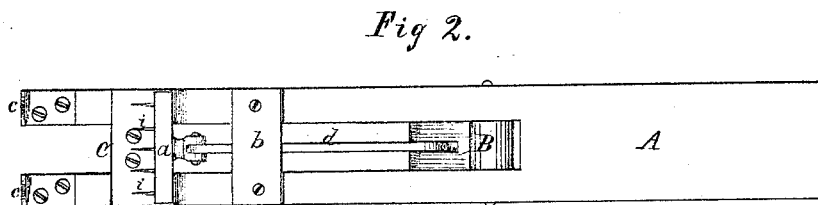
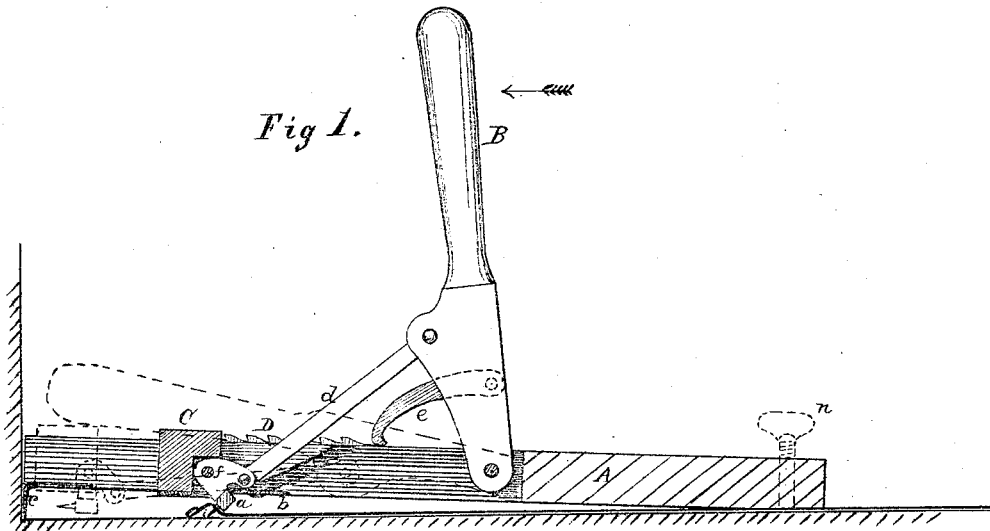


E. P. SHAFFER.

Improvement in Carpet-Stretchers.

No. 114,053.

Patented April 25, 1871.



Witnesses:

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EDWARD P. SHAFFER, OF ROCHESTER, NEW YORK.

Letters Patent No. 114,053, dated April 25, 1871.

IMPROVEMENT IN CARPET-STRETCHERS.

The Schedule referred to in these Letters Patent and making part of the same.

I, EDWARD P. SHAFFER, of Rochester, in the county of Monroe and State of New York, have invented certain Improvements in "Carpet-Stretchers," of which the following is a specification.

My invention relates to a device for straining carpets during the process of fastening them to floors; and consists, mainly, in the use of a rocking tenter-hook, reciprocated upon a frame by means of a hand-lever, and operating in connection with suitable dogs which hold the frame to the floor.

In the drawing—

Figure 1 is a sectional side elevation of my invention.

Figure 2 is an inverted plan view.

The base plate A is slotted for a portion of its length to receive the reciprocating block C, which is fitted to slide easily thereon, and which supports the oscillating tenter-head a.

This tenter-head swings upon a pivot passing through its shank *f* and into the block C, as shown in fig. 1, and is provided with several sharp points *i*, figs. 1 and 2, which pierce and retain the carpet.

A link, *d*, connects the tenter-head to a hand-lever, B, which is pivoted at its lower extremity to a suitable part of the base A.

Dogs *c* are secured to the extreme end of the base plate, and are sufficiently pointed to permit them to enter the floor readily.

