J. R. MOORE.

APPARATUS FOR TREATING HARNESS.

APPLICATION FILED APR. 2, 1906.

999,242.

Patented Aug. 1, 1911.

2 SHEETS—SHEET 1.

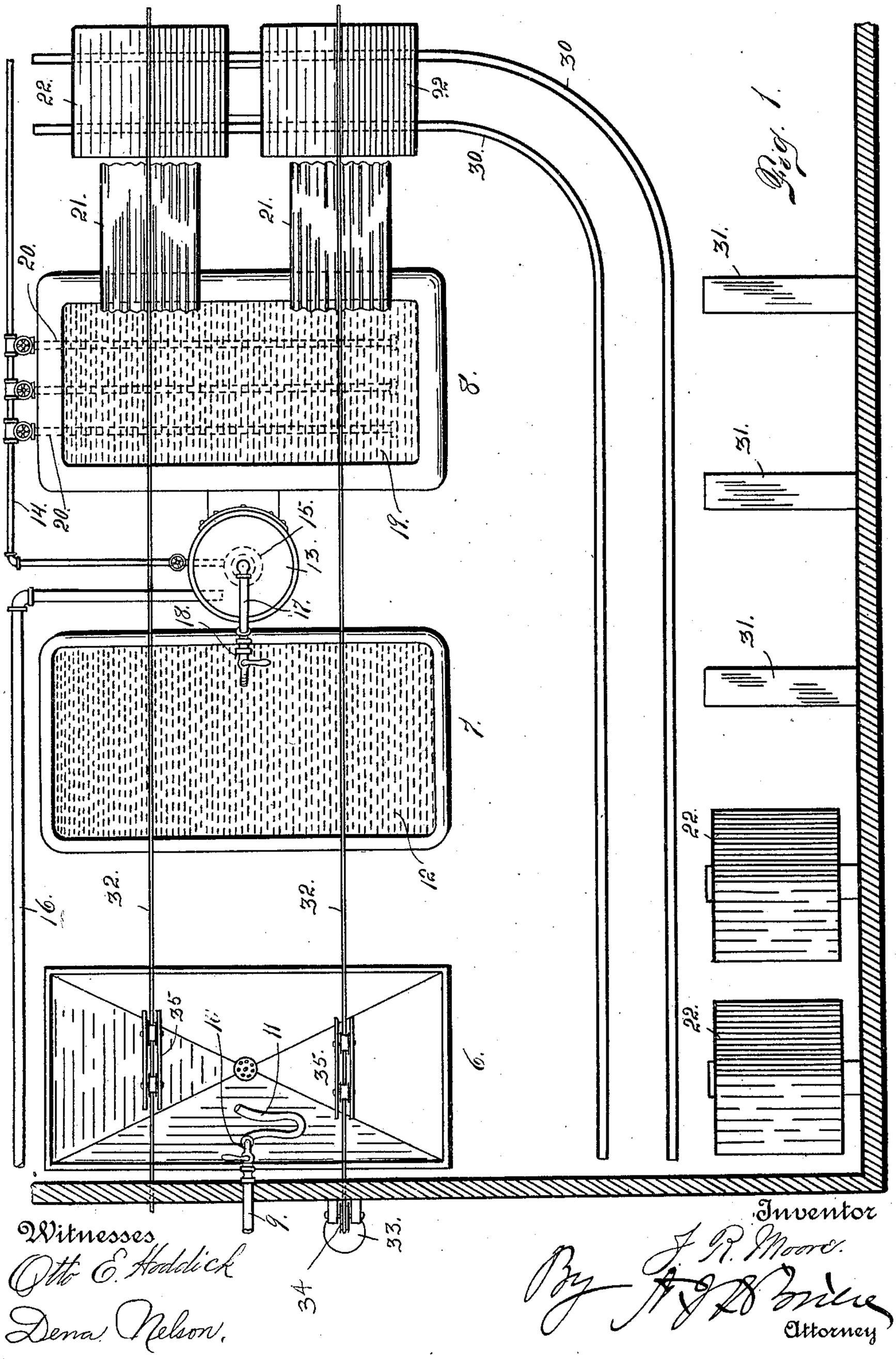

Fig. 1.

