

(No Model.)

L. KYSER, A. C. REX & R. M. HUNTER.
Toy Safe.

No. 237,757.

Patented Feb. 15, 1881.

Fig. 1

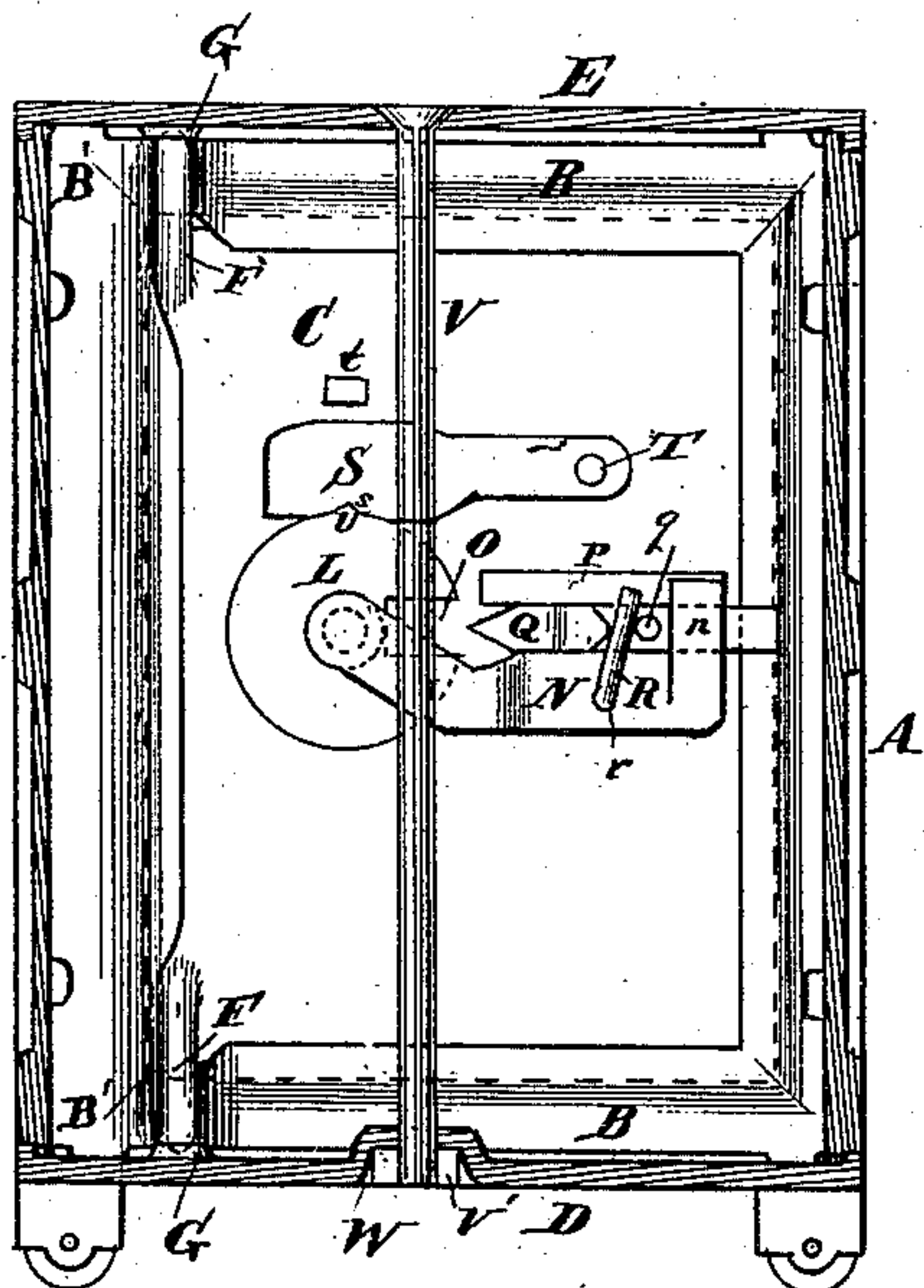
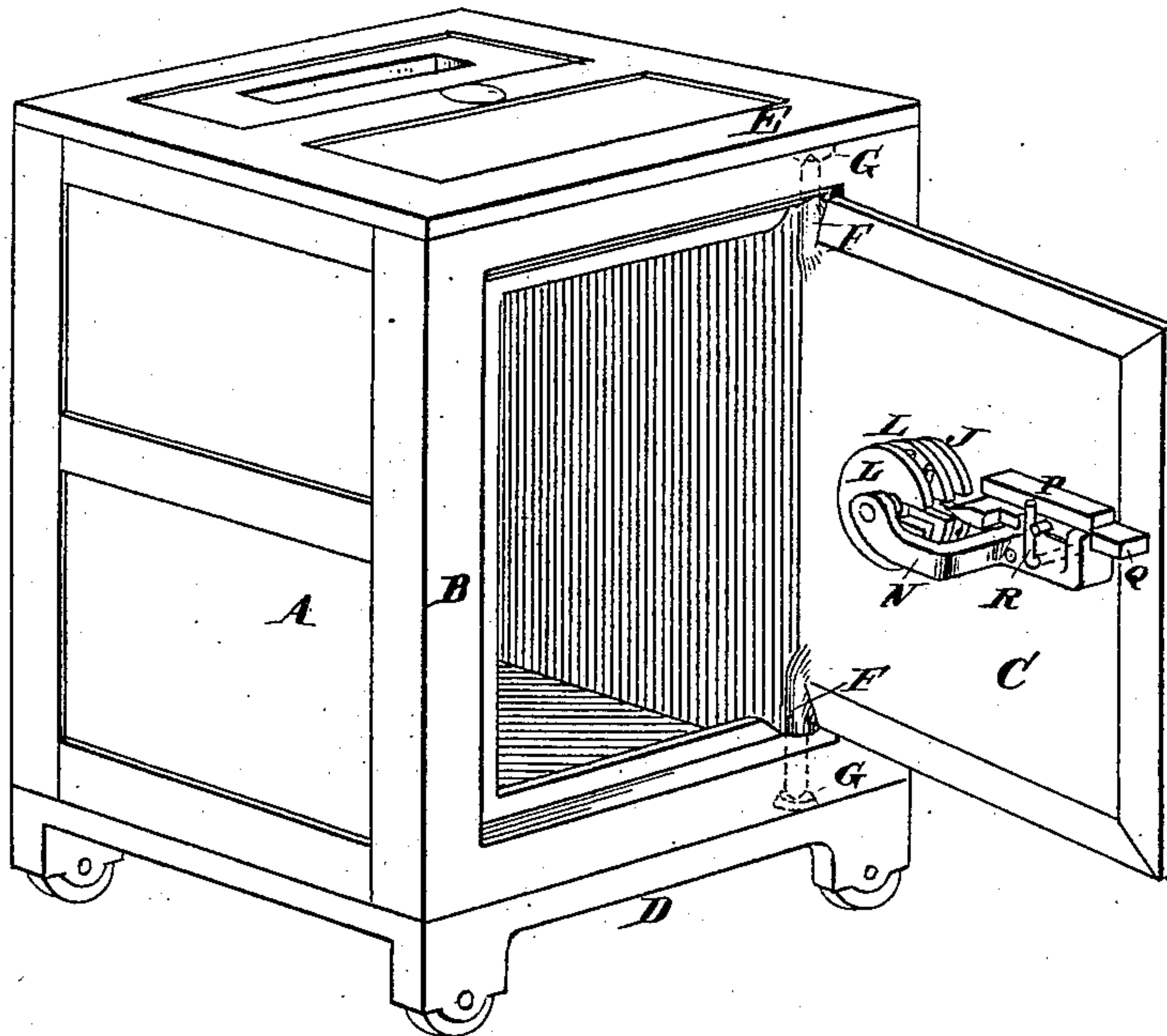


