Jan. 3, 1939. I. J. FOY 2,142,585

ADJUSTABLE TABBING CRADLE

Filed Nov. 4, 1937 2 Sheets-Sheet 1

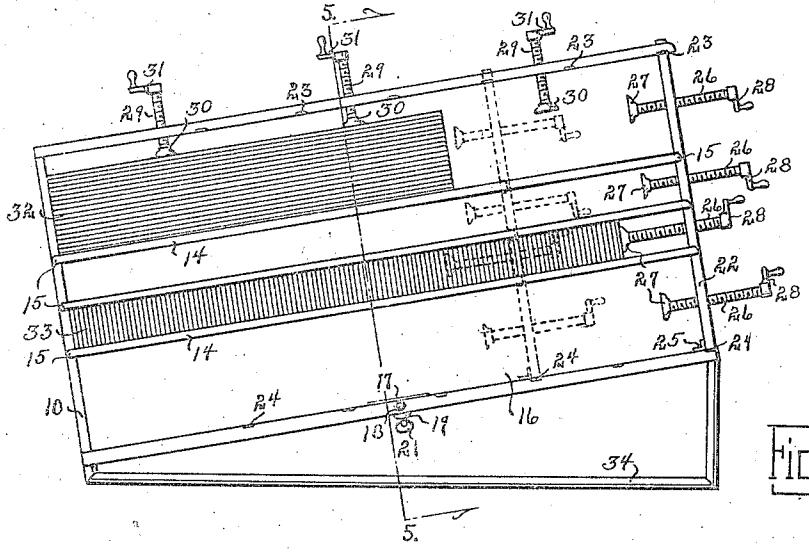


Fig. 1.

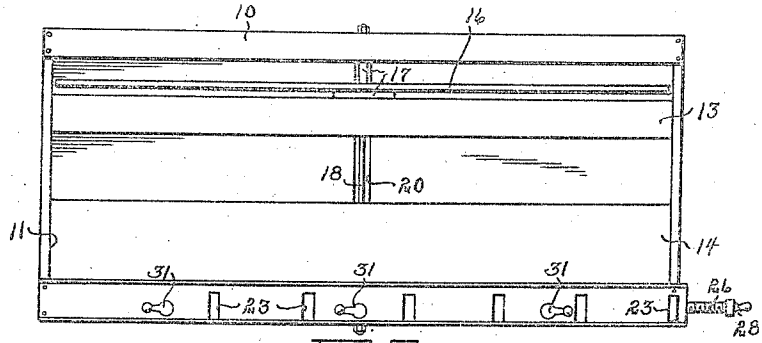


Fig. 2.



Fig. 3.

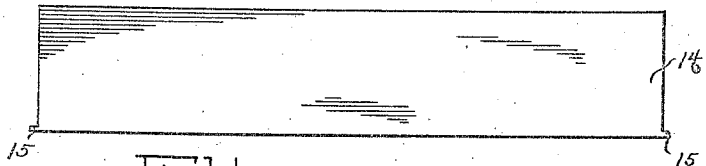


Fig. 4.

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ADJUSTABLE TABBING CRADLE

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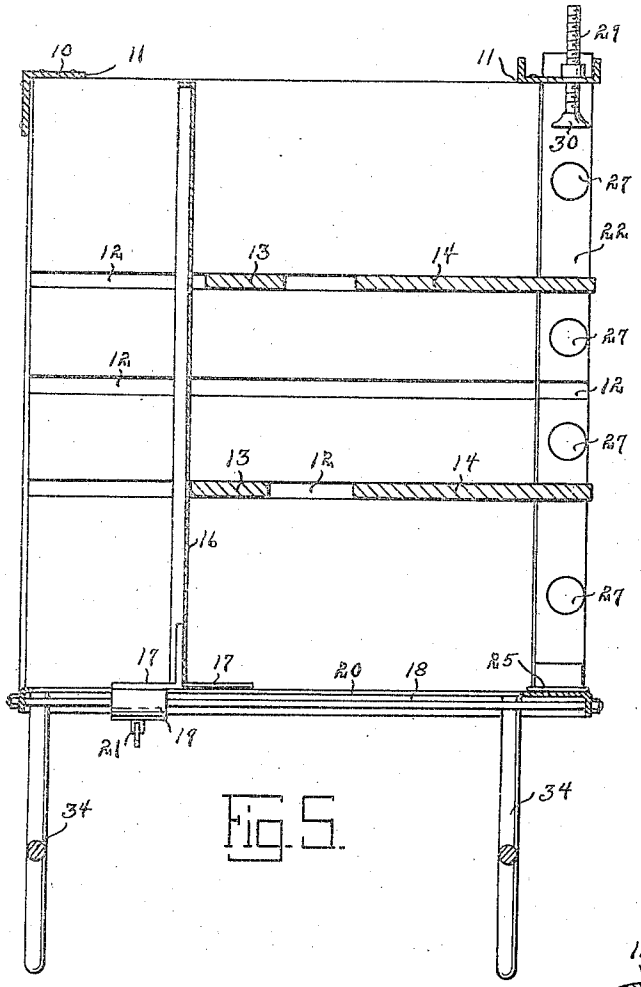


