H. B. ADAMS.
Fluting-Machines.

No. 196,066. Patented Oct. 16, 1877.

Fig. 1.

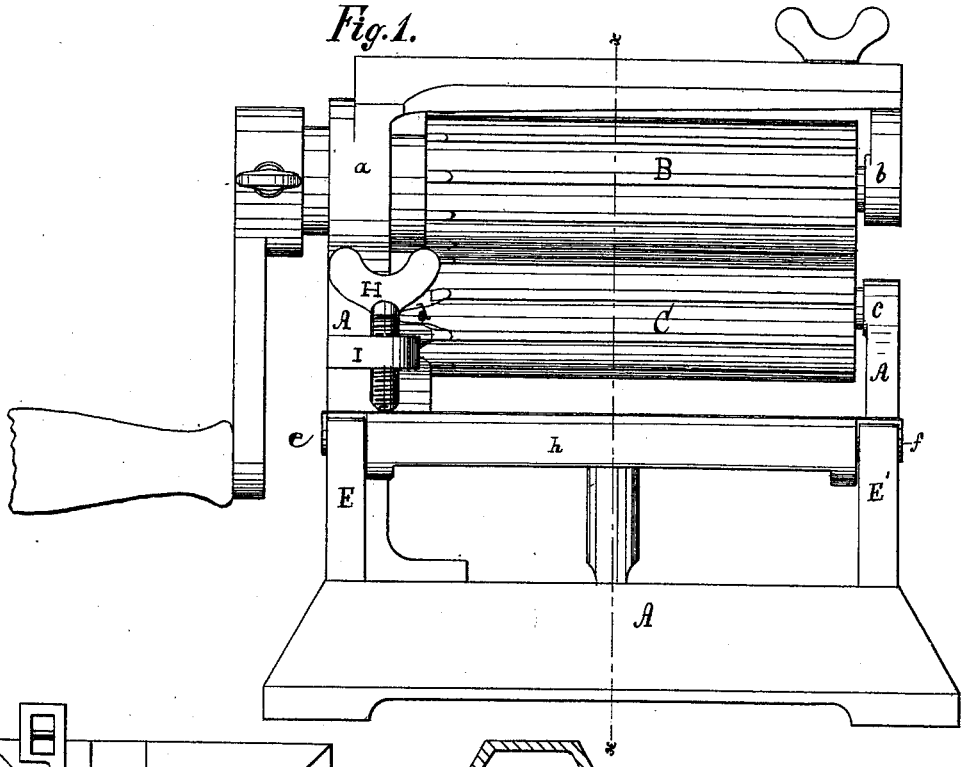


Fig. 3.

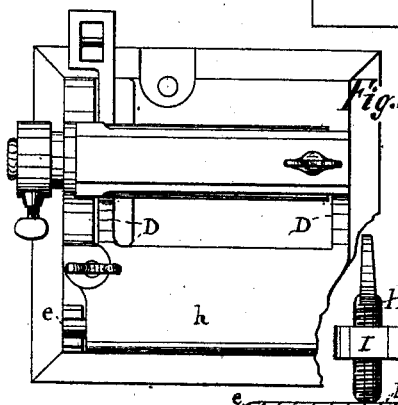
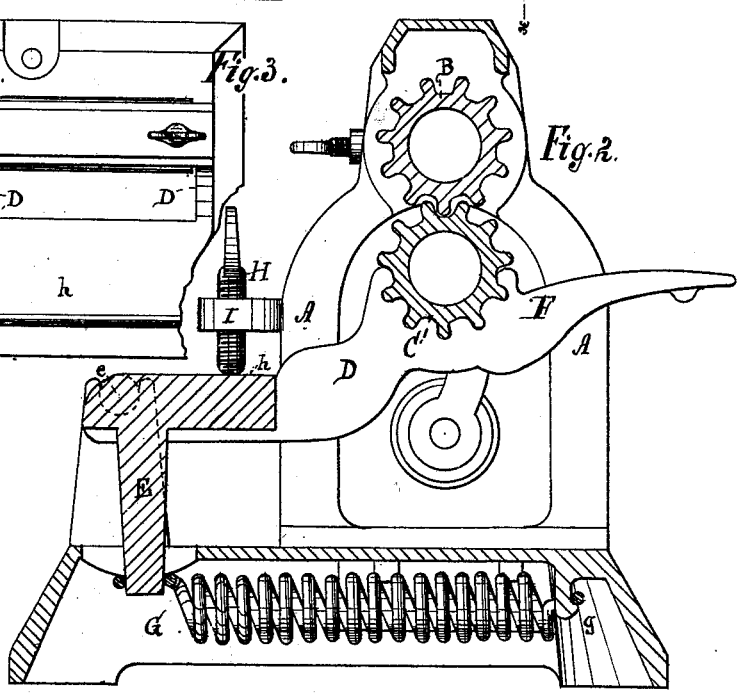


Fig. 2.



