(No Model.)

S. G. BROWN

BINDER FOR BOOKS.

No. 584,538. Patented June 15, 1897.

Fig. 1.

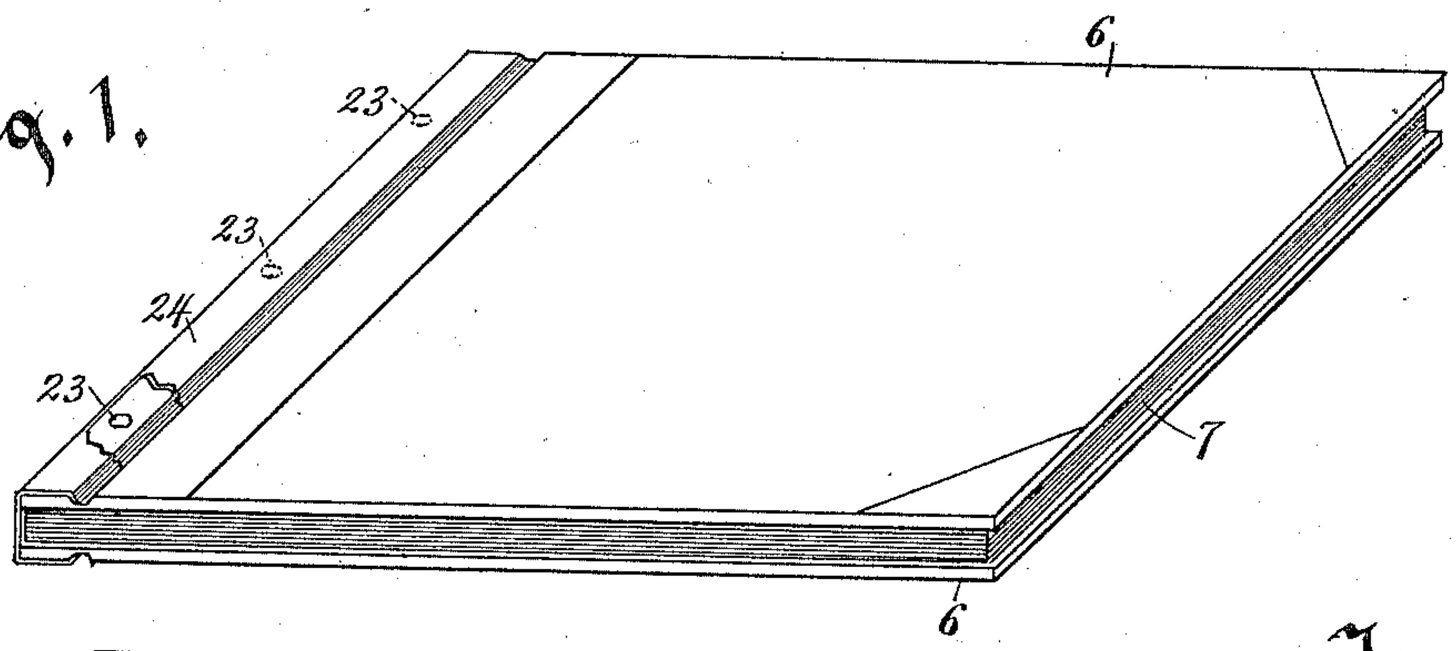


Fig. 2.

