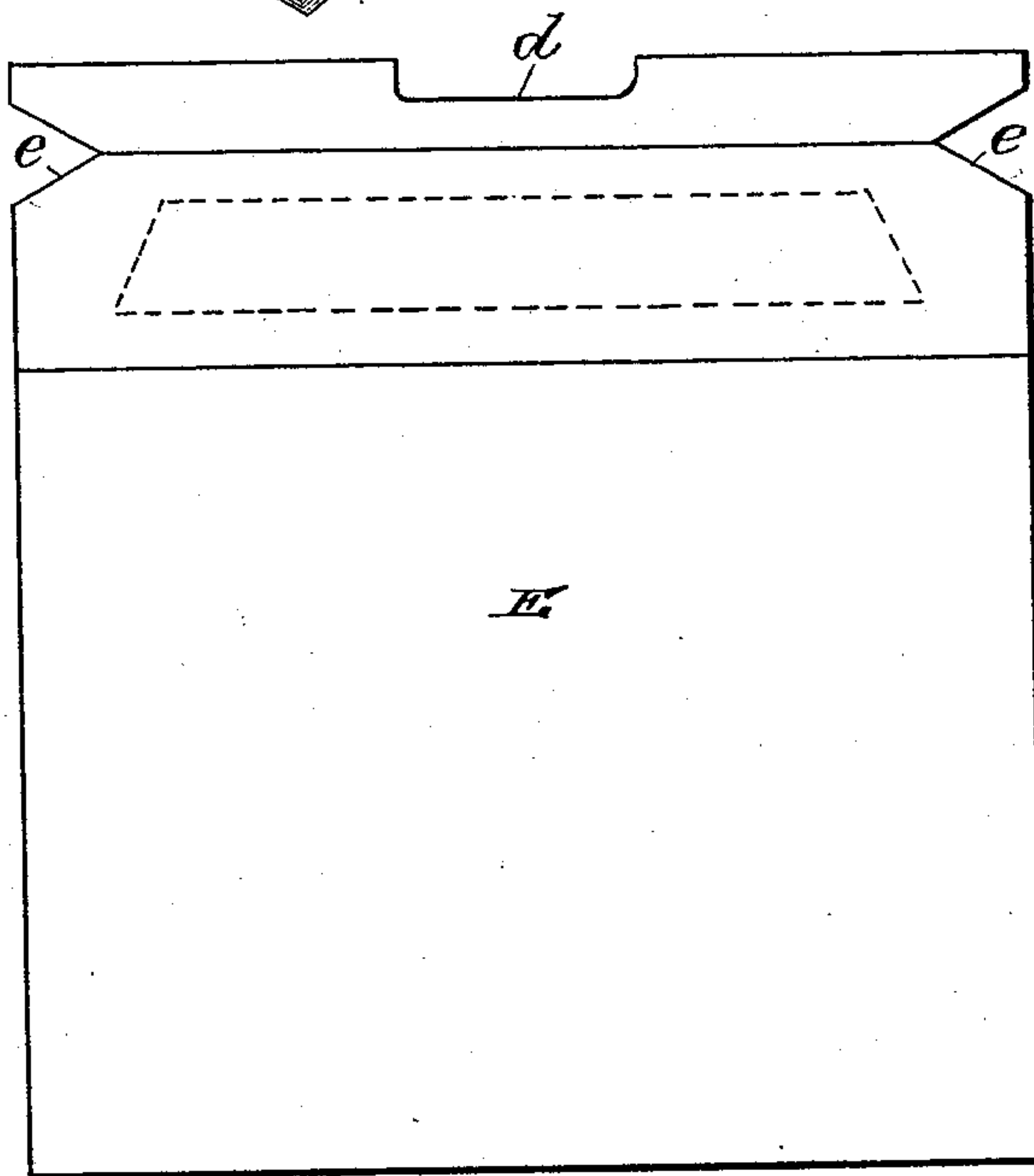