Witnesses

Otto E. Haddick

Dena Nelson.

Inventor

J. R. Moore.

By F. G. Fischer

Attorney

COLUMBIA PLANOGRAPH CO., WASHINGTON, D. C.

J. R. MOORE.

APPARATUS FOR TREATING HARNESS.

APPLICATION FILED APR. 2, 1906.

999,242.

Patented Aug. 1, 1911.

2 SHEETS—SHEET 2.

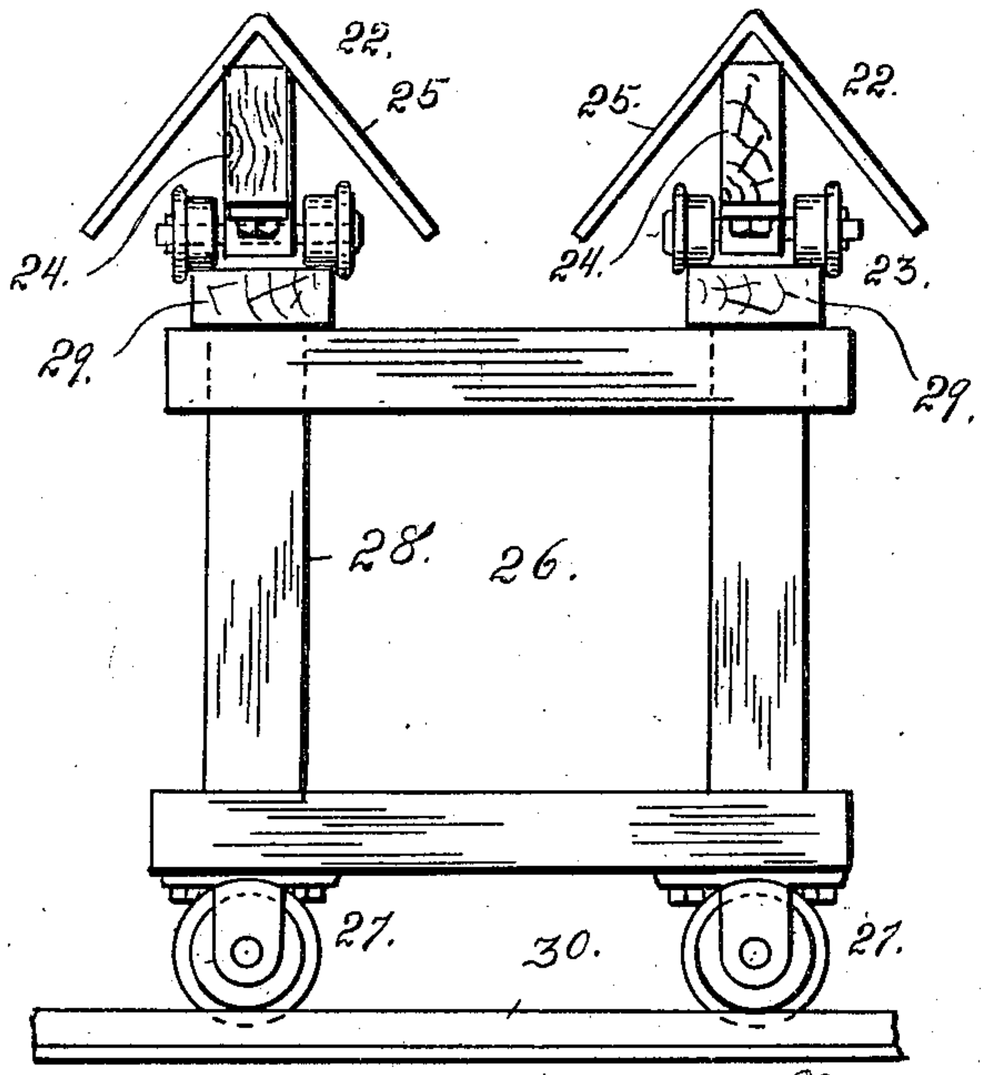

Fig. 2

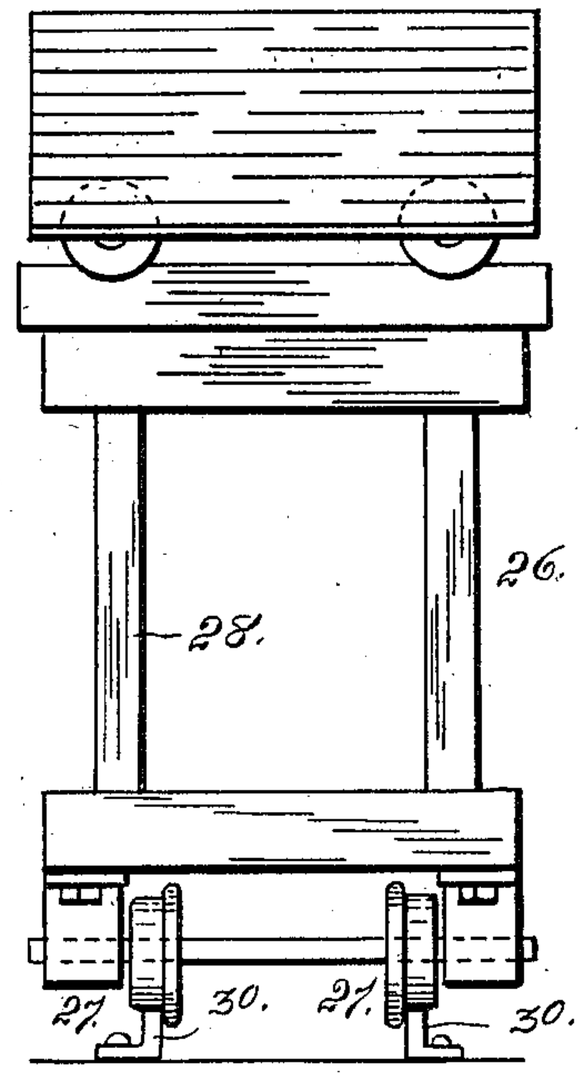

Fig 3

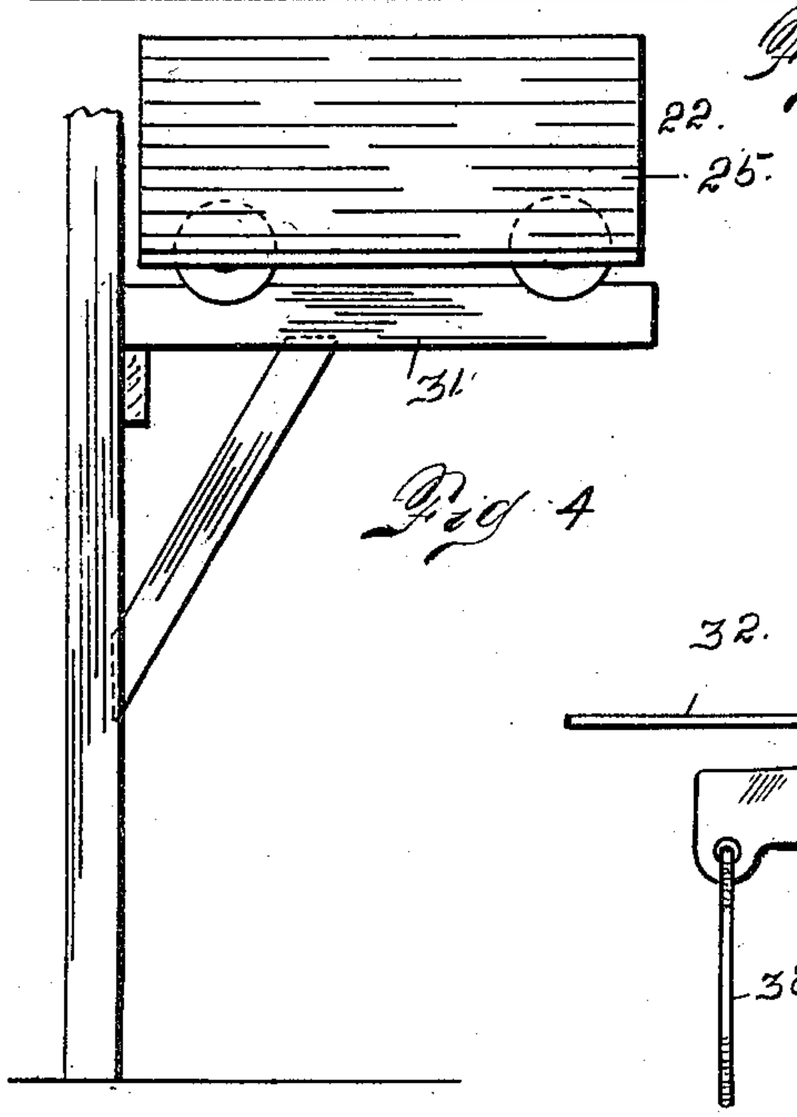

Fig 4

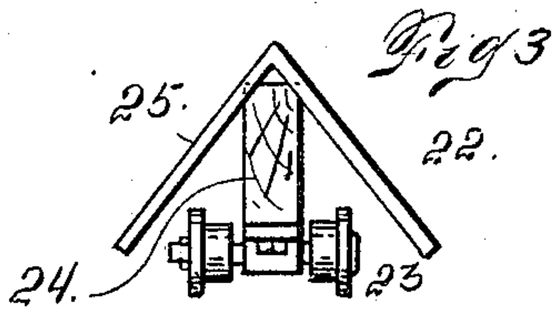

Fig 5

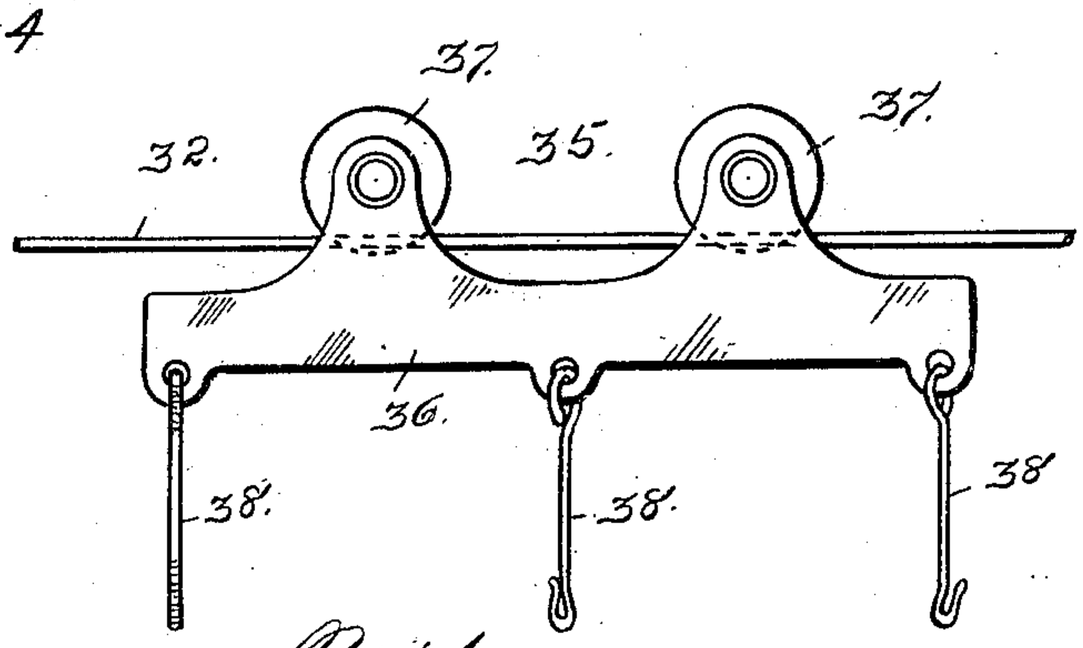

Fig. 6

Witnesses

Otto E. Hoddick.

Dena Nelson.

Inventor

J. R. Moore.

By A. R. & S. Bradley

Attorney

UNITED STATES PATENT OFFICE.

JOSEPH R. MOORE, OF FORT LUPTON, COLORADO.

APPARATUS FOR TREATING HARNESS.

999,242. Specification of Letters Patent. Patented Aug. 1, 1911.

Application filed April 2, 1906. Serial No. 309,325.

