J. F. A. DECK.

CLAMP TO BE USED ON KNOCKDOWN CLAMP TANKS.

APPLICATION FILED DEC. 9, 1920.

1,402,744.

Patented Jan. 10, 1922.

2 SHEETS—SHEET 1.

Fig. 1.

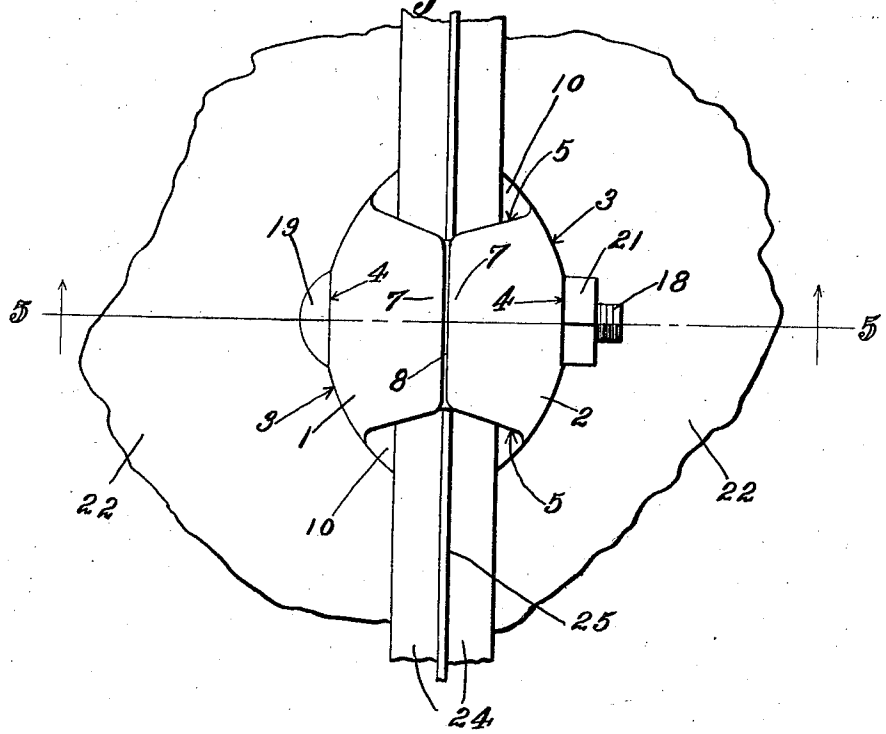


Fig. 3.

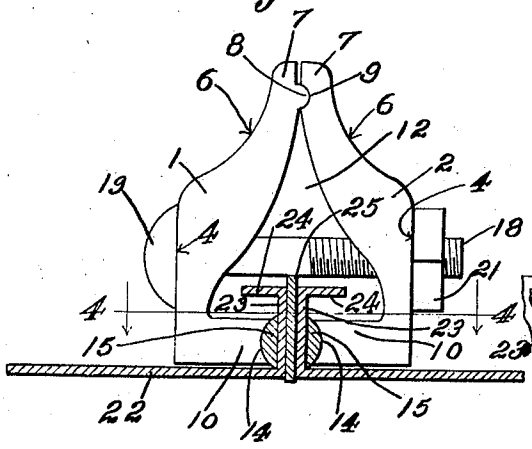
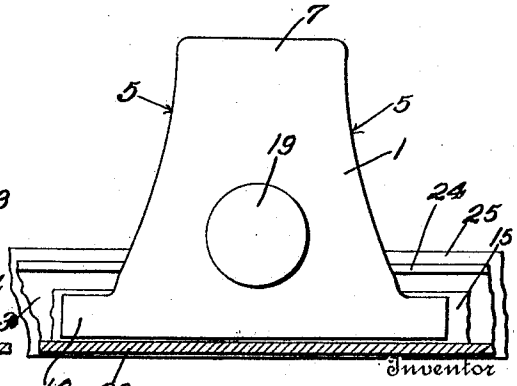


Fig. 2.



Inventor

J. F. A. Deck.

By C. A. Snow & Co.

Attorneys

J. F. A. DECK.

CLAMP TO BE USED ON KNOCKDOWN CLAMP TANKS.

APPLICATION FILED DEC. 9, 1920.

1,402,744.

Patented Jan. 10, 1922.

2 SHEETS—SHEET 2.

Fig. 4.

