

(No Model.)

2 Sheets—Sheet 1.

A. DE BEAUMONT.

DEVICE FOR RIPPING THE SEAMS OF GARMENTS.

No. 288,031.

Patented Nov. 6, 1883.

FIG. 1.

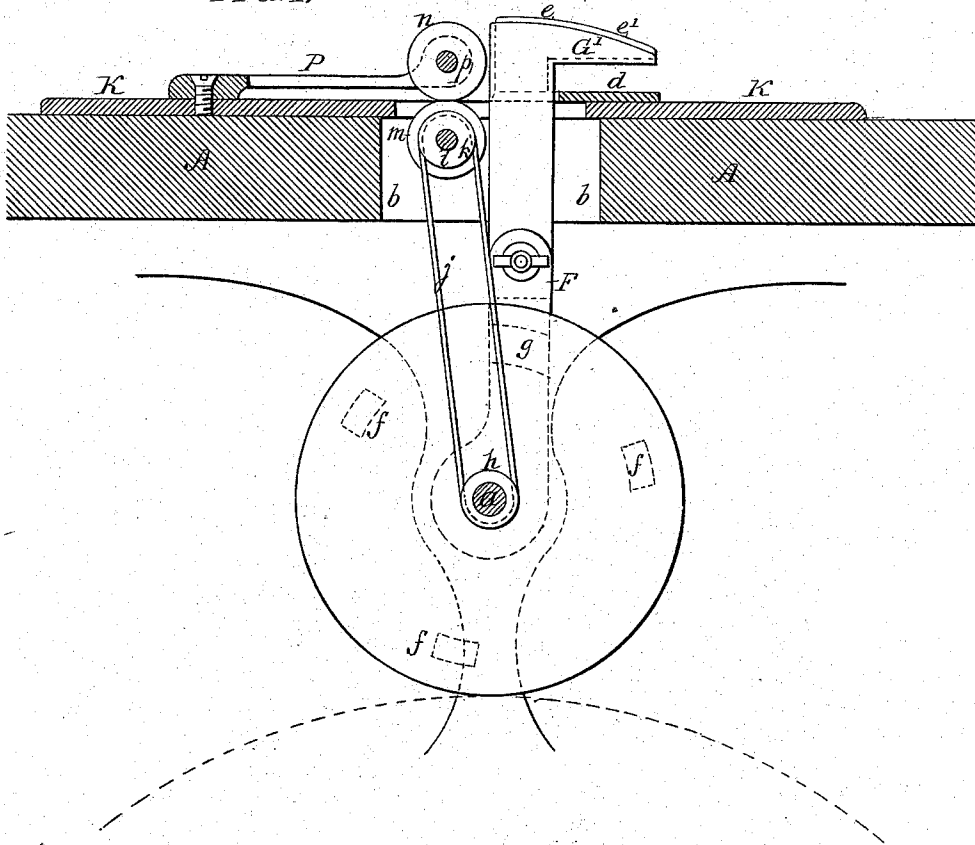
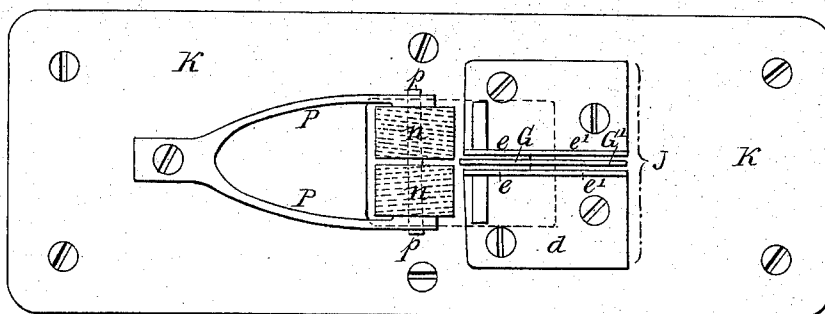


FIG. 2.



