(No Model.)

J. J. MANN.

MACHINE FOR CUTTING THE PILE OF FUSTIANS OR OTHER PILE FABRICS.

No. 486,050. Patented Nov. 8, 1892.

FIG: 1.

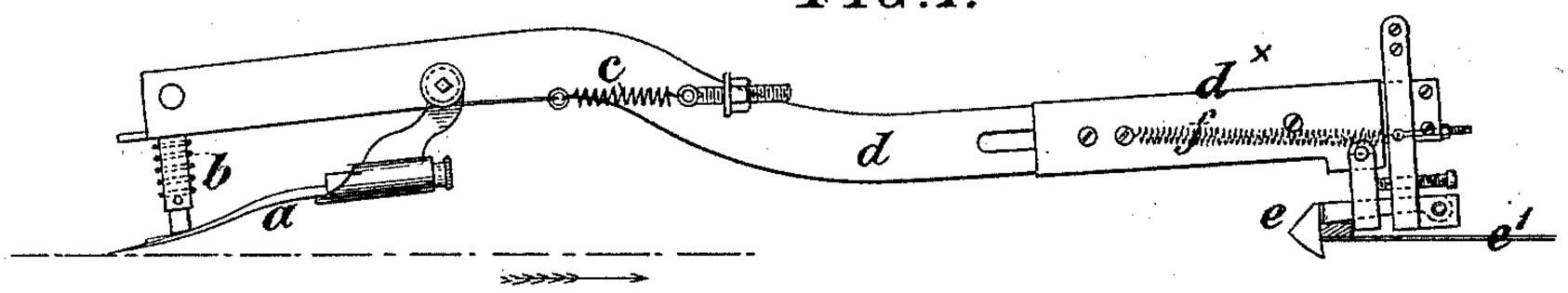


FIG: 2.

