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F. B. TOWNE.

TEMPORARY BINDER.

APPLICATION FILED SEPT. 18, 1902.

NO MODEL.

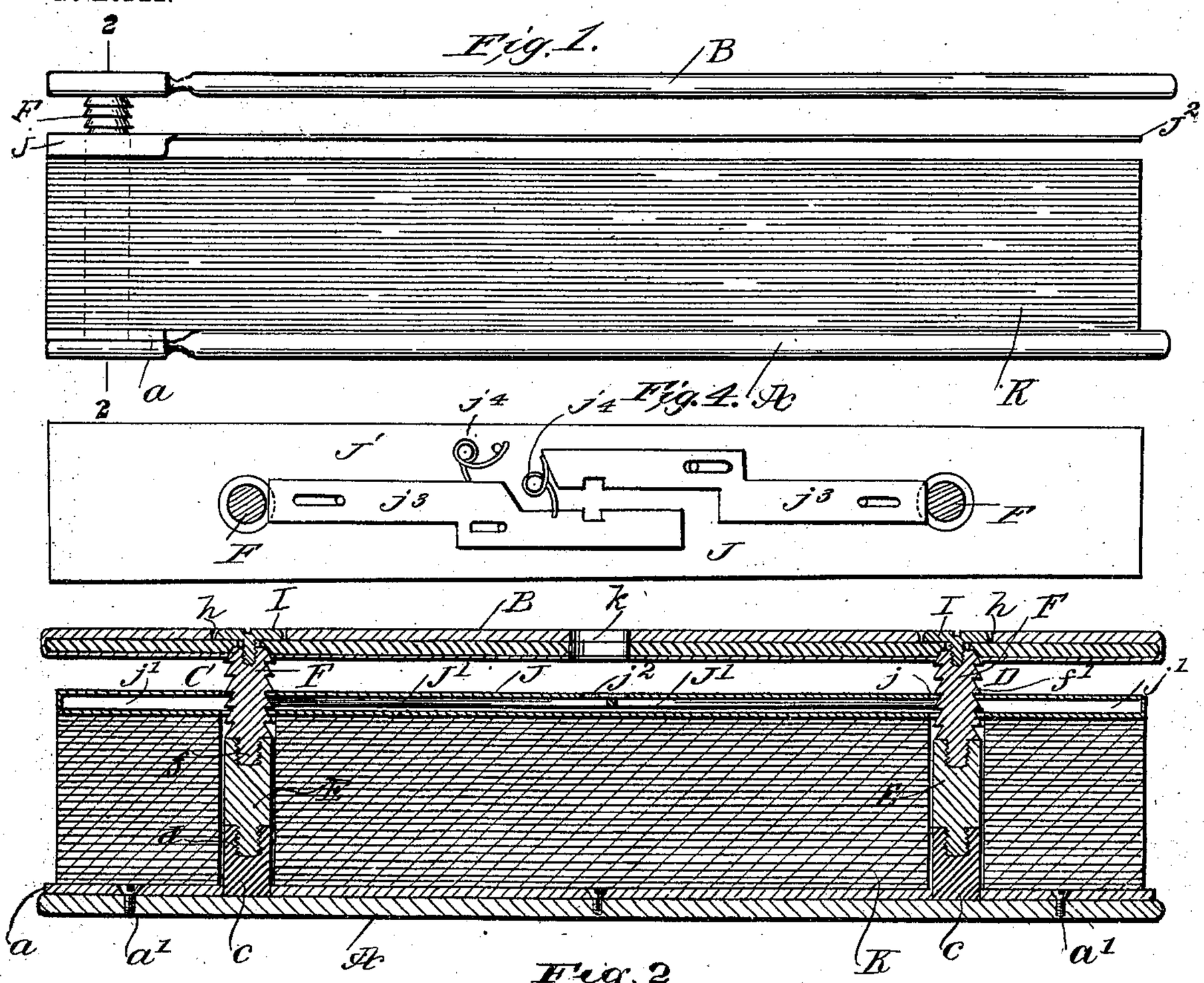

Fig. 2

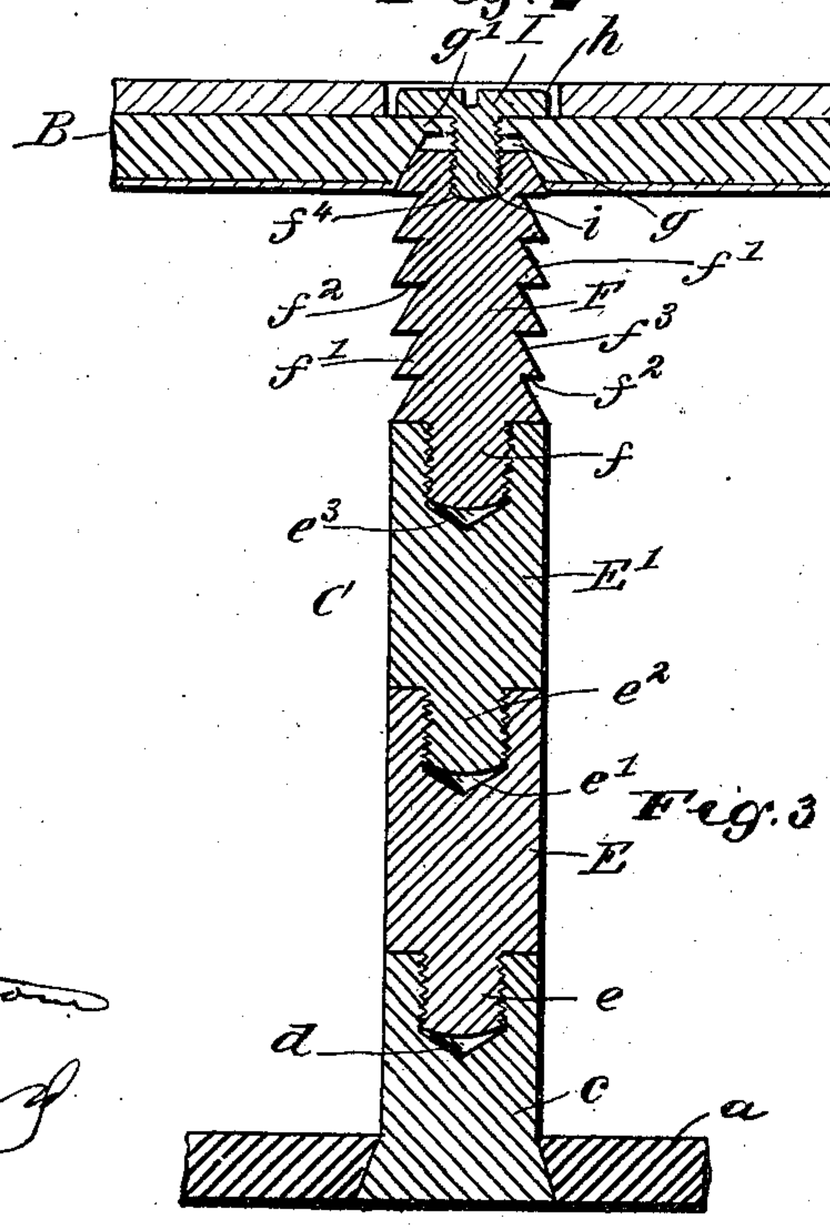

Fig. 3

WITNESSES:

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TEMPORARY BINDER.

SPECIFICATION forming part of Letters Patent No. 726,785, dated April 28, 1903.

Application filed September 18, 1902. Serial No. 123,856. (No model.)

To all whom it may concern:

Be it known that I, FRANK BECKWITH TOWNE, a citizen of the United States, and a resident of Holyoke, in the county of Hampden and State of Massachusetts, have invented new and useful Improvements in Temporary Binders, of which the following is a full, clear, and exact description.

My invention relates to improvements in temporary binders adapted to hold punched or slotted sheets or leaves which it is desired to keep intact either before their use, during their use, or after they shall have been filed.

The object of the present invention is to provide means for increasing the capacity of the binder in storing or filing leaves or sheets, thus making provision for an increase in thickness up to six (6) inches, more or less, according to the number of leaves in the mass it is desired to keep in a clean intact condition.

A further object that I have in view is to provide the extensible or sectional posts with adjustable ratchet members of peculiar form, the same being attachable and detachable at will to allow the desired increase or decrease in the length of the posts. Said ratchet members of the posts coöperate with locking devices on a shiftable locking-slat, which may be equipped with a waste leaf, and these ratchet members are formed with annular teeth or ribs which are always in position to engage with said locking devices on the slat.

