No. 739,370. PATENTED SEPT. 22, 1903.

D. WILLIAMS.

BAT SEPARATING AND FOLDING MACHINE.

APPLICATION FILED MAR. 7, 1903.

NO MODEL.

Fig. 1

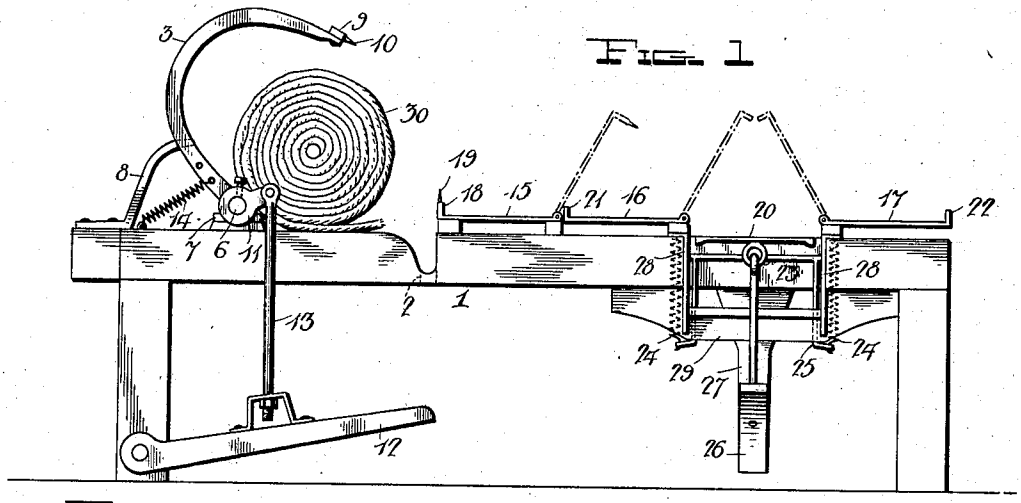


Fig. 2

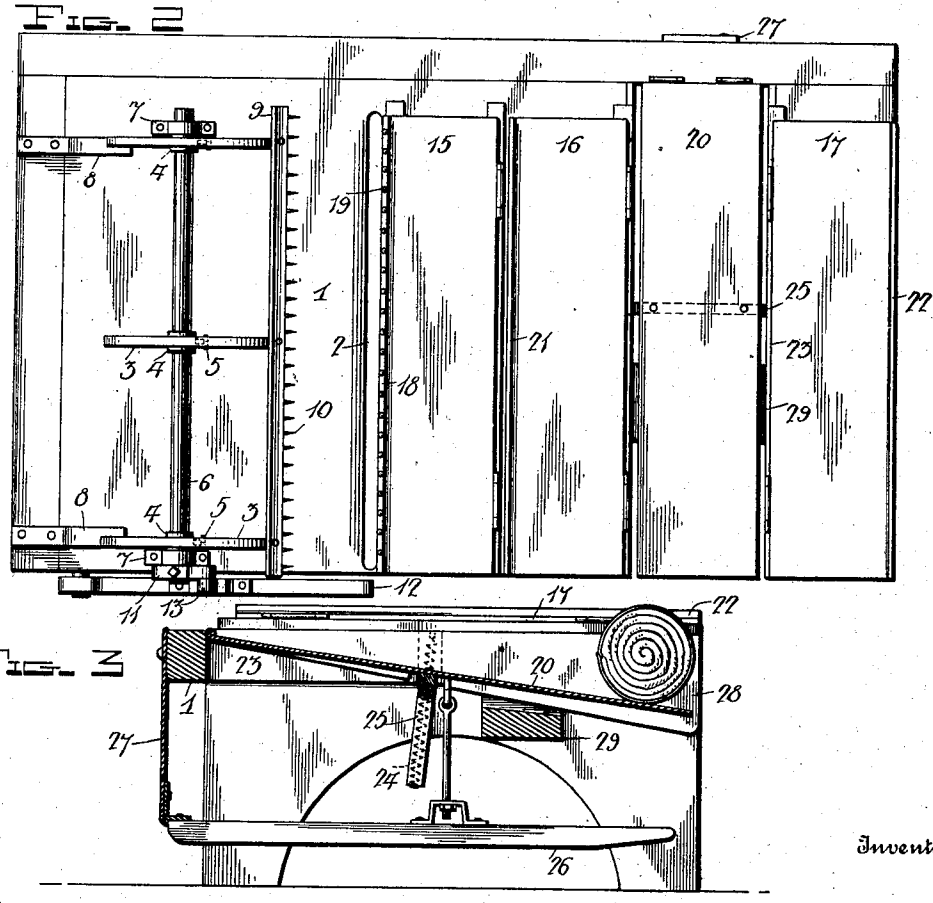


Fig. 3

Witnesses

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No. 739,370. Patented September 22, 1903.

UNITED STATES PATENT OFFICE.

DAVID WILLIAMS, OF COHOES, NEW YORK.

BAT SEPARATING AND FOLDING MACHINE.

SPECIFICATION forming part of Letters Patent No. 739,370, dated September 22, 1903.

Application filed March 7, 1903. Serial No. 146,650. (No model.)

To all whom it may concern:

Be it known that I, DAVID WILLIAMS, a citizen of the United States, residing at Cohoes, in the county of Albany and State of New York, have invented certain new and useful Improvements in Bat Separating and Folding Machines; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

My invention relates to bat separating and folding machines, and has for its object the production of apparatus enabling the operator to cut or separate from a roll of cotton-batting sheets of the material of certain rectangular area intended as the interior thickening of quilted bed-coverings and the like and to fold and finally roll the sheets so divided into the form in which they are shipped or exposed for sale.

I accomplish the object stated by means of the parts and their association, as illustrated in the accompanying drawings, of which—

Figure 1 is a side view of my invention. Fig. 2 is a top plan view of the folding table; and Fig. 3 is a cross-section of the folding table, showing the inclining leaf and its operating devices, with a completed roll of batting on the leaf.

Like numbers are used to designate like parts in the several views.

Considering the drawings, numeral 1 marks the table, supported on legs in the usual manner and of convenient height.

Numeral 2 marks a transverse slot through the table.

