No. 646,221. Patented Mar. 27, 1900.

H. P. JONES.

BINDER FRAME.

(No Model.) (Application filed Mar. 28, 1899.)

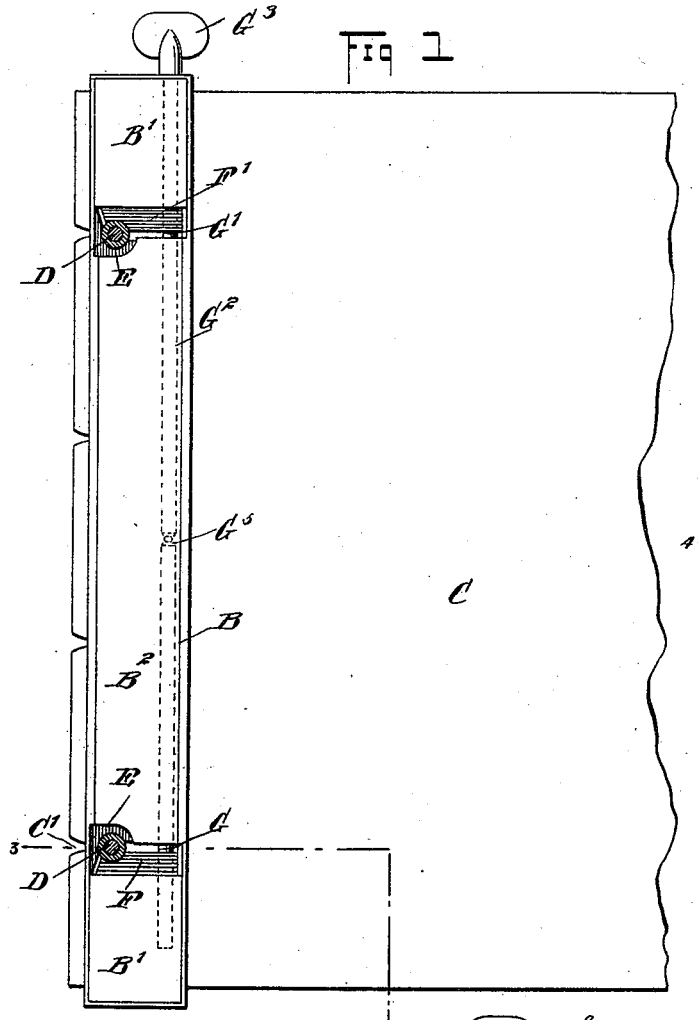

Fig 1

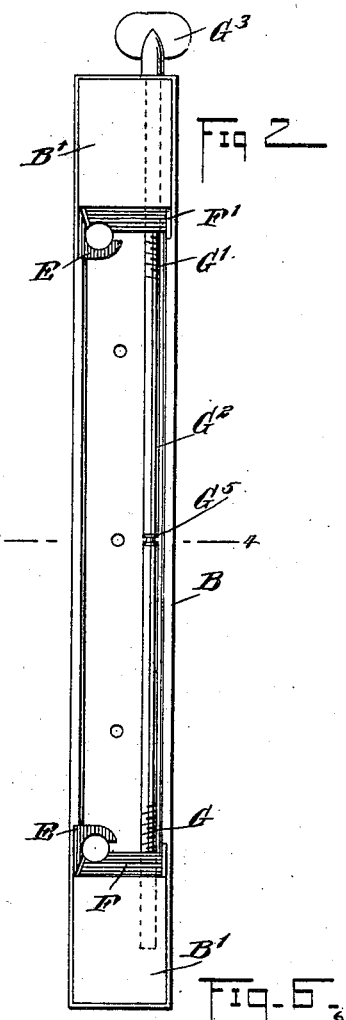

Fig 2

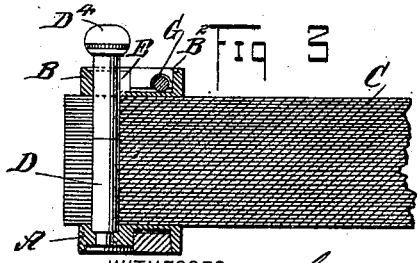

Fig 3

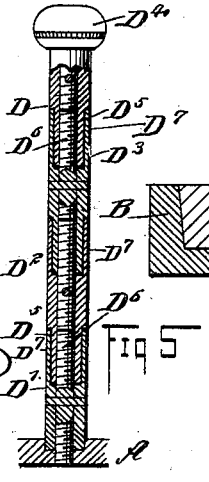

Fig 5

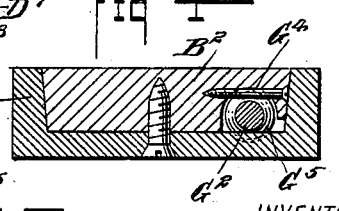

Fig 4

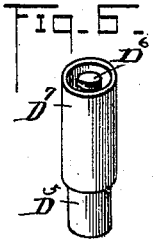

Fig 6

WITNESSES:

INVENTOR
Harvey P. Jones.
BY
ATTORNEYS.

