

(No Model.)

E. E. WITTER.
MATCH SAFE.

No. 550,118.

Patented Nov. 19, 1895.

Fig. 1.

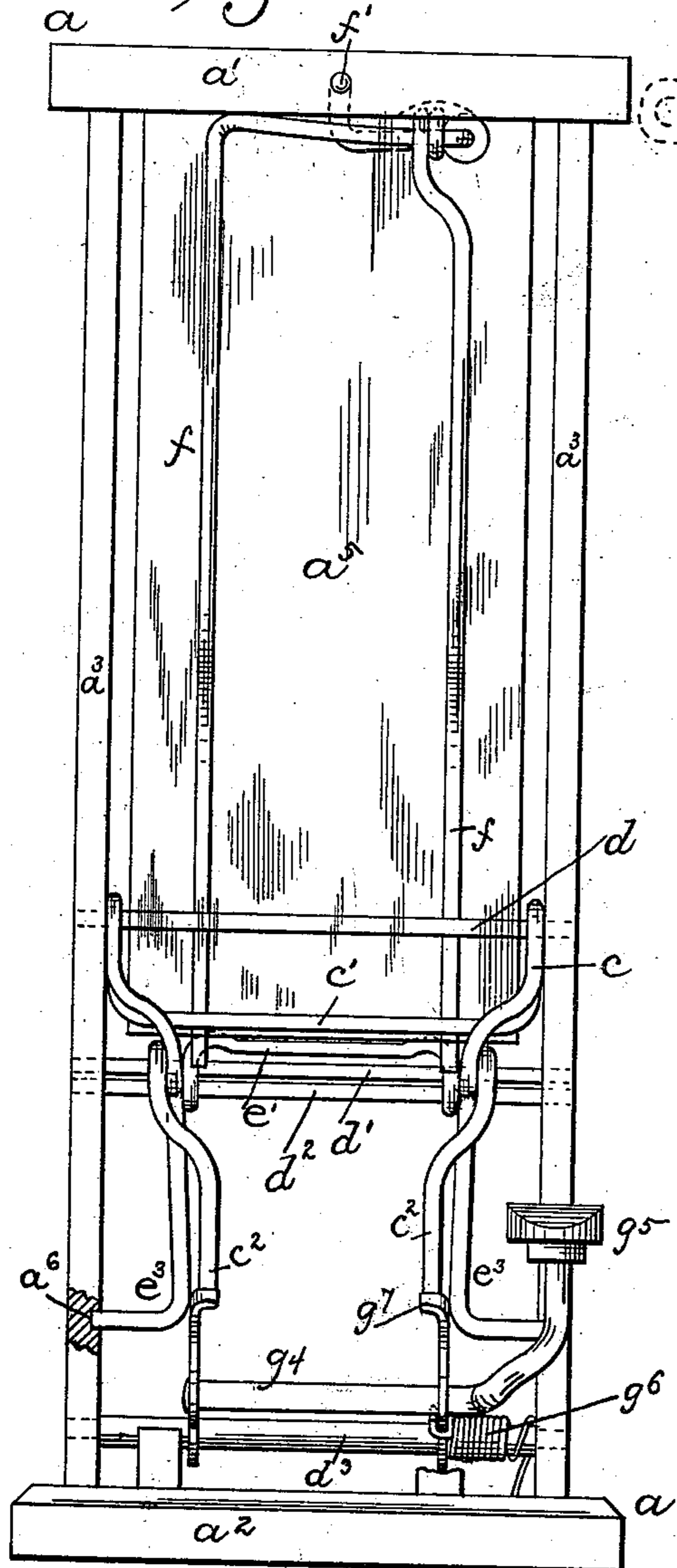


Fig. 2.