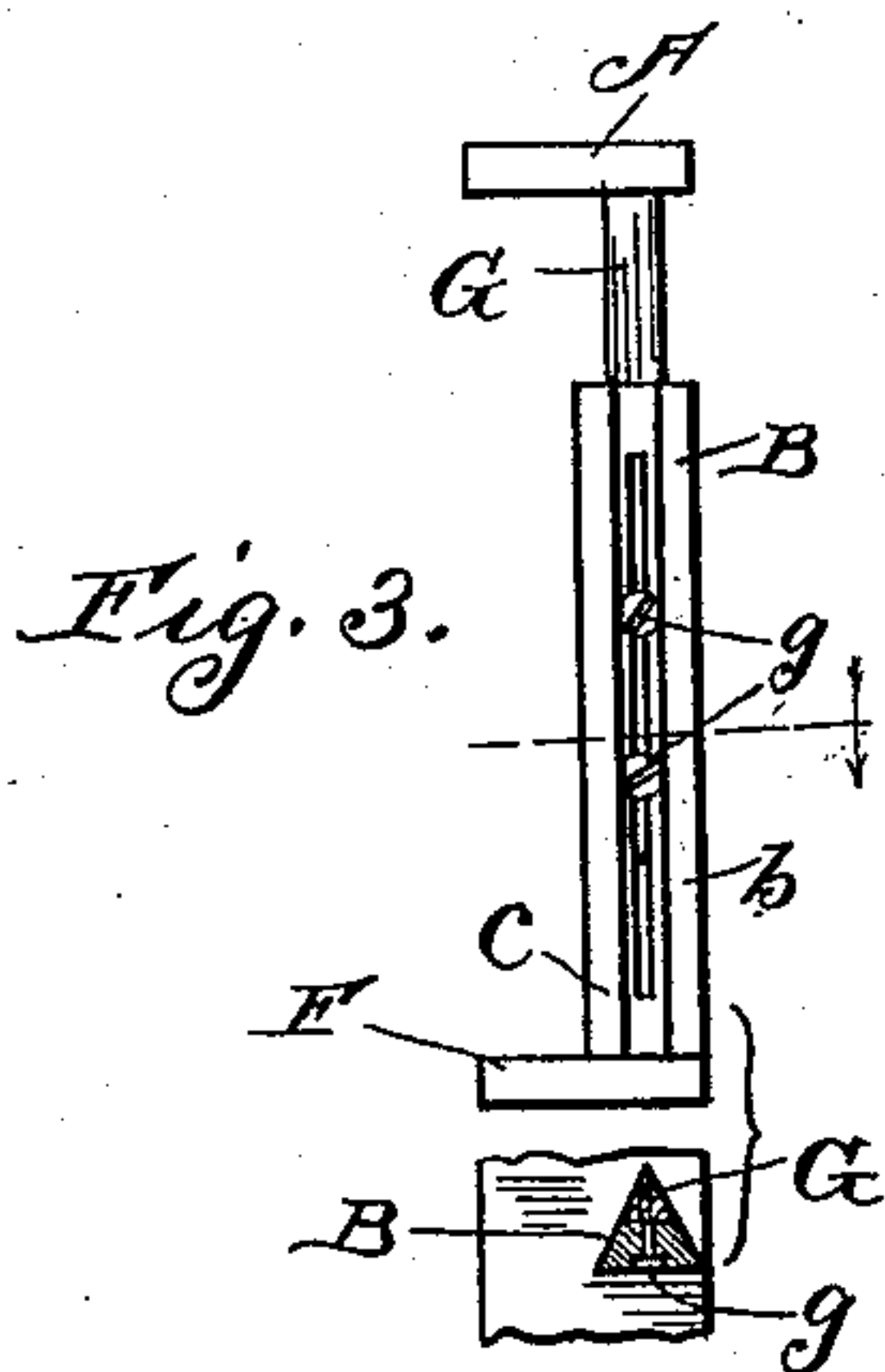
