(No Model.) 2 Sheets—Sheet 1.

T. F. BOURNE.

BINDER.

No. 396,980. Patented Jan. 29, 1889.

Fig. 1.

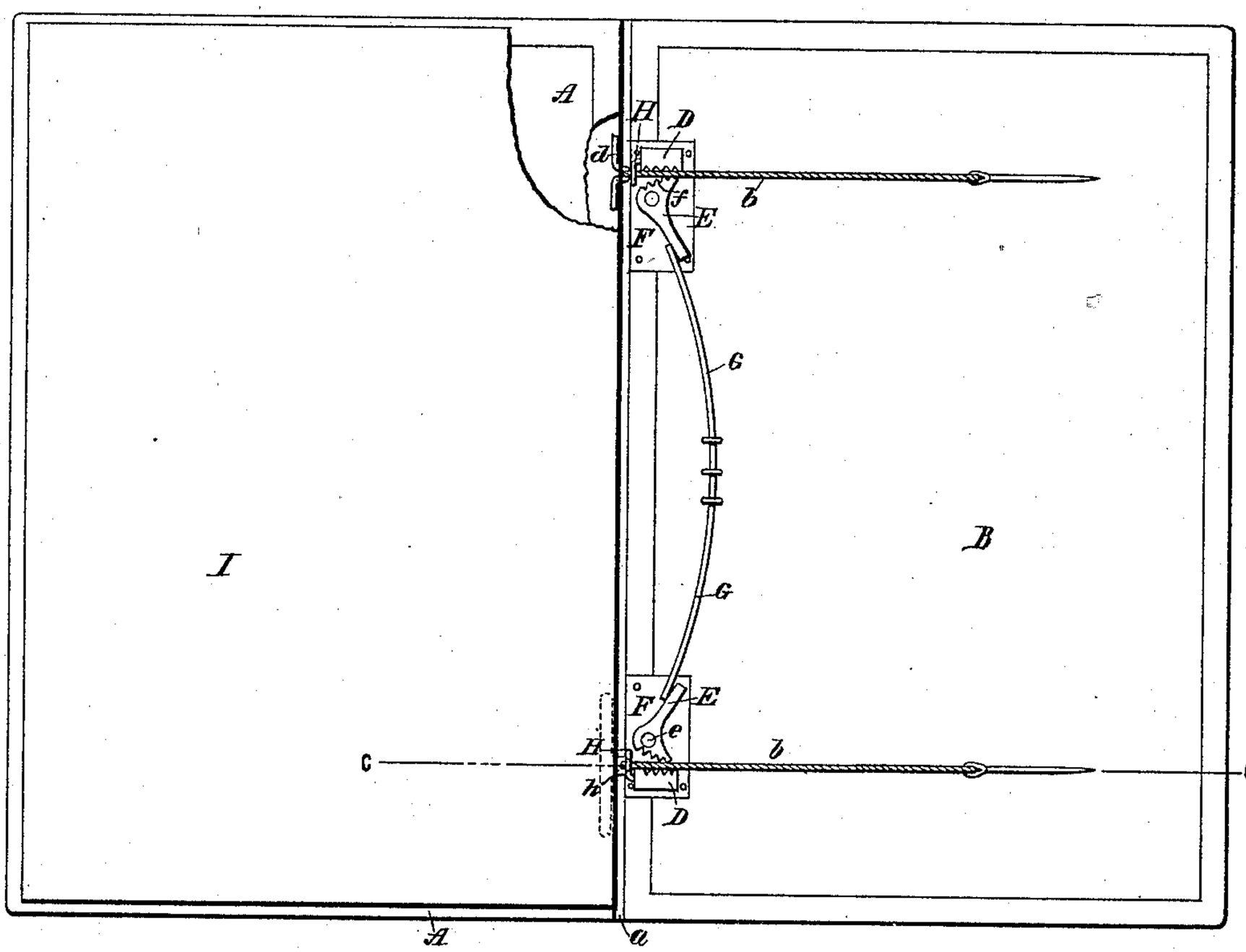


Fig. 2.

