

No. 609,996.

Patented Aug. 30, 1898.

M. G. POND.
MATCH SAFE AND CIGAR CUTTER.

(Application filed Feb. 23, 1897.)

(No Model.)

Fig. 1.

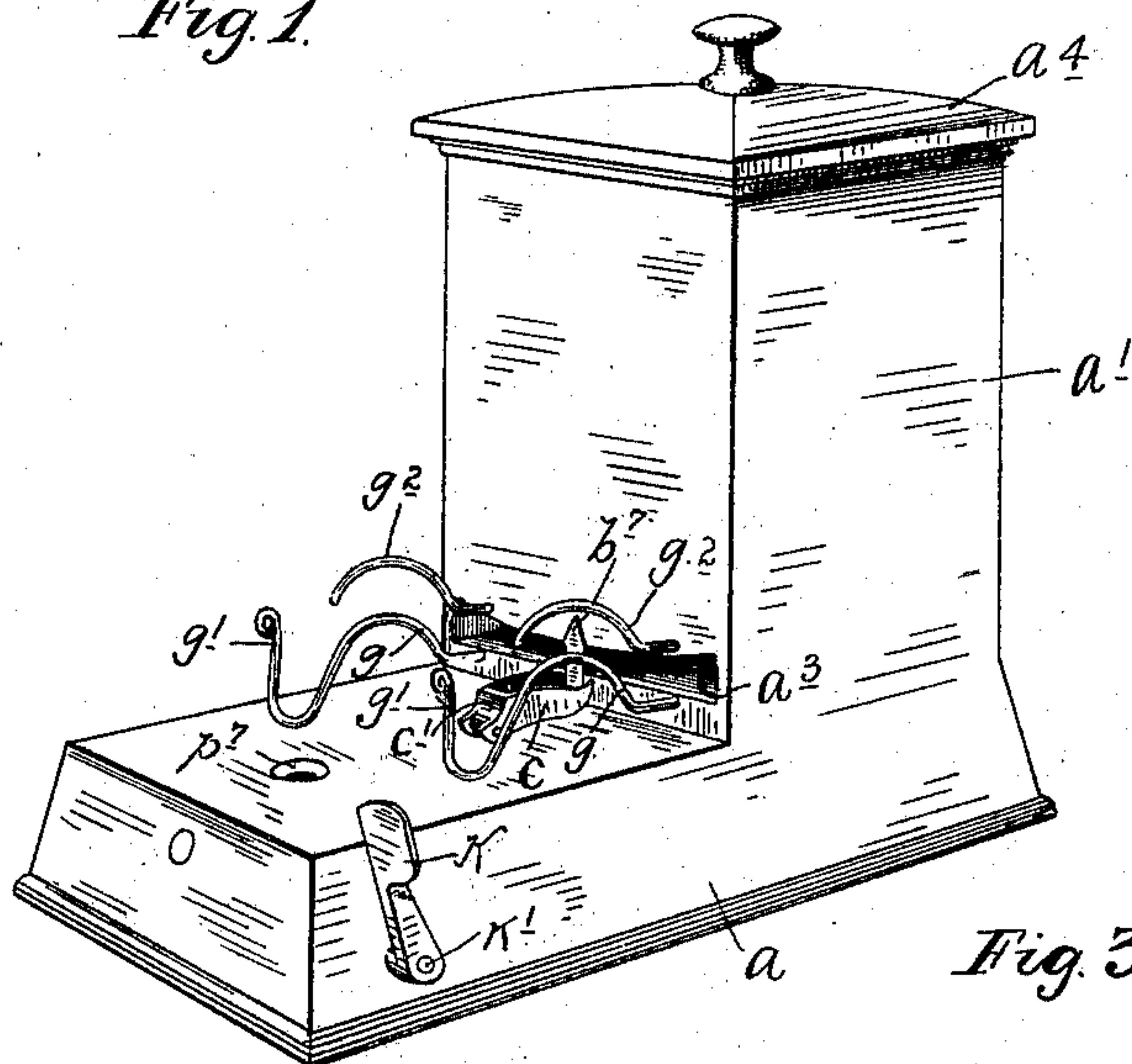


Fig. 2.

