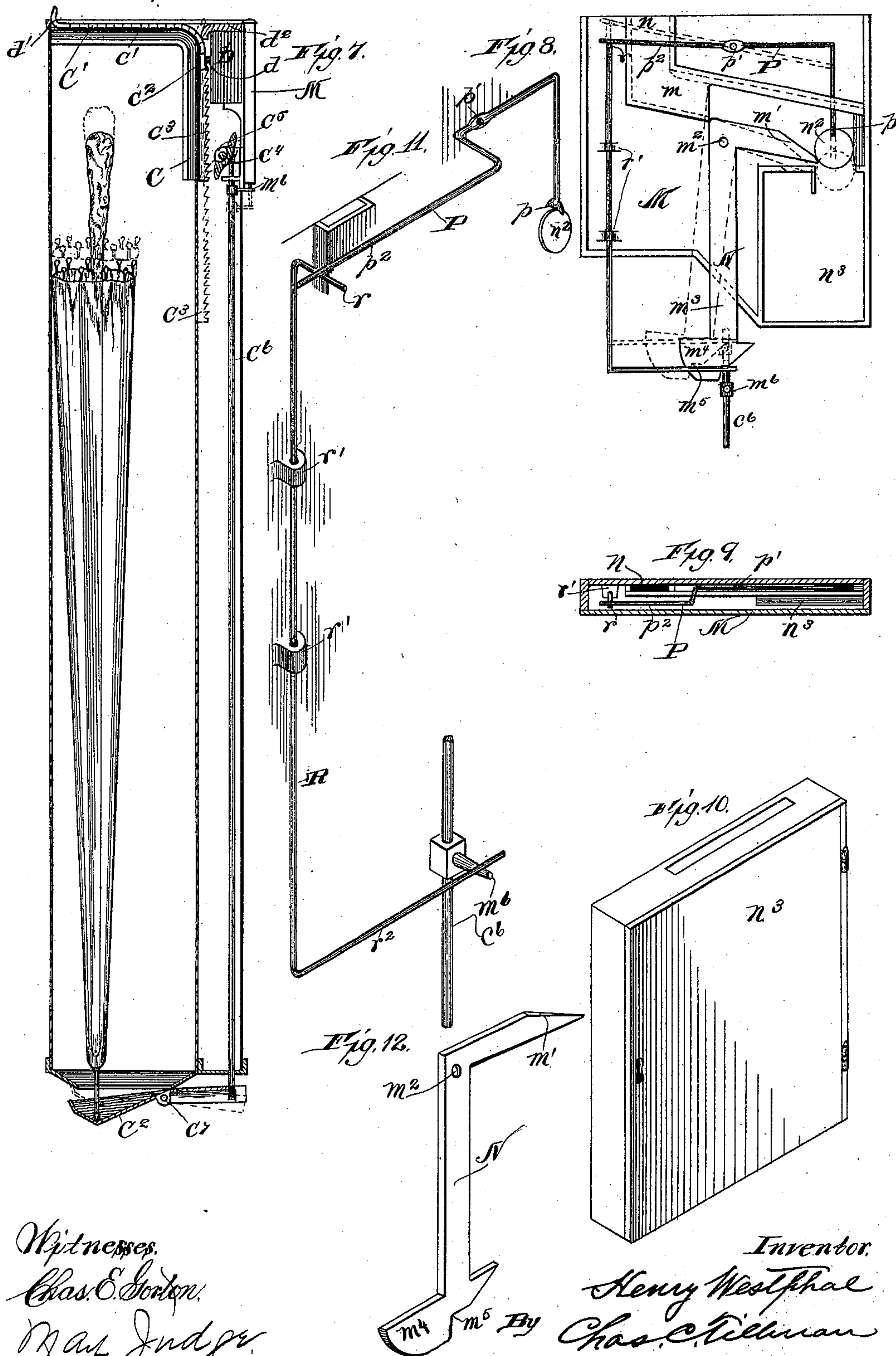
Witnesses:
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6 Sheets—Sheet 4.

