

W. H. METCALFE.
CARPET STRETCHER.
APPLICATION FILED MAY 26, 1910.

977,210.

Patented Nov. 29, 1910.

2 SHEETS—SHEET 1.

Fig. 1

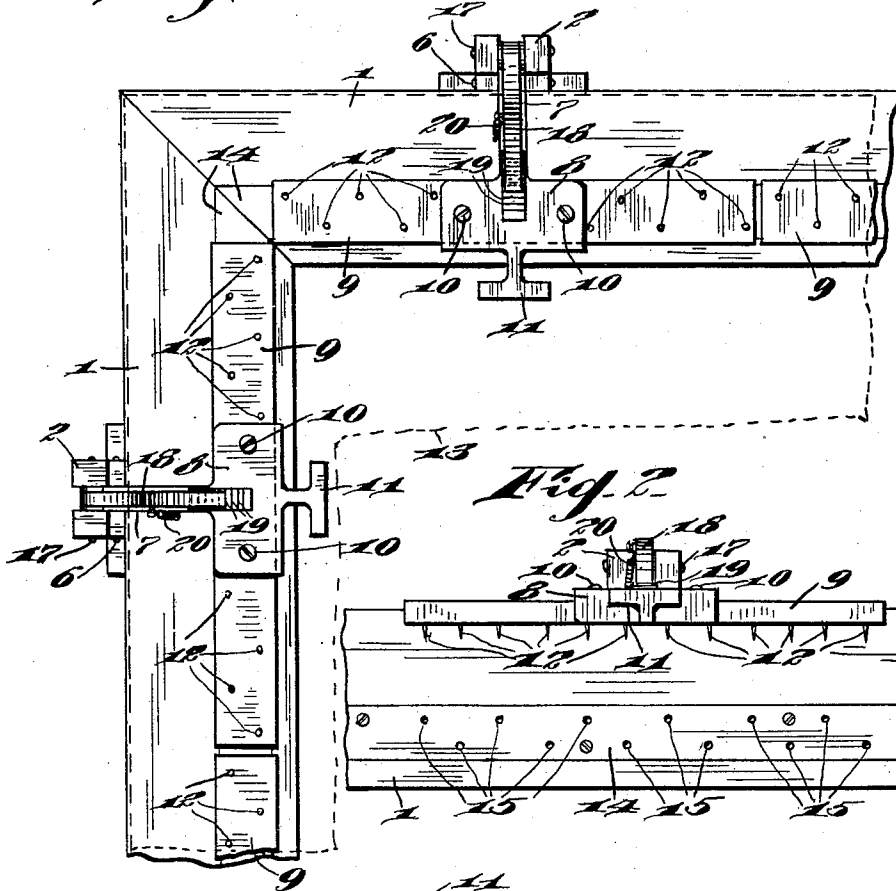


Fig. 2

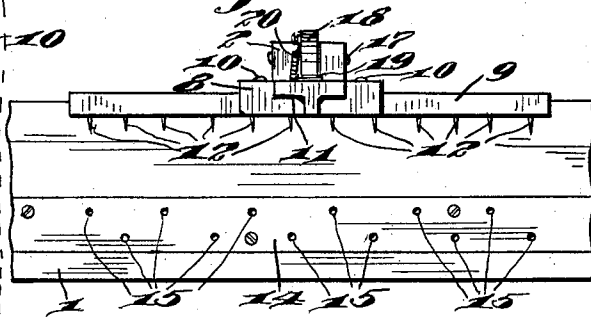
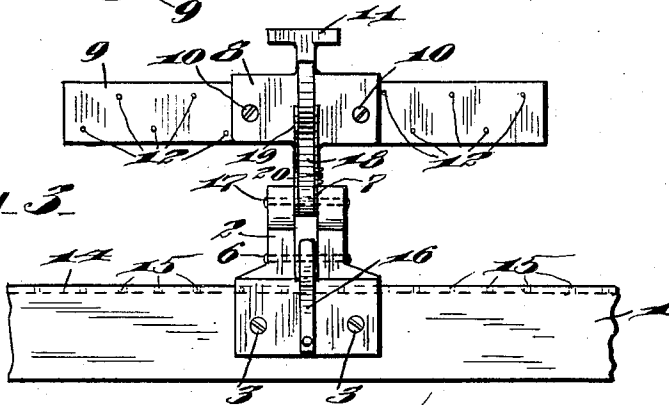


