

(No Model.)

2 Sheets—Sheet 1.

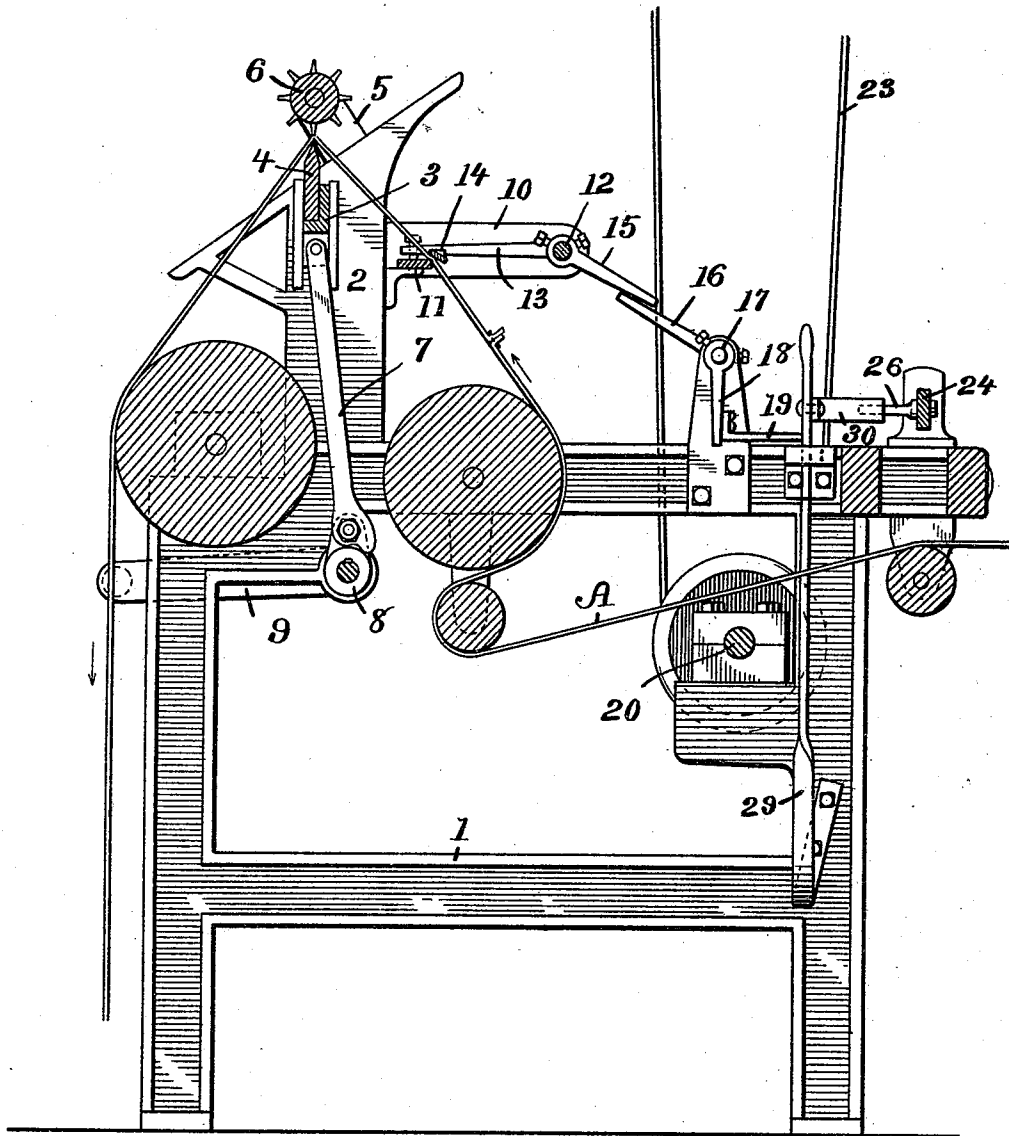
J. PEARSON, W. STEAD & W. J. MONK.

PLUSH SHEARING MACHINE.

No. 496,532.

Patented May 2, 1893.

Fig. 1.



WITNESSES

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2 Sheets—Sheet 2.

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Fig. 4.

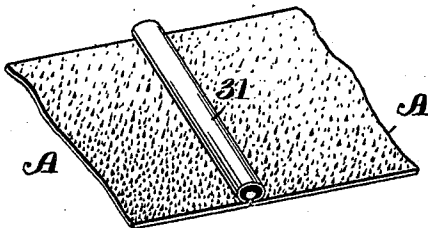


Fig. 5.

