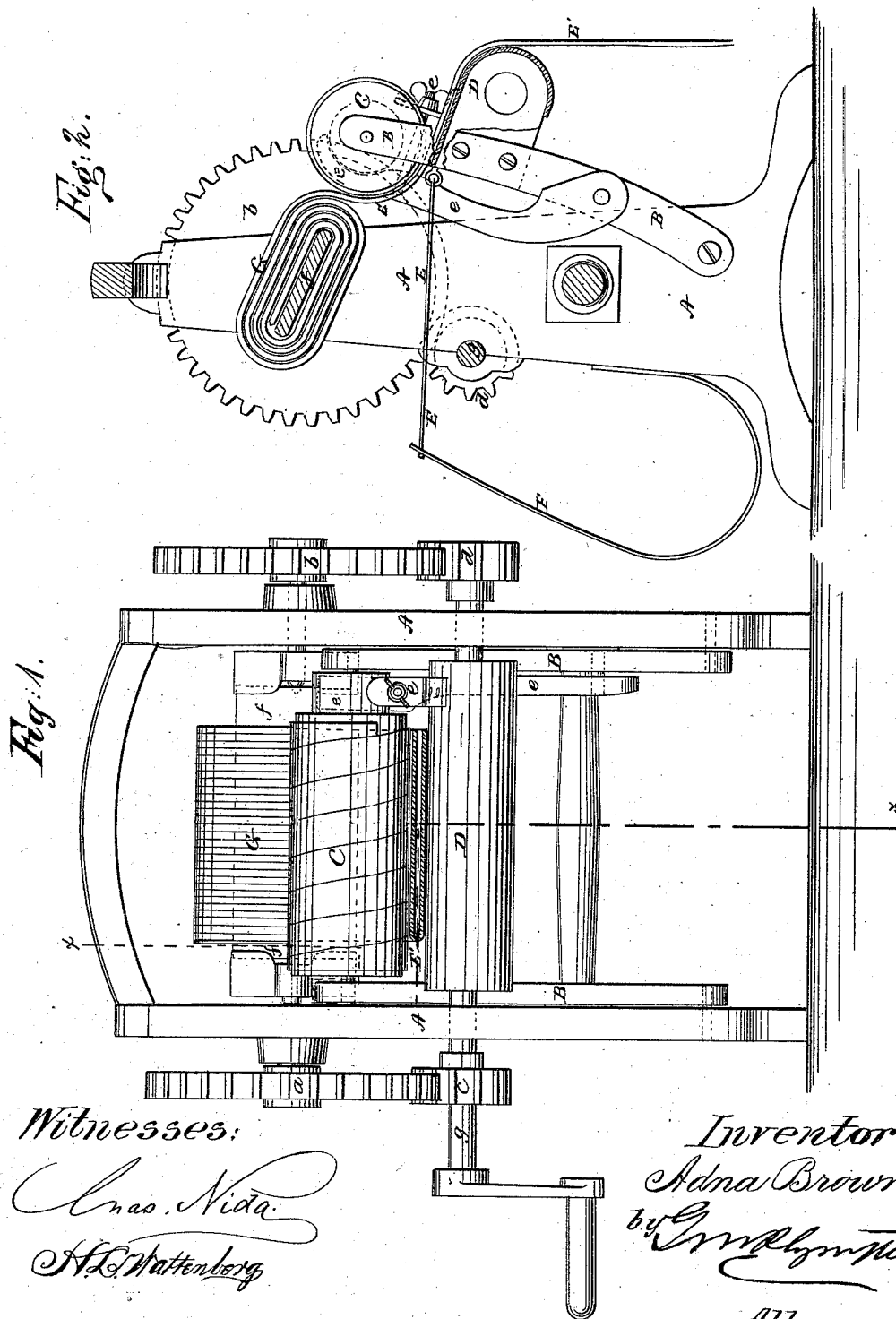


A. BROWN.
Cloth-Rolling Machine.

No. 225,557.

Patented Mar. 16, 1880.



UNITED STATES PATENT OFFICE.

ADNA BROWN, OF SPRINGFIELD, VERMONT.

CLOTH-ROLLING MACHINE.

SPECIFICATION forming part of Letters Patent No. 225,557, dated March 16, 1880.

Application filed November 13, 1879.

To all whom it may concern:

Be it known that I, ADNA BROWN, of Springfield, in the county of Windsor and State of Vermont, have invented a new and Improved Cloth-Rolling Machine; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making
10 part of this specification.

This invention is in the nature of an improvement in machines for rolling cloths—that is, in making the final merchantable roll of cloth for market; and the invention consists in a machine for rolling double-width cloths constructed with automatically-adjustable levers, with a friction-roll and table fixed thereto, in combination with a device having a flat center for rolling cloths thereon, as is more particularly
20 hereinafter described.

