

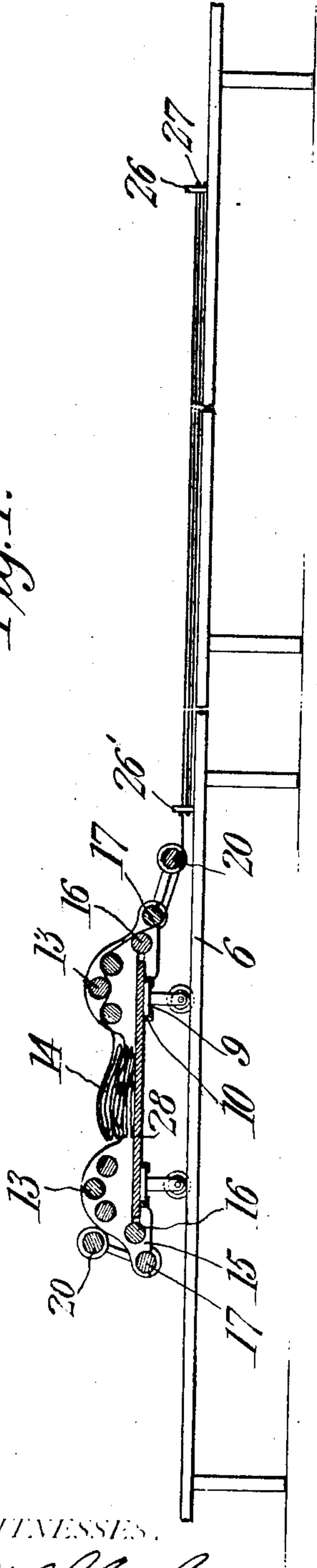
No. 879,551.

PATENTED FEB. 18, 1908.

T. S. JOHNSON.
CLOTH LAYER.

APPLICATION FILED APR. 20, 1907.

Fig. 1.



WITNESSES.

E. H. Smith
J. H. McKen

Fig. 2.

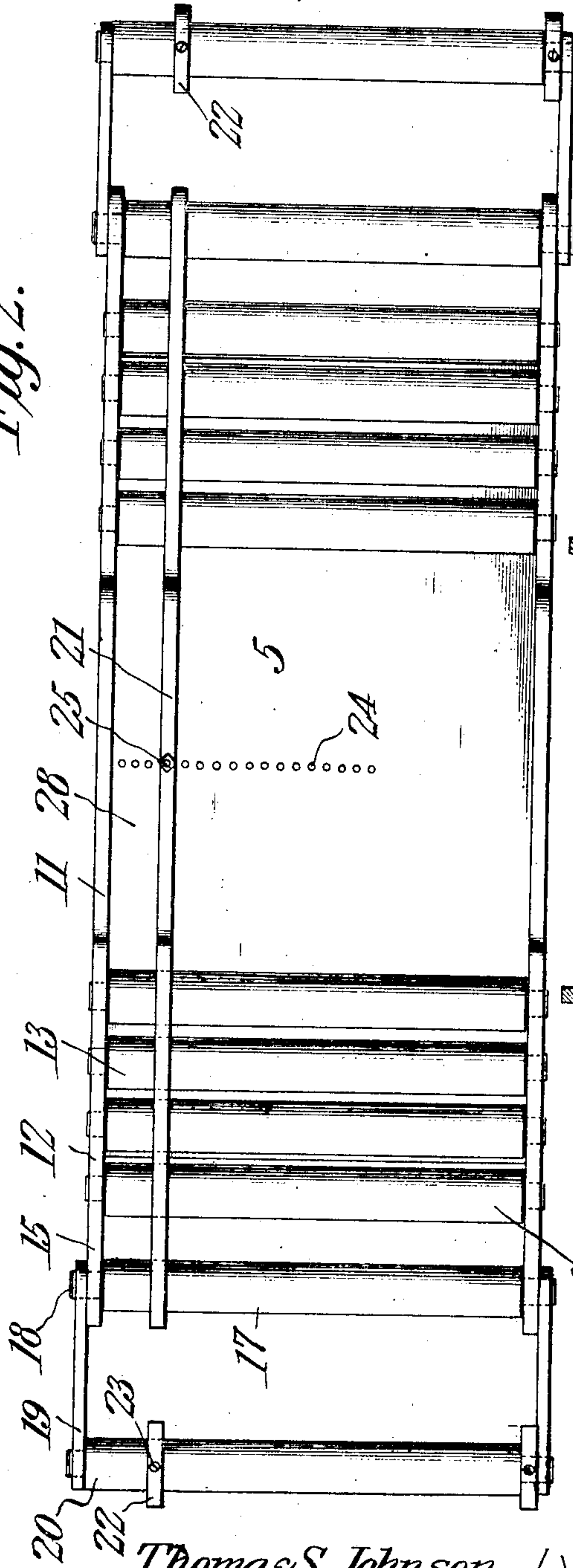


Fig. 3.

