

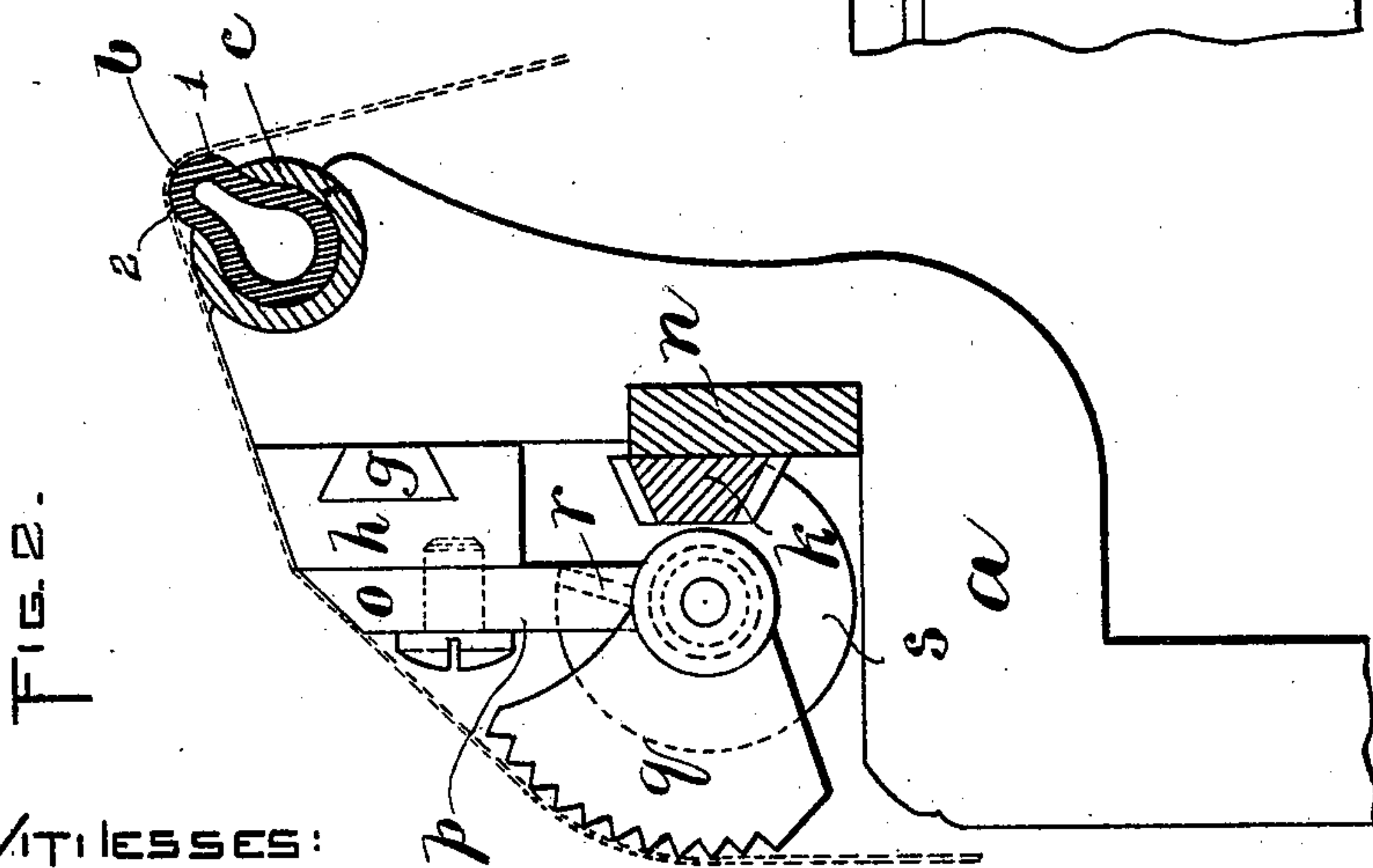
