Aug. 21, 1923. 1,465,479

V. OLB

CLOTH WINDING MACHINE

Filed July 15, 1922 2 Sheets-Sheet 1

Fig. 1.

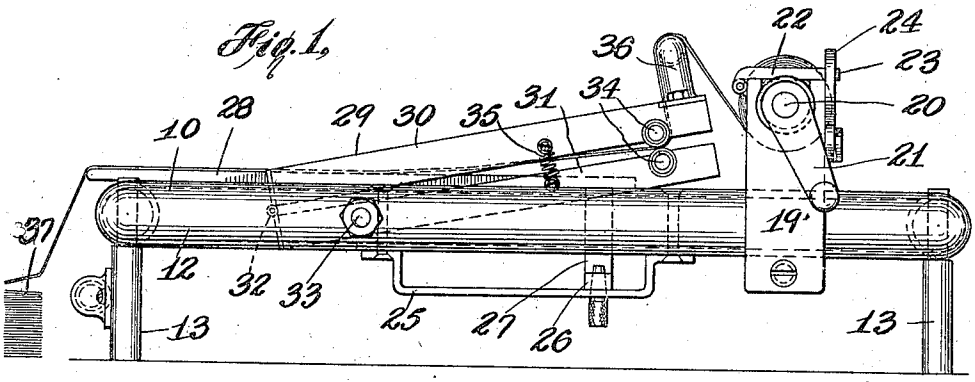
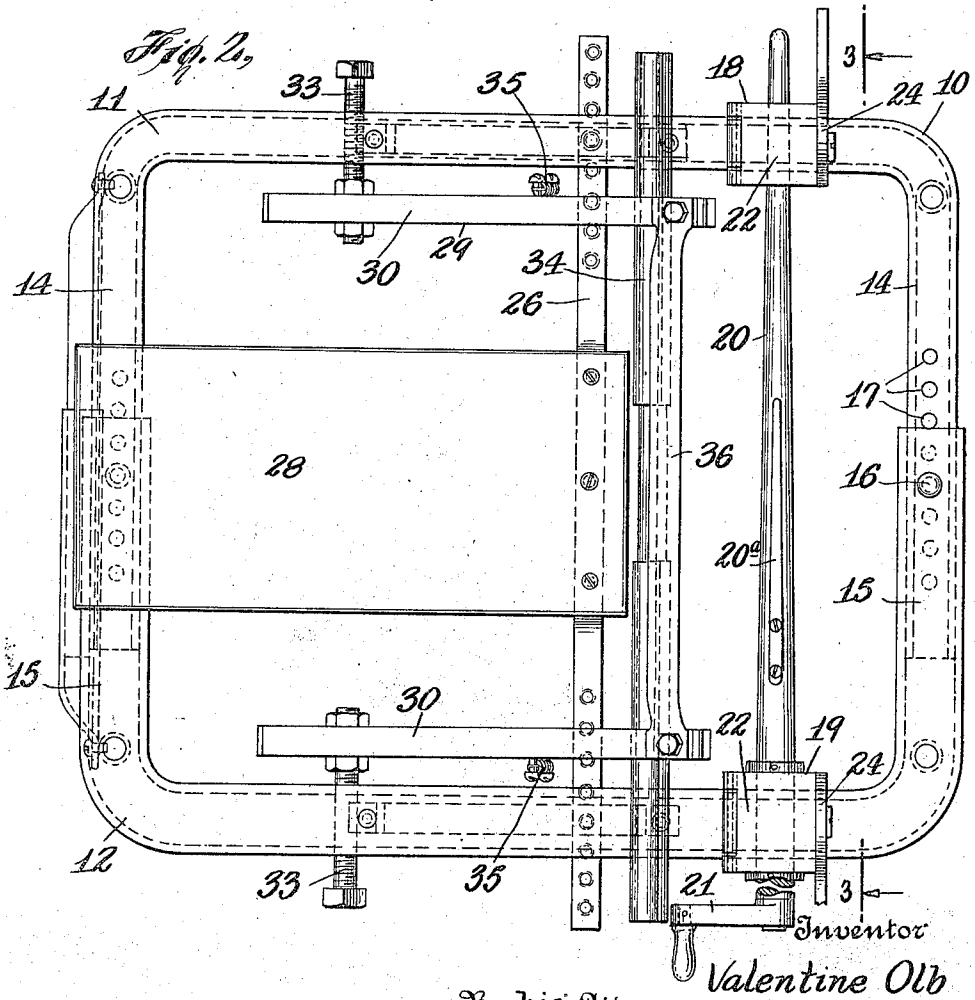


Fig. 2.