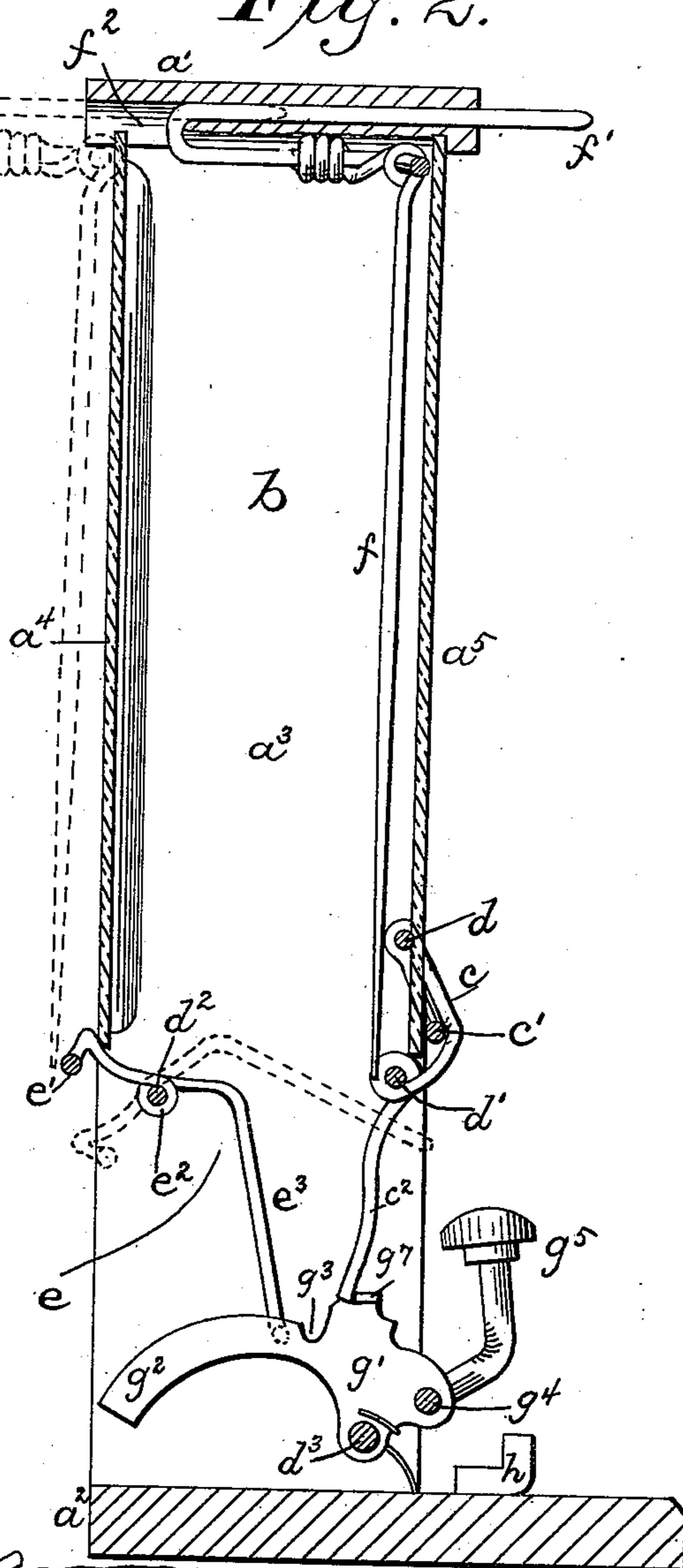
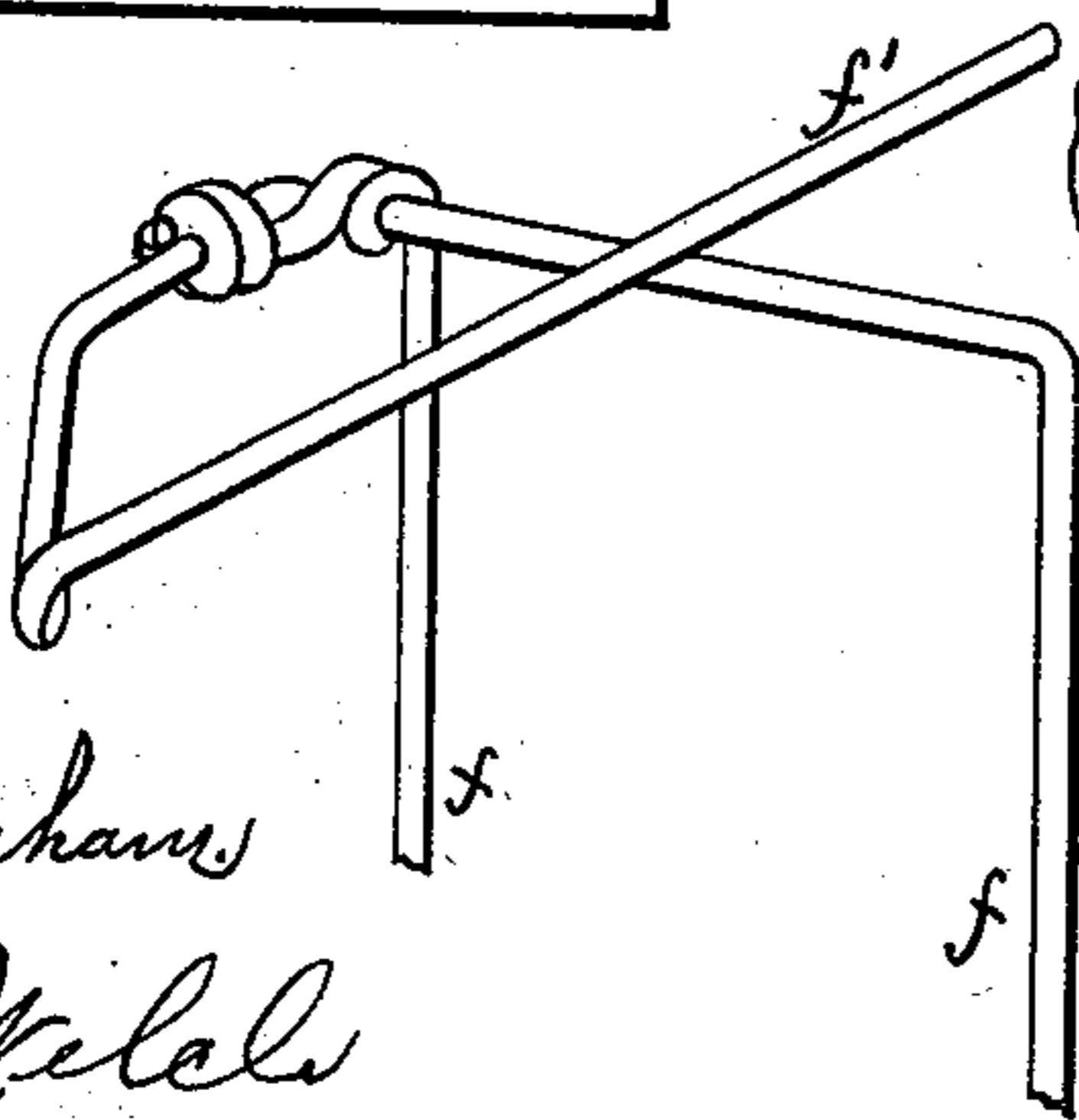


