

A. H. VAN DEVANDER & J. E. MOORE.

CLOTH LAYING MACHINE.

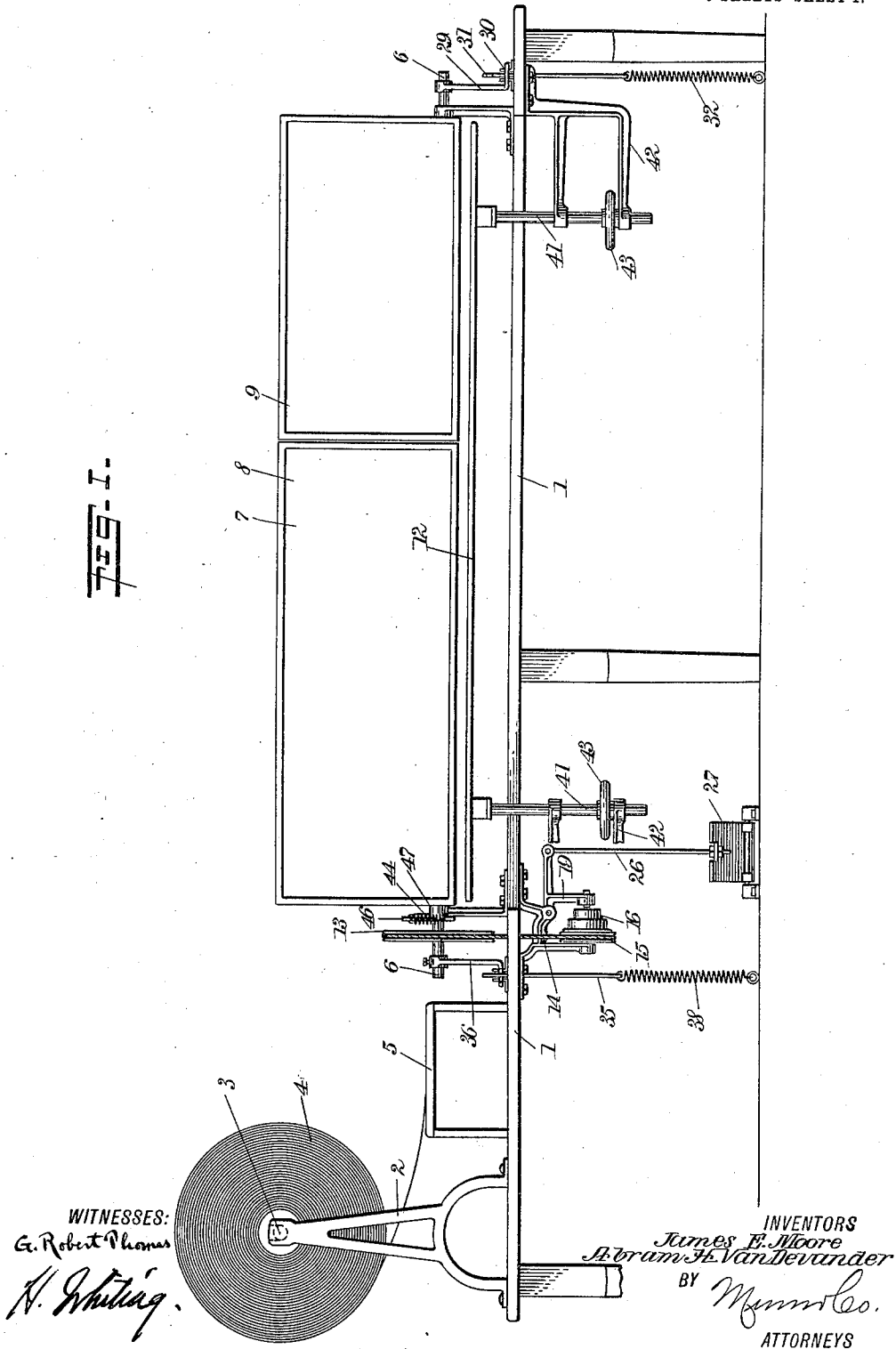
APPLICATION FILED MAY 4, 1911.

1,030,145.

Patented June 18, 1912.

3 SHEETS-SHEET 1.

Fig. 1.