No. 486,145.

Patented Nov. 15, 1892.



Witnesses,
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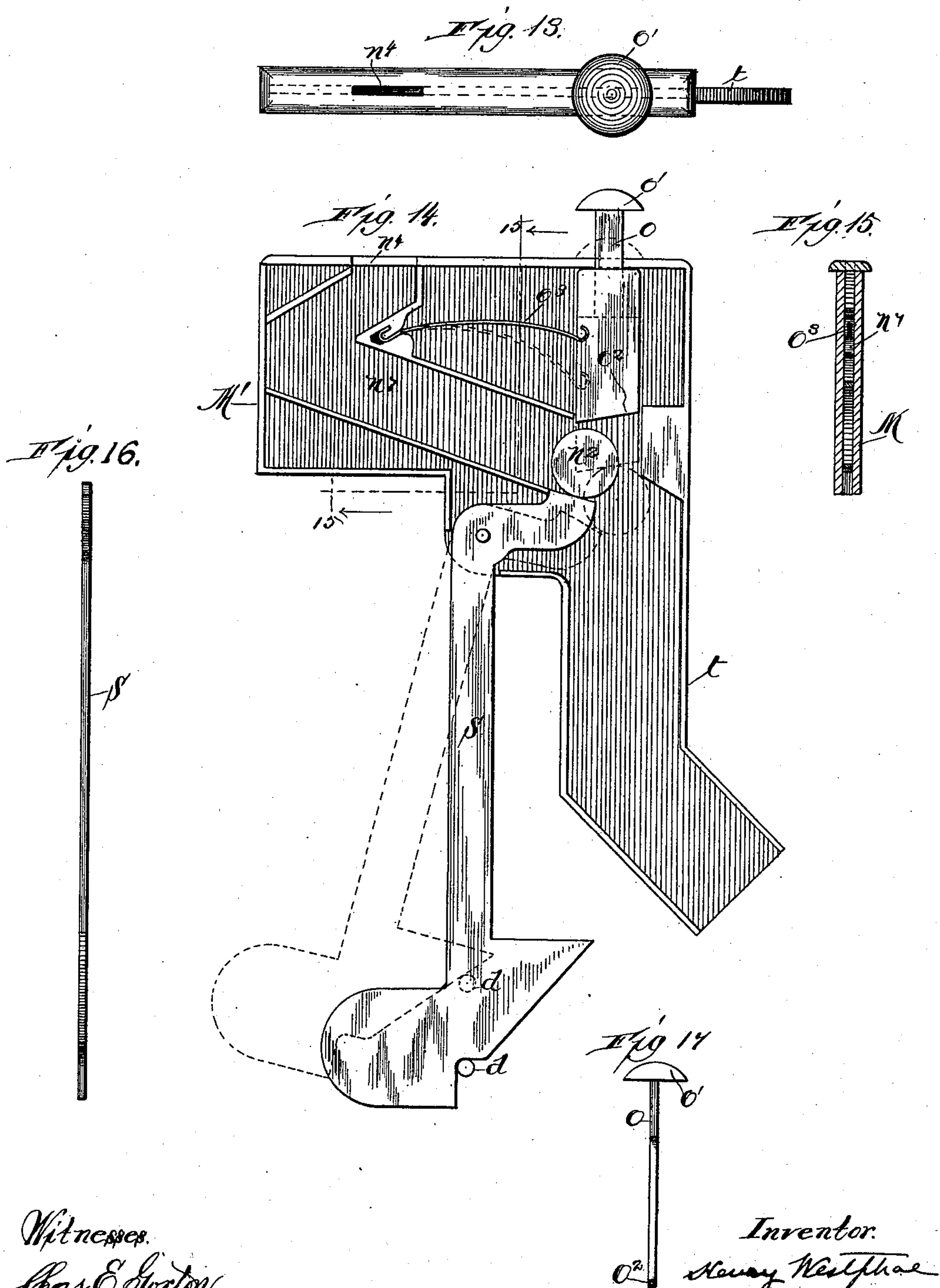
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6 Sheets—Sheet 5.

