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J. W. GARDAM.

BINDER FOR LOOSE LEAVES.

APPLICATION FILED MAY 31, 1904.

NO MODEL.

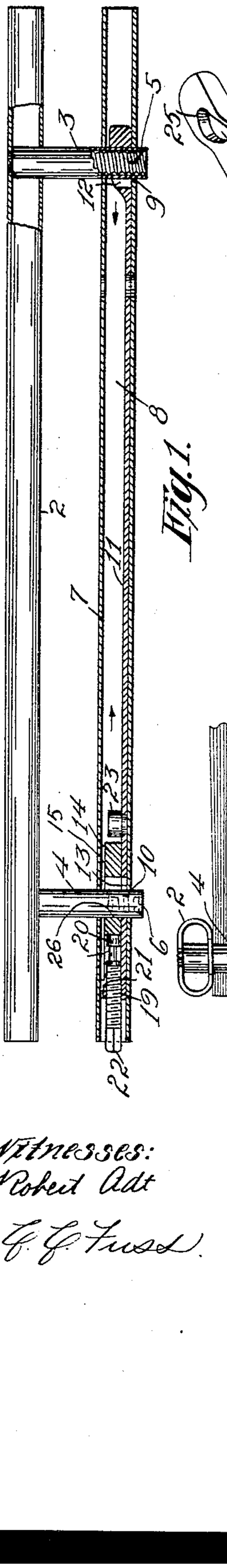

Fig. 1.

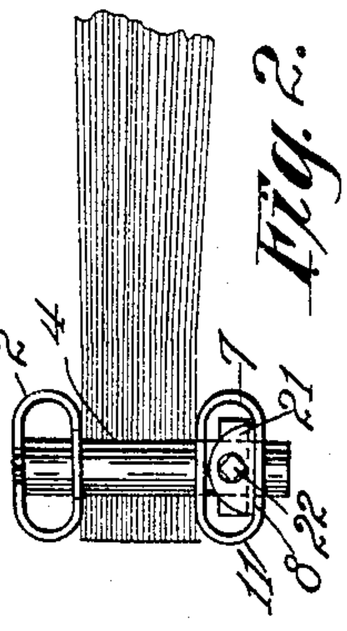

Fig. 2.

Fig. 3.

Fig. 6.

Fig. 4.

Fig. 5.

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No. 773,727. Patented November 1, 1904.

UNITED STATES PATENT OFFICE.

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BINDER FOR LOOSE LEAVES.

SPECIFICATION forming part of Letters Patent No. 773,727, dated November 1, 1904.

Application filed May 31, 1904. Serial No. 210,327. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH W. GARDAM, a citizen of the United States, residing in New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Binders for Loose Leaves, of which the following is a specification.

This invention has reference to means for retaining detachable or loose leaves in books.

It is an object of the present invention to provide a mechanical binder such as will permit of the removal of leaves from a book and also permanently retain the same in place at will.

It appears that devices of this character do not effectively maintain the pressure which has been applied to the loose leaves to hold them in place, and consequently in a short space of time the leaves drop out. This is due principally to the fact that the clamping member which is movably mounted on the binding-posts cannot take a rigid bite on the posts, because of the unstable nature of the latter, and therefore permits the clamp to slip out of place. The present invention comprehends such a device as will maintain the stability of the binding-posts by a movably-mounted clamping member to be fastened thereon and which will bind on diametrically opposite sides of each post when the clamping device is locked in position. This feature may be accomplished in various ways and by suitably-organized constructions, and one of these is illustrated on the sheet of drawings accompanying this specification, whereon is illustrated, in—

Figure 1, an elevational view of a locking device made in accordance with my invention. Fig. 2 illustrates an end view thereof, showing also the application of the loose leaves. Fig. 3 is a detail perspective of the movably-mounted clamping member. Fig. 4 is an elevational view illustrating a modified application of the invention. Fig. 5 is an end view looking from the left hand of Fig. 4, and Fig. 6 illustrates a fragmentary perspective of the modified form.

Similar characters of reference indicate like parts throughout the figures.

A simple form of construction is to provide a base 2, (preferably of suitable tubing, but not necessarily so,) to which may be secured binding-posts 3 and 4, respectively, or as many more as may be desirable, and which in the present instance may be provided at their upper portion with screw-threaded sockets 5 and 6 for the purpose of receiving additional posts, having screw-threaded portions adapted to fit in the screw-threaded portions 5 and 6, so that the posts may be extended. Mounted to move up and down on said posts 3 and 4 may be a member 7, which in the present case may be preferably in the form of tubing, as shown, so that the internal bore thereof, as 8, may be occupied by a mechanism (later to be described) adapted to clamp the member in any position on the posts, it being understood, of course, that said member 7 is provided with openings 9 and 10, respectively, to receive said posts 3 and 4, respectively. This mechanism, in the present instance located within the bore 8 of the member 7, may constitute an elongated member 11, which may be adapted to reciprocate within said member, and this member 11 may be provided with openings 12 and 13, respectively, each of which are somewhat oval or elongated in configuration and which take over the posts 3 and 4 when the parts are assembled. Mounted to reciprocate upon said member 11 is a device 14, also provided with a somewhat oval or elongated opening 15, which registers with said opening 13 of the elongated member 11. This member 14 may be bifurcated at one end, as at 16, and such bifurcation may be provided with inwardly-extending lugs 17 and 18, respectively, as seen, for instance, at Fig. 3. Movably mounted in such bifurcation 16 is a screw-threaded member 19, having a head 20, which operates in the base of the bifurcation and beyond the walls of the inwardly-extending lugs 17 and 18, respectively, so that when the screw-threaded member 19 is urged one way or the other in its bearings 21, carried by the elongated member 11, the movably-mounted member 14 will be urged correspondingly. For the purpose of actuating the screw-threaded member I provide the same with a squared stem 22, whereon