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3 SHEETS-SHEET 2.

FIG. 2.

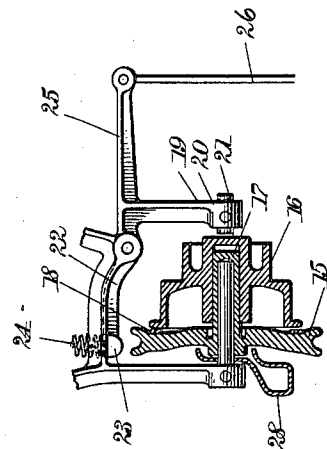
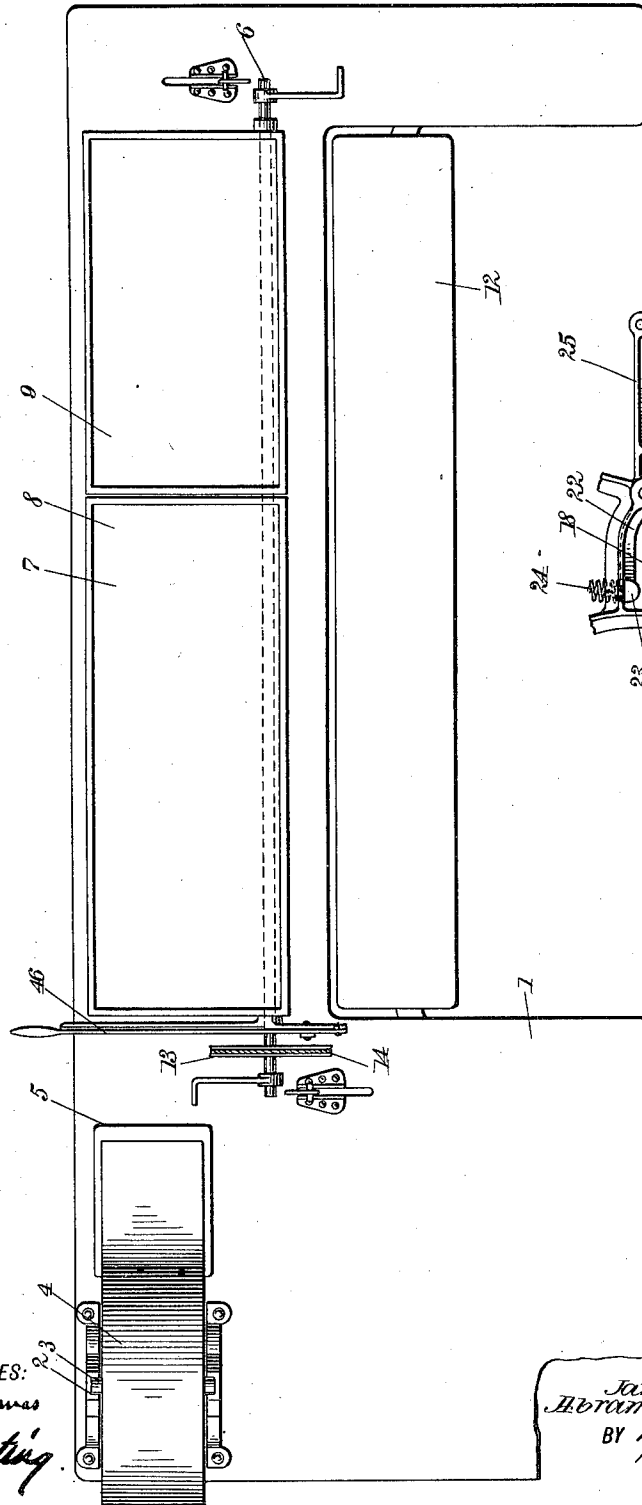


FIG. 5.

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3 SHEETS-SHEET 3.