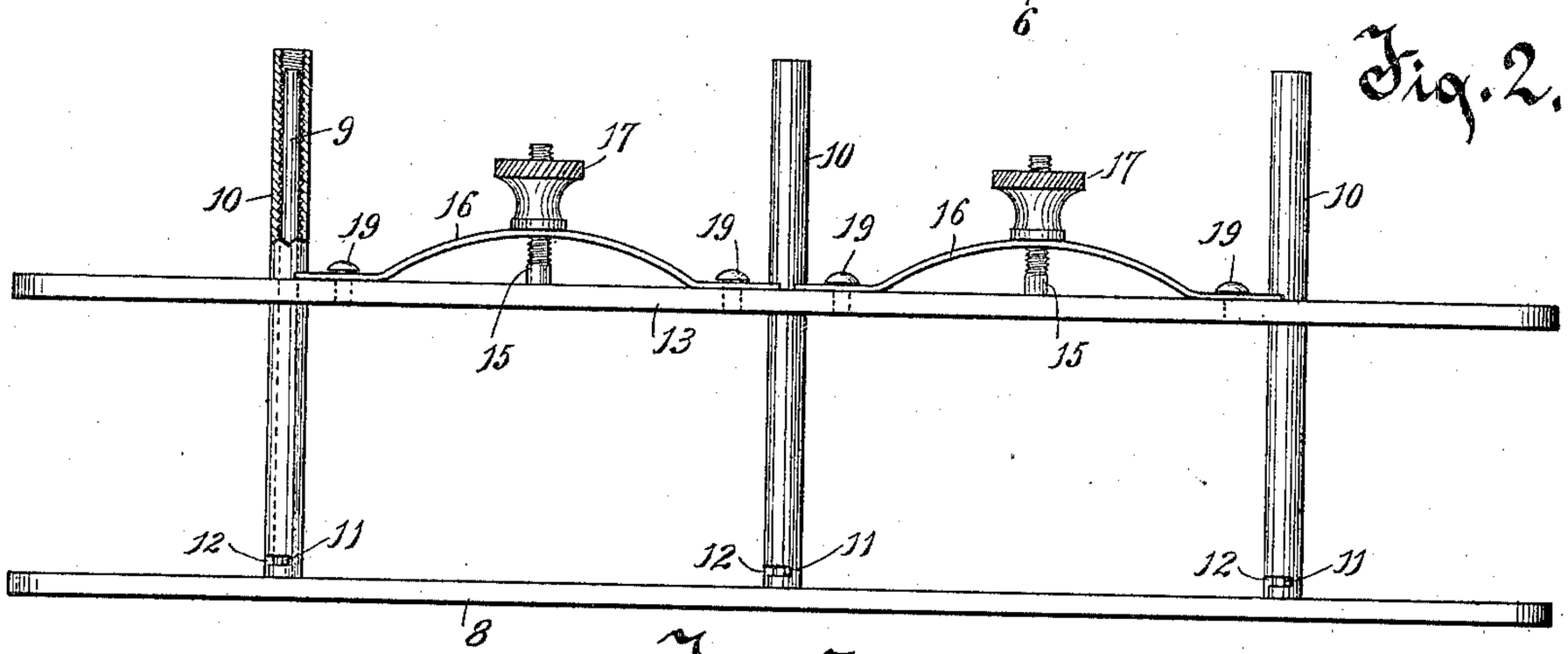


Fig. 3.

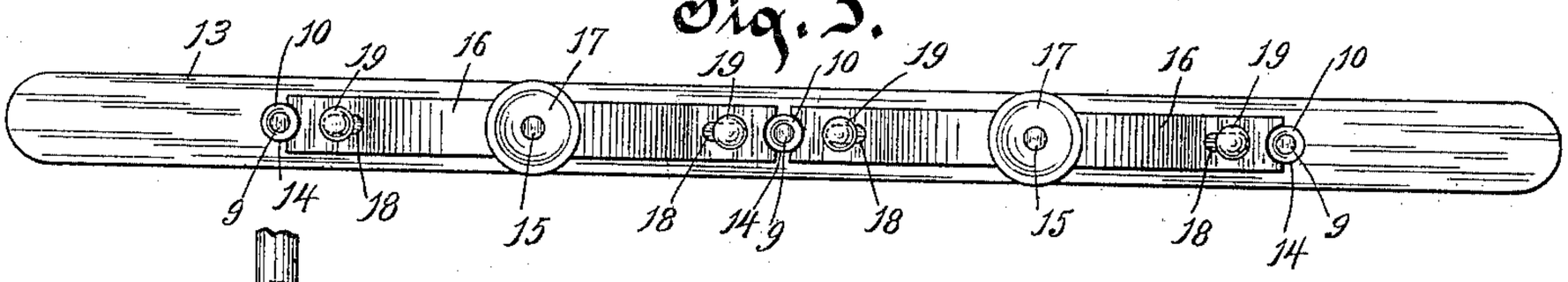


Fig. 4.