In the accompanying sheet of drawings, Figure 1 is a front view of my machine, and Fig. 2 a vertical cross-section of same in line *xx*, Fig. 1. Similar letters of reference indicate like parts
25 in both figures.

The final rolling up of folded cloths or cloths of double width into suitable marketable forms is at this time generally done by hand, requiring the aid of two men to accomplish it.

The rolls of cloth of merchantable form are usually oval—that is, they are wound about flat centers, which produce an oval-formed roll. The difficulty that is encountered in rolling up cloths that are folded in the direction of their width, or double-width cloths, consists in the fact that the upper side of the folded cloth requires stretching to some extent in the process of rolling, otherwise the lower side of the fold will pucker or gather up into small folds and run sidewise, causing the cloth to be rolled up irregularly unless the greatest care is observed and the operation be slowly proceeded with.

To obviate this difficulty, and at the same time cause the cloth to lie compactly and tightly in the roll, I construct my machine with suitable upright standards A, in which are formed the necessary bearings for the proper support of the gear-wheels *a b c d* and others which it is not necessary here to describe; also, to the standards A, and near their bases, are secured, at their lower ends, levers B. These levers are

secured to the standards A by pivotal bolts, or in some other way that will permit the levers to freely swing at the point of attachment. To these swinging levers B, at or near their upper ends, is fixed in suitable bearings a friction-roller, C, with its surface covered with cloth, and in some instances sand-paper or other material having a rough surface; also, to the levers B, and immediately below the rollers C, is permanently fixed a table, D, which has preferably a curved surface formed of sheet metal or other suitable material; also, to the levers B, and in connection with the rollers C, is fixed a brake, *e*. To each of the levers B, near their upper ends, and extending back, cords or wires E are fixed, the other ends of these cords or wires being secured to springs F, or suitable weights fixed to the rear sides of the standards A.

Between the standards A and in connection with the gear-wheels *a* and *b* is removably placed the flat center *f*, upon which the cloth is to be rolled. Meshing into the gear-wheels *a* and *b* are the gear-wheels or pinion-wheels *c* and *d*, which last-mentioned wheels are fixed to a driving-shaft, *g*.

Now, my cloth-rolling device being constructed substantially as I have described it, it is operated as follows: The cloth *E'* to be rolled up is folded or doubled into half its width and passed between the roller C and table D to the center *f*, around which a turn or two is first made by hand. The center *f* then being in position, as before described, it is caused to revolve, rolling up the cloth, fold over fold, into a roll, G. As the cloth is fed to this center or roll the roller C presses it with constant pressure against the roll G that is being formed on the center *f*, so that the upper outer side of the fold of the cloth is to some extent stretched, thereby permitting the under side of the fold to pass without wrinkles or puckers and smoothly around the roll G that is being formed by the center *f*.

Since the roll G is of irregular form and constantly increasing in size as the cloth is added to it, it becomes necessary to permit the roller C to adjust itself to this irregularity of form, while it at the same time maintains its necessary pressure against the cloth. This is accomplished by the springs F, which, through the

cords or wires E and levers B, enable the roller C to exert automatically a yielding pressure against the cloth as it is rolled up.

5 Instead of the springs F, weights and pulleys may be substituted. As the folded cloth passes between the roller C and table D it is guided in its passage by an attendant, who sits at the table D for that purpose.

10 It will be seen that not only does the roller C by its action stretch the outer side of the folded cloth, but it also causes the cloth to wind more compactly around the center *f* and the roll of cloth that is being formed thereby.

15 Under some circumstances, as when the folded cloth is heavy or thick, it may be found desirable to cover the surface of the roll C with sand-paper or other rough-surfaced material, which will cause the roll to bite a little more effectually, and thereby increase its power to stretch the cloth, as described. The efficiency of the roller C is also somewhat increased by the application of the brake *e*, which causes, when applied, the roller C to revolve less freely in its bearings or drag somewhat on the cloth.

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

1. In a machine for rolling double-width cloths, a pressure-roller and its friction-brake, in combination with supporting-levers, means 30 for automatically drawing said levers toward the roll of cloth, a table attached to or carried by the levers, and a flat center rolling device, substantially as described.

2. In a machine for rolling double-width 35 cloths, a cloth-rolling device, a pressure-roller, and its friction-brake, supporting-levers therefor, and a table carried by said levers, in combination with cords and springs or weights to keep the roller in close contact with the roll of 40 cloth, substantially as described.

3. In a machine for rolling double-width cloths, the combination of a revolving cloth-rolling device, having a flat center, with a roller, its friction-brake, supporting-arms and table, 45 and means, substantially such as described, to press said roller upon the cloth.

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Witnesses:

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A. M. ATTBE.