2 Sheets--Sheet 1.

O. M. CHAMBERLAIN.

Plaiting Attachments for Sewing-Machines.

No. 137,342. Patented April 1, 1873.

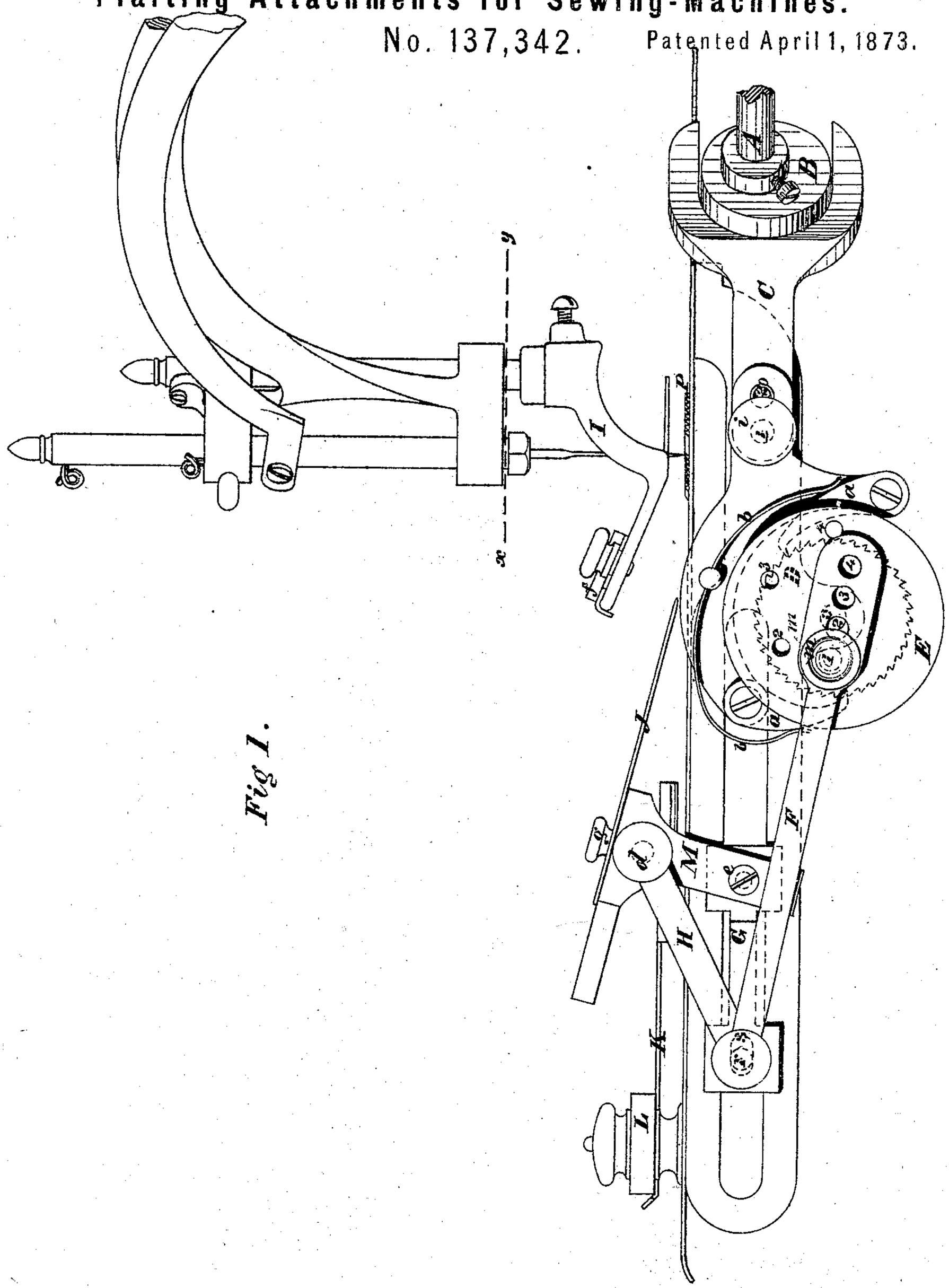

Fig. 1.

Witnesses.
Thos. A. Macaulay
Jas. G. Griffith

Inventor.
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2 Sheets--Sheet 2.