Fig. 5.

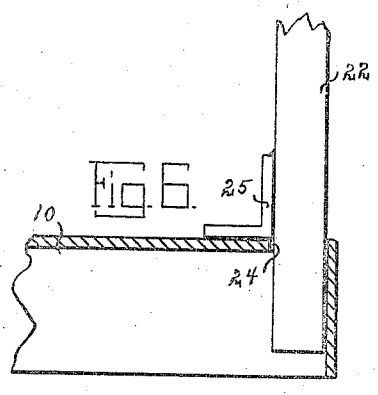


Fig. 6.

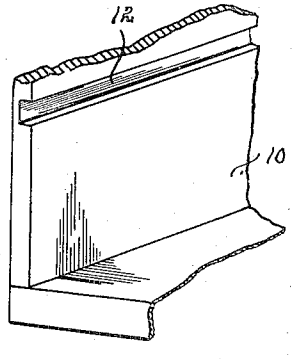


Fig. 7.

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Patented Jan. 3, 1939

2,142,585

UNITED STATES PATENT OFFICE

2,142,585

ADJUSTABLE TABBING CRADLE

Irving J. Foy, Denison, Iowa, assignor, by direct and mesne assignments, to Denison Tabbing Machine Corporation, Denison, Iowa, a corporation of Iowa

Application November 4, 1937, Serial No. 172,845

6 Claims. (Cl. 11—1)

The principal object of my invention is to provide a handy tabbing cradle for successfully holding sheet material during the tabbing operation that is easily and quickly adjustable for accommodating sheets of various lengths and widths.

A further object of this invention is to provide an apparatus for holding sheets for tabbing purposes that is economical in manufacture, compact, and durable in use.

A still further object of my invention is to provide a single unit machine that will handle all reasonable jobs of tabbing in an establishment, thereby eliminating the necessity of owning and operating a plurality of tabbing cradles for various tabbing jobs.

A still further object of this invention is to provide an adjustable tabbing cradle that will simultaneously successfully support and hold a plurality of stacks of sheets of different sizes.

These and other objects will be apparent to those skilled in the art.

My invention consists in the construction, arrangement and combination of the various parts of the device, whereby the objects contemplated are attained as hereinafter more fully set forth, pointed out in my claims and illustrated in the accompanying drawings, in which:

Fig. 1 is a front view of my complete device holding both horizontally and vertically arranged sheets for tabbing.

Fig. 2 is a top plan view of my adjustable tabbing cradle.

Fig. 3 is a top plan view of one of the supporting shelf elements of my device.

Fig. 4 is a top plan view of another supporting shelf used in my device.

Fig. 5 is an enlarged end sectional view of my device with one of the shelf elements removed and taken on the line 5—5 of Fig. 1.

Fig. 6 is an enlarged sectional view of a portion of the lower frame of my device, showing the means for holding the adjustable bar member in place.

Fig. 7 is an enlarged perspective view of a portion of one of the ends of the device showing the shelf engaging channels or grooves.

The most common method of tabbing is to lay the sheets of paper or like on a supporting surface, manually align them, place a weight on them to partially successfully hold them and then perform the tabbing operation which usually consists in the gluing, sewing, or otherwise attaching one of the side edges of the stack together to produce a book.