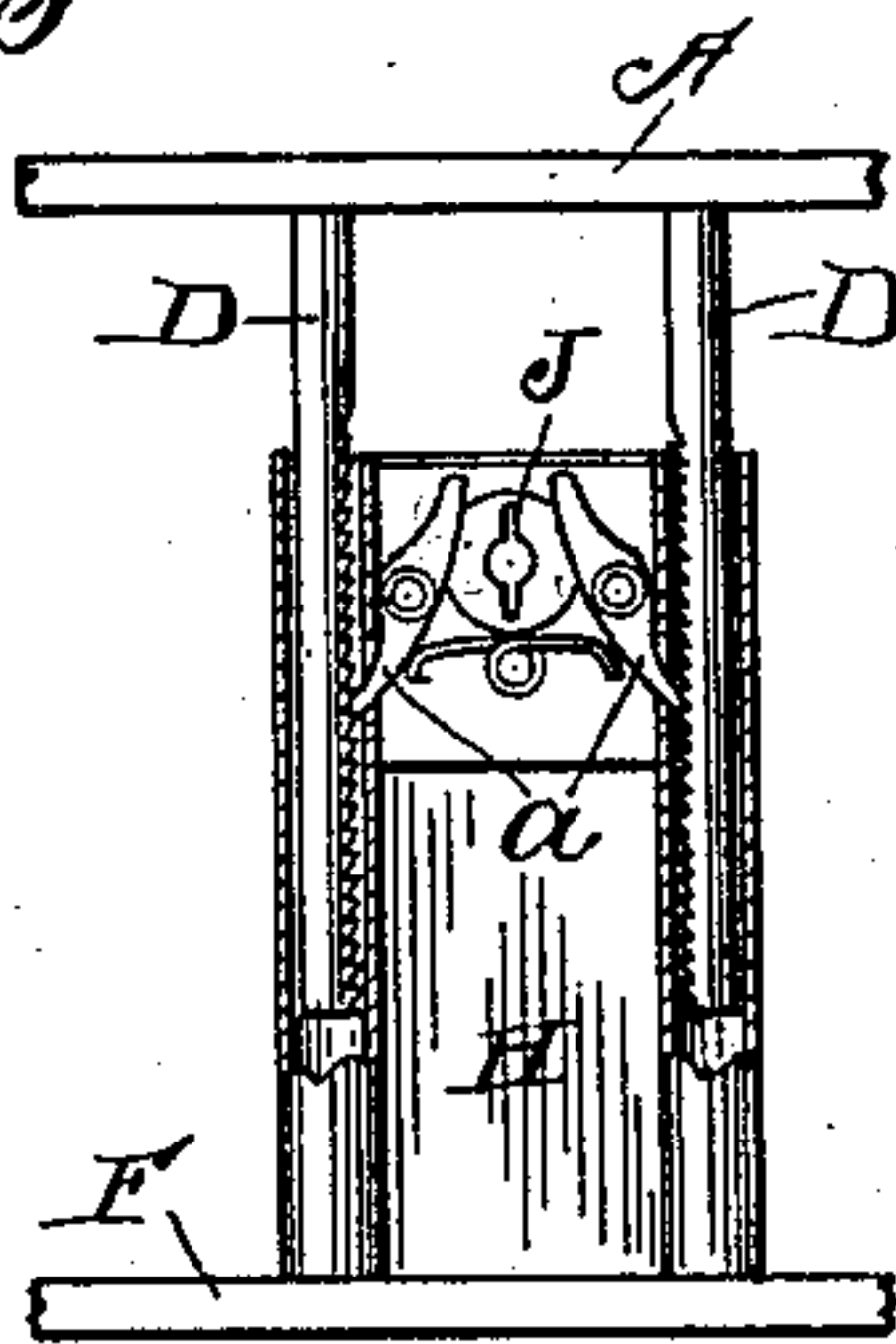
