

(No Model.)

H. CROGGON.
FEEDING MATCH SAFE.

No. 483,543.

Patented Oct. 4, 1892.

Fig. 1.

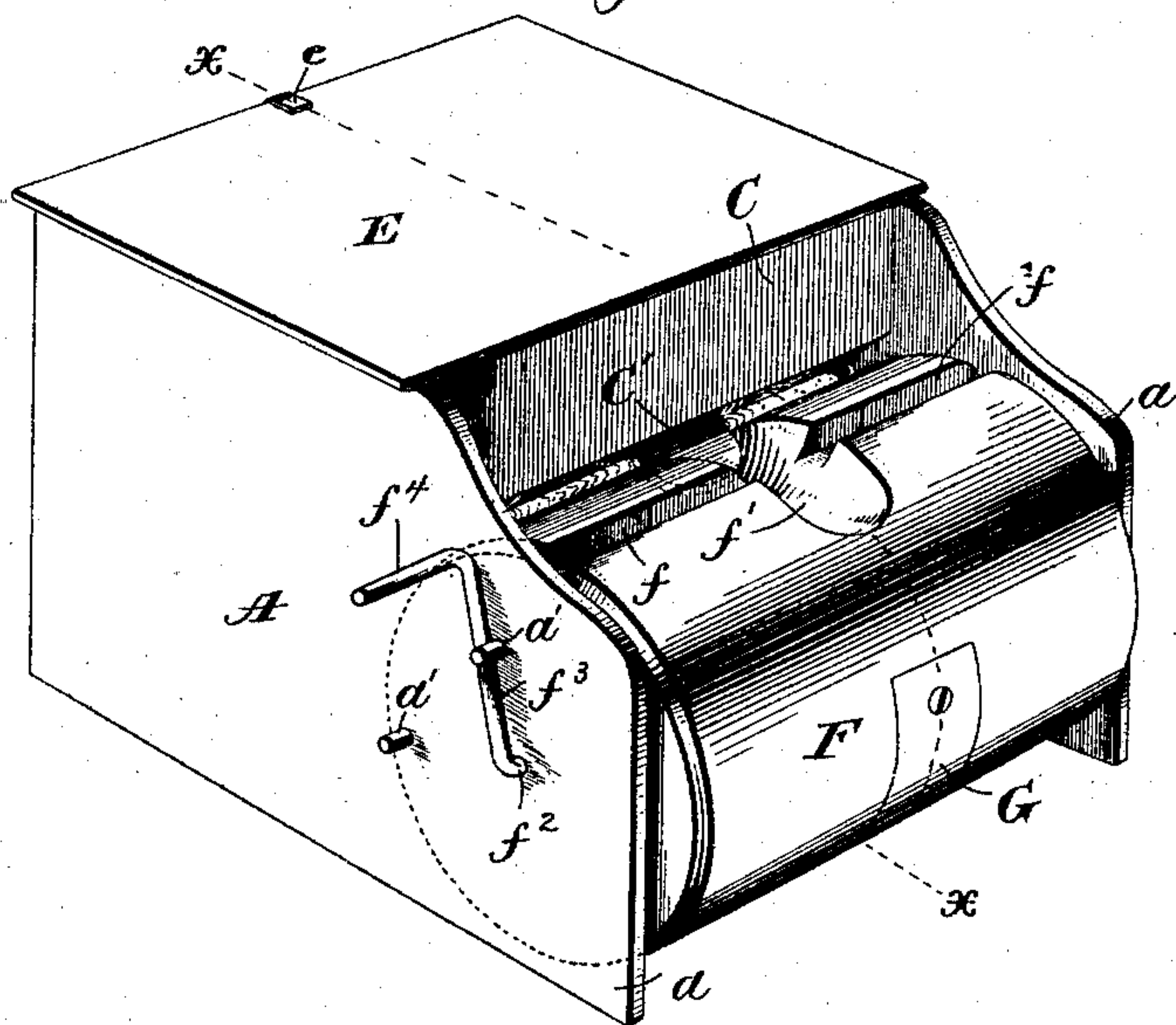


Fig. 2.

