(No Model.)

J. W. BLACKHAM.

MACHINE FOR CUTTING FELT, &c., INTO STRIPS.

No. 260,930. Patented July 11, 1882.

Fig 1.

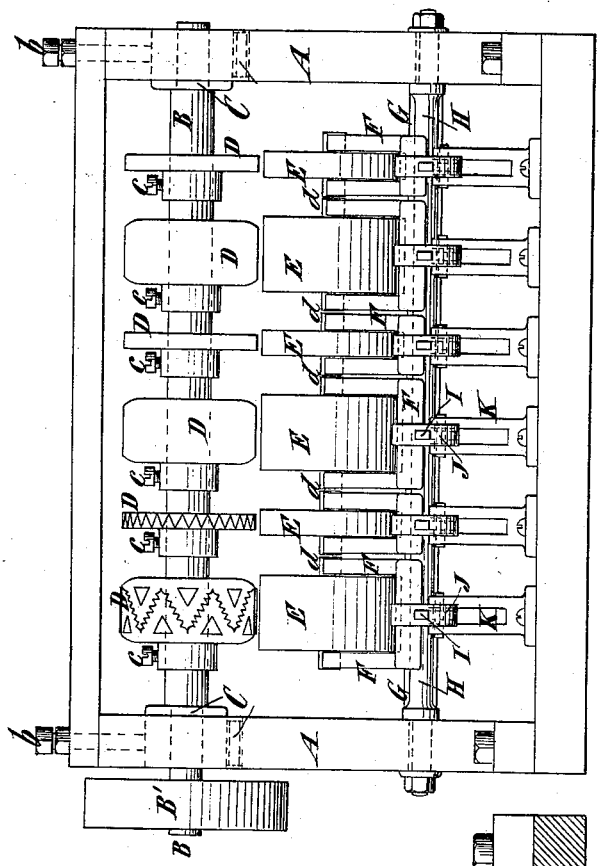

Fig 2.

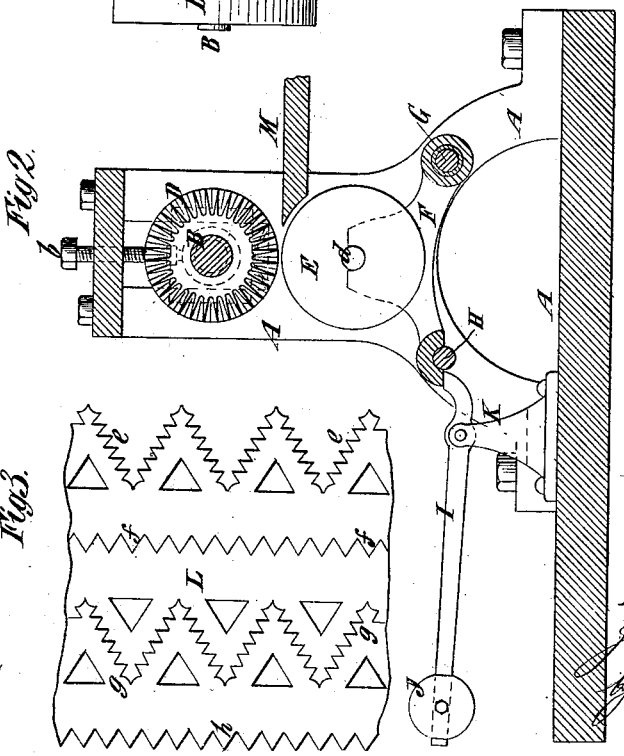

Fig 3.

Witnesses
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UNITED STATES PATENT OFFICE.

JOB W. BLACKHAM, OF BROOKLYN, NEW YORK.

MACHINE FOR CUTTING FELT, &c., INTO STRIPS.

SPECIFICATION forming part of Letters Patent No. 260,930, dated July 11, 1882.

Application filed May 26, 1882. (No model.)

To all whom it may concern:

Be it known that I, JOB W. BLACKHAM, of the city of Brooklyn, in the county of Kings and State of New York, have invented a certain new and useful Improvement in Machines for Cutting Felt and other Materials into Strips, of which the following is a specification.

