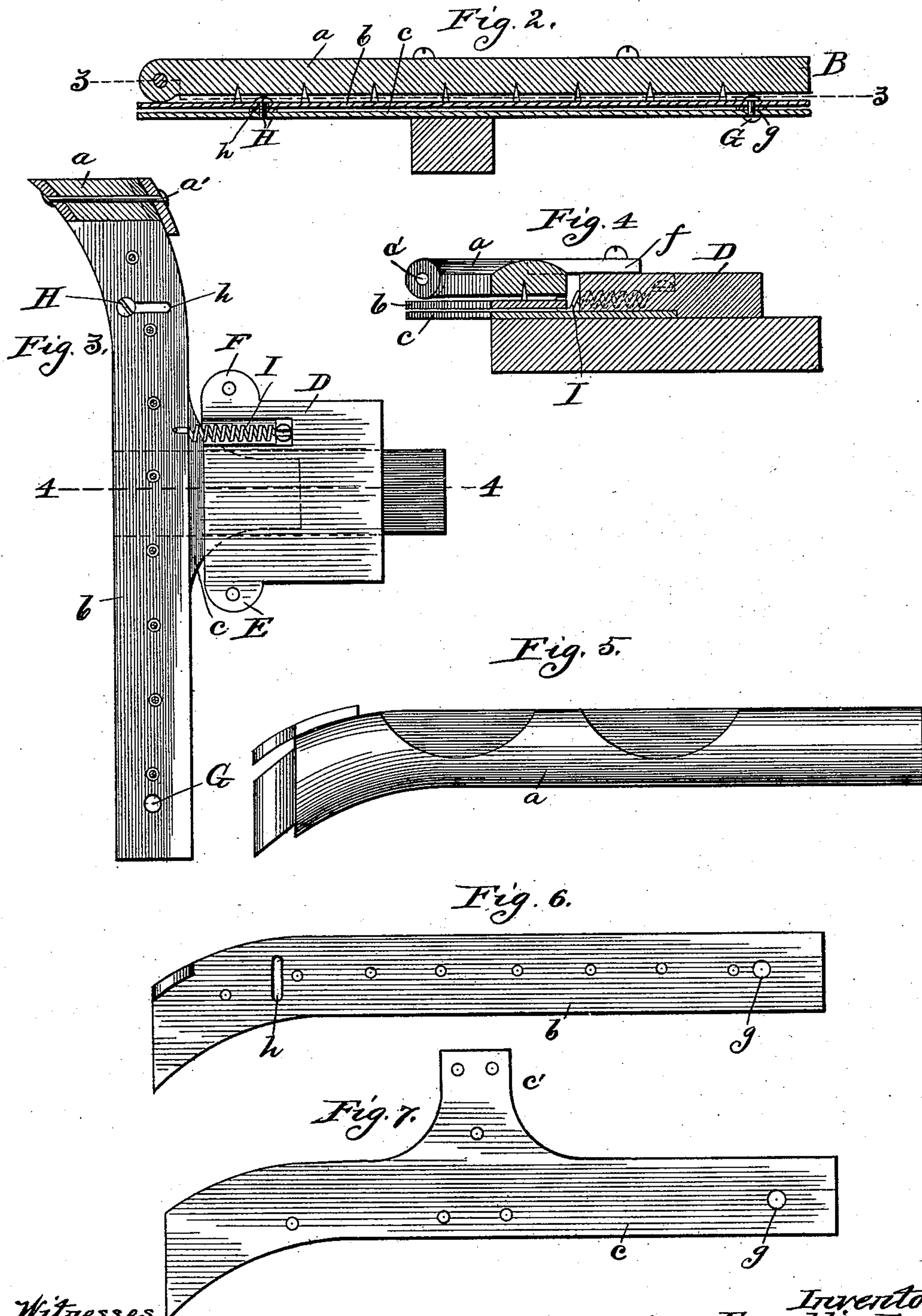


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CARPET CLAMP AND STRETCHER FOR SEWING MACHINES.

No. 464,212.

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UNITED STATES PATENT OFFICE.

FRANKLIN AMES, OF CHICAGO, ILLINOIS.

CARPET CLAMP AND STRETCHER FOR SEWING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 464,212, dated December 1, 1891.

