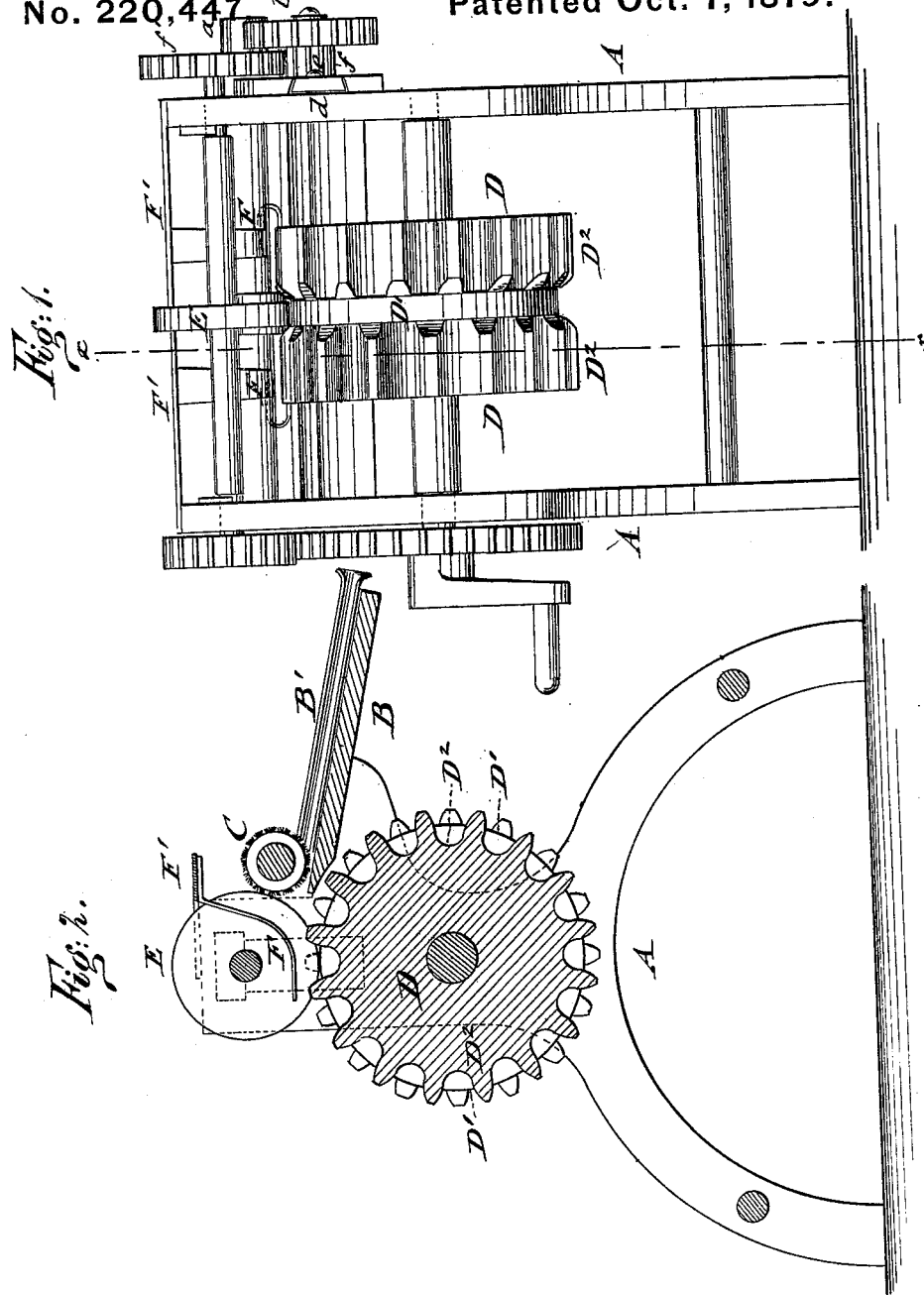


O. W. UHLIG.
Machine for Making Fluted Trimming.
No. 220,447 Patented Oct. 7, 1879.



Witnesses:
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Otto Busch.

Inventor:
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Fig: 3.