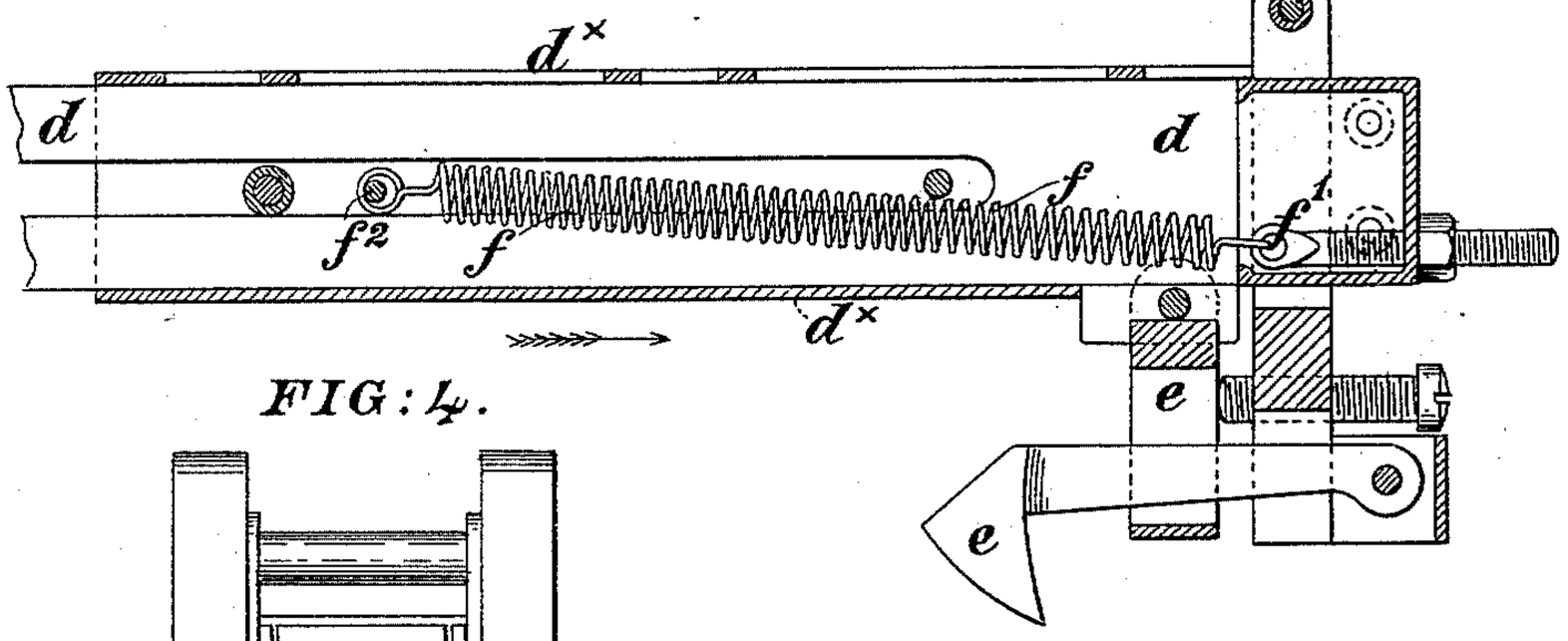


FIG: 4.

