E. S. CRADDOCK.

RUG TREATING MACHINE.

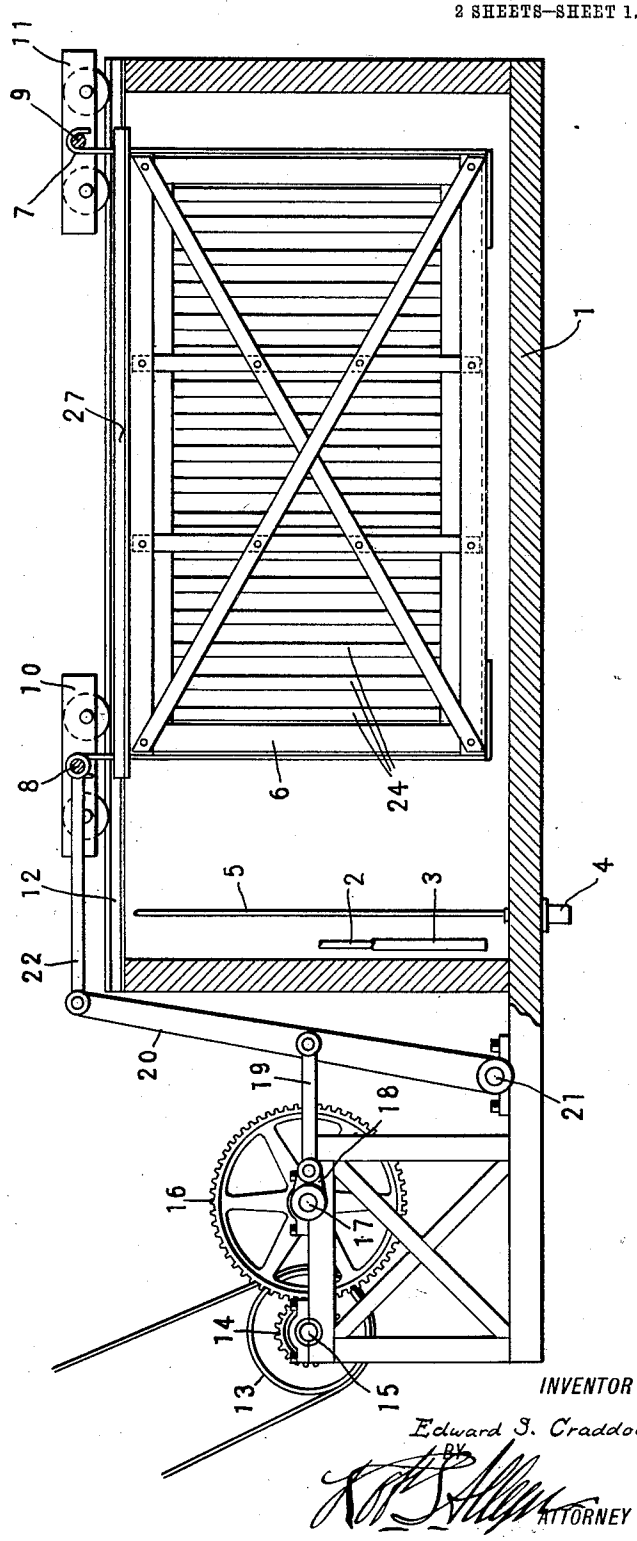
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1 097,967.

Patented May 26, 1914.

2 SHEETS—SHEET 1.

Fig. 1.



WITNESSES:

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2 SHEETS—SHEET 2.

Fig. 2.