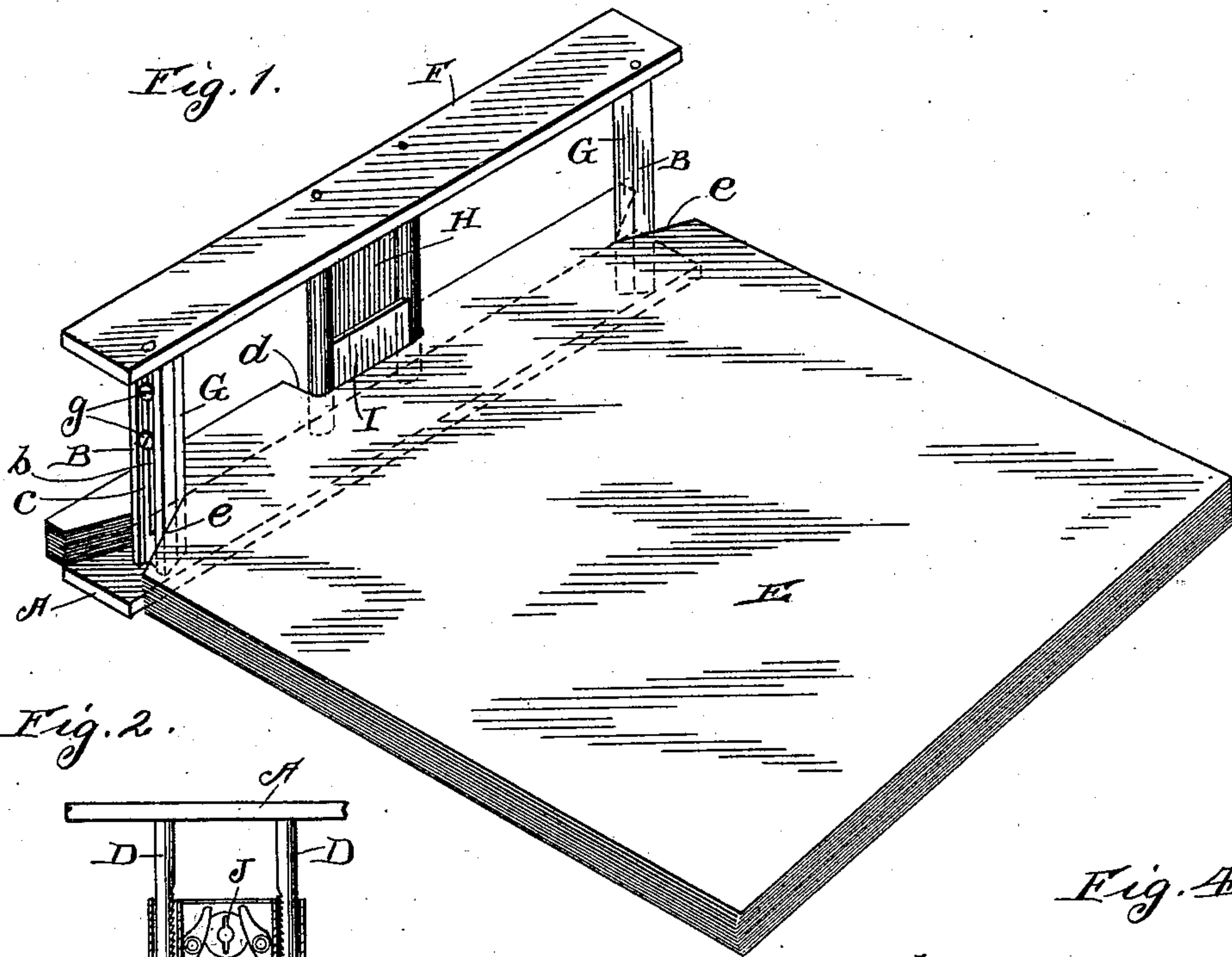


