

J. H. BROWN.

MACHINE FOR CREASING FLUTED FABRICS.

No. 171,264.

Patented Dec. 21, 1875.

Fig. 1.

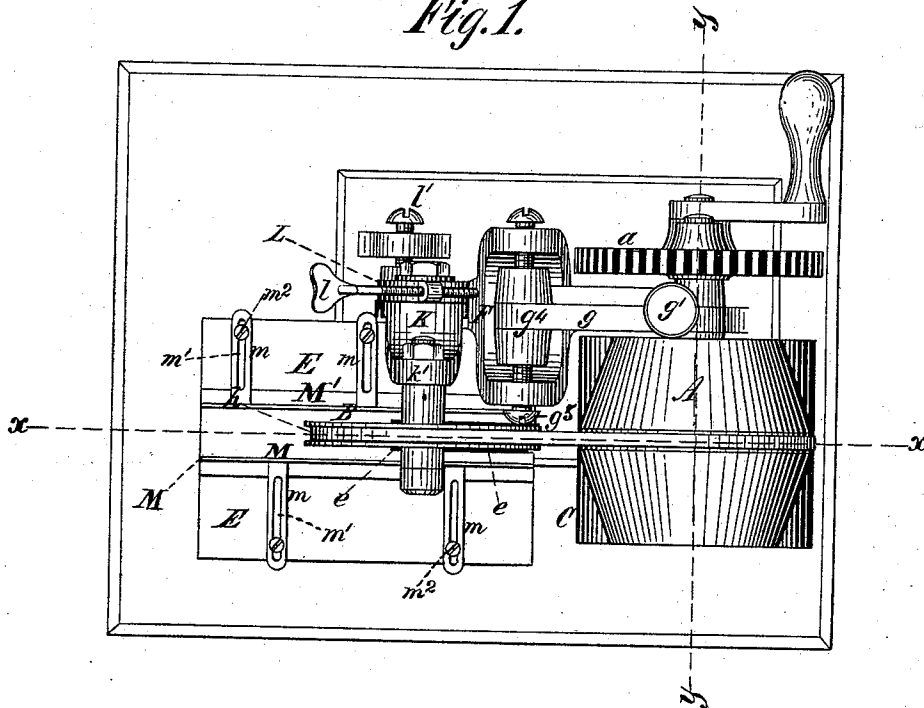
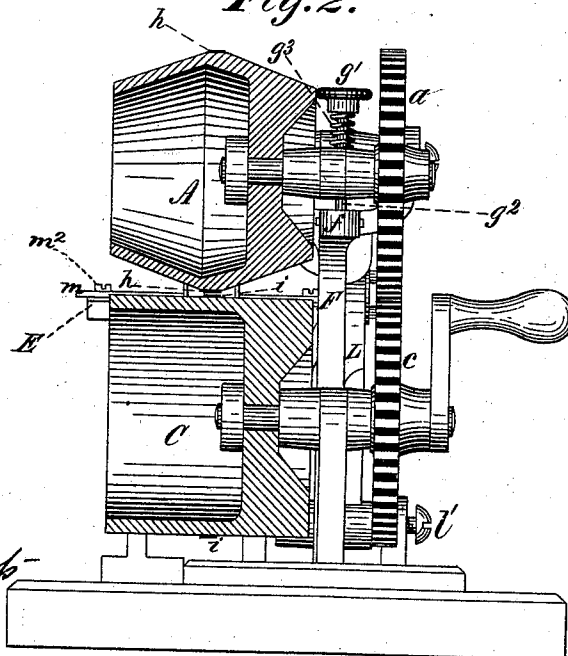


Fig. 2.



Witnesses:

Wm R. Luff
Geo. H. Evans.

Inventor:

John H. Brown

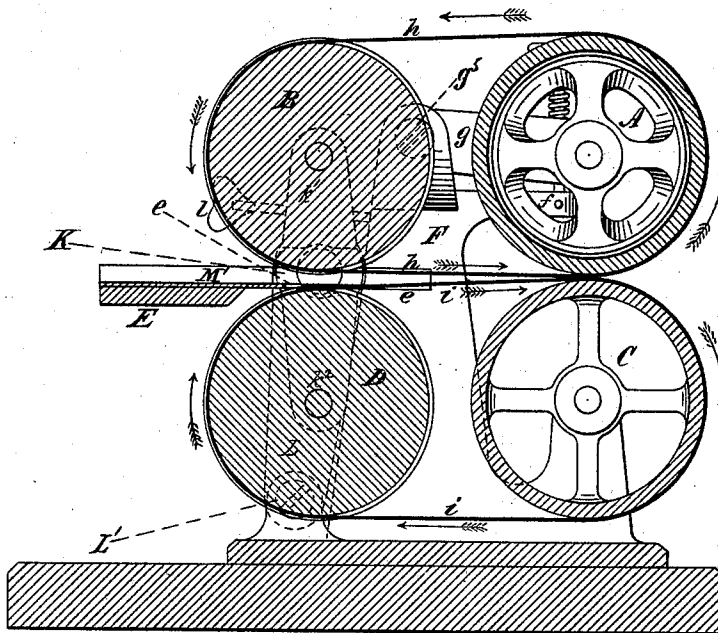
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Fig. 3.



Witnesses:

Geo. R. Jeffers
Geo. H. Evans.

Inventor:

John H. Brown

UNITED STATES PATENT OFFICE.

JOHN H. BROWN, OF NEW YORK, N. Y.

IMPROVEMENT IN MACHINES FOR CREASING FLUTED FABRICS.

Specification forming part of Letters Patent No. **171,264**, dated December 21, 1875; application filed September 3, 1875.