Fig. 2

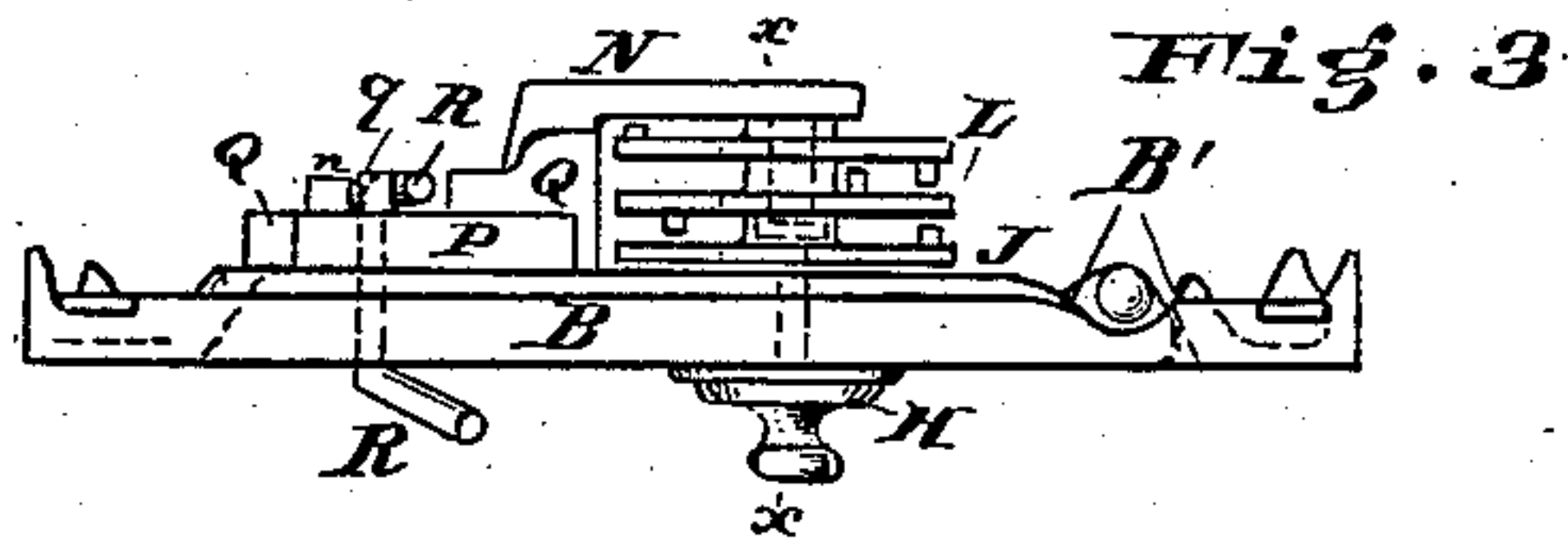


Fig. 3

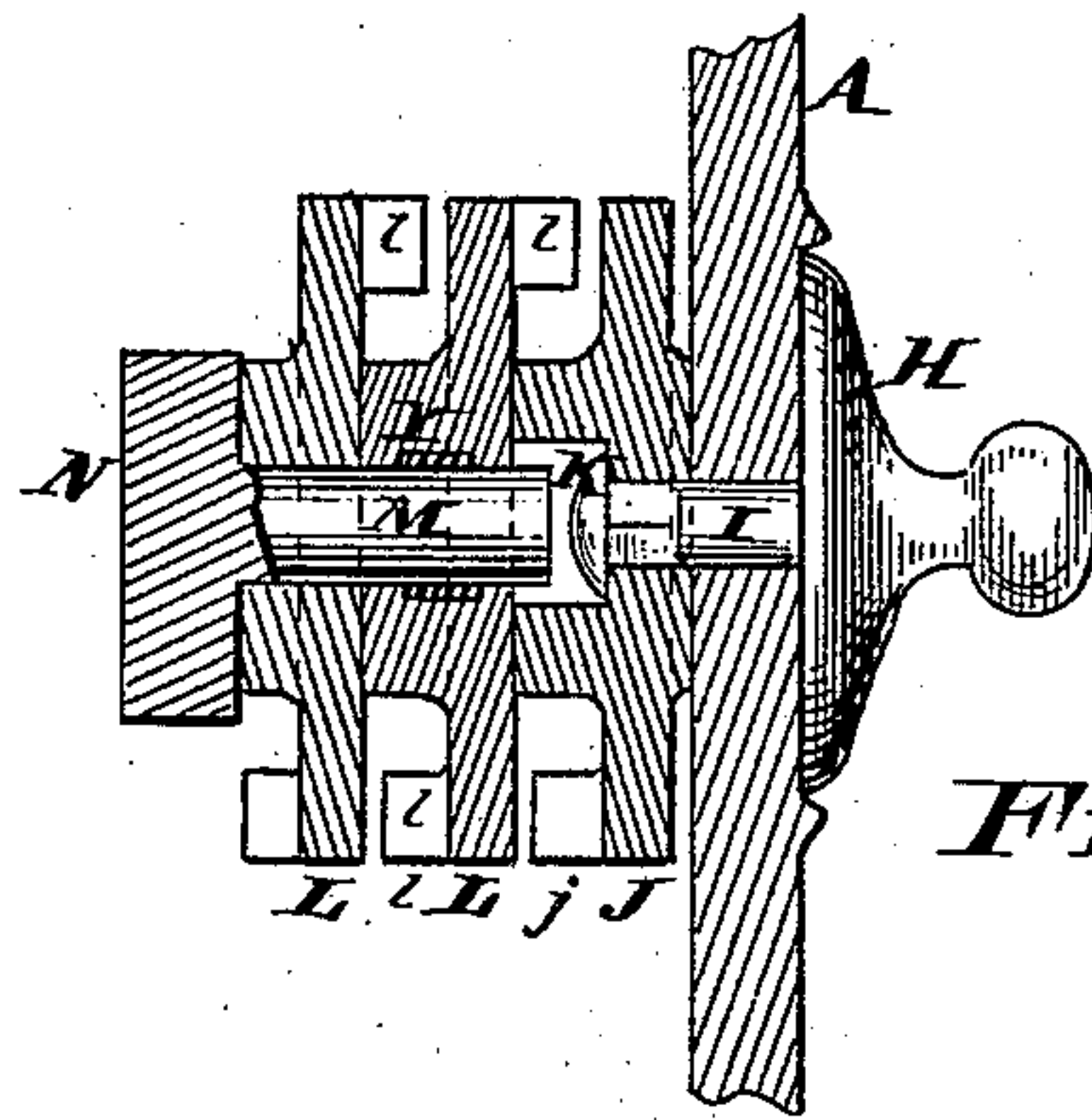


Fig. 4

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