

Sept. 15, 1925.

1,553,967

P. O. UNGER

POST BINDER

Filed June 3, 1925

Fig. 1

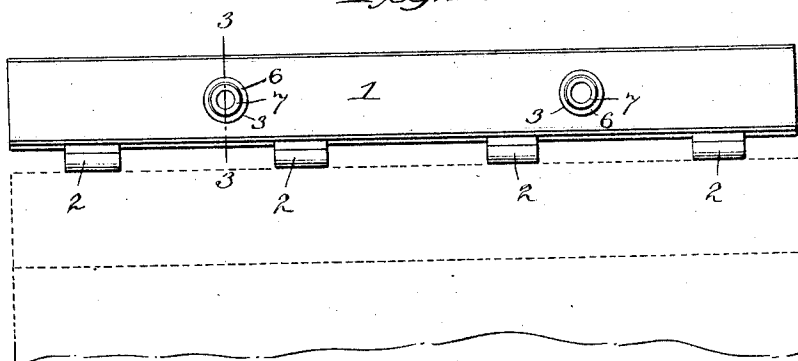


Fig. 2.

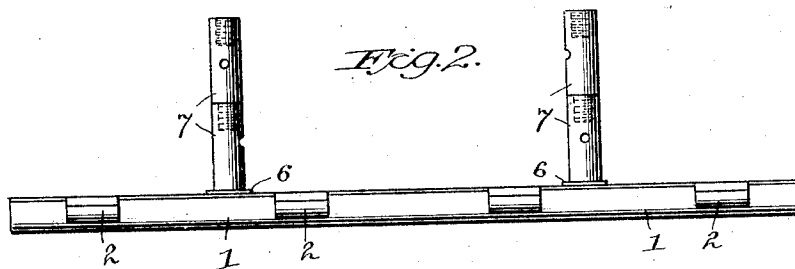


Fig. 3.

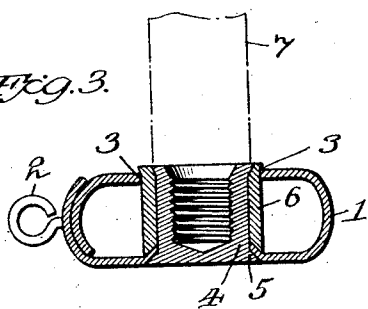


Fig. 6.

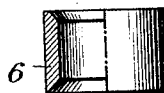
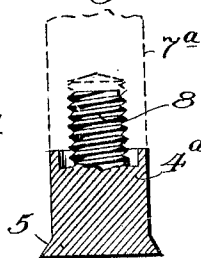


Fig. 4.

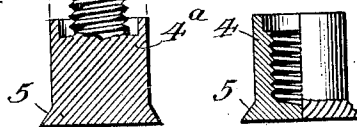


Fig. 5.

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UNITED STATES PATENT OFFICE.

PAUL O. UNGER, OF SYRACUSE, NEW YORK, ASSIGNOR TO McMILLAN BOOK COMPANY,
OF SYRACUSE, NEW YORK, A CORPORATION OF NEW YORK.

POST BINDER.

Application filed June 3, 1925. Serial No. 34,655.

To all whom it may concern:

Be it known that I, PAUL O. UNGER, a citizen of the United States, residing at Syracuse, in the county of Onondaga and State of New York, have invented certain new and useful Improvements in Post Binders, of which the following is a specification.

This invention pertains to that class of loose leaf binders commonly used for ledgers, minute books, record books, and the like, and generally known as post binders. These comprise a base member, usually of flattened tubular form; a plurality of posts, preferably sectional, rising from said base member; a series of post sockets or bases carried by the base member; and a follower similar to the base member but having holes for the posts and furnished with means of some kind for engaging the posts when pressed down upon sheets of paper perforated to encompass the posts and lying between the base member and the follower.

The specific construction of these several members aside from the post sockets or bases and their anchorage in the base member, is unimportant and variable at will, the invention residing in such sockets or post bases and in the manner or means of securing and retaining them firmly in place in the base member.

The purpose of the invention, not hitherto attained so far as I am aware, though often attempted, is to effect a secure, permanent, and rigid anchoring of the post sockets or bases in the base member. The construction by which this end is attained is illustrated in the accompanying drawings, wherein:

Figure 1 is a plan or top face view of the base member of a post binder, showing two post sockets or bases in position, and indicating by dotted lines the outline of a portion of a cover-board, which in general practice is hinged to said member, though this is not essential;

Fig. 2, an edge elevation of the base member, showing two sectional posts mounted in or upon each of the post sockets or bases;

Fig. 3, a transverse vertical sectional view of the base member on the line 3—3 of Fig. 1, passing through one of the post sockets or bases and its encompassing sleeve or collar;

Fig. 4, a partly sectional elevation of the collar which encompasses the post socket

or base, as it appears before being secured in place;

Fig. 5, a similar view of the post base or socket member, likewise prior to being secured in place in the base member; and

Fig. 6, a sectional view illustrating a modification of the post base shown in Fig. 5.

In these figures, 1 designates the base member, here shown as a flattened tubular body, formed by folding longitudinally a strip of sheet metal, steel or other, and overlapping its edges at one side. The outer of the overlapping portion is cut inward from the edge, at intervals, and alternate portions are bent outward and curled to form eyes 2 for the pintle by which the cover-board, provided with pintle barrels to fill the spaces between the eyes, is hinged to the base member 1. Registering circular holes 3 are formed through the upper and lower walls of base member 1, and a cylindrical post base or socket member 4 with a beveled or frusto-conical flange 5 at its lower end is passed upwardly through the lower and then through the upper hole, after which a tubular sleeve or collar 6 is passed downward through the upper hole, closely encompassing the body of the post base or socket member 4.

