J. HIST.

WATER BALLAST LAND ROLLER.

APPLICATION FILED DEC. 5, 1911.

1,104,502.

Patented July 21, 1914.

Fig 1.

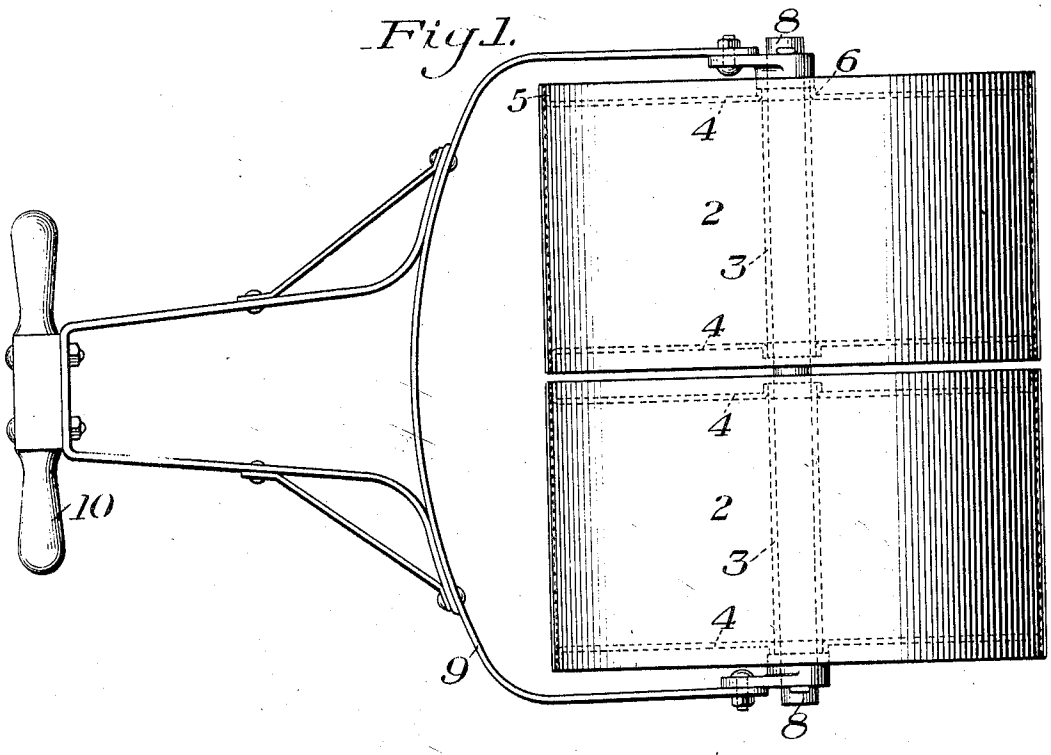
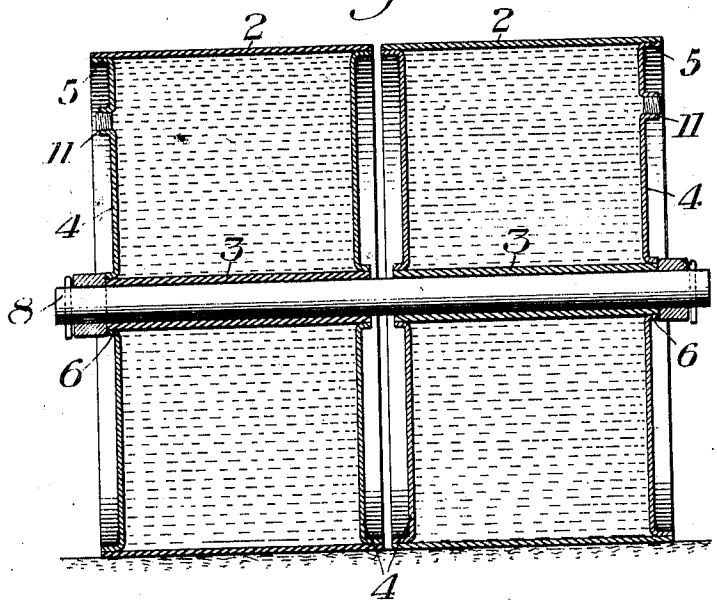



Fig 2




WITNESSES

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# UNITED STATES PATENT OFFICE.

JOHN HIST, OF BEREA, OHIO.

## WATER-BALLAST LAND-ROLLER.

1,104,502. Specification of Letters Patent. Patented July 21, 1914.

Application filed December 5, 1911. Serial No. 664,110.

