Nov. 7, 1933. J. H. PAMPAIAN ET AL 1,933,565

RUG CLEANING AND STRETCHING DEVICE

Filed Jan. 15, 1931 2 Sheets-Sheet 1

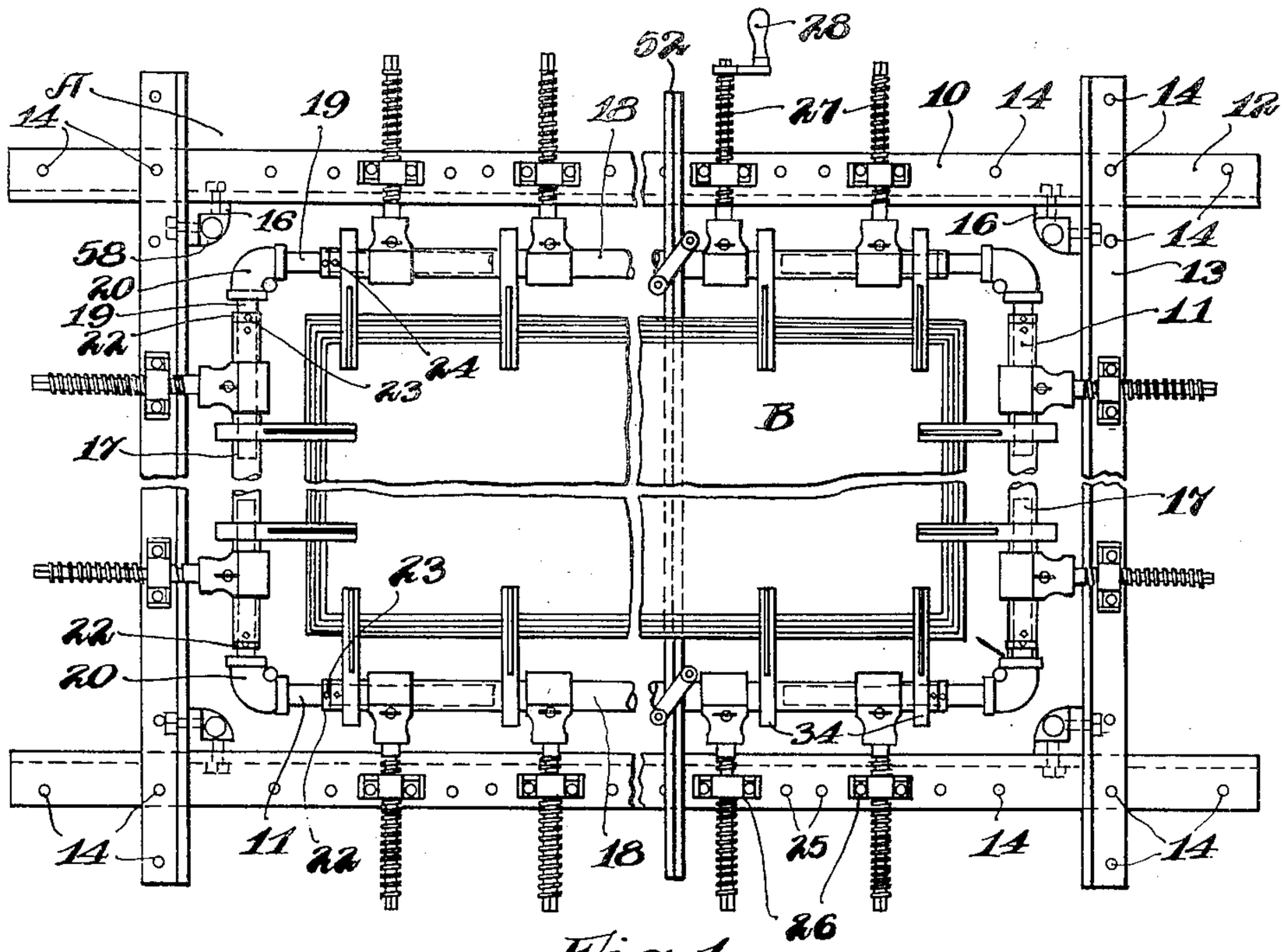

Fig. 1

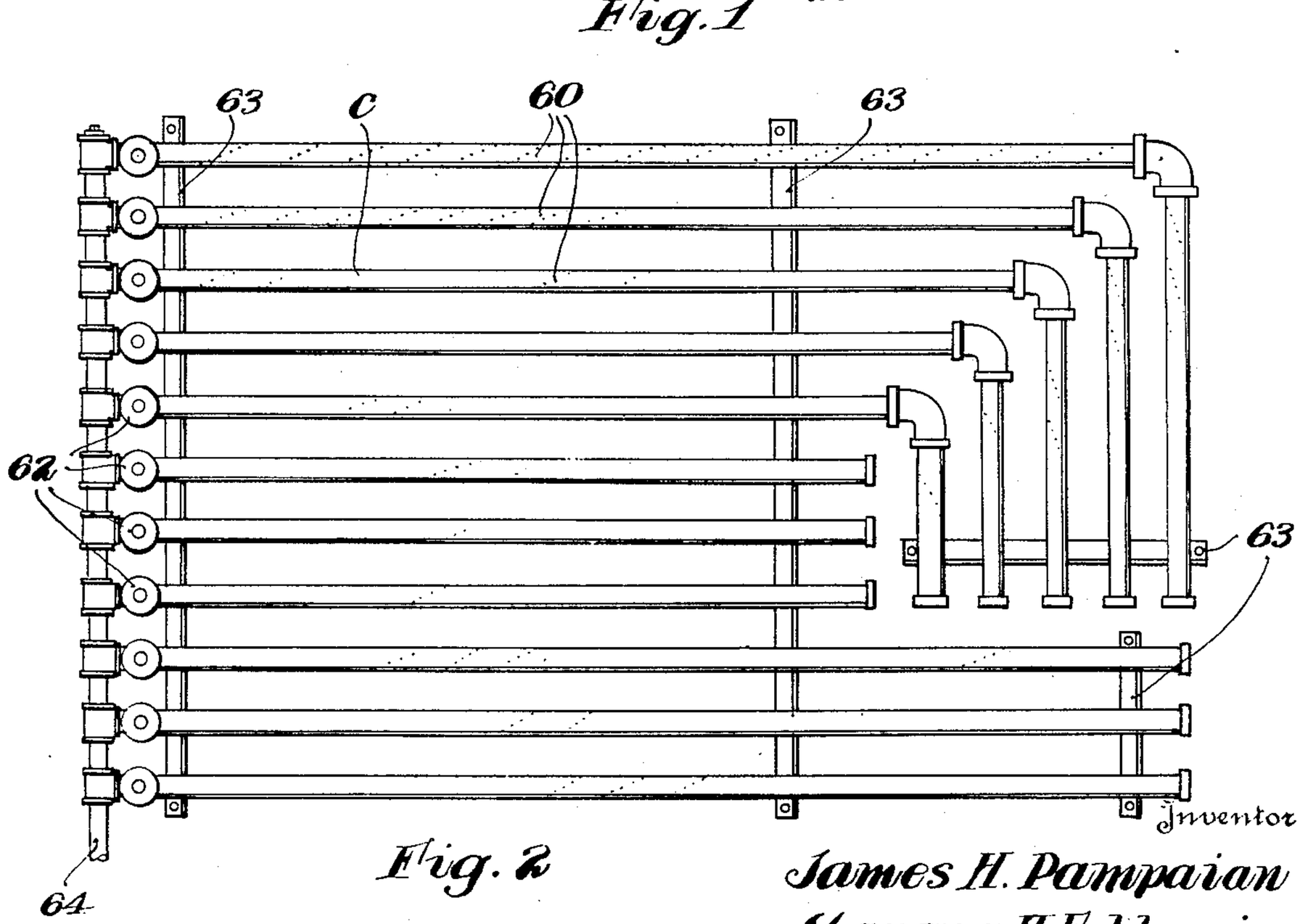

Fig. 2

Inventor

James H. Pampaian

Manoug H. Evkhanian

By Howard Lucker

Attorney

Nov. 7, 1933. J. H. PAMPAIAN ET AL 1,933,565

RUG CLEANING AND STRETCHING DEVICE

Filed Jan. 15, 1931 2 Sheets-Sheet 2

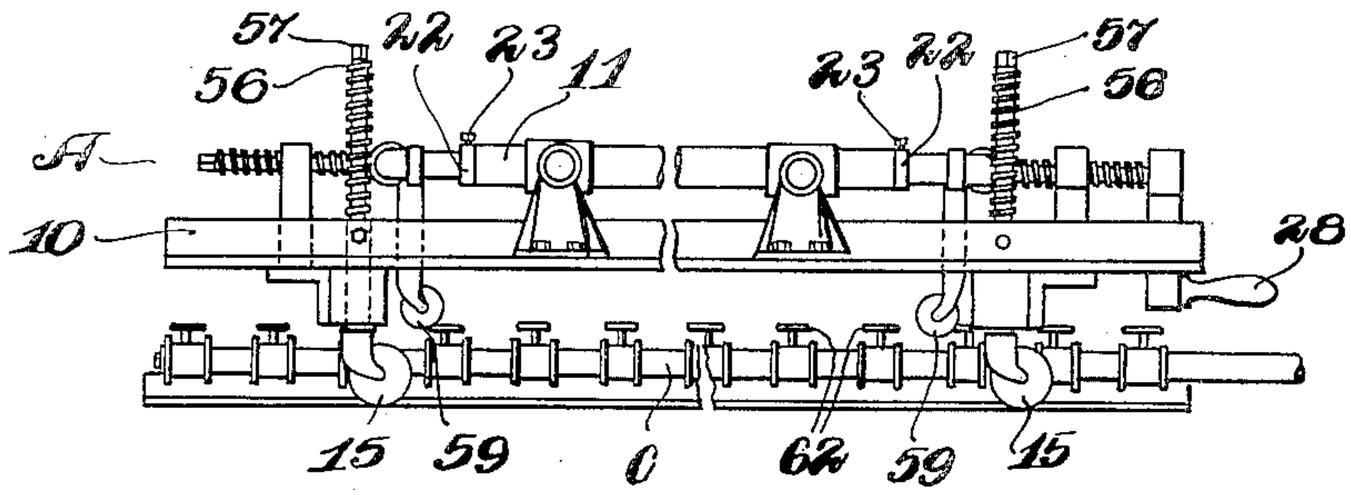

Fig. 3

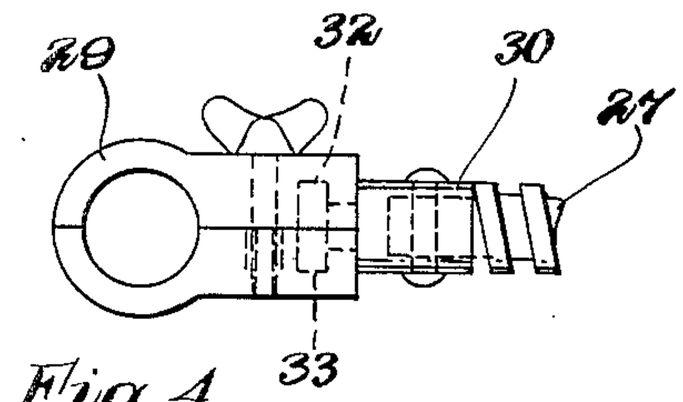

Fig. 4

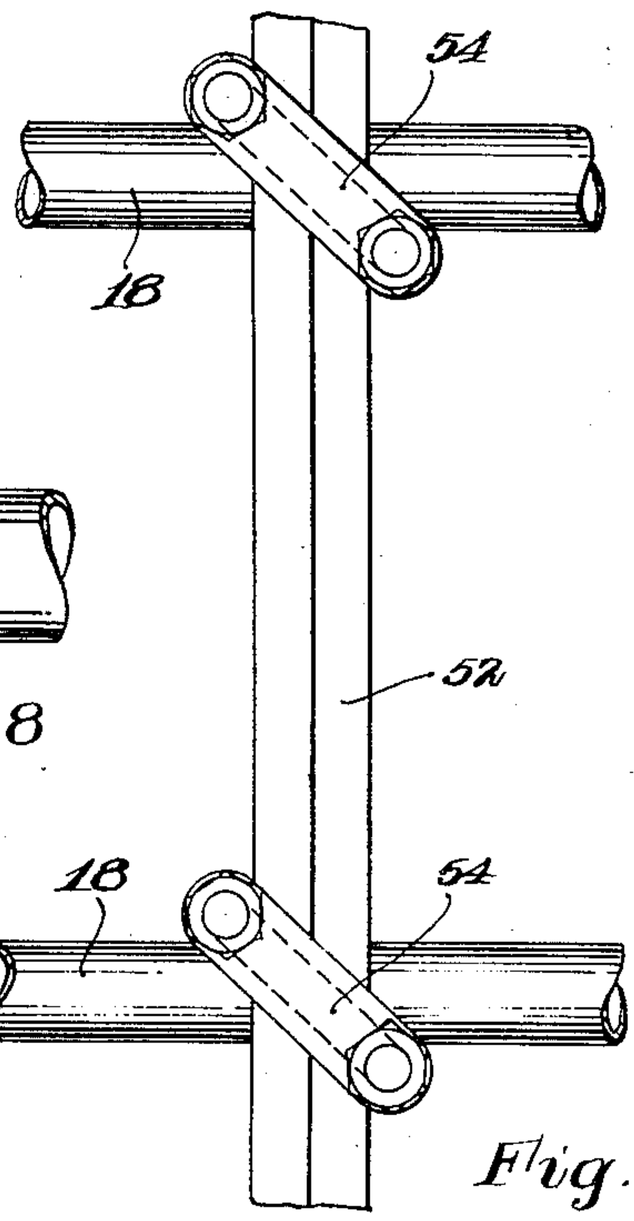

Fig. 6

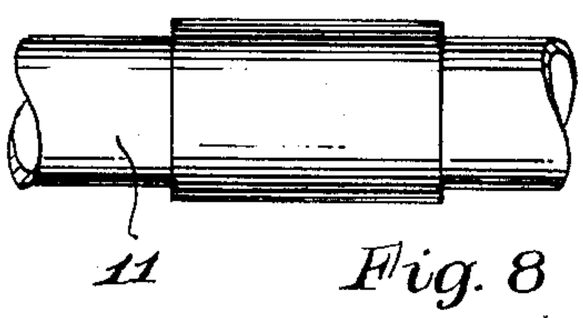

Fig. 8

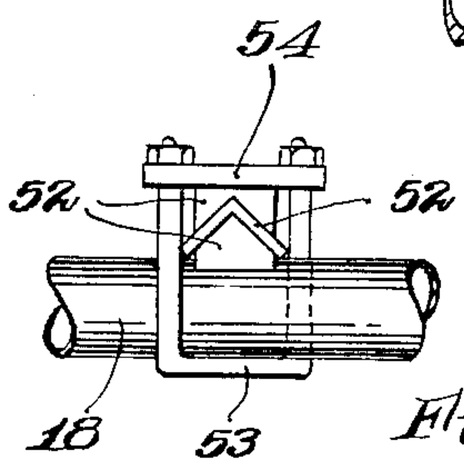

Fig. 7

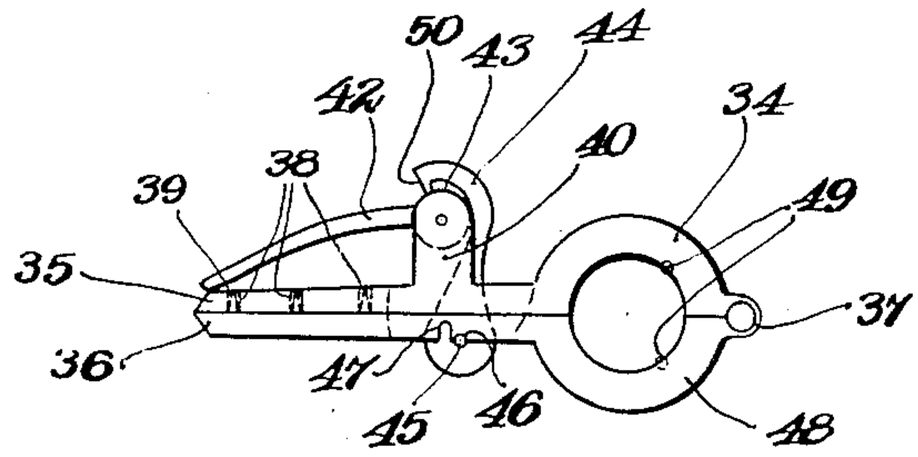

Fig. 5

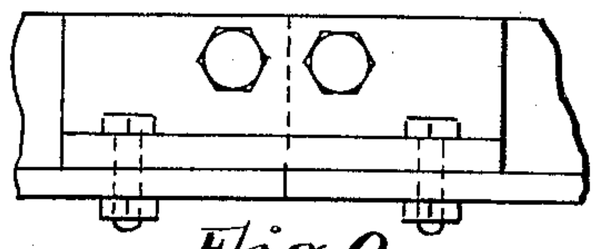

Fig. 9

Inventor

James H. Pampaian

Manoug H. Evkhanian