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INVENTOR:

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Howson & Sons

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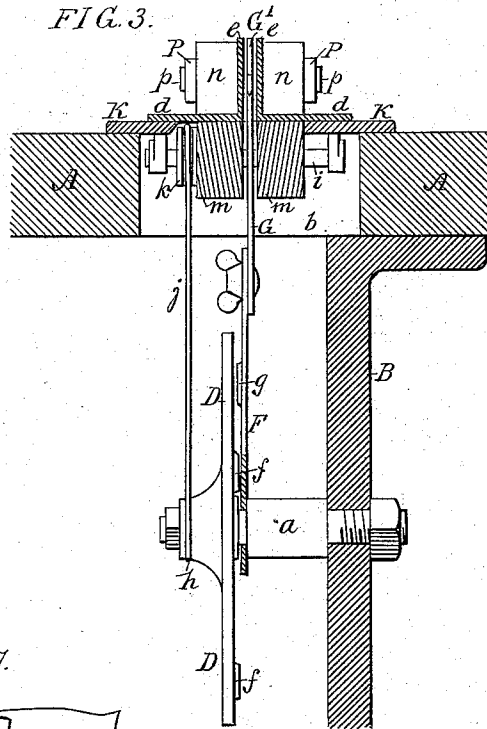


FIG. 7.

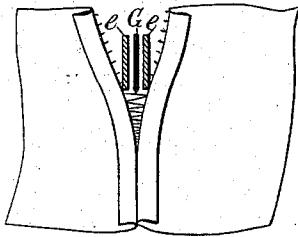


FIG. 6.

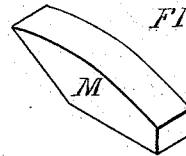


FIG. 5.

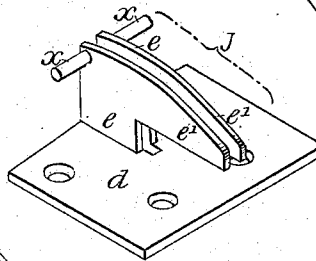
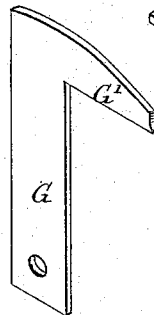


FIG. 4.



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UNITED STATES PATENT OFFICE.

ALEXANDRE DE BEAUMONT, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR
OF ONE-HALF TO SAMUEL SHERBURNE, OF SAME PLACE.

DEVICE FOR RIPPING THE SEAMS OF GARMENTS.

SPECIFICATION forming part of Letters Patent No. 288,031 dated November 6, 1883.

Application filed June 18, 1883. (No model.)

To all whom it may concern:

Be it known that I, ALEXANDRE DE BEAUMONT, a citizen of the United States, and a resident of Philadelphia, Pennsylvania, have invented certain Improvements in Devices for Ripping the Seams of Garments, of which the following is a specification.

The object of my invention is to construct a simple and effective device, to be driven by power, for ripping the seams of garments, and this object I attain in the manner hereinafter set forth, reference being had to the accompanying drawings, in which—

Figure 1, Sheet 1, is a longitudinal section of my improved device for ripping seams; Fig. 2, a plan view of the same; Fig. 3, Sheet 2, a transverse section; Figs. 4, 5, and 6, detached perspective views; and Fig. 7, a diagram illustrating the action of the device.

A represents part of the table of a sewing-machine, and B part of one of the side frames of the same, to which is secured a spindle, *a*, and to the latter is hung a wheel, D, which is free to rotate on the spindle, this rotation being effected by frictional contact with the periphery of the driving-wheel, as shown by dotted lines in Fig. 1, or by a belt from the main shaft, or other suitable means.

An elastic blade, F, is secured at the lower end to the spindle *a*, the upper end of this blade being bolted to the lower end of a knife, G, which projects through an opening, *b*, in the table A, that portion of the knife which is above the table being contained within a guard, J, which in the present instance comprises a base-plate, *d*, and opposite side plates, *e e*.

On the wheel D are cams *f*, and as said wheel is rotated these cams strike a projection, *g*, on the blade F, and cause the rapid lateral vibration of said blade, and of the knife G attached thereto, the side plates of the guard J occupying such relations to the blade of the knife G as not to interfere with this movement.