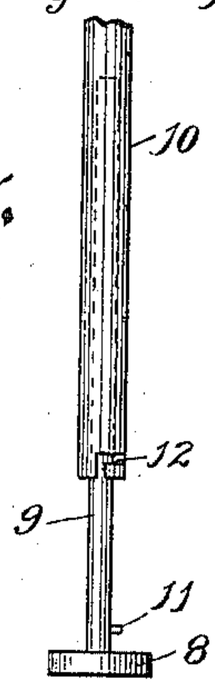
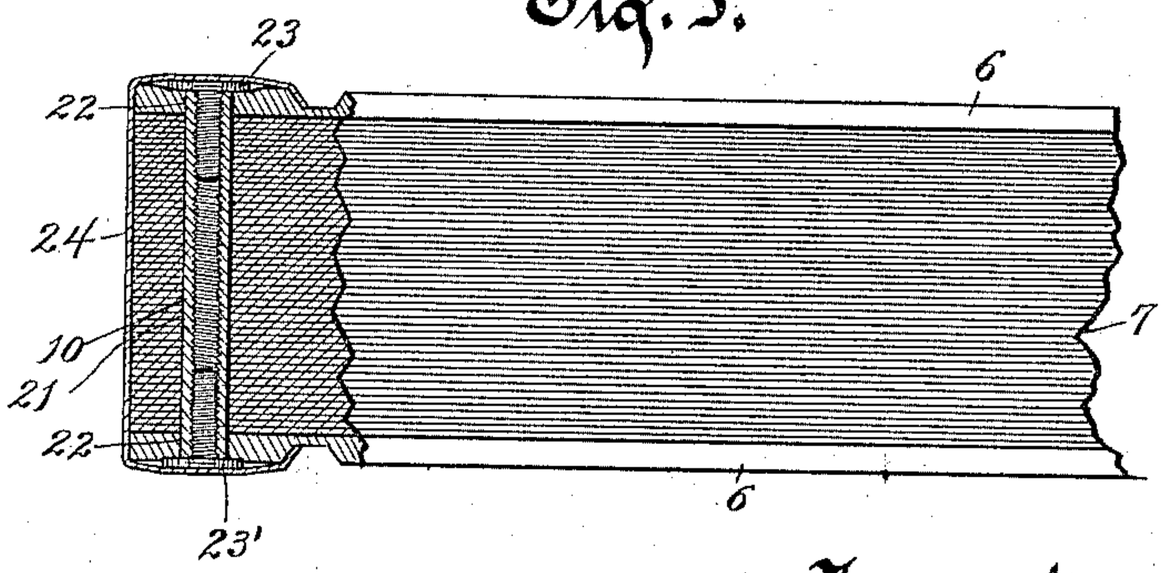


Fig. 5.



Witnesses.

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UNITED STATES PATENT OFFICE.

SIDNEY G. BROWN, OF MILWAUKEE, WISCONSIN.

BINDER FOR BOOKS.

SPECIFICATION forming part of Letters Patent No. 584,538, dated June 15, 1897.

Application filed September 30, 1896. Serial No. 607,422. (No model.)

To all whom it may concern:

Be it known that I, SIDNEY G. BROWN, of Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented a new and useful Improvement in Binders for Books, of which the following is a description, reference being had to the accompanying drawings, which are a part of this specification.

My invention has relation to improvements in binders for books.

The device is intended more particularly for use in connection with leaves containing certain information which are separately placed within the binder from time to time.

The object of the invention is to provide a construction of binder which will admit of the placing of leaves from time to time between the sides of a cover, the construction being such that when the full quota of leaves is inserted to form a complete book or record said leaves may be left intact without disturbing them in the least or without the necessity of transferring them to a permanent binder, the temporary binder itself being of such character that by the disassembling of certain parts a permanent binder is thereby formed.

The invention will be found of special advantage when used in connection with my improved clip for holding sheets or blanks and the like, which has been made the subject-matter of a separate application for patent of even date herewith.

The invention consists of the devices and parts or their equivalents, as hereinafter more fully set forth.

In the accompanying drawings, Figure 1 is a perspective view of a book, showing my device in connection therewith as a permanent binder, a part of the back of the cover being broken away. Fig. 2 is an elevation of the complete binder detached from the book, a portion of one of the tubes being broken away. Fig. 3 is a plan view of Fig. 2. Fig. 4 is a view of one end of one of the bars or strips, showing the end guide or rod extending upwardly therefrom and a fragment of a tube encircling said guide or rod and partly raised thereon. Fig. 5 is an edge view of a book, showing my device in connection therewith when said device is finally arranged as a permanent binder, parts being broken away to show clearly the construction.

