(No Model.)

# E. E. HENDRICK.

## Oil Tank.

No. 234,186. Patented Nov. 9, 1880.

Fig. 1

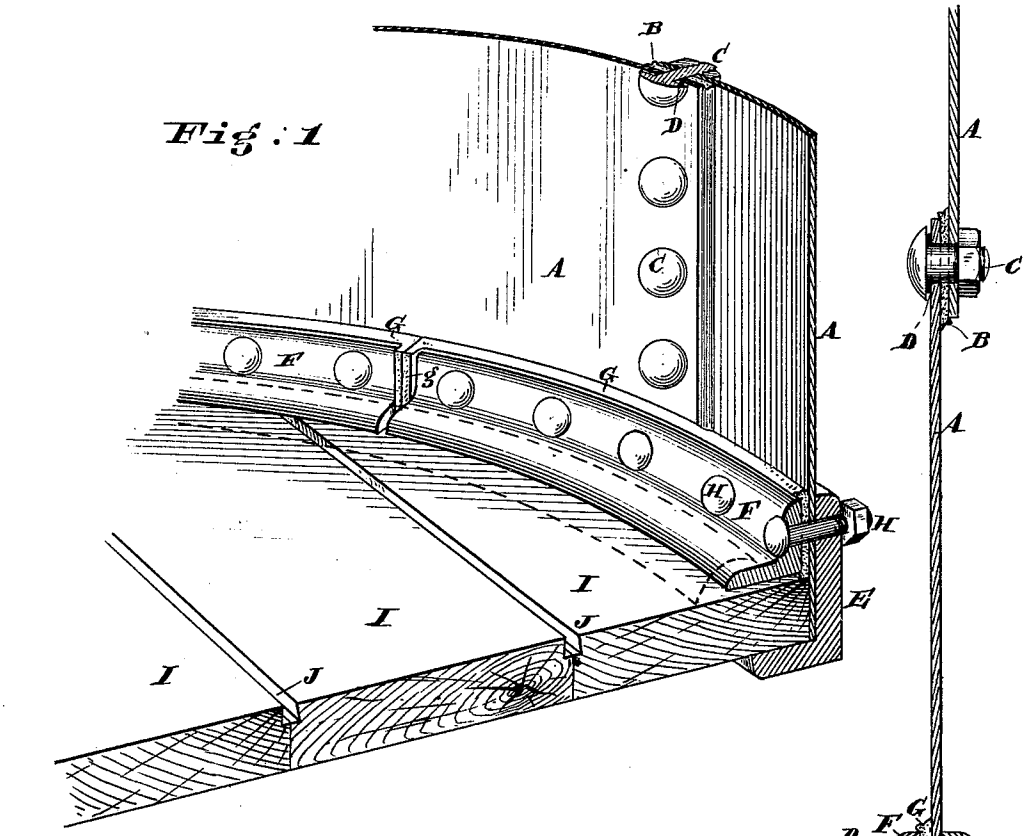
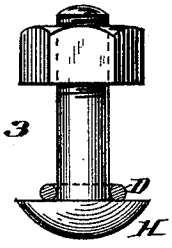



Fig. 2

Fig. 3



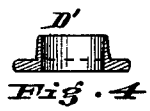




Fig. 4

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# UNITED STATES PATENT OFFICE.

ELI E. HENDRICK, OF CARBONDALE, PENNSYLVANIA.

## OIL-TANK.

SPECIFICATION forming part of Letters Patent No. 234,186, dated November 9, 1880.

Application filed September 10, 1880. (No model.)

*To all whom it may concern:*

Be it known that I, ELI E. HENDRICK, of Carbondale, in the county of Lackawanna and State of Pennsylvania, have invented an Improvement in Oil-Tanks, of which the following is a specification.

My invention relates to the construction of oil-tanks built upon a stationary foundation and designed to store up the oil produced by the wells; and my invention consists in the joint for uniting the sheets of metal forming the tank, but more particularly the joint for uniting the cylindrical shell of the tank to the floor of same in such a manner that the joint shall be perfectly oil-tight, and can be easily made, and in other and minor details, all of which are fully set forth in the following specification, shown in the accompanying drawings and referred to in the appended claims.

Heretofore the joints have been made by interposing a packing of leather, felt, cotton, or ticking between the wooden floor and the cylindrical shell of the tank and driving the same tight, compressing the packing by means of a curbing encircling the base of the shell; but in practice this has never proved liquid-tight.