The front edge of the knife projects beyond the front edges of the plates *e*, as shown in Figs. 1 and 7, so that if a seam properly stretched apart is drawn toward the knife the tightened threads will be pressed against the sharp edge of the vibrating knife, and will be

severed by a scraping action, so that there will be no risk of cutting the cloth. (See diagram Fig. 7.)

A plain straight knife is all that is necessary for cutting seams such as shown in Fig. 7; but in order to cut closed seams or hems I provide the knife with a tapering tongue, G', over which the closed seam or hem can be drawn, the tapering form of the tongue tending to spread or open the seam as it is drawn over the same. In this case the guard-plates *e* have tongues *e'*, the tongue G' of the knife projecting below the lower edges of the tongue *e'*, as shown in Fig. 1.

When it is not desired to use the device for cutting closed seams, a thimble, M, Fig. 6, may be slipped over the tongues *e'*, so as to prevent the tongue G' from cutting the cloth when a seam is presented to the knife G.

The cloth may be drawn forward by hand; but I prefer to combine automatic feeding devices with the cutting mechanism. These feeding devices comprise upper and lower rolls on opposite sides and in rear of the knife G. The lower rolls, *m*, are carried by a shaft, *i*, which is adapted to bearings on the under side of a plate, K, secured to the table A, said shaft having a pulley, *k*, which is driven by a belt, *j*, from a pulley, *h*, on the wheel D. The upper rolls, *n*, are covered with rubber or other elastic or semi-elastic material, and are free to turn on a spindle, *p*, carried by elastic arms P, secured to the plate K, the tendency of these arms being to keep the rolls *n* firmly in contact with the rolls *m*, so that as the latter are rotated the cloth clamped between the rolls will be drawn forward.

It is desirable to stretch the seam laterally at the same time that it is drawn forward, so as to tighten the threads for the action of the knife G. In order to accomplish this I provide the lower rolls, *m*, with spiral ribs, so arranged that as the rolls are rotated there will be a lateral as well as a forward draft upon the fabric. The same result may be attained by setting the rolls at an angle in respect to the line of draft of the material, and either of these plans may be adopted in carrying out my invention.

In cutting closed seams or hems I find it ad-

visible to provide the plates *e* with laterally-projecting fingers *x*, over which the cloth passes before reaching the rollers *m* and *n*, the duty of these fingers being to spread the cloth, so as to insure a proper hold of both sets of rollers on the same.

I am aware that a cutting-knife and side guard-plates have been combined in a seam-ripping instrument to be operated by hand, and hence I do not, broadly, claim this combination; but

I claim as my invention—

1. A seam-ripping device in which a cloth-supporting plate and a knife projecting through the same are combined with mechanism whereby a lateral vibrating motion is imparted to the knife, as set forth.

2. A seam-ripping device in which are combined a cloth-supporting plate, a knife, *G*, a guard, *J*, and mechanism for imparting lateral vibration to the knife, as set forth.

3. A seam-ripping device in which are combined a cloth-supporting plate, a knife projecting through the same, feed-rolls on each side of the knife, and mechanism for rotating the feed-rolls and actuating the knife, as set forth.

4. A seam-ripping device in which are combined a cloth-supporting plate, a knife projecting through the same, feed-rolls constructed, as

described, so as to exert both a forward and lateral draft on the cloth, and mechanism for rotating said feed-rolls and actuating the knife, as set forth.

5. The combination of the spindle *a*, the wheel *D*, having cams *f*, and the elastic blade *F*, secured to the spindle and carrying the knife *G*, as set forth.

6. The combination of the knife *G*, having a projecting tongue, *G'*, with mechanism for laterally vibrating said knife, as set forth.

7. The combination of the knife *G*, having a projecting tongue, *G'*, the guard *J*, having side plates, *e*, with tongues *e'*, and mechanism for laterally vibrating the knife, as set forth.

8. The combination of the knife *G*, having a tongue, *G'*, the guard-plates *e*, having tongues *e'*, and the protecting-thimble *M*, as set forth.

9. The combination of the knife having a projecting tongue, *G'*, the guard having projecting tongues *e'* and fingers *x*, and mechanism for laterally vibrating the knife, as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ALEXANDRE DE BEAUMONT.

Witnesses:

HARRY L. ASHENFELTER,
HARRY SMITH.