Numerals 3 designate the curved arms adjustably attached, by means of the end sleeves 4 and set-screws 5, upon the transverse shaft 6, that rocks in bearings 7, secured upon the table. At each side of the table bracket-stops 8 are placed, and their office is to limit the rear throw of the curved arms 3. The outermost ends of all the arms are joined together by the separator-bar 9, upon the downward face of which is a series of projecting pin-points 10. The bar 9 is lowered by foot or hand power and raised by retractive springs. The devices employed are, for the downward movement, the crank 11, secured to the end of shaft 6, the treadle 12, pivoted to the leg or string-piece of the table, and the connecting-rod 13, pivotally joining the crank and treadle. It will be understood from Fig. 1 that pressure of the foot on treadle 12 brings the separator-bar and pin-points down into the slot 2 of the table 1, from which position those parts are raised by the contraction of springs 14, attached to the table and to the curved arms nearest the sides of the table when the foot is removed from the treadle.

As ordinarily constructed my invention has three folding leaves 15, 16, and 17. It will be observed that the first folding leaf 15 is provided along its side that lies next to the edge of slot 2 with a pin-head bar 18, slightly raised and furnished with a series 19 of pin-points similar to those in the separator-bar 9. It will be noted, further, that the folding leaves 15 and 16 fold away from the slot and toward an inclinatory leaf 20, which will be again referred to. The third folding leaf 17 is situated beyond the inclinatory leaf and also folds toward that leaf—that is to say, all the folding leaves have their edges lying toward the inclinatory leaf 20, pivoted to the table, and each folding leaf may be turned over toward the leaf 20. The free edge of each folding leaf is provided with a flange. The pin-head bar 18 and pin-points 19 take the place of the flange for the folding leaf 15, and the flanges of the remaining folding leaves 16 and 17 are referred to by numbers 21 and 22. The folding leaves may be light boards, as illustrated, or they may be constructed by covering rectangular frames with oil-cloth or the like. I do not confine myself to the precise form shown.