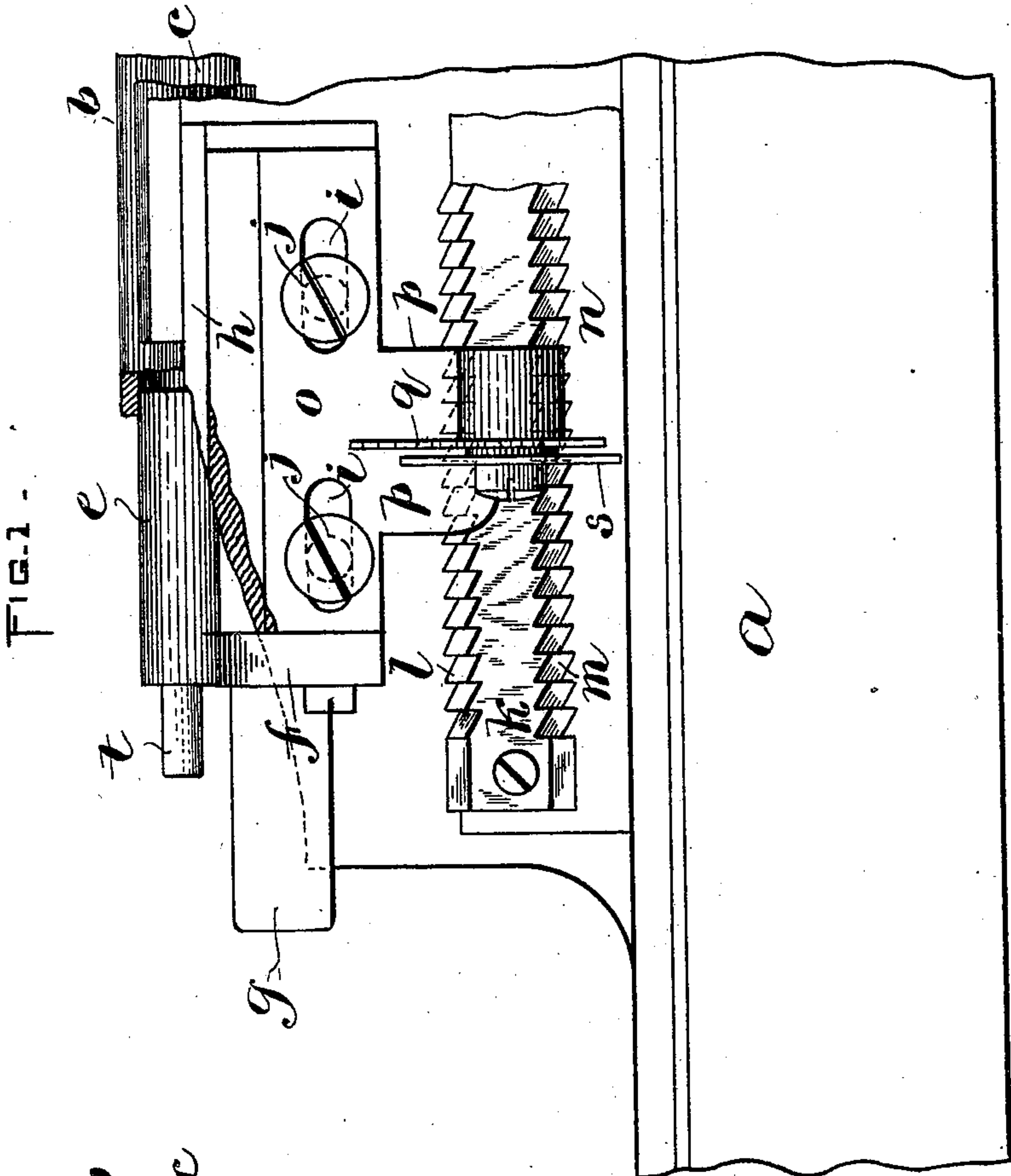
(No Model.)