Witnesses:
Theodore Foster.
B. F. Clark.

Inventor:
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UNITED STATES PATENT OFFICE.

HENRY B. ADAMS, OF NEW YORK, N. Y.

IMPROVEMENT IN FLUTING-MACHINES.

Specification forming part of Letters Patent No. **196,066,** dated October 16, 1877; application filed June 7, 1876.

To all whom it may concern:

Be it known that I, HENRY B. ADAMS, of the city of New York, in the State of New York, have invented an Improvement in Fluting-Machines, of which the following is a specification, reference being had to the accompanying drawings, forming part of the same, of which—

Figure 1 is a rear elevation of a fluting-machine containing my improvement. Fig. 2 is a central vertical cross-section of same on line *x x* of Fig. 1, and Fig. 3 is a plan of same.

My invention relates to that class of fluting-machines in which one of the fluting-rollers revolves in fixed bearings, while the bearings of the other roller are movable vertically, the same being mounted in a swinging frame, with which is connected a spring, whereby said roller in said movable bearing is pressed toward or against the other; and consists in the combination, with such organization, of an adjustable stop, whereby the movement of the roller in the movable bearings toward the roller in fixed bearings is limited to any desired point.

A is the frame in which the several moving parts are mounted. B is the upper fluted roller, which revolves in bearings *a b* in said frame. C is the lower fluted roller, which has its bearings *c d* in a frame, D, which is pivoted at each end, at *e f*, in pillars E E′, which rise from the base of the frame A. F is an arm, which extends downward from the said frame D, and G is a spiral spring, one end of which is connected to the lower end of said arm, and the other, at *g*, to the base of the frame A, the stress of the said spring acting to swing the frame on its pivots or bearings upward, thereby pressing the lower roller C toward the upper roller B, and, unless stopped or prevented, forcing it into actual contact with said upper roller with a pressure due to the entire force of the spring.

In fluting delicate fabrics they are liable to be cut or otherwise injured by this pressure and actual contact of the rollers; and to obviate such a result I have provided an adjustable stop for the said frame D. It consists of a set-screw, H, working in the arm I formed on the frame A. It impinges against the upper face of the cross-bar *h* of the frame D, thus limiting the upward movements of the said frame, and by running it up or down contact between the rollers may be prevented, and the limit of the upward movement so adjusted at pleasure that the thinnest and most fragile fabric may be fluted without injury.

In place of the spring G, its equivalent—a weight—may, of course, be used.

The advantages of this adjustable stop are material and important. In all fluting-machines heretofore constructed the rollers are permitted to come in contact with each other under a variable pressure, whereby they become worn and roughened by grinding together. Also, the only method of adjusting the rollers to fabrics of different thicknesses and width in the machines in common use is by varying the pressure of the movable roller against the other. But this does not always fully meet the exigencies of the case. Fabrics of equal thicknesses and different widths require substantially equal pressure, but different spaces between the rollers. I can, by my invention, secure this equality of pressure on all thicknesses of fabric, and can therefore flute fabrics of all varieties of thickness and widths with equal perfection.

When the machine is once set to any given thickness of fabric, such fabric of all varieties of widths may be fluted without any variation of the pressure, which cannot be done in any other machine now known or in use, there being required in the latter a variation of the pressure with every material variation of the width of fabric of even uniform thickness.

What I claim, and desire to secure by Letters Patent, is—

The combination, in a fluting-machine in which one of the rollers revolves in fixed bearings and the other in vertically-movable bearings, the latter being pressed toward the former by the stress of a spring, of the said rollers and spring with an adjustable stop, by which the movement of the one roller toward the other is limited and the said limitation varied at will, as and for the purpose described.

Witness my hand this 6th day of June, 1876.

HENRY B. ADAMS.

Witnesses:
B. S. CLARK,
FRED. E. BOND.