By Howson & Sicher

Attorneys

Patented Nov. 7, 1933 1,933,565

UNITED STATES PATENT OFFICE

1,933,565

RUG CLEANING AND STRETCHING DEVICE

James H. Pampaian, Reedley, and Manoug H. Evkhanian, Pasadena, Calif.

Application January 15, 1931. Serial No. 508,964

10 Claims. (Cl. 45—24)

Our invention relates to an improvement in a rug cleaning and stretching device wherein it is desired to provide a device adapted to support rugs in position to be cleaned and stretched.

It is an object of our invention to provide a rug cleaning and stretching device which is adjustable to various sizes of rugs and which may be quickly and easily regulated to accommodate a large or small rug. In this manner, our cleaning and stretching device is applicable for use with any size or shape of rug and is of great value where a large amount of this work is to be done.

It is an object of our invention to provide a portable rug supporting frame so that the rug while held in the frame may be moved either into position over a series of pipes adapted to emit steam for the purpose of cleaning the rug or may be placed in position to dry and stretch the rug after the cleaning operation.

It is a purpose of our invention to provide an outer frame which may be adjusted to accommodate any size of rug and may be secured tightly in this adjusted position. This outer frame is provided with casters so that it may be moved from place to place. It is a further purpose of our invention to provide an inner frame within the aforementioned outer frame and connected to this outer frame by a series of adjustable screw members by means of which the inner frame may be adjusted to the desired size.

It is the purpose of our invention to secure a rug by means of readily removable clamps within the inner frame of our rug stretching and cleaning device so that by operating the adjustable screw members connecting the inner and outer frames the rug which is clamped to the inner frame may be tightly stretched and held in this stretching position. In this manner, the rug may be supported in stretched position over the series of steam pipes which are used for cleaning the rug and the inner frame may be expanded from time to time during the process to stretch the rug.

It is an object of our invention to provide a means for holding the inner frame while supporting the rug at any desired expanded position and to provide a means for disconnecting the adjustable screw members from the inner frame so that the inner frame and the rug supported thereby may be removed from the outer frame and another inner frame inserted for the purpose of cleaning and stretching a second rug while the first is still being held in stretched position.

It is an object of our invention to provide a cleaning unit composed of a series of steam pipes having holes formed therein to emit steam and to so arrange this cleaning unit that any part of the same may be utilized without the necessity of emitting steam through the pipes of the entire unit. In this manner, when a small rug is to be cleaned only those pipes which would be covered by the rug are used to emit steam and the remaining portion of the unit over which the rug does not lie is not utilized.