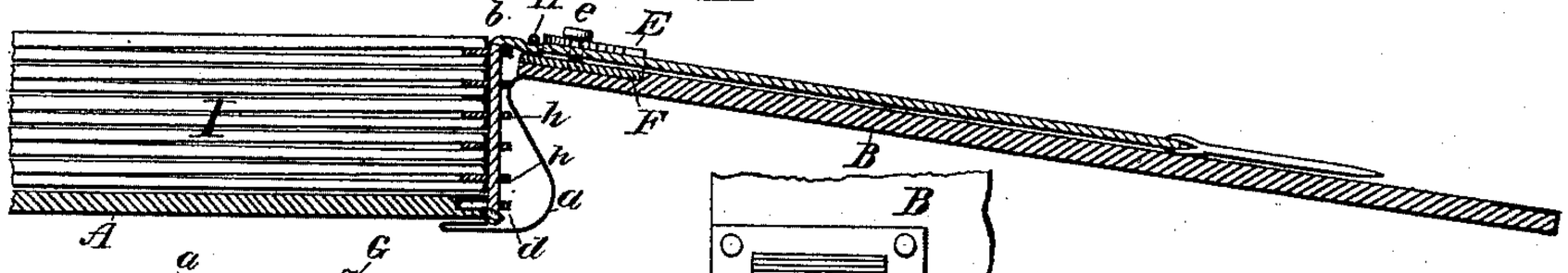


Fig. 3.

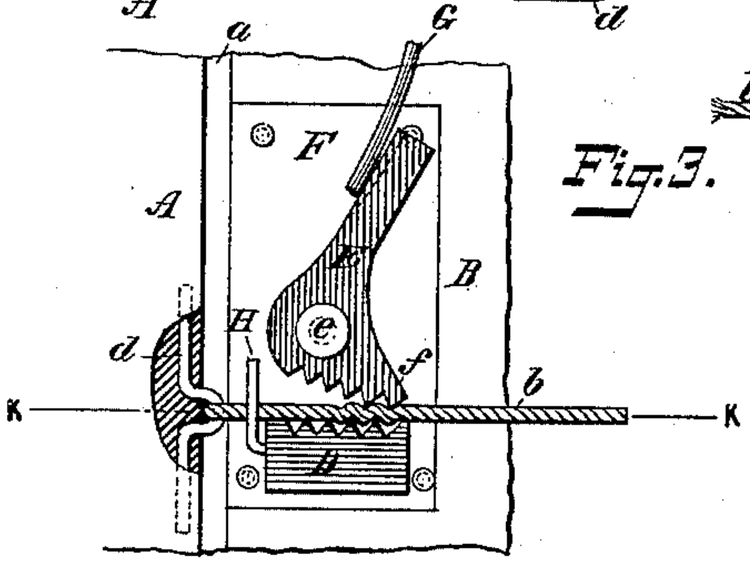


Fig. 5.

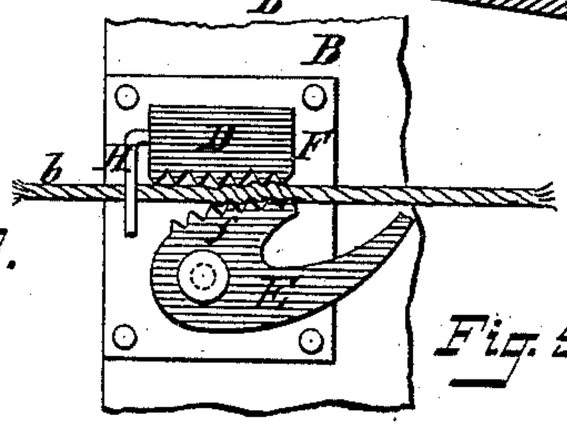


Fig. 4.

