

Nov. 15, 1938.

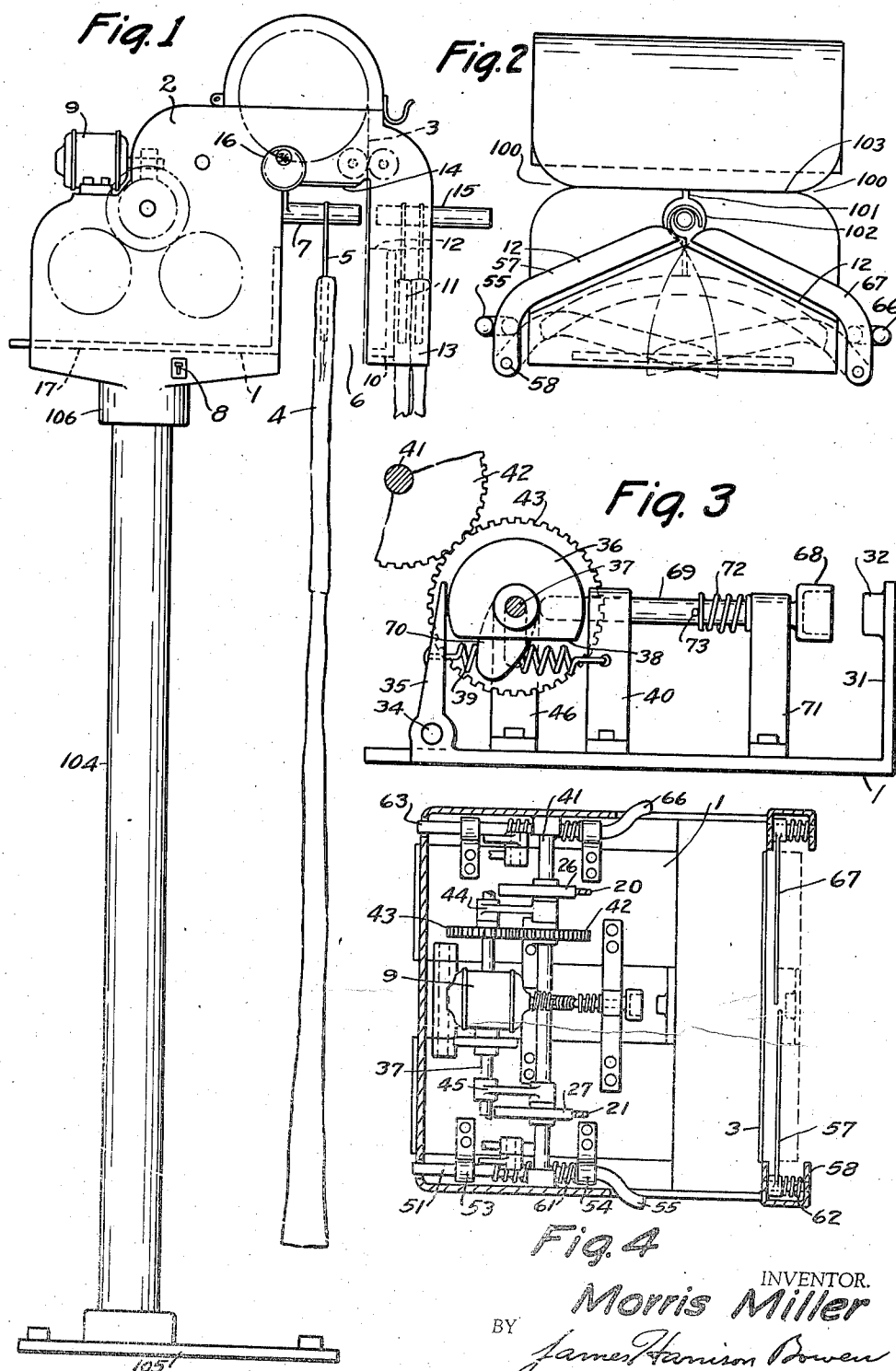
M. MILLER

2,136,703

GARMENT COVER MACHINE

Filed June 15, 1936

2 Sheets-Sheet 1



INVENTOR.
Morris Miller
 BY *James Harrison Bowen*
 ATTORNEY.

