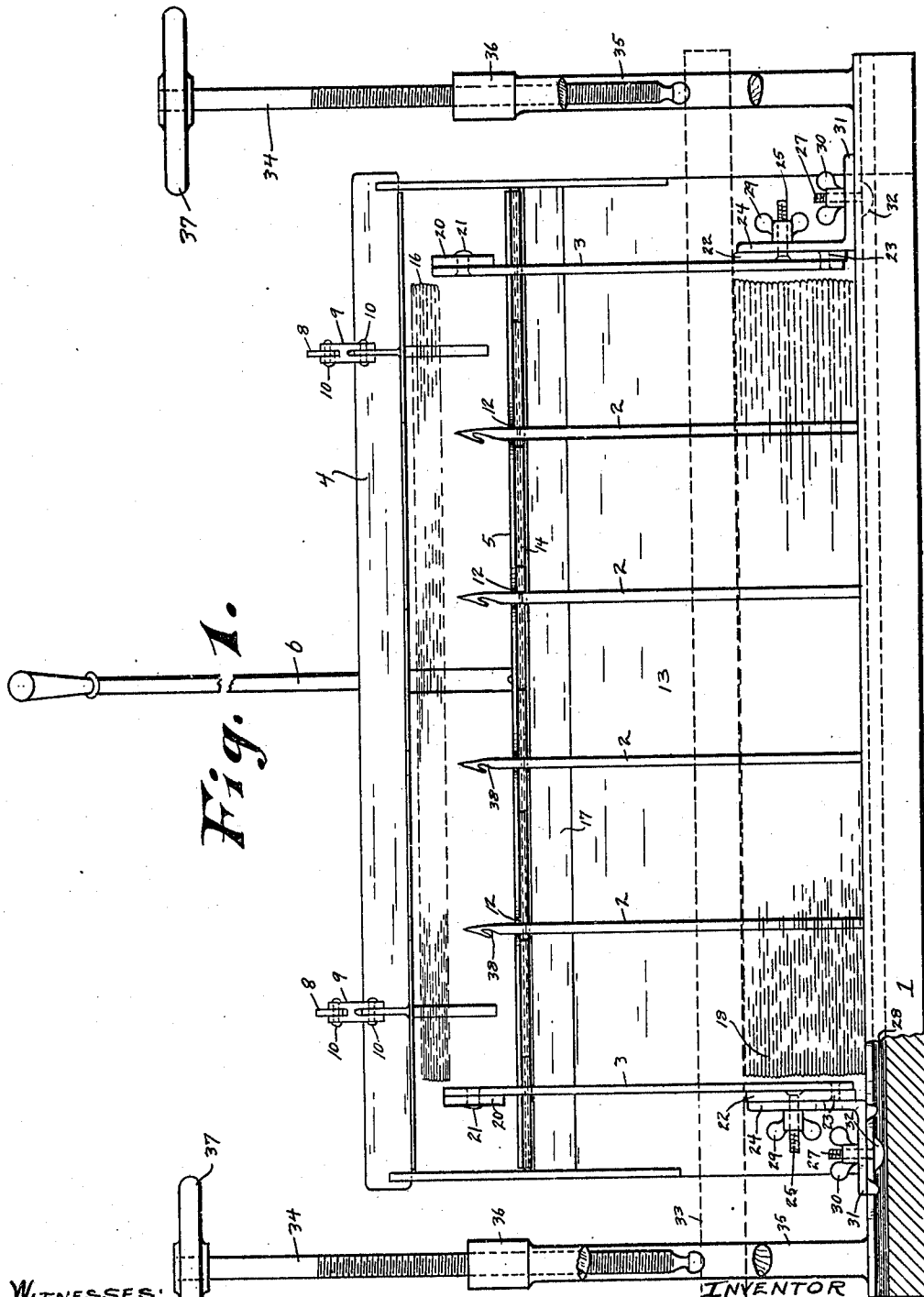


O. C. MANTEUFEL.
 BILL BOOK AND RECORD BINDER.
 APPLICATION FILED FEB. 5, 1909.

953,046.

