No. 801,507. PATENTED OCT. 10, 1905.

F. BLANCHARD, Jr.

DEVICE FOR PREPARING AND HOLDING SHEETS WHILE BINDING THE SAME.

APPLICATION FILED JAN. 16, 1905.

2 SHEETS—SHEET 1.

Fig. 1.

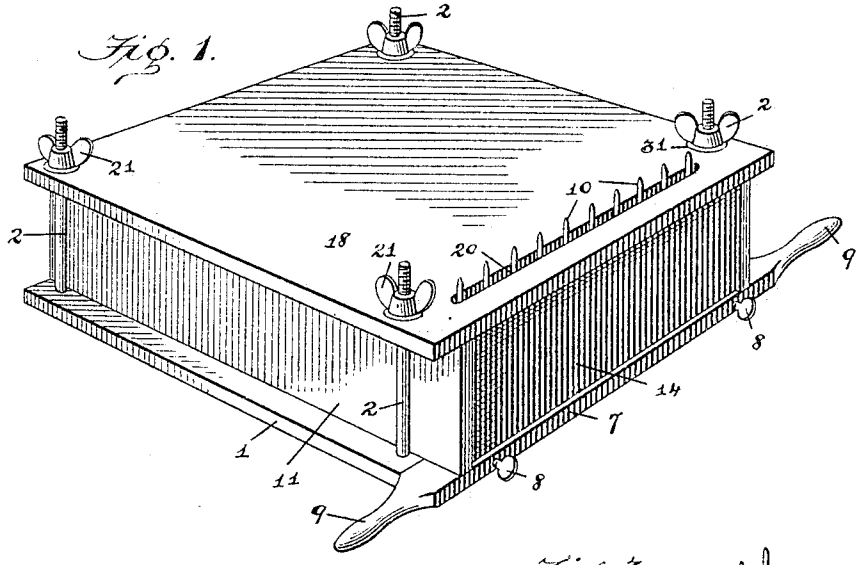


Fig. 2.

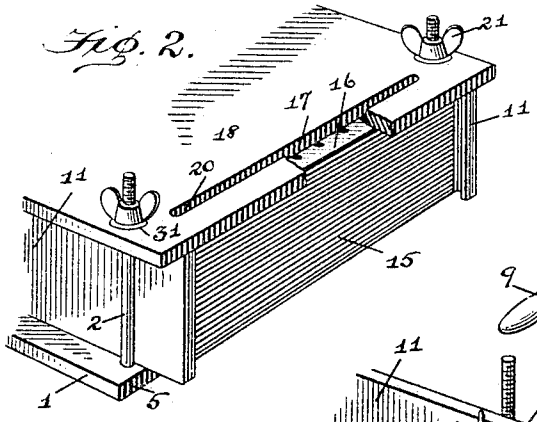


Fig. 3.

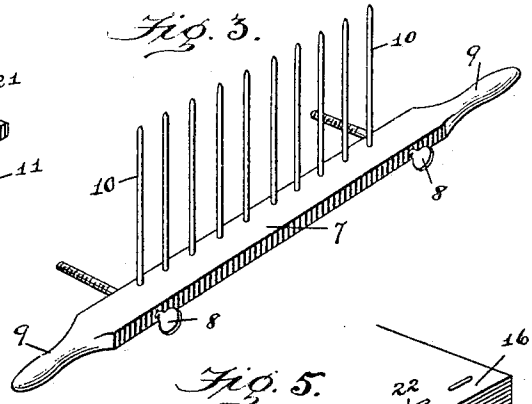


Fig. 5.

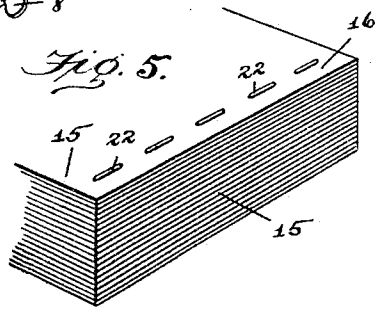


Fig. 4.