Nov. 15, 1938.

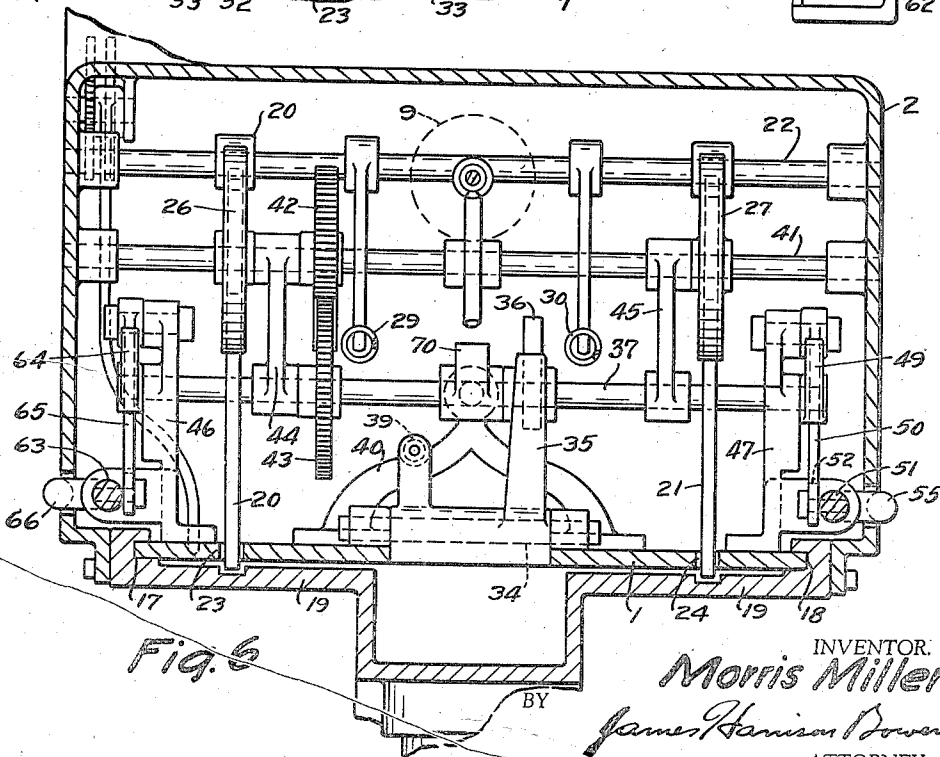
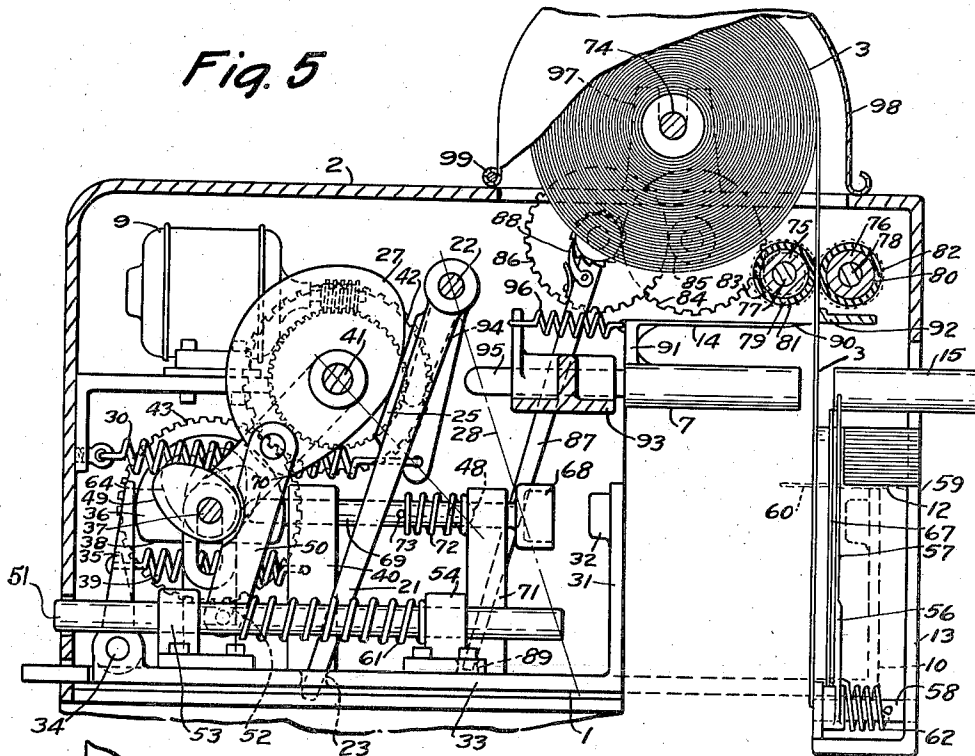
M. MILLER

