March 9, 1943. R. A. THOMAS 2,313,374

APPARATUS FOR RECONSTRUCTING FUR COATS

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FIG. 1.

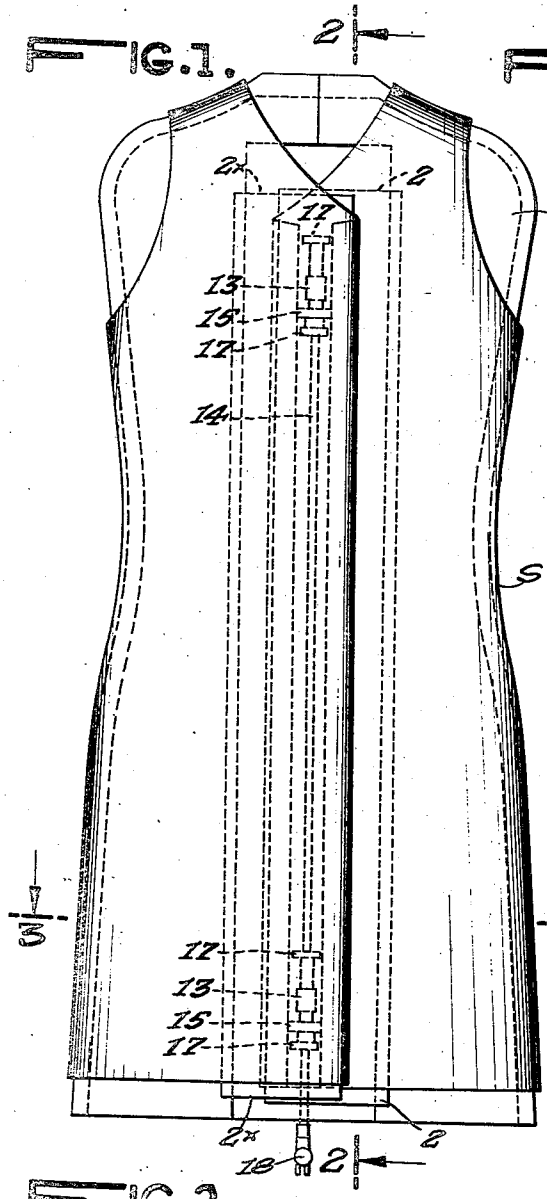


FIG. 2.

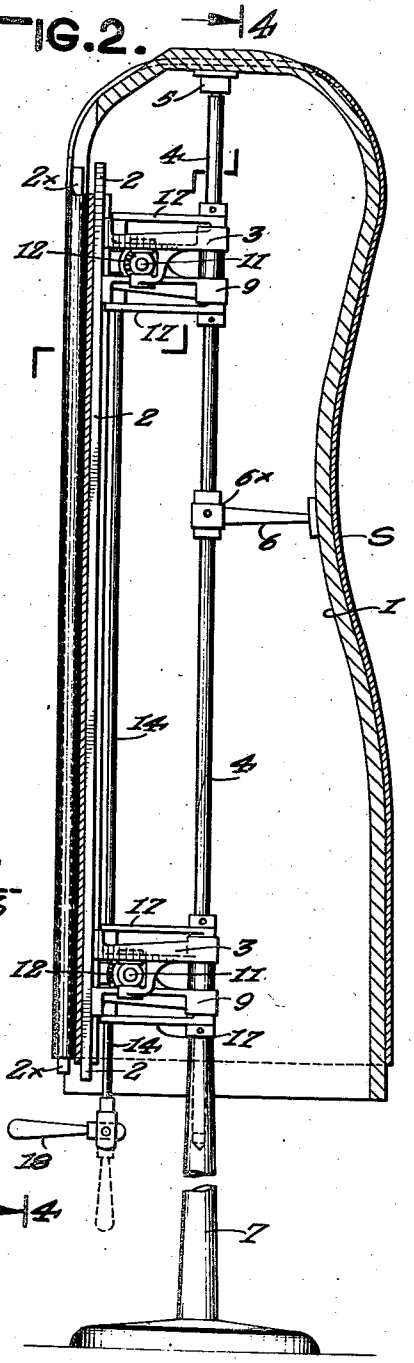
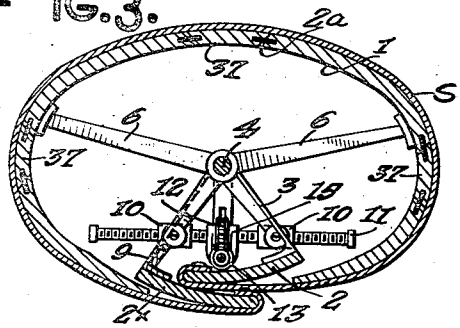


FIG. 3.