Referring to the drawings, the numerals 6 6 indicate the sides of a book-cover, and 7 the leaves therebetween.

Referring now particularly to the improved binder, the numeral 8 indicates a bar or strip which has extending upwardly therefrom a series of guides or rods 9. Adapted to encircle these rods are a series of tubes 10, which are screw-threaded interiorly, as clearly shown in Figs. 2 and 5. Each rod is provided near its lower end with a laterally-projecting pin 11, and each tube 10 is provided at a corresponding point with a bayonet-slot 12. When the tube is inserted over the rod, the vertical portion of the bayonet-slot is brought into register with the pin, and this permits the tube to be pushed down until its lower end contacts with the bar 8. The tube is then given a partial turn, so as to cause the pin to ride into the horizontal portion of the bayonet-slot. This, of course, locks the sleeve to the rod and prevents withdrawal of the same therefrom until the tube is again turned in the opposite direction to once more bring the vertical portion of the bayonet-slot into register with the pin, when, of course, the tube is free to be withdrawn vertically.

The numeral 13 indicates another bar or strip which corresponds in length and size to the bar or strip 8. This bar 13 is provided with a series of openings 14, which correspond in number to the number of rods and sleeves employed and are adapted to receive said sleeves therethrough. Extending upwardly from this bar are a series of screw-threaded pins 15. These pins are adapted to pass loosely through central openings in flat-bowed springs 16 16. Thumb-nuts 17 17 take on to the threads of the upper extremities of the pins and are adapted to act against the springs when turned in one direction to straighten out or elongate said springs and when turned in the opposite direction to allow for a contraction or shortening of the springs. The springs are provided near opposite ends with elongated slots 18 18, through which pins 19 pass and enter the bar 13. The pins, therefore, hold the ends of the springs down, while the elongated slots at the same time permit

of the necessary movement of the ends of the springs under the action of the thumb-nuts 17. The extremities of the springs are also concaved, whereby they are made to conform to and fit against the tubes 10. It is obvious that when the thumb-nuts are turned in a direction to compress the bowed springs the ends of said springs are forced firmly against the tubes, whereby the bar 13 is held to adjusted position on the tubes.

The leaves 7, which are designed to be bound in a cover, are provided with apertures 21. In the use of the device the side pieces of the cover are adjusted to the tubes, said side pieces being provided with openings 22 for that purpose. When it is desired to insert a leaf, the upper bar 13, together with the upper side piece of the cover, are first removed entirely from the tubes 10, said tubes being locked to the rods by means of the pins and bayonet-slots. The tubes are then passed through the apertures 21 of a completed leaf and the side piece of the cover and the bar 13 then readjusted to place. When the next sheet or report is ready for binding, the bar 13 and side piece are again removed and this sheet attached to the binder in a similar manner. It will be noticed that the bar 13 is adjustable vertically on the tubes 10, so that said bar may be raised as the number of sheets increase. Said bar 13 is also held in adjusted vertical position by turning the thumb-nut 17 so as to compress the bowed springs 16 and thereby force the ends of said springs against the tubes. It is obvious that in order to remove the bar 13 all that is necessary is to turn the thumb-nuts in the opposite direction, so as to relieve the pressure of the ends of the springs against the tubes. While the leaves or reports are thus temporarily bound, they are conveniently held together and may be readily referred to at any time. After a complete set of leaves or reports are thus temporarily bound, and it is then desired to permanently bind the same, the bar 13 is removed. The tubes 10 are then turned so as to bring the pins of the rods into alinement with the vertical portions of the bayonet-slots, which thus releases the tubes from the rods. The next step is to remove the lower bar 8 and with it the rods 9, which extend up into the tubes 10.

