G. M. GAITHER.

SEWING TABLE FOR BOOKBINDERS.

APPLICATION FILED JULY 20, 1909.

956,333.

Patented Apr. 26, 1910.

2 SHEETS—SHEET 1.

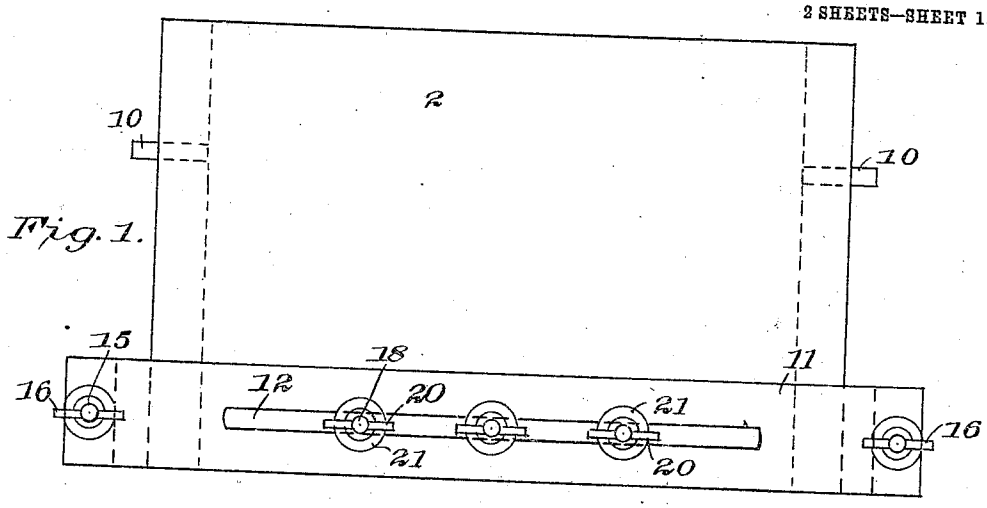

Fig. 1.

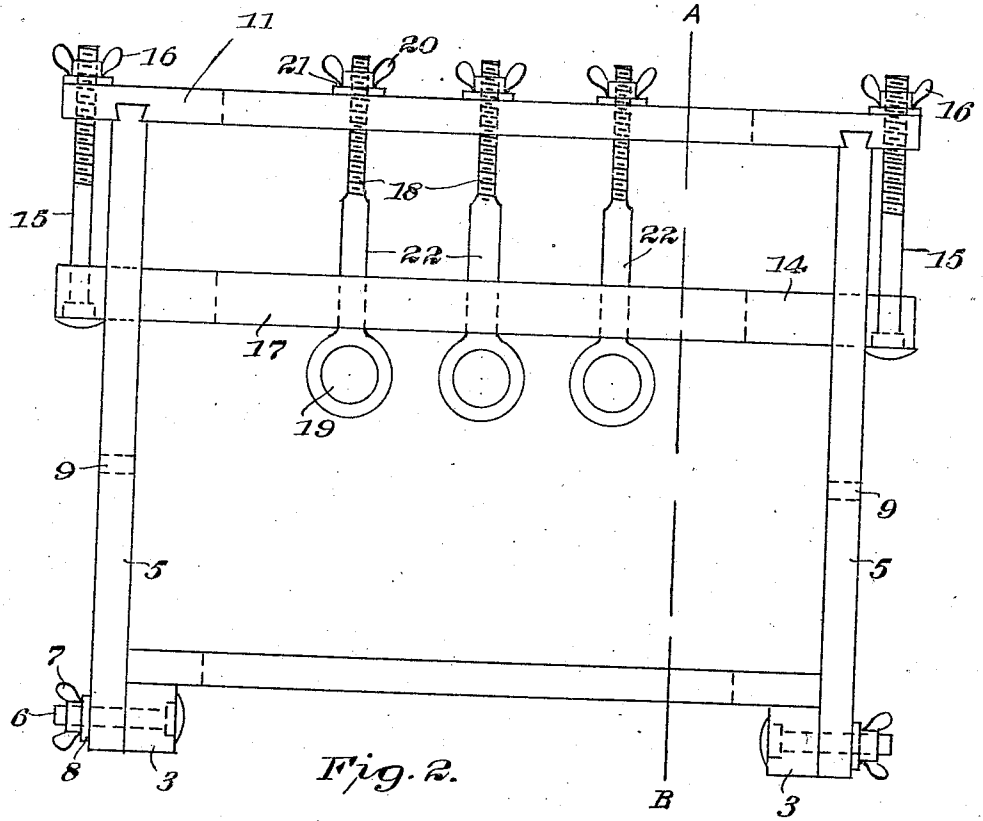

Fig. 2.