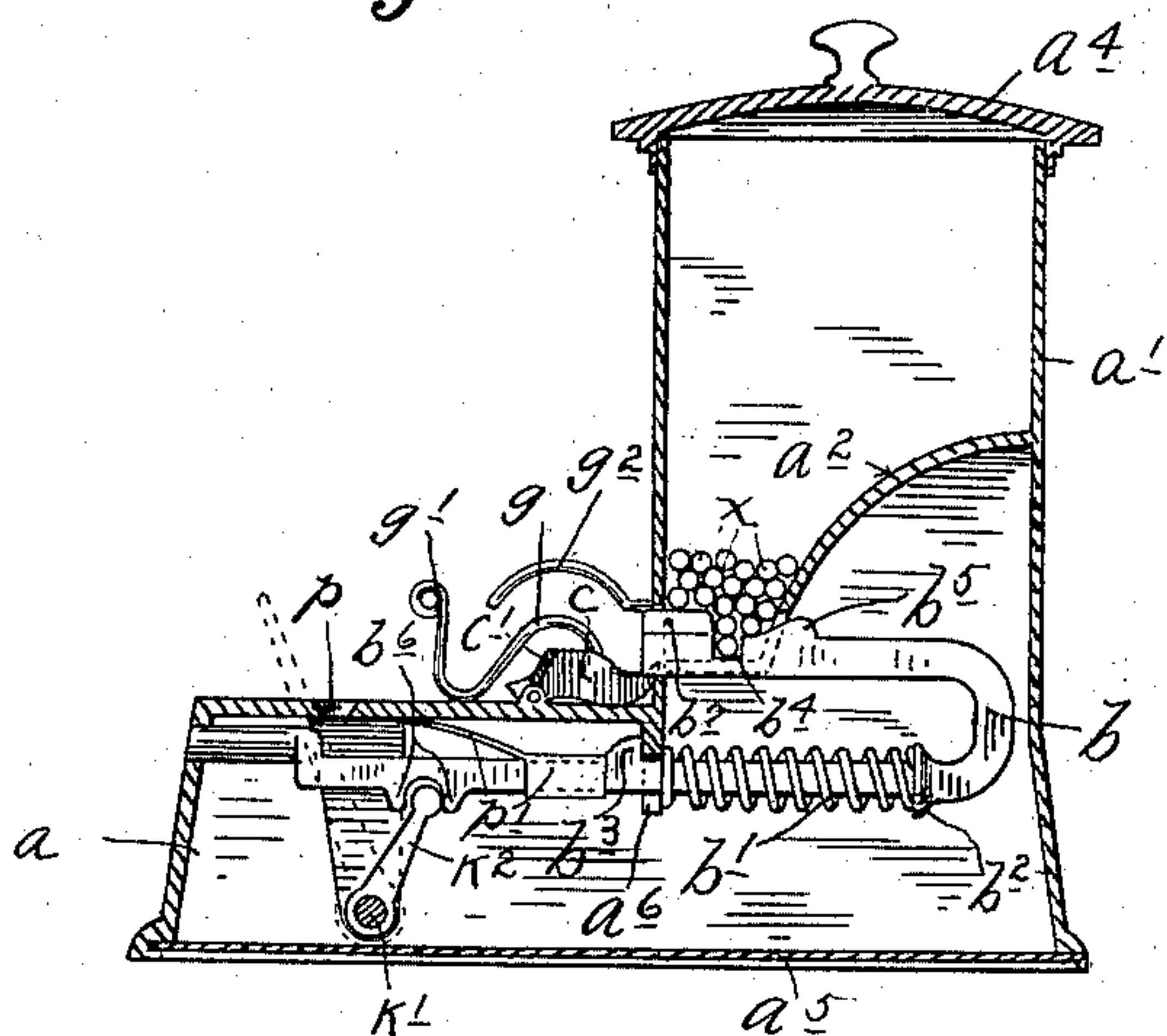


Fig. 3.