Obviously, such a method of holding a sheaf of sheet elements in successful alignment during the tabbing process is impossible. Also, only small stacks of sheet elements can be glued or fastened together and much time and effort is necessary to accomplish any results at all. I have overcome such objections by providing a universally adjustable tabbing cradle which not only successfully holds the sheet elements during the tabbing process but properly compresses them into a compact stack and aids in the proper alignment of the sheet elements when they are placed in the apparatus.

Referring to the drawings, I have used the numeral 10 to designate the frame housing of my device having its front and back open and a central longitudinal opening 11 in its top, as shown in Fig. 2. The numeral 12 designates a plurality of horizontal grooves on the inner side of each of the two ends of the frame housing. These grooves are designed to selectively engage and support supporting shelf members. Various widths of supporting shelf members may be used and in Fig. 3 I show a comparatively narrow shelf member which I have designated by the numeral 13, and in Fig. 4 I show a comparatively large supporting shelf element which I have designated by the numeral 14. These shelves 14 have limiting lugs 15 on their two forward corners. If comparatively wide sheets are to be tabbed, they may be supported on one shelf member 13 and one shelf member 14, as such sheets will easily bridge the space between the shelf 13 and the shelf 14 when the same are arranged as shown in Fig. 2.

The shelf 14 is limited in its sliding movement into the housing frame by the lugs 15 engaging the front marginal edges of the two sides of the frame housing. By using one narrow and one wide supporting shelf in any one horizontal plane, the space between these two shelf members permit the forward and rearward movement of the back board 16 without changing the number or size of the supporting shelves. Obviously, the back board 16 may be moved forwardly until the narrow supporting shelf 13 engages the rear marginal edge of the shelf 14. When the movable back board 16 is in a rearward position as shown in Fig. 2, the narrow supporting shelf 13 may be manually moved rearwardly to a position adjacent to it. Any method may be used for adjustably holding the back board 16. In the drawings, I show a horizontal plate 17 secured to the bottom of the vertical backing board 16 and resting on the inside bottom of the frame housing.

The numeral 18 designates a rod secured to

the frame housing 10 and extending below the plate 17 and transversely of the back board. The numeral 19 designates a bearing member rigidly secured to the bottom of the plate 17 and extending downwardly through a slot 20 in the bottom of the frame housing. This slot opening 20 is transversely arranged relative to the frame housing and communicates with the rod 18. The bearing member 19 loosely embraces the rod 18 as shown in the drawings. The numeral 21 indicates a thumb screw threaded into the bearing member 19 and capable when tightened of engaging the fixed rod 18 and rigidly holding the back board in the desired position.

When it is desired to move the back board forwardly or rearwardly, it is merely necessary to loosen the thumb screw 21 and slide the back board to the desired position after which the thumb screw 21 is tightened.

The numeral 22 designates a detachable bar member which normally forms a part of and completes the right end portion of the frame housing. This bar, which normally is a part of the right end of the frame housing has grooves 12 corresponding with the grooves in the right end of the frame housing. The numeral 23 designates rectangular slot openings in the top front portion of the frame housing. The numeral 24 indicates diametrically opposed rectangular slot openings in the bottom front portion of the housing 10. The bar 22 is capable of selectively engaging any vertical pair of these rectangular slot openings by having its upper end extending through one of the slot openings 23 and its lower end extending through one of the slot openings 24. A stop lug 25 is rigidly secured to and near the lower end of the bar 22 for limiting its downward movement through one of the slot openings 24. The bar 22 is of such length that when it is stopped in its downward movement by the member 25, its upper end will be engaging one of the slot openings 23 and its lower end will be engaging one of the slot openings 24. When the bar 22 is engaging the extreme right slot 23 and the extreme right slot 24, the bar 22 will be parallel with and form a part of the right end of the frame housing. When it is desired to move the bar 22 to the left, it is merely necessary to raise it upwardly until its lower end clears its holding slot 24, at which time the bar may be canted and removed from its holding slot 23, after which it is placed in the desired slot openings 23 and 24 to the left of its original holding slot openings 23 and 24.

Such a new position for the bar 22 is shown by dotted lines in Fig. 1. The numeral 26 designates a plurality of rods transversely threaded through the bar 22 and in spaced relationships relative to each other as shown in Fig. 1. Each of these threaded rods has a swivel head 27 on its inner ends and a crank handle 28 on its other end. These threaded rods 26 may be arranged in any suitable positions but at least one should be placed above each groove 12 and one above the bottom of the frame housing. The numeral 29 indicates horizontal rods threaded through the front upper portion of the frame housing. These threaded rods 29 are similar to the rods 26 and have a swivel head 30 on their lower ends and a crank arm 31 on their upper ends.