A. BROWN.

YIELDING EXTENSIBLE CLOTH REST FOR SHEARING MACHINES.

No. 592,744.

Patented Oct. 26, 1897.



WITNESSES:

A. D. Harrison.

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# UNITED STATES PATENT OFFICE

ADNA BROWN, OF SPRINGFIELD, VERMONT, ASSIGNOR TO THE PARKS & WOOLSON MACHINE COMPANY, OF SAME PLACE.

## YIELDING EXTENSIBLE CLOTH-REST FOR SHEARING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 592,744, dated October 26, 1897.

Application filed July 30, 1896. Serial No. 601,046. (No model.)

*To all whom it may concern:*

Be it known that I, ADNA BROWN, of Springfield, in the county of Windsor and State of Vermont, have invented certain new and useful Improvements in Yielding Extensible Cloth-Rests for Shearing-Machines, of which the following is a specification.

This invention has relation to shearing-machines of the class in which the cloth to be cut passes over a rest in proximity to a stationary ledger-blade, with which a revolving cutter coacts to shear or cut the nap of the fabric while it is raised from the body of the latter. It has been found greatly desirable to pass the fabric over a yielding or cushion rest, inasmuch as if it is drawn over a sharp unyielding rest knots or small masses of flocks or nap on the back of the fabric, which collect at the edges of the rest, are drawn over it with the under side of the fabric, so as to cause the cutter to cut into the body of the latter and render it unfit for use. By employing a cushion or yielding rest, however, the flocks or knots may sink therein, so that the cutter will not cut into the fabric; and, again, with many styles of cloths or fabrics—such as broadcloth, &c.—it is desirable to shear the nap from the body of the fabric and leave the selvage edges or lists unsheared, and to accomplish this it is necessary to provide an extensible rest which will automatically vary its length in accordance with the varying width of the cloth as it passes over the same under tension.

The object of this invention, therefore, is to provide a shearing-machine equipped with a rest for the cloth which shall not only be yielding to permit of the passage of flocks or knots, but which shall likewise be constructed to automatically vary in length as the cloth or fabric travels over it to save or leave unsheared the selvages.

To these ends the invention consists of a machine embodying those features of construction and arrangement which I shall now proceed to describe in detail and then point out in the claims, it being always remembered that I do not limit myself to the precise con-

struction of the rest chosen for illustrating my invention, as any other performing substantially the same functions in substantially the same way, though widely different in the details of construction, would come within the spirit and scope of my said invention.

Reference is to be had to the annexed drawings, and to the letters and figures marked thereon, forming a part of this specification, as the case may be, wherever they occur.

Of the drawings, Figure 1 shows enough of a cloth-shearing machine to illustrate one form of my improved yielding and selvage-saving rest and the mechanism for increasing or diminishing the length thereof. Fig. 2 is a vertical transverse section through the same.

In carrying out my invention I employ the ordinary frame having a bed for the rest, which is illustrated at *a* and which is of any length suitable to the cloth to be sheared, and a stationary ledger-blade and a revolving cutter, neither of which is shown, as they are not dissimilar in any respect from those which have been used on machines of this character for many years.

The cloth-rest, which forms the subject-matter of these Letters Patent, is designated by *b* and consists of an extensible rubber tube maintained within a slotted metallic support or tube *c*, with a portion *d* projecting up through the slot and over which elastic portion the cloth to be sheared travels. The rest may be moved longitudinally in the slotted tube *c*, and it may likewise expand under a strain and contract. Each end of the tube is closed by a cap or plug *e*, having a forwardly-extending arm *f*, said cap being rigidly secured to the tube to stretch or lengthen it as the cloth varies in width. The bed for the rest is provided with a bar or dovetail tongue *g*, on which a slide *h*, having a groove to receive it, is adapted to move.

*k* is a continuously-reciprocating rack-bar arranged parallel to the rest and having two sets of rack-teeth *l m*, which extend oppositely. One of the said rack-bars is mounted on each end of a vibrating bar *n*, to which power is imparted in the usual manner.



On the slide *h* is secured a holder or support *o* by screws *j j*, passing through slots *i i* thereof, said holder having depending arms *p p*, in which the ratchet-feeler or dog *q* is mounted. The outer edge of the feeler is serrated, while the dog or inner part is formed with two edges *r s*, each of which is adapted to engage with one set of the ratchet-teeth *l* or *m*.

The cloth passes over the rest, as indicated in dotted lines, Fig. 2, and in the direction of the arrow, and if it should sway to the left or if it should increase in width, so as to have any portion of it run in that direction, it would engage the feeler and thrust the edge *r* of the dog into engagement with the upper toothed part *l* of the reciprocating rack-bar, which in its stroke to the left would push the slide to the left, carrying with it the plug *e* and the end of the rest, thus extending the rest and causing the cloth to be held up to the action of the cutters.

