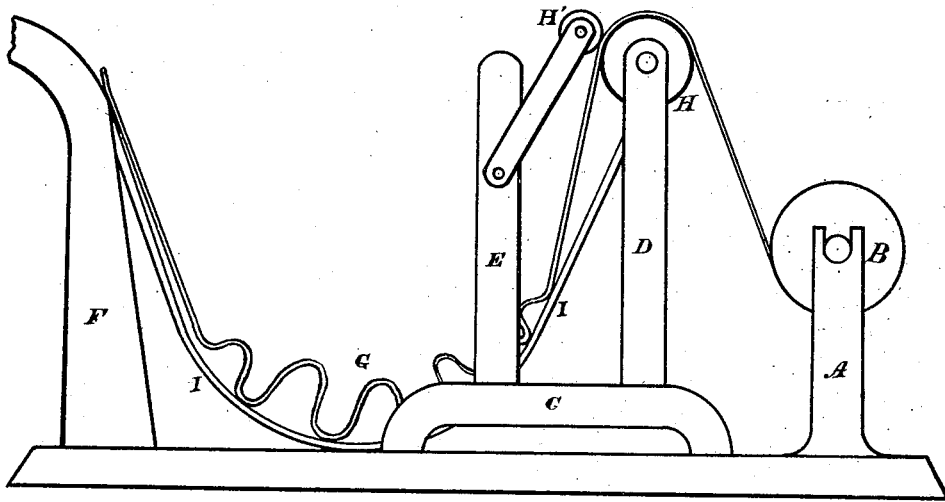


N. H. MORRILL.
Cloth-Folding Machinery.

No. 196,471.

Patented Oct. 23, 1877.



Witnesses:
L. M. Sherman
C. H. Littlefield.

Inventor;
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UNITED STATES PATENT OFFICE.

NATHANIEL H. MORRILL, OF LAWRENCE, ASSIGNOR OF ONE-HALF HIS
RIGHT TO J. D. ELLIOTT, OF NEWTON CENTRE, MASS.

IMPROVEMENT IN CLOTH-FOLDING MACHINERY.

Specification forming part of Letters Patent No. **196,471**, dated October 23, 1877; application filed
January 23, 1877.

To all whom it may concern:

Be it known that I, NATHANIEL H. MORRILL, of Lawrence, in the county of Essex and Commonwealth of Massachusetts, have invented certain new and useful Improvements in Cloth-Folding Machinery, which invention is fully described in the following specification and drawing.

With most folding-machines now in use operatives experience many difficulties in the operation of the same.

In many of the machines commonly in use the cloth is left free to fall on the floor from a delivery-roll, and there it accumulates in fold after fold, increasing in weight and tension, which uneven tension causes the folding of short and uneven yards; or should too many folds collect, the same fall forward upon the cloth being folded, which will cause the cloth to be more or less disarranged in folding by throwing over and back this over accumulation of cloth.

It is also noticeable with folders of this class that not more than twenty yards of cloth delivered from the roller is practicable, and even this amount is too great to insure good work and even yards in folding. This limited amount of cloth often runs out and causes the same to draw straight from the feed-roller, which is sure to draw the cloth from the jaws of a folder, thereby causing great delay in the rearrangement of the same.

When a folder is stopped, the cloth-roller (when nearly full) continues to revolve and winds the cloth back upon itself, which, when the folder is again started and the cloth thus wound back is delivered, the roller must necessarily come to a stop to reverse its motion, which also, should the supply of cloth be exhausted, causes the cloth to jerk back from the jaws and cause delays. These difficulties are caused by an uneven supply of cloth from the delivery-roller, which at times is either too great or too small.

The object of my invention is to obviate all these difficulties in folding cloth, so that each yard or fold laid shall be of a stated length and without variation. It is also claimed that with my improvement more work can be done

in a given time, and the same of a better character. This I accomplish by forming a feeding apron or conductor of wood, zinc, or other metal, the same being semicircular in form, and leading from the feed-roller to the folder. With my improved conductor each successive fold of cloth is guided around the same, each fold being free to feed from the conductor to the folder, (there being no piling up of cloth or variation in tension,) and any number of yards not exceeding one hundred may be fed into the same without in any way interfering with its working. (See figure.)

In the drawings, the letter A designates a stand designed to support a cloth-roller, B, C D E designate a stand for holding the feed and friction rollers. F designates the breast of a folding-machine; G, folds of cloth as guided by my improved conductor; H, a feed-roller; H', a friction or spreading roller; and I, a conductor or apron as formed by me.

To use my improved conductor, the same being applied to a machine, as shown in the drawing, the cloth is placed in the machine, as shown; but in place of the cloth falling on the floor in an accumulated mass it is received in the conductor, and the folds carried around the same without any increase of tension.

I am aware that it is not new to use an apron for guiding cloth in certain machinery, as in certain napping-machines, and as represented in Patents Nos. 36,550 and 63,893, and I make no claim thereto; but I am not aware that previous to my said invention a like apparatus has been in use in cloth-folding machines.

I claim, therefore, as new and desire to secure by Letters Patent—

In a cloth-folding machine, as herein described, the combination of the guiding-apron or conductor I with the stand C D E, provided with guiding-roller H and spreading-roller H', and the breast-guide F, in a manner and for the purpose substantially as described.

NATHANIEL H. MORRILL. [L. S.]

Witnesses:

M. S. JENKINS,
CHS. D. MOORE.