

UNITED STATES PATENT OFFICE.

AMASA WOOLSON, OF SPRINGFIELD, VERMONT.

IMPROVEMENT IN RESTS FOR CLOTH-SHEARING MACHINES.

Specification forming part of Letters Patent No. 207,091, dated August 13, 1878; application filed March 20, 1878.

To all whom it may concern:

Be it known that I, AMASA WOOLSON, of Springfield, in the county of Windsor and State of Vermont, have invented a new and Improved Rest for Cloth-Shearing Machines; and that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification.

This invention is in the nature of an improvement in rests for cloth-shearing machines.

The invention is a rest for a cloth-shearing machine, with the ends thereof provided with extensions, consisting of a series of vertical parallel sections, constructed to be operated by a sliding bar with a cam-slot formed therein, each of said sections having its upper end square and at right angles with the sides of the same, and combined with a hood which covers the ends of the several sections as they are successively moved in and out of position by reason of the sliding bar and slot engaging with pins affixed to said sections.

In the accompanying sheet of drawings, Figure 1 represents a rear elevation of my rest; Fig. 2, a front view of same with covering-plate removed; Fig. 3, a cross-section through line *y y*, Fig. 2; Fig. 4, a cross-section through line *x x*, Fig. 2, and Fig. 5 a detail view of cam-slot.

Similar letters of reference indicate like parts in the several figures.

This invention, as above stated, pertains more particularly to rests for cloth-shearing machines which are constructed with devices permitting the extension of the rest; and the extension portion of my rest consists of a series of nearly vertical sliding sections, A, with a pin, *a*, on the inner face of each section, which pin enters into a cam-slot, B, formed in a sliding bar, C.

The slot, for convenience of description, may be divided into three parts, *e*, *f*, and *g*. These sections lie snugly against a plain beveled inner face, *h*, formed in the backing D of the rest. They lie flatwise against this beveled surface, and are edge to edge, as shown in Figs. 1 and 2, the edge of one section lying accurately against the edge of the section ad-

joining it, the upper end of each section being beveled somewhat, as shown in Fig. 4.

The sliding bar C is fitted into a slideway, *b*, also formed in the beveled face *h* of the backing D, so that it may slide parallel with the edge of said backing. This edge of the backing has one part, *k*, somewhat higher than its other part, *l*, the part *k* forming substantially the fixed part of my rest, and the part *l* pertaining more particularly to the extension portion of the same; and the purpose of these several sections is to bring the part *l* of the rest up to the same height and parallel with the part *k* thereof.

To accomplish this, as the sliding bar C slides in one direction on the face *h* of the rest, the pins *a* of the sections are brought successively in contact with the part *f* of the cam-slot B, which will cause them to slide upward between the back of the sliding bar and the face *h* of the rest, against which they are placed, and as the sliding bar C is caused to move in an opposite direction, the inclined portion *f* of the cam-slot forces each section successively downward and below the level of the fixed part *k* of the rest and the edge *m* of the same, so that the reciprocating motion of the sliding bar C alternately raises and lowers these sections to and from the level of the fixed portion of the rest before referred to.

When each section is elevated to its proper height, the pins *a* of the sections enter into the part *e* of the cam-slot B, which retains the sections A in their elevated position straight and parallel with the edge of the fixed rest, and when each section is forced downward it is retained in this lower position by the pins *a* entering into the part *g* of the cam-slot, so that the part *l* of the rest may be built up, as it were, to the level of the part *k* thereof by the several upper ends of the entire series of sections, these upper ends, when in their elevated position, substantially forming a prolongation of the part *k* of the rest to an extent only limited by the number of sections and the length of the sliding bar, the slot therein, and its throw. Therefore, when the cloth passes rapidly over the rest to be sheared by the cutting-blades, the extension portion of the rest formed by these several sections, or their upper ends, presents as smooth, sub-

stantial, and as unobstructed a surface for the passage and support of the cloth as does the fixed or unadjustable part *k*. Now, as is obvious, if the cloth, or, more strictly speaking, the selvage of the cloth, as it passes over the extension portion of the rest, were permitted to come in contact with one or more of the sharp corners of each section as they are raised or lowered in position, the selvage would catch and be injured or torn, and the shearing operation disarranged. To obviate this, I protect the ends of each section, as it is successively raised or lowered, by a hood, E. This hood is secured to the sliding bar C, so that it is necessarily moved with said bar, following each section as it is raised or lowered and successively covering them. To accomplish this result the hood should be fixed to the sliding bar C immediately over that portion of the same wherein is formed the part *f* of the cam-slot B, so that its position will at all times correspond with this part of the cam, which elevates and lowers the several sections in succession. This hood E, while it protects the list from catching in the sharp angles of the ends of the several sections, also permits the list to drop below the surface of the rest and clear from the shearing action of the cutting-blades, preserving the list or selvage unshorn.

The sliding bar C (to describe the operation of my rest) is reciprocated right and left by the operation of a double ratchet-bar, F, in connection with feelers G and cams H, substantially as is described in Letters Patent heretofore issued to me on the 16th day of August, 1864, and which need not therefore be particularly described here. As this ratchet-bar is reciprocated by power in any desirable manner, the cloth passes over the rest, and the length of the bearing-edge *m* of the rest is extended to a greater or less degree, as the width of the cloth requires, the extension being automatically accomplished by the list, which, when in contact with the feelers G, causes the several sections to be elevated and prolong the bearing-edge *m*, and, when the list is not in contact with the feelers, causing the several sections to be depressed and the length of the edge of the rest reduced, in the manner heretofore described. By this means the list at all times maintains a straight direction over

the edge of the rest, and the cloth is sheared up to the list in a straight unbroken line, the list remaining unshorn.

To the sliding bar C is also fixed a plate, I, which forms a surface to guide the passage of the cloth over the permanent part *k* of the rest, as well as the extension portions *l* of the same; and also to the rest is fixed a plate, J, which forms a smooth surface for the list as it passes onto it from the hood E. The plate I has its edge sharpened, so that its upper edge is substantially in the same plane as the edge *m* of the rest. A surface-plate, K, is fixed to the backing, and this forms a cover and guide to the cloth.

Instead of providing each of the sections A with a pin to enter into the cam-slot of the sliding bar, it is obvious that slots may be formed in the sections so that they will be operated by one or more pins in the sliding bar, producing substantially the same operation. However, a series of sections with pins combined with a cam-slot in a sliding bar having been shown and claimed in an application for a patent filed simultaneously herewith, the same are in this application disclaimed.

Many of the minor details of construction may be varied without changing the features of my invention; but

What I claim as new, and desire to secure by Letters Patent, is—

1. A cloth-shearing rest constructed with a series of vertically-adjustable sections, each section constructed with square edges, and with their ends also square and at right angles to said edges, in combination with a hood, whereby the cloth is protected from said angular ends, substantially as described and shown.

2. In a cloth-shearing rest, a series of vertically-adjustable sections, provided with pins affixed thereto or slots formed therein, in combination with a sliding bar having a cam formed therein or thereon, and mechanism, such as described, for operating the same, whereby the said sections are automatically raised and lowered by the action of the cloth, essentially as specified.

AMASA WOOLSON.

Witnesses:

H. F. BARNARD,
HENRY CLOSSON.