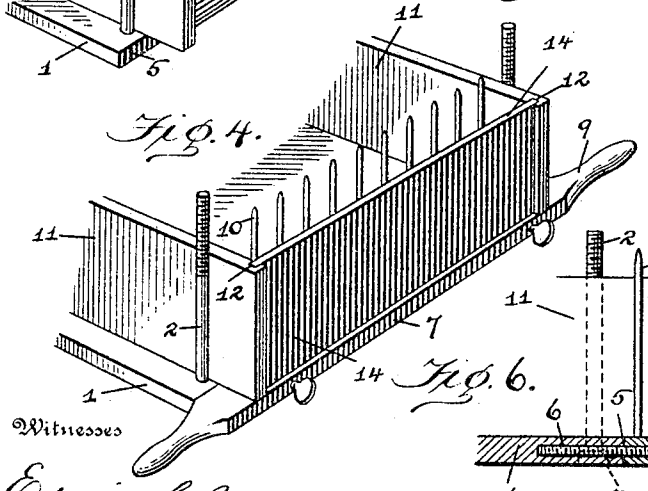


Fig. 6.

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DEVICE FOR PREPARING AND HOLDING SHEETS WHILE BINDING THE SAME.

APPLICATION FILED JAN. 16, 1905.

2 SHEETS—SHEET 2.

Fig. 7.

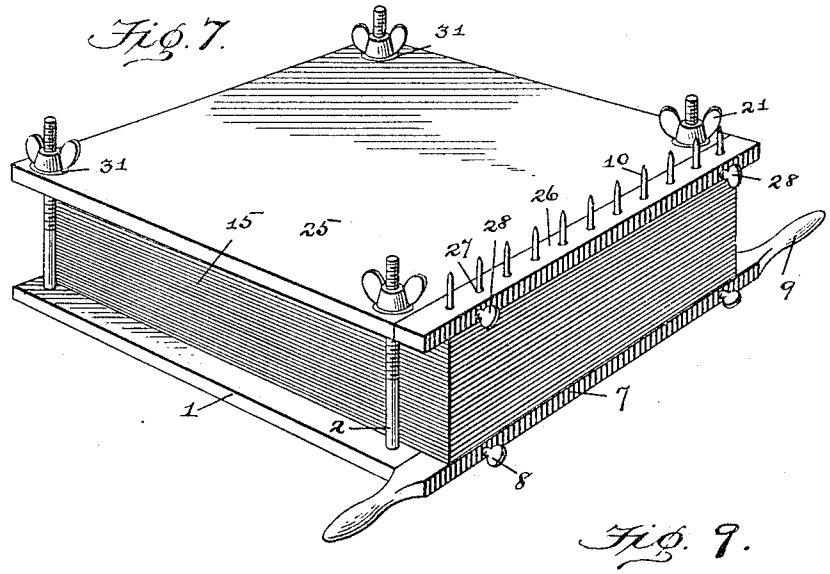
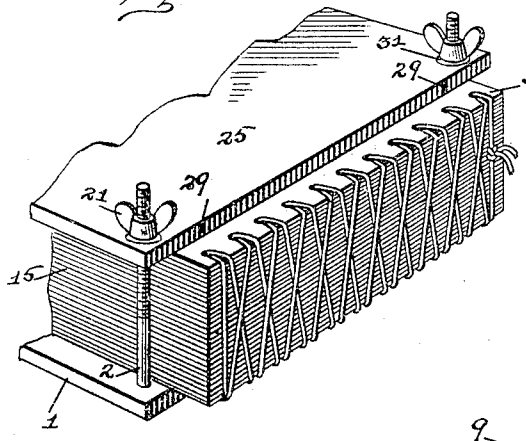


Fig. 9.

Fig. 8.