It is a feature of our invention that the outer frame is provided with casters which may if desired, be adjustable to various heights so that the outer frame may be raised or lowered. Accordingly, when a large rug is being supported within the inner frame the outer frame may be lowered until casters formed on the inner frame come in contact with the floor at which time the inner frame may be disconnected from the outer frame. By again elevating the outer frame the two frames may be separated and each rolled to any desired position. In this manner, heavy rugs may be handled which ordinarily would be unwieldly and difficult to support.

It is an added feature of our invention to provide rug clamps for connecting the rug to the inner frame which may be opened or closed in a single movement and which may be adjusted to various thicknesses of rugs. By utilizing these clamps the rug may be quickly and easily connected to the inner frame.

It is a further object of our invention to provide a supporting means for large rugs which may be secured beneath the rug to support the weight thereof. By this additional supporting means the entire weight of a large rug does not fall upon the clamps, thus obviating the danger of tearing the rugs within the clamps.

Additional objects and novel features of our invention will be more clearly and fully set forth in the following specification and claims.

In the drawings forming a part of this specifications:

Figure 1 is a plan view of our rug stretching and cleaning device.

Figure 2 is a plan view of the cleaning unit for cleaning the rugs.

Figure 3 is a side view of the rug cleaning and stretching device in place over the cleaning unit.

Figure 4 is a detail view of the method of connecting the adjustable screw means to the inner frame.

Figure 5 is a side view of a rug holding clamp.

Figure 6 is a plan view of our rug supporting member for use in supporting large rugs.

Figure 7 is an end view of the same.

Figure 8 illustrates a manner of increasing the length of one of the members of the inner frame.

Figure 9 illustrates a manner of increasing the size of the outer frame.

The rug stretching and cleaning device A is composed of an outer frame 10 and an inner frame 11. The outer frame 10 is made up of angle side members 12 and angle end members 13. Spaced bolt holes 14 through these angle members 12 and 13 permit the adjustment of this frame in size, and by passing a bolt through one of the bolt holes 14 at either end of each of the side and end angle members 12 and 13, a frame of the desired size may be formed. In order to insure the correct rectangular shape of the outer frame 10, to further support the junction of the angle members 12 and 13 and to provide a support for the casters 15, we provide vertical angle members 16 which are securely bolted to both the angle side members 12 and the angle end members 13 as illustrated in Figures 1 and 3 of the drawings.

The inner frame 11 is composed of tubular end members 17 and tubular side members 18 within which the bars 19 which are integrally connected to the elbow members 20 are slidably positioned. This inner frame 11 may be adjusted in size by sliding the bar members 19 into or out of the tubular members 17 and 18. For example, when it is desired to enlarge the inner frame 11, this may be done by sliding the bar members 19 farther out of the tubular members 17 and 18. The frame 11 may be held at any desired adjusted position against decreasing in size by means of collars 22 which are secured to the bar members 19 by means of set screws 23. It is obvious that when a rug is being supported within the inner frame, there is no tendency for the frame 11 to expand and thus it is only necessary to prevent this frame from diminishing in size. Set screws 24 directly through the tubular members 17 and 18 may be provided for securing the bar members 19 at any position within the tubular members if desired.

The outer frame 10 is provided with a series of holes 25 at equal intervals along the horizontal surface thereof in order to allow bracket members 26 to be connected in any adjusted position thereto. These bracket members are internally threaded to accommodate screw members 27. These screw members 27 are provided with an outer square end upon which a crank handle 28 may be placed in order to easily operate the screw. The inner end of each of the screw members 27 is secured to a split clamp member 29 which is adapted to fit over the tubular members 17 and 18 of the inner frame 11. In order that the split clamp 29 will not turn with the screw member 27, we provide a socket 30 riveted to the end of the screw member 27 which is provided with a circumferential flange 32 adapted to fit in a complemental circumferential groove 33 formed in the split clamp 29 as illustrated in Figure 4 of the drawings. The socket 30 turns with the screw member 27 and the circumferential flange turns in the groove 33, the split clamp 29 not rotating therewith. The two portions of the split clamp are secured together by a bolt means 31 which may be in the form of a thumb screw in order that the clamp 29 may be quickly removed from the inner frame 11.