H. WESTPHAL.
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Witnesses.
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UNITED STATES PATENT OFFICE.

HENRY WESTPHAL, OF CHICAGO, ILLINOIS.

COIN-CONTROLLED UMBRELLA-STAND.

SPECIFICATION forming part of Letters Patent No. 486,145, dated November 15, 1892.

Application filed July 6, 1891. Serial No. 398,489. (No model.)

To all whom it may concern:

Be it known that I, HENRY WESTPHAL, a citizen of the United States, residing at Chicago, in the county of Cook, State of Illinois, have invented certain new and useful Improvements in Coin-Controlled Umbrella-Stands and Attachments Therefor, of which the following is a specification.

This invention relates to improvements in umbrella-stands and attachments therefor; and it consists in certain peculiarities of the construction and novel arrangement of the various parts of the same, as will be hereinafter more fully set forth and specifically claimed.

The object of my invention is to afford an attractive piece of furniture for the safe-keeping of umbrellas, walking-canes, parasols, and other articles, whereby each compartment is provided with a downsliding door, and thereby leaves entirely free and unobstructed all other compartments to either insert or remove umbrellas or other articles, and also a piece of furniture within which either of the above-named articles may be placed and securely locked and retained, and in which the umbrella and the key used in locking said umbrella in the case cannot be both removed at the same time, and to sometimes afford a case for the protection of umbrellas, whereby the umbrella cannot be locked within the case except by the deposit of a coin of a specific value, which is in payment for the safe-keeping of the article.

In order to enable others skilled in the art to which my invention pertains to make and use the same, I will now proceed to describe it, referring to the accompanying drawings, in which—

Figure 1 represents a perspective view of one of my stands composed of several compartments as it appears when ready for use, showing one of the compartments closed and the key for locking the same removed, and also illustrating the manner of placing an umbrella in the compartment. Fig. 2 is a plan view of a stand having three compartments, showing one in use with the key removed. Fig. 3 is a rear sectional view of one of the compartments, taken on line 3 3, Fig. 2. Fig.

4 is an enlarged plan view of one of the compartments with the locking mechanism and door removed. Fig. 5 is a sectional side view of the upper and lower portions of one of the compartments, showing the operating mechanism. Fig. 6 is a sectional view of the rear upper portion of the case with the operating mechanism removed and showing the groove in guideway for the door. Fig. 7 is a vertical sectional side view of one of the compartments, showing an umbrella locked therein and a coin-controlling attachment secured thereto. Fig. 8 is a view in side elevation, showing the coin-controlling mechanism and a portion of the operating-rod. Fig. 9 is a plan sectional view of the same. Fig. 10 is a perspective view of the cash box or receptacle. Fig. 11 is a perspective view of a portion of the coin-controlling mechanism, showing the relative positions of the rods and levers. Fig. 12 is a detail perspective view of the operating-lever. Fig. 13 is a plan view showing a modified form of the coin-controlling device. Fig. 14 is a side view thereof, showing the interior mechanism. Fig. 15 is a vertical rear sectional view taken on line 15 15 of Fig. 14. Figs. 16 and 17 are detail views of the actuating lever and press-button, respectively. Fig. 18 is a view in side elevation of the lock and key used in each one of the compartments. Fig. 19 is a rear end view thereof. Fig. 20 is a plan view of Fig. 18, showing the upper portion of the key broken off. Fig. 21 is a bottom view of Fig. 18. Fig. 22 is a view in side elevation of the lock with the face-plate removed, showing the internal mechanism of the lock. Fig. 23 is a view in side elevation, partly in section, with the face-plate and key removed, showing the position of the parts when the door is up. Fig. 24 is a front end view of Fig. 18. Fig. 25 is a view in side elevation of the bed-plate of the lock. Fig. 26 is a detail perspective view of the key-receiving tube or guide. Fig. 27 is a face view of the wheel of the lock. Fig. 28 is a view in side elevation of the same. Fig. 29 is a rear view of the wheel. Fig. 30 is a view in elevation of Fig. 29. Fig. 31 is a view in side elevation of the key. Fig. 32 is a front view

of the same. Fig. 33 is a view in side elevation of a stay for the key. Fig. 34 is a front view of the same.