Inventor

Valentine Olb

By his Attorneys

Edgar Tate & Co

Aug. 21, 1923. 1,465,479

V. OLB

CLOTH WINDING MACHINE

Filed July 15, 1922 2 Sheets-Sheet 2

Fig. 3,

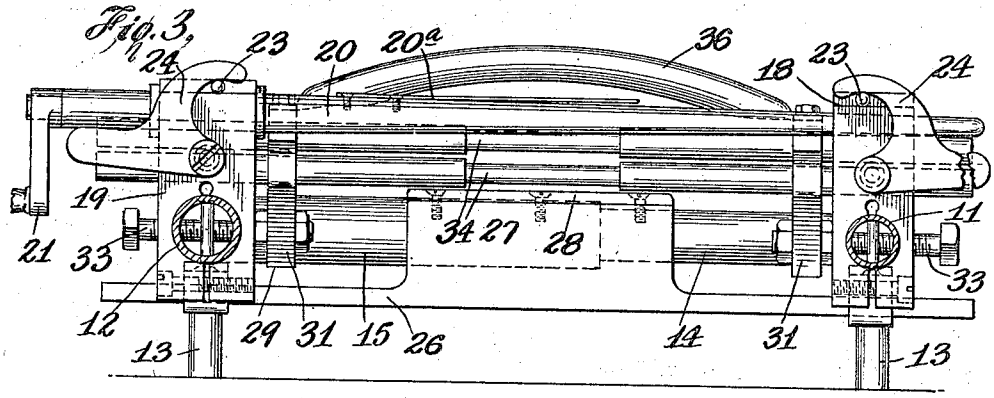
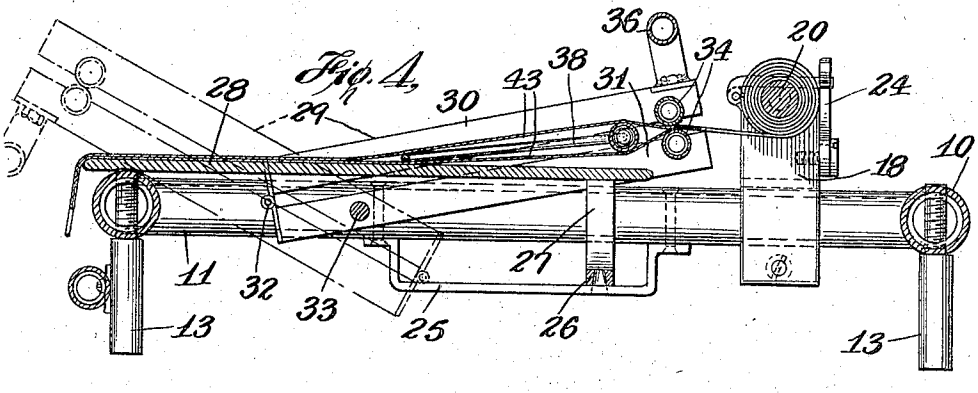


Fig. 4,



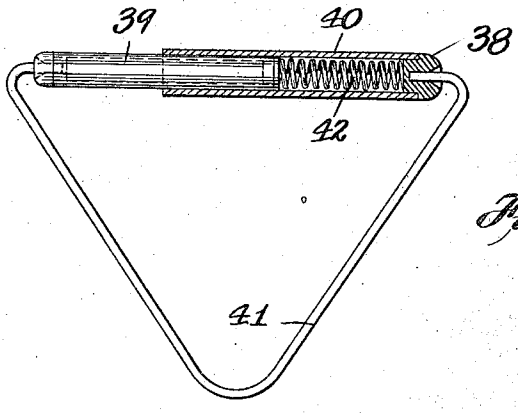


Fig. 5,

Inventor
Valentine Olb
By his Attorneys
Edgar Tate & Co

Patented Aug. 21, 1923. 1,465,479

UNITED STATES PATENT OFFICE.

VALENTINE OLB, OF WEEHAWKEN, NEW JERSEY.

CLOTH-WINDING MACHINE.

Application filed July 15, 1922. Serial No. 575,243.

To all whom it may concern:

Be it known that I, VALENTINE OLB, a citizen of the United States, and residing at Weehawken, in the county of Hudson and State of New Jersey, have invented certain new and useful Improvements in Cloth-Winding Machines, of which the following is a specification, such as will enable those skilled in the art to which it appertains to make and use the same.

This invention relates to machines for winding cloth or fabrics of any kind and class into a roll for shipment or other purposes and the object of the invention is to provide a machine for the purpose specified composed of adjustable frame members, whereby fabrics of different widths may be wound thereby, a further object being to provide a tapered shaft by means of which and upon which the fabric is wound; a further object being to provide means for guiding the fabric as it passes through the machine as well as means for preventing the wrinkling or creasing of the fabric; a still further object being to provide a stretcher device for use in rolling two-faced or tubular fabrics and with these and other objects in view, the invention consists in a machine of the class and for the purpose specified which is simple in construction, efficient in use and which is constructed and operated as hereinafter described and claimed.