*To all whom it may concern:*

Be it known that I, JOHN HIST, a resident of Berea, in the county of Cuyahoga and State of Ohio, have invented a new and useful Improvement in Water-Ballast Land-Rollers, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a plan view of my improved roller; and Fig. 2 is a central longitudinal section of the same.

My invention relates to the class of water-ballast land rollers, wherein a drum or drums is provided with water to give the desired weight.

The object of the invention is to provide a simple, strong and effective structure which will effectually prevent any leakage of water and give great strength while capable of being cheaply and quickly made.

In the drawings, 2 2 represent the drums, which are separately formed and provided with central sleeves or tubes 3. In forming these drums, I preferably take a plate having the width of one of the drums and of a length to give the desired circumference, and roll this plate up into the form of a cylinder. The meeting edges of the plate are butt-welded, preferably by means of the oxy-hydrogen blow pipe. The heads 4 are formed of circular plates flanged outwardly around their outer edges, as shown at 5, and also having a central hole flanged outwardly at 6. These heads are slipped into the opposite ends of the drum with the flanges extending outwardly, the edges of the flanges preferably being flush with the ends of the cylinder or drum. An oxy-hydrogen blow-pipe is then applied to these projecting edges to weld them together, thus giving a strong practically integral joint. The drum is then slipped on its tube 3 and the outwardly flanged central portions of the drum heads are welded, preferably by the oxy-hydrogen blow pipe to the end portions of the tube. The edges of the central flanges on the head are preferably flush with the ends of the tube. In this manner I not only provide for a water-tight joint between the heads and the sleeve 3, but I also practically double the thickness of the ends of the sleeve, thus providing a bearing surface of proper area for the members which support the shaft 8 and to which the yoke and handle are attached. Inasmuch as the sleeves 3 are of relatively thin metal, their outer ends, unless reinforced, would not have a sufficient bearing area for these pieces. It will also be seen that a considerable portion of these pieces lie within the circumference of the body of the drum, inasmuch as such portions lie within the spaces at the ends of the drum formed by the inset heads. By utilizing these same pieces, both as bearings for the shaft and also for the attachments of the handle-carrying yoke, and by making a considerable portion of the pieces lie within the ends of the drum, I make a very compact construction composed of few parts, and also considerably shorten the over-all length of the roller. The integral drums thus formed are then slipped over a shaft 8, which may be provided with the usual yoke 9 and handle 10. The drum may be filled with water from any suitable opening, such as shown at 11, this being provided with a suitable screw or other closure.

The advantages of my invention result from the simplicity and strength of the drum structure, as well as from the cheapness and ease of manufacture. No leakage is possible on account of the joints all being welded, while the manufacture is simple and rapid and the material may be cheaply bought in the open market. The drum becomes practically one integral structure, owing to the welding operation.

The roller may be provided with one or more drums, and other changes may be made without departing from my invention.

I claim:

1. A land roller having a water tight drum comprising a cylinder with insert heads formed with central openings, said heads having an outwardly extending flange at the periphery, and an outwardly extending flange surrounding the central opening, an axle tube or sleeve connecting the heads and having its ends extending outwardly through said openings and flush with the outer edges of the annular flanges surrounding the openings, the ends of the cylinder being flush with the outer edges of the annular flanges at the periphery of the heads, the ends of the cylinder extending beyond the annular flanges surrounding the openings and the tube extending therethrough, a shaft extending through said tube, and a handle having bearing members mounted on the ends of the shaft; substantially as described.

2. A land roller having a water tight drum comprising a cylinder and insert heads, each head being formed with an outwardly extending annular flange at its periphery and with an opening surrounded by an outwardly extending annular flange at its center, said peripheral flange being united with the cylinder with its edge flush with the edge of the cylinder, a tube extending through the openings in the heads and united with the flanges surrounding same with its ends flush with the edges of said flanges, a shaft disposed in said tube with its ends extending beyond the same, and bearings mounted on said ends of the shaft in contact with the edges of the united tube and flanges.

3. A land roller having a water tight drum comprising a cylinder with inset heads formed with central openings, each of said heads having an outwardly extending flange at the periphery, and an outwardly extending flange surrounding the central opening, an axial tube or sleeve connecting the heads and having its ends extending outwardly into said openings and welded to the annular flanges surrounding the openings, the ends of the cylinder being welded to the annular flanges at the peripheries of the heads, said ends extending beyond the annular flanges surrounding the openings and the ends of the tube, a shaft extending through said tube, and a handle having bearing members mounted on the ends of the shaft; substantially as described.

In testimony whereof, I have hereunto set my hand.

JOHN HIST.

Witnesses:
T. J. Poole,
W. W. Salisbury.