To support a rug B within the inner frame 11, we provide a number of clamps 34 which fit over the tubular members 17 and 18 of the inner frame 11. The clamps 34 are composed of two clamping jaws 35 and 36 which extend in a manner to encircle the tubular members 17 and 18 and are hinged at 37. The lower jaw 36 is provided with a number of sharp tooth-like projections 38 which extend through apertures 39 formed therefor in the upper jaw 35. A pair of upwardly extending ears 40 are formed integrally with the upper jaw 35 and between these ears 40 is pivoted a clamping handle 42. The clamping handle 42 is provided near its pivot point with a lug projection 43 which is adapted to be engaged by a catch 44. The catch 44 extends through apertures formed in both the upper and lower jaws 35 and 36 and is provided with a pin 45 extending entirely through the same to form a pivot point. The pivoting pin 45 is adapted to be positioned in a notch 46 in the lower jaw 36 as illustrated in Figure 5 of the drawings. When the clamp 34 is to be used for a thick rug such as a Chinese Oriental the pivoting pin 45 is positioned in a deeper notch 47. The collar portion 48 of the clamp 34, is adapted to encircle the tubular members 17 and 18 and is provided with a pair of ball bearing members 49 which are set into the body of the clamp and which provide a bearing means for the collar portion 48 so that the clamp may turn easily upon the tubular members.

When it is desired to clamp a rug within the clamp 34 the rug is inserted between the jaws 35 and 36 and the catch 44 is hooked over the lug 43 formed upon the clamping handle 42. The handle 42 is then moved into the position illustrated in Figure 5 of the drawings, the catch 44 drawing the lower jaw tightly against the upper jaw 35 to clamp the rug B tightly between the jaws. In this position it may be seen that the end 50 of the catch 44 extends beyond the centers of the catch member 44 and the handle 42 and therefore will remain in this position until the handle 42 is raised.

When a large rug is to be supported by the clamps 34, it is possible to secure an angle member 52, across the frame 11 beneath the rug to support a portion of the weight thereof. This angle member 52 is securely held to the tubular members 18 of the frame 11 by means of a U-bolt 53 passing through a clamping plate 54. A pair of blocks 55 hold the angle member 52 in proper relationship with the clamping plate 54 and the U-bolt 53 as may be seen in Figure 7.

In order that the height between the floor and the frame 10 may be adjusted it is possible to provide screw members 56 to which the casters 15 are secured. These screw members 56 are provided wtih a squared end 57 and may be operated by the crank handle 28 to raise or lower the frame 10. The screw members 56 pass through threaded collars 58 which are secured to the vertical angle members 16. Casters 59 may be secured to the elbows 20 of the inner frame 11 so that when the outer frame 10 is lowered, the casters 59 on the inner frame 11 will contact with the floor, the clamps 29 may be removed and the inner frame with the rug stretched therein will be free from the outer frame. The rug may be subjected to the cleaning action of the steam either while the inner frame 11 is clamped to the outer frame 10 or when the inner frame has been removed from the outer frame as desired.

If a rug B is used of too great a size to be included within the frames it is possible to enlarge the size of the frames by splicing the tubular members 17 and 18 in the manner illustrated in Figure 8 and by splicing the angle members 12 and 13 in the manner illustrated in Figure 9.

Splicing in this manner will increase the length of the tubular members and of the angle members to such an extent that virtually any size of rug may be included in our rug cleaner and stretcher A.

In order that the entire surface of the rug B to be cleaned comes in contact with the cleaning steam from the cleaning unit C, we provide a series of perforated pipes 60 which are formed preferably in the manner illustrated in Figure 2 of the drawings. It will be noted that some of these pipes are shorter than others. When it is desired to clean a small rug the rug B is suspended over the shortest pipes 60 and steam is admitted only to those pipes over which the rug extends. When a larger rug is used steam is admitted by means of the valves 62 to more of the pipes 60 so that the entire surface of the rug comes in contact with steam emitted from these pipes but no steam is allowed to pass through pipes over which the rug does not extend. The pipes 60 rest upon angle members 63 which may be bolted directly to the floor or to a concrete base and steam is admitted into the pipes through the steam inlet 64.

