

A. D. RAY.  
 TEMPORARY BINDER.  
 APPLICATION FILED JULY 9, 1910.

971,926.

Patented Oct. 4, 1910.

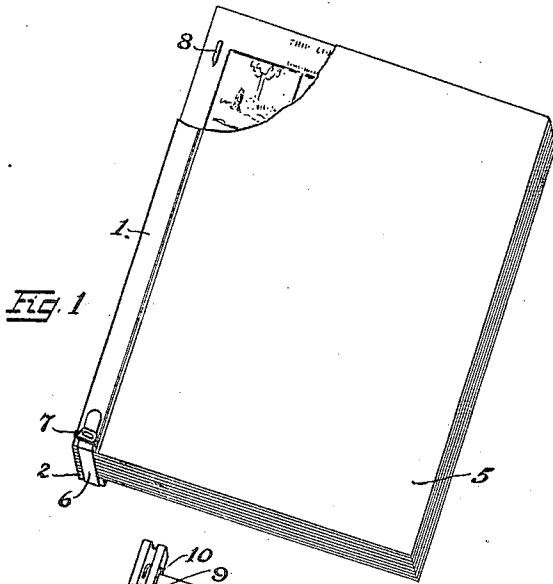


Fig. 1

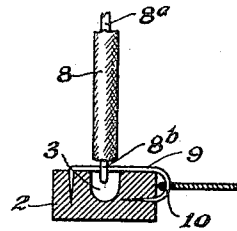


Fig. 3

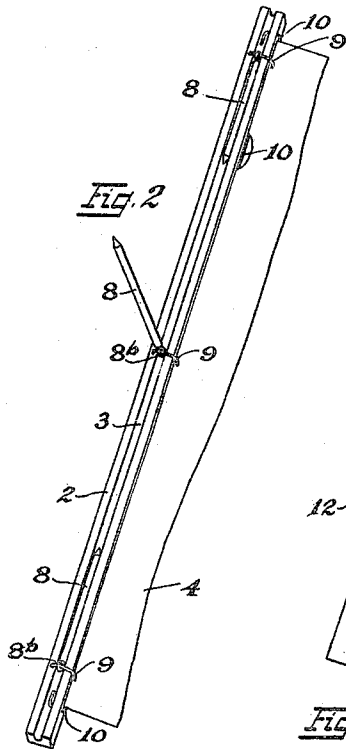


Fig. 2

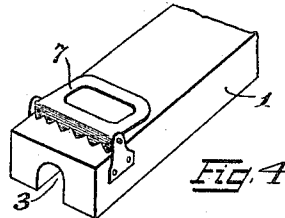


Fig. 4

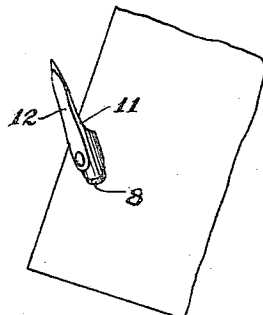


Fig. 5

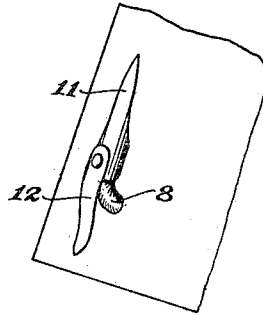


Fig. 6

Witnesses:

*F. C. Valentini*  
*A. C. Ottus*

Inventor:  
*A. D. Ray,*

by *Obed S. Billman*  
 Attorney.

# UNITED STATES PATENT OFFICE.

ALBERT D. RAY, OF CLEVELAND, OHIO.

TEMPORARY BINDER.

971,926.

Specification of Letters Patent.

Patented Oct. 4, 1910.

Application filed July 9, 1910. Serial No. 571,123.

*To all whom it may concern:*

Be it known that I, ALBERT D. RAY, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Temporary Binders, of which the following is a specification.

My invention relates to improvements in temporary binders, the primary object of the invention being to provide a simple, cheap and efficient device of this class, better adapted to its intended purposes than any other invention of the same class with which I am acquainted.

The present embodiment of the invention is particularly designed and adapted for securing and binding large sheets of paper such as the comic sections of Sunday newspapers, and the like, it being of course obvious that the same may be utilized in a number of ways where a cheap and efficient temporary binder is desired.

With the above mentioned and other ends in view, the invention consists in the novel construction, arrangement, and combination of parts, hereinafter described, illustrated in one of its embodiments in the accompanying drawings, and particularly pointed out in the appended claims.

Referring to the drawings, forming a part of this specification, Figure 1, is a perspective view of the improved binder as applied to a number of sheets of paper. Fig. 2, an enlarged detail perspective view of the inner side of the lower binding strip provided with a plurality of pivotally mounted leaf piercing and holding needles. Fig. 3, an enlarged cross sectional view of the same. Fig. 4, an enlarged detail perspective view of the end portion of the upper binding strip. Fig. 5, a detail perspective view of a modified form of leaf holding needle illustrating the manner of piercing or perforating a sheet of paper. Fig. 6, a similar view of the same showing the parts in their anchored position preparatory to being seated in the longitudinal groove of the upper binding strip.

Similar numerals of reference designate like parts throughout all the figures of the drawings.