Patented Mar. 29, 1910.

4 SHEETS—SHEET 1.



WITNESSES:

O. R. Erwin

J. D. Bremer

INVENTOR

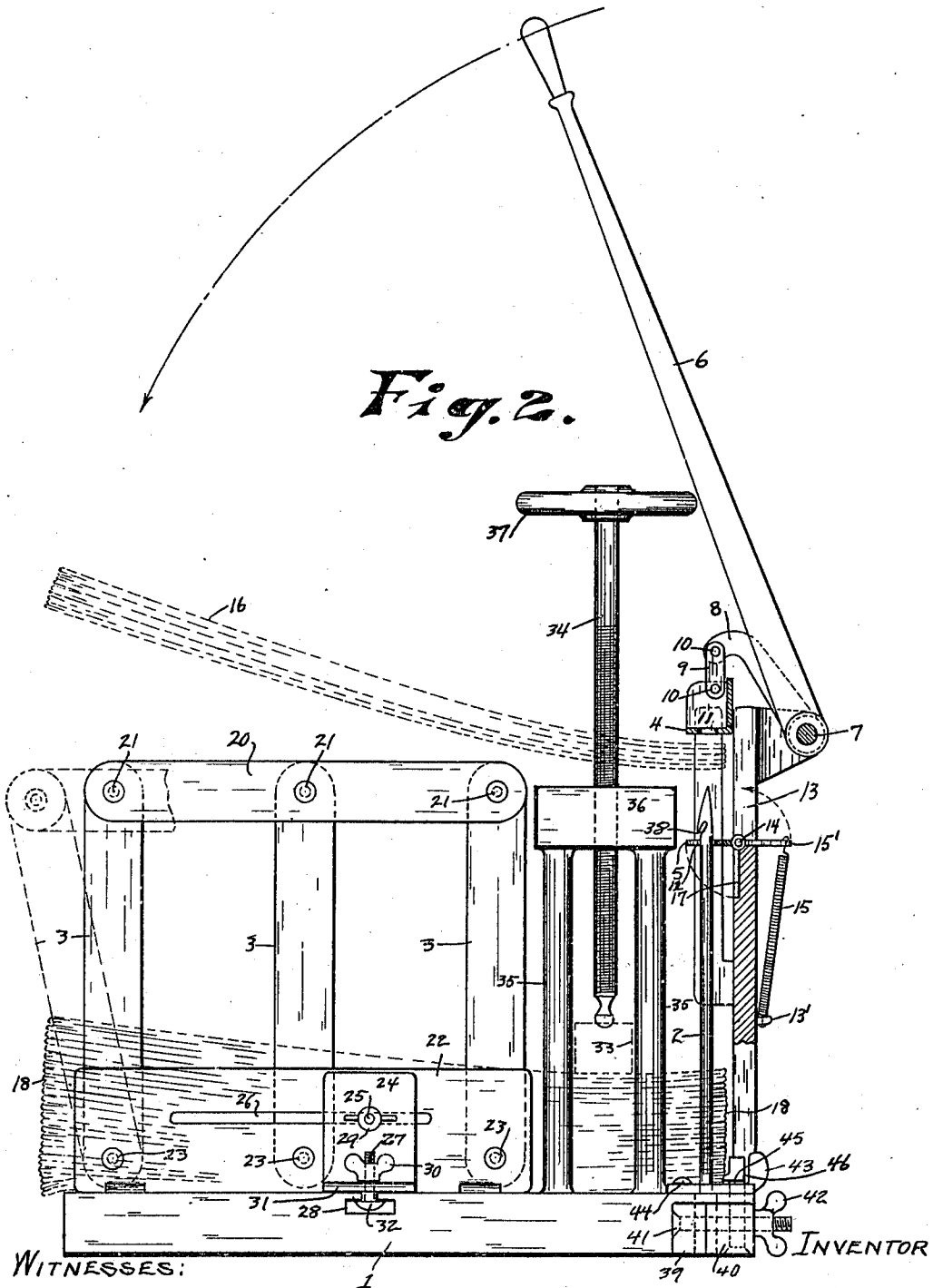
Otto C. Manteufel
 By Ennis T. Mader
 ATTORNEYS.