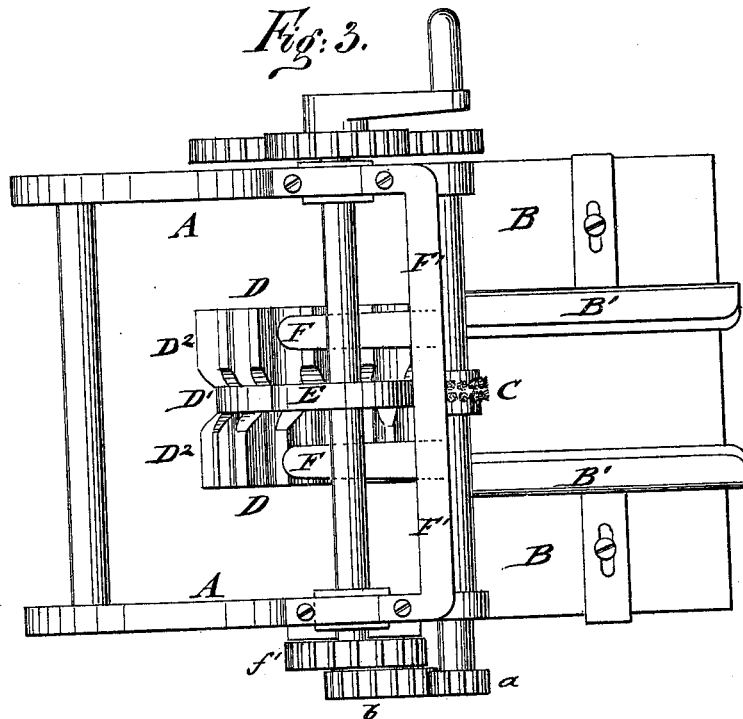


Fig: 4.

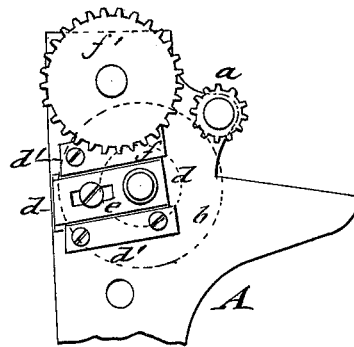
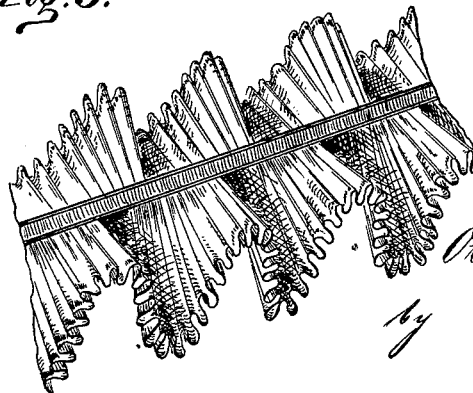


Fig: 5.



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OTTO W. UHLIG, OF NEW YORK, N. Y.

IMPROVEMENT IN MACHINES FOR MAKING FLUTED TRIMMINGS.

Specification forming part of Letters Patent No. 220,447, dated October 7, 1879; application filed July 21, 1879.

To all whom it may concern:

Be it known that I, OTTO W. UHLIG, of the city, county, and State of New York, have invented certain new and useful Improvements in Machines for Creasing and Shaping Fluted Fabrics, of which the following is a specification.

In the accompanying drawings, Figure 1 represents a rear elevation of my improved machine for creasing and shaping fluted fabrics. Figs. 2 and 3 are, respectively, a vertical longitudinal section on line *x x*, Fig. 1, and a top view of the variable gear for controlling the speed of the feeding brush-wheel; and Fig. 5 is a perspective view of the fluted fabric as creased and shaped on my machine.

Similar letters of reference indicate corresponding parts.

The object of this invention is to furnish an improved machine by which fluted fabrics may be creased and shaped at the same time in a uniform and reliable manner, so as to produce what are technically termed "shell-ruches" or "wave-flutings," and the invention consists of a shaping cylinder or wheel provided with a central cylindrical portion, and with toothed side portions having alternating cogs, which are beveled off toward the center portion. A presser-wheel bears on the central cylindrical portion of the shaping-wheel, while curved guides press the fabric on the alternately-toothed portions of the same. The fabric is fed by a brush-wheel over a table with adjustable guides to the shaping and presser wheels, the brush-wheel receiving variable speed by means of a variable transmitting-gearing.

Referring to the drawings, A represents the supporting-frame of my improved machine for creasing and shaping fluted fabrics.

The supporting-frame A is made of two transversely-braced standards, which are provided with journal-bearings for the shafts of the different wheels.

To bracket-shaped extensions at one side of frame A is attached an inclined table, B, with laterally-adjustable guides B', over and between which the fluted fabric is conducted to the feeding, creasing, and shaping mechanism of the machine.

The feeding mechanism consists of a brush-wheel, C, which bears on the center of the fab-

ric and feeds it forward, so as to enter between the lower shaping wheel or cylinder, D, and the upper presser-wheel, E.