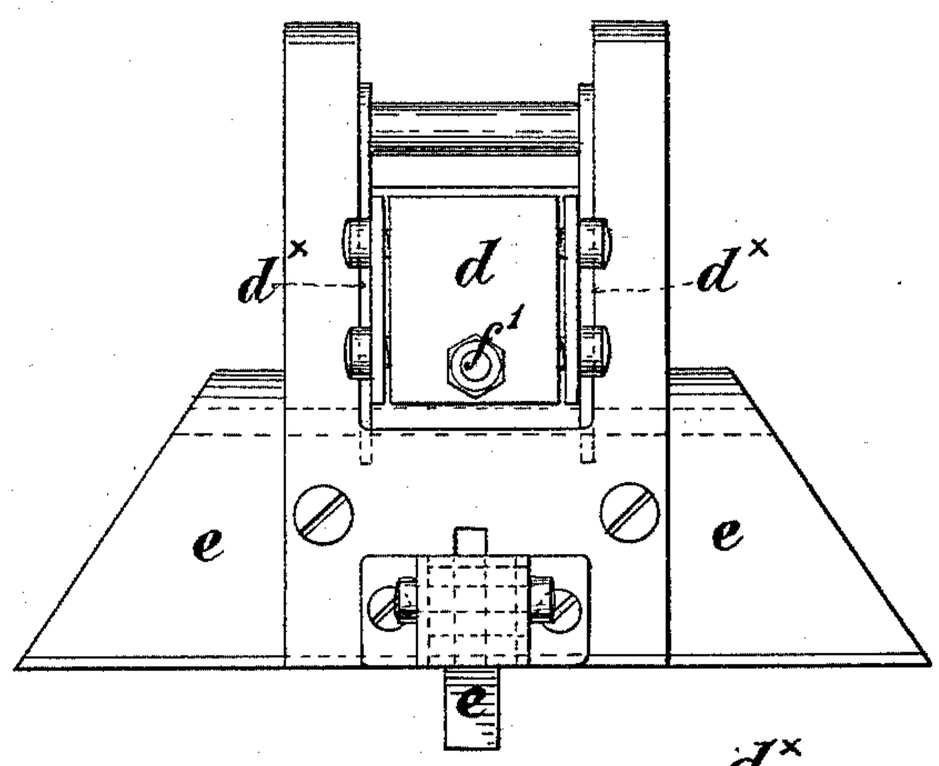
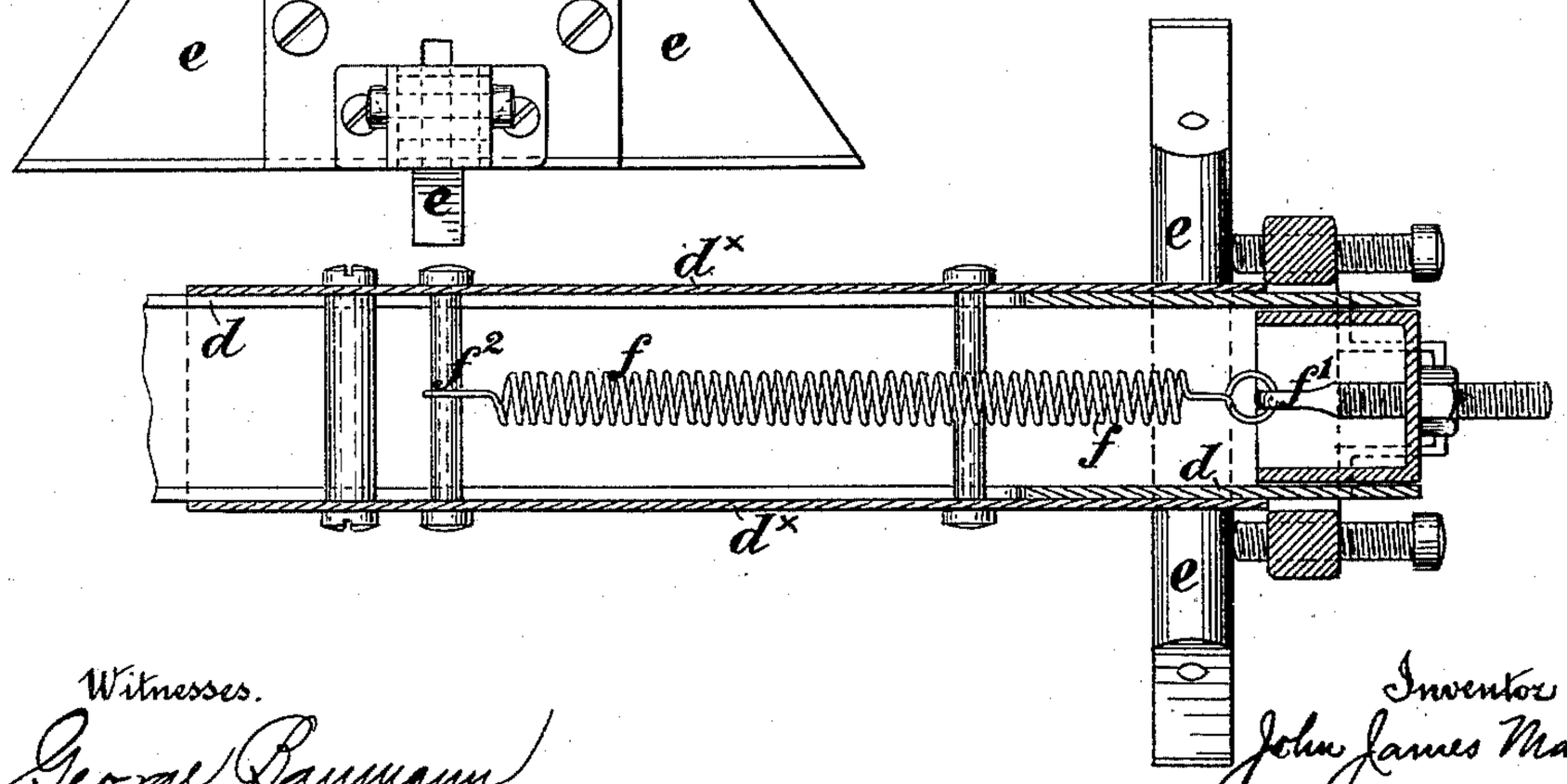


FIG: 3.



Witnesses.
George Baumann
James Gracin

Inventor.
John James Mann
By his Attorneys.
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UNITED STATES PATENT OFFICE.

JOHN J. MANN, OF SALFORD, ENGLAND.

MACHINE FOR CUTTING THE PILE OF FUSTIANS OR OTHER PILE FABRICS.

SPECIFICATION forming part of Letters Patent No. 486,050, dated November 8, 1892.

Application filed April 12, 1892. Serial No. 428,812. (No model.)