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FIG. 4.

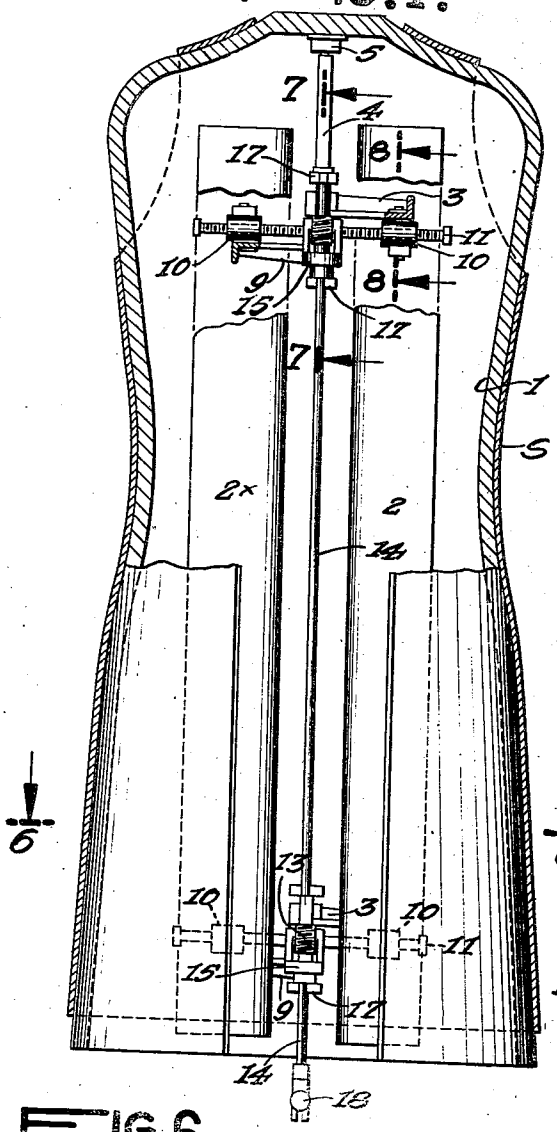


FIG. 5.

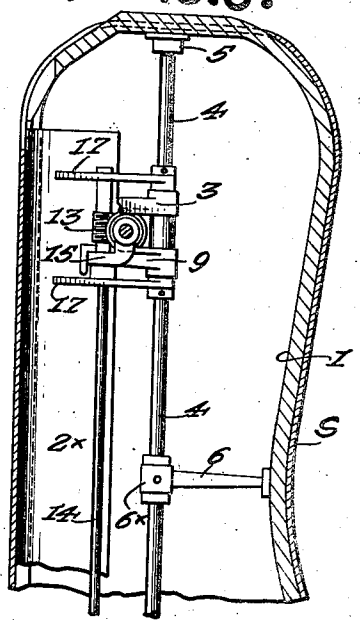


FIG. 7.

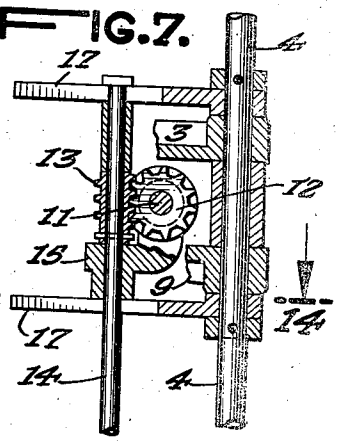


FIG. 6.

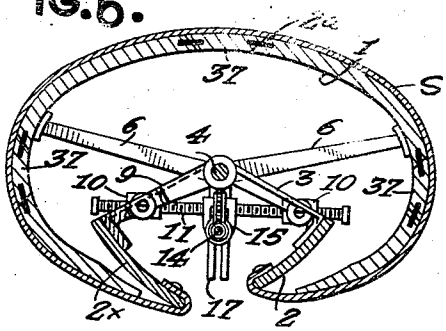
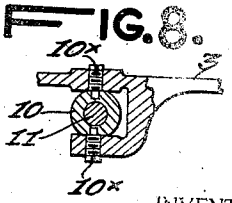


FIG. 8.