O. C. MANTEUFEL.
BILL BOOK AND RECORD BINDER.
APPLICATION FILED FEB. 5, 1909.

953,046.

Patented Mar. 29, 1910.

4 SHEETS—SHEET 2.



WITNESSES:

O. R. Erwin
A. D. Bremer

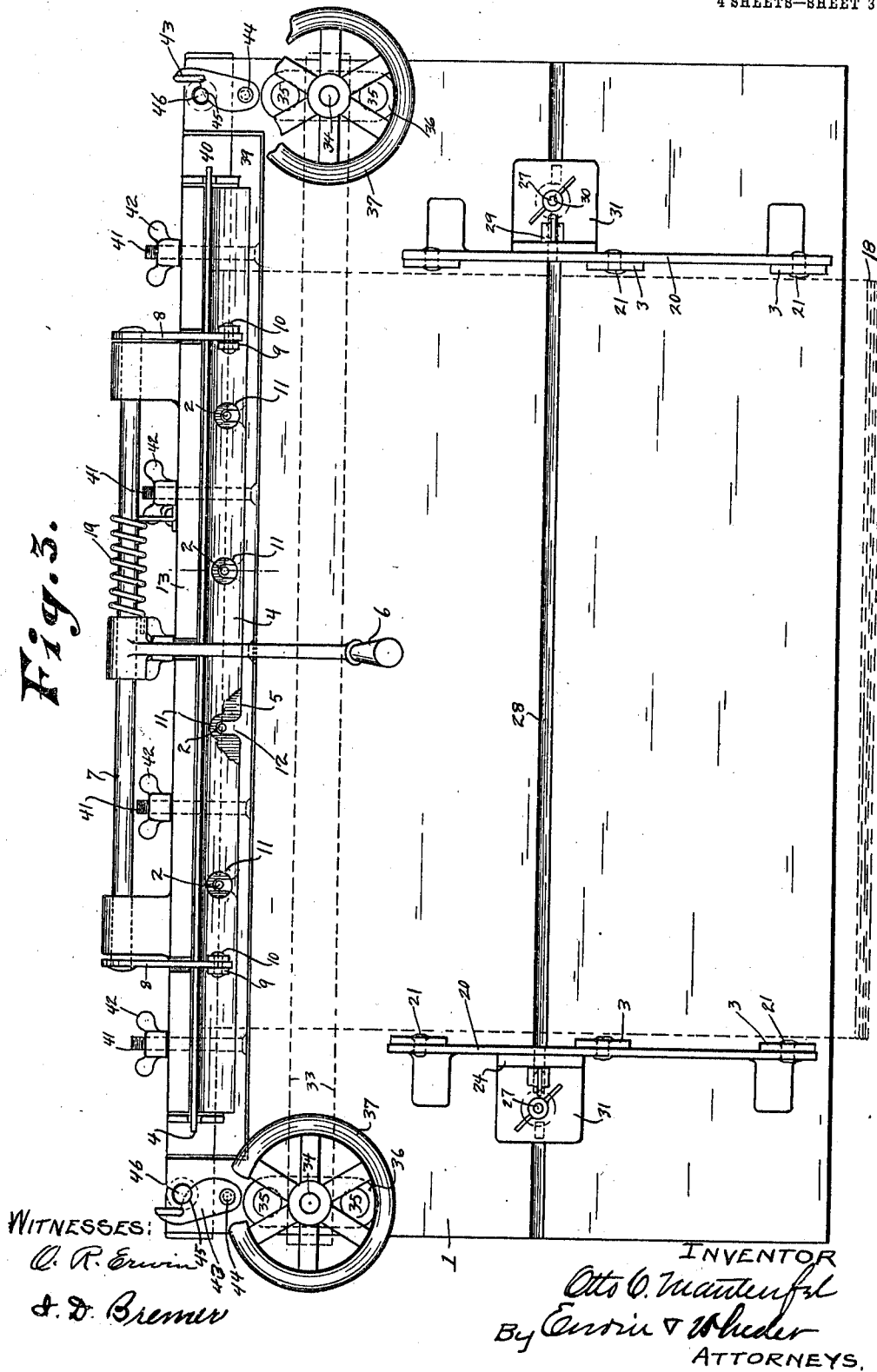
Otto C. Manteufel
By Erwin & Mueller
ATTORNEYS.