may be received a key, (not shown,) and for the purpose of limiting the movement of the member 14 away from the bearing 21 I provide a stop 23, suitably located in the member 11, against which the extremity of said member 14 may bear when attempt is made to turn the screw-threaded member 19 too far in one direction, it being understood, of course, that the movement of said member 14 is also limited in the other direction by the bearing 21.

It will be observed that when the parts are assembled, the member 11 upon actuating the screw-threaded member 19 will be drawn in the direction of the arrow seen at right hand of Fig. 1, so that the wall 25 of the opening 12 will bear against the post 3 in the manner shown in Fig. 1, while at the same time the wall 26 of the opening 15 of the member 14 will bear against the post 4 on a side opposite to the bearing-point at the post 3, it being understood that said member 14 is being urged in the direction of the arrow also shown at the left in Fig. 1.

The modified form (shown in Figs. 4 and 6) preferably employs substantially the same elements—namely, the base 2, posts 3 and 4, the member 7, and the elongated movably-mounted member 11—which may be constructed similar to the elements hereinabove described. In one end of the member 7 I preferably seat a plug 36, which may be suitably secured therein and which is provided with a screw-threaded bore 27, through which to pass a screw-threaded member 28, provided with a key-head 29 at one end and a neck 30 and head 31 at its opposite or inner end. The neck portion of this screw-threaded member takes into a bifurcation 32 of an upturned end 33 of the elongated member 11. Consequently when the screw-threaded member 28 is manipulated the effect will be to urge the member 7 in one direction, as shown by the lower arrow in Fig. 4, and at the same time the member 11 in the opposite direction, as shown by the oppositely-pointed arrow in the same figure, so that not only will the member 11 bind upon the posts 3 and 4 on one side of each post, but the member 7 will also bind against said post on sides diametrically opposite to the sides on which the member 11 binds. In this way the stability of the posts is maintained and a rigid clamping effect is thereby produced, which will maintain the member permanently in any position at will upon said post. The advantage of this particular construction will be apparent when it is taken into consideration that as the posts are extended higher and higher the flexure thereof becomes greater, and by binding upon each side thereof, as hereinbefore explained, this flexure is completely and advantageously obviated.

It will now be observed that I provide a device simple, durable, and efficient, which is designed to accomplish the function of permanently clamping a member upon a plurality of posts, so that when said member is pressed firmly upon a number of sheets to hold them in place that said member may be permanently maintained in any position at will. It will be also noted that by a device of the character described such flexure of the binding-posts as will ordinarily tend to make it impracticable to obtain a rigid clamping effect is entirely obviated by the mechanism itself, comprising a support on each side of the post to maintain them in a neutral position, and that when the clamping device is brought to a locked position it can be properly maintained in such position.

The members 7 and 11 are provided with openings 34 and 35, respectively, through which, when the parts are assembled, a suitable anchoring device may be placed to keep the members from separating when the member 7 is removed from the posts.

I do not limit myself to the precise construction shown, and within the purview of the invention I may resort to other organizations or constructions.

Having thus described my invention, I claim—

1. In a device of the character specified, the combination with a base, of posts mounted thereon, a tubular member movably mounted on said posts, a clamping member located within said tubular member and also mounted on said posts, a bifurcated member adapted to reciprocate on said clamping member, a screw-threaded member having a head portion adapted to take in said bifurcation and which has a bearing in said clamping member, said two last-mentioned members being adapted to travel in opposite directions when the screw is operated, whereby both of said members may bind on opposite sides of one of said posts.

2. In a device of the character specified, the combination with a base, of clamping-posts mounted thereon, a clamping device carried by said posts and comprising an elongated member having elongated openings through which the posts may pass, a secondary member located within said first-mentioned member and also provided with openings which take over said posts, and an auxiliary member provided with an opening which takes over one of said posts, said auxiliary member being screw-actuated and adapted to be driven back and forth on said secondary member so as to increase and decrease the diameter of one of the openings, whereby the two walls may rigidly bind onto one of the posts.

Signed at Nos. 9 to 15 Murray street, New York, N. Y., this 27th day of May, 1904.

JOSEPH W. GARDAM.

Witnesses:

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