A represents one of my umbrella-stands as it appears when completed and ready for use.

a represents the different compartments or boxes used for holding and storing umbrellas, canes, &c. In order to secure and protect said boxes, I inclose them in a frame consisting of narrow pieces of wood or other suitable material B, joined and secured by corner-pieces b , having a rod b' , connected with the feet b^2 of the stand and passing through the corner-pieces from the base to top of the stand and being secured there by a screw-nut b^3 or otherwise, as shown in Fig. 1 of the drawings. Between the narrow strips B and extending from the base to the top of the stand are placed thin strips of light sheet metal D, covering the space left between the boxes a , as shown in Fig. 1. Beneath the stand A is removably secured a drip-pan b^4 of suitable size and material to catch the drippings from the umbrellas placed in the stand when wet. The boxes a are preferably formed of two pieces of sheet metal, one of which A' is bent so as to form three sides $a' a^2 a^3$ of a rectangle, and the other piece A^2 forms the fourth side a^4 and is secured between the sides $a' a^3$ at a suitable distance from their edges to form a space and receptacle for the locking mechanism at the top and for the operating-rod and a portion of the tripping device at the bottom.

The inner surface of the upper ends of the sides $a' a^3$ is provided with pieces c , which extend from the front side a^2 horizontally to near the back a^4 and then downward a short distance and form a groove or guideway C for the door or covering C' of the compartment, which door is usually made of a number of narrow strips c' , which are secured to a piece of flexible material attached to the lower sides of the piece c' and permit the door to follow the curve in the guideway C.

The lower portion of the door, which is usually made of a rigid piece of material c^2 , is provided with a vertically-operating ratchet c^3 , which is engaged by a pawl c^4 , which pawl is fulcrumed at the rear of the ratchet to a casting c^5 and is operated vertically by the upper end of a trip or operating rod c^6 , which rod is attached at its lower end to the trap-door C^2 , as shown in Fig. 5 of the drawings. The trap C^2 acts as a lever and is fulcrumed to suitable projections or lugs c^7 , which are provided on the under side of a casting or removable bottom C^3 , which is designed to fit over and be secured to the bottom of the compartment a , as seen. The casting C^3 is preferably made with its sides sloping inward and downward, as shown, which form guides for the end of the umbrella or cane to the trap C^2 , which entirely covers the open bottom of the casting C^3 and is likewise formed with its sides sloping to the center, and has near its front a number of openings c^8 , which per-

mit of the escapement of water from a dripping umbrella, the weight of which will place and hold the trap C^2 in the position indicated by dotted lines in Fig. 5. It will further be seen that the rear portion of the casting C^3 is formed with a horizontally-projecting portion or box c^9 , the rear wall of which reaches from the rear edge of the side piece a' to that of the side piece a^3 , and thus more firmly braces the entire bottom of the structure and also furnishes a guide to the rod c^6 , which passes through an opening c^{10} in the bottom of the box c^9 , which is formed for said purpose. Thus it will be seen that when the umbrella is placed in the compartment a its lower end will rest in the trap C^2 , which by reason of the weight of the umbrella will be pressed to the position shown by dotted lines in Fig. 5, which operation will force the operating-rod c^6 upward, and thereby cause the pawl to disengage from the ratchet c^3 , thus releasing the door and key and allowing the former to be drawn to the position shown in Fig. 7, thus locking the umbrella in and permitting the key to be removed.