O. C. MANTEUFEL.
BILL BOOK AND RECORD BINDER.
APPLICATION FILED FEB. 5, 1909.

953,046.

Patented Mar. 29, 1910.

4 SHEETS—SHEET 3.



O. C. MANTEUFEL.
BILL BOOK AND RECORD BINDER.
APPLICATION FILED FEB. 5, 1909.

953,046.

Patented Mar. 29, 1910.

4 SHEETS—SHEET 4.

Fig. 4.

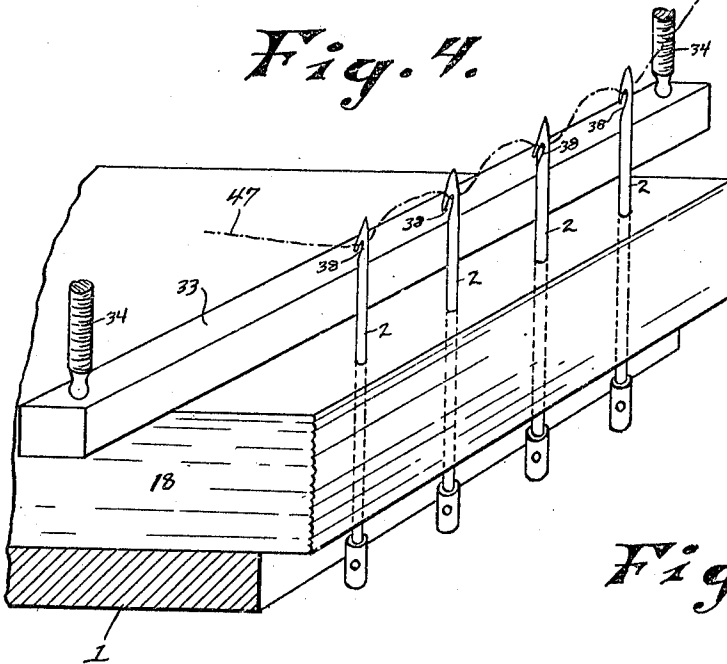


Fig. 6.

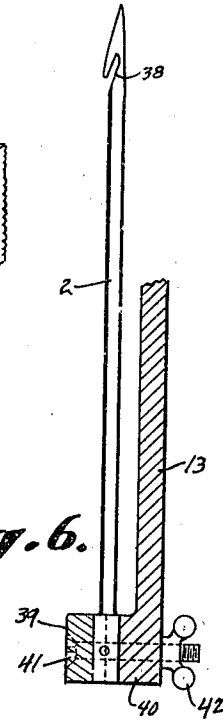
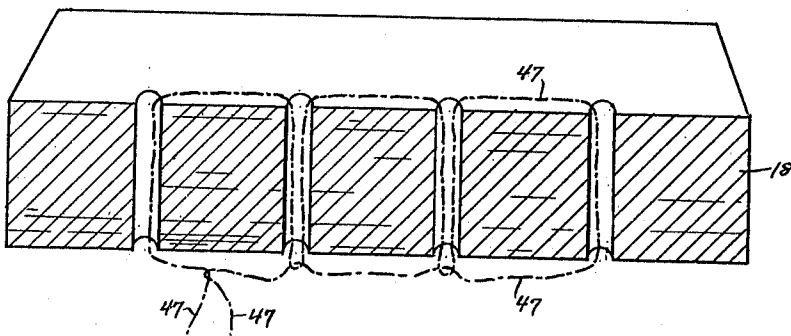


Fig. 5.