My machine is more particularly intended to cut felt for making trimmings for ladies' skirts, but may be used for cutting other materials. The felt which is employed for this purpose is usually two yards wide and is folded or doubled, and the ordinary mode of cutting trimmings has been to cut off from the double felt two strips at a time with a single knife, or a single roller or rotary cutter, which is very wasteful, owing to the difficulty of cutting perfectly straight and parallel with the edges of the felt. The felt usually varies considerably in thickness at different parts; and the object of my invention is to provide a machine for cutting a number of strips at one operation by means of rotary cutters and bed-rolls, and in which provision is afforded for the bed-rolls to adapt themselves severally to the rotary cutters independently of each other, so that the felt will be properly cut notwithstanding great variations in the thickness.

To this end the invention consists in the combination, in a cutting-machine, of a series of rotary cutters or knives and oppositely-arranged bed-rolls, separate bearings for the several bed-rolls, which are self-adjusting independently of each other, and springs or weights for acting upon said bearings to carry said bed-rolls toward the rotary cutters, all as fully hereinafter described and claimed.

The invention further consists in a novel construction and arrangement of the bed-roll bearings and devices for applying weights thereto, as hereinafter described and claimed.

In the accompanying drawings, Figure 1 represents a side elevation of my improved machine. Fig. 2 represents a transverse vertical section thereof; and Fig. 3 represents a piece of the felt, showing the lines upon which it is cut by the machine.

Similar letters of reference designate corresponding parts in all the figures.

A designates the frame of the machine, and B designates a shaft supported in bearings C in said frame, and adapted to be rotated by a belt upon the pulley B′, or otherwise. The bearings C may be set and held down by means of set-screws *b*.

Upon the shaft B are secured a number or series of rotary cutters or knives, D, which are constructed or formed so as to produce any desired pattern, and which may be adjusted to any desired distance apart on the shaft and secured by means of set-screws *c*, or otherwise. Only two of these knives or cutters D are here fully shown; but it will be understood the others have cutting-edges formed to cut the felt with the desired pattern. The frame-work of the machine may be wide enough to take in the yard-wide double felt or other material, or even wider, and the cutters or knives D are sufficient in number to cut the whole width of fabric into strips at one operation.

E designates bed-rolls, which are equal in number to the cutters or knives D, and the journals *d* of which are supported in bearings F, which are separate from and adjustable independently of each other. As here shown, the bearings F are all supported or fulcrumed at one end on a rod or bar, G, on which they may swing or turn, and are supported at the opposite end upon a rod or bar, H, so that at that end they may be raised and lowered.

I designates levers to which weights J are applied, and which are fulcrumed in standards K. The inner ends of the levers I severally bear upon the ends of the bearings F, as best shown in Fig. 2; and it will be clearly understood that the weights J will tend to raise the bearings F and keep the bed-rollers E pressed upward against the cutters or knives D, and any one bed-roll and its bearing may rise and fall independently of all the others.

If desired, the bearings of the bed-rolls might be arranged to rise and fall in vertical guides, and springs placed below them, or weights otherwise applied to them, might be used.

The felt L is fed through the machine from a table, M, and the several knives or cutters will sever it on the irregular lines *e f g h* without waste; and as the bearings of the several bed-rolls can rise and fall independently of each other the felt will be entirely cut through by all the knives or cutters, no matter how

much different portions may vary in thickness. If the bed-rolls were all mounted on a single shaft or arranged with their journals in fixed unyielding bearings, the springing of the cutter-shaft, produced by the greater thickness of felt between certain of the knives or cutters and their bed-rolls than between others, would prevent the thinner parts of the felt from being cut through. The separately self-adjusting rolls are also desirable, for the reason that the cutters or knives cannot well be made and kept of exactly the same size and are not always true; and when supported in independently self-adjusting bearings the rolls will adapt themselves to cutters or knives of varying sizes or diameters and any want of truth in the cutting-surfaces.

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

1. In a cutting-machine, the combination of a series of rotary cutters or knives and oppositely-arranged bed-rolls, separate and independent bearings for said rolls, and separate springs or weights applied to the several bearings, substantially as and for the purpose herein described.

2. The combination, with the shaft B and knives or cutters D thereon, of the several bed-rolls, E, separate and independent bearings for said rolls, and separate springs or weights applied to the several bearings, substantially as and for the purpose herein described.

3. The combination, with the shaft B and cutters D, of the bed-rolls E, bearings F, fulcrum G, levers I, and weights J, substantially as and for the purpose herein described.

JOB W. BLACKHAM.

Witnesses:

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ED L. MORAN.