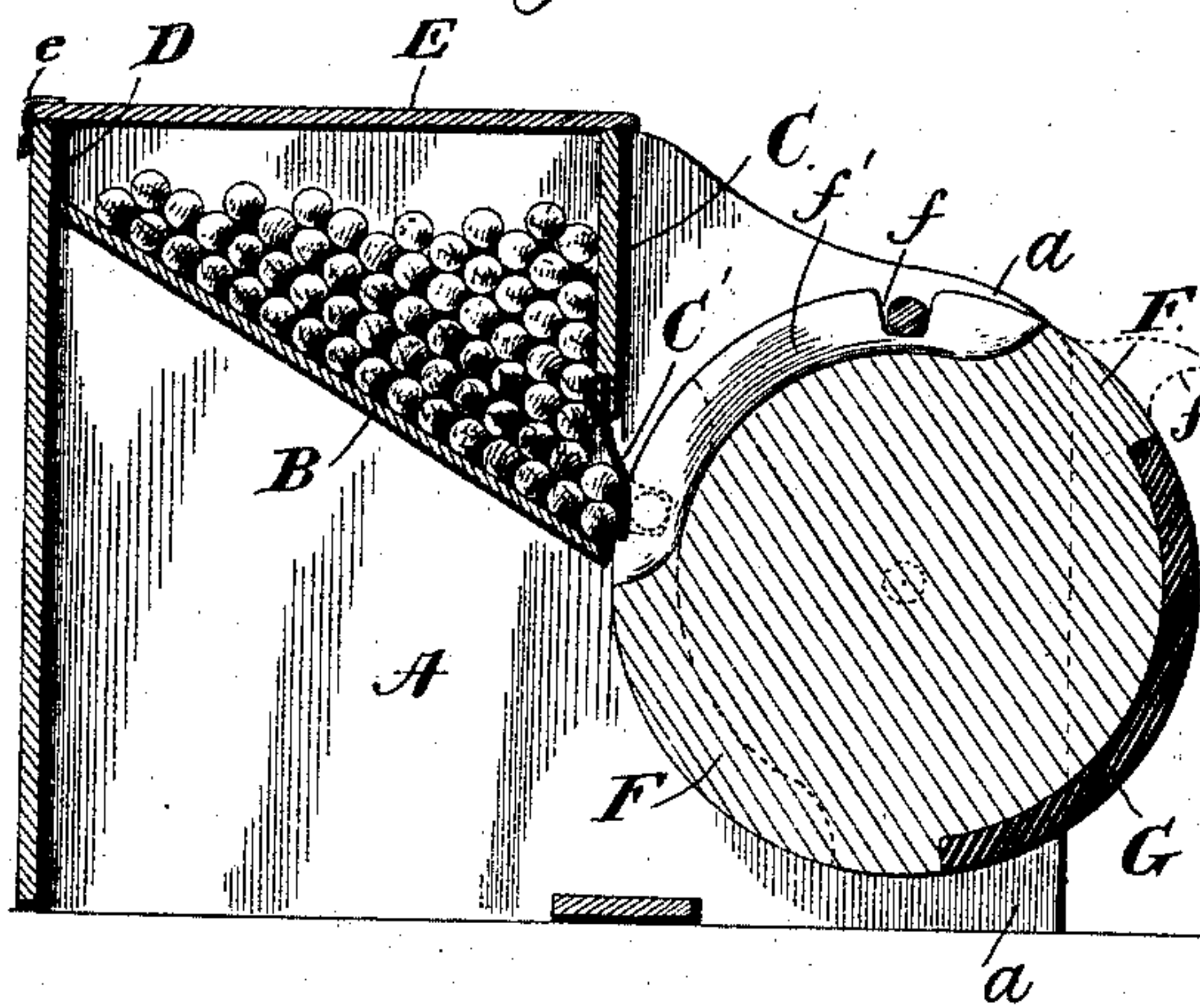