Application filed November 15, 1890. Serial No. 371,598. (No model.)

To all whom it may concern:

Be it known that I, FRANKLIN AMES, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in Carpet Clamps and Stretchers for Sewing-Machines, which is fully set forth in the following specification, reference being had to the accompanying drawings, in which—

Figure 1 is a plan view of a table with the carpet-stretcher containing my invention attached thereto. Fig. 2 is a section of the carpet-stretcher, taken on the line 2 2 of the clamp in Fig. 1. Fig. 3 is a detail plan section of the same, taken on the line 3 3 of Fig. 2. Fig. 4 is a cross-section taken on the line 4 4 of Fig. 3, but shown in full as in Fig. 2. Fig. 5 is a detail plan view of the upper or wooden portion of the clamp. Fig. 6 is a detail plan view of the middle section of the clamp. Fig. 7 is a detail plan view of the lower or bottom section of the clamp. Fig. 1 is on one scale. Figs. 2 to 7, inclusive, are on another scale enlarged.

My invention has for its object the improvement of the clamps for stretching carpets lengthwise described in my application for Letters Patent for improvement in apparatus for sewing carpets, filed February 20, 1890, Serial No. 341,235, and to prevent, more particularly, the carpet from bowing outward toward the center of the table as it is being stretched for the purpose of being sewed.

My present invention consists, principally, in the addition of another strip or bar to the clamps and in pivoting the middle strip to the lower strip or bar, so that a movement in a certain direction will be allowed to the middle and upper strip of the clamp, which movement is limited by a slot in said strip, with a pin secured to the lower strip and projecting upward through the slot.

My improvement further consists in making the strips composing said clamp slightly curved at one end for the purpose hereinafter described; and my invention consists in other devices, hereinafter described, by means of which the carpet after being stretched will curve or belly toward the machine by the use of my devices, as hereinafter described, so that its edge will extend a little beyond the edge of the table and in a convenient position to be sewed.

A is the table on which is placed the carpet to be sewed. This table is similar in its construction to the table heretofore described by me in my said application, and need not particularly be described here.

B and C are clamps placed at each end of the table in such a manner as to be held to the table, and at the same time they may be moved back and forth thereon, as may be desired. These clamps are the same in their construction, and there is no necessity of my particularly describing only such parts as are new and contain my invention. The clamp B consists of three cross strips or sections, of which *a* is the upper strip, *b* the middle strip, and *c* the lower or bottom strip.

D is a block having a tongue on its under side adapted to fit into the groove in the table, so that it may be slipped into the latter at the end of the table and be moved back and forth therein lengthwise of the table.

E and F are ears, preferably made in one piece with a block D, to which are pivoted buttons *e f* for the purpose of fastening the strips *a* of the clamp B when desired, as hereinafter stated. The strips *a*, *b*, and *c* are each slightly curved at their outer ends or ends at the opposite side of the table from where the carpet is sewed, as shown in the drawings. The strip *c* is rigidly secured to the upper side of the tongue of the block D by screws or rivets, holes being provided in *c*, as shown in the drawings. Near that end of the strip *c* which is nearest to the side of the table where the carpet is sewed, and which for convenience I will call the "inner end," is a rivet G, securing the strips *c* and *b* together. The rivet G forms a pivot or hinge, on which the strip *b* turns and is pivoted. At the other end of the strip *c*, near the point where it commences to curve, is a pin H, rigidly secured to the strip *c*. The strip *b* is pivoted to the strip *c*, as before stated, the rivet G extending through the holes *g* in the strips *b* and *c*.

h is a slot at the curved end of the strip *b*, so constructed and located that when the strip *b* is pivoted to the strip *c* the pin H will enter the slot *h* and fit loosely therein. The length of this slot regulates the extent of the movement of the strip *b* on its pivot G, and it is of sufficient length to cause the bellying or outward curve of the carpet to be stretched, as hereinafter stated. The strips *a* and *b*

are held in their normal position directly over and on the top of *c* by a coiled wire spring I, which is fastened at one end to the block D and at the other end to the strip *b* by any suitable means, as shown in Fig. 3. The strip *b* is provided with a series of short teeth for the purpose of engaging the carpet, as hereinafter stated. The strips *b* and *c* are both of metal, preferably iron or steel. The upper strip *a* is of wood, and is hinged to the strip *b* by means of a pin *a'*, passing through lugs on the strips *a* and *b*, and thus forming a hinge for the strip *a*, as shown in the drawings.