To all whom it may concern:

Be it known that I, JOHN JAMES MANN, a subject of the Queen of Great Britain and Ireland, and residing at Salford, in the county of Lancaster, England, have invented Improvements in Machines for Cutting the Pile of Fustians or other Pile Fabrics, of which the following is a specification.

This invention is applicable to all knives for cutting fustians or other pile fabrics which are mounted in a handle or frame in such a way that they can be released and withdrawn from the cloth or otherwise rendered inoperative immediately the guide or point of the knife goes through the back of the fabric. It is found in practice that however delicately the releasing device of such knives may be constructed and adjusted to act instantaneously the motion of the cloth past the knife (or the knife past the cloth) is required for economical cutting to be so rapid that it causes the said knife to make a considerable slit in the fabric before it can be withdrawn out of action.

My invention is intended to reduce to a minimum the length of this slit; and it consists in applying a yielding device—such, for example, as a spring, weighted lever, or a cushion of air—to the part of the frame or to the handle which carries the knife and guide and the releasing and withdrawing mechanism in such a manner that when the said knife goes through the back of the fabric and while the said releasing and withdrawing mechanism is being brought into action the whole can give way in the direction of the motion or the action of the cloth, and thus a very short slit may be made therein.

Various devices may be adopted in carrying out my invention, according to the construction of the handle or frame which supports the knife and its releasing and withdrawing mechanism; but I will describe means for applying my invention to a knife-handle made according to Patents No. 448,088, dated March 10, 1891, and No. 475,709, dated May 24, 1892, granted to James Hoyle Smith, Andrew Goddard, Lloyd Higginbottom, and Thomas Mannock. This adaptation will be readily understood from the following description upon reference to the accompanying drawings.

Figure 1 is an elevation of an automatic knife of the kind above referred to with my invention applied thereto. Fig. 2 is a sectional elevation of the rear end of the handle. Fig. 3 is a sectional plan of the same, and Fig. 4 a back view thereof.

a is the knife; *b*, the releasing-trigger; *c*, the withdrawing-spring. *d* is the handle carrying the same and provided with the catch mechanism *e* for connecting it to the cutting-table *e'*, as described in the specification of the above-named Letters Patent of March 10, 1891. According to the present invention the latter mechanism *e* is carried by a separate part $d^{\times}$ of the handle. This part $d^{\times}$ forms (or is provided with) a socket in which the part *d* slides.

A spring *f* is connected to the part *d* at *f'* and to $d^{\times}$ at f^2, and thus when the knife *a* goes through the cloth and while the releasing-trigger *b* and withdrawing-spring *e* are being brought into the action the parts *a*, *b*, *c*, and *d* can yield by means of the spring *f* in the direction of the motion of the cloth, (indicated by the arrow on Figs. 1 and 2,) thereby reducing the length of the slit made therein.

It will be evident without further illustration that the division in the frame or knife-handle may be nearer to the knife, if preferred, instead of at the rear end of the handle close to its connection with the table *e'*, as shown.

I would repeat in conclusion that the application of my invention will vary according to the construction of the frame or handle of the automatic knife to which it is required to be adapted.

I claim—

1. A knife for cutting fustians or other pile fabrics, having an automatic releasing mechanism and a yielding handle or frame carrying both knife and releasing mechanism and adapted to give way in the direction of the action of the cloth when the knife goes through the back of the fabric.

2. A knife for cutting fustians or other pile fabrics, having an automatic releasing mechanism and a handle or carrying frame in two

parts, one part carrying the knife and releasing mechanism, with a yielding connection between the said two parts, substantially as and for the purpose set forth.

3. A knife for cutting fustians or other pile fabrics, having an automatic releasing mechanism and a handle or carrying-frame in two parts, one carrying the knife and releasing mechanism, while the other is adapted to be secured to a support, and a yielding connection between the two parts of the said handle or frame, substantially as and for the purpose set forth.

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

JOHN J. MANN.

Witnesses:

GEORGE DAVIES,

JNO. HUGHES.