At the top and rear of each of the compartments and within the top space formed by the projecting edge of the sides $a' a^3$ is secured a lock D' , which engages with a lug or projection d , secured to the rear of the door C' just above the ratchet c^3 . This lug, together with a thumb-piece d' and curve on the front of the door, prevents the same from dropping down the guideway, the thumb-piece striking against the ornamental plate d^2 , placed above the lock, and the lug against the pawl when the door is thrown back to the position shown in Fig. 5. The lock D' is retained in place by the casting c^5 , which has a shelf d^3 , upon which the lock may rest, and is provided at its lower end with inwardly-extending lugs d^4 , which form a bearing for the pawl c^4 . The lock D' has a face and bed plate $d^5 d^6$, which are secured together in the ordinary manner and retain the parts of the lock in place. The plate d^6 is formed or provided on its inner surface at a proper point with a lug d^7 for the support of one or more spring-actuated tumblers $d^8 d^9$, which tumblers are pivotally secured near the opposite end of the bed-plate d^6 in a bearing d^{10} and have their operating-springs $e e'$ secured between them and the plate d^6 , so that they will be forced forward to engage with the wheel D^2 , which has its bearings in the plates d^5 and d^6 , as at e^2 . This wheel or compound cam is provided on its side adjacent to the bed-plate d^6 with a hub e^3 , through which is passed the axle e^4 , upon which it revolves. On this hub and about the middle thereof is formed or provided an arm e^5 , the upper end of which is adapted to engage with the recesses $e^6 e^7$ in the tumblers $d^8 d^9$, and the lower end of which is formed partly circular, as at e^8 , to engage with the projections f on the key D^3 . Between the arm e^5 and the plate d^5 and on the hub e^3 is formed or pro-

vided a forked arm F, having two prongs f' and f^2 , the prong f' being longer than f^2 , that it may easily engage with the lug d on the door C' and be raised to the position shown in Fig. 23, when the lower end of the arm e^5 will be disengaged from the projection f on the key-shank and will release the same, so that it may be withdrawn. It will be seen by reference to Fig. 22 that the prong f^2 on the arm F will rest when in its normal position against the bottom of the casing and prevent the arm f' dropping too far to engage with the lug d . In the door G is a split tube or guide for the key, and has its upper bearing in the top of the plates $d^5 d^6$ about their juncture, as shown in Fig. 20, and its lower bearing in the depending bracket g . On the plate d^6 , around the lower end of the tube, is secured a spring g' , which is secured at its other end to the bracket. This spring is employed to bring the projection f on the key back into alignment with the opening g^2 therefor in the top of the lock-case, and is prevented from turning the tube too far by reason of the lug g^3 on the lower end of the tube, which lug engages with a lug g^4 on the bottom of plate d^5 and acts as a stop. At a suitable point in the top and bottom of the lock-case, composed of the two plates $d^5 d^6$, and near the opening g^2 is secured a recessed stay H, having a number of recesses h for the projections f on the key. This plate is used to regulate the combination of the lock, for it is obvious that by altering the size of any one of the recesses the corresponding projection on the key must be altered.

In Figs. 18 and 22 the key is shown as locked in the case, and when in this position the lower end of the arm e^5 is interposed between the projections f on the key and the stay H, as seen at e^8 , and cannot be removed or the key turned except by raising the wheel or cam D^2 , which is done by placing the umbrella in the stand and raising the door.

