

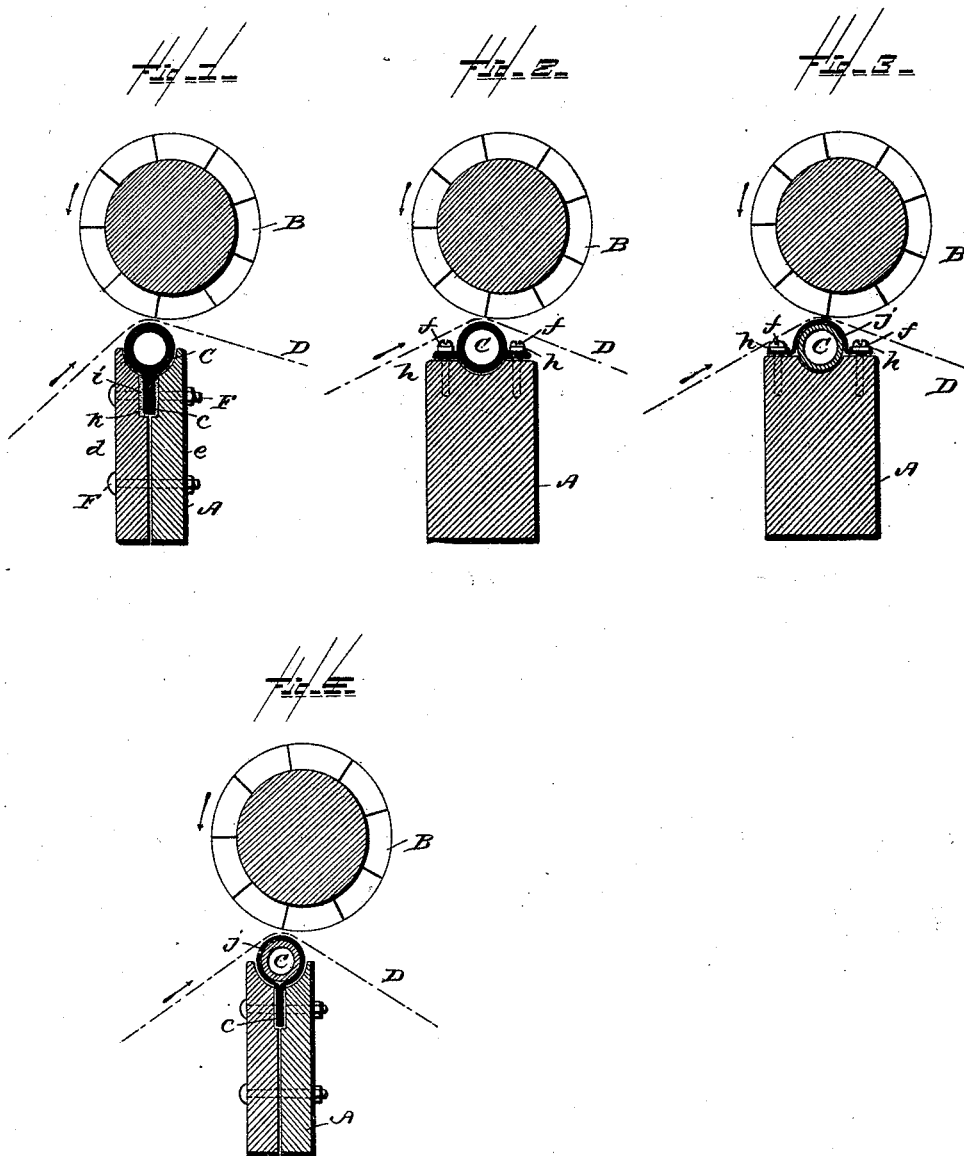
(No Model.)

E. MARTIN, T. F. DRAKE & J. W. JOHNSON.

BED FOR SHEARING OR CROPPING MACHINES.

No. 421,743.

Patented Feb. 18, 1890.



Witnesses

Albert Speiden,
Alfred T. Gage

Edwin Martin, Inventors
Thomas Fred Drake,
John William Johnson
By their Attorney
Wm. Henderson.

UNITED STATES PATENT OFFICE.

EDWIN MARTIN, THOMAS FRED. DRAKE, AND JOHN WILLIAM JOHNSON, OF
HUDDERSFIELD, COUNTY OF YORK, ENGLAND, ASSIGNORS TO MARTIN
SONS & CO., OF SAME PLACE.

BED FOR SHEARING OR CROPPING MACHINES.

SPECIFICATION forming part of Letters Patent No. 421,743, dated February 18, 1890.