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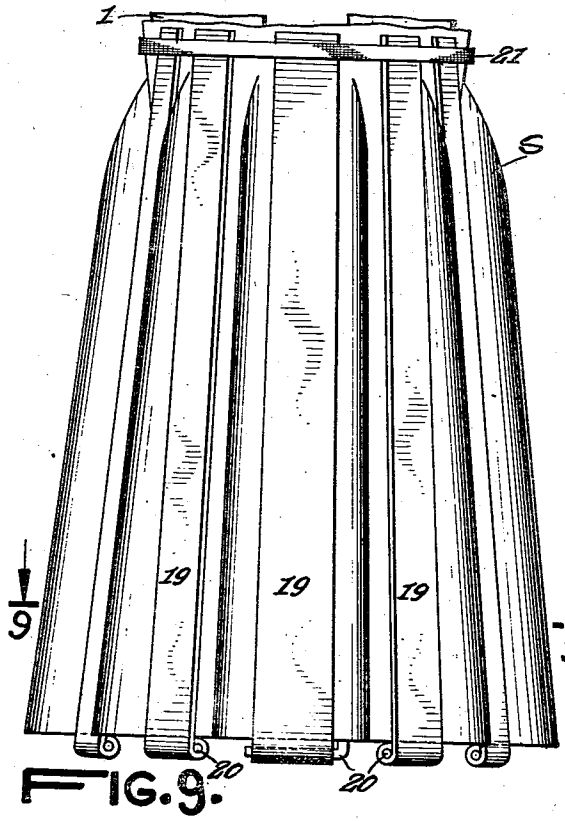


FIG. 9.

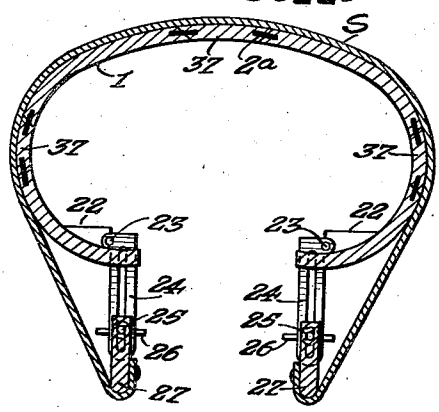


FIG. 11.

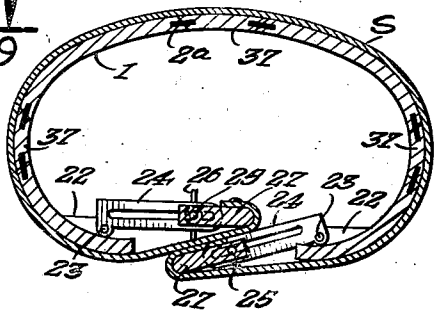


FIG. 12.

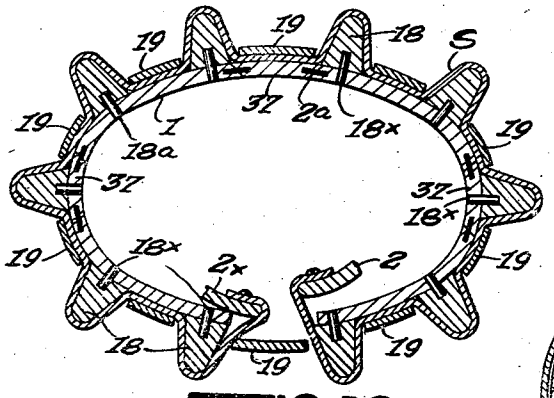


FIG. 10.

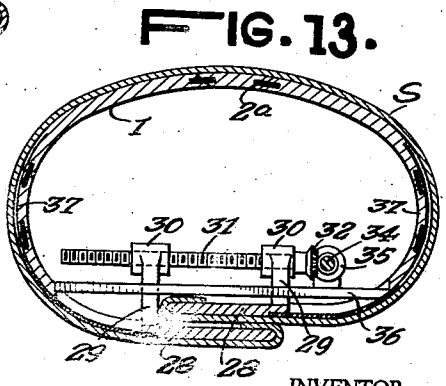


FIG. 13.