(No Model.)

L. M. LESLIE.
BINDER.

No. 581,123.

Patented Apr. 20, 1897.



Witnesses:

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UNITED STATES PATENT OFFICE.

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BINDER.

SPECIFICATION forming part of Letters Patent No. 581,123, dated April 20, 1897.

Application filed August 3, 1896. Serial No. 601,436. (No model.)

To all whom it may concern:

Be it known that I, LEON M. LESLIE, a citizen of the United States, residing at Chicago, in the county of Cook, State of Illinois, have
5 invented certain new and useful Improvements in Binders, of which the following is a description, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

10 My invention relates to that class of temporary binders known in the trade as "perpetual ledgers" and is designed to embody certain improvements whereby they may be made more compact and easily manipulated.

15 It is further designed to fasten the sheets thereof in the binder in such a way that any sheet may be extracted from the binder without loosening the remaining sheets from the binder and thereby possibly disarranging
20 them. As hitherto constructed in one form they have consisted of an upper and a lower back piece connected by posts which pass through apertures in the loose sheets, which are placed between and clamped by the said
25 back pieces. With this construction whenever it was desired to remove a sheet it was necessary to completely separate the back pieces and remove the desired sheet and all that might be above it by lifting them bodily
30 until the apertures in the sheets are freed from the posts. In my improved construction I make the posts cooperate with notches or projections on the edges of the sheets instead of passing through apertures in the
35 sheets, whereby I am enabled to remove any desired sheet without completely removing all superposed sheets, but all that is necessary is to move the superposed sheets enough so that the desired sheet may be bent until
40 its notches or projections are freed from the posts. It has also been proposed to build such binders with spring-backs, which, when in place, tend to hold the sheets together and in which the sheets are accurately secured in
45 place by means of pivoted links on the ends of the spring-backs, which take into notches in the edges of the sheets. With such a construction, if it were desired to remove any sheet, it would be necessary to release the
50 pressure of the spring-backs on the sheets, and then, having swung out the links, to with-

draw the desired sheet and thereby displace the other sheets, as they are not held in place by any mechanism whatever. In my improved construction I employ posts to cooperate with the notches or projections on the edges of the sheets, which posts are rigid with their back pieces and are connected with each other, so that the posts are never withdrawn from the sheets that are not to be extracted,
60 and the other sheets consequently cannot be displaced while any desired sheet is being withdrawn.

My invention further consists in the combination, with the binder, as above described,
65 of a spring-catch locking device between the back pieces, so that they will be held as adjusted in any position until they are released by applying a key to said lock.

To further illustrate my invention I annex
70 hereto a sheet of drawings, in which the same reference-letters are used to designate identical parts in all the figures, of which—

Figure 1 is a perspective view of my ledger with a few sheets in place. Fig. 2 is an inverted detail view in elevation, some of the covering being broken away, showing the construction of the spring-catch locking device. Fig. 3 comprises an elevation and section of the telescoping posts cooperating with
80 the notches in the edges of the sheets, and Fig. 4 is a plan view of one of the sheets.

The upper and lower back pieces F and A are rigid metallic plates which may be covered with leather and have covers attached
85 thereto by flexible hinges, as is customary in this class of devices. I have not, however, illustrated these covers, as they are not deemed to be any part of my invention. Near each end of the back piece A is an upwardly-
90 projecting triangular metal post G, which is rigidly fastened to the back piece A, and cooperating with each of said posts G is a post B, rigidly fastened to the back piece F and located just outside of the posts G and
95 having a quadrilateral cross-section, so that the cross-section of the posts G and B taken together form a substantially equilateral triangle, as shown in Fig. 3. To insure these posts G and B always remaining in proper
100 juxtaposition, I make a slot *b* in the post B and I pass one or more screws *g* through this

slot and screw them into the post G. To prevent the heads of the screws *g* from projecting, I countersink the outer portion of the slot *b* to receive the heads.