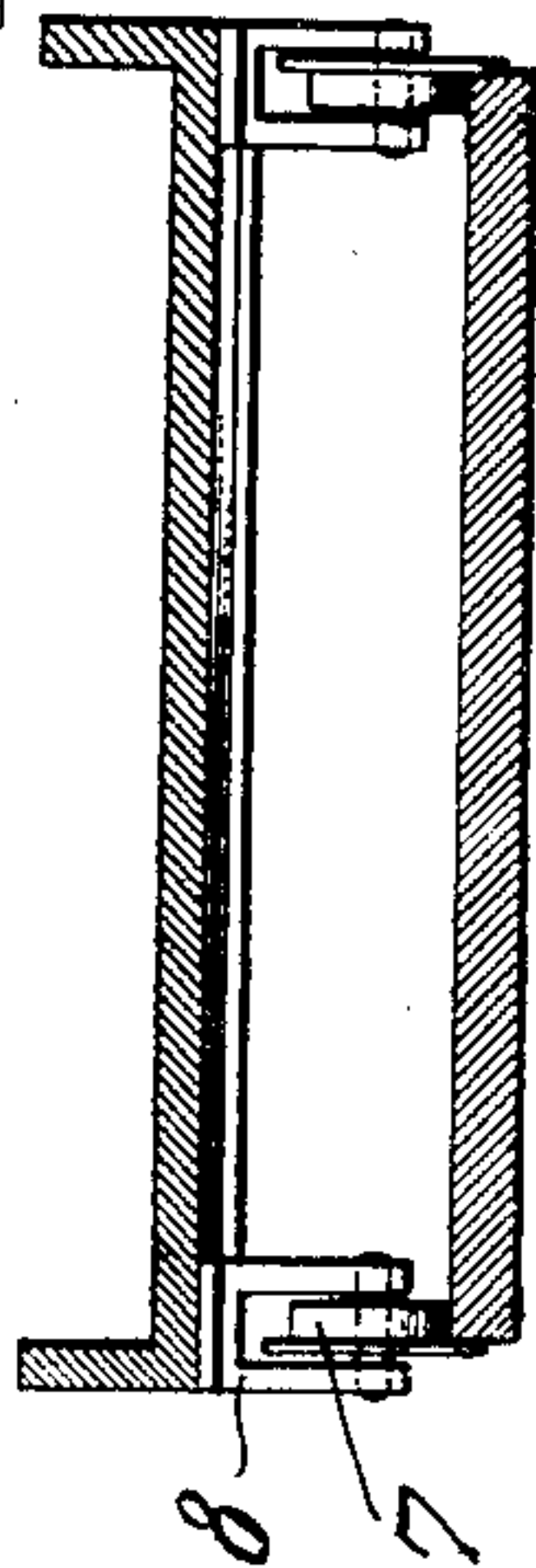
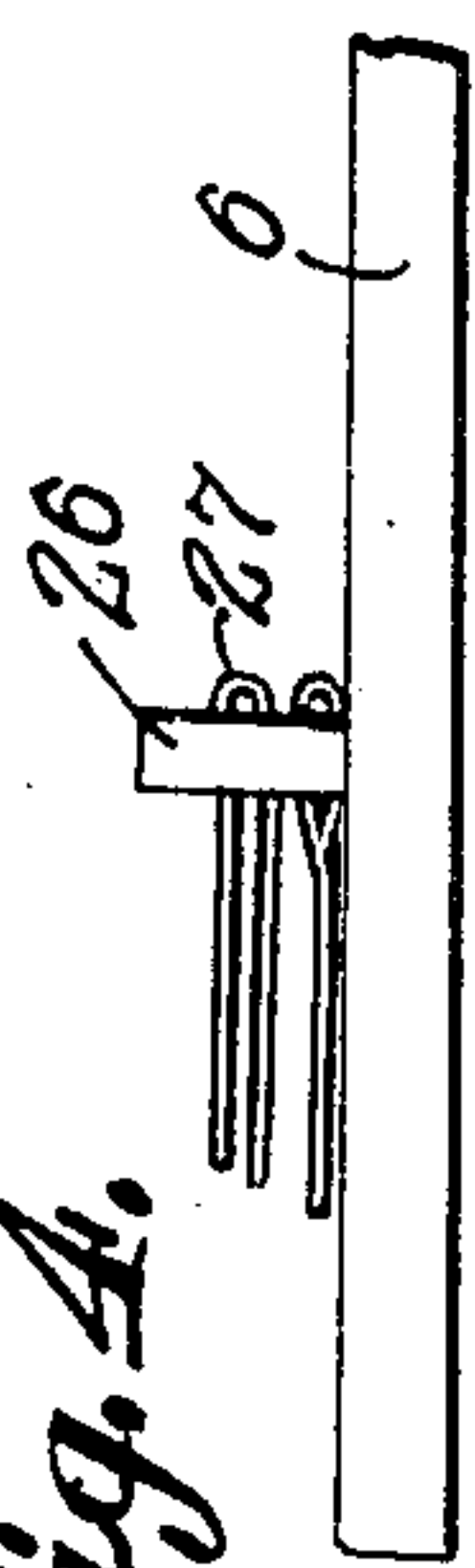