It will be observed that a motion of the lever B in the direction of the arrow, fig. 1, forces the tenter-head forward, about its pivoting point, till its shank meets a shoulder or stop upon the block C, when a continuation of such motion causes both tenter-head and block to move forward toward the dogs *c*. Thus the points *i* enter the carpet at an angle with the floor, but upon obtaining a hold upon the fabric assume a horizontal position, as indicated by dotted lines in fig. 1.

A guide-plate, *b*, is fixed to the base A at or near the inner extremity of the stroke of the tenter-head, upon which the lower end of the shank *f* or link *d* rests during a small portion of the movement of the tenter. This guide acts to retain the tenter with its teeth in the angular position described till the latter have penetrated the web of the carpet.

A ratchet-rack, D, is attached to the base plate with which the pawl *e* engages, the latter being pivoted to the lever B, as indicated in dotted lines in fig. 1.

I prefer to offset the pivoting point of the link *d* upon the hand-lever, whereby, when the lever is pushed down to the horizontal position shown in dotted lines, and the block C and tenter-head are at the forward part of their stroke, the pivot center of the link and lower end of the hand-lever will be nearly

or quite in the same straight line and the tenter-head thus locked at such extreme point.

It will be noticed, also, that by the act of forcing the lever B forward a certain amount of downward pressure is exerted upon the base plate, by means of which the dogs *c* are forced into the floor; whence it follows that the greater the power applied to stretch the carpet the more rigidly the dogs retain their hold.

The operation and mode of using my invention are as follows:

The carpet having been fastened at one side of the room, the dogs *c* of the stretcher are pressed slightly into the floor by the foot of the operator, close to the base board upon the opposite side, the inner extremity of the base A resting upon the carpet, as indicated in fig. 1. The hand-lever B is then drawn up to the extremity of its stroke, which operation tilts the tenter-head upon its axis, bringing the teeth *i* into an angular position with relation to the floor, as shown in full lines, fig. 1. If the lever is now forced forward the end of the link *d* rests upon the guide *b* till a small portion of such movement of B and *a* is completed, and as it leaves the edge of the guide the tenter-head assumes a horizontal position, (indicated by dotted lines.) By this means the inclination of the teeth is continued long enough to enable them to pierce the heaviest material before the tenter-head begins to draw upon it, and immediately swing upward away from the floor.

Thus further motion imparted to the lever B forces the teeth *i* entirely through the carpet lying underneath and stretches it to the required point, being held there by means of the ratchet D and pawl, or by the rectilinear position of the pivot centers of *d* and B, as above described, till tacked or otherwise secured to the floor.

Another method of supporting and guiding the tenter-head *a* may consist in forming gudgeons upon each side of the shank *f*, which move in ways or grooves provided in the base plate, thus dispensing with the guide-block C.

I may also use, in place of the guide *b*, a spring, attached either to the link *d* or tenter-head, the tension of which shall be sufficient to retain the latter in its inclined position till the teeth have penetrated the fabric. The teeth *i* are preferably circular in section, and finished smoothly so as not to injure the texture of the carpet.

In the carpet-stretchers heretofore in use the tenter-hooks have usually been rigid, and consequently could not accommodate themselves to different thicknesses of material, generally tearing out the "pile" of costly carpets or otherwise injuring their fabric. The use of the oscillating tenter-hook *a* wholly avoids this trouble, since the teeth are caused to penetrate

entirely through the carpet before they begin to stretch it, the thoroughness of this action being insured by the guide-plate *b*.

I do not mean to confine myself to the particular form of base plate, tenter-head, or dogs *c*, herein shown, as other equivalent forms may be used, operating in the same manner.

It may be desirable to adjust the rear end of the base *A* vertically, and thereby prevent the tenter either from gouging the floor or from only partly penetrating the carpet. This may be effected by a thumb-screw, *n*, shown in dotted lines in fig. 1, or by other equivalent means.

What I claim as my invention is—

1. The rocking tenter-head *a*, in combination with the link *d* and hand-lever *B*, operating substantially as described.

2. In combination with a rocking tenter-head *a*, a device or devices for retaining the teeth of the former in an inclined position during the first part of the stroke of the tenter, for the purposes set forth.

EDWARD P. SHAFFER.

Witnesses:

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