C. G. RICHARDSON.

CLOTH REST FOR SHEARS.

APPLICATION FILED MAY 14, 1915.

1,262,844.

Patented Apr. 16, 1918.

2 SHEETS—SHEET 1.

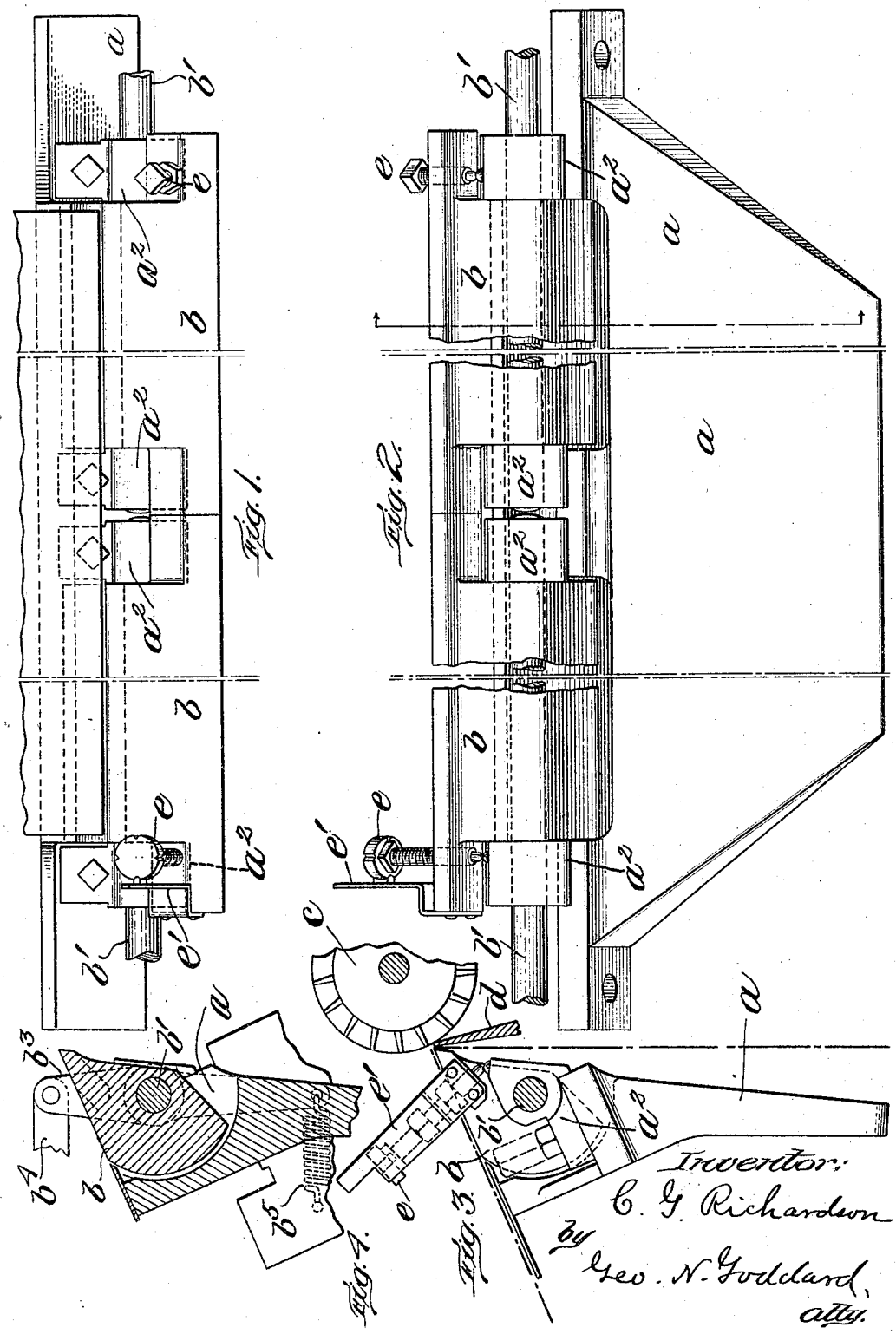

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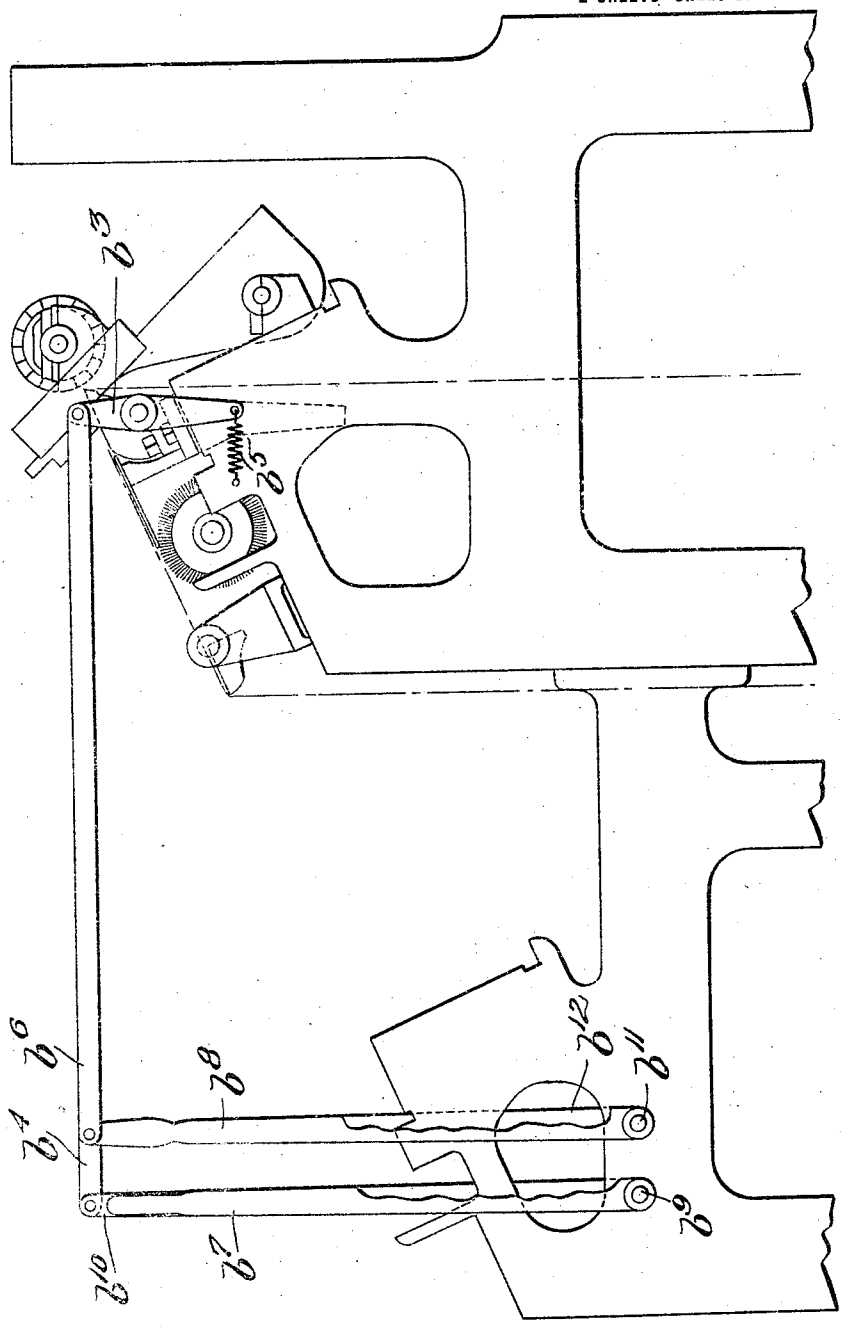
Fig. 5.



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UNITED STATES PATENT OFFICE.

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CLOTH-REST FOR SHEARS.

1,262,844. Specification of Letters Patent. Patented Apr. 16, 1918.

Application filed May 14, 1915. Serial No. 28,097.

To all whom it may concern:

Be it known that I, CHARLES G. RICHARDSON, citizen of the United States, and resident of Springfield, county of Windsor, State of Vermont, have invented certain new and useful Improvements in Cloth-Rests for Shears, of which the following is a specification.

This invention relates to machines for shearing cloth and is more particularly concerned with the improvement of the cloth rest construction by which the cloth is supported in proper relationship to the revolving shear and to the ledger blade for the operation of shearing the nap.

The invention is intended particularly to adapt the ordinary wide shear for use in shearing simultaneously two narrow widths of cloth running side by side through the machine with the same degree of efficiency and precision that would be possible if only one width of cloth were running through the machine. It will be understood to those skilled in the art, that the pieces of cloth to be sheared are run into the machine, and the two ends thereof are stitched together to form a sort of endless belt. Of course, where the overlapped ends are stitched together there is an extra thickness of material which necessitates the shifting of the cloth rest out of operative relationship to the shear in order to avoid cutting the cloth at this point. Now when the two narrow pieces of cloth are run through the machine together side by side in this fashion, the stitched ends of the two pieces seldom, if ever, are in alinement, consequently the cloth rest, as heretofore constructed, would need to be shifted to inoperative position whenever either line of stitching reaches the cloth rest. Such shifting of the cloth rest, however, to avoid the stitched ends of one piece, involves the omission of the shearing operation on a portion of the other piece of cloth that should be sheared, consequently the attempt to use shears, as heretofore constructed, in this manner has led to imperfect or uneven shearing of the nap.

The present invention embraces substantially a cloth-supporting rest divided transversely at its middle portion into two independently movable sections, each having means for controlling its movement independently of the other.

This and other features of the invention will be explained in this specification, and will be defined in the claims forming part hereof.

In the accompanying drawings I have illustrated a simple and efficient form of embodying the principle of this invention.