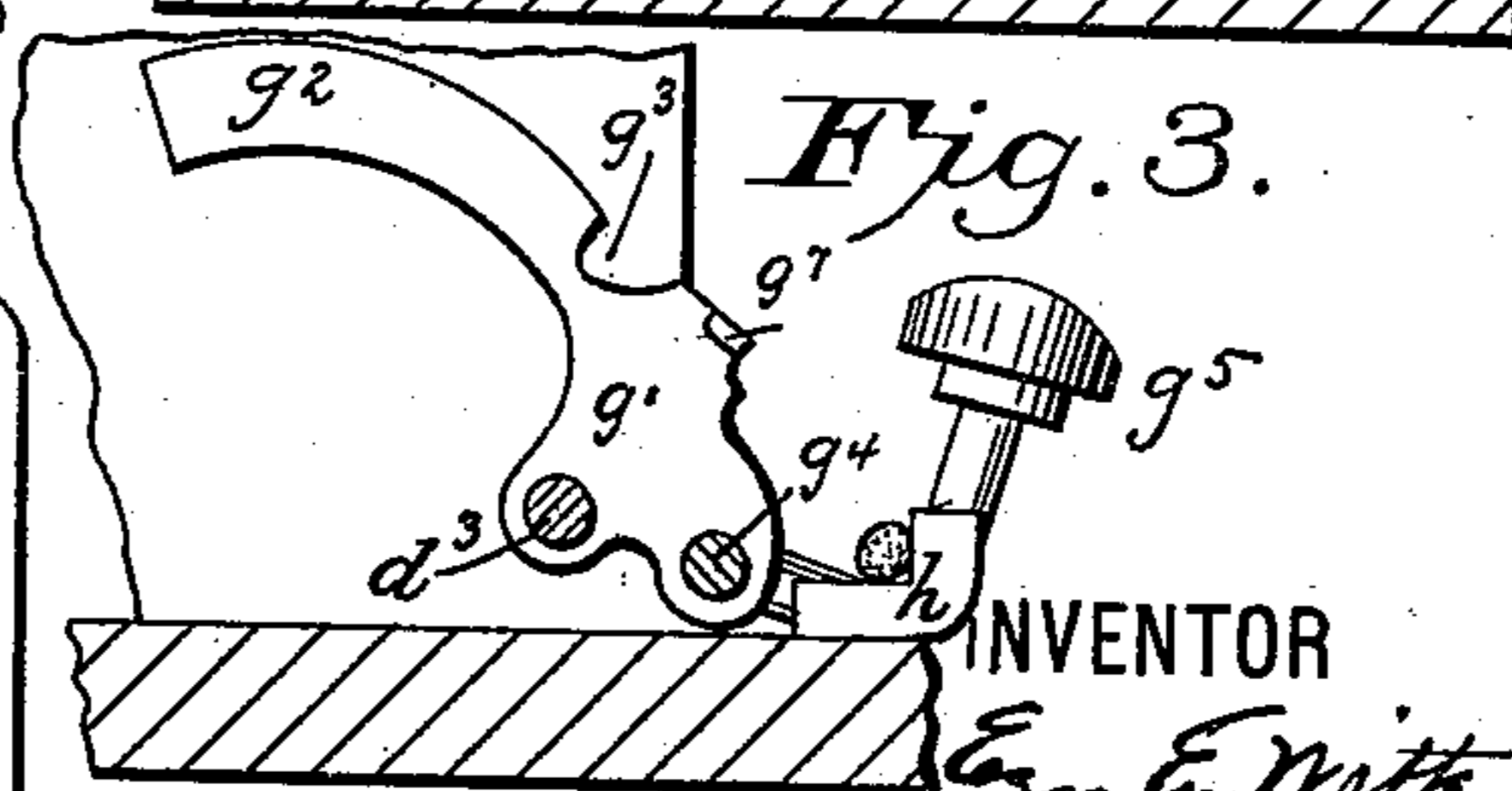
Fig. 4.