To all whom it may concern:

Be it known that I, JOSEPH R. MOORE, a citizen of the United States, residing at Fort Lupton, in the county of Weld and State of Colorado, have invented certain new and useful Improvements in Apparatus for Treating Harness; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

My invention relates to improvements in apparatus for treating harness or similar articles, my object being to provide apparatus of this class adapted to do the work upon a comparatively large scale. In fact an apparatus constructed in accordance with my improvements may be made of any desired capacity, by simple duplication or enlargement of the tanks or receptacles and other elements employed in the operation of cleaning, oiling, draining and drying a harness.

The invention will now be described in detail reference being made to the accompanying drawing in which is illustrated an embodiment thereof.

In this drawing, Figure 1 is a top plan view of my improved apparatus. The walls of the house or shed in which the apparatus is located being shown in horizontal section and partly broken away. Fig. 2 is a side elevation of a carriage for transporting the harness trucks from the drainage tank to the drying racks. In this view two of the harness trucks are shown in position upon the carriage. Fig. 3 is a view taken at right angles to Fig. 2. Fig. 4 is an elevation illustrating a tire rack with one of the harness trucks in place thereon. Fig. 5 is a detail view of one of the harness trucks shown in detail. Fig. 6 is a side elevation of a carrier shown in connection with the cable passing above the tanks employed in the harness treating process. The carrier in this view is shown on a larger scale than in Fig. 1.

The same reference characters indicate the same parts in all the views.

As shown in the drawing a number of tanks or receptacles designated 6, 7 and 8 are employed. The tank 6 has a comparatively shallow receptacle in its upper portion into which the harness to be cleaned is first placed. The necessary cleansing water is delivered to this receptacle by a conduit 11 connected with a water pipe 9, the water discharged being controlled by a valve 10. The tank 7 is of considerable depth and contains a quantity of hot water 12 adapted to receive the harness after it has been subjected to the preliminary cleansing in the tank or receptacle 6. Within the tank 7 the harness is supposed to be thoroughly cleaned. Water is supplied to this tank from a boiler 13 heated from any suitable source. As shown in the drawing a gas pipe 14 delivers gas through a nozzle 15 located directly beneath the bottom of the boiler. When this gas is ignited the water in the boiler is kept hot. The necessary water is supplied to the bottom of the boiler from an ordinary service pipe 16. The hot water is drawn from the top of the boiler through an outlet 17, the discharge being controlled by a valve 18. On the side of the boiler 13 opposite the tank 7, is located the tank 8 containing a quantity of hot oil 19. This tank is open at the top to receive the harness which is plunged therein after leaving the tank 7. It may be stated, however, that after taking the harness from the tank 7, it should be thoroughly drained whereby it is relieved of all superfluous water before delivering it to the oil tank 8. The oil in this tank may also be heated from any suitable source. As shown in the drawing gas pipes 20 are located underneath the tank from which gas is allowed to escape in jets when it is desired to heat the tank. These gas jets when ignited produce sufficient flame to heat the oil. Attention is called to the fact that other heating means may be employed both for the boiler 13 and the tank 8. It is believed desirable to isolate or conceal the heating medium in order to avoid the possibility of fire. It is therefore evident that any of the usual devices such as steam or hot water jackets may be employed more especially for heating the oil tank 8. In any event it must be understood that I do not limit the invention to any special heating means for either the boiler or the oil tank.

The oil tank is provided with an inclined draining platform 21 upon which the harness may be placed after it is taken from the oil tank. It should be allowed to re-

main upon this platform until the superfluous oil is drained back into the tank. After draining, it is placed upon a harness truck 22 provided with two sets of wheels 23 and a suitable frame 24 upon which is mounted a sort of roof 25 having two sides sloping downwardly in opposite directions from a central apex at the top. This special construction forms a support well adapted to hold the harness parts in proper place since the back pad may be made to straddle the apex of the truck while the other members hang down on opposite sides thereof somewhat in the same manner as when in position on a horse.