Fig. 3



Inventor

Witnesses

Thos. Brennan.
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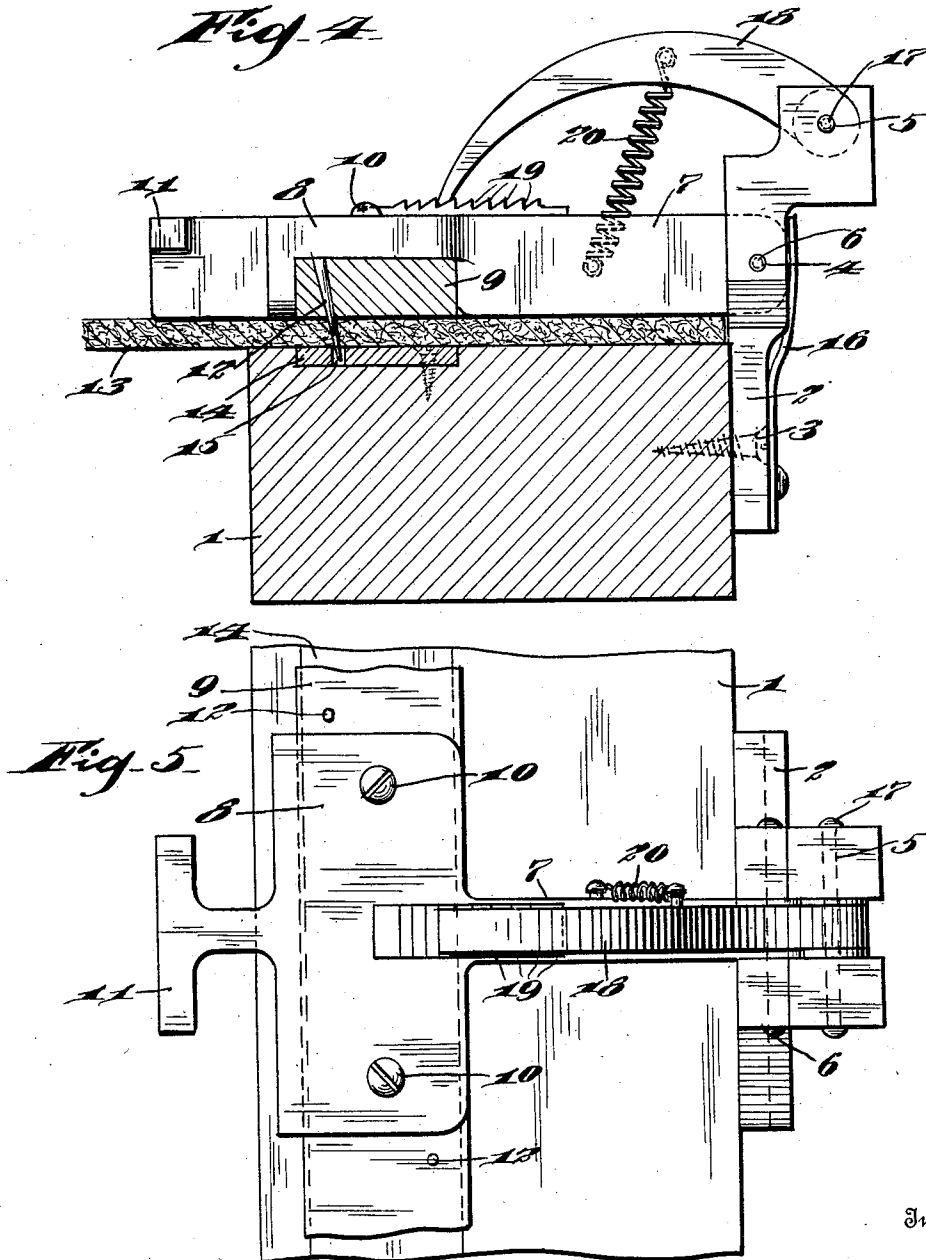
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2 SHEETS-SHEET 2.



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UNITED STATES PATENT OFFICE.

WILLIAM HENRY METCALFE, OF PHILADELPHIA, PENNSYLVANIA.

CARPET-STRETCHER.

977,210.

Specification of Letters Patent.

Patented Nov. 29, 1910.

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To all whom it may concern:

Be it known that I, WILLIAM HENRY METCALFE, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Carpet-Stretchers, of which the following is a specification.

My invention relates to improvements in carpet stretchers, more particularly designed for use for holding carpets and rugs during the course of manufacture of the rugs, or rather at the finishing point of the manufacture when the seams are being pressed flat, the object of the invention being to provide improved brackets affording an improved mounting for arms to which bars are secured, said bars having sharp teeth to engage and hold the carpet.

A further object is to provide improved means for locking the carpet holding bars in their lower clamping position, and provide improved means for holding the bars elevated.

With these and other objects in view, the invention consists in certain novel features of construction and combinations and arrangements of parts, as will be more fully hereinafter described and pointed out in the claims.

In the accompanying drawings: Figure 1, is a plan view of one corner of a carpet holding frame, illustrating the application of my improvements. Fig. 2, is a broken plan view showing the clamping bar in its raised position. Fig. 3, is a view in rear elevation of Fig. 2. Fig. 4, is an enlarged view in cross section through the frame and bar and showing my improved mechanism in side elevation, and Fig. 5, is a plan view of Fig. 4.

1, 1, illustrate the bars of a frame which are secured at right angles to each other, and in ordinary use a rectangular frame is constructed of the desired size to hold rugs of any given dimension. To these frame bars 1, at regular intervals, my improved clamping mechanisms are secured, and as all of these clamping mechanisms are precisely alike, the description hereinafter of one will apply alike to all.