WITNESSES:

O. R. Erwin

J. D. Bremer

INVENTOR

Otto C. Manteufel

By Erwin & Mader
ATTORNEYS

UNITED STATES PATENT OFFICE.

OTTO C. MANTEUFEL, OF MILWAUKEE, WISCONSIN.

BILL-BOOK AND RECORD BINDER.

953,046.

Specification of Letters Patent. Patented Mar. 29, 1910.

Application filed February 5, 1909. Serial No. 476,222.

To all whom it may concern:

Be it known that I, OTTO C. MANTEUFEL, a citizen of the United States, residing at Milwaukee, county of Milwaukee, and State of Wisconsin, have invented new and useful Improvements in Bill-Book and Record Binders, of which the following is a specification.

My invention relates to improvements in bill-book and record binders, and the same is explained by reference to the accompanying drawings, in which—

Figure 1 represents a front view thereof, part in section. Fig. 2 is an end view. Fig. 3 is a plan view. Fig. 4 is a detail in perspective of the paper clamping mechanism and binding needles as the same appear preparatory to drawing the binding cord through the paper. Fig. 5 is a detail in perspective, showing the position of the binding cord as it appears after it has been drawn by the needle into the perforations, formed by such needles, in the paper; and Fig. 6 is a detail of the clamping device for holding the needles, while the paper is placed upon them.

Like parts are identified by the same reference numerals throughout the several views.

1 is a base plate, which is provided at its rear side with a series of binding needles 2, upon which separate sheets of paper, bills, etc., are placed, from time to time, preparatory to being thereafter bound together, when a sufficient number have thus accumulated.

3, 3, are adjustable bars by which the several sheets of a book are kept in alignment with each other, as they are placed upon the needles.

4 is a pressure plate by which several sheets are adapted to be pressed down upon the needle at a time, preparatory to being forced down to the base plate.

5 is a guide plate by which the upper ends of the several needles are retained in alignment with each other, as the sheets of paper are being forced upon them.

6 is an operating lever by which the pressure plate is forced down upon the paper and motion is communicated to the pressure plate from the operating lever through the lever supporting shaft 7, arms 8, 8, links 9, 9, and link retaining pins 10, 10.

The pressure plate 4 is provided with a plurality of apertures 11 formed for the re-

ception of the needles, as such plate is forced down upon the paper. The guide plate 5 is provided at its front edge with V-shaped recesses 12 for the reception of the needles. The guide plate 5 is pivotally supported at its rear edge from the rear wall 13 upon the hinge pin 14, and said plate is normally retained in the horizontal position shown in Fig. 2 by the recoil of the spiral spring 15, which is connected at one end with said guide plate through the arm 15' and at its other end to the vertical wall 13 through the bracket 13'. When the sheets are being forced, as represented by dotted lines 16 in Fig. 2, by the action of the pressure plate 4, said needles are prevented from moving laterally by contact with the sides of said recesses 12, as they penetrate the paper, when by the further downward movement of the pressure plate 4, said guide plate will be turned down from the horizontal position shown in Fig. 2 to the vertical position shown in Fig. 3 within the recess 17, whereby the several papers 16 are free to pass said guide plate and may be forced down upon the bundle of papers 18 below. When the several papers 16 have been thus forced upon the needles and past the guide plate, the operating lever 6 is drawn back from the position shown in Fig. 3 to that shown in Fig. 2 by the recoil of the spiral spring 19, one end of said spring 19 being connected with the side of the operating lever 6, while the opposite end is secured to the rear wall 13.