2,136,703

GARMENT COVER MACHINE

Filed June 15, 1936

2 Sheets-Sheet 2



INVENTOR:

Morris Miller

BY

James Harrison Downer

ATTORNEY.

UNITED STATES PATENT OFFICE

2,136,703

GARMENT COVER MACHINE

Morris Miller, Beonton, N. J.

Application June 15, 1936, Serial No. 85,309

14 Claims. (Cl. 93—2)

The purpose of this invention is to provide an automatic machine for placing a cover over the tops of garments such as dresses, coats, suits, uniforms, and the like, as they are manufactured, to prevent handling the garment by hand any more than necessary.

The invention is a machine in which a garment may be suspended on a hanger, and as the garment is placed therein the machine automatically wraps a cover around the upper end of the garment and secures the ends of the cover together, then expels the garment from the machine with the cover thereon; and the machine also counts each garment as the cover is placed thereon.

In manufacturing plants, garments of this type and particularly dresses are ordinarily covered by a small paper cover which is placed over the shoulder portions, and this cover is preformed so that it is necessary to hold the garment with one hand, the paper in the other, and pass a hook of a hanger upon which the garment has been placed upward through the opening in the paper, and this must be done without permitting the garment to touch the floor, so that with relatively long dresses it is rather difficult for a short girl to place this paper on the dress and, therefore, it has been found desirable to provide means for automatically placing this paper or cover, which may be also made of any material, on the dress or garment automatically, so that it is only necessary for the girl or operator to hang the garment in the machine and then press a button to start the machine.

The object of the invention is, therefore, to provide a machine that automatically folds a garment cover over the garment.

Another object is to provide a device for placing garment covers upon garments with the upper edges thereof rolled instead of creased, providing more clearance for the garment on the inside.

Another object is to provide a machine for placing garment covers on garments which feeds the material forming the cover from a roll.

Another object is to provide a machine for placing garment covers on garments which feeds the material from a roll and in which the material in the roll is cut to a specific form so that a roll of material supplied by the owner of the machine only can be used.

A further object is to provide a machine for placing garment covers on garments in which the garments are counted as covered.

A still further object is to provide a machine

for placing covers on garments which may be used for garments of different types.

And a still further object is to provide a machine for placing covers on garments which is of a simple and economical construction.

With these ends in view the invention embodies a machine supported upon a relatively high stand having a bar upon which the hook of a garment hanger may be placed with a garment suspended thereon, means supplying a strip of paper on the far side of the garment, a pusher adapted to push said garment against said sheet of paper and into a pocket provided therefor, folding blades adapted to fold the paper against the garment, sealing means adapted to crimp the ends of the paper cover together, a counter for counting each time the machine operates, means expelling the garments from the machine, and suitable mechanism for operating the respective parts.