Fig. 4.



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THOMAS S. JOHNSON, OF BLUEFIELD, WEST VIRGINIA.

CLOTH-LAYER.

No. 879,551.

Specification of Letters Patent.

Patented Feb. 18, 1908.

Application filed April 20, 1907. Serial No. 369,298.

To all whom it may concern:

Be it known that I, THOMAS S. JOHNSON, a citizen of the United States, residing at Bluefield, in the county of Mercer and State of West Virginia, have invented a new and useful Cloth-Layer, of which the following is a specification.

This invention relates to cloth laying machines of that general class especially designed for use in factories, mills and similar places for folding cloth into layers of uniform length.

The object of the invention is to provide a movable car or carriage having tension rollers mounted for rotation thereon and between which the cloth or fabric is drawn and folded into equal lengths on a supporting table as the carriage travels back and forth on said table.

A further object is to provide a gage capable of being adjusted laterally of the car or carriage to accommodate cloth of different widths and means for locking the gage in adjusted position.

A further object is to provide a gravity actuated wheel or roller adapted to bear against the successive layers of cloth and thus prevent the same from wrinkling when laying or folding the cloth.

A further object is to provide a car or carriage adapted to support the cloth or fabric to be folded, said cloth being fed through the tension rollers at either end of the carriage.

Further objects and advantages will appear in the following description, it being understood that various changes in form, proportions and minor details of construction may be resorted to within the scope of the appended claims.

In the accompanying drawings forming a part of this specification: Figure 1 is a longitudinal sectional view of a cloth layer machine constructed in accordance with my invention showing the same in position on a support or table. Fig. 2 is a top plan view of the machine detached. Fig. 3 is a transverse sectional view. Fig. 4 is an enlarged side elevation of a portion of the table showing the manner of placing the rods in position between the folds of the fabric.

Similar numerals of reference indicate corresponding parts in all of the figures of the drawings.

The improved machine forming the subject matter of the present invention includes a car or carriage 5 mounted for travel on a table or support 6 and provided with depending wheels 7, the flanges of which bear against the opposite longitudinal edges of the table and serve to guide the carriage in its forward and backward movement.

The wheels 7 are mounted for rotation in suitable brackets 8 having their upper ends provided with laterally extending flanges 9 which engage corresponding guide flanges 10 secured to and extending transversely across the bed of the carriage.

Secured to the bed of the carriage or car are oppositely disposed side walls 11 provided with spaced enlargements 12 in which are journaled a plurality of tension rollers 13 which bear against the cloth or fabric 14.

Journaled in the extensions 15 and preferably disposed in alinement with the bed plate are rollers 16 which serve to guide the cloth beneath the carriage as the latter is moved back and forth over the table in the act of folding the cloth into layers, as will be more fully explained hereinafter.

Spaced from the rollers 16 and journaled in the free ends of the extensions 15 are traction rollers 17 having their opposite ends reduced at 18 to form terminal bearings for suitable rods or links 19 in which are pivoted gravity actuated rollers 20 adapted to bear against the successive layers of cloth and thus prevent the same from wrinkling during the folding operation.

Extending longitudinally of the carriage is a plate or cloth gage 21 preferably of the same size and shape as the end walls 11 and provided with openings for the reception of the rollers 13, 16 and 17, said gage being adjustable laterally of the carriage thereby to accommodate cloth of different width.

The gravity actuating rollers 20 are provided with spaced gage collars 22 which constitute traction wheels and which may be adjusted laterally of the rollers 20 in alinement with the gage 21, said collars being locked in adjusted position by means of screws or similar fastening devices 23.

As a means for locking the gage 21 in adjusted position, the bed of the machine is formed with a plurality of spaced perforations or openings 24 adapted to receive a bolt

or similar fastening device 25 which extends through the gage 21 and engages the perforations, as shown.

Extending vertically from the table 6 are spaced standards or supports 26 and 26' between which the layers of cloth are folded, there being suitable pins or rods 27 interposed between the adjacent layers of cloth and bearing against the standards 26 for holding the cloth in folded position.