The several bars 3 are pivotally connected together at their upper ends by the horizontal bars 20 and pivotal bolts 21, while the lower ends of said bars 3 are connected with the horizontal bar 22 by the pivotal bolts 23, which pivotal bolts 21 and 23 permit said vertical bars 3 to be inclined rearwardly as shown in Fig. 2, in such a manner that the connecting bar 20 will be brought to a lower plane and out of the way of the operator as the sheets of paper are being placed upon the needles, while such pivotal bolts permit said bars 3 to be brought back to the vertical as the size of the bundle 18 increases. The horizontal bars 22 are adjustably connected with the base 1, by the angular brackets 24, horizontal clamping bolts 25, operating in the longitudinal slots 26 of said bars, and vertical bolts 27 operating in the transversely arranged horizontal channel 28, formed in the base plate 1,

whereby said bars 22 are adapted to be adjusted forwardly and backwardly a distance corresponding with the length of the slots 26 by releasing the clamping nuts 29 on said bolts 25, said clamping nuts 29 being adapted, as they are being turned down on said bolts, to hold said bars 22 at any desired point of adjustment.

It will be understood that the bars 22, together with the vertical bars 3 and bars 20 connected therewith located at each side of the base plate, are adapted to be adjusted laterally, nearer to or farther from each other, as may be required to correspond with the widths of the sheets which are being bound, by loosening the hand nuts 30 upon the bolts 27, and when thus adjusted they are secured in place by turning down the nuts 30 upon said bolts, whereby the horizontal arm 31 of the supporting bracket 24 is rigidly clamped between the nut and the base plate. The channel 28 is T-shape in cross section and is so constructed as to permit the heads 32 of the bolts 27 to enter said channel and bear at their upper sides against the upper walls of said channel. The channel 28 extends longitudinally of the base plate from one side to the other, as shown in Fig. 3, whereby the guide bars on the respective sides of the base plate are adapted, as stated, to be adjusted nearer to or farther from each other to correspond with the width of the paper being bound.

When the required number of sheets have been added to the bundle 18, a binding bar 33 is placed transversely across the rear ends of the bundle, when the same is forced down firmly upon the bundle by the vertical binding screws 34. The binding screws 34 are supported from the base 1, by the vertical standards 35, 35, and the screw threaded connecting member 36. 37 is a hand wheel by which the binding screws 34 are operated. When the sheets of the bundle have been thus compressed together, the series of needles 2 are withdrawn therefrom, as hereinafter described. The several needles 2 of the series are each provided with a notch 38 for the reception of the binding cord, whereby the binding cord, which is placed in such notches, as indicated in Fig. 4, is drawn down through the perforations in the paper by the act of withdrawing the needles, whereby the binding cord is left within said perforations, as indicated by dotted lines in Fig. 5. The several needles 2 of the series are rigidly secured at their lower ends to the rear edge of the base plate 1, between the opposing surfaces of the transversely arranged bar 39 and the opposing bearing 40 formed on the lower edge of the rear wall 13 by the clamping bolts 41 and clamping nuts 42, and such parts, having been secured together as shown in Fig. 6, are connected with the rear edge of the

base plate 1, by the pivotally supported locking levers 43, 43, which locking levers are pivotally connected at one end with the base plate 1 by the pivotal bolts 44 and are adapted, as they are moved in to the position shown in Fig. 3, to engage in a recess formed in the sides of the vertical retaining pins 46, whereby the several parts shown in Fig. 6 are rigidly secured to the rear edge of the base plate preparatory to placing the sheets of paper upon said needles, as previously described. When, however, the desired number of sheets have been thus accumulated and compressed together, as stated, the several clamping nuts 42 are turned back upon said bolts 41, whereby said needles are released from binding contact with the opposing surfaces of the bar 39 and the bearing 40. When this is done, the locking levers 43 are turned back out of contact with the vertical pins 46, when the bar 39 and wall 13, together with the clamping bolts are moved downwardly and withdrawn from the lower end of said needles, when said needles will be supported by the bundle of paper 18, as shown in Fig. 4. When this is done, the binding cord 47, which has been previously inserted in the recesses 38 of the needles, is drawn through the perforations of the paper from the position indicated in Fig. 4 to the position indicated in Fig. 5, when one free end of the binding cord is passed through the several vertical loops of the same and tied to the other free end, whereby the bundle of paper is permanently bound together.

