(No Model.)

J. L. COLES.

PLAITING ATTACHMENT FOR SEWING MACHINES.

No. 254,536. Patented Mar. 7, 1882.

Fig. 1

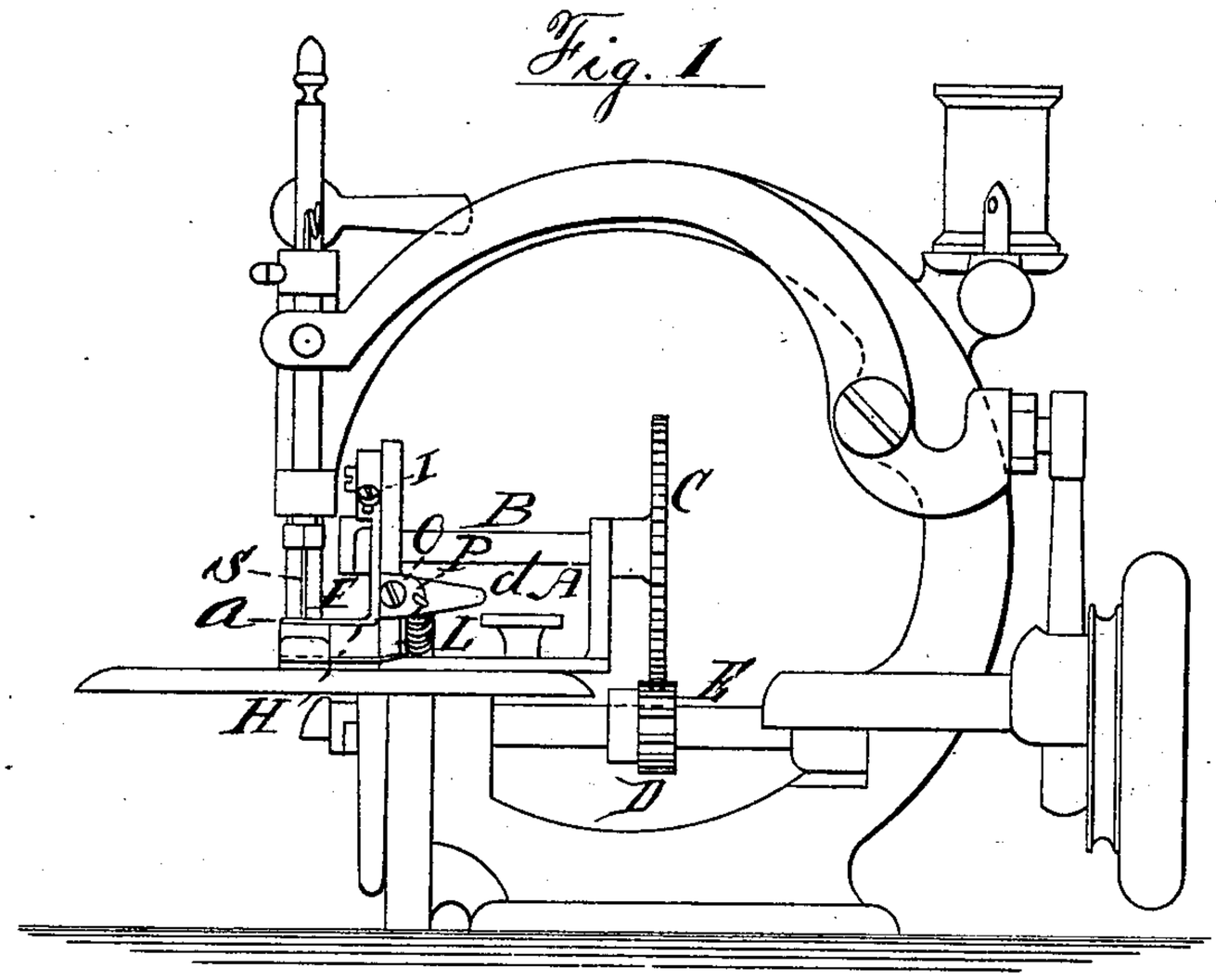


Fig. 2

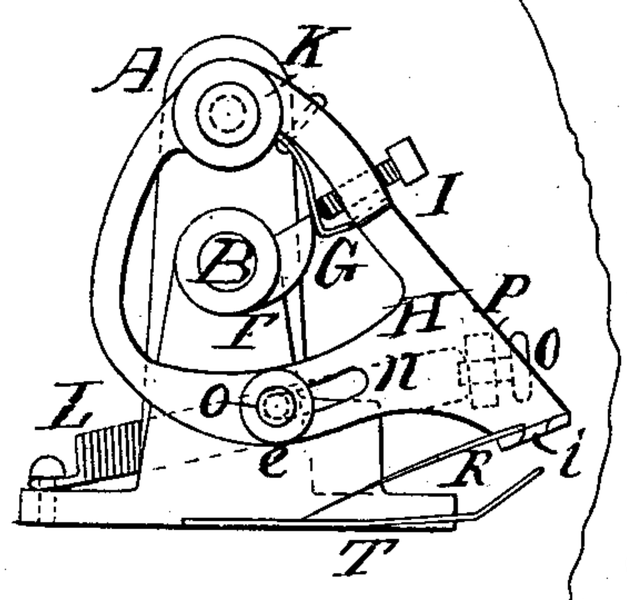
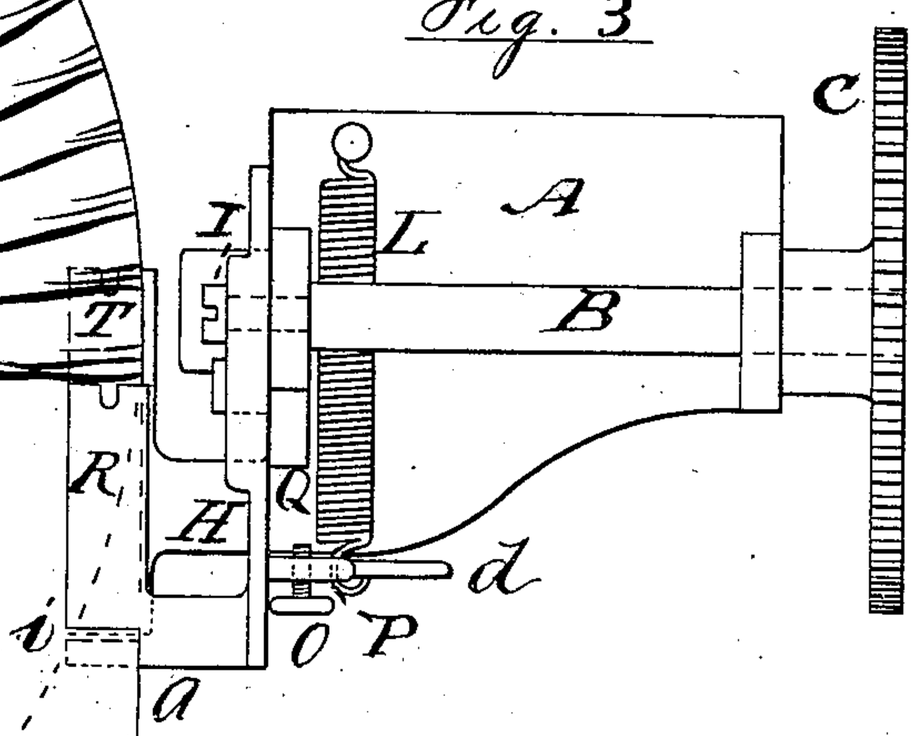


Fig. 3



Attest:

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JACOB L. COLES, OF NEWARK, NEW JERSEY.

PLAITING ATTACHMENT FOR SEWING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 254,536, dated March 7, 1882.

Application filed December 2, 1881. (No model.)