In accordance with the patent statutes, we have described the principles of operation of our rug cleaning and stretching device and while we have endeavored to set forth the best embodiment thereof, we desire to have it understood that this is only illustrative of a means of carrying out our invention and that obvious changes may be made within the scope of the following claims without departing from the spirit of the invention.

We claim:

1. A rug cleaning and stretching device including, a rug holding frame, clamps for engaging the marginal edge of the rug to hold the same to the frame, said frame having an expandable nature and an adjustable stretching frame variable in size outside of said rug holding frame having screw operated stretching means engageable with the rug holding frame to stretch the rug for cleaning and stretching.

2. A rug cleaning and stretching device including, an adjustable stretching frame variable in size, an auxiliary rug supporting frame adapted to be placed within said stretching frame, stretching devices for engaging with said rug supporting frame to stretch the rug into the desired shape and removably connecting the rug supporting frame with said stretching frame to receive another rug and supporting frame.

3. A rug stretching and shaping device including, an adjustable frame having a series of hand operated stretching members, an auxiliary frame adapted to be placed within the bounds of said stretching frame, clamps carried by said auxiliary frame adapted to pinch the marginal edge of a rug to be stretched and shaped, adjustable means in said auxiliary frame adapted to permit the same to expand, and means for locking said auxiliary frame in expanded position to hold the rug supported thereby while cleaning and shaping the same.

4. A device adapted to support rugs while cleaning and reshaping including, a rug supporting frame, a series of adjustable clamps for engaging the marginal edge of the rug, said frame having an expandable nature, locking means for locking said frame in expanded position when the rug is stretched to the desired shape, brace means for engaging the expanded frame to hold the same in the desired shape and to overcome sagging of large rugs, and an adjustable stretching frame variable in size and having a series of stretching members adapted to engage with said rug supporting frame to shape the rug supporting frame in a manner to stretch the rug supported thereby into the desired shape.

5. A rug stretching device including, a pair of frames, one of which is adapted to provide the stretching frame proper, means for adjusting said stretching frame to different sizes, a series of screw operated stretching members, handles for operating said stretching members, the other of said frames providing expandable and contractable rug supporting means, means for connecting said stretching members to said rug supporting frame, a series of adjustable rug clamps carried by said rug supporting frame adapted to engage the rug marginally and means for locking the rug supporting frame in stretched out position to hold the rug supported thereby stretched while cleaning and shaping.

6. A rug stretching and shaping device including, a pair of frames, one frame adapted to form the stretching medium and having a series of stretching elements, the other frame adapted to form the rug supporting means and having rug engaging elements, means for disconnecting the stretching elements of the stretching frame from the rug supporting frame, and means for adjustably supporting each of said frames on wheels upon the floor so that the rug supporting frame may be removed away from said stretching frame after the rug has been cleaned and shaped.

7. A portable rug stretching device including, a pair of frames, one of said frames constituting the stretching frame and adjustable to the desired size, a series of stretching elements carried by said stretching frame, adjustable caster wheels for supporting said stretching frame to raise and lower said frame, the other frame constituting a rug supporting means and adjustable casters for supporting said rug supporting frame to permit the same to be moved away from said stretching frame.

8. A rug stretching device including, a stretching frame, an inner frame composed of telescoping members within said stretching frame, rug engaging clamps on said inner frame, and adjustable connecting means between said frames to stretch said inner frame.

9. A rug stretching device including, an outer frame, an inner frame adjustable in size, a series of rug clamps on said inner frame, engaging clamps on said inner frame, and adjustable means connecting said engaging clamps with said outer frame to expand or contract said inner frame.

10. A rug stretching device including, an expandable and contractible stretching frame, an inner frame adjustable in size, a series of rug clamps on said inner frame, and adjustable means connecting said inner frame with said outer frame to expand or contract the inner frame.

JAMES H. PAMPAIAN.
MANOUG H. EVKHANIAN.