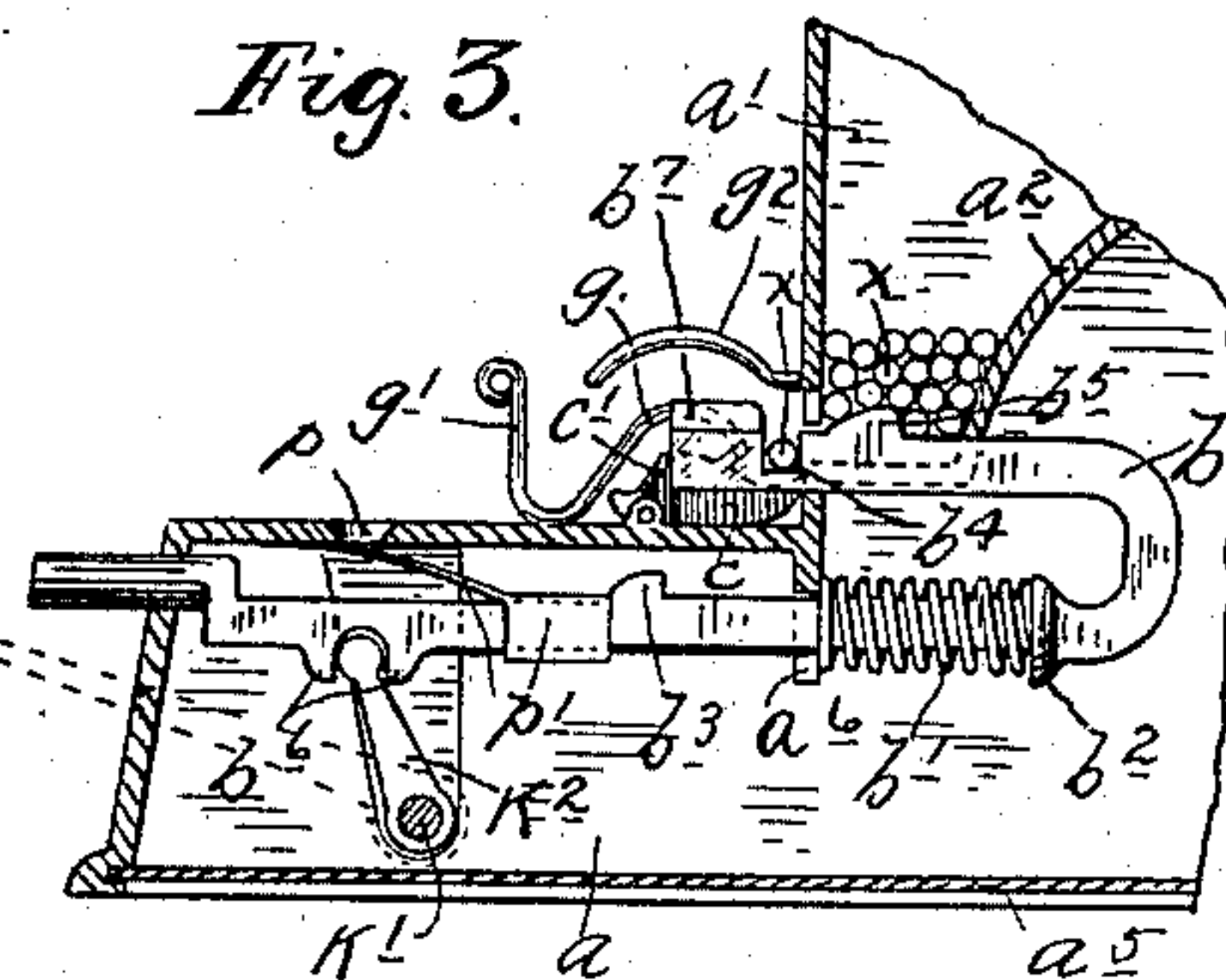