UNITED STATES PATENT OFFICE.

HARVEY P. JONES, OF CHICAGO, ILLINOIS, ASSIGNOR TO THE JONES PERPETUAL LEDGER COMPANY, OF SAME PLACE.

BINDER-FRAME.

SPECIFICATION forming part of Letters Patent No. 646,221, dated March 27, 1900.

Application filed March 28, 1899. Serial No. 710,785. (No model.)

To all whom it may concern:

Be it known that I, HARVEY P. JONES, of Chicago, in the county of Cook and State of Illinois, have invented a new and Improved Binder-Frame, of which the following is a full, clear, and exact description.

The invention relates to temporary binders; and its object is to provide a new and improved binder-frame more especially designed for conveniently and properly binding temporarily any desired number of loose leaves and allowing of removing or adding leaves at will, proper adjustment being possible to securely bind any desired number of leaves together.

The invention consists of novel features and parts and combinations of the same, as will be fully described hereinafter and then pointed out in the claims.

A practical embodiment of my invention is represented in the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a partial plan view of the improvement with parts in section. Fig. 2 is a plan view of the upper binding-bar with its wooden filling removed. Fig. 3 is a sectional side elevation of the improvement on the line 3 3 in Fig. 1. Fig. 4 is a section on the line 4 4 of Fig. 2. Fig. 5 is a sectional side elevation of one of the posts, and Fig. 6 is a detail view of one of the sections of the posts.

The improved binder-frame is provided with two clamping-bars A and B, between which are clamped the leaves C to be bound together. The binding-bars A and B are located one above the other, and on the lower binding-bar A are secured posts D, extending loosely through guideways E, formed on the upper clamping-bar B, as is plainly shown in the drawings, to engage the inner sides of the posts. The other sides of the posts are engaged by clamping-nuts F F′, fitted to slide in suitable bearings B′, formed on the ends of the clamping-bar B, the nut F screwing on the right-hand-threaded portion G of a screw-rod G^2, formed near its other end with a left-hand-threaded portion G′, screwing in the nut F′. The screw-rod G^2 extends longitudinally in the bar B and extends near to one end thereof and is provided at its outer end with a polygonal offset, over which is fitted a key and by means of which the operator turns the screw-rod so as to cause the nuts F F′ to simultaneously slide inward or outward into and out of clamping engagement with the posts D.

In order to prevent the rod G^2 from moving longitudinally in the clamping-bar B, but to permit of turning the rod as described, I provide the same near its middle with an annular groove G^5, into which extends a pin G^4, (see Fig. 4,) held in the wooden filling B^2, screwed or otherwise secured in the hollow body portion of the bar B.

When the nuts F F′ are in an outermost position, then the clamping-bar B can be freely moved up and down on the posts D to allow of inserting or removing leaves C between or from the bars and to permit of pressing the bar B downward firmly upon the uppermost leaf. The screw-rod G^2 is then turned in the opposite direction to simultaneously move the nuts F F′ inward, so as to engage and clamp the posts D directly opposite the bearings E to securely fasten the bar B in place on the posts. When this has been done, the leaves are securely bound and clamped between the bars A and B, and the leaves cannot be removed from between the bars, as the three essential devices—that is, the two bars and the posts—are firmly connected with each other.

Each of the leaves is preferably provided with slots C′, which fit upon the posts and prevent accidental displacement of the leaves when the bar is lifted up on the posts D for inserting or removing the leaves.

Each of the posts D is preferably made in sections D′ D^2 D^3, of which the lowermost section is rigidly attached at its lower end to the bar A, and the section D^2 is screwed into the upper end of the section D′, and the section D^3 is screwed into the upper end of the section D^2, so that the several sections extend in perfect alinement with each other. In the upper end of the top section screws a knurled button D^4 for preventing the bar B from accidentally slipping off the posts when inserting and removing leaves, and it also gives a smooth and finished appearance to the posts.

Each section and the button D^4 of the post is provided at one end with a reduced portion D^5, fitting snugly in the hollow end D^7 of the adjacent section, and each reduced portion D^5 has a central screw-threaded bore screwing on a fixed screw-rod D^6, extending centrally in said hollow portion of the adjacent section, so that when the sections are screwed together, as plainly shown in Fig. 5, then the reduced portion of a section fits snugly into the hollow portion of the adjacent section and is held therein by the screw-rod of this section engaging the threaded bore in the reduced portion. The sections are thus securely fastened together and are in perfect alinement with a smooth outer surface.

Now when but a few leaves are clamped between the bars A and B only one section D′ of the post is used, the button D^4 being secured to the upper end of said section, and if it is desired to bind more leaves the button D^4 is removed from the upper end of the section D′ and the section D^2 is screwed to the upper end of the section D′. In this manner each post may be extended to any desired length by adding additional sections, so that any desired number of leaves may be bound between the two bars A and B.