In Fig. 8 of the drawings I have illustrated an attachment for controlling the operation of the locks and stand by means of a coin. This attachment is composed of a plate M, which is formed on its inner surface with an inclined groove or guide m , which has its opening n for the deposit of the coin preferably placed in the top of the plate M and extends vertically for a short distance and then inclines to the side, the bottom surface of said groove uniting with the upper arm m' of a lever N, which is fulcrumed near its top, as at m^2 , to the plate M and has its longer or lower arm m^3 normally depending in a vertical position, as seen by the continuous lines in Fig. 8. At the bottom the arm m^3 is formed with an enlargement m^4 , which is provided with a recess m^5 for engagement when in a vertical position with a lug m^6 on the operating-rod c^6 . As before stated, this operating-rod is connected to the trap C² and disengages the pawl from the ratchet when the umbrella is placed in the case. When the coin-control-

ling device is used, it is secured by means of screws to the rear of the lock-case, as shown in Fig. 7, when the lower arm m^3 of the lever N will extend slightly below the case M, and in the upward movement of the rod c^6 by reason of the weight of the umbrella the lug m^6 will engage in the recess m^5 of the enlargement m^4 and prevent the end of the rod from releasing the pawl c^4 until a coin is placed in the slot n of the groove, when said coin will glide theredown until it reaches the point indicated by the coin n^2 , (continuous lines,) which when in this position rests gently under the forked end p of a lever P, which is also fulcrumed to the plate N, as at p' , and has its straight arm p^2 resting on the arm r of a vertically-movable rod R, which is secured to the plate M by means of guide-eyes r' , and has an arm r^2 at its lower part to engage with the lug m^6 by resting thereon. From the above description it will be seen that by the uplifting of the rod c^6 the rod R will be raised, and thereby lift the arm p^2 of the lever P, causing its forked end to press the coin against the beveled arm m' of the lever N and throw said lever and the other parts into the position shown by dotted lines, and will deposit the coin in the box n^3 , when the lug m^6 on the rod c^6 will be released from the recess m^5 and allow the end of the rod c^6 to disengage the pawl from the ratchet, when the operation of the parts will be as before described.

In Fig. 14 I have shown a modification of a coin-controlling attachment which I may sometimes use instead of the construction just described. This attachment also has a plate M', which is provided with a guideway n^7 , having an opening n^4 in the top of the plate M' for the deposit of the coin n^2 , and a lever S, fulcrumed to the plate M' and substantially the same in form as the lever N. Through the upper part of the plate M' is secured a press-button o , which has on its outer end a knob o' and its lower end slightly beveled, as at o^2 . Secured to this button is a spring o^3 , which holds the same in the position shown in Fig. 14, except when it is pressed down to release the lever S, when it will assume the position shown by dotted lines in the same figure. The operation in this modification is similar to that before described with the exception that the lever P and rod R are dispensed with and that instead of using them to automatically press the coin n^2 against the lever it is done in this instance by the button o , which, as shown, has its lower end beveled, so that the coin will be removed laterally by the pressure and thrown into the chute t , which may be connected to any suitable receptacle for the coin.

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

1. An umbrella-stand composed of one or more compartments having a downsliding door engaging by means of an operating-rod

and trap at the bottom of the compartment, with a lock mechanism and coin-controlling device, whereby the insertion or removal of articles is unimpeded by the downsliding door 5 and the release and removal of the key are controlled by the deposit of a coin and the umbrella, substantially as set forth.

2. In an umbrella-stand, the combination of a box or receptacle having at its top a guideway for the door, with the door adapted to operate in said guideway and having at its rear lower part a projection to engage with a locking mechanism and a ratchet to engage with a pawl operated by a rod secured at its 15 lower end to a trap secured to and covering the lower end of the box, substantially as set forth.

3. In an umbrella-stand, the combination of the piece A' , bent to form the sides $a' a^2$ 20 a^3 and having at its top the guideway C , and the piece A^2 , forming the side a^4 , the whole composing a box or receptacle a for the umbrella, with the door C' , having the strips c' secured to a flexible piece and having the 25 projection d and ratchet c^3 , the pawl c^4 , having its bearing in the rear portion of the box, the operating-rod c^6 , pivotally secured at its lower end to the trap C^2 , having the openings c^8 and fulcrumed to the casting C^3 , and the 30 casting C^3 , having the portion c^9 and adapted to fit over the bottom of box a , substantially as and for the purpose set forth.