This machine is particularly designed for ladies' dresses, wraps, blouses, shirt waists, misses', childrens', and juniors' dresses, wraps, and coats, however, it may be also used on ladies' coats, and substantially any other garment, such as men's coats and suits, barbers' coats, nurses' uniforms, and the like, and may be also provided to cover the whole garment, and the machine may be also made semi-automatic, so that a lever may be pulled to operate the different parts instead of a motor, or so that a garment may be placed upon a support and a cord pulled to draw the garment up into the cover. It will, therefore, be understood that this device is a machine for placing covers on garments and is designed to eliminate the operation of placing garments in these covers by hand, and the machine may be completely automatic, and parts thereof may be operated by hand, as may be desired.

Other features and advantages of the invention will appear from the following description, taken in connection with the drawings, wherein:

Figure 1 is a front elevation showing the general design of the machine.

Figure 2 is a view looking toward the finish end of the machine with the casing removed, and with the folding arms and paper only shown.

Figure 3 is a detail showing the carriage upon which the operating parts are mounted in the working position with parts omitted and parts broken away, showing only the secondary cam shaft and the rosette forming dies.

Figure 4 is a sectional plan of a machine with parts omitted and parts broken away.

Figure 5 is a cross section through the machine looking from one side thereof, with the side of

the cover broken away. This figure shows an alternate design in which the motor is enclosed in the case.

Figure 6 is a cross section through the machine on a line substantially at the back with the back plate of the cover removed and with the base cut on a section approximately in the center of the machine.

In the drawings the machine is shown as it may be made, wherein numeral 1 indicates the carriage, numeral 2 the cover or case, and numeral 3 the paper.

The machine is constructed so that a dress or the like 4, on a hanger 5, is placed in an opening 6 in the case with the hook of the hanger placed over a rod 7, and as soon as the garment is in place the operator may close a circuit through a button or switch 8 which will start the motor 9, and this will move the carriage 1 over to the position indicated by the dotted lines 10, which will move the dress over to the position indicated by the dotted lines 11, and this will force the dress against the paper 3, and at the same time force the paper into a pocket 12 in the section 13 of the case. As soon as a dress arrives in this position the paper is folded over the upper end of the dress and the ends are secured together. The carriage then returns to the position shown in Figure 5, and as the carriage returns it feeds an additional strip of paper down into one side of the opening 6. The paper is cut by a knife 14 as the carriage starts its original movement. After the dress is covered it remains upon a rod 15 and as the operation is continued the dresses are moved along the rod 15, and this rod may be of any length or may extend to any point. Each time the machine operates it trips a counter 16 so that the counter indicates the number of dresses wrapped.

The carriage 1 which is formed with two plates is slidably mounted in grooves 17 and 18 in a base plate 19 of the case, and this is moved backward and forward by levers 20 and 21 which are pivotally mounted on a rod 22. The lower end of the levers extend through openings 23 and 24 in the carriage 1, and these levers are provided with surfaces 25 against which cams 26 and 27 bear, and as the cams rotate the levers are moved from the position shown in full lines in Figure 5 to the position indicated by the line 28 which moves the carriage to the position indicated by the dotted lines 10. The cam holds the carriage in this position for a certain period of time, and after the different operations have been completed the cams release the levers 20 and 21 and the springs 29 and 30 return the carriage to the position shown. Just as the carriage starts to return, however, a section 31 thereof drops downward out of the inside of the dress cover, and as soon as the carriage returns this part moves back into its original position. The part 31 is provided with a boss 32 at the upper end, and the lower end is connected to a panel 33 positioned between the two plates of the base, and this panel is hinged upon a pin 34 at the rear of the carriage, and the panel is also provided with an extension 35 which extends upward engaging a cam 36 on a shaft 37, and this cam holds the extension 35, the panel 33, and the part 31 in the position shown in Figure 5 until the flat side 38 of the cam turns up and at this time the spring 39, which is attached to the extension 35, and a bearing 40, draws the extension forward, thereby moving the panel 33 and the part 31 downward, and as hereinbefore stated, as soon as

the carriage travels backward, the part 31 will be raised by the cam to the normal position.