Witnesses

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Fig. 4.

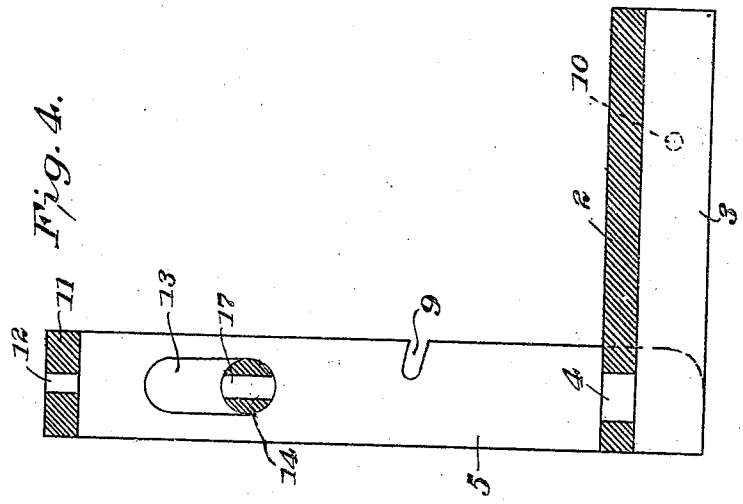
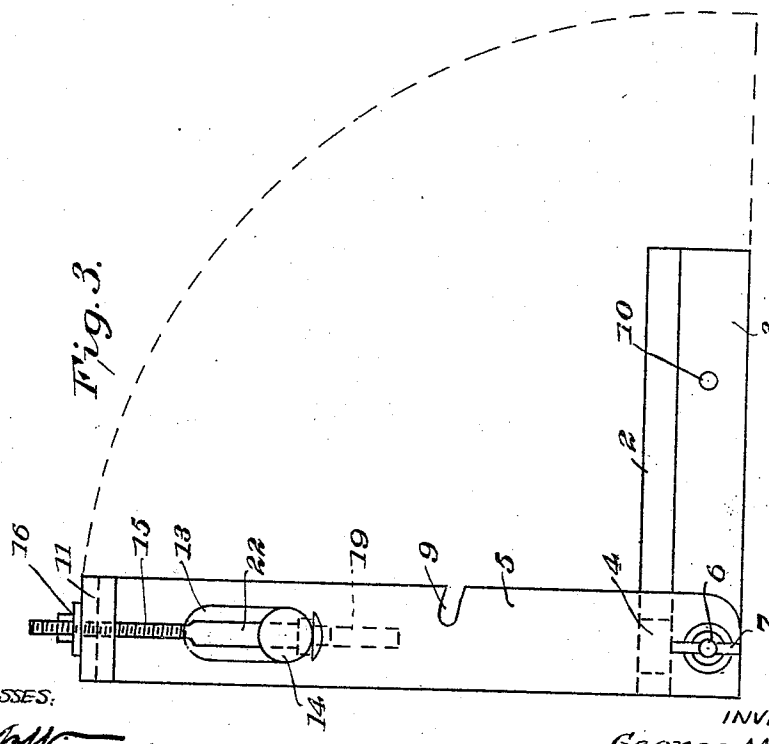


Fig. 3.



WITNESSES:

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UNITED STATES PATENT OFFICE.

GEORGE M. GAITHER, OF BALTIMORE, MARYLAND.

SEWING-TABLE FOR BOOKBINDERS.

956,333. Specification of Letters Patent. Patented Apr. 26, 1910.

Application filed July 20, 1909. Serial No. 508,605.

To all whom it may concern:

Be it known that I, GEORGE M. GAITHER, citizen of the United States, residing at Baltimore, in the State of Maryland, have invented certain new and useful Improvements in Sewing-Tables for Bookbinders, of which the following is a specification.