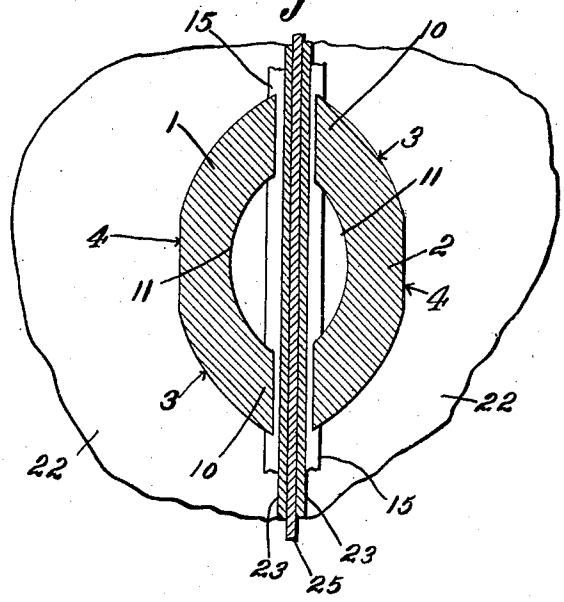


Fig. 5.

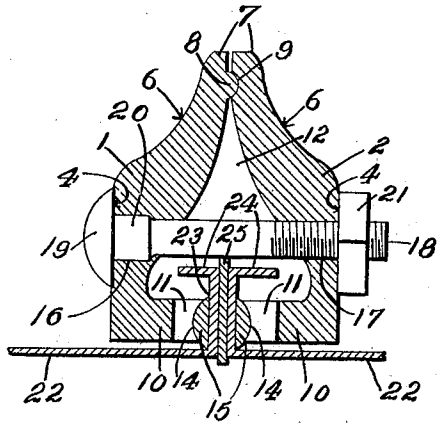
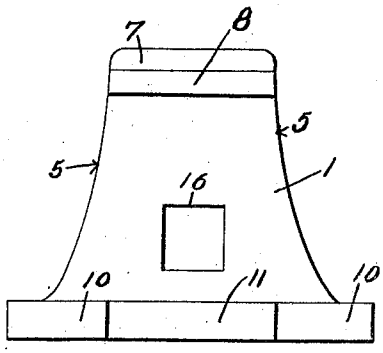


Fig. 6.



Inventor

J.F.A. Deck.

By Cashow & Co.

Attorneys

UNITED STATES PATENT OFFICE.

JOHN F. A. DECK, OF OKMULGEE, OKLAHOMA, ASSIGNOR TO DECK TANK COMPANY, OF TULSA, OKLAHOMA.

CLAMP TO BE USED ON KNOCKDOWN CLAMP TANKS.

1,402,744. Specification of Letters Patent. Patented Jan. 10, 1922.

Application filed December 9, 1920. Serial No. 429,459.

To all whom it may concern:

Be it known that I, JOHN F. A. DECK, a citizen of the United States, residing at Okmulgee, in the county of Okmulgee and State of Oklahoma, have invented a new and useful Clamp to Be Used on Knockdown Clamp Tanks, of which the following is a specification.

The device forming the subject matter of this application is a clamp, adapted to be used on tanks and like structures, and one object of the invention is to provide a clamp which will facilitate the forming of a watertight joint, the construction being such that the clamp may be removed at will when it is desired to take the tank down. Another object of the invention is to provide novel means whereby the pressure imposed by the clamp is distributed. The invention aims so to construct the clamp that irregularities in the plates of the tank may be accommodated and taken care of.

It is within the province of the disclosure to improve generally and to enhance the utility of devices of that type to which the invention appertains.

With the above and other objects in view, which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, it being understood that, within the scope of what is claimed, changes in the precise embodiment of the invention shown can be made without departing from the spirit of the invention.

In the drawings:—

Figure 1 shows in elevation, a portion of a tank whereunto the clamp forming the subject matter of this application has been applied; Figure 2 is a side elevation of the clamp, one of the plates of the tank appearing in section, and parts being broken away; Figure 3 is an end elevation of the clamp, certain parts appearing in section; Figure 4 is a section on the line 4—4 of Figure 3; Figure 5 is a section on the line 5—5 of Figure 1; and Figure 6 is an elevation showing the inner surface of one member of the clamp.