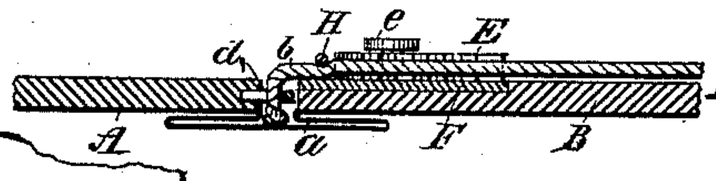
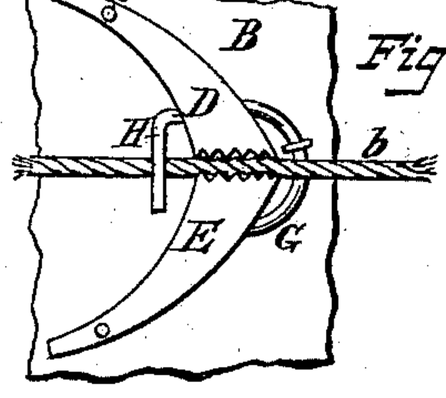


Fig. 6



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ATTORNEY

(No Model.) 2 Sheets—Sheet 2.

T. F. BOURNE.

BINDER.

No. 396,980. Patented Jan. 29, 1889.

Fig. 7.

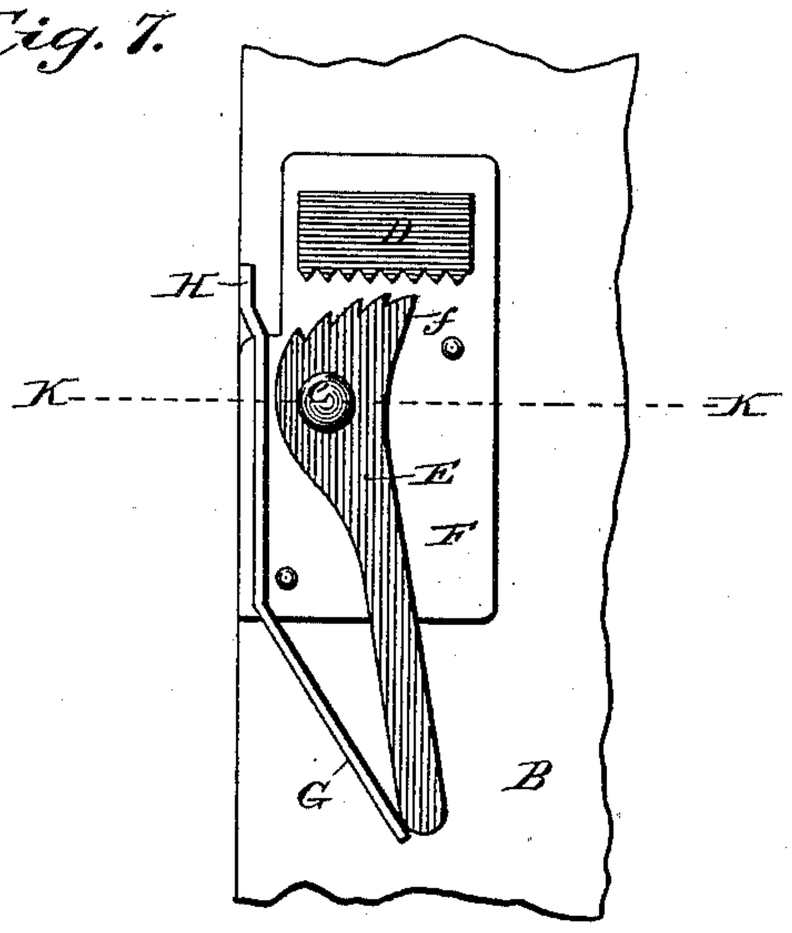
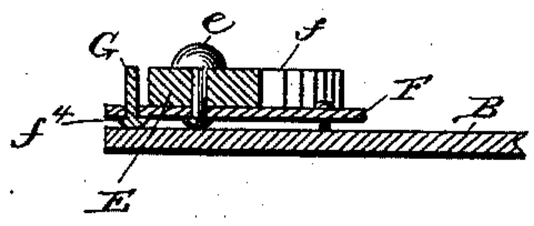


Fig. 8.



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UNITED STATES PATENT OFFICE.

THEODORE FREDERICK BOURNE, OF CLIFTON, ASSIGNOR TO ASA L. SHIPMAN'S SONS, OF NEW YORK, N. Y.

BINDER.

SPECIFICATION forming part of Letters Patent No. 396,980, dated January 29, 1889.

Application filed September 1, 1888. Serial No. 284,368. (No model.)