Application filed July 18, 1889. Serial No. 318,093. (No model.) Patented in England November 26, 1886, No. 15,415.

To all whom it may concern:

Be it known that we, EDWIN MARTIN, THOMAS FRED. DRAKE, and JOHN WILLIAM JOHNSON, subjects of the Queen of Great Britain, residing at Lindley, Huddersfield, in the county of York, England, have invented certain new and useful Improvements in Beds for Shearing or Cropping Machines, (for a part of which we have received Letters Patent in England, No. 15,415, dated November 26, 1886;) and we do 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, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

The invention has reference to improvements in machines for shearing or cropping cloth, and particularly to such machines in which an elastic or yielding bearing-surface is secured to the top of the bed below the cutter; and it has for its object to secure that bearing-surface to its bed, and especially so when the bearing-surface is a tube or roll, so that it will not be pulled or drawn from its place.

In machines of the character described where an elastic tube has been used to constitute the bearing-surface for the traveling fabric to be sheared or cropped it has been found that friction of the cloth in passing over the tube is at times sufficient to roll or force the tube from its position on the bed—for instance, out of a groove formed in the bed, and in which groove the tube would lie.

This present invention prevents the traveling fabric from pulling the tube out of said groove or from off the bed, and the object is effected by means hereinafter to be described, reference being had to the accompanying drawings, forming a part hereof, and in which—

Figure 1 is a vertical cross-section through a rotary helical cutter and suitable bed, showing one manner of securing the bearing surface or tube to its place. Fig. 2 is a similar view of a modification effecting the same result. Figs. 3 and 4 are similar views show-

ing other modifications to do the same thing.

In the drawings, the letter A designates a suitable bed; B, a rotary helical cutter, which may be supported and rotated in any well-known way, forming no part of this invention, and therefore not more fully shown and described.

C is an elastic or yielding cylinder, in this instance a rubber or elastic roll, which may be tubular, as shown, and D illustrates a fabric to be sheared or cropped.

In Figs. 1 and 2 the yielding bearing is formed by the roll or tube C alone, which in Fig. 1 is illustrated as formed with a projection, rib, or flange *c*, fitted in a way *k*, formed in the two sections *d* and *e* of the bed, the flange being secured to said bed by any suitable means—for instance, by clamping it between the sections of the bed by the bolts F and the nuts thereon; or it may be held to the bed by a glutinous substance indicated by *i* in said Fig. 1, the means employed being immaterial, so long as they will secure the elastic roll or tube to its place and prevent the traveling fabric D from rolling or forcing the bearing surface, roll, or tube out of its groove or from its seat.

Instead of the rib or flange shown in Fig. 1, we may employ two flanges or ribs, as illustrated in Fig. 2, and pass bolts or screws *f* through said flanges and into the top of the bed A. There may also be employed plates or washers *h* between the heads of the bolts and the material composing the roll or tube, so as to protect the material.

Instead of forming the yielding bearing of a roll or tube with flanges or ribs thereon for the purpose of clamping it to its seat, the yielding bearing may be formed as in Fig. 3, in which the roll or tube C is secured to its place by a strip of suitable material *j*, which may be of india-rubber placed over the top of the roll or tube and extended beyond the sides thereof, so as to be secured to the bed by any suitable means—for instance, by the bolts or screws *f*, passed through the extended portions and into the bed. Plates *h* may be used, as in the modification illustrated in Fig. 2.

If preferred, the yielding bearing may be

formed by wrapping the material *j* around the roll *C*, so as to form a casing to completely envelop the same and have an extension forming a rib or flange *c* to be passed between the sections of the bed and secured in the manner specified in describing Fig. 1 of the drawings. It is recommended that the material *j* be thin and pliable, so as not to destroy the effect of the elastic or yielding roll or tube *C*.

The bed in each form illustrated is shown as formed with a grooved or recessed seat for the roll or tube to rest in, as such is considered to give the best results.

When the elastic or yielding bearing-surface is secured to its seat, so as not to be moved therefrom by the friction of the traveling fabric, the fabric will be most effectually sheared or cropped without liability of being injured.

Having described our invention and set forth its merits, what we claim is—

The combination, with a suitable bed, of an elastic or yielding cylindrical bearing, forming a yielding support for a traveling fabric, having a flange-like extension projecting laterally therefrom, and means engaging with said extension to hold said bearing to its bed, substantially as and for the purposes set forth.

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

EDWIN MARTIN.
THOMAS FRED. DRAKE.
JOHN WILLIAM JOHNSON.

Witnesses:

C. W. WHITMAN,
U. S. Consular Agent at Huddersfield, England.
T. S. SIMPSON,
Solicitor, Huddersfield, England.