The clamp C is similar in its construction to the clamp B. One of these clamps is fastened to the table by any convenient means. I have shown a binding-screw K by which it is fastened; but it may be fastened in any other suitable manner. The other clamp is moved in the groove while the carpet is being stretched by a windlass L, which may be of the same construction and may be operated in the same manner as the windlass already described by me in my application before referred to.

The clamps B and C are placed a little on one side of the longitudinal center of the table and nearest the edge where the carpet is sewed, and are shown in the drawings with their outer ends slightly curved, as before stated. This curvature is unnecessary where Brussels or other similar heavy carpetings are sewed; but where ingrain carpets are sewed by the use of my apparatus the ends, on account of the strain upon them while the carpet is stretched, often tear out or unravel at that part near the edge of the carpet which is not being sewed by reason of their not being held as firmly as that part near the other edge of the carpet, and for this reason I curve what may be termed the "outer" end of the clamp, so that the teeth on the strip *b* will enter the carpet farther from the end on that portion which is liable to tear out.

The operation of my invention is as follows: Two pieces of carpet M of the proper length are laid together on the table, the right side of each being inward, and in this position the ends of the carpet are placed on the strip *b*, the teeth of which enter the carpet. The strip *a* is then turned on its hinge down onto the strip *b* and fastened to said strip by means of the buttons *e* and *f*, and the carpet is thus secured between the strips *a* and *b* of the clamps, being so placed that its inner edge will extend a little over the edge of the table. One of the clamps is fastened to the table at any desired point and the windlass L is fastened to the other clamp and the carpet is stretched lengthwise, as required, and until the carpet is in the position shown in dotted lines *c' c'* in Fig. 1 and ready to be sewed. The windlass L is attached directly to the block D, to which the strip *c* is rigidly secured. The strip *c* is moved in straight horizontal lines by the action of the windlass. At

the same time the strips *a* and *b*, between which the carpet is secured, turn on the pin or pivot G, thus shortening the outer edge of the carpet and causing the other or inner edge of the carpet to curve or belly over the front edge of the table where it is sewed. The length of the slot *h* governs the extent of the movement of the strip *b* on the pin G. If at any point the inner edge of the carpet projects over the edge of the table farther than is necessary for the operation of sewing, it is pushed back to the proper position for sewing by suitable devices on the sewing-machine.

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

1. In a clamp for stretching carpets, a supporting-block D, in combination with a lower or base strip *c*, rigidly fastened to said block, a toothed strip *b*, connected at one end to the former strip *c* by an ordinary pivot and at the other end to the same strip by a slot-and-pin connection, whereby limited independent movement thereof is permitted, and the top or fastening strip *a*, adapted to be closed down upon the metal strip *b*, substantially as and for the purposes specified.

2. In a machine for stretching carpets, clamps for holding the ends of the carpet, composed of strips or sections, the strips holding the carpet being pivoted to the remaining strip, which moves in straight horizontal lines when the carpet is being stretched, said strips holding the carpet turning on said pivot and causing the outer edge of the carpet to contract and at the same time causing the inner edge of the carpet at the front of the table to curve outwardly or belly over the table, in combination with a table holding the carpet, a device for holding one of the clamps in a fixed position, and a windlass for moving the other clamp, and a carpet to be stretched, substantially as specified.

3. In a machine for stretching carpets, the clamps B and C, coiled spring I, and buttons *e* and *f*, in combination with the table A, carpet M, binding-screw K, and windlass L, all combined and arranged as set forth.

4. In a machine for stretching carpets, the clamps B and C, consisting of the block D and strips *a*, *b*, and *c*, slightly curved at their outer ends, the strip *b* being pivoted to the strip *c* near its inner end by the pin G, and having a slot *h* near its outer end into which the pin H enters, and the buttons *e* and *f*, in combination with the carpet M, secured to the said clamps between the strips *a* and *b*, the coiled spring I for holding the strips *a* and *b* in position, the binding-screw K for holding one clamp, the windlass L for moving the other clamp, and the table A, all combined and arranged substantially as specified.

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