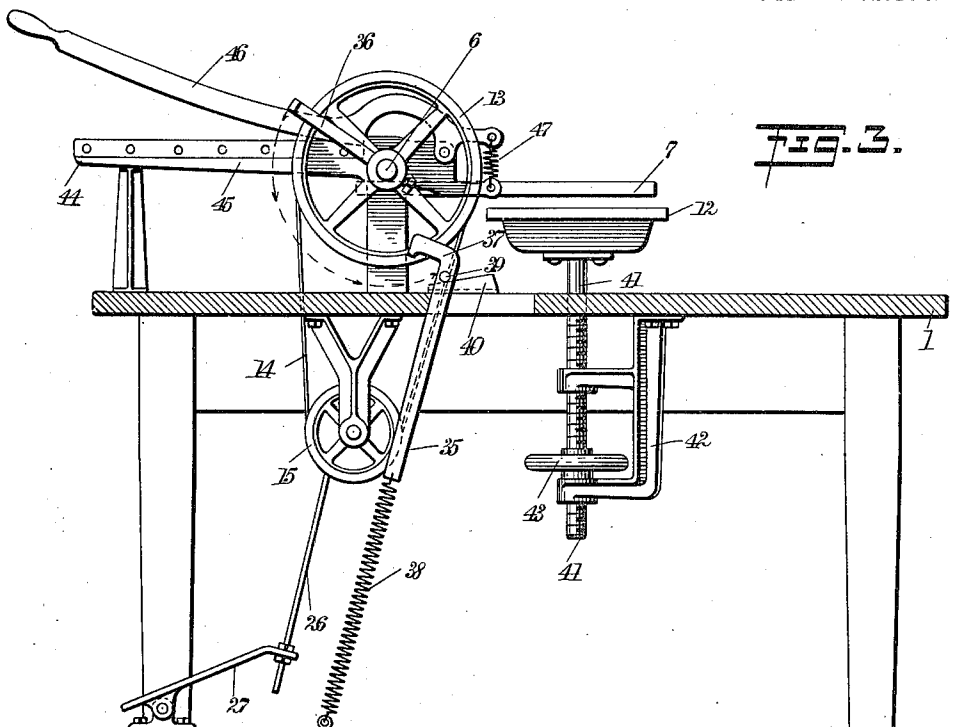


FIG. 3.

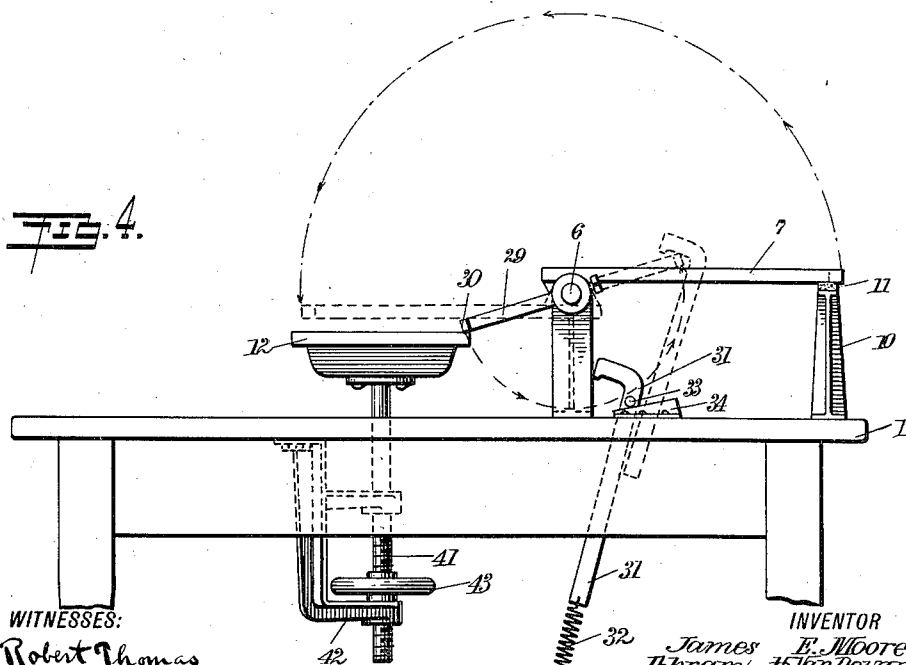


FIG. 4.

WITNESSES:
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UNITED STATES PATENT OFFICE.

ABRAM H. VAN DEVANDER AND JAMES E. MOORE, OF CEDARTOWN, GEORGIA.

CLOTH-LAYING MACHINE.

1,030,145.

Specification of Letters Patent.

Patented June 18, 1912.

Application filed May 4, 1911. Serial No. 624,988.