5 To cooperate with the structure hitherto described, I employ loose sheets E, as shown in plan view in Fig. 4. These sheets have triangular notches *e*, which cooperate with the posts B and G, as clearly shown in Fig. 1.
 10 With all the available space between the back pieces A and F filled with the sheets E if it is desired to remove any sheet all that is necessary is to draw apart the back pieces A and F as far as permitted and then to open the book
 15 at the desired sheet, when it will be found that there is sufficient space between the sheets E to permit of the desired sheet E being bent enough to disengage it from the posts B and G. As these posts have the same bevel, it
 20 will be noted that when the back pieces A and F are separated or the binder expanded the leaves will have no more play in the expanding part of the binder than the leaves contained in the main body of the binder, which will be noted as a considerable advantage.

It will be understood that I might construct my posts so that the combined cross-section should be of some other shape than triangular, the only essential being that the cross-sections of each of the cooperating posts shall correspond to the shape of the apertures or projections, so that the sheets shall be held with the same amount of play, whether they
 35 are held by the cooperating posts separately or together.

In order to secure the back pieces A and F firmly in any desired relative position, so as to make a practical book capable of standing
 40 ordinary usage, I add to the structure hitherto described the spring-catch locking device shown in Figs. 1 and 2. This consists of two parallel posts D, adjacent the edge of the back piece A and at the central portion thereof, provided with teeth which cooperate with
 45 a pair of spring-pressed dogs *a*, pivotally mounted on the inside of a casing I, formed at the lower end of a plate II, projecting downwardly from the back piece F. The edges
 50 of this plate II are curved, so as to form tubes inclosing the posts D. It will be seen from this construction that when the ledger is well filled with sheets and the back pieces A and F are pressed together the posts D, passing
 55 into the tubes formed on the plate II, will be engaged by the dogs *a* and held firmly in whatever position they may be placed, as the dogs cooperate with the notches in the posts D will prevent the pieces A and F being separated under the expansive force of
 60 the sheets E. It will be noticed that these sheets E have notches *d* to accommodate the locking device. When it is desired to unlock the back pieces, a key having oppositely-disposed lugs is inserted in the keyhole J,
 65 and it will be seen from Fig. 2 that when such a key is inserted and turned its lugs will

take against the tails of the dogs *a* and thus release them from the notches in the posts D and permit the back pieces A and F to be
 70 separated so far as the slot-and-pin connection of the posts B and G will permit.

While I have shown my invention as embodied in the form now designed by me to be the simplest and the most practical, yet it will
 75 be understood that it is capable of some modifications clearly within the scope of the invention. For instance, instead of breaking the continuity of the outline of the sheet E by the notches *e* and having the posts B and G
 80 enter said notches I might break its continuity by projections and form and adjust the posts B and G so as to inclose the projections, and thus hold the sheets E in place by cooperating with the projections. It is also mani-
 85 fest that I might make the posts B and G to telescope instead of having them cooperate in the manner shown. Therefore I do not desire to be limited to the exact structure shown and described, but I desire to cover such con-
 90 structions as are fairly within the terms of the following claims.

I claim—

1. In a temporary binder, the combination of a back piece with posts secured thereto,
 95 with a similar back piece having posts secured thereto cooperating with said first-named posts, and sheets having cut-away portions cooperating with said posts, the posts of each back piece being of such shape that they are
 100 in holding contact with the cut-away portions in all positions of the posts so that the sheets are held by said posts with the same firmness whether they are held by the posts of either or both back pieces, substantially as described. 105

2. In a temporary binder, the combination of a back piece with posts secured thereto, with a similar back piece having posts secured thereto cooperating with said first-named
 110 posts, and sheets having broken outline portions cooperating with said posts, the posts of each back piece being of such shape that they are in holding contact with the broken outline portions in all positions of the posts so that
 115 the sheets are held by said posts with the same firmness whether they are held by the posts of either or both back pieces, substantially as described.