The clamp forming the subject matter of this application preferably is made of metal and comprises a pair of members 1 and 2, the outer surfaces of which are transversely convexed as indicated at 3, the outer portions of the members 1 and 2 having flat parallel surfaces 4. The edges of the members 1 are concaved as indicated at 5, the members 1 and 2 being concaved, as indicated at 6, in a direction at right angles to the curvature indicated at 5, thereby to form thinned terminal wings 7. On its inner surface, the wing 7 of the member 1 is supplied with a transverse rib 8 received in a groove 9 formed in the wing 7 of the member 2. Those ends of the members 1 and 2 which are remote from the rib 8 and the groove 9 are supplied with inwardly projecting jaws 10, the jaws 10 being supplied intermediate their ends with recesses 11 defining an opening, the inner portions of the members 1 and 2 being shaped to form a transverse passage 12 with which the opening formed by the recesses 11 in the jaws 10 communicate. In their inner edges, the jaws 10 are provided with longitudinal grooves 14. Pressure strips 15 are seated detachably in the grooves 14, a pressure strip 15 having parallel flat inner surfaces, as clearly shown in Figures 3 and 5. An aperture 16 is fashioned in the member 1, an aperture 17 being formed in the member 2.

The numeral 18 marks a securing element, preferably in the form of a bolt, inserted through the apertures 17 and 16, the head 19 of the bolt bearing against the surface 4 of the member 1, the aperture 16 of the member 1 being so shaped as to receive the squared portion 20 of the shank of the bolt 18, thereby to hold the bolt against rotation. A nut 21 is threaded on the bolt 18 and bears against the surface 4 of the member 2. The bolt 18 extends across the passage 12 which exists in the interior of the clamp, between the members 1 and 2.

The numeral 22 designates plates which form part of the tank, the plates having parallel flanges 23 disposed at right angles, preferably, to the body portions of the plates, the flanges being supplied with lips 24 which may extend outwardly in opposite directions, the lips being located approximately parallel to the plates.

In practical operation, a packing 25 is disposed between the lips 24 of the plates 22, the flanges 23 being located between the pressure strips 15 which are seated in the grooves 14 of the jaws 10, the lips 24 being located in the passage 12 of the clamp. When the nut 21 is tightened up, the jaws

10 press the strips 15 against the flanges 23, the flanges being pressed against the packing 25, and a water-tight joint resulting.

The groove 9 and the rib 8 prevent the members 1 and 2 from slipping with respect to each other, and serve to hold the jaws 10 in parallel relation. The pressure strips 15 distribute the pressure on the flanges 23, longitudinally of the flanges. Owing to the fact that the jaws 10 are recessed as at 11, any irregularities or protuberances on the flanges 23 of the plates 22 will be accommodated. The lips 24 serve as reinforcements for the flanges 23, and the passage 12 accommodates the lips 24 within the contour of the clamp. Further, owing to the internal curvature indicated at 11, and to the external curvature indicated at 3, the members 1 and 2 of the clamp will have an arched form, and will be well adapted to withstand the severe pressure which is imposed on devices of this sort. In view of the fact that the recesses 11 in the jaws 10 are concaved, and since the pressure strips 15 are convexed on their outer surfaces, to conform to the recesses, the pressure strips may rock in the grooves or seats 14, thereby permitting the flat inner surfaces of the pressure strips to cooperate with the flanges 23 of the plates 22, if the flanges should not be exactly parallel to each other. The outer edge of the packing 25 engages the bolt 18, and the bolt, therefore, serves as a stop for the packing. The pressure strips 15 extend across the grooves 14 and may flex slightly, into the recesses 11, the strips thus accommodating themselves to irregularities which may exist in the flanges 23.

Having thus described the invention, what is claimed:—

1. In a device of the class described, a clamp comprising a pair of members provided with inwardly projecting cooperating jaws having longitudinal seats; pressure strips mounted to rock in the seats; and a securing element connecting the members of the clamp.

2. In a device of the class described, a clamp comprising a pair of members provided with inwardly projecting jaws having longitudinal seats, each jaw being supplied intermediate its ends with a recess, pressure strips extended across the recesses and detachably mounted in the seats to rock therein; and a securing element connecting the members of the clamp.

In testimony that I claim the foregoing as my own, I have hereunto affixed my signature in the presence of two witnesses.

JOHN F. A. DECK.

Witnesses:
J. K. ADAIR,
GEO. W. DECK.