To all whom it may concern:

Be it known that we, ABRAM H. VAN DEVANDER and JAMES E. MOORE, both citizens of the United States, and residents of Cedartown, in the county of Polk and State of Georgia, have invented a new and Improved Cloth-Laying Machine, of which the following is a full, clear, and exact description.

10 This invention relates to a new and improved machine for laying cloth in stacks previous to cutting out simultaneously a plurality of identical patterns from superposed layers of cloth.

15 An object of this invention is to provide a cloth-laying machine which will stack superposed layers of cloth in predetermined lengths in a smooth and even manner, with the least possible effort on the part of the operator.

20 A further object of this invention is to provide a cloth-laying machine which will be simple in construction, inexpensive to manufacture, easily operated, and readily adjusted.

25 A still further object of this invention is to provide a cloth-laying machine which can be used to lay different lengths of cloth and stack them by hand or power, in a pile on an adjustable cloth receiving member.

30 These and further objects, together with the construction and combination of parts, will be more fully described hereinafter and particularly set forth in the claims.

35 Reference is to be had to the accompanying drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views, and in which—

40 Figure 1 is a side view in elevation showing the stacker in a vertical position, midway between the limits of its operative movement; Fig. 2 is a top plan view; Fig. 3 is a vertical section; Fig. 4 is an end view in elevation, taken from the opposite side to that of Fig. 3; and Fig. 5 is a detail section of the clutching mechanism for connecting the device to the power-operating means.

50 Referring more particularly to the separate parts of this invention as embodied in the form shown in the drawings, 1 indicates a table, which may be of any suitable char-

acter and material, and is adapted to support, adjacent one end thereof, a cloth-bolt or roll-holder 2, which in this instance is shown in the form of spaced brackets, having a shaft 3 journaled therein. As shown in this case, the cloth may be in the form of a roll 4, or in the form of a bolt.

60 Disposed below and adjacent the cloth-roll 4, there is provided a cloth-rest 5, which is in the form of a supplementary table, and is adapted to receive the end of the cloth being unwound from the roll or bolt, as illustrated in Figs. 1 and 2.

Rotatably mounted on the table 1 in any suitable manner, there may be provided a shaft 6, to which may be adjustably secured a stacker 7. This stacker is preferably in the form of a frame having a wire-screen surface, and may be divided into a plurality of sections 8 and 9, which can be detachably connected to the shaft 6, so that either a portion of the stacker or the whole of the stacker can be utilized to pile strips of cloth of different lengths. The stacker 7 is supported in an upright horizontal position, as indicated in Fig. 4, by one or more rests 10, having a buffer 11 on the upper surface thereof, which may be of any suitable material, such as felt, rubber or the like. The stacker is adapted to be swung from the horizontal upright position indicated in full lines in Fig. 4 to the dotted horizontal position indicated by the dotted lines in Fig. 4 and by the full lines in Fig. 3, corresponding to a position superposed above the cloth receiving member 12, on which the strips of cloth are adapted to be stacked or piled, by the rotation of the shaft 6. This shaft may be rotated either manually or by power. In this instance, the shaft 6 is shown as being provided with a pulley 13, over which extends a flexible belt or driving cord 14, which also passes over a drive pulley 15. Any suitable type of motor may be used for driving the pulley 15, and in this instance, a step pulley 16 is shown, which represents the motive means. The step pulley 16 may be slidably mounted on an extension hub 17 of the pulley 15, and adapted to be brought in frictional contact with the pulley 15 to form a clutching arrangement connecting the pulley 15 and the pulley 16 in driving relation. For the purpose of in-

creasing the friction between the contacting surfaces of the pulleys 15 and 16, one of them may be provided with a suitable layer 18 of leather or the like. The movement of the step pulley 16 may be caused by a shifter 19, contacting with the lower end thereof. This shifter is shown in the form of a double bell crank lever, with an arm 20 having a head 21, which engages the step pulley 16, and an arm 22 formed with a brake shoe 23, whereby when the pulleys 15 and 16 are out of frictional contact, the brake shoe 23 will be in engagement with the pulley 15, stopping the rotation thereof. This brake-shoe 15 may be forced into contact with the pulley 15 automatically by a spring 24. The shifter 19 is also provided with an arm 25, connected adjustably by a link 26, to a treadle 27, which is pivotally mounted adjacent the front of the table 1, where it can be readily accessible to the operator's foot.