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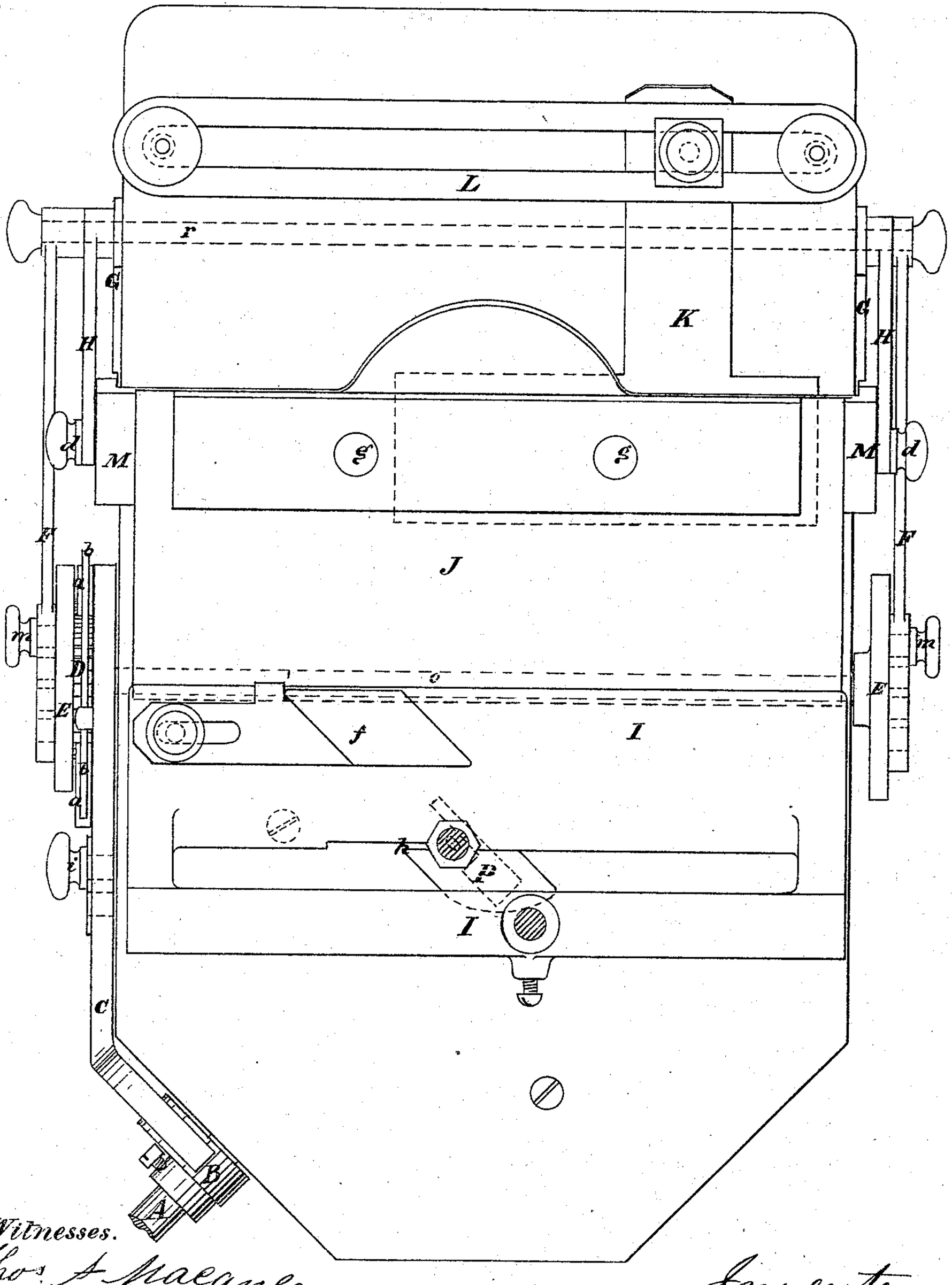
Fig 2.



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Thos. A. Macauley
Jos. G. Griffith

Inventor
O. M. Chamberlain

UNITED STATES PATENT OFFICE.

ORANGE M. CHAMBERLAIN, OF NEW YORK, N. Y., ASSIGNOR OF ONE-HALF HIS RIGHT TO WM. B. CARRINGTON, OF SAME PLACE.