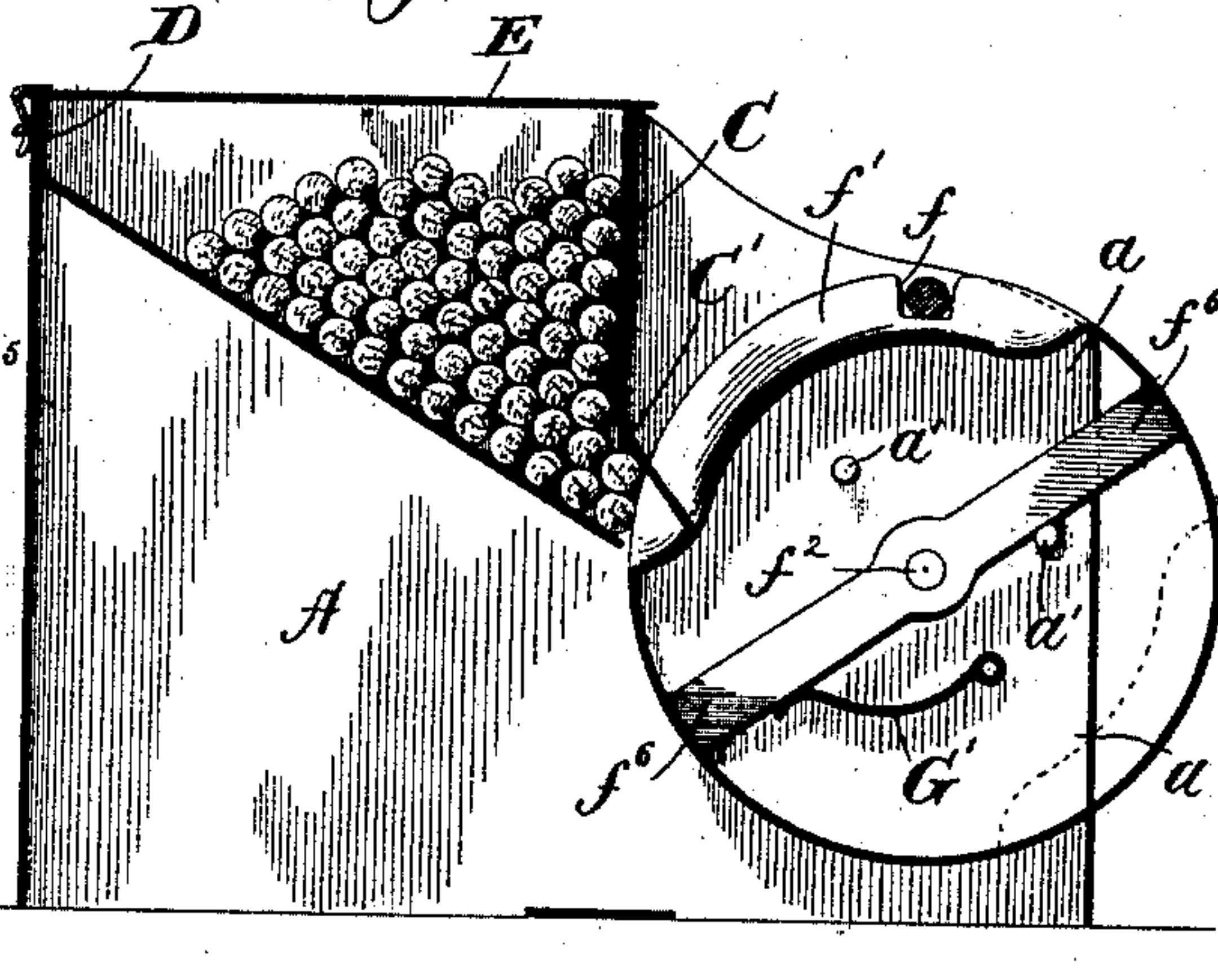