The improved binder has the posts fastened to one cover in a secure permanent manner, while the other cover is fastened rigidly and detachably to the ratchet members of the posts. The binder is simple, strong, and durable in construction, it can be manufactured at a low cost, the parts are easily manipulated to vary the thickness of the structure, and the leaves can be inserted or removed with facility and despatch.

Further objects and advantages of the invention will appear from the subjoined description, and the novelty will be defined by the annexed claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a side elevation of a temporary binder constructed in accordance with my invention. Fig. 2 is a vertical section on the line 2 2 of Fig. 1, and Fig. 3 is an enlarged vertical section showing the post extended by the addition of certain sections or members to the post. Fig. 4 is a detail view showing the locking mechanism in plan and the posts in cross-section.

A B designate the covers of the binder, and the bottom cover A is provided with a metallic plate *a*, which is firmly secured thereto by any suitable means—as, for example, by the screws *a'*.

C D designate the posts, each of which consists of any suitable number of sections which are screwed detachably and rigidly together. Each post has a base member or section *c*, which is secured firmly to the metallic plate *a*. The base member of each post is provided with an interior or female socket *d*, into which is adapted to be screwed the threaded tenon *e* on a removable member E of the post, said member E being provided with a threaded socket *e'* at its upper end. The post may be equipped with any desired number of these members or sections E; but in Figs. 1 and 2 said post consists of the base member *c*, the member E, and the ratchet member F. Said ratchet member F is provided with a threaded tenon *f* at its lower end, and this tenon is adapted to be screwed into the socket *e'* at the upper end of the post E, as shown by Fig. 2. The ratchet member F is provided with a series of annular ribs or teeth *f'*, each of which extends continuously around the post member F, and these annular teeth are spaced a suitable distance apart. Each annular tooth *f'* of the ratchet is provided with a flat under face f^2 and with an inclined face f^3, and at the upper end of this ratchet member F of each post is provided a female-threaded socket f^4. The post C or D may be extended in length by the addition of any desired number of sections or members similar to the part E, and in Fig. 3 of the drawings I have shown a member E', having a threaded tenon e^2 and a socket e^3. The extension of the post is effected by unscrewing the ratchet member F (shown by Fig. 2) from the socket *e'* of the post member E, and the member E' is now

connected to the member E by screwing the tenon e^2 into the socket e', after which the tenon f of the ratchet member F is screwed into the socket e^3 of the post member E'. It is evident that additional post members similar to the parts E E' may be connected to the post by merely screwing the extra post members into the sockets, and all the members of the posts are screwed up tightly, so as to have an abutting engagement endwise with respect to each other. Each member of the post is circular in cross-section, and said members are adapted to lie flush with each other, so that the parts c E E' will present practically a single pillar or post.

The cover B is provided on its under side with countersunk openings g, and each opening is partially closed by an integral portion g' of the cover. This integral portion g' is between the countersunk opening g and a recess h, which is provided in the outside of the cover B, as clearly shown by Fig. 2. The upper extremity of each ratchet-post F is adapted to fit snugly in the countersunk opening g of the cover, and through the integral portion g' of said cover passes the threaded stem i of a screw I, the head of which is countersunk in the opening h in the upper side of the cover B. The shank of this screw is adapted to be turned into the threaded socket f^4 of the ratchet-post member F, and the screws I operate to rigidly fasten the cover B to the upper ends of the posts C D. These screws may be detached from the post members F, and the cover B can be removed from the posts, thus allowing easy access to be obtained to said posts and to a locking-slat J. This locking-slat is provided with openings j, adapted to receive the ratchet members F of the posts, and said slat J is chambered, as at j' in Fig. 2, for the accommodation of the locking mechanism J', which is housed in said slat. This locking mechanism may be of any suitable construction adapted to have its parts retracted by turning a key which may be inserted into a keyhole-slot j^2 in the locking-slat, said key passing through a slot k, which is provided in the cover B.

One form of locking mechanism is shown more particularly by Fig. 4, wherein oppositely-movable bolts j^3 are slidably confined within the chambered slat, and these bolts are normally impelled in opposite directions by the springs j^4. The inner ends of the bolts are disposed in overlapping relation and provided with notches adapted to receive projecting portions of a key, the latter serving to engage with both bolts and to retract them simultaneously from engagement with the teeth of the ratchet members F, forming parts of the posts.