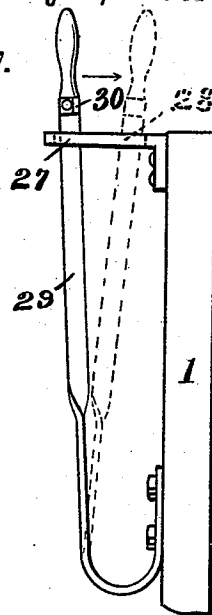
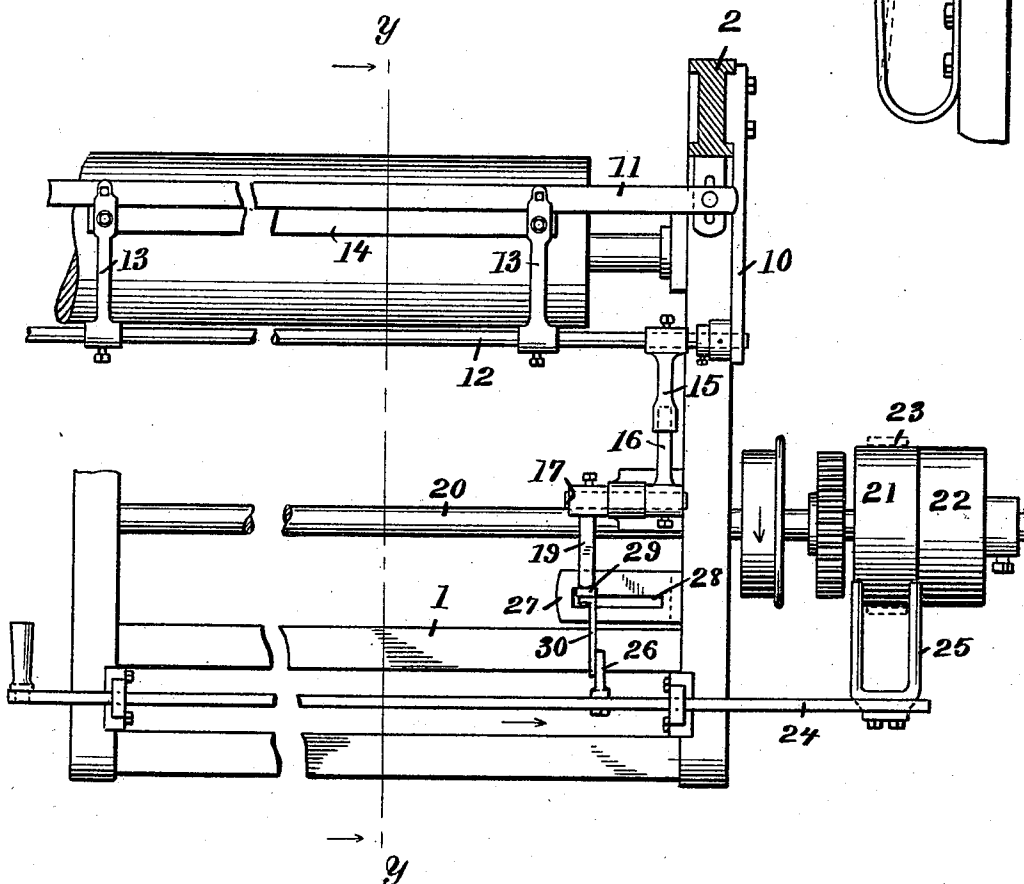


Fig. 2.



WITNESSES

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UNITED STATES PATENT OFFICE.

JAMES PEARSON, WILLIAM STEAD, AND WILLIAM JAMES MONK, OF
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PLUSH-SHEARING MACHINE.

SPECIFICATION forming part of Letters Patent No. 496,532, dated May 2, 1893.

Application filed April 11, 1892. Serial No. 428,650. (No model.)

To all whom it may concern:

Be it known that we, JAMES PEARSON, WILLIAM STEAD, and WILLIAM JAMES MONK, all subjects of the Queen of Great Britain, residing at Saltaire, county of Yorkshire, Kingdom of Great Britain, have invented certain new and useful Improvements in Plush-Shearing Machines; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to certain novel and useful improvements in plush shearing machines, and has for its object to provide a stop motion actuated by the running fabric for the purpose of automatically stopping the machine when the end of the piece to be sheared has been reached.

The machine is designed to operate upon long lengths of fabric consisting of several pieces whose ends are connected or joined together as by the means shown in the drawings, or by means of a seam which necessarily makes a thick place in the piece.

With these ends in view our invention consists in the construction and combination of elements hereinafter fully and in detail explained and then recited in the claims.

In order that those skilled in the art to which our invention appertains may fully understand its construction and method of operation we will describe the same in detail, reference being had to the accompanying drawings which form a part of this specification, and in which,

Figure 1, is a central, vertical, longitudinal section, substantially upon the line $y-y$ of Fig. 2. Fig. 2, is a plan view; Fig. 3, a detail elevation of the lever 29 and its connections; and Fig. 4, a perspective showing the two ends of fabric joined together.