Fig. 3.



Witnesses:

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UNITED STATES PATENT OFFICE.

HENRY CROGGON, OF WASHINGTON, DISTRICT OF COLUMBIA.

FEEDING MATCH-SAFE.

SPECIFICATION forming part of Letters Patent No. 483,543, dated October 4, 1892.

Application filed November 10, 1891. Serial No. 411,481. (No model.)

To all whom it may concern:

Be it known that I, HENRY CROGGON, a citizen of the United States, residing at Washington city, in the District of Columbia, have invented certain new and useful Improvements in Feeding Match-Safes; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, in which—
Figure 1 shows my improved feeding match-safe in front perspective; Fig. 2, a view of a section on line *xx* of Fig. 1, and Fig. 3 a similar view showing a modified form of feed-roller and means for turning the same back to its normal position when it has been moved to receive a match from the hopper.

Letters of like name and kind refer to like parts in each of the figures.

The object of my invention has been to provide an approved feeding match-safe; and to this end my invention consists in the match-safe and the parts thereof constructed and arranged and combined as hereinafter specified.

The special purpose which I have had in view in devising the present safe has been to provide a receptacle capable of receiving and inclosing a quantity of matches, with simple and easily-operated means for feeding out the matches one by one into convenient position to be readily taken by one desiring a match for use.

As shown in the drawings, the apparatus consists, broadly, of a receptacle having an inclined bottom, down which the contained matches tend to descend, and a discharge-opening at the lower end of such bottom, and a feed-roller having a longitudinal groove adapted to receive a match discharged from said opening and carry it upward and outward as the roller is turned, so as to bring the groove from its inner side to its top.

The apparatus has, also, certain other special features and parts which will be set forth and described hereinafter.

In the drawings, *A A* designate the sides of the match-holding receptacle. As shown, they consist simply of upright plates, which can be of wood, but are preferably made of metal or other fireproof or incombustible material, having forwardly-projecting por-

tions *a a*, in which the feed-roller to be described is journaled. The bottom of the receptacle is formed of an inclined plate *B*, which extends downward and outward toward the roller, holding part of the frame at an angle sufficient to cause any matches resting upon it to slide or roll downward over it. Just above the lower end of this bottom is the upright plate *C*, forming the front end of the receptacle proper and having its lower edge situated a short distance above the bottom, so as to leave a match-discharging opening at the lower end of the latter of sufficient size to admit the free outward passage of the matches in the manner to be described.

Attached to plate *C* and extending downward across the discharge-opening is the flap *C'*, preferably made of leather, but, if desired, of metal or other material which is both flexible and elastic enough to tend to stand normally across the opening, while not stiff enough to prevent the outward flow of the matches.

The receptacle, having its outer end closed by board or plate *D* or otherwise, as desired, should be provided with a suitable cover arranged to allow it to be charged or filled with matches. As shown, it has a hinged lid *E* to be held shut by a catch *e*, or any other locking device.

Journaled in the parts *a a* of side plates *A* is the roller *F*, whose periphery stands close to the discharge-opening of the match-holding receptacle, so that no matches can get down between it and the end of the inclined receptacle-bottom *B*. In said periphery is a longitudinal groove *f* of a size and depth to receive one match, and a larger and deeper groove or recess *f'* at right angles to and crossing the other and extending part way around the roller on each side of groove *f*. It is of such length as to extend just below the discharge-opening of the receptacle when the roller is turned to bring its match-groove *f* on its upper side in the position indicated in full lines in the drawings, and of a size and depth to allow the match held in groove *f* to be easily grasped by the middle by the finger and thumb and removed from the roller. The flap *C'* extends downward and outward into groove *f'* beyond the path of the bottom

of groove f , and is preferably, though not necessarily, made, as shown, rounded at its lower end to correspond with the shape of the groove f' .

5 With the construction described, the match-receptacle being charged with matches, if the roller F without a match in groove f be rotated to carry such groove inward and downward to a point opposite the lower end of the inclined bottom of the receptacle a match
10 will drop into it, passing under flap C' . A turn of the roller in the opposite direction will then carry the match, securely held in the groove f , upward and outward past the
15 flap until it comes upon the upper side of the roller in position to be readily picked out of the groove by the fingers. After the described passage of the match the flap C' flies back into position over the receptacle discharge-
20 opening. With said flap made, as shown, long enough to extend into the groove f' beyond the path of the bottom of groove f , if the roller should, while the latter groove already held a match, be turned inward and down-
25 ward to bring said groove around to the discharge-opening of the receptacle, the match itself would force the flap inward across said opening, so that no other match could get out of the same. This arrangement is advanta-
30 geous as effectually preventing any more matches from getting out of the receptacle until the one already fed out by the roller has been taken, and making impossible any clogging or jamming of a second match between
35 the one in the groove and the upper side of the discharge-opening of the receptacle.