It will be seen from the foregoing that the device is very simple and durable in construction, is not liable to get out of order, and permits the operator to readily open or close the clamping-bars for removing or inserting leaves and for securely binding the leaves together, one of the bars being locked to the other by means of nuts and posts, of which the posts are stationary on the bar and the nuts are slidable on the other bar.

Having thus fully described my invention, I claim as new and desire to secure by Letters Patent—

1. A binder-frame comprising superimposed clamping-bars for clamping leaves between them, posts carried by one of the bars, fixed guideways on the other or movable bar and located near one side thereof, the said posts extending through the movable bar and engaging the fixed guideways, a right and left hand screw-rod journaled in the movable bar and located near the opposite side thereof, and clamping-nuts screwing on said screw-rod and located at the outer sides of the posts, the said nuts being arranged to clamp the posts opposite said fixed guideways, substantially as shown and described.

2. A binder-frame comprising superimposed clamping-bars for clamping leaves between them, posts carried by one of the bars and extending loosely through the movable bar, fixed guideways on the movable bar arranged to engage the inner sides of the posts, a right and left hand screw-rod journaled in the movable bar, clamping-nuts screwing on said screw-rod and located at the outer sides of the posts, and arranged to simultaneously move in and out of clamping engagement with said posts, bearings for said nuts to slide in, said bearings being arranged on the ends of said movable clamping-bar, and means located at one end of the movable bar for turning said screw-rod, as set forth.

3. A binder-frame comprising clamping-sections for clamping leaves between them, posts carried by one of the sections and on which slides the other section, a right and left hand screw-rod journaled in the movable section, clamping-nuts screwing on said screw-rod and arranged to simultaneously move in and out of clamping engagement with said posts, means located at one end of the movable section and connected with the said screw-rod for turning the same, and means for preventing longitudinal movement of the screw-rod, substantially as described.

4. In a binder, the combination with the clamping-sections, of a post or posts secured to one of said sections, each post being adapted to pass through an opening in the other or movable section, a fixed guideway for each post on the movable section and located near one side thereof, a right and left hand screw-rod journaled in the movable section and located near the opposite side thereof, and a clamping-nut for each post arranged on said screw-rod and extending in line with the fixed guideway and arranged to clamp the post opposite the fixed guideway, substantially as described.

5. A binder-frame, provided with posts for receiving the leaves, each post being made in sections with one end of a section formed with a reduced portion having a central threaded bore, the other end of the section being hollow, and a screw-rod central in the hollow end to screw into the threaded reduced portion of the adjacent section, and which reduced portion fits into the hollow end, substantially as shown and described.

6. A binder-frame comprising clamping-sections for clamping leaves between them, a post secured to one of said sections and extending through an opening in the other or movable section, a fixed angular guideway located at said opening and having one of its members beveled, the guideway being provided with a recess for engaging one side of the said post, a clamping-nut having guided movement in the movable section and having a beveled portion corresponding with that of the guideway and an opposing recess for engaging the opposite side of the post, and a screw-rod engaging the nut for moving it in and out of clamping engagement with the post, substantially as described.

7. A binder-frame provided with clamping-bars, posts carried by one of the bars and extending loosely through the other or movable bar, fixed guideways on the movable bar arranged to engage the posts at one side thereof, bearings arranged on the movable clamping-bar, nuts mounted to slide in said bearings and adapted to engage the sides of the posts opposite the fixed guideways, a screw-rod journaled in said movable clamping-bar and

having right and left hand screw-threaded portions on which screw the said nuts, to simultaneously move the nuts in or out of clamping engagement with said posts, and means located at one end of said movable clamping-bar for turning the screw-rod, substantially as set forth.

8. A binder-frame, provided with posts for receiving the leaves, each post being made in sections, one end of one section being hollow and having a screw-rod central in the hollow end, and one end of the other section being formed with a reduced portion having a central threaded bore, the said reduced portion being adapted to fit into the hollow end of the first-mentioned section and the central bore of said reduced portion receiving the said central screw-rod, substantially as described.

9. A binder-frame comprising superimposed clamping-bars for clamping leaves between them, posts carried by one of the bars and made in sections, the engaging ends of the sections of the posts being formed one with a reduced portion having a central threaded bore, the other being hollow and having a screw-rod central in the hollow end, a button removably held on the upper end of the uppermost section of said posts, the said posts extending through the other or movable clamping-bar, and means for locking the movable clamping-bar in position on the posts, substantially as described.

10. In a binder-frame, a sectional post, the engaging end of one section of the post being formed with a reduced portion having a central bore and the engaging end of the other section being hollow and having a central rod, for the purpose set forth.

HARVEY P. JONES.

Witnesses:
W. B. LUCAS,
W. H. MOORE.