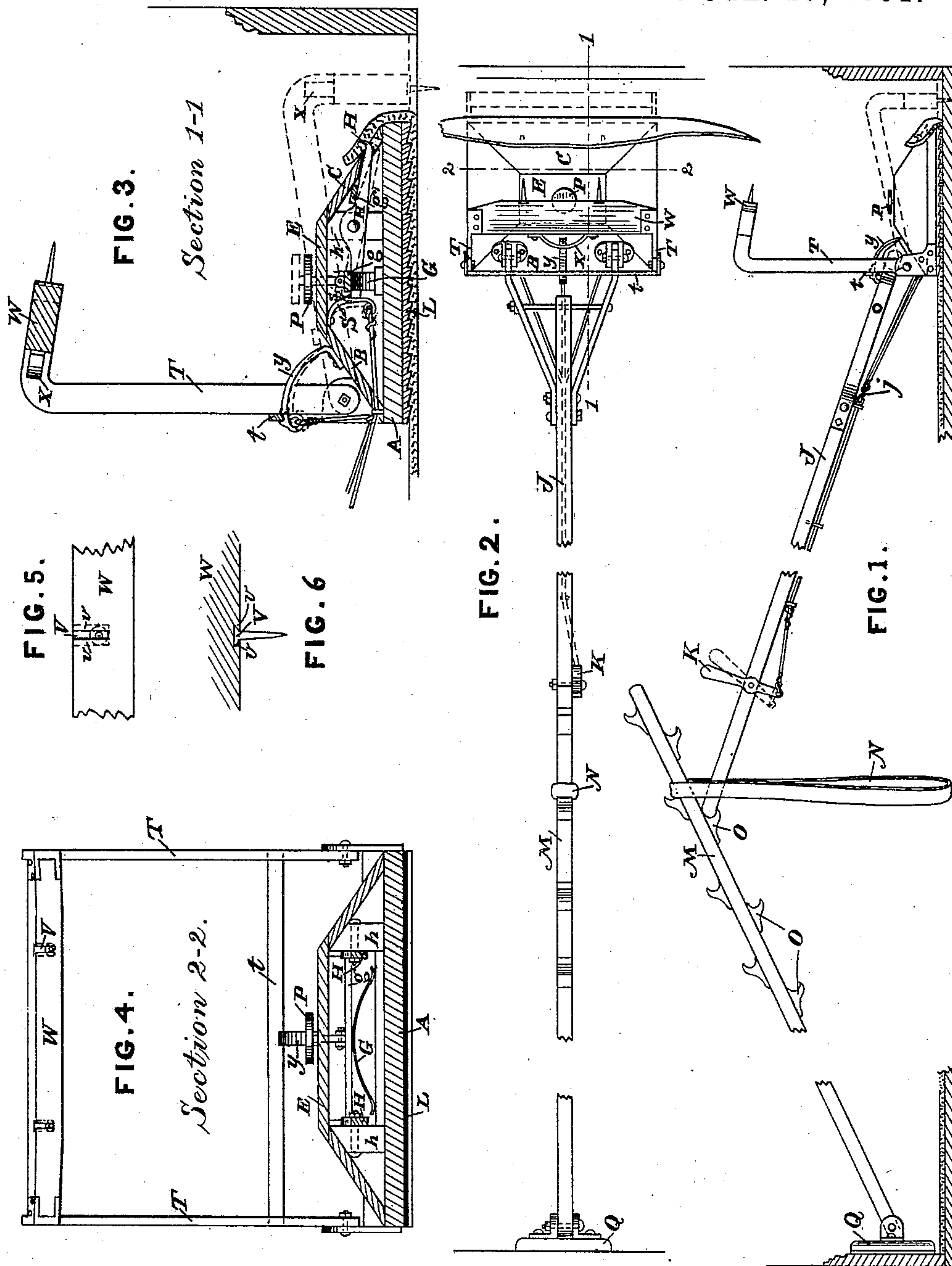


(No Model.)

D. H. McFALLS.  
CARPET STRETCHER.

No. 444,503.

Patented Jan. 13, 1891.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

DAVID H. MCFALLS, OF ELLENSBURG, WASHINGTON.

## CARPET-STRETCHER.

SPECIFICATION forming part of Letters Patent No. 444,503, dated January 13, 1891.

Application filed July 14, 1890. Serial No. 358,703. (No model.)