The shaft 37 is driven from the shaft 41, upon which the cams 26 and 27 are also mounted, by gears 42 and 43, and the shaft 37 is connected to the shaft 41 by links 44 and 45. The shaft 37 is also mounted in slotted bearings 46 and 47 which permit the shaft to travel downward and then move upward to the position indicated by the dotted lines 48 as the carriage travels.

The shaft 37 continues to rotate with the shaft 41 and after the carriage arrives at the forward position as indicated by the numeral 10, a cam 49 on the shaft 37 engages a lever 50 which is pivotally attached to a rod 51 through a slotted hole 52, and this moves the rod 51 forward. The rod 51 is slidably mounted in bearings 53 and 54 and the outer end is curved as shown at the point 55 in Figure 4, and as it moves forward it engages the back 56 of a plate 57 which is pivotally mounted on a pin 58 in an opening 59 of the section 13 of the forward part of the casing, and as the rod engages the back 56 it moves the plate 57 downward over the front of the garment, thereby folding the outstanding edge 60 of the paper downward against the face of the garment. As soon as the cam releases the lever 50 a spring 61 returns the rod 51 and a spring 62 returns the plate 57. At the opposite side of the machine is another rod 63 which is operated by a cam 64 through a lever 65, and this rod has an outwardly curved end 66 which engages a similar surface on another plate 67 similar to the plate 57, and operates this plate in a manner similar to that of the plate 57 in order to fold the paper on the opposite side of the garment downward over the face thereof. This plate is mounted and operated in the same manner as the plate 57 and a similar spring returns the plate to the normal position which is shown in Figure 2. After these plates have folded the paper downward over the front of the garment and over the boss 32 on the part 31, the female die 68 on the end of a rod 69 is moved forward by a cam 70 on the shaft 37, and as this die moves over the boss 32 it crimps the paper so that one end is secured over the other in the form of a rosette which projects outward in front of the garment. This rosette, therefore, holds the two ends of the paper together and at the same time provides a projecting cushion to space one garment from another. The rod 69 is mounted in bearings 70 and 71 and is returned by a spring 72 bearing against the inner surface of the bearing 71 and a pin 73 extending through the rod 69.

The carriage 1, which consists of two similar plates with the panel 33 pivotally mounted between them, forms a complete base with the edges held in the grooves 17 and 18, and the two plates forming the sides of the carriage are rigidly held together by the bearings 40 and 71, which may be bolted or welded through the plates. The panel 33 is supported on the pin 34, which extends into bosses forming hubs at the rear ends of the two plates of the carriage, and this is held upward by the cam 36 engaging the arm 35.

In this design the paper is supplied from a roll 3 mounted upon a shaft 74, and the paper is fed from the roll downward by feed rollers 75 and 76, so that it hangs downward at one side of the opening 6. The feed rollers are mounted in shafts 77 and 78, and these may be covered with rubber sleeves 79 and 80, however, these sleeves