2, represents a bifurcated bracket which is secured by screws 3 to the outer face of frame bar 1, and projects above the upper face of the frame bar where it is provided with two bearings 4, and 5, respectively, the

bracket being so shaped that the bearing 5 is disposed above and an appreciable distance in rear of the bearing 4. In the bearing 4, a journal pin 6 is located and supports a pivoted arm 7. This arm 7 is preferably a casting having an integral angular or recessed enlargement 8 near its free end in which a clamping bar 9 is secured by means of screws 10, and at the extreme free end of arm 7, a T-shaped integral finger hold 11 is provided to facilitate the raising of the arm and its clamping bar. The clamping bar 9 is provided with a plurality of downwardly projecting sharp teeth 12, which are preferably disposed at an angle as illustrated to more effectually clamp the carpet illustrated at 13, and in the frame bar a metal plate 14 is countersunk and is provided with a plurality of openings 15 to receive the ends of the teeth 12 after they are forced through the carpet 13, and prevent the teeth from becoming dulled which would be the case if they constantly engaged an obstruction. A flat spring 16 is secured to the rear face of bracket 2 and engages the arm 7, which latter is somewhat rounded at its end to turn freely under the spring 16, so that the arm may be swung to a vertical position, and the spring 16 will hold it in this vertical position so that the clamping bar 9 will be out of the way while the carpet is being placed in position on frame 1 or removed therefrom.

The bearing 5 above referred to receives a journal bolt 17 on which a pawl 18 is secured. This pawl is preferably of the curved form illustrated and has a somewhat sharp end to engage in any of the ratchet notches of a bar 19 fixed to arm 7, and a coiled spring 20 connects the pawl 18 with the arm 7 so as to normally hold the pawl in engagement with the notched bar 19 and thereby lock the arm 7 in its horizontal clamping position as clearly illustrated in Fig. 4. To release the carpet, pawl 18 must be elevated out of engagement with the notches of bar 19 and arm 7 swung upward to a vertical position, carrying with it the bar 9. As above explained, the frame 1 is provided with a plurality of these arms 7 and bars 9, as many of them being employed as desired in accordance with the size of the frame, but each of them are capable of individual operation and they may be raised and lowered and locked in lowered position as desired in accordance with the finishing opera-

tion of manufacturing rugs and carpets, and they will serve to effectually hold the carpet stretched, while the seams are being ironed out, and other finishing steps performed in the manufacture of rugs and carpets.

Various slight changes might be made in the general form and arrangement of parts described without departing from my invention, and hence I do not limit myself to the precise details set forth, but consider myself at liberty to make such changes and alterations as fairly fall within the spirit and scope of the appended claims.

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

1. In an apparatus of the character described, the combination with a frame adapted to receive a carpet thereon, of a plurality of arms pivoted to the frame, bars secured to said arms and extending parallel with the frame, and downwardly projecting teeth on said bars constructed to engage a carpet and said bars clamp the carpet against the frame, substantially as described.

2. In an apparatus of the character described, the combination with a frame adapted to receive a carpet thereon, a bracket secured to the rear face of the frame, an arm pivoted to the bracket, and a toothed bar secured to the lower face of said arm and constructed to engage a carpet and clamp it between the bar and the frame, substantially as described.

3. In an apparatus of the character described, the combination with a frame, a bracket secured to the frame, an arm pivoted to the bracket, a toothed bar secured to the lower face of the arm and extending at right angles thereto, and a plate counter-sunk in the frame and having openings to receive the teeth of said bar, substantially as described.

4. In an apparatus of the character described, the combination with a frame, of a bracket secured to the rear face of the frame, an arm pivoted to the bracket, a toothed bar secured to the lower face of the arm and extending at right angles thereto, and means

for locking the arm in its horizontal position, substantially as described.

5. In an apparatus of the character described, the combination with a frame, a bifurcated bracket secured to the rear face of the frame, an arm pivoted in said bracket, a toothed bar secured to the lower face of said arm and projecting at right angles thereto, a finger hold on the free end of said arm, and a spring secured to said bracket engaging said arm at its pivoted end and constructed to hold said arm in operative position.

6. In an apparatus of the character described, the combination with a frame, a bifurcated bracket secured to the rear face of the frame, an arm pivoted in said bracket, a toothed bar secured to the lower face of said arm and projecting at right angles thereto, a pawl pivoted to said bracket, a bar fixed on said arm and having notches to receive said pawl, and a spring connecting said pawl and said arm, substantially as described.

7. In an apparatus of the character described, the combination with a frame, a bifurcated bracket secured to the rear face of the frame, an arm pivoted in said bracket, a toothed bar secured to the lower face of said arm and projecting at right angles thereto, a pawl pivoted to said bracket, a bar fixed on said arm and having notches to receive said pawl, a spring connecting said pawl and said arm, and the pivotal connections of said arm and said pawl with said bracket positioned out of vertical and horizontal alignment with each other, whereby the arm may be swung to vertical position, and a flat spring secured to the bracket and engaging said arm to hold the arm in its vertical position, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

WILLIAM HENRY METCALFE.

Witnesses:

MARY ANN METCALFE,
R. H. KRENKEL.