If the cloth should sway to the right or its edge recede in that direction by reason of a decrease in the width of the cloth or any portion thereof becoming narrower, then the feeler would drop by its own weight until the edge *s* would come into engagement with the lower set of teeth *m* and the edge of the rest would be pushed to the right, the tubular rest contracting.

It will be observed that the edge of the rest is slightly to the right of the feeler *q*, the distance therefrom being substantially equal to the selvage which it is desired to leave unsheared. As a matter of fact it is unnecessary to stretch the tubular rest to any great extent, as the cloth is practically of a constant width, so that if one end of the rest is moved to the right or the left the other end will be correspondingly moved in the same direction, the whole tube being bodily moved in its support.

In case there be any diminution of the diameter of the tubular rest as a resultant of the stretching of the same I connect the interior thereof with an air-chamber by a pipe or conduit *t*, which chamber is under just that pressure which would compensate for the diminution in diameter by inflating the tube to the proper diameter, so as to maintain the rest in its exact relation to the knives.

By reason of the holder being slotted the screws *j* may be loosened and the feeler may be adjusted to the right or the left, so that the edge or selvage of the cloth will always project over the end as much as may be desired, which, however, is never more than the length of the slots *i i*.

It will be seen that the rest presents a curved periphery from 1 to 2, over which the cloth may easily pass without having flocks and shreds collecting at the edge thereof, as is common where sharp-edged rests are employed. The rubber tubular rest being yield-

ing the passage of flocks or knots on the under side of the cloth will not lift up the body of the latter to be sheared and cut, but they will sink into the yielding or elastic rest and the cloth will be unharmed.

It is evident, as I have before stated, that I am not limited to the employment of just those devices and that particular form of rest which I have illustrated and described, as they may all be considerably modified without departing from my invention.

Having thus explained the nature of the invention and described a way of constructing and using the same, though without attempting to set forth all of the forms in which it may be made or all of the modes of its use, it is declared that what is claimed is—

1. A rest for a cloth-shearing machine, having a portion over which the cloth passes, yielding to receive, and permit of the passage of, flocks or knots, combined with means for longitudinally stretching or contracting said rest automatically to leave unsheared the selvage at the edge of the cloth.

2. A rest for a cloth-shearing machine having a portion over which cloth passes, yielding to receive, and permit of the passage of, flocks or knots, a support for the rest relatively to which the rest may be extended or contracted, and means adapted to be acted upon by the cloth for automatically stretching or contracting the yielding rest to leave unsheared the selvage at the edge of the cloth.

3. A yielding rest for a cloth-shearing machine, extensible and contractile longitudinally in combination with means for stretching or contracting said rest.

4. A rest for a cloth-shearing machine, comprising a support, and an extensible rubber tube, in combination with means for automatically extending said tube or moving it relatively to its support to leave unsheared the selvage at the edge of the cloth.

5. A rest for a cloth-shearing machine having a portion over which the cloth passes, of a yielding nature to receive and permit of the passage of flocks or knots, combined with a stationary support for the said yielding portion, and means for automatically stretching the ends of the rest longitudinally of the support to leave unsheared the selvage at the edge of the cloth.

6. A rest for a cloth-shearing machine having a portion over which the cloth passes yielding to receive and permit of the passage of flocks or knots, a support for the rest relatively to which the said rest may be moved longitudinally, and means adapted to be acted upon by the cloth for moving the rest in its support to leave unsheared the selvage at the edge of the cloth.

7. As a means for supporting cloth in proximity to the knives of a cloth-shearing machine, the combination with a stationary support of a rest constructed of yielding mate-

rial to receive and permit of the passage of  
flocks or knots, said rest being movable lon-  
gitudinally of said support for the purpose of  
leaving unsheared the selvage at the edge of  
5 the cloth.

In testimony whereof I have signed my  
name to this specification, in the presence of

two subscribing witnesses, this 24th day of  
July, A. D. 1896.

ADNA BROWN.

Witnesses:

C. G. RICHARDSON,

W. W. BROWN.