The interior threads at the upper ends of the tubes 10 are now engaged by screws 23, said screws being turned down into the tubes until the heads of the screws bear against the side piece of the cover and thereby hold said side piece down to place. The protruding lower ends of the tubes, if any, are then sawed off, so as to leave the edges of the tubes flush with the lower face of the lower side piece of the cover. This preserves the lower portion of the tubes in which the bayonet-slots are arranged, so as to enable the same to be again used. Screws 23′, similar to the screws 23, are now turned into the lower threaded ends of the tubes 10 until the heads of said screws bear against the lower face of the lower side piece of the cover. If desired, in order to form a neat and complete binding a back piece 24 may be pasted or otherwise suitably secured to the side pieces of the cover, as clearly shown in Figs. 1 and 5.

From the above description it is thought that the construction and advantages of my invention will be readily understood. It will be seen that it may be used generally as a binder for any form of book, although when the present specification is read in connection with the specification of my application for patent on clip for holding sheets or blanks and the like, of even date herewith, its advantages in connection with the construction shown by said application will be readily appreciated.

My invention possesses an advantage over the constructions employed in which the leaves are first bound temporarily and then transferred in their aggrouped form to a permanent binder. In this method of binding, no matter how much care is exercised, there is always the danger of the leaves becoming disassembled, and, besides, in such method two separate and distinct binders are required. In my form of construction these disadvantages are obviated.

What I claim as my invention is—

1. A file comprising bars or strips, one of said bars or strips provided with a guide, and another bar or strip being made movable on the guide and provided with a clamp or fastening comprising an arched or bow spring and a flattening or clamping screw attached to the bar or strip and projecting through said spring and provided with a nut engaging the upper side of said spring, the said spring being normally arched or in releasing position.

2. A file comprising bars or strips, one of said bars or strips being provided with a guide, and another bar or strip being made movable along the guide and provided with a clamp or fastening, said fastening comprising an arched or bow spring, a screw-stem secured to one of the strips or bars, and a nut adapted to turn on the screw and bear against the central portion of the bow-spring.

3. In a binder, the combination, of a bar provided with projecting rods, said rods having at or near their lower ends laterally-projecting pins, tubes fitting over said rods, said tubes provided at their lower ends with bayonet-slots, the vertical portions of said slots adapted to be brought into register with the pins of the rods, and said tubes adapted to be turned so as to bring the horizontal portions of the slots into engagement with said pins, whereby the tubes are detachably locked to the rods, another bar provided with openings through which the tubes pass, and also provided with a projecting threaded pin, a spring having a medial opening through which the threaded pin passes, the ends of the spring bearing against the tubes, and a

thumb-nut engaging the threaded extremity of the pin and adapted to bear against the spring.

4. In a binder, the combination, of a bar provided with one or more projecting rods, each rod having at or near its lower end a laterally-projecting pin, a tube or tubes fitting over said rod or rods, and adapted to be passed through openings in the sides of a book-cover and through leaves interposed between said sides, each tube provided at its lower end with a bayonet-slot, the vertical portion of the slot adapted to be brought into register with the pin of the rod, and said tube adapted to be turned so as to bring the horizontal portion of the slot into engagement with said pin, whereby the tube is detachably locked to the rod, the bar carrying the rod being separate from, and independent of, the side of the book-cover adjacent thereto, and another bar provided with an opening or openings through which the tube or tubes pass, said bar being also separate from, and independent of, the side of the book-cover adjacent thereto, the last-named bar adapted to be withdrawn from the tube or tubes, and the rod or rods of the other bar adapted to be disengaged from the tube or tubes by the turning of said tube or tubes, so as to permit said bar to be withdrawn, and the rod or rods thereof to be pulled out of the tube or tubes, thereby leaving said tube or tubes extending through the sides of the cover and through the leaves interposed between said sides, to form á part of a permanent binder.

5. In a binder, the combination of a bar or strip provided with projecting guides or rods, tubes fitting over said guides or rods, another bar or strip provided with openings through which the tubes freely pass, and also provided with a projecting threaded pin, a spring having a medial opening through which the threaded pin passes, the ends of the spring adapted to bear against the tubes, and said spring provided near its ends with elongated slots, pins passing through said slots and entering the bar, and a thumb-nut engaging the threaded extremity of the pin and adapted to bear against the spring.

In testimony whereof I affix my signature in presence of two witnesses.

SIDNEY G. BROWN.

Witnesses:
ARTHUR L. MORSELL,
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