The shaping-wheel D is made of a central cylindrical portion, D¹, and of toothed portions D² at each side thereof, the teeth of which project above the central cylindrical portion, D¹, and are beveled off toward the same at their inner ends, adjoining the smooth cylindrical part.

The teeth of the side portions, D², are so arranged as to alternate with each other. In other words, the teeth of one side portion are placed opposite to the spaces between the teeth of the other side portion, which spaces extend about the same depth below the surface of the middle cylindrical portion as the teeth project above the same, as is shown clearly in Fig. 2.

The presser-wheel E is of about the same width as the middle cylindrical portion, D¹, of the shaping-wheel and bears thereon, so as to produce the central crease in the fluted fabric, while the toothed side portions, D², produce the alternating waves in the same, as shown in Fig. 5.

Flat curved guides F extend downward from a fixed transverse rod or plate, F', of the frame, and pass at some distance from the toothed side portions, D², over the same, so as to cause the proper spreading of the fluted fabric over the toothed portions for the proper formation of the waves thereon.

The shaft of the brush-wheel C, by which the fabric is fed to the shaping and pressing wheel, meshes, by a detachable interchangeable pinion, *a*, with an intermediate gear-wheel, *b*, which turns in bearings *d*, that are capable of adjustment in guides *d'* by a slot and clamp-screw, *e*, as shown in Fig. 4. A second pinion, *f*, on the shaft of the intermediate wheel, *b*, intermeshes with a gear-wheel, *f'*, at the end of the presser-wheel shaft. The presser-wheel shaft receives motion by a transmitting-gearing from the shaft of the shaping-wheel, which latter is set in motion either by a hand-crank, treadle, or belt-and-pulley connection with a power-shaft.

The adjustable intermediate gear-wheel, *b*, in connection with a larger or smaller pinion, *a*, imparts a variable speed to the brush-wheel,

so as to feed the fabric slower or quicker to the creasing and shaping wheels. When a larger pinion is placed on the brush-wheel shaft the intermediate gear has to be shifted in one direction, so as to still gear with the cog-wheel of the presser-wheel shaft and the pinion of the brush-wheel shaft, while for a smaller pinion the intermediate gear is shifted in opposite directions.

By using a larger gear the fabric is fed slower, so that a less fullness of fabric is fed to the creasing and shaping wheels and smaller waves obtained, while with a smaller gear an increased speed, and consequently a greater fullness of fabric, is furnished to the creasing and shaping wheels, and thereby larger waves formed in the fabric.

By the variable gear the machine is capable of turning out shell-ruches or wave-flutings of any size and fullness of waves in a rapid and uniform manner, so as to dispense with the more expensive and unequal shaping of the waves by hand.

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

1. In a machine for creasing and shaping fluted fabrics, the combination of a feeding brush-wheel with a creasing and shaping wheel, and with a central presser-wheel, substantially as set forth.

2. In a machine for creasing and shaping fluted fabrics, the combination, with a feeding brush-wheel, of a central presser-wheel and of a shaping-wheel having a smooth cylindrical center portion and alternately-toothed side portions, substantially as described.

3. In a machine for creasing and shaping fluted fabrics, a shaping wheel or cylinder having a smooth cylindrical center portion and alternately-toothed side portions, as specified.

4. In a machine for creasing and shaping fluted fabrics, a shaping cylinder or wheel having a smooth cylindrical center portion and alternately-toothed side portions, whose teeth project above the center portion, and are beveled off at their inner ends toward the same, substantially as described.

5. In a machine for creasing and shaping fluted fabrics, the combination of a creasing and shaping wheel having a cylindrical center portion and alternately-toothed side portions with a central presser-wheel, and with curved guides for the fabric at each side of the presser-wheel, substantially as and for the purpose set forth.

6. The combination of the shaping-wheel D, presser-wheel E, and brush-wheel C with a feed-table, B, having guides B', all substantially as described.

7. In a machine for creasing and shaping fluted fabrics, the combination of a shaping-wheel, D, and presser-wheel E with a feeding brush-wheel, C, and with mechanism to impart a variable speed to the latter, substantially as specified.

8. In a machine for creasing and shaping fluted fabrics, the combination of the presser-wheel shaft having a fixed gear-wheel with an intermediate adjustable pinion and gear-wheel, and with a detachable and interchangeable pinion of the brush-wheel shaft, to impart variable speed to the latter, substantially as and for the purpose set forth.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of two witnesses, this 19th day of July, 1879.

OTTO W. UHLIG.

Witnesses:

PAUL GOEPEL,
ADOLF DENGLE.