An oiling cup 28 may be provided for the pulley 15, to make it smooth and easy-running. It will be seen that when the pulley 16 is shifted into frictional engagement with the pulley 15, they will be clutched together, so that the pulley 15 will be rotated, thereby rotating the shaft 6, and swinging the stacker from the position indicated in full lines in Fig. 4 to the position indicated in dotted lines in the same figure. In order to bring the stacker back to its original position, there is provided, adjustably mounted on the shaft 6, a dog 29, which has a projecting lug 30 so as to readily engage a hook 31, movably mounted in the table 1 and connected adjacent one end to a retractile spring 32, the other end of which is fixedly secured in any well known manner.

For the purpose of limiting the downward motion of the hook 31, it is provided with projecting lugs 33, which are adapted to engage sliding inclined gibs 34 on the table 1. It will be seen that when the stacker is swung from its full-line position to its dotted-line position in Fig. 4, the dog 29 will engage the hook 31, moving it up against the tension of the spring 32, so that when the power drive is cut off, the spring 32 will automatically return the stacker to its original position. It will be seen that the spring 32 is merely necessary to bring the stacker back beyond the dead center, where it will fall by gravity to its original position. In order that the stacker may not come back with a bang, there is provided a yielding stop 35, which, however, only comes in action for the last quarter of a revolution on the return of the shaft 6 to its original position. This stop is similar to the returning mechanism, and there is provided a dog 36, adjustably secured to the shaft 6, projecting in the opposite direction

from the dog 29 and adapted to engage a hook 37 secured to one end of a retractile spring 38. This hook 37 is likewise limited in its downward motion by lugs 39 engaging inclined sliding gibs 40.

The cloth receiving member 12 may be adjustably secured by being provided with screw-threaded pedestals 41, which engage in openings in brackets 42, and are locked in any adjusted position by hand-wheel nuts 43.

For the purpose of cutting the cloth after it is drawn over the stacker, there is provided a cutter 44, which may be of any suitable structure, and is shown in the form of a base 45, with a knife 46 pivoted at one end in juxtaposition to said base 45, and normally held elevated by a spring 47. This knife may be provided with a handle at the opposite end from the spring 47, whereby the operator can readily manipulate it.

The operation of the device will be readily understood when taken in connection with the above description. The strip of cloth is drawn across the stacker 7, and laid thereon the desired length, and cut off by the actuation of the knife 46. Each strip may be separately piled onto the cloth receiving member 12, or a number of strips may be accumulated on the stacker and then transferred to the cloth receiving member 12. At any rate, when it is desired to transfer the cloth on the stacker to the cloth receiving member, the operator presses on the treadle 27, clutching the pulley 15 and the motor indicated by the step pulley 16, when the shaft 6 will be rotated. During the last portion of the rotation of the shaft 6, the dog 29 will come in engagement with the hook 31, extending the spring 32 so that after the cloth has been deposited on the cloth receiving member 12 by the inversion of the stacker 7, and the driving connections released by the operator removing his pressure on the treadle 27, the spring 32 will act as a retriever, and return the stacker to its original position. The retriever, however, does not act for the complete rotation of the stacker, but only enough to move it beyond the dead center, so that it will fall by gravity. During the last portion of the return revolution of the stacker, the force of its fall is decreased by the hook 37 of the stop 35 catching the dog 36, and permitting the stacker to resume its normal horizontal position, under the retarding influence of the spring 38. If there is any shock left in the fall of the stacker, this will be absorbed by the buffer 11. If the pile of cloth laid on the cloth receiving member 12 becomes too high, the level of the cloth receiving member can be lowered by manipulating its adjustable connection with the table 1.

It will thus be seen that there is provided a simple and efficient device, which will

pile cloth in a smooth, even manner, previous to cutting a multiplicity of patterns from the same.

While we have shown one embodiment of our invention, we do not wish to be limited to the specific details thereof, but desire to be protected in various changes, alterations and modifications which may come within the scope of the appended claims.