The numeral 32 indicates a stack of sheet members horizontally positioned and resting on the shelves in the upper grooves 12 in the two end portions of the frame housing. These sheet members are supported by these shelves and are properly aligned by engaging the left end of the frame housing and the back board 16. By manually screwing the two left rods 29 downwardly onto and in engagement with this stack of sheet members, the sheet members will be compressed and tightly held for tabbing. The numeral 33 designates a sheaf of sheet members supported in vertical positions on one of the shelves. These vertical sheet members are held in alignment by engagement with the supporting shelf, the left end of the frame housing and the back board 16.

By tightening the adjacent threaded rod 26 as shown in Fig. 1, onto this group of vertical sheet members, the sheet members will be compressed and tightly held for tabbing. Any lesser amount of vertical sheet members may be as easily and successfully compressed by moving the bar 22 to the left as herebefore explained in order to bring the swivel head of the adjacent screw rod into operative position onto one end of the stack of sheets. If a much greater amount of horizontal sheets are to be tabbed than that shown in Fig. 1, the upper shelf or shelves may be removed to provide more room. In some instances, it may be desirable to tab sheet members of various widths in one stack and when this is the case, the back board 16 may or may not be moved completely out of contact with the stack. After the tabbing operation the rods 26 or 29 as the case may be, are manually rotated to the left in order to withdraw their operative engagement with the stacks of sheet members.

My frame housing may be held in any position but I recommend a frame 34 for supporting the frame housing in such manner that the left end of the frame housing is lower than the right end of the frame housing as shown in Fig. 1. By this arrangement the stack of sheet members will tend to automatically align itself on the left end of the frame housing by grabbing. Any number of grooves 12 may be employed to accommodate any number of shelf elements. These shelf elements when in place either perform the service of a supporting shelf or a partition in the housing for the creation of various compartments in the frame housing. By this construction, several different sheafs of paper or like may be simultaneously tabbed.

Some changes may be made in the construction and arrangement of my improved adjustable tabbing cradle without departing from the real spirit and purpose of my invention, and it is my intention to cover by my claims any modified forms of structure or use of mechanical equivalents which may be reasonably included within their scope.

I claim:

1. In a tabbing device, a housing having its front and rear open, a plurality of shelf partitions, a means for supporting said shelf partitions in said housing, a back board slidably mounted in said housing, a means for securing said back board in various positions of its movement, a bar secured to said housing, compressing means on said bar, and compressing means carried by the upper portion of said housing.

2. In a tabbing device, a housing having its front and rear open, a plurality of shelf partitions, a means for supporting said shelf partitions in said housing, a back board slidably mounted in said housing and capable of movement transversely of the longitudinal axis of said housing, a bar secured to said housing,

compressing means on said bar, and compressing means carried by the upper portion of said housing.

3. In a tabbing device, a housing having its front and back portion open, grooves in the ends of said housing, a shelf partition having a relatively narrow width slidably engaging said grooves, a second shelf partition having a comparatively wide width slidably engaging said grooves, a back member mounted in said housing for sliding movement transversely of the longitudinal axis of said housing, and compressing means carried by said housing.

4. In a tabbing device, a housing having its front and rear opening. a plurality of shelf partitions, a means for supporting said shelf partitions in said housing, a back board slidably mounted in said housing, a means for securing said back board in various positions of its movement, and compressing means carried by said housing.

5. In a tabbing device, a housing having its front and rear open, a plurality of shelf partitions, a means for supporting said shelf partitions in said housing, a back board slidably mounted in said housing and capable of movement transversely of the longitudinal axis of said housing, a bar adjustably secured to said housing, compressing means on said bar, and compressing means carried by the upper portion of said housing.

6. In a tabbing device, a housing having its front and rear opening and having a plurality of slot openings in its top and bottom portions, a back board slidably mounted in said housing and capable of movement transversely of the longitudinal axis of said housing, a bar capable of selectively engaging any one of said slot openings in the top portion of said housing and any one of said slot openings in the bottom portion of said housing, and a compressing means carried by said bar.

IRVING J. FOY.