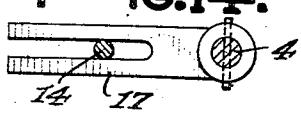


FIG. 14.

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APPARATUS FOR RECONSTRUCTING FUR COATS

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Application June 27, 1940, Serial No. 342,664

4 Claims. (Cl. 223—68)

In the substantial alteration of fur coats to change the same in accordance with new styles, and in many cases in the increase or decrease of a given size, it is customary to follow these steps: measure, cut pattern, make canvas model and fit to customer, remove lining of coat, rip seams, cut to correspond with pattern adding new fur pieces where necessary, operating i. e. sewing pieces together, wetting and nailing pieces to stretch and set, squaring off, flat taping, edge reinforcing pressing, and finishing.

By the present method and apparatus I eliminate the necessity of a pattern and also a canvas model. The saving in cost is very considerable, the time saved being about as follows:

	Per cent elimination
Operating	50 to 80
Cutting	35 to 75
Taping	75 to 90
Nailing	50 to 75
Finishing	15 to 35
Pressing seams	50 to 80
Ripping up or tearing apart	50 to 90
Squaring-off	75 to 90

The presently practiced procedure of this work is to first take the measurements and from the measurements to draft the pattern. Then from this pattern a canvas model is made, which requires one-half to one and one-half hours' time to make and the material cost of which is between 50¢ to 75¢. The rest of the process requires approximately the following time:

Rip-up	From ¾ to 1½ hours for a thorough job.
Nailing	From 2 to 5 hours.
Cutting	From 2 to 5 hours, depending on material.
Operating	From 2 to 4 hours.
Finishing down	From 1½ to 2½ hours.
Pressing seams	From 5 to 15 minutes.
Taping	From 2½ to 4½ hours.
Squaring off	From ½ to 1½ hours.
Operation (machine tape)	Approximately 30 minutes.

The method and apparatus will be described with reference to the accompanying drawings, in which:

Figure 1 is a view in elevation and partly in dotted lines showing an embodiment of apparatus for carrying the method into effect, the apparatus carrying a fur coat from which the collar and sleeves have been removed and

Figure 2 is a vertical section on the line 2—2, Figure 1.

Figure 3 is a transverse section on the line 3—3, Figure 1.

Figure 4 is a vertical section on the line 4—4, Figure 2, looking in the direction of the arrows.

Figure 5 is a fragmentary vertical section similar to Figure 2, but showing the position of one stretch board and connected parts when the board is moved to the position of Figure 6.

Figure 6 is a horizontal section on the line 6—6, Figure 4.

Figure 7 is an enlarged detail view of the stretcher board adjusting means partly in vertical section.

Figure 8 is a fragmentary vertical section on the line 8—8, Figure 4.

Figure 9 is a view in elevation of the lower portion of the apparatus with a coat skirt thereon over kyle strips and held by presser plates.

Figure 10 is a horizontal section on the line 9—9, Figure 9.

Figure 11 is a horizontal sectional view taken at the same position as Figure 6, but showing a modified form of stretcher board adjustment in open position holding a coat preliminary to stretching.

Figure 12 is a view similar to Figure 11, with the coat in stretched position.

Figure 13 is a view similar to Figure 11, showing a modified form of stretcher board adjustment.

Figure 14 is a detail view, in plan, of the forked worm bracket guide.

Referring to the drawings which show apparatus capable of carrying out my method, I have shown at 1 a hollow form open at its front and which may be constructed of sections connected by pegs 2a or other connecting means so that by separating the sections and inserting supplementary wedge-shaped sections of different widths, the size of the form may be varied at will.

At the open front of the form are two adjustable stretcher boards 2, 2x, and in the structure of Figures 1 to 8 inclusive, these boards are transversely curved, board 2 being carried by a plurality of arms 3 rotatable about a supporting shaft 4. Shaft 4 may at its upper end be engaged by a cup-like member 5 carried by the form 1 and the form may be further supported by shaft 4 through the intermediary of one or more arms 6, each arm at one end being secured to the form and at its opposite end having an apertured box 6x receiving the shaft,

as shown in Figures 2 and 5. Shaft 4 may rotate within an axial seat formed in a standard 7 as shown in Figure 2.