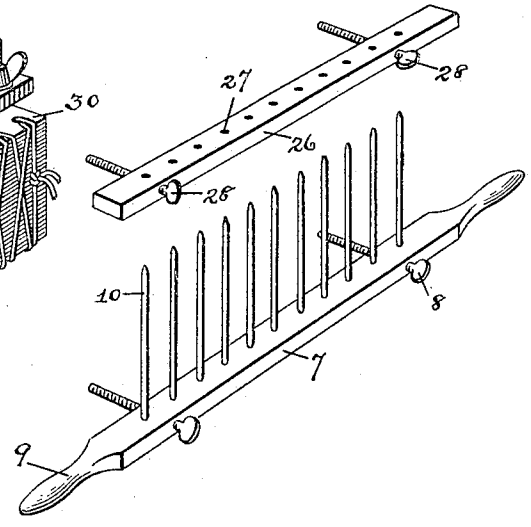


Fig. 10.

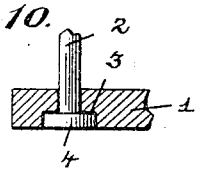
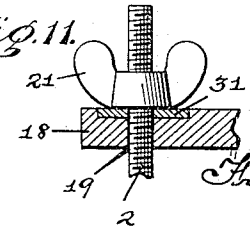


Fig. 11.



Witnesses

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DEVICE FOR PREPARING AND HOLDING SHEETS WHILE BINDING THE SAME.

No. 801,507. Specification of Letters Patent. Patented Oct. 10, 1905.

Application filed January 16, 1905. Serial No. 241,181.

To all whom it may concern:

Be it known that I, FRANK BLANCHARD, Jr., a citizen of the United States, residing at Baltimore, in the State of Maryland, have invented certain new and useful Improvements in Devices for Preparing and Holding Sheets while Binding the Same, of which the following is a specification.

My invention relates to a device for preparing and temporarily holding sheets or documents while the same are being permanently bound.

The invention has for its object to provide a simple and durable device in which the sheets or documents to be bound may be placed and with the edges registering with each other and while thus placing the sheets in the temporary holder to perforate the same along one edge and prepare them for the reception of the permanent binding cord or wire.

Another object of the invention is to provide an improved construction of temporary holder whereby the sheets may be squeezed or clamped tightly together and while held in the clamped condition to enable the perforated edge of the sheets to be exposed in order that the cords or wire may be fed through to permanently bind the sheets.

In carrying the inventive idea into practical effect I have found that the mechanical form of the holder is susceptible of modification, and I have therfore deemed it proper to illustrate two forms of devices, either of which is practical and effective, and I therefore desire it understood that the invention is not to be limited to the particular devices shown, but the claims should be interpreted liberally.

In the drawings, Figure 1 illustrates a perspective view of the improved device secured together. Fig. 2 is a perspective view of one end of the device with the end slide and pin-supporting strip removed and with the paper sheets clamped in position ready to receive the permanent cords or wires. Fig. 3 is a perspective detail of the removable strip and the perforating-pins attached thereto. Fig. 4 is also a perspective view of the device with the cover-plate removed to show the sheet-receptacle. Fig. 5 is a detail showing the bound sheets. Fig. 6 is a vertical section through the end of the device shown in Fig. 4. Fig. 7 is a perspective view of a slightly-modified form of holder in which both the upper and lower plates are provided with removable end strips. Fig. 8 is a perspective view of this latter device with the end strips removed and the binding-cords fed through the sheets while the same are clamped. Fig. 9 illustrates perspective views of the end strips. Figs. 10 and 11 illustrate detail views of the lower and upper end, respectively, of the clamping-bolts which hold the sheets together while they are being bound.