IMPROVEMENT IN PLAITING ATTACHMENTS FOR SEWING-MACHINES.

Specification forming part of Letters Patent No. **137,342**, dated April 1, 1873; application filed November 2, 1872.

To all whom it may concern:

Be it known that I, ORANGE M. CHAMBERLAIN, of the city, county, and State of New York, have invented a new and useful Improvement in Attachments for Sewing-Machines for making Bias Plaiting; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification.

My invention relates to improvements in attachments for sewing-machines for making bias plaiting, and is an improvement on my invention patented August 6, 1872, and numbered 130,189, in which the parts are applied above the platform, which gives motion to a reciprocating plaiter for making straight plaits. My present attachment is mounted in suitable frame-work, and applied beneath the platform, and receives motion from an eccentric secured to a shaft forming part of the sewing-machine.

Figure 1 is a side elevation of my invention, and Fig. 2 is a plan view of the same through the dotted lines *x* and *y*.

Similar letters refer to like parts.

The eccentric moves an adjustable lever pivoted to the frame, and at the other end are pivoted two pawls, which move a ratchet-wheel and turn a shaft to which this ratchet-wheel is secured. Each end of this ratchet-wheel shaft is provided with a disk, onto which is screwed a crank-pin for conveying motion through connecting-rods and pitman to the sliding boxes and folder. The disk-plates are provided with several holes at various distances from the center for changing the traverse of the folders in making large or small plaits. The connecting-rods are also provided with several holes on one end for the purpose of carrying the folder to the same point when finishing a plait. The sliding boxes are provided with slots S, which receive the shaft *r*, to which the connecting-rods are attached. The brace M, which carries the folder J, is pivoted at *e*, and is connected to the shaft *r* by links H, and the movement of the shaft in the slots of the boxes rocks the brace on its pivot and gives a downward movement to the folder before the forward movement takes place, so that the folder may rest firmly on the cloth to be folded, and also raises the folder from the cloth after the plait is made, and before any backward movement takes place, thus permitting the feeding to go on without any resistance or friction from the folder. The figures 1, 2, 3, 4, on the connecting-rods and on the disk-plates, are to indicate that the stud *m* is to be passed through a hole in the connecting-rods having a similar figure to the one on the disk-plate into which it is to be screwed. 20 on the oscillating lever C represents a hole into which the stud *n* is passed to increase the action of the lever, and there is a hole tapped into the frame directly opposite. When it is desired to put a band or heading on the plaiting the strip is passed through an adjustable guide, *f*, on the presser-foot, and through a slot, *h*, in the presser-foot near the needle. (This slot may be at any desirable angle to the feed, or may be straight across it.) The band, in being fed through with the plaiting, will be stitched on at the same time.

In Fig. 1, A is the shaft of the sewing-machine; B, the eccentric; C, the adjustable lever; D, the ratchet-wheel; *a a*, the pawls, kept in position by the springs *b*; E E are the disk-plates; F, the connecting-rods; G G are the sliding boxes; H, the pitman; M is a brace, to which the folder J is attached, pivoted to the sliding boxes at *e*; *d d*, the studs securing the pitman H to the brace M. L is a slide to which the adjustable guide K is attached. I is the presser-foot, extending across the plate, each side of the needle, so as to press the plaits when formed. *f* is an adjustable guide for passing a band or heading through when it is desired to sew a band on the plaiting at the same time the plaiting is done. *h* is a slot in the presser-foot through which the band is to pass. *m* is a crank-pin, and *i* the stud of the lever C.

Motion being given to the machine, the eccentric B moves the lever C, which, by the pawls *a a*, causes the shaft *o* to rotate, and a reciprocating motion is given to the folder. The cloth to be plaited is passed through the guide K at an angle to the direction of the feed P, and fed through, being stitched at the same time. The bias of the plait is the same

as the angle at which the cloth is presented to the feed by the plaiter.

I have now particularly described my invention, and the manner in which it may be carried into effect; and

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

1. The slotted blocks S, in combination with the pitman H, folder J, and brace M, for the purpose set forth.

2. The guide K, the folder with the edge inclined to the path traversed by the material, and the feed inclined in a direction opposite the inclination of the folder, all as and for the purpose described.

O. M. CHAMBERLAIN.

Witnesses:

THOS. A. MACAULAY,

JAS. G. GRIFFITH.