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Fig. 3.



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MATCH-SAFE.

SPECIFICATION forming part of Letters Patent No. 550,118, dated November 19, 1895.

Application filed December 26, 1894. Serial No. 533,030. (No model.)

To all whom it may concern:

Be it known that I, EZRA E. WITTER, a citizen of the United States, residing at Milford Centre, in the county of Union and State of Ohio, have invented certain new and useful Improvements in Match-Safes, of which the following is a specification.

My invention relates to that class of match-safes designed to contain a quantity of matches and provided with means by which the matches can be obtained therefrom only in limited quantities, preferably one at a time.

The object of the invention is to provide a match-safe of this character the construction of which is simple and at the same time effective in operation.

A further object of the invention is to provide means for readily filling the match-safe in such a manner that the discharging mechanism will operate uniformly and accurately. I attain these objects by the constructions shown in the accompanying drawings, in which—

Figure 1 is a front elevation of a device embodying my invention. Fig. 2 is a sectional elevation of the same. Fig. 3 is a detail view of the discharging mechanism. Fig. 4 is a detail view of a portion of the mechanism employed in filling the match-safe.

Like parts are represented by similar letters of reference in the several views.

In the said drawings, *a* represent an outer casing, which may be formed of wood or other suitable material. It consists, essentially, of top and bottom pieces *a'* *a''* and side pieces *a'''*, joined thereto. In the upper part of this casing a chamber *b* is formed by back and front plates *a⁴* *a⁵*, secured in the top and side pieces of the casing and preferably formed of glass. The front plate *a⁵* is preferably fixed permanently in position, while the rear plate *a⁴* is removably secured therein. Each of the plates *a⁴* *a⁵* is fitted at the top into suitable notches formed in the top plate *a'*, as shown, to receive the same. The bottom of the front plate is held in position by means of a wire retaining device *c*, operating in conjunction with cross-rods *d* and *d'*, which extend from side to side of the casing, with their ends seated in the side plates *a'''*. This retaining device *c* is preferably formed of a single piece of wire so formed that the central part there-

of *c* rests against the outside of the plate *a⁵* and stands substantially parallel to the rods *d* and *d'*. The ends of the wire are then bent so as to pass around the rod *d*, thence downwardly so as to cross the portion *c'*, and thence around the rod *d'*, with the free ends *c²* projecting inwardly and downwardly to form guides for the matches, as is hereinafter more fully described. The rear plate *a⁴* is held in position by a somewhat similar retaining device *e*, which preferably consists of a single piece of wire, the central portion *e'* of which extends across the plate, and the ends radiating therefrom being bent so as to engage the lower end of the plate *a⁴*, thence extending inwardly and formed with eyes *e²*, which engage a transverse rod *d²*, thence inwardly and downwardly to form guides *e³*, the ends being turned laterally toward the respective side plates, so as to engage in openings *a⁶*, formed in said side plates, as shown in Figs. 1 and 2. By the construction as described this retaining device *e* is pivoted on the rod *d²* and the parts are so constructed that by pressing the guides *e³* together the laterally-projecting ends may be withdrawn from the openings *a⁶* and turned to the position indicated in dotted lines in Fig. 2, in which position the end of the plate *a⁴* is disengaged and the guides *e³* are moved upward to form a bottom for the chamber *b*.