My invention relates to the sewing benches used by bookbinders, and the object of the invention is to provide a bench or table for this purpose, wherein the sheet cords may be either individually tensioned or tensioned as a whole.

A still further object is to provide a sewing table particularly adapted for use in schools, not only because of the means for independently tensioning each sheet cord, but also because of the fact that the table may be folded up into parallelism with the tension frame and thus rendered extremely compact so as to be easily shipped and easily carried by students, and occupying but little room when folded up and placed in the desk or other receptacle by the student.

The invention consists in the arrangement of parts and details of construction described in the following specification and more particularly detailed in the claims appended.

For a full understanding of the invention and the merits thereof, and to acquire a knowledge of the details of construction, reference is to be had to the following description and accompanying drawings, in which:

Figure 1 is a top plan view of my improved table; Fig. 2 is a front elevation; Fig. 3 is a side elevation; and, Fig. 4 is a section on the line A—B of Fig. 2, the eye bolts being not shown, however.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

In the use of the ordinary sewing table, a cord-tensioning bar is used to which the upper ends of the leaf cords are attached. This bar is adjustable at both ends thereof usually by means of screw standards upon which the ends of the bars are supported. It has been found that in practice, and particularly where bookbinding is being taught to children, it is very difficult to get a uniform tension upon all of the leaf cords where they are all attached to a single bar. Not only may the opposite ends of the bar be different in consequence of the independent adjustment of each of its ends, but some of the cords may be longer than others, or the knots may be badly placed, or the cords may slip, and as a consequence, some of the cords will be slack while others are tighter than they should be. Hence, in an endeavor to tighten the slack cords, the tight cords are very likely to be snapped. It is to avoid this objection that I have devised my invention.

Referring to the figures, 2 designates a table having on each edge the cleats or sidepieces 3. The rear margin of the table is longitudinally slotted, as at 4, as is usual in book-sewing tables, the leaf cords passing up through this slot. Pivotally attached to the rear ends of the sidepieces 3 are the opposed standards 5. The pivotal attachment of the standards to the sidepieces is best secured by means of bolts 6, the outer extremities of which are provided with wing nuts 7 bearing against washers 8. By this means, after the standards have been raised to a vertical position, the wing nuts may be tightened so as to hold the standards clamped in proper relation to the table. The forward edges of the standards 5 are formed with inwardly projecting slots 9 in which stop pins 10 are adapted to engage when the standards are lowered so that the standards and table will be held in the same plane with each other.

The upper ends of the standards are connected by a crosspiece 11 which is joined to the upper extremities of the standards in any suitable manner. This crosspiece is longitudinally slotted as at 12. The crosspiece preferably projects beyond the ends of the standards. The upper ends of the standards are vertically slotted, as at 13, and the opposite extremities of the tension bar 14 pass through these slots. Bolts 15 extend up from the ends of the tension bar and through the extremities of the crosspiece, these bolts being provided with wing nuts 16. By means of these bolts and wing nuts, the tension bar may be adjusted vertically in the slots 13.

The tension bar is longitudinally slotted, as at 17, the slot 17 corresponding with the slot 12 in the crosspiece. Extending through both these slots are the eye bolts 18. The lower ends of the bolts are provided with the eyes 19, and the upper ends which pass through the slot 12 are screw-threaded for engagement with the wing nuts 20.

Washers 21 surround the eye bolts below the wing nuts 20. The shanks 22 of the eye bolts are preferably rectangular in section, the cross sectional area of the shank 22 being of such size that the shank is engaged on its front and rear faces by the walls of the slot 17 so that the shank cannot turn, though it may be slipped longitudinally along the tension bar to any desired position. It is usual in bookbinding to use three of five cords, and I have shown therefore three, but I wish it to be understood that I may use any number desired.

In the operation of my device it will be seen that the tension cords may be attached to the tension bar 14, if desired, and that this bar may be tensioned by adjusting the nuts 16 on the bolts 15. Thereby the device may be used as in the ordinary form of bookbinding table, but it will also be seen that the cords may be attached to the eyes 19 and that thereby each cord may be individually adjusted until the proper tension is secured. By this means the disadvantages incident to the old form of table are entirely obviated and the device may be particularly adapted to unskilled workers. My device is compact, simple, may be cheaply constructed, and has been found entirely effective in practice. It will also be seen that if the cords are attached to the tension bar 14, the individual eye bolts may be used to prevent any bending of the tension bar at its middle under great tension. Thus a better and more even tension may be secured along the whole extent of the tension bar by means of my device than where the tension bar is adjustably supported only at its extremities.