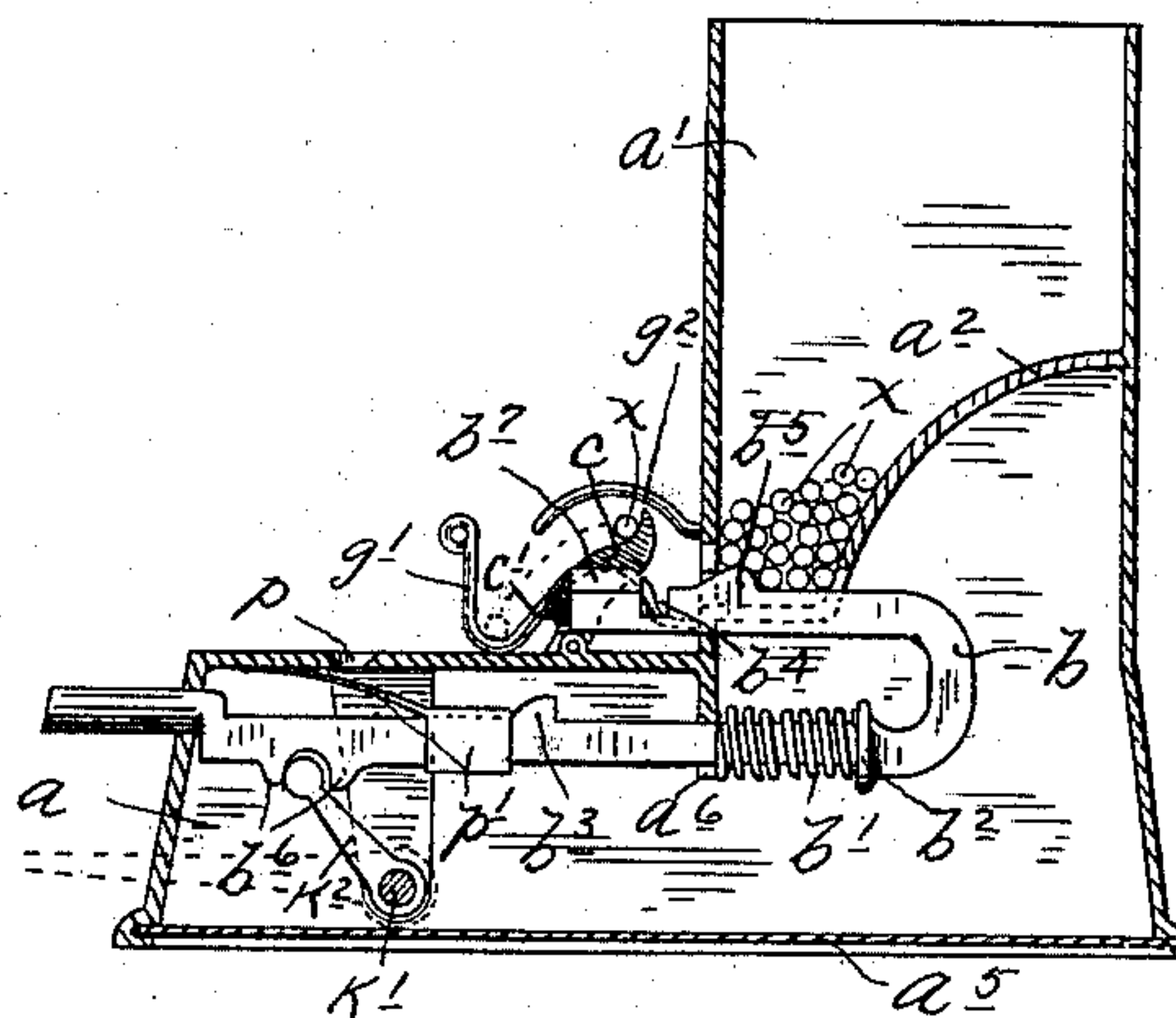