The improved binder comprises upper and lower independent binding strips or members 1, and 2, respectively, provided with longitudinally extending pocket grooves 3,

adapted to aline or be brought into registry with each other when the binding strips are connected together in their operative position as hereinafter described. The binding strips 1, and 2, are provided with protecting covers 4, and 5, and as a means for detachably and adjustably connecting said strips together in their binding position, the lower strip 2, is provided at either end with a binding-strap 6, adapted to be secured to the adjacent end of the upper strip or member 1, by means of a buckle member 7, preferably of the form shown most clearly in Fig. 4, of the drawings.

As a means for piercing and holding the leaves to be bound in proper position between the binding strips or members 1, and 2, a plurality of needles 8, are pivotally mounted and secured within the grooved portion of the lower strip 2, said needles being adapted, when not in use, to rest or be seated within the pocket groove 3, as illustrated in Fig. 2, of the drawings, and when passed through the leaves to be bound to have their extended or free ends bent over at right angles as illustrated in Figs. 1, and 6, for the purpose of resting or being seated within the pocket groove of the upper binding strip or member 1. The leaf holding needles 8, are preferably each made up of ductile metallic material 8<sup>a</sup>, such as copper wire, or the like, and a surrounding body or cover of non-metallic flexible material 8, as illustrated most clearly in Fig. 3 of the drawings. The pliable or ductile character of the metallic material 8<sup>a</sup>, holds the needles in suitable form for piercing the leaves or papers, as well as holding the bent over portions in position for being seated in the pocket groove of the upper binding strip 1, in the binding operation as illustrated in Figs. 1, and 6, of the drawings. The non-metallic flexible covering enables the needles to be bent into any desired form, and at the same time gives such a body to the needle as a whole, as to lessen the liability of the leaves or sheets of paper becoming torn or pulled from the holding needles.

As a convenient means for mounting and securing the needles and lower protecting cover 4, to the lower binding strip or member 2, a plurality of staple hinge members 9, are secured in the lower binding strip 2, said hinge members extending through the marginal edge of the protecting cover 4, and transversely over the grooved side of the

lower binding strip 2, as shown most clearly in Fig. 2 of the drawings, thus providing bearings for the loop eyes 8<sup>b</sup>, at the base of the needles 8. The adjacent or hinged edge of the lower protecting cover 4, is preferably reinforced by means of a wire member 10, having its ends fastened to the lower binding member 2, as shown most clearly in Fig. 2, of the drawings. If desired, the free ends of the needle members 8, may be provided with piercing tips 11, and pivotally mounted anchor fingers 12, said anchor fingers being adapted to normally rest in alinement with the tips 11, when being passed through the sheets of paper as illustrated in Fig. 5, of the drawings, after which the tipped portions may be bent at right angles to the main body portion of the finger members and the anchor finger reversed in an opposite direction as illustrated in Fig. 6, and the upper binding strip 1, placed over the same in the manner hereinbefore described.

From the foregoing description, taken in connection with the accompanying drawings, the operation and advantages of my invention will be readily understood.

Having thus described an embodiment of my invention, what I claim and desire to secure by Letters Patent is:—

1. A temporary binder, comprising independent binding strips, protecting covers hingedly secured thereto, means for detachably connecting the ends of said binding strips to each other, leaf holding flexible needles pivotally mounted on the inner side of one of said binding strips, and means for securing the bent over portions of said needles beneath the opposite binding strip.

2. A temporary binder, comprising binding strips, protecting covers carried thereby, binding straps at either end of said strips, leaf piercing and holding needles pivotally carried on the inner side of one of said binding strips, and means for securing the bent over portions of said needles on the under side of the other or opposite binding strip.

3. A temporary binder, comprising bind-

ing strips provided on their inner sides with longitudinally extending grooves, protecting covers carried by said strips, leaf holding bendable needles pivotally mounted in the groove of one of said strips and adapted to have their ends bent over and seated in the groove of the opposite strip, and means for detachably connecting said binding strips.

4. A temporary binder, comprising independent binding strips provided with pocket-grooves, protecting covers carried thereby, leaf holding needles pivotally mounted in one of said pocket-grooves and adapted to have their free ends bent over and seated in the opposite pocket-groove, each of said needles comprising a wire of metallic material covered with non-metallic flexible material, and connecting straps and buckles at either end of said binding strips.

5. A temporary binder, comprising independent binding strips provided with pocket-grooves on their inner sides, staple hinge members secured to one of said strips and extending transversely over the grooved side thereof, a reinforced cover member secured on said staple hinge members, leaf holding needles mounted on said staple hinge members and adapted to be seated in said pocket-grooves, and means for detachably connecting the ends of said strips together.

6. A temporary binder, comprising binding strips provided with longitudinally extending grooves adapted to be brought into registry with each other, protecting covers carried by said strips, leaf holding needles pivotally secured within the grooved portion of one of said strips and provided at their free ends with pivoted members adapted to be seated in the grooved portion of the opposite binding strip, and means for detachably and adjustably connecting said binding strips together.

In testimony whereof I have affixed my signature, in presence of two witnesses.

ALBERT D. RAY.

Witnesses:

O. C. BILLMAN,  
GEO. H. BILLMAN.