The invention is fully disclosed in the following specification, of which the accompanying drawing forms a part, in which the separate parts of my improvement are designated by suitable reference characters in each of the views, and in which:—

Fig. 1 is a side view of my improved machine and indicating the method of its use.

Fig. 2 is a plan view of the construction shown in Fig. 1 with the work piece omitted.

Fig. 3 is a partial section on the line 3—3 of Fig. 2.

Fig. 4 is a longitudinal sectional view through the machine and showing the use of my improved stretcher device; and

Fig. 5 is a detail sectional view of the stretcher device, which I employ.

In practice I employ a tubular frame work 10 composed of separate side frame members 11 and 12 which are substantially U-shaped in form and are supported by legs 13 and the side members 14 and 15 of the frame members 11 and 12 telescope with each other and the members 15 are provided with pins 16 adapted to enter one of a number of apertures 17 in the members 14 to adjustably secure the frame members 11 and 12 together.

The frame members 11 and 12 are provided with upstanding bearings 18 and 19 in which is rotatably mounted a tapered shaft 20, provided at one end with a crank 21 or other means for rotating said shaft. The shaft 20 is retained in the bearings 18 and 19 by hinge plates 22 which are provided at one side with pins 23 adapted to be engaged by cam-shaped lock members 24 pivoted to the bearings 18 and 19 as clearly shown in Fig. 3 of the drawing.

Mounted in connection with the frame members 11 and 12 are hangers 25 which are located approximately centrally thereof and in which is slidably mounted a transverse supporting rod 26 having an upwardly directed extension 27 to which is secured a table member 28 and this table member and rod are capable of movement forwardly and backwardly in the frame and the rear end of the table member is supported upon the members 14 and 15 of said frame members.

A work piece guide member 29 composed of pairs of parts 30 and 31 hinged together as shown at 32 are pivotally mounted in connection with the frame members 11 and 12 and adjustable thereon by screws 33 as clearly shown in Figs. 1 and 2 of the drawing. The separate pairs of parts 30 and 31 of the member 29 are connected adjacent to their free ends by telescoping rods 34 which are located in the adjacent faces of said parts and serve to space said parts one from the other and springs 35 are employed for holding the rods of the separate parts together. The parts 30 are connected at their free ends by an upwardly directed arch-shaped rod member 36 which serves to straighten out or smooth a work piece passed thereover as hereinafter set out.

The use of my improved machine will be readily noted from the foregoing description when taken in connection with the accompanying drawings and the following statement:—In practise a predetermined amount of a suitable cloth or fabric is stacked as shown at 37 at one end of the machine and the free end thereof is passed upwardly over the table member 28 between the rods 34 of the member 29 and upwardly over the rod 36

and on to the shaft 20 and secured to said shaft by passing the same beneath a spring clip 20^a on said shaft. The machine is now ready for operation and by rotating the shaft 20, the cloth or fabric will be wound on to the shaft and in this operation the rod 36 by reason of the curvature thereof, will operate to extend the cloth or fabric laterally and to remove all wrinkles or creases in the operation of winding the same upon the shaft. This operation is continued until the desired amount of the cloth or fabric has been wound upon the shaft, it being understood that the table member 28 as well as the member 29 are capable of backward movement in this operation and when the desired amount of fabric has been wound upon the shaft, the shaft is removed by releasing the cam-locks 24 and raising the plates 22 and lifting the shaft with the material thereon from the machine and said shaft may be withdrawn from the roll of fabric by reason of the taper thereof.

From the foregoing it will be apparent that with my improved machine I provide a very simple method of winding various kinds and classes of fabrics into rolls of predetermined length. It will also be apparent that the separate frame members 11 and 12 may be adjusted laterally to adapt the machine for use in connection with cloth of different widths. In the adjustment of the frame a new member 36 will be substituted to correspond in length with the adjustment.

In Figs. 4 and 5 of the drawing I have shown a stretcher device 38 which is substantially triangular in form and comprises two telescoping members 39 and 40 to the ends of which is secured the free end of a V-shaped rod 41 with a spiral spring 42 mounted in the parts 40 and adapted to operate in connection with the part 39 to normally hold said parts in an extended position.

The stretcher device 38 is designed to be used in connection with tubular fabric 43 and is adapted to be placed within the fabric rearwardly of the rods 34 of the member 29 and serves to stretch the fabric 43 as it passes between said rods and it will be noted on a consideration of Fig. 4 of the drawing that the fabric 43 is passed directly onto the shaft 20 instead of over the rod 36 as in Fig. 1 of the drawing.

It will be understood that my improved machine may be made of any desired size and the shaft 20 of the machine may be operated in any desired manner and while I have shown certain details of construction for carrying my invention into effect, it will be understood that I am not necessarily limited to these details and various changes therein and modifications thereof may be made, within the scope of the appended claims, without departing from the spirit of my invention or sacrificing its advantages.