Fig. 4.



Witnesses

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MATCH-SAFE AND CIGAR-CUTTER.

SPECIFICATION forming part of Letters Patent No. 609,996, dated August 30, 1898.

Application filed February 23, 1897. Serial No. 624,563. (No model.)

To all whom it may concern:

Be it known that I, MERRITT G. POND, a citizen of the United States, residing at Minneapolis, in the county of Hennepin and State of Minnesota, have invented certain new and useful Improvements in Match-Safes and Cigar-Cutters; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to match-safes, and has for its especial object to improve the construction of that class of match-safes which are particularly adapted for use on cigar-counters and numerous other public places where it is desired to effect economy in the use of matches. Usually match-safes of this class are more or less automatic in their action and are adapted to feed or eject one match at a time from the match-magazine under the action of their feed mechanism. Preferably I also provide a cigar-cutter the knife of which is carried by or moved with the feed device, so that one action of the said feed device will serve both to cut the tip of a cigar and discharge a match from the magazine.

To the ends above noted my invention consists of the novel devices and combinations of devices hereinafter described, and defined in the claims.

The preferred form of my invention is illustrated in the accompanying drawings, wherein, like characters indicating like parts throughout the several views—

Figure 1 is a perspective view of my improved match-safe. Fig. 2 is a vertical longitudinal section taken centrally through the said match-safe; and Figs. 3 and 4 are views corresponding in the line of their section to Fig. 2, but illustrating different positions of the match-feeding slide and parts carried thereby, some parts of the match-safe being broken away and others being removed.

In the construction shown the body or case of the match-safe is made up of a shell-like base *a* and a match-magazine *a'*. The match-magazine *a'* is provided with an inclined or hopper-like bottom *a²*, which terminates at its lower forward portion immediately below a match-discharge slot or exit *a³*, which is cut through the front wall of the magazine *a'* just

above the top of the base *a*. The magazine *a'* may be provided with a removable cover *a⁴* and the base portion *a* with a removable bottom *a⁵*.

The match-feeding mechanism involves a U-shaped slide *b*, which is mounted for reciprocating movements longitudinally of the base *a*, with its long lower prong working through a suitable seat in the front wall of said base and with its upper and shorter prong working in guide-notches formed in the front wall of the magazine *a'* at approximately the center of the discharge-slot *a³*. The slide *b* is under spring-tension to move inward by a spring *b'*, coiled on its lower prong and compressed between a shoulder *b²*, formed thereon, and a depending bifurcated flange *a⁶*, which, as shown, is cast integral with the said base *a* and straddles the lower prong of the said slide *b*. The inward movement of the slide *b* is limited by a stop-lug *b³*, formed on the lower prong thereof and engageable with the flange *a⁶*. The short and uppermost prong of the slide *b* is provided with a match-receiving notch *b⁴*, which in the normal position of the slide *b* (best shown in Fig. 2) stands under the column of matches in the magazine and is adapted to receive one match at a time. When the feed-slide *b* is thrown forward to its extreme position, the match which is lodged in or caught by the notch *b⁴* will be carried through the discharge passage *a³* to the exterior of the magazine.

To discharge the match or release the same from the notch *b⁴* after it has been carried to the exterior of the magazine, I provide a kicker or kicking device, which is operated by the final outward movement of said slide. This kicker is preferably in the form of a bifurcated or pronged piece *c*, which is pivoted to the upper face of the base *a* and is adapted to straddle the discharge end of the feed-slide *b*. The kicker *c* is provided with a striking-surface *c'*, which lies in the path of and is adapted to be struck by the end of the upper prong of the feed plunger or slide *b* when said slide is moved outward, as already indicated. The upper prong of the feed-slide *b* is also preferably provided with an agitating-lug or cam projection *b⁵*, which, under the reciprocating movements of said slide, engages and stirs or agitates the matches in the magazine.

The action of the agitator serves to prevent the matches from becoming bridged or clogged at the bottom of the magazine and insures the ready engagement of a match with the notch b^4 on the return movement of the feed-slide.