The standards 26 and 26' are spaced inwardly from the adjacent longitudinal edges of the table 6 and are preferably of less height than the bed of the carriage so as to permit the carriage to travel over the same without interfering with the standards.

Attention is here called to the fact that the brackets 8 are adjustable transversely of the carriage to accommodate tables of different widths, said brackets being also removable so that the wheels may be reversed and used on ordinary tracks, if desired.

In folding or laying the cloth the latter is placed on the bed plate 28 and one end thereof threaded under and over the tension rollers 13 at one end of the machine and thence over the adjacent roller 16 and under the rollers 17 and 20 the free end of the cloth being fastened in any suitable manner to the table at the rear standard or support 26. The carriage is then moved longitudinally of the table until the same passes the opposite standard 26' after which one of the rods 27 is placed on top of the cloth at the rear of the standard 26' and the carriage caused to travel in the direction of the standard 26 to form a second layer or fold, one of the rods 27 being placed on the cloth of the standard 26', as best shown in Fig. 1 of the drawings. The carriage is moved back and forth over the table in this manner until the desired quantity of cloth has been laid or folded.

The rollers 13 serve to maintain the cloth under the desired tension during the folding operation while the traction rollers 20 by engagement with the successive layers of cloth prevent the same from wrinkling and holds the cloth flat against the table during the folding operation. Attention is here called to the fact that the tension rollers 13 are disposed at each end of the carriage so that the cloth may be laid from both ends of the table. It will also be observed that the rollers 20 being pivotally mounted on the carriage, the same may be elevated when passing the standards, and that either roller may be swung upwardly to inoperative position when the other is in use.

While it is preferred to support the pile or roll of cloth to be folded on the carriage, it is obvious that said cloth may rest on the table or other suitable support and the free end thereof threaded through the rollers at either end of the carriage without departing from the spirit of the invention.

From the foregoing description it will be seen that there is provided an extremely simple, inexpensive and efficient device admirably adapted for the attainment of the ends in view.

Having thus described the invention what is claimed is:

1. In a cloth laying machine, a carriage having means for supporting the cloth to be folded, and a gage extending the entire length of the carriage and adjustable transversely of the same.

2. In a cloth laying machine, a carriage including a bed plate provided with depending traction wheels and having spaced side walls, tension rollers journaled in the side walls at the opposite ends of the carriage and arranged in semi-circular form, a roller disposed in alinement with the bed plate at each end thereof, auxiliary rollers spaced from the bed plate and extended below the latter, traction rollers pivotally mounted on the opposite ends of the machine and adapted to bear against the cloth to be folded, and a longitudinal gage bar adjustable laterally of the carriage and having openings formed therein for the reception of the tension and auxiliary rollers, respectively.

3. In a cloth laying machine, a carriage having spaced tension rollers adapted to engage the cloth to be folded, a gage extending longitudinally of the carriage and slidably mounted for lateral movement on said rollers, and a traction roller pivotally mounted on one end of the carriage.

4. In a cloth laying machine, a reversible carriage, tension rollers mounted for rotation on the carriage and arranged in substantially semi-circular form, traction rollers pivotally mounted on the opposite ends of the carriage, and a longitudinal gage adjustable laterally of the carriage and having openings formed therein for the reception of the tension rollers.

5. In a cloth laying machine, a reversible carriage having a bed plate and provided with oppositely disposed side walls, tension rollers journaled in the side walls for engagement with the cloth, traction rollers pivotally mounted on the opposite ends of the carriage, a longitudinal gage adjustable laterally of the carriage and provided with openings for the reception of the tension rollers, and means for clamping the gage to the bed plate.

6. In a cloth laying machine, a carriage including a bed plate, tension rollers mounted for rotation on the carriage and adapted to engage the cloth to be folded, a traction roller pivotally mounted on the carriage for engagement with the successive layers of cloth, a roller arranged at each end of the carriage and disposed in horizontal alinement with the bed plate, the latter being provided with a transverse row of perforations, a

longitudinal gage adjustable transversely of the carriage and having openings formed therein for the reception of the tension rollers, and a fastening device carried by the gage and engaging the openings in the bed plate for clamping the gage in adjusted position.

7. In a cloth laying machine, a carriage provided with transverse tension rollers arranged in staggered relation and adapted to engage the cloth to be folded, a traction roller pivotally mounted on one end of the carriage, a longitudinal gage adjustable laterally of the carriage and having openings

formed therein for the reception of the tension rollers, a bed plate forming a part of the carriage, means for clamping the gage to the bed plate, and a collar carried by the traction rollers and adapted to register with the gage.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

THOMAS S. JOHNSON.

Witnesses:

CHARLES W. THORNTON,
CLARKE V. FOLAND.