The employment of the ratchet members F, having the annular teeth f', is an important feature of my improved binder. The ratchet members may be screwed into either of the members E E' of the posts, and the teeth f' of these ratchet members F are also in position for engagement by the parts of the locking mechanism J'. If the ratchet members F of the posts are provided with teeth on one side only, these members when screwed into different post-sections E or E' are liable to assume positions wherein the ratchet-teeth cannot be engaged by the locking mechanism in the slat J; but by using the annular teeth on the post members F the parts of the locking mechanism in said slat J are always engaged with certain teeth f' of the post members F.

The improved binder is adapted for use in connection with leaves or sheets K, which are provided with slots or openings adapted to receive the posts C D. The leaves or sheets are clamped between the cover A and the locking-strip J, the latter having engagement with the ratchet members of the posts, and the binder is completed by fastening the cover B to the posts by means of the screws I. If it is desired to place additional leaves in the binder or to remove a number of leaves from the binder, the operator unscrews the screws I from the posts and removes the cover B. The key is now inserted in the slot j^2 of the slat J, and the locking mechanism is retracted from engagement with the members F of the posts, after which the slat J is lifted up or removed. This releases the leaves or sheets K, and the latter can be removed from the posts or a number of leaves can be fitted on the posts, the annular form of the ratchet-teeth f' affording practically no resistance to the insertion or removal of the leaves. After the leaves shall have been inserted or removed the slat J is replaced by slipping it over the ratchet members F of the posts, so that the locking devices will engage automatically with the teeth f', and finally the cover B is replaced and fastened by the insertion of the screws I. If it is desired to increase the capacity of the binder, the cover B and the slat J are removed in the manner described. The ratchet members F of the post are unscrewed, and additional post members, such as E', are screwed into the member E. The operator now replaces the posts F by screwing them into the parts, such as E', and then the slat, the cover, and the screws are replaced.

I prefer to equip the slat J with a waste leaf J^2, as shown by Fig. 1; but this leaf may be omitted, if desired.

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

1. In a temporary binder, an extensible post having a ratchet member coupled thereto by a rotary adjustment of the parts, said ratchet member having external ratchet-teeth each extending continuously around the member, combined with a locking-slat, and devices carried by the slat to have positive interlocking engagement with either tooth of the series on said ratchet member.

2. A temporary binder provided with sectional posts having the members thereof united by a rotary adjustment of the parts,

one member of each post being provided with annular ratchet-teeth, a locking-slat fitted to said posts, and locking devices carried by said slat for positive interlocking engagement with the ratchet members at any point of the rotary adjustment thereof.

3. In a temporary binder, a post consisting of a series of members detachably coupled together, one member of said post being provided with a series of ratchet-teeth, each tooth of the series extending continuously around the member, and all the teeth having inclined sides which face in a common direction.

4. In a temporary binder, a series of posts secured in place by rotary adjustment and each provided with a series of annular ratchet-teeth all of which have inclined sides which face in a common direction and each tooth extending continuously around the member, combined with a slat fitted to said posts, and locking devices carried by the slat and arranged to have positive interlocking engagement with the teeth of the ratchet members at any point in the rotary adjustment thereof.

5. In a temporary binder, a post consisting of members coupled detachably together by screw-joints, the upper member of each post being removably secured to a lower member by a rotary adjustment, and said upper member being provided with a series of annular ratchet-teeth, combined with a slat, and a locking mechanism carried by said slat for interlocking engagement with the teeth of said ratchet members of the posts.

6. A temporary binder, comprising a cover, posts attached to said cover and having removable members screwed detachably together, the upper member of each post being provided with annular ratchet-teeth, another cover, means for fastening said last-mentioned cover to the ratchet members of the posts, a locking-slat fitted slidably to said posts, and locking devices carried by said slat and having positive interlocking engagement with the annular teeth of the ratchet members of said posts.

7. A temporary binder comprising a cover, sectional posts having the base members thereof secured permanently to said cover, and each post member provided with a socket and with a threaded tenon, ratchet members screwed detachably to the upper post members and provided with annular ratchet-teeth, a slat having means for engagement with said locking members, another cover fitted to the ratchet members of the posts, and screws to firmly fasten said cover to said ratchet-post members.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

FRANK BECKWITH TOWNE.

Witnesses:

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H. J. FERRY.