As shown in Fig. 5 the beveled flange 5 is knurled, scored, or otherwise roughened to cause it to engage securely the metal of the lower wall of the base member lying immediately about the post base or socket member, and caused through suitably applied pressure to conform to and lie upon such roughened face of the flange 5. As also shown in Fig. 5, the post base or socket member 4 is bored and tapped to receive the threaded lower end of the lowermost post section 7, and the upper end of said base or socket member is bored out to a slight depth to produce a somewhat thinner wall at the top than in the threaded portion below. The sleeve or collar is of internal diameter to fit snugly about the post base or socket member 4, and has its inner wall beveled at top and bottom, the bevel at the top extending only part way to the circumference and that at the lower end extending preferably quite to the circumference, as seen in Fig. 4.

The parts constructed and assembled as described are placed upon a solid metal base

or support, and the sleeve or collar 6 is pressed or driven down until the upper end of said sleeve is brought flush with the top of the post base or socket, the beveled lower end of the sleeve forcing downward the lower wall of the base member 1, and causing the metal thereof immediately surrounding the post base or socket member to conform to and bear firmly upon the roughened face of flange 5, and to be closely bound between the beveled faces of sleeve 6 and of the post base, as seen in Fig. 3. The upper end of the post base or socket member is at the same time or subsequently, expanded by forcing into it a conical punch, by hammering, or in any other convenient way. In practice this may be conveniently and uniformly done in a lever or screw press, carrying a suitable conical-ended punch or stem of a size to enter and force outward the relatively thin upper end of the post base or socket member 4. In expanding, the upper end of the post base or socket member 4 causes a like expansion of the upper end of the sleeve or collar 6, whereby an exceedingly close and firm contact is made between its circumference and the surrounding wall of the hole 3 in the upper wall of the base member 1, and an overhanging lip is formed on the upper end of the sleeve which prevents any upward movement or bending of the upper wall of the base member. This contact is so close and firm that there is no possible play or movement of the parts, and the roughened surface of the flange 5, the coned lip formed by bending upward the metal around the lower hole 3 of the base member, and the lower bevel of the collar 6, make such firm engagement, and the lip is so tightly held between the sleeve or collar 6 and flange 5, that the post base or socket member 4 cannot be turned. In fact, a post section screwed into the socket will be twisted or broken off, if sufficient force be applied to it, without loosening the post base or socket member.

In Fig. 6 there is illustrated a modification of the above described structure, in which the post base 4^a is of the same construction as shown in the other figures except that it has at its top an upwardly extending threaded stem 8 to enter a correspondingly threaded socket in the lower end of the first detachable post section 7^a. In other words, the threaded socket instead of being in the base section is in the post or post section, the base having the same relatively thin annular wall at its upper end as before. This form of post base will be used in connection with a collar 6 as with the other form of base, and the upstanding annular wall and the upper end of the collar will be expanded in the same manner as with the form of post base shown in Fig. 5.

Both constructions are inexpensive, sim-

ple, and expeditious in assembling, and when the lower face of the post base is ground or dressed flush with the bottom of base member 1, the structure presents the appearance of an integral body. Through its adoption I have solved a problem of long standing, and overcome the one serious objection to the use of post binders, particularly where many large and heavy sheets are employed, as in ledgers, record books, minute books, and the like. Owing to the great weight of such a body of leaves and to the leverage afforded by the posts, prior constructions, which have included riveting with or without a spacing collar within the base member, nuts and lock washers, squared or polygonal rivet shanks, and other forms, have proven unsatisfactory.

While it is customary and contemplated, to employ upper and lower cover-boards and to hinge the same to the base member and follower, these may be omitted if desired.

It is to be understood of course that the structure here set forth may be employed in any type of binder to which it is adapted.

What is claimed is:—

1. A base member for post binders having a post base provided with a flange at its lower end and bored and tapped to receive a post section, said post base passing up through openings in the lower and upper walls of the base member; and a sleeve encompassing said post base, passing downward through an opening in the upper wall of the base member and bearing upon the lower wall thereof, said sleeve holding in close contact with the flange of the post base the metal of the lower wall of the base member immediately encompassing the post base, the post base and the encompassing sleeve being expanded into close and firm contact with the inner face of the opening in the upper wall of the base member.

2. A base member for post binders, comprising a hollow or tubular metal body having registering perforations in its upper and lower walls; post bases provided at their lower ends with roughened conoidal flanges and passed upwardly through the registering openings in the upper and lower walls of the base member; and sleeves encompassing the post bases, passing downwardly through the openings in the upper wall of the base member and inwardly beveled at their lower extremities to bear upon the coned metal of the lower wall of the base member lying upon the roughened flanges of the post bases, said sleeves being pressed into closed binding contact with such coned lip and retained in such gripping contact through expansion of the upper ends of the post base and sleeve.

3. A post support and anchorage for use in connection with the base member of a post binder, comprising a cylindrical body having at one end a beveled outwardly ex-

tending flange and at its opposite end an annular wall; and a co-acting, closely fitting, encompassing sleeve internally beveled at its upper and lower extremities, substantially as described.

5 4. A post support and anchorage for use in connection with the base member of a post binder, comprising a cylindrical body having at one end a beveled outwardly extend-

ing flange roughened on its inclined face, 10 and at its opposite end an annular wall; and a co-acting, closely fitting, encompassing sleeve internally beveled at its upper and lower extremities, substantially as described.

In testimony whereof I have signed my 15 name to this specification.

PAUL O. UNGER.