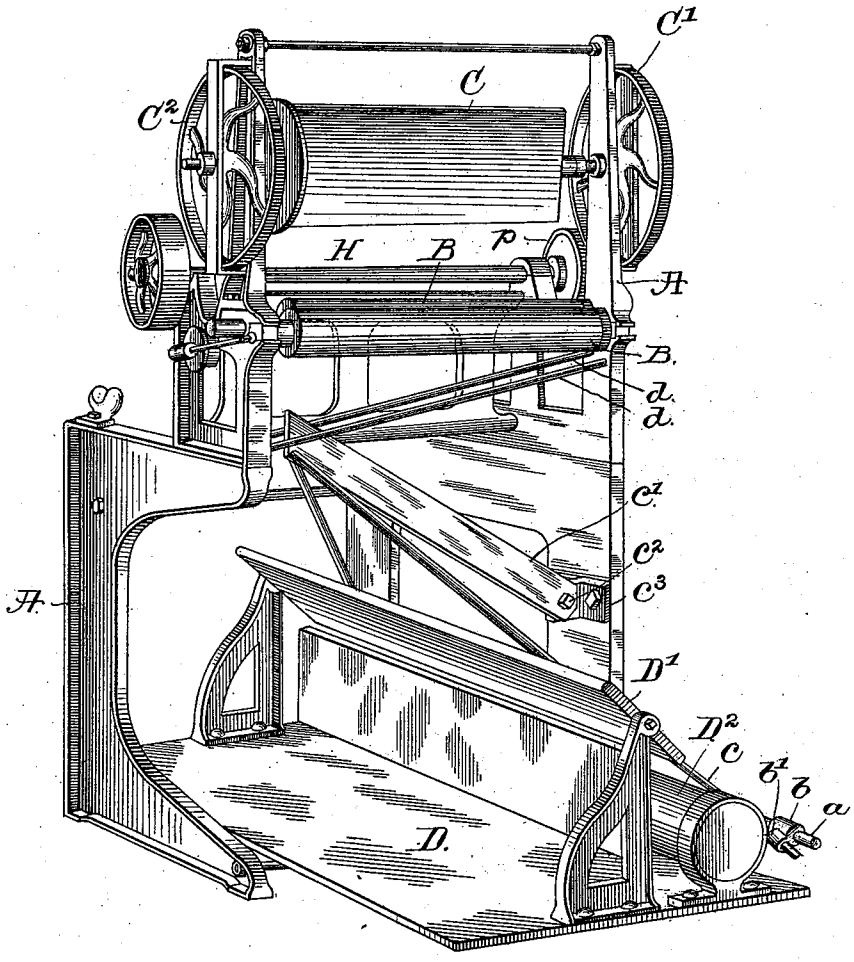
(No Model.)

J. E. WINDLE.

CLOTH FOLDING MACHINE.

No. 523,499. Patented July 24, 1894.



Witnesses.
Louis N. Sowell
Fred Washington

Inventor.
John E. Windle,
by Crosby & Gregory Attys.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

JOHN E. WINDLE, OF NORTH GRAFTON, MASSACHUSETTS.

CLOTH-FOLDING MACHINE.

SPECIFICATION forming part of Letters Patent No. 523,499, dated July 24, 1894.

Application filed August 4, 1892. Serial No. 442,118. (No model.)

To all whom it may concern:

Be it known that I, JOHN E. WINDLE, of North Grafton, county of Worcester, State of Massachusetts, have invented an Improvement in Cloth-Folding Machines, of which the following description, in connection with the accompanying drawing, is a specification, like letters on the drawing representing like parts.

The machine, the subject of this invention, has for its object to fold cloth longitudinally, and by my improvements this work may be performed quickly and with the minimum of personal attention.

In accordance with my invention I have arranged between the presser rolls and the friction roll, they occupying positions substantially at right angles each to the other, a truncated former, and smoothing rods, the "former" acting upon the distended material from its edges substantially to its longitudinal center, so that the material is gradually folded longitudinally, the material being delivered from the "former" between the smoothing rods occupying a position diagonal to the line of travel of the folded cloth, smoothing the same in its doubled condition before the folded material is acted upon by the presser rolls.

The drawing shows a sufficient portion of a cloth folding machine embodying my improvements to enable my invention to be understood.

A represents the frame-work; B, B, the presser rolls; C the cloth-receiving board held between suitable centers connected with the shafts of the gears C′, C².

D is a cloth-receiving table on which will be deposited in a pile the cloth to be folded longitudinally; D′ a bar over which the cloth in its full width is drawn, and D² a friction roll under which the cloth in its unfolded condition is drawn, the roll D² being substantially at right angles to the presser rolls.

The parts so far referred to are substantially as in cloth folding machines now made, and substantially as in United States Patent No. 349,774, and therefore need not be herein further described.

To the machine parts so far described I have added a rod *a*, which is supported rigidly in suitable bearings, not shown, extended from the frame A below the stand c^3, this rod near its opposite ends having mounted upon it collars *b* having suitable ears *b′* for the reception of a wire *c* bent or formed into Λ-shape and shown as attached at the small or pivoted end of the Λ to an inclined blade or bar *c′* secured in suitable manner as by a screw c^2 to a stand c^3 or other proper support on the frame-work and in a plane at right angles to the axis of the friction roll. The rod *c* constitutes a truncated "former" and it is braced in position tangential to the said roll by the bar *c′*. Above the "former" I have arranged the smoothing rods *d*, *d*, they being extended diagonally across the folded cloth from its central fold to its edges, the lower ends of said rods being located at opposite sides of the upper extremity of the inclined bar, as shown, to receive the folded material between them, the "former" delivering the longitudinally folded material to the said rods, the latter by their friction gradually smoothing the cloth from its central line of fold to its free edges.

I have shown the presser rolls B, and in practice they will preferably be used, but my invention would not be departed from if the said rolls B were omitted.

It will be understood that the folded material will be drawn positively by suitable means from the friction roll and over the "former" and between the smoothing rods, the said means in this embodiment of this invention being the board C, and the gears C′, C², and their shafts, said gears in practice deriving their motion of rotation from pinions *p* on a suitable power shaft H parallel to the shaft or journal of the said gears.

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

1. In a cloth folding machine, the following instrumentalities, viz;—a friction roll, a truncated former to act on the unfolded material from its edges to its longitudinal center,—devices to draw the cloth from the friction roll over the "former," and smoothing devices occupying an inclined position with relation to the line of travel of the cloth and receiving the folded cloth between them, substantially as described.

2. In a cloth folding machine the following instrumentalities, viz:—a friction roll, a trun-

cated former composed of an inclined bar occupying a position in a plane at right angles to the axis of said roll, and rods *c*, substantially tangential to the friction roll and converging to the said bar, said former acting on the unfolded material from its edges to its longitudinal center, devices to draw the material from the friction roll over the said former, and diagonally extended rods extended above the former and having their lower ends located at opposite sides of the upper extremity of the inclined bar, to receive the folded material between them and gradually smooth it from its central line of fold to its free edges, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOHN E. WINDLE.

Witnesses:
GEO. W. GREGORY,
M. J. SHERIDAN.