To all whom it may concern:

Be it known that I, THEODORE FREDERICK BOURNE, of Clifton, Richmond county, New York, have invented certain new and useful Improvements in Binders, of which the following is a specification.

The object of my invention is to provide an improved binder for papers, pamphlets, &c., that shall be simple in construction and efficient in use, and by which papers, &c., may be adjusted together with very little trouble.

The invention consists in the combination, with a pair of covers and a cord or other connection to hold papers between said covers, of a catch carried by one of the covers and adapted to grasp the connection to hold the covers upon the contained papers.

The invention further consists in the details of improvement and the combinations of parts, that will be more fully hereinafter set forth.

Reference is to be had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is an inside face view, part being broken away, of a binder opened out containing my improvements. Fig. 2 is an enlarged cross-section on the line *c c*, Fig. 1. Fig. 3 is an enlarged face view of a portion of the binder, showing the catch as grasping a cord; and Fig. 4 is a cross-section on the line *k k*, Fig. 3. Figs. 5, 6, and 7 show modified forms of catches, and Fig. 8 is a cross-section on the line *k k* of Fig. 7.

In the accompanying drawings the letters A B represent the covers of a book or binder, which may be of any approved construction. The covers A B, I prefer to connect by a flexible back strip or connection, *a*, so that the covers may be moved toward and from each other, as desired.

To one of the covers—say the cover A—I secure one or more cords or other connections, *b*. These cords or connections *b*, I prefer to secure to the inner edge of the cover by passing them through a looped wire, *d*, carried by the cover, and there knotting or tying them at said loop; but these cords or connections *b* may be secured to the cover by the aid of an eyelet-hole or in any other suitable manner. On the opposite cover to the one that holds the cords or connections *b*—say the cover B—I place a catch that is adapted to grasp the cord or connection *b* and thereby firmly hold the cord. The catch used to hold the cord or connection *b* may be of any approved construction; but I find the construction shown in the accompanying drawings to give good results.

In said drawings the letter D represents a block or head-piece that is carried by the cover B.

E represents a lever that is pivoted, as at *e*, and is placed upon the cover B in proximity to the head D, as shown. The head D and lever E, I prefer to place upon a small plate, F, and to secure said plate to the cover B, as shown. The lever E has a projection or cam-like edge, *f*, at the end that is near the head D. The lever E or the cam projection *f* thereon is adapted to contact the head D, or to press a cord against said head when it is placed between said head and lever, as shown, and thus to firmly grasp the cord.

In order to more securely grasp the cord or connection I prefer that the inner or meeting faces of the head D and lever F shall be provided with serrations or teeth, as shown. When holding a cord, these teeth will either sink into the cord, or the teeth on one part of the catch will press the cord between the teeth of the other part of the catch to prevent the cord from slipping. By making the end of the lever E cam-shaped the cord *b*, when between the lever and the head D, will draw upon the cam *f*, and thus press the end of the lever toward the head D. The more said end of said lever is thus drawn upon the more the cam *f* will be pressed against the head D and caused to bite the cord. In order that the catch may at all times be ready to grasp a cord, I prefer to provide a spring, G, that is carried by the cover B, or by the plate F, head D, or otherwise, and that presses at one end against the lever E. The spring G forces the end *f* of the lever E against the head D, or against a cord, *b*, when between said head and lever, as shown.

The spring G may be of any approved construction.

In order that the cord or connection *b* will not be pulled up from the catch when the cover is turned on its hinges, I provide a loop or cross-pin, H, that extends across a line drawn between the head D and lever E, as shown.

The loop H may be carried by the head D, by the spring G, or by the cover B, or in any other suitable manner. When the cord or connection *b* is to be held by the catch, it is first passed under the loop H, whereby it is confined between the loop and the cover, (see Fig. 4;) but said cord may be passed through an eye or a hole or held down in any other suitable manner.

I represents papers that are held in the binder. *h* are fasteners that have a projecting eye, that pass from the back of the papers I in the ordinary way. The cords *b* pass through these fasteners, as shown; but the cords *b* may pass through holes in the papers or be connected to said papers in any other manner.

In the accompanying drawings I have shown two catches on the cover B, and two cords or connections, *b*, to be grasped by said catches, which catches are near the inner edges of the cover; but it is evident that one or more catches can be used.