As a feature of my improvement I employ a carriage 26 consisting of two sets of wheels 27 and a frame work 28 whose upper portion is provided with blocks 29 adapted to receive the harness trucks 22. This carriage as shown in the drawing is constructed to hold two of the trucks and is of sufficient height to permit of the easy transfer of the harness from the draining platform to the trucks when mounted on the carriage. This carriage is mounted to run on a track composed of rails 30. This track as shown in the drawing extends from a position adjacent the drainage platforms 21, and makes a bend and extends along the opposite side of the structure which is provided with racks 31 upon which the harness trucks may be run from the carriage, the racks being of the proper elevation to facilitate this result. After the trucks with the harness thereon have been placed in position on the racks, they are allowed to remain until the oil has permeated or entered the pores of the harness or until there is no superfluous oil visible thereon.

Extending above the tanks 6, 7 and 8 and also above the carriage when in the position shown in Fig. 2, are two cables 32 each of which is made fast at one extremity while its other extremity is provided with a weight 33 which normally holds the cable taut. Each cable passes over a pulley 34 and upon it is mounted a carrier 35. This carrier is mounted to travel freely on the cable above the different tanks, whereby it may be utilized in manipulating the harness as well as transferring it from one position to another. The size of the weight is so regulated that when a harness is mounted on a carrier 35, the cable will be practically taut. In other words the weight is so arranged as to practically balance the harness and the cable. In manipulating the harness, however, the operator may without difficulty pull the harness down into a tank while still on the carrier and when the latter is in position on the cable, the cable being bent downwardly whereby the tension weight is elevated.

While two cables are shown in the drawing, it is evident that more or less than two may be employed if desired. The drawing is only intended to illustrate the general idea of my improvement whereby the work of cleaning, oiling and otherwise treating harness may be facilitated and extensively carried on if desired. It will be observed that my construction may be arranged to give any desired capacity according to the amount of business that can be obtained in the vicinity where the plant is located.

From the foregoing description the use and operation of my improved apparatus will be readily understood. In the beginning of the operation it is assumed that a set of harness will be placed in the shallow tank 6 and cold water turned on for the purpose of giving the harness the preliminary cleaning. The greater portion of the dirt is removed at this operation. As soon as this is finished, it is preferred to remove the harness therefrom and place it upon the carrier 35. The carrier may remain a short time in the position immediately above this tank for draining purposes if desired. The carrier together with the harness is then moved along to position above the hot water tank 7. Without removing the harness from the carrier, the harness is pulled downwardly and immersed in the hot water tank 7 where it is thoroughly cleaned. The harness is then allowed to rise with the carrier to the normal position, being thus automatically raised out of the tank by the weight which moves downwardly drawing the cable and carrier upwardly, as soon as the operator ceases to apply sufficient force to keep the harness down. After draining, the carrier is then again moved upon its cable, to a position above the oil tank 8. The harness is then pulled downwardly while still in position on the carrier and dipped into the oil tank being completely immersed. After the oiling operation is complete, the harness together with the carrier is again allowed to assume its normal position of suspension upon the cable above the oil tank. The carrier may then be moved sufficiently to bring the harness above the drainage platform 21. The harness is then removed from the carrier and placed upon this platform where it is allowed to remain until all the superfluous oil has drained therefrom and returned to the tank 8. The harness is then placed upon one of the trucks 22 the same being mounted upon a carriage 26. The carriage is then run around the track to position adjacent the rack 31, when the truck with the harness thereon is run upon the track where it is allowed to remain as heretofore explained.

Having thus described my invention, what I claim is:

1. An apparatus of the class described,

comprising a carriage, a track therefor, a harness truck provided with downwardly sloping sides adapted to be carried by the carriage, racks supported adjacent the track and adapted to receive the harness truck from the carriage, substantially as described.

2. Means for receiving and conveying harness after having been subjected to a cleaning treatment, comprising a carriage, a track therefor, the carriage being provided with a track arranged on the top thereof, a harness truck adapted to be carried by the said carriage, and to travel on the said track thereof, the said truck having downwardly sloping sides adapted to support the harness, racks arranged along the path of the carriage and adapted to receive the harness truck from the carriage, substantially as described.

3. An apparatus of the class described, comprising a carriage, a track therefor, a truck carried by the said carriage, and racks supported adjacent the track and adapted to receive the truck from the carriage.

In testimony whereof I affix my signature in presence of two witnesses.

JOSEPH R. MOORE.

Witnesses:
DENA NELSON,
A. J. O'BRIEN.