To all whom it may concern:

Be it known that I, JOHN H. BROWN, of New York city, New York, have invented certain new and useful Improvements in Machines for Pressing or Creasing Flutings, which improvements are fully set in the following specification, reference being had to the accompanying drawings.

In the method heretofore practiced for pressing or creasing flutings a narrow metallic edge is brought down upon the fluted fabric, and there pressed until a crease is formed, which is usually retained in place by what is commonly called a gum-cord—that is, a cord or thread moistened with some adhesive substance. This method is slow, because the fluted fabric has to be moved along, space by space, under the pressing-iron as the operation is performed on each section of the length of the fluted fabric; and it is also defective because the flute which is crushed down will sometimes fall forward, and sometimes backward, producing an irregular appearance in the goods. My machine greatly facilitates the operation, and at the same time produces a much more perfect result.

In the accompanying drawings, Figure 1 is a plan of my machine. Fig. 2 is a section in elevation at the line Y Y, showing also the gearing in elevation. Fig. 3 is a section at the line x x.

The same letters refer to similar parts in all the drawings.

C is a hollow cylinder revolving upon an axis supported by a bearing in the frame of the machine. In the interior of this cylinder heat may be applied either by a gas-jet or other appropriate means. A is a presser-roller, having a cylindrical surface at *h*. This presser-roller may be made hollow, and may be heated by a gas-jet or other appropriate means. This presser-roller is mounted upon a revolving shaft, which is driven by a gear-wheel, *a*, from a corresponding gear-wheel, *c*, on the shaft of the cylinder C. The shaft of the presser-roller A is supported upon a lever, *g*, which vibrates around a center, *g*⁴, so placed as to permit a slight, nearly vertical, movement to the presser-roller A. Through this lever a set-screw, *g*¹, passes, having a recoil-spring, *g*³, between its head and the top

of the lever, and being screwed into the frame of the machine at *f*. By turning down this set-screw this presser-roller A will be pressed upon the cylinder C with greater force, and the spring will permit it to yield and rise slightly, as occasion may require. D and B are two band-wheels mounted upon two centers, K¹ and K². These two centers are fixed upon a vibrating beam, which is centered at K upon the lever L, which is centered also on the frame of the machine at L'. The upper end of this lever is provided with a screw, *l*, whose office is to tighten or loosen the bands which pass over the band-wheels by moving the lever L away from or toward the cylinder and presser-roller, as required. When this set-screw is tightened, the beam, which supports the two wheels B and D, accommodates itself to the length of the bands, and assumes the position which will make the tension equal upon both bands. *i i* and *h h* are narrow bands, preferably of metal. The band *h h* passes around the wheel B and the presser-roller A, and the band *i i* passes around the wheel D and the cylinder C. The centers of the band-wheels B and D are farther apart than the centers of the cylinder C and presser-roller A, so that the bands converge as they approach the pressure-point between the cylinder C and the presser-roller A. E is a table, on which the work is received, and which leads up to the machine, and its surface is about level with the top of the band-wheel D. On the top of the plate E are two parallel guides, M and M', attached to bars *m*, in which are slots *m*¹, through which pass the screw-pins *m*², by means of which the guides M M' are held fast to the plate E, and by loosening the screws *m*² the guides M M' can be moved backward or forward through the slots *m*¹ in the bars *m*.

The operation of the machine is as follows: It is set in motion by a crank or other means in the direction of the arrows in Fig. 3. A length of fluted fabric, which it is desired to press or crease permanently, is fed into the machine on the table E between the guides M M', so that it can be caught between the converging bands *h h* and *i i*, and carried along with them toward the cylinder C. As the goods advance in the machine the flutes

are pressed down between the converging bands almost vertically, so that they will be symmetrically and similarly laid; and as the presser-roller A presses down the folds upon the cylinder C they receive a permanent set or crease. The guides M M' serve not only to keep the fluted fabric in proper position while it is passing between the bands, but they also serve to hold back the fluted fabric and regulate, to some extent, the speed with which it passes between the cylinder C and the presser-roller A. By proper mechanism, when desired, a gum-cord can also be fed under or above the fluted fabric, or both above and under the same, and between the cylinder C and the presser-roller A.

It is obvious that the mode of operation of this machine may be extended, so as to have several pairs of bands moving in the same machine, each pair making a separate pressure or crease in the fluted fabric, which is passing through the machine, intervals being left between the bands for the passage of the parts of the fluted fabric, which is not to be pressed.

What I claim as my invention, and desire to secure by Letters Patent in a machine for creasing fluted fabrics, is—

1. The endless bands *h h* and *i i* in combination with the presser-roller A and cylinder

C, and the wheels B and D, when constructed and arranged to operate substantially as and for the purpose set forth.

2. In a machine for creasing fluted fabric the combination of the cylinder C with the presser-roller A, mounted upon a movable center and controlled by a spring for the purpose of varying the pressure, as desired, substantially as described.

3. The band-rollers B and D, mounted on opposite ends of a vibrating beam, for the purpose of equalizing the tension of the bands, substantially as described.

4. The band-wheels B and D with the lever L and the screw *l*, combined and arranged substantially as described.

5. In a machine for creasing fluted fabric the combination of the presser-wheels A and C, geared with the band-wheels B and D, substantially as described.

6. In a machine for creasing fluted fabric the combination of the table E with the band-wheels B and D, substantially as described.

7. In a machine for creasing fluted fabric the combination of the table E with the guides M M', substantially as described.

JOHN H. BROWN.

Witnesses:

GEO. H. EVANS,
JNO. R. LEFFERTS.