Like stretcher board 2, stretcher board 2x is rotated on shaft 4 through the intermediary of a plurality of supporting arms 9. In the present embodiment, the device is provided with upper and lower sets, each of two supporting arms 3 and 9, and to each arm of the appropriate set is affixed a threaded sleeve 10. The sleeves 10 of each set receive a horizontally disposed threaded shaft 11, the latter carrying a worm wheel 12 which is engaged by a worm 13 on an adjusting shaft 14. Shafts 11 and 14 are mounted in suitable apertures formed in a bracket 15.

As shown more particularly in Figures 5, 6 and 7, shaft 14 is received within spaced fork members 17 held in fixed position upon shaft 4 and adjusting shaft 14 at its lower end carries an operating handle 18 by which the said shaft may be rotated.

Rotation of shaft 14 will effect rotation of threaded shaft 11. The opposite sections of said shaft are reversely threaded so that its rotation will cause movement of sleeves 10 toward and from each other, in accordance with the direction of rotation, and hence, will move the stretcher boards 2, 2x, toward and from each other. In such movement shaft 14 and its immediately connecting parts will move relatively to the forks 17 and will be guided thereby.

The method of connection between the arms 3, 9 and the sleeves 10 is shown in Figure 8, wherein one of the arms, to wit, number 3, is forked to embrace sleeve 10 and is pivotally connected to the latter by the pivot studs 10x.

The skirt portion of the form 1 may be provided with a series of longitudinal rows of apertures to receive pegs projecting from kyle members 18, the pegs being shown at 18x, so that two or more kyles may be positioned to conform with desired skirt flares, gathers or gores, and, at the same time, the skirt area may be stretched through the action of such members as presser plates 19 disposed over the skirt, which is indicated at S, Figures 9 and 10. The presser plates may be held down by any suitable means. For example, they may be curled at their lower ends to fit upon angularly extending pivot members 20 and their upper ends may be held by an encircling clamp band 21. Members 20 may be so held by the form as to be swung forwardly and backwardly by pivotal action for convenient insertion and removal of the presser plates.

In the structure of Figures 11 and 12 at each side of the open front of the form 1, at the top and bottom of the stretcher board position, are placed supporting blocks 22 for pivot members 23, each pivot member passing through the aperture of one of two swinging bracket members 24, each bracket member being formed with a slot for receiving a stud such as that indicated at 25, the end of the stud which may be threaded, receiving a thumb nut or equivalent tightening member. The threaded studs are carried by stretcher boards 27, an initial position of the stretcher boards being shown in Figure 11 and a final and stretching position being shown in Figure 12.

In the structure of Figure 13, each stretcher board 28 is carried by one of two bracket arms 29, each arm having an internally threaded sleeve 30 operatively connected to a screw 31 having at one end of a bevelled gear 32 engaging a bevelled pinion 33 of an adjusting shaft 34. Shaft 34 is rotatable in the bearing boss of a bracket arm 35 carried by a bar 36 which, in practice, will be forked to embrace the bracket arms 29 so that the latter will slide between the arms of the fork. Rotation of shaft 34 will cause the stretcher boards to be moved relatively to each other. At the open bottom of the form shaft 34 may be provided with a hand wheel and the construction of Figure 13 will be duplicated at spaced points of the form.

In the practice of my method, and assuming that a box type fur coat is to be remodelled into a princess or fitted style, the form is brought to the required size, as by the removal of appropriate wedge-inserts or substitution thereof by inserts of the required widths. These removable inserts are indicated at 37. The lining of the coat, and preferably the collar and sleeves, having been removed, the coat is placed on the form 1 which is narrowed at the waist in accordance with the fitted style and it is also adapted for receiving a flexible strong covering at the waist line to conform the latter with box coat form. Such a supplemental member has not been shown, its use being obvious. The coat will hang loose upon the form except possibly at the skirt area and in accordance with the width thereof. In changing a box coat to a fitted coat, it is necessary to add fur at the skirt area. Therefore, a desired number of kyles will be placed in position to provide the usual gathers or flares. The operator will then by means of longitudinal cuts and usually a horizontal cut, and the removal of fur adjacent them, reduce the waist area in conformity with the form 1 and will, by separation of the fur opposite lines of cut in the skirt area, determine the necessary pieces of fur to be inserted for flaring the skirt.

Thus for the waist area, finishing requires only seaming and reinforcing taping can be added where desired. For the skirt area, measurements of the added fur pieces can be made while the coat is on the form and these pieces may be cut and their accuracy checked by application to the form. The coat is then removed from the form and the pieces seamed in, taping preceding seaming where required. The new areas and any other desired areas may then be wetted and the coat restored to the form.