*To all whom it may concern:*

Be it known that I, DAVID H. MCFALLS, a citizen of the United States, residing at Ellensburg, in the county of Kittitas, State of Washington, have invented a new and useful Carpet-Stretcher, of which the following is a specification.

My invention relates to improvements in devices for stretching and laying carpets; and the object of my invention is to produce a machine by means of which a carpet may be stretched to the utmost and at the same time be tacked to the floor while held in its stretched position. I attain these objects by means of the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation. Fig. 2 is a plan view. Fig. 3 is a section on line 1 1 of Fig. 2. Fig. 4 is a section on line 2 2 of Fig. 2. Fig. 5 is a detail view of the weight, showing the manner of securing the tack thereto. Fig. 6 is a detail view of the weight, showing the tack in position.

Similar letters refer to similar parts throughout the several views.

I construct a box composed of a lower surface or base-piece A, having its sides B C D extending above the base-piece A and approaching each other, with the top E smaller than the base-piece A. To the lower surface of the base-piece A, I attach a piece of rubber for the purpose of increasing the friction generated by the movement of the base-piece A along the surface of the carpet, or corrugate the lower surface of the base-piece A for the same purpose.

In order that I may obtain a secure hold on the carpet, I place one edge of the carpet in contact with two hooks H, which protrude through the slanting surface of the front of the box C. The hooks H are provided at one end with a sharp point for the purpose of engaging with the carpet near its edge, and the shank of the hook is pivoted about midway between its ends to the support h, extending from the base to the top of the box. The hooks H are supported and strengthened by the bars g g', extending from one to the other, one of said bars being on one side of the pivotal support and the other on the opposite side and very near the end of the hook-bar.

The opening in the face C of the box, through which the hooks protrude, is sufficiently wide to allow the hooks to be forced downward entirely within the box.

Beneath the bar g, nearest the rear end of the hooks H, I place a steel spring G, resting on a strip extending across the box a slight distance above the bottom in such a position that the spring G will become contracted when the bar g is pressed downward. To the upper surface of the bar g I attach in any suitable manner the pedal P, which passes through the top of the box E. The end of each hook H is in contact with a spring S, which spring is secured to the top of the box E, and is provided with a shoulder s on the side nearest the hook, and so arranged that when the bar g is pressed downward, forcing the pointed ends of the hooks upward, the end of the hook-shank will come beneath the shoulder s on the spring S, the spring G will be contracted, and the sharp end of the hook will be forced into the carpet near its edge. The lower end of the spring S is attached to a chain or rope in such a manner that by operating the chain or rope the hook-shank will be liberated from the shoulder on the spring S and the spring G will force the hook-shank upward, causing the hook to become disengaged from the carpet and the edge of the carpet will fall to the floor in front of the box.

For the purpose of tacking the carpet when held in position by the stretcher, I attach to each side of the base-piece of the box a suitable support, to which is movably attached the arms T, having their upper ends curved or bent forward at almost or quite a right angle, forming an elbow supported and strengthened a short distance above the top of the box by the connecting-bar t and having their ends farthest from the box attached to a weight, usually constructed of heavy wood or iron and extending across from one arm to the other. On the lower surface of the weight when the weight is in contact with the carpet I place a series of grooves V, having overlapping sides v, into which groove the head of a tack will fit, the shank of the tack extending outward from the weight and the head retained in position and kept from falling out



by the side pieces *r*, which overlap the groove. (See Figs. 5 and 6.) To the top of the weight W, I secure a bail or handle X for the purpose of lifting the weight and the arms to which it is attached.

To the side B in the rear of the box I secure the spring *y*, provided near its loose end with two projections on its upper surface a short distance apart, forming an opening, into which the connecting-bar *t* is held when the arms T are raised. When the arms T are in an upright position, they are kept from falling by means of the spring *y* holding the bar *t*. To the end of the spring *y* I attach a chain or rope, which passes downward about a staple attached to the lower part of the side B, just above the base-piece A of the box, in such a manner that by drawing on the chain or rope the spring *y* will be forced downward, liberating the bar *t*, and the arm T will descend toward the front of the box by force of gravity, forcing the tacks secured to the weight through the carpet into the floor.

To the rear of the box I secure in any suitable manner the tongue J, to the under side of which I secure the chains attached to the spring *y* and the spring S, which two chains I bring together and hold in connection with each other by means of the hook *j*. To the end of the chain I attach a suitable handle K, pivoted to the side of the tongue J in such a manner that by forcing the upper portion of the handle K toward the box the spring S is drawn toward the rear and the spring *y* is drawn toward the bottom of the box.