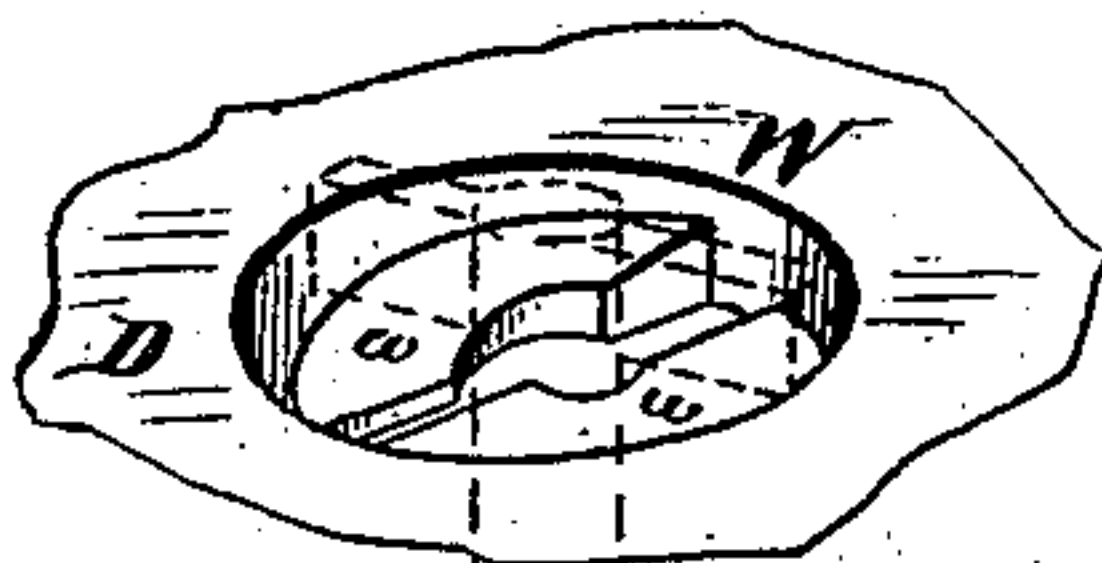


Fig. 5

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TOY SAFE.