Figure 1 is a plan view showing the cloth rest and cloth rest-supporting beam constructed according to my invention;

Fig. 2 is an elevation of the same parts viewed from the back end of the machine;

Fig. 3 is a side elevation of the same parts showing their relation to the ledger blade and the shear;

Fig. 4 is a similar elevation in central section; and

Fig. 5 is an assembled view showing the pertinent portions of a double shear and the actuating mechanism for controlling the cloth rest sections.

In the practice of my invention, I employ the usual cross-beam or bridge a whose end lugs are securely bolted to the side frames of the machine and whose function it is, in part, to support the cloth rest. This rigid supporting-beam a is provided with a longitudinal recess at its upper end on the side toward the cloth shear c, in order to receive the cloth rest which presents the cloth to the shear and to the ledger blade. The cloth rest b is made up of two longitudinal sections divided from each other about midway of the entire length of the cloth rest, the sections being of irregular contour in cross-section, substantially as shown in Fig. 4.

Each section b is secured to and mounted on a rock shaft b' which is journaled in a pair of bearing-brackets a^2 mounted on the middle and end portions of the supporting-beam a. On the ends of the shaft sections b' are secured actuating levers b^3, by the forward movement of which the rock shaft is turned so as to throw the working edge of the cloth rest sections back away from the revolving shear c and the ledger blade d, leaving a gap or space through which the double or stitched end portions of the cloth may pass without being severed. The lower ends of these arms or levers b^3 are engaged by contractile springs b^5, which tend to hold the cloth rest sections in operative position and to return them to operative position when they are released after their shifting movements. The connecting links b^4, b^6 on the left and right hand sides of the machine, respectively actuate the left hand and right hand sections of the cloth rest by means of

their connection with the actuating or hand levers b^7, b^8. Both levers are shown on the right hand side of the machine, but the lever b^7 is connected, through the agency of a transverse rock shaft b^9 and a vertical arm b^{10}, with the connecting link b^4 in order to transmit movement to the left hand cloth rest section. This arrangement brings the levers controlling both right and left sections in convenient position to be grasped by either hand of the attendant, on either side of the machine.

Each section of the cloth rest is provided with an adjustable stop screw e whose lower end is in position to abut against the top of one of the fixed brackets a^2, so as to limit the movement of the cloth rest toward the shear. By the adjustment of this screw e, the space between the cloth rest, the ledger blade and the shear may be varied according to the thickness of the cloth, or the length of the nap to be sheared. The adjusting screw e has a notched head which is engaged by a spring keeper e' to hold it against jarring out of proper position of adjustment.

From the foregoing, it will be obvious that two breadths of cloth may be run side by side simultaneously through the machine, and that the operator can shift or throw back the cloth rest section, supporting one piece of cloth, when the stitched ends reach the cloth rest without disturbing the action of the shear on the companion piece of cloth, thereby making it possible to efficiently and evenly shear the nap of each piece of cloth throughout its length without any skipping.

What I claim is:

1. A cloth rest for a cloth-shearing machine divided at its middle portion into independently movable sections and means for shifting each section separately out of operative relationship to the shear, substantially as described.

2. In a cloth-shearing machine the combination of, a transverse supporting member, a cloth rest divided transversely into sections and movably supported on said supporting member and shifting means under the control of the operator for moving each section of the cloth rest out of operative relationship to the shear, substantially as described.

3. The combination with the revolving shear and its ledger blade of, a cloth rest divided into independently movable sections rotatably supported on a transverse supporting beam and hand operated mechanism having operative connection with each section of said cloth rest whereby the operator may shift one section out of operative position independently of the other sections, substantially as described.

4. In a cloth shearing machine the combination of the transverse supporting member, two independently rotatable rock shaft sections supported therein, a cloth rest section secured to each rock shaft for support and movement thereby, a pair of hand levers which are connected respectively with the sections of the cloth rest to shift said sections away from operative position and means for automatically returning each cloth rest section to operative position, substantially as described.

5. The combination with a revolving shear and its ledger blade of two separate transversely alined cloth rest sections each extending to the middle portion of the shear and mounted to be moved independently into and out of operative relationship to the shear and adjustable means for limiting the movement of each cloth rest section toward the shear, substantially as described.

6. In a cloth-shearing machine the combination of the two alining rock shafts, a cloth rest section secured to each rock shaft to turn therewith and having their inner ends in juxtaposition, a pair of operating levers arranged on one side of the machine adjacent to each other and having connection respectively with the different sections of the cloth rest, substantially as described.

7. In a cloth-shearing machine the combination of a rotatable napping shear, a cloth rest arranged to operatively support the cloth adjacent to the shear, said cloth rest being divided at its middle portion into sections independently movable toward and away from the shear, substantially as described.

In witness whereof, I have subscribed the above specification.

CHARLES G. RICHARDSON.

In the presence of—
BLANCHE L. NORTON,
ANNIE BEATRICE BURKE.