The same numerals denote the same parts in each of the figures.

1 denotes the frame of the machine which may be of any suitable construction. In vertical extensions of said frame numbered 2, is mounted in slide ways a bar 3 carrying a blade 4. Journalled in brackets 5 above the blade is a rotating cutter 6 between which and said blade the fabric is sheared, as seen

at Fig. 1. Connected to the bar 3 are pitmen 7, one near each end of said bar, and the lower ends of said pitmen are eccentrically connected to a shaft 8 journalled in the frame. This shaft has an outwardly extending handle 9 by means of which the operator may turn it, say a quarter of a turn, and thereby withdraw the bar 3 and blade 4 downward away from the rotary cutter to permit the passage of the ends of the fabric and the means whereby they are joined, as will be presently explained. The upward extension 2 of the frame carries a pair of brackets 10 between which is mounted a stationary bar 11. In the ends of the said brackets a shaft 12 is journalled, and this shaft bears outwardly projecting arms 13 whose ends support a cross bar 14 which, as shown in the sectional view Fig. 1, lies on top of the fabric which is designated by A, the bar 11 supporting the fabric beneath. The shaft 12 also carries a lever 15 whose end overlaps and engages with the end of another lever 16, which latter is mounted on a short rock shaft 17 supported in a bracket on the frame. The shaft 17 bears a downwardly extended lever 18 and the end of this last named lever engages and operates a short slide 19 which appears in plan view at Fig. 2, and in side elevation at Fig. 1.

The main shaft of the machine is designated by 20 and is connected to the running parts in any suitable manner. As these connections are immaterial to the present invention they have been omitted from the drawings. The end of this shaft 20 carries a fast pulley 21 and a loose pulley 22, and these are driven by a belt 23 as shown at dotted lines Fig. 2 and full lines at Fig. 1. 24 is a shifter bar arranged and adapted to slide in ways across the machine, and the end of this bar bears a yoke 25 which embraces the belt. This bar bears an outwardly extending bolt or stud 26. 27 is a plate having a slot 28, one end of which has an offset or recess, as seen at Fig. 2. Through this slot projects a spring lever 29 whose lower end is attached to the frame, as shown at Fig. 1, and just above the plate and in the same horizontal plane with the bolt 26 on the shifter bar the lever bears an outward extension 30.

The operation of our invention is as follows.

The parts in Figs. 1 and 2 are shown in the running position, the belt 23 being on the fast pulley, the shifter bar in the proper position so that its yoke embraces the belt, and the spring lever is withdrawn toward the inner end of its slot and is held against its spring action in the lateral recess or offset. When the joined ends of the fabric approach the shearing mechanism the means whereby they are joined, such for instance as the long wire needle 31 shown at Fig. 4, or a thick seam as appears at Fig. 1, is obliged to pass between the bars 11 and 14 and in so doing the latter is raised and the shaft 12 turned upon its axis. This, through the parts, 15, 16, 17, and 18 moves the slide 19 outward toward the right of Fig. 1, so as to disengage the spring lever from the offset in its slot. Thereupon the spring action of the lever through the parts 30 and 26 moves the shifter bar 24 in the direction of the arrow with a quick movement and shifts the belt from the fast pulley 21 to the loose pulley 22, thereby stopping the machine. The operator then drops the blade 4 by means of the handle 9, and then draws the fabric along by hand until the seam or joint has passed the cutting devices. Then he withdraws the spring lever and latches it in the offset, and then moves the shifter bar to the position shown at Fig. 2, thereby starting the machine. The disengaging process will be repeated at each joint between the ends of the fabric.

We have shown as a means of connection between the bar operated by the cloth and the shifter bar and spring lever, certain connections which are operative and are at present employed in machines actually in use, but it will be readily understood that the con-

struction of these connections is immaterial, and we do not wish to limit our invention to the precise mechanical devices shown, since other means for effecting this object may be substituted.

We claim—

1. In a plush-shearing machine, the combination with the rotary cutter, of a vertically movable blade beneath said cutter, an eccentric connected to said blade and adapted to control its position, and a crank or handle for the operation of the eccentric, the whole arranged substantially as described.

2. In a plush shearing machine, the combination with the rotary cutter and the co-operating movable blade, of a belt shifter consisting of a lever spring-actuated in one direction, a latch adapted to engage and hold said lever to hold the same in position, the bars 11 and 14, one stationary and the other movable, between which the fabric passes, and connections substantially as described between the movable bar and the latch, whereby when the former is raised the belt shifter will be released, substantially as and for the purpose set forth.

In testimony whereof we affix our signatures in the presence of witnesses.

JAMES PEARSON.
WILLIAM STEAD.
WILLIAM JAMES MONK.

Witnesses as to James Pearson:

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Witnesses as to William Stead and William James Monk:

FREDERICK WOOD,
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