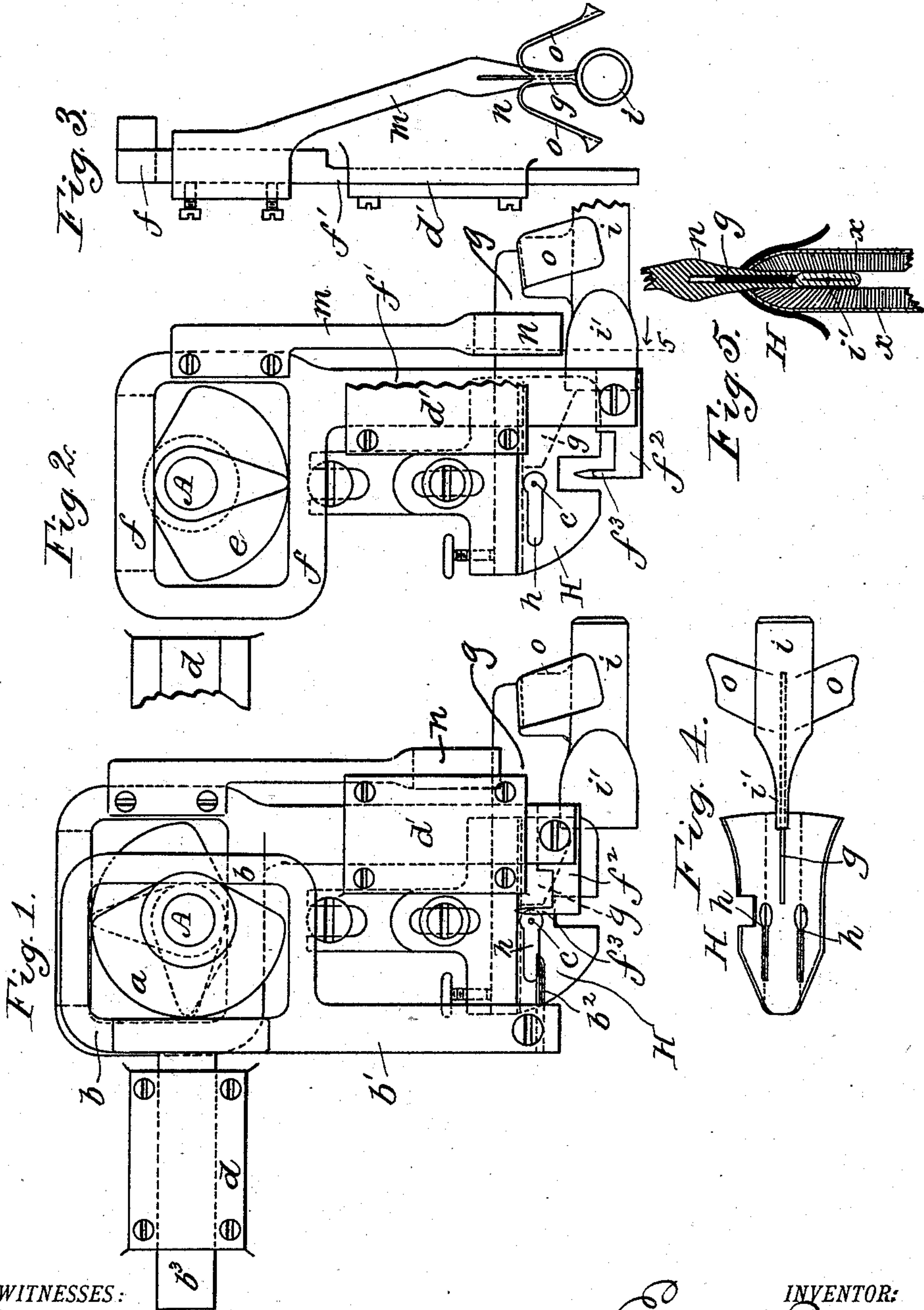


(No Model.)

E. B. ALLEN.  
GUIDING AND PILE CONTROLLING DEVICE FOR CARPET SEWING MACHINES.  
No. 524,994. Patented Aug. 28, 1894.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

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GUIDING AND PILE-CONTROLLING DEVICE FOR CARPET-SEWING MACHINES.

SPECIFICATION forming part of Letters Patent No. 524,994, dated August 28, 1894.

Application filed November 3, 1893. Serial No. 489,895. (No model.)

*To all whom it may concern:*

Be it known that I, EDWARD B. ALLEN, a citizen of the United States, residing at Elizabeth, in the county of Union and State of New Jersey, have invented certain new and useful Improvements in Guiding and Pile-Controlling Devices for Carpet-Sewing Machines, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention has for its object to provide a traveling carpet sewing machine with means whereby the cut pile of carpets such as Wilton, Axminster, Moquette, &c., may be effectively pushed in from the edges to be joined in such a manner that it will be out of the way of the seam and will be properly held and controlled until the sewing has been completed. To secure this result reciprocating "pilars" or pile deflectors have heretofore been employed, but not with satisfactory results for the reason that as the pilars were lifted or withdrawn from between the carpet edges (which are held, in sewing, with their pile faces together) the pile would spring back or follow the pilars, this difficulty being greatest with high-class velvet and Wilton carpets having firm and stiff heavy piles.