4. In an umbrella-stand, the combination of the box a or receptacle for the umbrella, 35 composed of the pieces $A^2 A'$, having the sides $a' a^2 a^3$ and the guideway C' , the door C , having the strips c' secured to a flexible piece and having the projection d and ratchet c^3 , the pawl c^4 , having its bearings in the rear 40 portion of the box a , the operating-rod c^6 , pivotally secured at its lower end to the trap C^2 and having the openings c^8 and fulcrumed to the casting C^3 , secured to the bottom of the box a , and the locking mechanism D' , engaging with the door C' , all constructed as and 45 for the purpose set forth.

5. In an umbrella-stand, the combination of the box a or receptacle for the umbrella, composed of the pieces A' , having the sides 50 $a' a^2 a^3$ and the guideway C' and the piece A^2 , with the door C' , having the strips c' secured to a flexible piece and having the projection d and ratchet c^3 , the pawl c^4 , the operating-rod c^6 , pivotally secured at its lower end to the trap C^2 , secured to the bottom of the box 55 a , the lock D' , having the compound cams D^2 to engage the projection d on the door, the tumblers, and the key, all constructed, arranged, and operating substantially as and 60 for the purpose set forth.

6. In an umbrella-stand, the combination of the piece A' , bent to form the sides $a' a^2 a^3$

and having at its top the guideway C and the piece A^2 , forming the side a^4 , the whole composing a box or receptacle a for the umbrella, 65 with the door C' , having the strips c' secured to a flexible piece and having the projection d and ratchet c^3 , the pawl c^4 , having its bearing in the rear portion of the box, the operating-rod c^6 , pivotally secured at its lower end 70 to the trap C^2 , having the openings c^8 and fulcrumed to the casting C^3 , the casting C^3 , having the portion c^9 and adapted to fit over the bottom of the box a , the locking mechanism D' , having the plates $d^5 d^6$, the tumblers $d^8 d^9$, 75 having the springs $e e'$ and recesses $e^6 e^7$, the wheel or compound cam D^2 , having the arm e^5 and forked arm F , having the prongs $f' f^2$, the key guide or tube G , having the spring g' and lug g^3 , the stay H , having the recesses 80 h , and a key D^3 , having projections f , all constructed, arranged, and operating substantially as shown and described, and for the purpose set forth.

7. In an umbrella-stand, the combination 85 of a box or receptacle for the umbrella, having a guideway for a door, with the door having a catch to engage with a locking mechanism, the locking mechanism adapted to engage with the door, a coin-controlling attach- 90 ment having the casing M , having the slot n , the groove m , the box n^3 , the lever P , having the forked arm p , the lever N , having the arms $m' m^3$ and the lower enlarged part m^4 , having the depression m^5 , the rod R , having 95 the arms $r r^2$, and the rod c^6 , having the projection m^6 , all constructed, arranged, and operating substantially as and for the purpose set forth.

8. In an umbrella-stand, the combination 100 of the locking mechanism D' , having the plates $d^5 d^6$, the tumblers $d^8 d^9$, having the springs $e e'$ and recesses $e^6 e^7$, the wheel or compound cam D^2 , having the arm e^5 and forked arm F , having the prongs $f' f^2$, the key-guide G , hav- 105 ing the spring g' and lug g^3 , the stay H , having the recesses h , and a key D^3 , having projections f , with a receptacle for the umbrella, having a door to engage the lock, substantially as and for the purpose set forth. 110

9. The locking mechanism D' , having the plates $d^5 d^6$, the tumblers $d^8 d^9$, having the springs $e e'$ and recesses $e^6 e^7$, the wheel or compound cam D^2 , having the arm e^5 and forked arm F , having the prongs $f' f^2$, the 115 key-guide G , having the spring g' and lug g^3 , the stay H , having the recesses h , and a key D^3 , having projections f , substantially as and for the purpose set forth.

HENRY WESTPHAL. [L. S.]

In presence of—

CHAS. C. TILLMAN,
CHAS. E. GORTON.