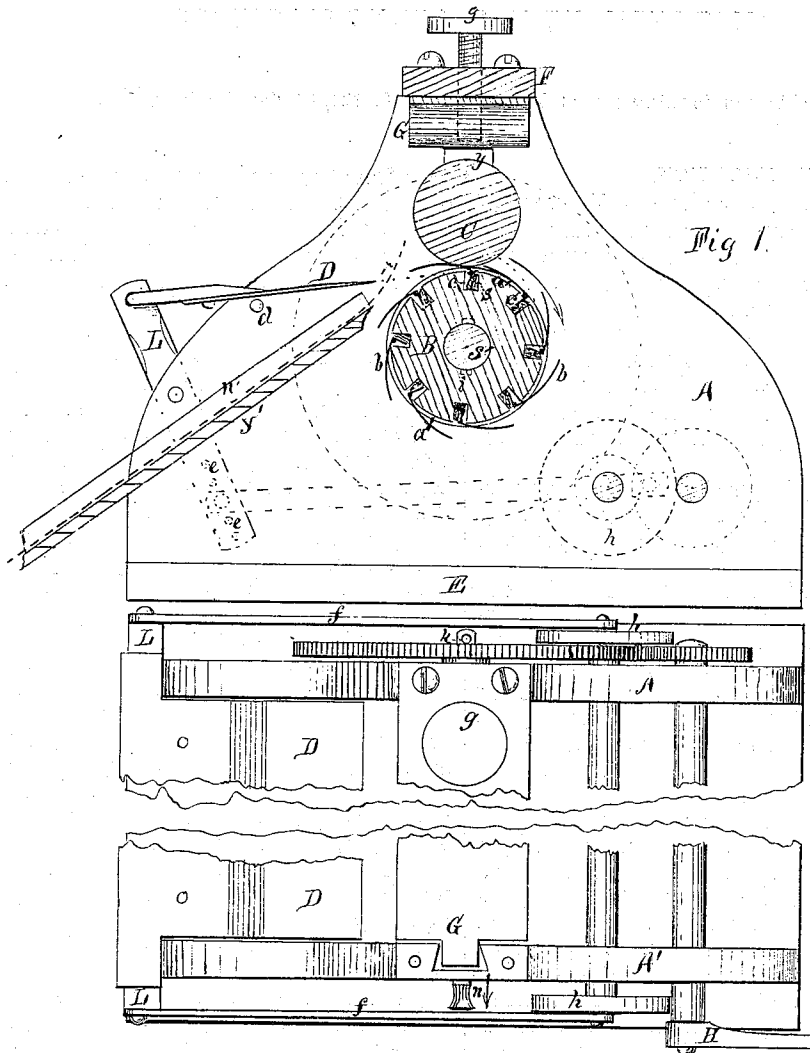


J. E. WHEAT.

Plaiting-Machines.

No. 129,504.

Patented July 16, 1872.



Witnesses.

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UNITED STATES PATENT OFFICE.

JAMES E. WHEAT, OF ROCHESTER, NEW YORK, ASSIGNOR TO HIMSELF,
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IMPROVEMENT IN PLAITING-MACHINES.

Specification forming part of Letters Patent No. 129,504, dated July 16, 1872.

SPECIFICATION.

Be it known that I, JAMES E. WHEAT, of Rochester, in the county of Monroe and State of New York, have invented a certain new and useful "Ruffling or Plaiting-Machine," of which the following is a specification:

The object of my invention is to provide a simple, cheap and efficient machine to fold ruffles, lay plaits, &c., with perfect uniformity and with the greatest possible rapidity in all kinds of fabrics or material used for such purposes.

In the drawing, Figure 1 is a transverse vertical section of my invention. Fig. 2 is a top view of the same having the central portions broken away.

A A' are the end supports for the rollers B and C, feeding or plaiting blade D, and its attachments, and they may be made in any ornamental design, of wood or metal, and are fixed to the base-plate E. The folding-roller B may be made of wood or metal, as may be desired. If made of metal it may be hollow and kept filled with steam or otherwise heated to assist in fixing the folds. This folding-roller is provided upon its periphery with several hinges or folding-blades *b*, which are hinged to the disks *a*, Fig. 1, fixed to the ends of the roller. They are provided with short adjusting-arms *c*, resting in cavities formed in the roller to receive them. A rubber or other suitable spring, *s*, is placed behind these arms to force the edge of the blades off from the roller, except while passing under the compression-roller C, as seen at *a'*, Fig. 1, when the spring *s* yields and the folding-blades are forced down firmly upon the fold made in the cloth; and as soon as they are released by the roller C they are thrown open by the springs *s*, and the folds of the work allowed to discharge. There may be any desired number of blades, *b*, provided upon the roller. I prefer the number shown in the drawing—eight. The rear edge of the reciprocating feeder-plate D is hinged to the upper end of the pivoted levers L, and it rests loosely upon the lugs *d* toward its front edge. The levers L are pivoted to the supports A and A', and the lower ends are connected to the crank-heads *h* by the rods *f*. The levers L are provided with several holes, *e*, whereby the rods *f* may be attached nearer to or fur-

ther from their axial point, so as to increase or diminish the throw of the feeder-plate D. The gearing should be proportioned so as to afford as many reciprocations of the feeder-plate as there are folding-blades *b* on the roller B (the number shown in the drawing being eight.) The crank-heads should revolve eight times to one of the roller B. When wider or narrower folds or plaits are to be made a larger or smaller folding-roller is inserted, there being a set of five or more furnished with each machine. The larger the rollers the wider the folding blades are, and vice versa. The axial shaft *s'* is locked to the roller, as shown at *i*, Fig. 1, and may be withdrawn in the direction indicated by the arrow *n* in Fig. 2, by simply removing the key *k*. The compression-roller C is hung in vertically-sliding boxes *y*, which are pressed down upon the folding-blades *b* by the ends of the spring G, which is attached to the cap F. The tension of this spring may be increased or diminished, and thereby the pressure upon the forming folds by the thumb-screws *g*. Rubber may be used instead of the strap or plate spring G. The feeding-apron *y'* may be provided with an adjustable side-gauge, *n'*, if desired, whereby the cloth may be fed through either straight or obliquely, which latter would lay the folds or plaits diagonally.

The operation is as follows: The end of the strip to be plaited is placed slightly above the edge of the feeding-blade, and held there until the first stroke is made, after which the machine may be run as rapidly as desired. It may be driven by hand, by the crank H, or by steam or other power.

What I claim as my invention, is—

1. In a machine for laying plaits, folds, or ruffles, a folding-roller, provided with one or more plaiting recesses having one yielding wall or side, for the purposes set forth.

2. In combination with the reciprocating feeder-blade D, the folding-roller provided with plaiting recesses having yielding walls, and the compressing-roller C, or its equivalent, for the purposes set forth.

JAMES E. WHEAT.

Witnesses:

J. M. HOWE,
WM. J. MCPHERSON.