SPECIFICATION forming part of Letters Patent No. 237,757, dated February 15, 1881.

Application filed January 6, 1881. (No model.)

To all whom it may concern:

Be it known that we, LOUIS KYSER, ALFRED C. REX, and RUDOLPH M. HUNTER, all of the city of Philadelphia, county of Philadelphia, and State of Pennsylvania, have invented an Improvement in Toy Safes, of which the following is a specification.

Our invention relates to toy safes; and it consists in the peculiar construction of the front or door plate of same, and in the method of hinging the door, and, finally, in the construction of the miniature combination-lock, which is especially adapted to a toy safe, all of which is fully set forth in the following specification, shown in the accompanying drawings, and referred to in the appended claims.

The object of our invention is to cheapen the construction of the toy safe, and at the same time make it as near a representation of a full-sized safe as possible.

Heretofore cubical toy safes have been constructed with hinged doors, the hinges of which had to be drilled for the pins which secured the doors to the side of the body of the safes. Never to our knowledge has a toy safe been constructed with a separate door or front plate which inclosed the door. Sham combination-lock handles have been cast or secured on the doors; but never has a miniature combination-lock been applied to a toy safe prior to our invention.

In the drawings, Figure 1 is a perspective view of an open safe embodying in it our invention. Fig. 2 is a vertical cross-section of same through the sides. Fig. 3 is a top view of the front or door plate, door, and lock. Fig. 4 is an enlarged section of part of the combination-lock. Fig. 5 is a perspective view, showing method of fastening the safe parts together.

A are the side and back plates; B, the front, E the top, and D the bottom plates, which make up the body of the safe. All of these parts are old; but the front or door plate, B, which is frame-like in its construction, is provided with depressed inner edges, against which the door C closes, and at the top and bottom B is grooved, to allow play of the hinge-pins F of the door, and allow the said door to swing properly into position in the front or door plate. The door C is rectangular in shape,

and preferably provided with beveled edges, as shown in Fig. 1, and is provided with two long hinge-pins, F, which project from the top and bottom of the door and extend from one of the vertical edges of same. These pins are pivoted in recesses G in the top plate, E, and bottom plate, D, as shown in dotted lines, Fig. 1, and in elevation, Fig. 2.

Heretofore it has been the practice to hinge the door direct to the side plates by hinges having bored holes.

By the construction shown, not only is the safe cheaper to construct, but is also more perfect in its construction.

The parts forming the body of the safe are secured together by the bolt V, provided with wings V', working upon inclined planes W.

In making the combination-lock it becomes necessary to make the parts as few in number and as simple as possible. A combination-lock constructed with the sleeved tumblers, as is usual with regular combination-locks, would be far too complicated and expensive, and when reduced to the small scale necessary for use on a toy it becomes too delicate to work, and far too complicated and expensive to be used. We accomplish the purpose by a simple construction of a combination-lock, as follows:

The handle H is made to represent the ordinary combination-lock handle, and may be divided into spaces about its periphery, and is provided with a pin, I, which extends through the door A, and is secured, by riveting or other means, to a tumbler, J, so that by turning the handle H the tumbler must turn also.

Secured to the door is a piece, N, carrying a pin, M, upon which the tumblers L are supported independently from tumbler J. All of the tumblers are provided with a deep slot, O, into which the bolt works, and the tumbler J is provided with a projection, j, and the tumblers L with projections l. By this arrangement the tumblers L may be turned to any desired position, and the friction upon the pin M will prevent turning when not desired, and incidentally to operate the lock. To increase this friction the pin M or the holes in the tumblers L may be lined with some friction substance.