may be made of any material, providing a friction surface. These rollers are geared together by gears 81 and 82 and the roller 75 is provided with a gear 83 which meshes with a gear 84 having a gear 85 mounted therein, and the gear 85 meshes with another gear 86 which may be rotated by a lever 87 through a ratchet 88, and it will be noted that the lever 87 extends downward into a pocket 89 on the carriage 1, and as the carriage moves forward the lever does not move the gears, however, as the carriage moves backward the lever rotates the gear 86, and through the train of gears, operates the feed rollers a sufficient distance to provide enough paper to form a cover. It will be noted, therefore, that the paper is fed downward as the carriage travels backward, and as the carriage travels forward the edge 90 of the knife 14 mounted on the rod 7 through a vertical section 91 moves forward and shears the paper against a cutting edge 92. The rod 7 is slidably held in a bearing 93 and is moved forward by an arm 94 on the shaft 22 which engages the inner end 95 thereof. This rod and the knife are returned by a spring 96 as soon as they are released by the arm 94. It will be noted that as the arm 94 moves the rod 7 forward the end thereof engages the end of the rod 15 and the hanger 5 is moved from the rod 7 to the rod 15, as the garment is moved into the pocket 12 in the section 13 of the casing.

The entire machine may be covered by the case 2, which may be of any design, and the paper roll 3 may be supported in a bearing 97 extending upward from the case and may be covered by a cover 98 hinged to the upper side of the case at the point 99.

This machine is designed to use paper from a roll, and it is preferred to form the paper as shown in Figure 2, with notches 100 at the sides, a slit 101 at the upper part of the center, and an opening 102 connected with the slit to clear the rod or bar 15. As the machine operates the knife 14 cuts the paper on the line 103, and as soon as the machine carriage returns the paper is automatically fed by the feed rollers down to the position shown in Figure 2.

In the design shown in Figure 1 the machine is mounted upon a stand formed by an upright member 104, with a base plate 105 and this may be held in a boss 106 placed on the lower end of the case, which in this design is indicated by the numeral 107. It will be understood that the machine may be provided with a base of any type and may be supported by any means.

It will be understood that changes may be made in the construction without departing from the spirit of the invention. One of which changes may be in the use of any other material instead of paper as shown and described, another may be in the use of other means for feeding the paper to the machine, as it will be understood that the paper may be also supplied in sheet form, another may be in the use of other means for operating the machine, another may be in the use of other means for folding the paper, another may be in the use of other means for securing the ends of the paper together, and still other changes may be in the use of any other mechanical movements for operating the different parts, as it will be understood that these may be operated in any manner or by any means.

The construction will be readily understood from the foregoing description. In use the device may be provided as shown and described, and it will be noted that a dress or the like on a

hanger may be placed upon the rod 7, and as the machine is started the pusher 31 will push the dress over against the paper 3, and the upper edges of the paper will fold or bend outward as they engage the upper edges of a pocket into which the dress is pushed, and then the plates 57 and 67 will alternately pass down over the front of the dress, folding the paper down over the dress with a roll at the upper edge. The part 68 will then force the paper over the part 32, forming a rosette or fastener, crimping the paper together at this point and thereby securing the ends. The parts will then return to their original positions so that the machine is ready for the next dress which may readily be placed therein.

As hereinbefore stated, this machine may be adapted for ladies', children's, misses', and juniors' dresses, coats, wraps, blouses, shirt waists, or for any similar garments, such as men's shirts, barbers' coats, nurses' uniforms, and may also be used for heavy coats or any other similar garments.

The paper is preferably cut as shown in Figure 2, so that the rolls of paper cut in this manner are only adapted for use upon this machine, however, it will be understood that the paper may be formed in different designs. It will also be understood that the paper may be provided in different colors with each different size represented by paper of a different color, and the different colors may be used consecutively on the same machine, or different machines may be provided with each machine having paper of a different color mounted thereon to designate a different size. The paper may also be perfumed or scented, and the name of the manufacturer may be printed thereon. It will be understood that although one roll of paper only is shown on the machine, any number of rolls may be used thereon.

This machine fastens the two ends of the paper by crimping one over the other, and it will be understood that any fastening means may be employed, and the fastening means may be arranged so that it may be opened and closed in order to display the garment. It will also be understood that although the fastening means is shown at only one point, similar means may be used at different points, or one on each side of the center, or the edges may be fastened together, as may be desired.