Having thus described our invention, we claim as new and desire to secure by Letters Patent:—

1. The combination with a cloth-holder, of a swinging cloth-stacker adapted to receive a strip of cloth laid out in its extended position, and a cloth receiving member disposed to one side of said stacker and adapted to receive the strip of cloth from said stacker, said stacker being swingingly mounted, so as to deposit said strip of cloth on said receiving member in its extended position after said strip of cloth has been laid on the stacker:

2. The combination with a cloth-holder, of a swinging cloth-stacker adapted to receive a strip of cloth laid out in its extended position, and a cloth receiving member juxtaposed to said stacker and adapted to receive the strip of cloth from said stacker, said stacker being swingingly mounted, so as to deposit said strip of cloth on said receiving member in its extended position after said strip of cloth has been laid on the stacker, said cloth receiving member being adjustably mounted so as to vary its position relative to said stacker.

3. The combination with a cloth-holder, of a cloth receiving member adapted to receive stretched-out strips of cloth, a pivotally-mounted swinging stacker adapted to receive stretched-out strips of cloth from said holder and adapted to swing to deposit said strips of cloth on said cloth receiving member, and means for swinging said stacker from a receiving position to a position in which it deposits the stretched-out strip of cloth onto said cloth receiving member.

4. The combination with a cloth-holder, of a cloth receiving member adapted to receive a plurality of strips of cloth to be piled in stacks, a swinging stacker for depositing the stretched-out strips of cloth on said cloth receiving member, and a treadle for controlling the swinging movement of said stacker.

5. The combination with a cloth-holder, of a cloth receiving member adapted to receive a series of strips of cloth to form a pile or stack, a stacker swingingly mounted so as to swing from a substantially upright horizontal position to a substantially inverted horizontal position, whereby a strip of cloth deposited thereon from said holder

can be inverted and re-laid onto said cloth receiving member.

6. The combination with a cloth-holder, of a cloth receiving member adapted to receive a series of strips of cloth, and a stacker adapted to receive strips of cloth from said holder, for depositing said strips of cloth on said cloth receiving member, said stacker comprising a plurality of sections capable of movement relative to each other to vary the active area of said stacker.

7. The combination with a cloth receiving member for receiving a plurality of strips of cloth to be accumulated in a pile or stack of one or more layers, of a stacker for piling said strips of cloth on said cloth receiving member, said stacker being pivoted adjacent one of its side edges, so as to be capable of swinging from a horizontal position with one side uppermost to an inverted position with the other side uppermost, whereby cloth laid on the top of said stacker may be inverted and deposited on said cloth receiving member, and means for swinging said stacker.

8. The combination with a cloth receiving member for receiving a plurality of strips of cloth to be accumulated in a pile or stack, of a movably-mounted stacker for piling said strips of cloth on a cloth receiving member, means for manipulating said stacker, and a retriever for returning said stacker to its normal position.

9. The combination with a cloth receiving member for receiving a plurality of strips of cloth to be accumulated in a pile or stack, of a movably-mounted stacker for piling said strips of cloth on a cloth receiving member, means for manipulating said stacker, a retriever for returning said stacker to its normal position, and a retarding stop for slowing up the movement of said stacker.

10. The combination with a swinging stacker, of a cloth receiving member for receiving the strips of cloth from said stacker, a motive means, driving mechanism connected to said stacker, and means for connecting said driving mechanism with said motor, said means including a brake adapted to be automatically applied when said mechanism and said motor are operatively disconnected.

11. The combination with a table, of a cloth-holder on said table, a cloth receiving member juxtaposed to said table, a stacker pivotally mounted on said table and adapted to receive strips of cloth from said cloth-holder, a cutter on said table adapted to cut said cloth into strips, means for adjustably supporting said cloth receiving member, means for swinging said stacker, and a spring-controlled member for regulating the movement of said stacker.

12. The combination with a table, of a

shaft rotatably mounted on said table, a
stacker secured to said shaft, a cloth receiv-
ing member adapted to receive the cloth laid
on said stacker, a dog on said shaft, a hook
5 adapted to engage said dog, a spring se-
cured to said hook so as to control the move-
ment of said shaft and said stacker, and
means for rotating said shaft.

In testimony whereof we have signed our
names to this specification in the presence of 10
two subscribing witnesses.

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Witnesses:

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,
Washington, D. C."