So far as the construction already described goes, the roller can be operated by hand or in any desired way. I prefer, however, to pro-
40 vide it with means for holding it normally turned to bring its match-holding groove f on its upper side and returning it to such position when it has been rotated to bring said groove down to the match-discharge opening
45 and released. For this purpose I either weight the roller, as indicated at G , Figs. 1 and 2, or use a spring, as shown at G' in Fig. 3, and provide a stop device to limit the upward and outward turn of the roller under the influence
50 of the weight or spring.

In Fig. 1 the roller-shaft f^2 is shown provided with an arm f^3 , which is adapted to engage one or the other of stops $a' a'$ on the side plate as the roller is rotated to the limit of
55 its motion in one direction or the other. For convenience in turning the roller against the stress of the weight or spring said stop-arm can be provided with an outwardly-extending handle f^4 , (shown in full lines in Fig. 1,) or
60 the roller can have the piece f^5 . (Shown in dotted lines in Fig. 2.)

The roller shown in Fig. 3 is represented in the form of a hollow cylinder, which can be made of metal or other desired material,
65 having the grooves f and f' easily made by stamping or bending portions of the cylinder inward. An arm f^6 within the roller end can

be used to engage the stops $a' a'$ on the inner side of the casing just as the arm f^3 (shown in Fig. 1) engages the outside stops, and also
70 to engage the spring G' , where the latter is used to turn the roller into its desired normal position with the match-groove on top.

The operation of my feeding match-safe, which will be understood from the foregoing
75 description, is briefly as follows: With no match in the groove f , if one is wanted the roller is simply turned to bring said groove down to the level of the lower end of the inclined bottom of the match-receptacle, and then re-
80 leased, so as to allow it to turn back again. When the groove f is brought down in the manner described, a match passes from the receptacle under the flap C' and enters said
85 groove, to be carried thereby upward past the flap and outward as the roller returns to its normal position. The match thus brought
up from the receptacle is in convenient position to be taken by the thumb and finger in-
90 serted in groove f' on opposite sides of the match-groove. Until the match is removed no other will be fed out, even if the roller be
turned to bring the groove f down opposite the receptacle discharge-opening again, for
95 the flap C' will by the match remaining in the groove be forced back across said opening to prevent any match issuing through the same.

My device shown and described is cheap and simple in construction, most efficient and
100 convenient for the feeding out of the matches for use one by one, has no part complicated or liable to get out of order, and is arranged so that it cannot get clogged or fail in its ac-
105 tion.

Having thus described my invention, what I claim is—

1. In a feeding match-safe, in combination with the match-holding receptacle having a discharge-opening toward and through which
110 the matches tend to move, the rotary feed-roller standing close to said opening, provided with a longitudinal match receiving and holding groove in its periphery, and a yielding flap extending down over the discharge-open-
115 ing, substantially as and for the purpose shown.

2. In a feeding match-safe, in combination with the match-holding receptacle having a discharge-opening toward and through which
120 the matches tend to move, the rotary feed-roller standing close to said opening, having in its periphery a longitudinal match receiving and holding groove and a second deeper groove at right angles to the other, and a
125 yielding flap extending down over the discharge-opening and made long enough to project into the deeper of the two grooves, substantially as and for the purpose set forth.

3. In a feeding match-safe, in combination
130 with the match-holding receptacle having an inclined bottom and a discharge-opening at the lower end of the latter, the rotary feed-roller standing close to said opening, having

in its periphery a longitudinal match receiving and holding groove and a second deeper groove at right angles to the other groove, the flexible flap extending down over the discharge-opening, and means for holding the roller normally turned with its match-receiving groove upward and returning it to such position after it has been rotated to bring the latter groove down to the discharge-open-

ing of the receptacle and released, substantially as and for the purpose described.

In testimony that I claim the foregoing I have hereunto set my hand this 27th day of October, A. D. 1891.

HENRY CROGGON.

Witnesses:

HENRY C. HAZARD,
E. L. WHITE.