Referring to the drawings by numerals, 1 designates a base or bottom board of a size and shape to suit the particular sheets or documents which are to be bound, and this base is provided in the present instance with vertically-projecting bolts 2. In the present instance these bolts are located at the corners of the base, and they are inserted from the bottom side of the board, which latter is provided with recesses 3, in which the heads 4 on the lower ends of the bolts fit, as seen in Fig. 10. At one side the vertical edge 5 of the base is provided with a plurality of screw-threaded recesses 6, (see Fig. 6,) which extend horizontally into said vertical edge of the base. At this side the binding operation is to take place, and the purpose of these threaded recesses will presently be explained.

A detachable bar 7 extends along the edge 5 of the base, and a plural number of thumb-screws 8 extend horizontally through this bar and engage the threaded recesses 6 in the base to hold the bar in position at the edge of said base. The ends of this bar are provided with handles 9, which may be grasped to work the bar when removing it, as will presently appear. A plurality of pins 10 project vertically from the upper surface of said bar and are spaced from each other and at equal distances apart. These pins are rigidly secured to the bar in the present instance and are removable with said bar. It is obvious, however, that they may be removable from said bar.

Referring now to Figs. 1 to 6, inclusive, it will be seen that parallel vertical walls 11 extend along opposite sides of the base and between the vertical bolts 2, and these side walls project beyond the edge 5 of the base and rest on the ends of the detachable bar 7. At their inner sides these projecting ends of the side walls are each provided with a vertically-extending groove 12, which extends from the top to the bottom edge and terminates on top of the bar 7. These grooves have position in

a vertical plane outside of the row of vertical pins 10, so that a vertical space 13 will be provided between them, as seen in Fig. 6. An end wall or slide 14 extends in a direction parallel with the pins 10, and the ends of this slide fit into the vertical grooves 12, while the bottom edge of said slide rests on the removable bar 7 and is sustained by the latter and is thereby prevented from dropping out as long as the bar is secured to the base. The removal of said bar, however, will enable the slide to be withdrawn by sliding it down in front of the edge 5 of the base for a purpose to be hereinafter pointed out.

When the slide is in position, as above described and as illustrated in Figs. 4 and 6, the device will have the form of an uncovered box with vertically-projecting pins within the box at one end and spaced from the end wall. While in this uncovered condition the sheets or documents 15 may be fitted between the side and end walls and one edge 16 of the sheets forced down over the projecting ends of the pins 10 and laid on the base. This operation serves to provide a series of perforations 17 adjacent but spaced from the edge 16 of the sheets, as seen in Fig. 2. After the desired number of sheets have thus been fitted over the pins a cover-plate 18, having perforations 19 in its corners, is fitted over the ends of the bolts 2. This cover-plate is longer than the base-plate and projects out over the upper edge of the slide 14, and said projecting end is provided with a slot 20, which registers with and receives the upper ends of the pins 10. When the cover-plate is fitted as just described, thumb-nuts 21 are screwed on the upper ends of the bolts and on top of the cover, and as these nuts are screwed down they will force the cover-plate down on top of and compress the sheets by crowding them down against the base 1, and the ends of the pins 10 will consequently pass through the slot 20 in the cover-plate, as illustrated in Fig. 1. The sheets are thus temporarily held until it is desired to permanently tie or secure them together by cords or wire.

When it is desired to permanently bind the sheets, the thumb-screws 8 in the detachable bar 7 are withdrawn from engagement with the base. The handles 9 may then be grasped and by working the opposite ends alternately in a vertical direction the bar and pins attached thereto may be withdrawn. The end wall or slide may then be drawn downwardly and removed to expose the edges of the sheets, as clearly seen in Fig. 2, and the permanent binding operation may then take place.

In the device just described the binding operation is performed by feeding a wire or cord 22 through one vertical row of perforations, which are now exposed, because the pins have been withdrawn in the sheets, then down through the next adjoining row and back up through the next row, and so on until the cord has been fed through every row of perforations. When the ends of the binding cord or wire are properly secured, the top or cover plate may be removed and the bound sheets withdrawn.