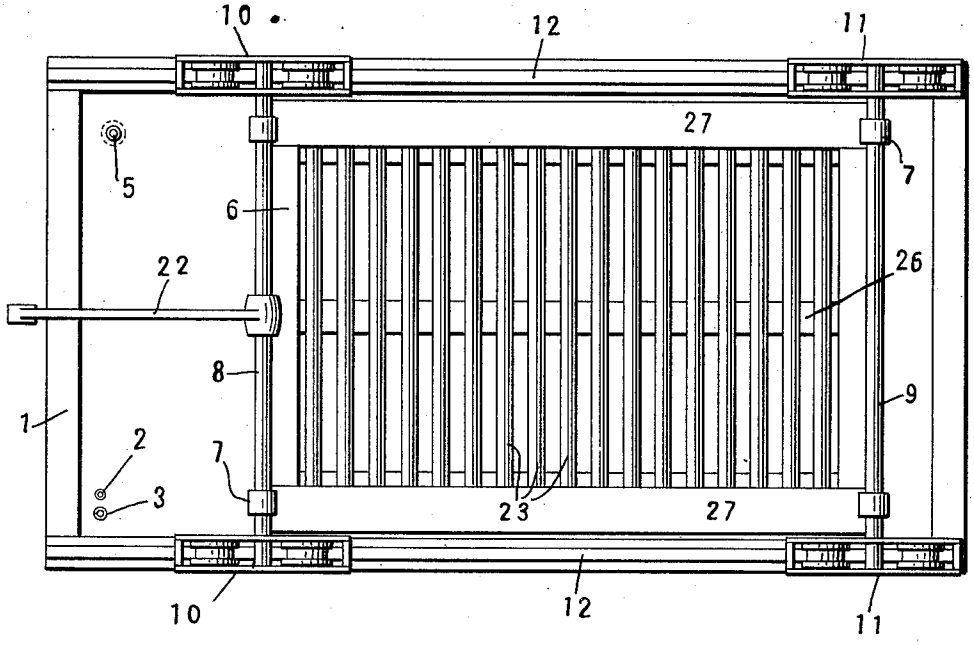
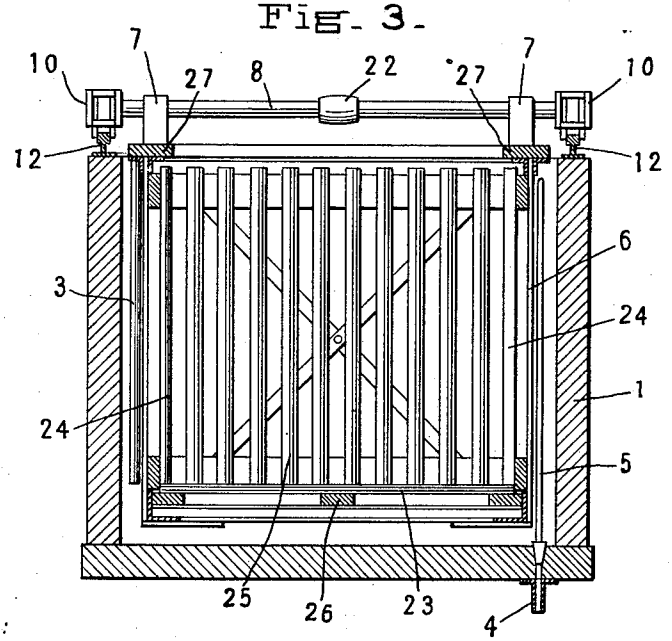


Fig. 3.



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UNITED STATES PATENT OFFICE.

EDWARD S. CRADDOCK, OF NEW YORK, N. Y., ASSIGNOR TO TABRIZ RENOVATING COMPANY, OF JERSEY CITY, NEW JERSEY, A CORPORATION OF NEW JERSEY.

RUG-TREATING MACHINE.

1,097,967. Specification of Letters Patent. Patented May 26, 1914.

Application filed September 20, 1909. Serial No. 518,544.

To all whom it may concern:

Be it known that I, EDWARD S. CRADDOCK, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Rug-Treating Machines, of which the following is a specification.

My invention relates particularly to mechanism for the treatment of heavy pile fabric rugs or carpets by washing, stripping, fixing or coloring.

Oriental rugs and the like are very difficult to handle and in the past their treatment has been unsatisfactory on account of the matting of the pile threads, the running of the colors and the slow speed and expense of the old operations.

My objects are to simplify the handling of the rugs and to expedite the operations without injury to the rugs and to obtain more uniform results.

The invention consists in a tank for containing the treating liquid, and a special form of reciprocating open-work frame for containing the rugs which are thus caused to move back and forth in the liquid so that the different layers of the same rug or a number of rugs are moved back and forth against each other and the liquid is well rubbed into the pile threads and the body of the fabric or fabrics.

Figure 1, is a side view and longitudinal section of a machine embodying the improvements of my invention. Fig. 2, is a plan view of the treating tank and frame. Fig. 3, is a transverse sectional view of the tank and frame.

Tank 1 is of special construction to hold the desired liquid for stripping, washing or coloring as the case may be. The liquid may be introduced through a pipe 2 and hot water or steam may be introduced through the same pipe or a separate pipe 3. The liquid may be drained through the outlet 4. A long handled plug 5 is preferably provided for this outlet.