3. In a temporary binder, the combination of a back piece with posts secured thereto,
 120 with a similar back piece having posts secured thereto cooperating with said first-named posts, and sheets having notches in their edges cooperating with said posts, the posts of each back piece being of such shape that they are
 125 in holding contact with the notches in all positions of said posts so that the sheets are held by said posts with the same firmness whether they are held by the posts of either or both back pieces, substantially as described. 130

4. In a temporary binder, the combination of a back piece with posts secured thereto, with a similar back piece having posts secured thereto cooperating with said first-named

posts, the combined cross-sections of the cooperating posts being triangular, and sheets having angular notches therein cooperating with said posts, the posts of each back piece being of such shape that they are in holding contact with the notches in all positions of the posts so that the sheets are held by said posts with the same firmness whether they are held by the posts of either or both back pieces, substantially as described.

5. A temporary binder comprising a back piece, having triangular, vertical posts secured thereto, another back piece provided with corresponding beveled, downwardly-projecting posts, having sliding engagement with the first-mentioned posts, and leaves adapted to engage said triangular posts; substantially as described.

6. A temporary binder comprising a back piece, having beveled posts projecting upwardly therefrom, another back piece having similarly-beveled posts projecting downwardly therefrom, said downwardly-projecting posts having slots and guiding pins or screws passing through said slots into the posts which are secured to the first-mentioned back piece, and means for locking the back pieces in any desired position; substantially as described.

7. A temporary binder comprising the upper and lower back pieces with triangular posts between the two, said lower back piece being provided with parallel, upwardly-projecting posts having teeth, a casing sliding on said posts and carried by the upper back piece, and locking mechanisms secured to said casing adapted to engage the teeth on the parallel posts and leaves having V-shaped notches on each edge beveled to correspond to the triangular posts and having cut-out portions at their rear ends to allow for the sliding movement of the locking-casing; substantially as described.

8. A temporary binder comprising the rigid back pieces with connecting-pieces rigid therewith and permanently but loosely connected to their cooperating connecting-pieces and having a limited sliding movement so as to permit movement of the back pieces toward and from each other, whereby the binder may be expanded but not separated, so that any sheet may be extracted without freeing the others from the binder, and means for locking the pieces in any desired position, substantially as described.

9. In a temporary binder, the combination of the back pieces having the posts rigid there-

with and permanently but loosely connected to and cooperating with each other, with the sheets having a broken outline, the said posts cooperating with the broken outline portion of said sheets to hold them in position so that any sheet may be extracted from the binder without freeing the others from the posts, substantially as described.

10. In a temporary binder, the combination of a rigid back piece having a plurality of posts rigid therewith, with a similar back piece having a plurality of posts permanently but loosely connected to and cooperating with the posts of the first-named back piece, and sheets having notched portions cooperating with said posts so that any sheet may be extracted from the binder without releasing the others from the posts, substantially as described.

11. In a temporary binder, the combination of the back pieces having the posts rigid therewith and permanently but loosely connected with their cooperating posts, with the sheets removably held in position by said posts so that any sheet may be withdrawn from the binder without releasing the others from the posts, substantially as described.

12. In a temporary binder, the combination of the back pieces having the posts rigid therewith and permanently but loosely connected with their cooperating posts, with the sheets removably held in position by said posts so that any sheet may be extracted from the binder without freeing the others from the posts, and locking mechanism connected to said back pieces whereby they may be locked in any desired position, substantially as described.

13. In a temporary binder, the combination of the back pieces having the posts rigid therewith and loosely connected to and cooperating with each other, with the sheets having a broken outline, the said posts cooperating with the broken outline portions of said sheets to hold them in position so that any sheet may be extracted from the binder without freeing the others from the posts, and locking mechanism connected to said back pieces whereby they may be locked in any desired position, substantially as described.

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

LEON M. LESLIE.

Witnesses:

MERVIN P. WOODY,
NORMAN WATTE.