Returning to the inclinatory leaf 20, it will be seen that, as best shown in Fig. 2, the end instead of the side of the leaf is pivoted at the far side of a second transverse slot 23 through the table. The inclinatory leaf is supported yieldingly by the springs 24, secured to each end or foot of the bow 25, attached directly to the under side of the leaf. The leaf is inclined by means of a treadle 26, transversely disposed beneath the table and pivoted to a fifth leg or hanger 27, extending downwardly from the opposite side of the

table. Each side of the slot 23 is walled downwardly by side boards 28, and when the leaf is depressed it constitutes the floor of a channel, inclining toward the operator. A cross-piece 29, usually recessed, as illustrated, limits the downward movement of leaf 20.

In operating the invention a portion of material from a roll 30, usually placed beneath the curved arms, as shown, is drawn to the outer or flanged edge of the last folding leaf 17. This practically is a measure of the length of the sheet desired to be separated, and by pressure of the foot on treadle 12 the arms and pins are brought sharply downward into the slot 2 and the batting is severed crosswise between the two series of pin-points 10 and 19. Next folding leaf 15 is folded from the slot 2 and then folded back into its first place, leaving the bat double on folding leaf 16, and when that leaf is folded over and back it leaves the bat with a three-fold thickness on the inclinatory leaf, the normal position of which is horizontal. Finally the last folding leaf 17 is folded over toward the inclinatory leaf and back, and this completes the folding operation, leaving the bat lying upon the inclinatory leaf. The end of the leaf is now depressed by the operator, and he has before him an inclined channel wherein to roll the folded bat into its marketable shape. It is easy to draw the folded bat down the incline, as it is rolled by hand. Usually the roll is given an external wrapping of paper, as shown in Fig. 3, to hold its shape and permit convenient handling.

Having thus described my invention, what I claim, and seek to protect by Letters Patent of the United States, is—

1. In a bat-folding machine, the combination of a slotted table, an inclinatory leaf located in the said slot and devices adapted for inclining the said leaf, and folding leaves arranged to deliver the bat one leaf upon another in cumulative folds and lastly upon the said inclinatory leaf.

2. In combination with bat-separating mechanism, folding leaves arranged to deliver the bat one leaf upon the other in cumulative folds.

3. In combination with bat-separating mechanism, folding leaves, and an inclinatory leaf, the said folding leaves arranged to deliver the bat one leaf upon another, and lastly upon the said inclinatory leaf in cumulative folds.

4. In combination with bat-separating mechanism, a slotted table, an inclinatory leaf located in the said slot, and folding leaves arranged to deliver the bat one leaf upon another in cumulative folds, and lastly upon the said inclinatory leaf.

5. In a bat separating and folding machine, a slotted table, curved arms pivoted upon the table, a separator-bar provided with a series of pin-points and joining the outermost ends of the said arms, means for actuating the arms, a plurality of folding leaves, one of the said leaves being provided with an edge series of pin-points, substantially as described.

6. In a bat separating and folding machine, a table having two transverse slots, curved arms pivoted upon the table, a separator-bar provided with a series of pin-points and joining the outermost ends of the said arms, means for bringing the bar and pin-points downwardly into one of said slots of the table, a plurality of folding leaves, one of said leaves being provided with an edge series of pin-points, and an inclinatory leaf, the said folding leaves delivering the bat one leaf upon the other and lastly on the said inclinatory leaf in cumulative folds, substantially as described.

7. A bat-separating machine, the combination of a slotted table, curved arms pivoted upon the table, a separator-bar provided with a series of pin-points and joining the outermost ends of the said curved arms, means for bringing the bar and pin-points downwardly into the said slot, and a series of pin-points arranged at the edge of the said slot.

8. In combination with bat-separating mechanism, an inclinatory leaf and means for operating it, and folding leaves situated upon both sides of the said inclinatory leaf and arranged to deliver the bat one leaf upon the other and lastly upon the said inclinatory leaf in cumulative folds.

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

DAVID WILLIAMS.

Witnesses:
ARCHIBALD PAUL,
CHAS. A. TINDALL.