The difficulty referred to is overcome by my invention by providing a dividing plate or divider against which the edges of the pile faces of the sections of carpets to be joined are pressed, and by combining with said divider a double piler, or two pilars, working on both sides of said divider, and transverse to the carpet edges, so that as the pile is depressed or tucked in by the double piler it is held in its depressed or intucked position, by contact with said divider; and thus when the piler is withdrawn the pile will not spring back or follow the retreating movements of the piler.

In the accompanying drawings Figure 1 is a front side view of a carpet sewing machine with my invention applied thereto. Fig. 2 is a similar view with some parts omitted for clearness. Fig. 3 is an end view of the piler and some other parts shown in Fig. 2. Fig. 4 is a bottom or inside view of the guide in connection with which the piler works, and

Fig. 5 is a detail sectional view of the piler, divider and guide on line 5, Fig. 2, looking in the direction of the arrow.

A denotes the main shaft of a carpet sewing machine, and *a* a double cam thereon working in a horizontally movable yoke *b* from which depends a bar *b'* carrying an eyed or thread-carrying looper *b<sup>2</sup>* operating in conjunction with a needle *c* working horizontally but at right angles to the looper, said yoke having a slide bar *b<sup>3</sup>* working in a guide-way *d*.

On the shaft A is a second double cam *e* working in a vertically movable yoke *f* from which depends a bar *f'* working in a guide way *d'* and carrying at its lower end a block *f<sup>2</sup>* having formed thereon or attached thereto the spreader *f<sup>3</sup>*, said spreader, thread-carrying looper and needle co-operating to form the well-known double chain stitch seam.

The parts thus far described form no part of the present invention, and are not herein claimed, being shown merely to illustrate their operative relation to my novel fabric guiding and pile controlling devices.

Supported in proper relation to the stitch-forming devices of the machine is a saddle guide H of inverted trough-shape and having depending outwardly flaring flanges or wings provided with slots *h* for the passage of the needle and threads. Secured to the under surface of the saddle guide, midway between the depending wings or flanges of the latter, is a divider *g* the rear end of which terminates just in front of the slots *h*; and below and supported by said divider is preferably placed a separator *i* which is thicker than said divider so as to hold the fabrics *x* somewhat apart and prevent them from clinging together, and also to curve them outward from each other thus partially abutting their extreme edges to cause the seam to be as flat as possible when made, the rear end part *i'* of the separator being flattened, as shown in Fig. 4, to permit the fabrics *x* (the pile faces of which are inward) to come nearer together just before they are sewed.

Attached to the vertically reciprocating yoke *f* is a bar *m* carrying at its lower end the double piler *n* straddling or working on



both sides of the divider *g*, each outer face of the double piler being preferably inclined, as shown, so as to operate as a wedge to force inward or downward the pile which is pressed against the said divider, and the pile when thus forced downward or inward will be held in such position and be prevented from springing back when the piler is withdrawn owing to its pressure against said divider.

Instead of a double piler made in a single piece it will be understood that two separate pilers, to constitute the double piler, might be employed, but I prefer the double piler made in a single split piece, as shown.

In front of the double piler are the trough-like guides *o* which ride over the fabric edges, which are so hung as to be somewhat higher than the inner or guiding faces of said guides, so that as the fabric edges are depressed or forced downward by the traveling guides the parts of the fabrics below their extreme edges are curved outward somewhat by the separator *i* so as partially to turn the pile in and to assist in holding it in by contact with the divider when tucked in by the piler, which latter reciprocates in a plane transverse to the carpet edges. Thus by the use of a guide provided with a divider and a reciprocating piler working transverse to the fabric edges, and on both sides of said divider, I am enabled to depress the pile out of the way of the seam and to hold the same depressed when tucked in, until the sewing operation has been completed, the carpets, when sewed, showing clean seams at their backs and the pile at the seams on the faces of the carpets being so disposed that the seams show as little as possible, with no backward or forward inclination of the pile at the seams, as is the

case when traveling but non-reciprocating pile turning-in devices are employed.

The guide *H*, with its appurtenances, is not herein claimed, excepting in combination with the double piler, this guide being embraced by my application, Serial No. 490,874, filed November 14, 1893.

Having thus described my invention, I claim and desire to secure by Letters Patent—

1. A pile controlling apparatus for carpet sewing machines consisting of the combination with a guide provided with a centrally placed dividing plate or divider, of a piler or pilers working opposite to or against both sides of said divider and in a plane transverse to the longitudinal edges of the carpet sections to be united.

2. A pile controlling apparatus for carpet sewing machines consisting of the combination with a guide provided with a dividing plate or divider, of a double piler straddling said divider, and means for reciprocating said piler in a plane transverse to the length of said divider and also transverse to the longitudinal edges of the carpet sections to be united.

3. The combination with the guide *H* having depending flanges or wings and provided with the centrally placed dividing plate or divider *g*, of the reciprocating piler *n* straddling said divider and the guides *o* between which and the guide *H* the said piler works.

In testimony whereof I affix my signature in presence of two witnesses.

EDWARD B. ALLEN.

Witnesses:

J. G. GREENE,  
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