The frame 6 specially constructed for the purpose of this invention as more fully described hereinafter has a hook-like upright 7 at each corner by means of which the frame is suspended from shafts 8 and 9. These shafts are carried by carriages 10, 10 and 11, 11 which are adapted to be moved back and forth on the tracks 12, 12 along the upper side edges of the tank 1.

The frame 6 reciprocates slowly in the tank by automatic means such as shown in Fig. 1. The driving pulley 13 and pinion 14 are fixed on shaft 15. Pinion 14 meshes with gear wheel 16 on shaft 17. The crank 18 also fixed on shaft 17 is connected by rod 19 to lever 20 which is hinged at 21 at the lower end. The upper end of lever 20 is connected by link 22 to shaft 8. The rotation of the pulley 13 is thus transformed in to a reciprocating motion of the shaft 8 carriages 10, 10, frame 6, shaft 9 and carriages 11, 11.

The skeleton of the frame 6 is preferably made of angle irons braced and reinforced substantially as shown to give sufficient strength to carry the loads to be imposed upon it. The bottom, sides and ends are each constructed preferably of slats or bars of wood such as 23, 24 and 25 all rounded toward the interior of the frame so as to prevent injury to the rugs. The slats 23 of the bottom are all fastened to cross pieces such as 26 so that they may all be inserted or removed from the metal skeleton of the frame at once. The sides and ends are similarly constructed, and all of their slats are vertical so that while the liquid is free to pass back and forth, the rugs cannot slip through and will not tend to clog up the passages. Along the upper edges of the sides of the frame are guards 27, 27 extending over the upper ends of the bars or slats 24, 24 and up close to the sides of the tank 1 so as to prevent injury to the rugs when putting them into or taking them from the tank.

The rugs are laid flat in the bottom of the frame and on top of each other, such rugs as are larger than the bottom of the frame being folded back and forth. As the frame with the rugs is reciprocated back and forth in the tank, the liquid surges back and forth through the ends of the frame and beneath, between and over the rugs, reaching the bodies of the rugs at the base of the pile threads. The rugs themselves being heavy and laid flat, shift back and forth at the end of each stroke so that a rubbing motion takes place between every two adjacent layers which accelerates the action. I prefer to have the bottom reticulated as shown, like the sides, so as to permit a more free circu-

lation of liquid but the openings should not be large enough to permit the rugs to fall or work through. The rugs should be kept clear from the sides and bottom of the tank to prevent injury and to keep them clean for there is a tendency for dirt and colors to collect particularly at the bottom of the tank.

What I claim is:—

1. A rug treating machine, comprising in combination, a liquid containing tank having longitudinal tracks along its side edges, supporting wheels running on said tracks, a rug holding frame supported by said wheels, said frame being of openwork construction with a bottom formed of spaced slats extending transversely of the frame whereby to retard longitudinal shifting movement of the rugs during longitudinal reciprocation of the frame and to thereby exert a scrubbing action on such rugs, the sides and ends of the frame consisting of spaced slats disposed upright to thereby prevent the rugs laid flatwise in the frame from slipping out of the frame into the tank and means for reciprocating the frame containing the rugs longitudinally through the tank to thereby scrub the rugs against each other and against the slats of the frame and to force the liquid freely through and around the rugs.

2. A rug treating machine, comprising in combination, a liquid containing tank having longitudinal tracks along its side edges, supporting wheels running on said tracks, a rug holding frame supported by said wheels, said frame being of openwork construction with a bottom formed of spaced slats extending transversely of the frame whereby to retard longitudinal shifting movement of the rugs during longitudinal reciprocation of the frame and to thereby exert a scrubbing action on such rugs, the sides and the ends of the frame consisting of spaced slats disposed upright to thereby prevent the rugs laid flatwise in the frame from slipping out of the frame into the tank, strips secured to the upper edges of the frame, overlying the upper ends of the upright slats to thereby prevent rugs thrown into the frame from catching on the upper ends of the slats, said strips also extending outward relatively close to the walls of the tank to prevent the rugs which are being thrown into the frame from slipping in between the frame and the wall of the tank, and means for reciprocating the frame containing the rugs longitudinally through the tank to thereby scrub the rugs against each other and against the slats of the frame and to force the liquid freely through and around the rugs.

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Witnesses:
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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."