If desired, one catch may be placed at about the center of the cover and both cords *b* be grasped by it.

In the drawings, the springs for the two catches are shown to be in one piece of metal, secured at the center. This construction is convenient for a small binder or where the catches are near each other; but in large binders, where the catches are at a greater distance apart, these springs may be made in separate pieces, each spring being independently secured to the cover or to the plate F, if preferred, as shown in Fig. 7. As shown in Figs. 7 and 8, the spring G is secured to the plate F, a projection, f^4, on the spring being passed through the plate F and swaged. As shown in Fig. 7, the loop H is an integral part of the spring G.

My improved binder is operated as follows: To place papers in the binder, the cover B is thrown back and the cord or connection *b* is loosened from the catch by drawing the cord upward from between the lever E and head D. The cord is then slipped from under the loop H. The papers, I, to be bound, having first been provided with fasteners *d*, or holes for the cord, are placed upon the cover A and the cord or connection *b* passed through the eye or loop in the fastener or through the hole in the papers. The cord or connection is then passed under or through the loop or eye H, and is drawn over the space between the end of the lever E and the head D, the lever E meanwhile being turned on its pivot to move its cam end *f* from the head D. The cord is then passed or laid in between the lever E and head D and the cover B pushed up close to the papers I, the slack in the cord being taken up. When in this position, the lever E is released, which is immediately pressed against the cord by the spring G or by the hand, whereby the cord is grasped between the head D and lever E and securely held. The cord cannot be drawn from the catch in the direction of or toward the cover, to which it is secured by the weight of the papers I or the movement of the covers, because the catch holds it securely. The more the cord is pulled in said direction the tighter it will be grasped, on account of the cam-shaped end *f* of the lever E, which will thereby be drawn more toward the head D, as heretofore stated. If desired to tighten the cords or connections at any time, it is only necessary to draw the cords toward their free ends. The cords will slip between the lever E and head D to be grasped tightly when such draft is released.

The cam part *f* of the lever E may be more at one side of the lever, as in Fig. 5, if desired. With this construction the spring G may be dispensed with, the lever being moved by hand to grasp the string.

The head D could be made movable, if desired. This is shown in Fig. 6. In said figure the head D is pivoted, as at *x*, so that its free end will come against the end of the lever E to grasp a string between them, as shown. The spring G may be arranged to press the ends of the lever E and head D together, as in Fig. 6, or otherwise suitably adjusted.

A binder of the above description will be found simple in construction, not liable to get out of order, and efficient in use. With this binder papers, pamphlets, &c., may be quickly and easily placed in the binder, and will be firmly held when in position.

Having now described my invention, what I claim is—

1. In a binder, the combination, with a pair of covers and a cord or connection for holding papers, of a catch carried by said covers, said catch having a movable member and being adapted to grasp said cord, substantially as described.

2. In a binder, the combination, with a pair of covers and a cord or connection, *b*, of a head, D, and lever E, carried by one of the covers and adapted to grasp the cord between them, substantially as described.

3. In a binder, the covers A B and a cord or connection, *b*, combined with a catch to grasp said cord and with a loop or eye to prevent raising of the cord from the catch, substantially as described.

4. In a binder, the covers A B and the cord or connection *b*, combined with the head D and spring-pressed lever E to grasp a cord, and with a loop or eye to prevent raising of the cord, substantially as described.

5. In a binder, the covers A B and cord or connection *b*, combined with a catch to grasp said cord, and with a plate, F, to support said catch, substantially as described.

6. In a binder, the covers A B and a cord or connection, *b*, combined with the plate F, head D, and spring-pressed lever E on said head, and with the loop or eye H, substantially as described.

7. In a binder, the covers A B and a cord or connection, *b*, combined with the head D and lever E, the meeting faces of said head and lever being serrated or toothed, substantially as described.

8. In a binder, the covers A B and a cord or connection, *b*, combined with the head D and lever E, said lever having a cam projection, *f*, substantially as described.

9. In a binder, the covers A B and a cord or connection, *b*, combined with the head D and lever E, said lever having a cam projection, *f*, and with a spring, G, substantially as described.

THEODORE FREDERICK BOURNE.

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