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

1. A fabric winding machine of the class described comprising a suitable frame, a shaft rotatably and detachably mounted in the frame and on which the fabric is adapted to be wound, and a fabric guide member pivotally mounted in the frame, said member being composed of separate parts hinged together, the separate parts of said member being provided with rods adapted to cooperate one with the other and between which the fabric to be wound is adapted to be passed.

2. A fabric winding machine of the class described comprising a suitable frame, a shaft rotatably and detachably mounted in the frame and on which the fabric is adapted to be wound, a fabric guide member pivotally mounted in the frame, said member being composed of separate parts hinged together, the separate parts of said member being provided with rods adapted to cooperate one with the other and between which the fabric to be wound is adapted to be passed, and tensional means for holding the separate parts of said member or the rods thereof together.

3. A fabric winding machine of the class described comprising a suitable frame, a shaft rotatably and detachably mounted in the frame and on which the fabric is adapted to be wound, a fabric guide member pivotally mounted in the frame, said member being composed of separate parts hinged together, the separate parts of said member being provided with rods adapted to cooperate one with the other and between which the fabric to be wound is adapted to be passed, tensional means for holding the separate parts of said member or the rods thereof together, and one part of said guide member being provided with means over which the fabric is adapted to pass, for holding said fabric in predetermined position.

4. A fabric winding machine of the class described comprising a suitable frame, a shaft rotatably and detachably mounted in the frame and on which the fabric is adapted to be wound, a fabric guide member pivotally mounted in the frame, said member being composed of separate parts hinged together, the separate parts of said member being provided with rods adapted to cooperate one with the other and between which the fabric to be wound is adapted to be passed, tensional means for holding the separate parts of said member or the rods thereof together, one part of said guide member being provided with means over which the fabric is adapted to pass, for holding said fabric in predetermined position, and a table member movably mounted in said frame.

5. A fabric winding machine of the class described comprising a frame composed of adjustable frame members, a tapered shaft

rotatably and detachably mounted in bearings in said frame members and on which the fabric is adapted to be wound, a fabric guide member pivotally mounted in connection with said frame members and composed of separate parts hinged together at one end, the other end of said parts being provided with telescoping rods adapted to cooperate one with the other and between which the fabric is adapted to pass.

6. A fabric winding machine of the class described comprising a frame composed of adjustable frame members, a tapered shaft rotatably and detachably mounted in bearings in said frame members and on which the fabric is adapted to be wound, a fabric guide member pivotally mounted in connection with said frame members and composed of separate parts hinged together at one end, the other end of said parts being provided with telescoping rods adapted to cooperate one with the other and between which the fabric is adapted to pass, and tensional means for holding the separate parts of said guide member or the rods thereof together.

7. A fabric winding machine of the class described comprising a frame composed of adjustable frame members, a tapered shaft rotatably and detachably mounted in bearings in said frame members and on which the fabric is adapted to be wound, a fabric guide member pivotally mounted in connection with said frame members and composed of separate parts hinged together at one end, the other end of said parts being provided with telescoping rods adapted to cooperate one with the other and between which the fabric is adapted to pass, tensional means for holding the separate parts of said guide member or the rods thereof together, and one of said parts being provided with an arc-shaped member over which the fabric is adapted to pass and by means of which said fabric is retained in predetermined position.

8. A fabric winding machine of the class described comprising a frame composed of adjustable frame members, a tapered shaft rotatably and detachably mounted in bearings in said frame members and on which the fabric is adapted to be wound, a fabric guide member pivotally mounted in connection with said frame members and composed of separate parts hinged together at one end, the other end of said parts being provided with telescoping rods adapted to cooperate one with the other and between which the fabric is adapted to pass, tensional means for holding the separate parts of said guide members or the rods thereof together, one of said parts being provided with an arc-shaped member over which the fabric is adapted to pass and by means of which said fabric is retained in predetermined position, and a table member adjustably mounted in said frame.

9. A fabric winding machine of the class described comprising a frame composed of adjustable frame members, a tapered shaft rotatably and detachably mounted in bearings on said frame members and on which the fabric is adapted to be wound, a fabric guide member pivotally mounted in connection with said frame members and composed of separate parts hinged together at one end, the other end of said parts being provided with telescoping rods adapted to cooperate one with the other and between which the fabric is adapted to pass, tensional means for holding the separate parts of said guide members or the rods thereof together, one of said parts being provided with an arc-shaped member over which the fabric is adapted to pass and by means of which said fabric is retained in predetermined position, a table member adjustably mounted in said frame, and a stretcher device adapted to be detachably mounted in said guide member.

In testimony that I claim the foregoing as my invention I have signed my name this 12th day of July, 1922.

VALENTINE OLB.