In large locks the spindle I passes through

all of the tumblers and operates the inmost one first; but this is objectionable in a toy lock, because the tumblers would be thrown out of position by the continual reversing of the handle H. Therefore we make them separate from the operating-spindle, except in the instance of tumbler J, and support them on a stationary pin, M. If the friction is not sufficient to hold the inner tumbler L in place against the turning of the outer tumbler L and the latter against the turning of tumbler J, loose gravity-dogs S, pivoted to the door at T, may be employed to increase the friction at the periphery. These dogs are prevented from falling out of position by the lug *t* on door C, and may be provided with depressions *s*, into which the projections U or the tumblers L fit when the openings in same are in position to open the safe, as shown in Fig. 2; but we do not desire to use the dogs where it is not absolutely necessary.

The bolt Q slides between the lug or projection P, cast on the door, and the piece N, which is secured to the door by rivets or otherwise. The inner end of bolt Q is widened and may be beveled, so as to pass into all the slots O of the tumblers and enter said slots tolerably sure, even against very slight displacement.

The bolt-handle R works through the door and operates the bolt Q, as shown. This extension of handle R and lug *n* keeps the bolt from becoming displaced from its position between piece N and projection P.

One of the essential features of our invention is, that the inner end of the bolt itself enters the slots in the tumblers, while in large combination-locks an auxiliary dog moves into said slots, freeing the bolt, the slots in that case being very shallow, whereas in our case they are very deep, to allow full play of the bolt.

To open the safe, proceed as follows: Turn the handle H around about three revolutions, and bring a certain number on the handle before a certain number on the door, which will bring the inner tumbler in the position shown in Fig. 2 through the agency of projections *l j*. Then turn the handle H in the opposite direction until the number on the handle comes before the right number on the door to bring the outer tumbler L into a corresponding position to the inner one, friction preventing displacement of the same. Then turn the handle H in the opposite direction to the proper number to set the opening or slot in the direction of the bolt. Then oscillate the handle R and the bolt Q is drawn back, the wide end passing into slots O of the tumblers and the safe is opened.

Having now described our invention, what

we claim as new, and desire to secure by Letters Patent, is—

1. As a new article of manufacture, a toy safe rectangular in shape, provided with a frame or front plate rectangular in form, and provided with a rectangular aperture, in combination with a door hinged at one side of said aperture, and adapted to entirely close the same, substantially as shown and described.

2. As a new article of manufacture, a toy safe provided with the front or door plate, B, independent of the door, and curved or recessed at B', in combination with the door C, provided with long hinge-pins F, which work in the recesses B', substantially as and for the purpose specified.

3. As a new article of manufacture, a toy safe composed of the side plates, A, top plate, E, provided with pivot-recess G, bottom plate, D, provided with pivot-recess G, front or door plate, B, provided with recesses B', and door C, provided with long hinge-pins F, substantially as shown and described.

4. As a new article of manufacture, a toy safe provided with a toy combination-lock, substantially as and for the purpose specified.

5. In a toy safe, the combination of the door C, the body of the safe, and a toy combination-lock in which the bolt, in being drawn back, slides directly into the slots in the tumblers of said lock, substantially as and for the purpose specified.

6. In a toy combination-lock for a toy safe, the combination, with one or more tumblers working on a stationary pin, of a handle on the outside of the door to operate said tumblers, substantially as described.

7. In a toy-safe lock, the combination of tumblers L L J, handle H, with its pin I, stationary pin M, bolt Q, and bolt-handle R, substantially as and for the purpose specified.

8. In a toy safe, the combination of tumblers L L, provided with slots O and mechanism to operate them, dogs S, door C, bolt Q, and bolt-handle R, substantially as and for the purpose specified.

9. In a toy lock for toy safes, the bolt Q, in combination with one or more tumblers, provided with slots extending from the periphery to near the center in a radial line, into which the bolt is drawn directly in opening the safe, substantially as and for the purpose specified.

In testimony of which invention we hereunto set our hands.

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Witnesses:

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W. EGBERT MITCHELL.