The object of my invention is to mainly overcome this objectionable feature in storage oil-tanks.

In the drawings, Figure 1 is a perspective view of a portion of an oil-tank embodying in it my improvements. Fig. 2 is a cross-section of same. Fig. 3 is an elevation of the bolt and nut with its calking-band. Fig. 4 is a sectional view of the calking-band after the nut is screwed up in place.

A are the sheets of iron which make up the body or shell of the tank. These sheets are joined together by interposing a calking-strip of lead, B, between the laps, and then passing bolts and nuts C, having the heads provided with calking-bands of lead D, through the plates and screwing up, and then calking the joint by means of the calking-strip of lead B. The calking-band D is pressed into the shape shown in Figs. 2 and 4, part being pressed out between the plate and head of the bolt and part between the shank of the bolt and plate, thereby making a perfectly liquid-tight joint about the bolts. Heretofore I have used flat washers of lead under the heads of the bolts, as set forth in another pending application of mine; but in practice I have found that a great deal of pressure on the bolt-head is required to make a tight joint, whereas with this joint, using the round calking-band of lead, there is not so much surface in contact, and a perfectly liquid-tight joint is made without much pressure or trouble. Never to my knowledge have lead calking washers or bands been used by others under the heads of bolts in the construction of portable oil-tanks, and although this round calking-band of lead is small in itself, yet I consider it of great value in the construction of portable oil-tanks. The shell of the tank, composed of the sheets A, is then placed within the curved angle-iron E, and rests upon its horizontal or lower leg. The floor of the tank, which is composed of wood, is then put in place. This flooring is composed of boards I, having their upper edges grooved, as at J, so that when the two boards are laid side by side there shall be an open groove slightly larger at the bottom than at the top, as shown in Figs. 1 and 2. After all the boards I but two have been laid down these two are placed together thus, ∧, and pressed down, making the floor fit the sides of the tank tightly. The grooves J are then filled with pitch, which, when cold, cannot work out. A calking-strip of lead, G, is now placed against the lower part of the inner side of the shell and extends all around. Against this are placed sections of angle-iron F, which do not quite touch the flooring, but leave a space of about one-eighth of an inch. These angle-irons E and F, calking-strips of lead G, and body-plates of the tank are bolted together with bolts H, similar to those already described, only longer, and provided with similar calking-bands of lead D. The lead strip G is then calked firmly at the top. Where two sections of angle-irons F butt against each other, as shown in Fig. 1, the calking-strips of lead G are bent out over the ends, as shown, and calked. When this is done a former, L, of wood or bent angle-iron, curved to correspond with angle-iron F, is placed within about an inch and a half of said angle-iron, and molten pitch or equivalent substance is poured into

the channel thus made, the pitch being made to run under the angle-iron, and covering over the greater part of the lower leg, as shown in Fig. 2. When the pitch has hardened sufficiently the former L is moved farther around. To prevent the pitch sticking to the former it may be rubbed with grease.

With a joint like this it is impossible to have a leak, and there is little or no liability of its getting out of order. This joint at the junction of the shell and flooring is about the most important feature in the construction of an oil-tank.

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

1. In an oil-tank, the joint between the shell and floor, consisting of an angle-iron, E, upon which the shell rests, a wooden floor, I, inclosed between said shell, an angle-iron, F, secured above said floor, an interposed calking-strip of lead, G, between said angle-iron and shell, bolts H, provided with lead calking-bands D under their heads, to secure the angle-irons E and F, shell A, and calking-strip G together, and a joint or covering of pitch or equivalent substance over the lower leg of angle-iron F and floor I, substantially as and for the purpose specified.

2. In a portable oil-tank, the joint between the casing and floor, consisting of floor I, angle-irons E and F, lead calking-strip G, shell A, and bolt and nut H, provided with calking-band D under its head, substantially as and for the purpose specified.

3. In an oil-tank, the combination of the following parts, to make a complete tank: side plates, A, having their edges lapped upon a calking-strip of lead, B, and fastened by a bolt and nut, C, provided under its head with lead calking-bands D, flooring I, having grooves J, and pitched joint K, angle-irons E and F, lead calking-strip G, bolts and nuts H, provided with lead calking-bands D, and pitch or equivalent joint M, all constructed substantially in the manner and for the purpose specified.

In testimony of which invention I hereunto set my hand.

ELI E. HENDRICK.

Witnesses:
L. A. BASSETT,
BENJAMIN GREENSTED.