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

1. In a bill book and record binder of the described class, the combination of a base plate, a plurality of binding needles removably secured to said base plate, means for forcing one or more sheets of paper simultaneously upon all the needles of such series, means for detachably securing the free ends of said needles to a binding cord, and means for releasing the lower ends of said needles from their supporting base preparatory to withdrawing them from the paper, whereby as such needles are withdrawn, the binding cord is drawn into their perforations preparatory to binding the paper together.

2. In a bill book and record binder of the described class, the combination of a base plate, a plurality of binding needles removably secured to said base plate, means for forcing one or more sheets of paper simultaneously upon all the needles of such series, means for retaining the points of said needles in alinement with each other as the paper is being forced upon the same, means for detachably securing the free ends of said needles to a binding cord, and means for releasing the lower ends of said needles

from their supporting base preparatory to withdrawing them from the paper, whereby as such needles are withdrawn, the binding cord is drawn into their perforations preparatory to binding the paper together.

3. In a bill book and record binder of the described class, the combination of a base plate, a plurality of binding needles removably secured to said base plate, bars for retaining sheets of paper in alinement with each other as they are placed upon said needles, means for adjustably securing said bars to said base plate, means for forcing one or more sheets of paper simultaneously upon all the needles of such series, means for retaining the points of said needles in alinement with each other as the paper is being forced upon the same, means for detachably securing the free ends of said needles to a binding cord, and means for releasing the lower ends of said needles from their supporting base preparatory to withdrawing them from the paper, whereby as such needles are withdrawn, the binding cord is drawn into their perforations preparatory to binding the paper together.

4. In a bill book and record binder, the combination of a base plate, a plurality of binding needles removably secured to said base plate, a vertical wall detachably secured to the rear edge of said base plate, a pressure plate provided with a plurality of apertures respectively registering with said needles, said pressure plate being slidably connected with said vertical wall, an operating lever pivotally connected at one end to said vertical wall, means for communicating motion from said operating lever to said pressure plate, whereby as said lever is drawn forward, the sheets of paper will be simultaneously forced upon the points of all the needles, means for securing a binding cord to the free ends of said needles, and means for releasing the lower ends of said needles from their supporting base preparatory to withdrawing them from the paper, whereby as such needles are withdrawn, the binding cord is drawn into their perforations preparatory to binding the paper together.

5. In a bill book and record binder of the described class, the combination of a base plate, a plurality of binding needles removably secured to said base plate, means for passing one or more sheets of paper simultaneously upon the points of said needles until the required number of sheets have

been thus connected together, means for compressing and holding the sheets thus attached to said needles, means for withdrawing said needles from the paper which is being thus held, and means for securing the binding cord to the free end of said needles, means for releasing the lower end of said needles from their supporting base, preparatory to being withdrawn from the paper, whereby as the needles are withdrawn, the binding cord is drawn thereby into their perforations, preparatory to binding the sheets of paper together, all substantially as and for the purpose specified.

6. In a bill book and record binder, the combination of a base plate, a plurality of binding needles removably secured to said base plate, a vertical wall detachably secured to the rear edge of said base plate, a pressure plate provided with a plurality of apertures respectively registering with said needles, said pressure plate being slidably connected with said vertical wall, an operating lever pivotally connected at one end to said vertical wall, means for communicating motion from said operating lever to said pressure plate, spring actuated means for automatically throwing said lever back to its normal position when released from the hand of the operator, a guide plate for retaining the points of said needles in alinement with each other as the paper is forced upon them, means for pivotally connecting said guide plate to the front side of said vertical wall, spring actuated means for normally retaining said guide plate in its horizontal position in contact with said needles, means for disengaging said rear vertical wall and the operative parts directly connected therewith from the rear edge of said base plate, preparatory to withdrawing the needles from the papers, means for securing the binding cord to the free ends of said needles, whereby when said rear wall and connected parts are disengaged from the base plate, said needles may be withdrawn from the paper and the binding cord simultaneously drawn into the perforations formed by said needles, all substantially as and for the purpose specified.

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

OTTO C. MANTEUFEL.

Witnesses:

O. R. ERWIN,
JAS. B. ERWIN.