To catch the matches which are discharged from the magazine under the action of the feed-slide and kicker, I preferably use a pair of brackets or catch-fingers g , which project from the forward face of the magazine a' at points just below the slot a^3 and terminate at their outer ends in hook-like portions g' . At their intermediate portions the brackets or fingers g run on lines which represent, approximately, a line on which the match will be discharged under the action of the kicker c .

g^2 indicates a pair of guard-fingers which project from the forward face of the magazine a' and run substantially parallel to but above the fingers g throughout part of their length.

The feed-plunger b is preferably operated by means of a hand-operated lever k , secured on the outer end of a rock-shaft k' , which is mounted transversely in the base a and is provided within said base a with a lever k^2 , the free end of which works between lugs or fingers b^6 , depending from the lower prong of said slide b . The slide b is provided with a raised or shouldered portion b^7 just outward of the notch b^4 .

The cigar-cutting device consists of the perforation p , cut in the upper face of the base a , directly over the lower prong of the feed-slide b , and a coöperating knife p' , the base end of which is secured to the lower prong of said slide b and the free and sharpened end of which is adapted to be moved directly under said perforation p when the said slide is reciprocated.

x indicates the matches in the magazine a' .

The action or operation of the above-described device has already been indicated, but may be briefly summarized as follows: The small uncut end of a cigar being inserted through the perforation p , the tip may be cut off and a match discharged from the match-magazine by one and the same action—that is, by forcing the lever k from its normal position (indicated in Fig. 1) to its extreme lowermost position. (Indicated by dotted lines in Fig. 4.) The different steps in the action of the match-discharging mechanism are illustrated by the views 2, 3, and 4. In the normal position illustrated in Fig. 2 a single match has been lodged in the notch b^4 of the slide b . In Fig. 3 the match has been carried outward to the exterior of the magazine and the outermost end of the upper prong of the slide b has just engaged the striking-surface c' of the kicker c , and in Fig. 4 the kicker has been operated by the feed-slide b and is thrown into a position in which it causes the discharge of the match into the hook portions g' of the catch-finger g . The action of the raised portion or shoulder b^7 is very important. Without this shoulder I have found that the matches at the

bottom of the magazine will tilt more or less, so that they will interfere with the ready discharge of the match which has fallen into the notch b^4 . However, the shoulder b^7 forces the other matches upward and backward from the match engaged by the said notch b^4 , so that no one of said matches can lie directly in front of the said match in the notch b^4 . Hence the discharge or outward movement of the match held by the notch b^4 is unimpeded, or, in other words, is free for outward movement with the feed-slide b .

As this device is designed particularly with a view of effecting an economy in the use of matches, the notch b^4 in the plunger b should be of such size that it will receive but one match at a time; but, if desired, said notch may be made of such size that it will receive any other desired predetermined number of matches.

It will be understood, of course, that various alterations in the specific details of construction above described may be made without departing from the spirit of my invention.

What I claim, and desire to secure by Letters Patent of the United States, is as follows:

1. In a match-safe, the combination with a match-magazine and a device for receiving and holding the matches delivered thereto, of a feed-slide constructed to receive one or a predetermined number of matches, at one time, and to deliver the same to the exterior of said magazine, and a "kicker" operated by said slide and serving to kick said match or matches from said slide and into said match-receiving device, substantially as described.

2. In a match-safe, the combination with the base a and magazine a' , said magazine having the bottom a^2 and match-passage a^3 , of the feed-slide b provided with the notch b^4 and subject to the action of the spring b' , the bifurcated "kicker" $c c'$ pivoted to said base a , and the catch-fingers $g g'$ supported substantially as described.

3. In a match-safe, the combination with a match-magazine, of a feed-slide constructed to receive and deliver one, or a predetermined number of matches, at a time, and provided with the single agitating-lug or cam projection which operates on the matches in said magazine, substantially as described.

4. In a match-safe, the combination with a match-magazine, provided with a slot through which the matches may be ejected, of a feed-slide working outward through said slot, provided with a notch to receive the matches, one at a time, and provided with a raised shoulder or surface outward of said notch, substantially as and for the purposes set forth.

In testimony whereof I affix my signature in presence of two witnesses.

MERRITT G. POND.

Witnesses:

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F. D. MERCHANT.