To all whom it may concern:

Be it known that I, JACOB L. COLES, residing in Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Sewing-Machine Attachments, as fully described and represented in the following specification and the accompanying drawings, forming a part of the same.

My invention relates to an attachment to sewing-machines for plaiting and for uniting a plaited strip to another section, and has especial adaptation to the manufacture of hat-tips by plaiting the side linings, and in the same process uniting them with the tips; but it may be used for other goods; and it consists in the mechanism substantially as herein shown and described.

Figure 1 is a side elevation of a Willcox & Gibbs sewing-machine with this attachment in place, and it may be attached to other sewing-machines as well. Fig. 2 is a front view of the attachment aside from the machine. Fig. 3 is a plan of the same, showing some work being plaited.

In my construction, A is a frame carrying the shaft B, having the gear-wheel C uniting with a pinion, D, fixed on the driving-shaft E of the sewing-machine.

On the front end of the shaft B, outside of the frame, is a cam, F, having an abrupt termination on one side that allows it, in pressing against a spring, G, on the swing arm or lever H, to drop suddenly off from the spring and leave the arm to return to the starting-point in the order of plaiting. The screw I is used, acting on the spring G, to regulate the fullness of the plait.

The arm H is hung to the frame on a shouldered screw, K, and has a spring, L, uniting with the frame, to react the arm making the plait. This spring may be otherwise constructed and arranged and perform the same service. At the lower portion of the arm are a washer, *e*, and screw O, turning into the frame A, the shank of the screw passing through a slot, N, and used to prevent the arm from moving forward out of line.

The screw O passing through a stub, P, on the side of the arm, to which the spring L also is attached, is adapted to have the inner end strike against a stop, Q, connected with the frame, and the screw adjusts the action, so that in the event of the cam wearing off the feed will remain the same.

To a stub, *a*, extending from the front of the arm, is secured the blade R, for plaiting the goods to the needle S. The plaiting-strip *r* is fed in under the blade R, passing through the slot *i* in the stub *a*. The blade T is secured to the frame A, and lies below the blade R, and covers the feed-teeth of the machine, and also separates between the strip *r* being plaited and the tip *c* to which it is being stitched, when desirable to unite the two; but I may plait without sewing the plaited strip to any other section, if desired.

By increasing the size of the wheel C over the size of the pinion D, I increase the number of stitches taken to one action of the plaiting-blade R, and, as shown, I make three stitches to one movement of the blade, which gives me a desired space between the plaits; or, in plaiting, the operator may make as long a space between the plaits as may be desired by holding onto the arm, by pressing the finger against the inside of the end *d* of the stub P, and letting the needle run without the action of the cam on the arm, as the movement of the arm is not dependent on the movement of the needle, except by the connection of the spring L.

I claim—

1. In a plaiting attachment for sewing-machines, the blade R, carried by the swing-arm H, pivoted at K to the frame A, in combination with the cam F on the shaft B, said cam working within a slot in the said arm, and the spring L, together with the gear-wheels C and D, by which a rotary motion is transmitted from the main shaft E to the shaft B, substantially as shown and described.

2. In combination with the blade R, arm H, spring L, cam F, and frame A, the shaft B and gear-wheels C and D, substantially as and for the purpose set forth.

3. In combination with the blade R, arm H, spring L, frame A, and cam F, the spring G and screw I, substantially as and for the purpose set forth.

4. In combination with the blade R, arm H,

spring L, frame A, and cam F, the stub P and screw O, substantially as and for the purpose named.

5. The blade R, carried by the slotted arm H, said arm being moved in one direction by the cam F on the shaft B and in the other by the spring L, in combination with the separator-blade T, secured to the frame A, substantially as set forth.

6. The combination of the blade R, arm H, spring L, frame A, cam F, and blade T and the extended end of stub P, substantially as and for the purposes specified.

JACOB L. COLES.

Witnesses:
HORACE HARRIS,
S. R. STEADMAN.