In a fur coat the fur is turned under and back from neck line to hem at each longitudinal margin of the front to form a substantially straight vertical edge reinforcement generally of a width about ¾–1 inch. The stitching, except at top and bottom, is removed in my method, which provides at each front margin a long narrow pocket to receive one of the stretcher boards. The coat being on form 1, the pockets provided at the front margin receive appropriate stretcher boards as, for example, 2 and 2x, which boards are actuated by rotating handle 18, Figure 2, lying for example, in the position of Figure 6. Handle 18 is then operated to rotate shaft 14 and by the operating members above described the stretcher boards are moved toward each other. In the case of an overlap of the coat margins at the front the boards will move toward each other and then overlie, for example, as in the position of Figure 13. When the desired overlap is secured, the wet fur sections will be stretched tightly upon the form. The coat may then be left on the form until the stretched section is set. When kyles are used, presser plates 19 will not be applied until the stretcher boards have been moved to final

position or approximately so, and at the back and side areas of the skirt the fur may be drawn up under toward the front until it lies tightly over the back and side kyles and loosely over the front kyles or part of them, the final movement of the stretcher boards taking up any excess slack and the application of the stretcher plates 19 completing the stretching action.

In alteration of a fitted or "princess" coat to a box coat, it is generally necessary to remove fur from the skirt area and it is necessary to add fur to the waist area. The form is prepared by tacking or otherwise securing a sheet of strong flexible material as, for example, fibre board, around the back and partly to the side of the form so as to produce the box shape. Vertical cuts are then made in the back waist area of the fitted coat, and one or more horizontal cuts, if desired, and the coat is placed upon the form, the stretcher boards being placed in the front margin "pockets" of the coat and operated to bring the margins to the proper position, either meeting or overlapping, as required. This will produce gaps in the back of the coat which must be filled in with fur. Measurements may quickly and accurately be made for providing the necessary fur pieces to be added and the pieces may be checked as to final dimensions while the coat remains on the form. The coat may then be removed from the form and the pieces seamed in, taping preceding the seaming where required. The new areas or the entire section is then wetted, the coat restored to the form, stretched by means of the stretcher boards, set by partial or complete drying, and then removed for finishing.

The above illustrations are sufficient to show the wide adaptability of my method to all of the major alterations required. The method is adapted to save substantial losses which are repeatedly incurred by fur coat dealers having stock surplus at the end of a given season followed by changes in style at the beginning of the new season which has heretofore necessitated unloading coats at very small or no profit, or even at a loss, to make place for new style coats. My method permits the economic remaking of these coats. My method also enables a greatly increased alteration of old coats by the owners thereof. For example, a customer of a shop may have a coat two years old and which is out of style. However, with the old method of restyling the cost of remaking the coat is prohibitive. My new method by reason of its saving in time and cost will enable the change of styles from year to year and will still enable the furrier to make a larger percentage of profit than he does today by reason of a greater number of coats which will be remade in accordance with the new styles.

Having described my invention, what I claim and desire to secure by Letters Patent, is as follows:

1. Apparatus for reconstructing fur coats comprising a hollow form open at its front, a pair of stretcher boards within the form and accessible from the open front thereof, the boards extending longitudinally of the form, each stretcher board being adapted for attachment to a margin of the cost body at a front longitudinal edge thereof, a plurality of sets of holding members for said stretcher boards, means common to said sets for simultaneously moving the boards of each set toward and from each other, and means for rigidly supporting the form during said movement of the stretcher boards.

2. Apparatus for reconstructing fur coats, comprising a hollow form open at its front, a pair of stretcher boards within the form and accessible from the open front thereof, the boards extending longitudinally of the form, and one board inset relatively to the other, each stretcher board being adapted for attachment to a margin of the coat body at a front longitudinal edge thereof, and means for moving the boards toward and from marginal overlap thereof.

3. In apparatus for reconstructing fur coats, constructed in accordance with claim 2, in combination with a plurality of kyle members and means for removably securing the kyle members in spaced relation upon the hollow form.

4. Apparatus for reconstructing fur coats constructed in accordance with claim 2 in combination with presser plates and means for movably holding the same upon the hollow form, in combination with means for applying pressure to the plates.

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