The device illustrated in Figs. 7, 8, and 9 differs from the one above described in that the side walls and end slide are omitted, and the cover-plate 25 is substantially the same length as the base, and in lieu of the slot 20 in the cover a detachable end strip 26 is provided having a plurality of perforations 27, through which the pins 10 project. This strip is secured to the cover-plate by thumb-serews 28, which screw into the threaded holes 29 in the edge of the cover. In the operation of this device the sheets are clamped together in the same manner as described with reference to the device of Fig. 1; but in order to expose the perforated edges 30 of the sheets the end strip 26 is removed, and the bar 7 and pins 10 are then removed, as before, to expose the sheets for binding, as seen in Fig. 8.

The covers are both provided with perforated metal plates 31, through which the upper ends of the bolts project and on which the thumb locking-nuts seat to prevent mutilation and wear on the covers when the nuts are turned.

The invention is useful in binding various sheets or documents, but is especially adapted for binding manifest sheets, tariffs, and analogous pamphlets, such as are used by railroad and transportation companies.

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

1. In a device of the character described the combination with a base on w hich the sheets to be bound are supported, of a cover; a plurality of pins extending between the base and cover for perforating the sheets; means for drawing the base and cover together to compress the sheets, and means whereby the pins may be withdrawn from the sheets while the latter are held compressed.

2. In a device of the character described the combination with a base for supporting the sheets to be bound, of a cover; a plurality of pins adjacent the edges of the base and cover and projecting beyond the clamping-surfaces of the two; means for compressing the sheets between the base and cover and means whereby the pins may be withdrawn from the sheets to expose the perforations along the edge while said sheets are held compressed.

3. In a device of the character described the combination with a base for supporting the sheets, said base having a removable edge portion, of a cover having a detachable edge portion provided with one or more openings; means for compressing the sheets between the base and cover and means for perforating said sheets.

4. In a device of the character described the

combination with a base for supporting the sheets to be bound, of a detachable bar at one edge of said base; a plurality of pins sustained by said bar and extending above the base and serving to perforate the sheets; a cover; means for drawing the base and cover together to compress the sheets, and means whereby the bar and pins may be removed to expose the perforations in the sheets while the latter are held compressed.

5. In a device of the character described the combination with a base for supporting the sheets to be bound, of a cover having one or more openings adjacent its edge, a bar secured to the base; a plurality of pins projecting from said bar and extending through the opening or openings in said cover; means for compressing the sheets between said base and cover, and means for permitting the removal of said bar and the withdrawal of the pins from the sheets while the latter are held compressed.

6. In a device of the character described the combination with a base for supporting the sheets to be bound, of a cover, a plurality of pins adjacent the edges of the base and cover and projecting beyond the confronting surfaces of the two; bolts and nuts for drawing the base and cover toward each other to compress the sheets between them, and means for permitting the withdrawal of the pins without disturbing the bolts and nuts.

7. In a device of the character described the combination with a base for supporting the sheets to be bound, of a bar secured at one edge of said base; a plurality of pins sustained by said bar and projecting above the base; a cover having one edge projecting beyond the base and over the pins on said bar, said cover having an opening adjacent its projecting edge through which the pins project; means for drawing the cover down over said pins and toward the base, and means whereby the bar may be detached from the base to withdraw the pins while the sheets are held compressed.

8. In a device of the character described the combination with a base for supporting the sheets to be bound, of a bar at one edge of said base; a plurality of pins projecting from said bar above the base; parallel side walls on said base and projecting onto the said bar; a slide fitting between said side walls and resting on said bar beyond said pins; a cover, and means for drawing the cover toward the base to compress the sheets, and means for permitting the removal of the bar, pins and slide to expose the edges of the compressed sheets.

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

FRANK BLANCHARD, JR.

Witnesses:
CHARLES B. MANN, Jr.,
G. FERDINAND VOGT.