Having thus described the invention, what I claim is:—

1. A book-sewing bench including a table, standards projecting upward from the table, a cross piece on the upper ends of the standards, a cross piece supported from the first named cross piece and having adjustable connection therewith, whereby it may be raised and lowered, and individually adjustable leaf cord supporting devices mounted on the first named cross piece.

2. A book-sewing bench including opposed standards, a table pivoted at its rear end between said standards so as to be turned into the same plane as the standards, with its main portion on the same side of the pivot as the main portion of said standards, and cord-tensioning devices supported on the upper ends of the standards.

3. A book-sewing bench including a table, opposed standards, an upper cross piece supported on the standards, independent cord-supporting devices adjustable along the cross piece, to which the leaf cords may be attached, said devices being independently adjustable to tighten or loosen the cords attached thereto, and an adjustable cross piece mounted beneath the first named cross piece, through which said cord-supporting devices pass.

4. A book-sewing bench including a table, standards projecting from the table, a cross-piece on the upper ends of the standards, eye bolts individually longitudinally adjustable along the crosspiece, and tensioning nuts on the eye bolts.

5. A book-sewing bench including a table, opposed standards projecting from the table, a crosspiece connecting the upper ends of the standards, and having a longitudinal slot, and eye bolts passing through the slotted portion of the crosspiece and carrying adjusting nuts whereby the eye bolts may be drawn upward toward the crosspiece to tighten the leaf cords to which they are attached.

6. A book-sewing bench including a table, opposed standards, a crosspiece connecting the upper ends of the standards, a tension bar supported beneath the crosspiece and adjustable to or from the crosspiece, said bar being slotted, and eye bolts passing through the crosspiece and projecting beneath the slotted tension bar, said eye bolts having nuts whereby they may be drawn upward toward the crosspiece.

7. A book-sewing bench including a table, opposed standards slotted at their upper ends, a crosspiece connecting the standards and longitudinally slotted, a tension bar having its ends projecting through the slots in said standards, said bar being longitudinally slotted, eye bolts passing through the slots in the crosspiece and tension bar and having nuts whereby the bolts may be drawn upward, and means whereby the tension bar may be separately adjusted from the eye bolts.

8. A book-sewing bench including a table, standards projecting from the table and slotted at their upper ends, a cross piece connecting the ends of the standards and longitudinally slotted, a tension bar passing through the slots in the standards and projecting beyond the same, bolts connecting the ends of the tension bar with the ends of the crosspiece, nuts on said bolts whereby the tension bar may be adjusted nearer to or farther from the crosspiece, and eye bolts passing through the slot of the crosspiece and tension bar and laterally adjustable therein, said eye bolts being provided with nuts whereby they may be drawn upward toward the crosspiece.

9. A book-sewing bench including a table, standards projecting from the table and slotted at their upper ends, a transverse cross-piece connecting the ends of the standards and longitudinally slotted, a tension bar projecting at its ends through the slots of the standards, tightening bolts connected to the ends of the tension bar passing up through

the crosspiece and having nuts whereby the bolts may be tightened to draw the tension bar upward, and a plurality of eye bolts passing through the slots of the tension bar and crosspiece and having nuts whereby they may be individually drawn upward toward the crosspiece, said bolts having rectangular shanks fitting the slot in the tension bar, the bolts being thus prevented from turning.

10. A book-sewing bench including a table, standards pivoted to the outside edges of the table so that the table may be turned into alinement with the standards, said standards being slotted at their upper ends, stops for limiting the closing movement of the table and standards, a crosspiece connecting the upper ends of the standards and longitudinally slotted, a tension bar also longitudinally slotted and having its ends projecting through the slots in the standards, tightening bolts depending from the crosspiece and engaging with the tension bar, and eye bolts passing through the slots in the crosspiece and tension bar and having nuts whereby they may be individually adjusted.

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

GEORGE M. GAITHER. [L. S.]

Witnesses:
GERMAN H. H. EMORY,
CHAS. R. SHARRETTS.