For the purpose of obtaining a purchase and assisting in forcing forward the box, and thus the carpet, I place a notched pole M, having one end attached to the block Q by means of a bolt, securing it between two lugs attached to the block, which block is placed against the base-board on the side of a room to which the carpet has been secured. The notches or projections O are placed on each the upper and lower side of the pole, in contact with which is placed the end of the tongue J. By pressing down on the pole M the box at the end of the tongue J is forced forward and the carpet which is attached to the hooks is stretched toward the front of the box. About the pole M, I place the band N, extending downward to within a short distance of the floor, into which band the foot may be placed, and the weight of the body of the person operating the stretcher may be used for the purpose of assisting in forcing the carpet to the desired position.

When a carpet is to be stretched by my machine, one end of the carpet having been tacked to the floor, the edge of the opposite end is turned over against the front piece C of the box, the pedal P is pressed down, forcing the hooks II into the carpet, and they are held in position by the spring S. The tacks are placed in the grooves V in the weight W and the arms T are raised and held in position by the spring *y* in contact with the con-

necting-bar *t*. The notched pole M is brought in contact with the end of the tongue J and is forced downward, stretching the carpet to the desired position. The handle K is then pressed forward, causing the spring S to be withdrawn from the end of the shank of the hook II, liberating the spring G, which causes the hook II to disengage itself from in contact with the carpet and the edge of the carpet will fall forward away from the box. At the same time the spring *y* will be drawn away from the connecting-bar *t*, the weight W will descend, and the tacks connected therewith will be driven through the carpet near its edge into the floor. In order to remove the weight from in contact with the tacks, the box and the weight must be drawn backward away from the edge of the carpet which has just been nailed and the heads of the tacks will be drawn from the grooves V in the weight W. The tacks may then be driven home by means of a hammer in the usual manner.

I do not limit myself to the exact number of hooks used for the purpose of engaging with the carpet, as shown and described; nor do I limit myself to the number of tacks placed in the weight, as shown and described, since it is apparent that these may be increased or diminished without materially altering the operation of my stretcher; nor do I limit myself to the manner of attaching the springs G, S, and *y* or to their exact construction, as shown and described in this specification; but

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

1. In a carpet-stretcher, a box provided with a lower surface covered with rubber having attached a pole at one end, a hook engaging with the carpet at its edge, said hook pivoted to said box, having its shank on the opposite side of the fulcrum from the hook end attached to a fastening device holding the hook in contact with the carpet, and an arm attached to said box movable in a vertical plane, said arm having a weight adapted to carry a tack attached to the end of said arm, all substantially as described, and for the purpose as set forth.

2. In a carpet-stretcher, a box having a pole attached to one end thereof, in combination with a hook passing through a side of the box engaging with the carpet near its edge, said hook pivoted to said box, with a spring engaging with the end of the hook-shank, holding the hook in contact with the carpet, and a spring placed beneath the hook-shank, tending to force the hook away from the carpet, all substantially as described, and for the purpose as set forth.

3. In a carpet-stretcher, a box provided with a pole attached to one end thereof, in combination with a hook passing through a side of the box, engaging with the carpet near its edge, said hook pivoted to said box, a spring engaging with the end of the hook-shank, hold-



ing the hook in contact with the carpet, a spring placed beneath the hook-shank, tending to force the hook away from the carpet, an arm attached to said box movable in a vertical plane, provided at one end with a weight carrying a tack, and a spring attached to said box and engaging with said arm when the arm is in its vertical position, all substantially as described, and for the purpose as set forth.

4. In a carpet-stretcher, a box provided with a pole attached to one end thereof, in combination with a hook passing through a side of the box, engaging with the carpet near its edge, said hook pivoted to said box, a spring engaging with the end of the hook-shank, holding the hook in contact with the carpet, a spring placed beneath the hook-shank, tending to force the hook away from the carpet, an arm attached to said box movable in a ver-

tical plane, provided at one end with a weight carrying a tack, a spring attached to said box and engaging with said arm when the arm is in its vertical position, chains attached to the loose ends of the springs, engaging, respectively, with the end of the hook-shank and with said arm, said chains secured together and passing along the pole toward the end of said pole farthest from the box, a handle pivoted to said pole, to which the chains are attached by the operation of said handle releasing said springs from their engagement with the hook-shank and arm, respectively, all substantially as described, and for the purpose as set forth.

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Witnesses:

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W. J. ROBBINS.