Located in the chamber *b* and projecting downwardly parallel with the plate *a⁵* are guide-fingers *f*. These fingers *f* are connected together at the top and also to a sliding bar *f'*, which is journaled in a suitable bearing *f²*, formed in the top plate *a'*, the sliding bar *f'* being in its normal position projected through the top plate toward the front, as shown. The construction is such that by pressing the end of the bar *f'* inwardly the guide-fingers *f* will be moved rearwardly, so that the bar *f'* may be engaged from the rear and drawn backward to the position indicated in dotted lines, so as to stand flush with or beyond the sides of the side plates *a'''*. With the parts in this position the case is placed over a box of matches with the cover removed and with the guide-fingers resting against the matches. By reversing the position of the safe—that is, with the safe lying down and the matches on top—and pressing the bar *f'* inwardly or forwardly

the matches will be carried into the chamber b and the matches deposited therein in the same position they occupied in the box. When the guides have reached their normal positions, the box is removed and the plate a^4 placed in the case and the guides e^3 turned to their normal positions, so that the retaining device shall engage the side plates. If the safe is now turned to an upright position, a sufficient number of matches will drop down between the guides e^3 and c^2 to fill said space.

Below the chamber b and near the extremities of the guides c^2 and e^3 is an oscillating frame g , which consists in the side plates g' , each having a backwardly-extending curved projection g^2 and a notch or recess g^3 , which normally stands below and between the guides e^3 and c^2 . These side plates g' are connected together by a cross-bar g^4 , which is extended forwardly and upwardly at one side to form a handle g^5 . The frame as thus constructed is journaled on the cross-bar d^3 and is held in its normal position by a spring g^6 . By pressing down on the handle g^5 the frame is moved to the position shown in Fig. 3, so that the notch or recess g^3 is carried beyond the front guide c^2 . When the handle is released, the frame is returned to its normal position. As long as there are matches in the chamber b , a match will be deposited in the recess g^3 each time the frame g is returned to its normal position and will be carried out under the guide c^2 when the frame is moved. This movement of the match is assisted by the curved extensions g^2 , which are formed eccentric to the pivotal center d^3 of the frame, so that each time the frame is oscillated the matches are raised between the guides and thus agitated to prevent sticking. As the frame is returned to its normal position by the spring g^6 , small projections g^7 on the side plates come in contact with the ends of the guides c^2 and thus arrest the frame at the proper point.

If desired, small receiving blocks h may be placed on the base a^2 to receive the matches in case they drop down out of the recess g^3 , these blocks being adapted to hold the matches at the ends so as to be readily grasped between the side blocks which form a rest therefor.

The guide-fingers f are preferably formed of wire, one of said fingers and the sliding bar f' being preferably formed integral, as shown in Fig. 4, the other finger being formed of a separate piece of wire and joined to the main portion by twisting, as shown in Fig. 4.

Having thus described my invention, I claim—

1. The combination, in a match safe, with a receiving chamber, and a movable notched

carrying frame, of guides intermediate of said chamber and carrying frame and arranged at the front and rear to form a passage from said chamber as described, one set of said guides being pivoted as described, and adapted to be moved to form a bottom for said chamber and close said passage, the movement of said guide being also adapted to unlock a plate or cover for said chamber, substantially as specified.

2. The combination with a receiving chamber and a passage leading therefrom, of a movable guide or guides adapted when turned to an abnormal position to close said passage, movable guide fingers arranged vertically in said chamber and adapted to move laterally through the same, and a removable plate to close said chamber, substantially as specified.

3. The combination with an outer casing, of front and rear plates as described, said front plate being secured by a retaining device formed of a single piece of wire, the ends of which are extended to form guides, substantially as specified.

4. The combination with a chamber and guides extending downwardly therefrom on each side to form a passage as described, an oscillating notched frame operating below said guides, and inwardly extending projections on said frame to engage said guides to form a stop for said frame, substantially as specified.

5. The combination with an outer casing, a chamber therein, and a removable plate adapted to close one side of said chamber, a pivoted retaining device consisting of a single piece of wire formed into eyes on which the same is pivoted, said wire being extended on opposite sides of said eyes and adapted to engage said removable plate at one side and to form guides leading from said chamber on the other side of said pivotal center, substantially as specified.

6. The combination with a chamber having a removable plate, of a retaining device for said plate formed of a single piece of wire, the ends of which are extended downwardly, thence laterally so as to engage the side plates of said casing, and adapted when turned on its pivotal center to release said movable plate, substantially as specified.

In testimony whereof I have hereunto set my hand this 10th day of December, A. D. 1894.

EZRA E. WITTER.

Witnesses:

OLIVER H. MILLER,
CHAS. I. WELCH.