This machine has also been shown and described as being operated by a motor, and it will be understood that the shaft 41 may be turned by a crank or lever so that as a dress is placed in the opening 6 a lever may be pulled down and this lever may operate all of the parts in the proper sequence; and it will also be understood that any other means may be provided for manually operating the machine; or the machine may be arranged so that the dress may be placed on a movable hanger and the hanger may be drawn up into the casing with the paper, cloth, or other cover fed downward over the dress with the supporting means passing through an opening in the center of the top thereof. Therefore, although a complete machine is shown, it is understood that, as applicant is the first to provide a machine for automatically placing paper covers on dresses, this invention relates to any means for placing these paper or other covers on dresses or garments of any type.

It will be understood that although this machine has been shown and described as applying wrappers to dresses and garments, it may be also

used to apply a wrapper or cover to other objects, such as a bunch of bananas or other produce, or, in fact, for any object, and, although the cover has been described as being made of paper, it may be made of "Cellophane" or any material.

Having thus fully described the invention, what I claim as new and desire to secure by Letters Patent, is:

1. A machine for forming covers on garments, having an aperture extending transversely therethrough with a garment receiving recess in the far side of said aperture, a support extending substantially across said aperture upon which garments may be suspended, means feeding paper to a position between the end of the support and the far side of the aperture, means for moving a garment against the paper, and the paper and garment into the recess in the far side of said aperture, the periphery of said recess bending the edges of said paper over the edges of said garment, and means folding the bent-over edges of the paper across the garment.

2. In combination with a machine as described in claim 1, means for securing the ends of the cover together.

3. In combination with a machine as described in claim 1, means for cutting the paper with each operation.

4. A machine as described in claim 1 in which the paper is automatically fed to the position adjacent the garment with the return movement of the machine.

5. A garment cover machine having a head with an opening therein into which a garment may be placed with the garment suspended on a hanger, said machine having a pocket in the far side of the opening, means for feeding material adapted to form a cover for the garment in front of the pocket, and means pushing the garment into the paper and the garment and paper into the pocket, and folding the paper over the garment.

6. A machine as described in claim 5 having means securing the ends of the paper together.

7. A machine as described in claim 5, having means forming a raised portion in the open ends of the paper, providing means holding the ends together, and also means spacing the garments.

8. A machine as described in claim 5, having means feeding the paper as the machine operates.

9. A machine as described in claim 5 having means automatically feeding an additional strip of paper as the means pushing the dress into the pocket returns to its starting position.

10. A machine as described in claim 5 characterized in that the means pushing the dress into the pocket comprises a carriage and the means for folding the paper is operated by the movement of said carriage, and the means for securing the ends together, is mounted on said carriage.

11. A machine as described in claim 5 having a member adapted to extend upward inside of the cover cooperating with a die for securing the ends of the cover together, and means whereby said means adapted to extend upward into the cover drops downward after the ends are secured together.

12. A machine as described in claim 5, characterized in that all of the parts are positively operated by cams and returned to the normal positions by springs.

13. A garment cover machine comprising a housing having a transverse aperture extending therethrough mounted upon a stand and positioned from the floor a sufficient distance to permit hanging a garment in the said aperture therein, a bar extending into the said aperture upon which a garment may be suspended, said bar having an opening therethrough through which a sheet of paper may be fed, said housing having a recess in one side of the aperture thereof adapted to receive a garment suspended on said rod, means slidably mounted in said housing adapted to engage said garment to move the garment against a sheet of paper suspended in said aperture and, with the continued movement thereof, move said garment and paper into the recess, with part of the paper folded at right angles, means folding the folded parts of said paper over the garment, means returning the respective parts of said device, and means feeding another sheet of paper into the aperture of the housing with the return movement of the said parts.

14. A garment cover machine as described in claim 13, having means on the garment moving device for forming a rosette securing the ends of the cover together.

MORRIS MILLER.