

W. KOWALEVSKY.

RECEPTACLE FOR STORING AND TRANSPORTING SUBSTANCES.

No. 262,232.

Patented Aug. 8, 1882.

Fig. 1

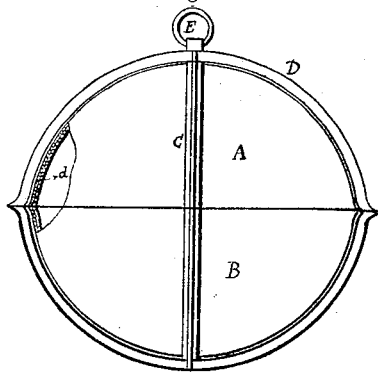


Fig. 3

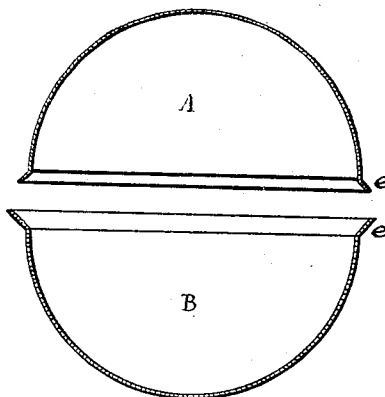


Fig. 2

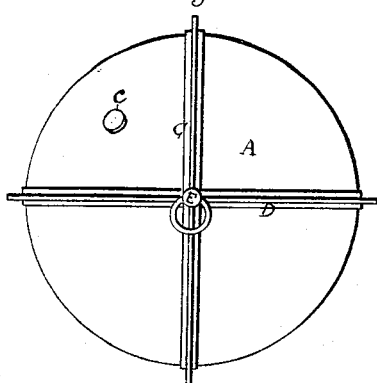


Fig. 5



Fig. 4

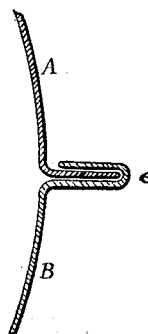


Fig. 9

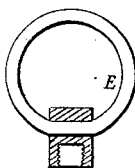


Fig. 10

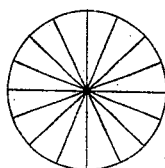
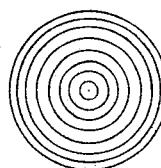


Fig. 11



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Fig. 6

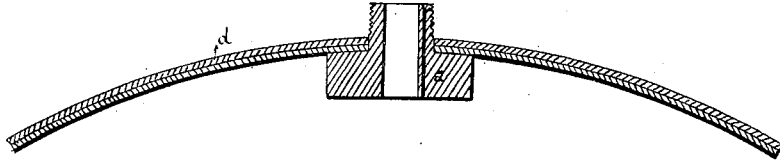


Fig. 7

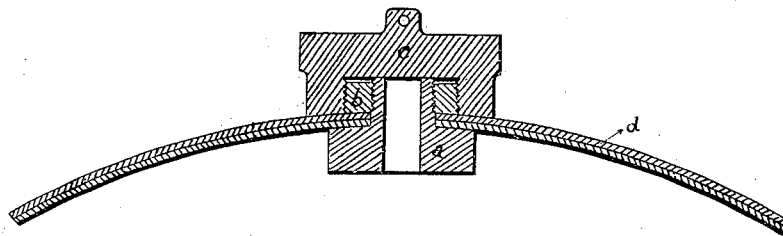


Fig. 8

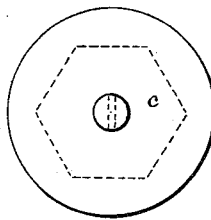


Fig. 12

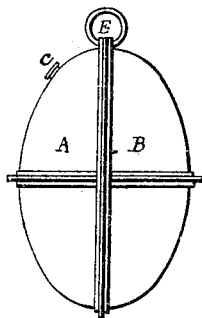


Fig. 13

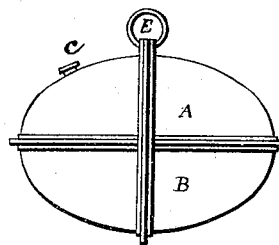
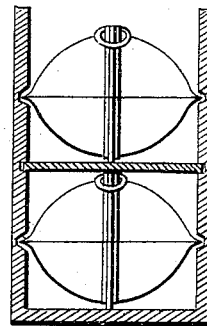


Fig. 14



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UNITED STATES PATENT OFFICE.

WOLDEMAR KOWALEVSKY, OF MOSCOW, RUSSIA.

RECEPTACLE FOR STORING AND TRANSPORTING SUBSTANCES.

SPECIFICATION forming part of Letters Patent No. 262,232, dated August 8, 1882.

Application filed January 3, 1882. (No model.) Patented in France November 18, 1881, and in England November 25, 1881, No. 5,150.

To all whom it may concern:

Be it known that I, WOLDEMAR KOWALEVSKY, a citizen of the Russian Empire, residing at Moscow, Russia, and Professor of Geology in Moscow University, have invented certain Improvements in Receptacles for Storing and Transporting Substances, of which the following is a specification.

Heretofore casks for the transportation of wines, oils, acids, and other liquids have been cumbersome in form and lacking in capacity in proportion to their weight and strength. Besides this, owing to their form, the pressure from within is not equally distributed, and breakage and leakage are often the result. I have sought to obviate these difficulties by constructing the receptacles in the form of a sphere or that of a solid of revolution most nearly approaching thereto, whereby I obtain a receptacle that will offer equal resistance at all points, that will be light, owing to the form requiring very little weight of material, and that will give the greatest possible interior capacity for the amount of material used and the space occupied by the receptacle.

In the drawings which serve to illustrate my invention, Figure 1 is a side elevation of a vessel embodying my invention, partly broken away to show the construction of the wall. Fig. 2 is a plan of the same. Fig. 3 is a vertical mid-section, showing the two hemispheres or halves slightly separated, and before they are joined securely together. Figs. 4 and 5 are detached sectional views on a larger scale, showing the preferred method of forming the median joint. Figs. 6, 7, and 8 are enlarged detached views, arranged to illustrate the construction of the bung-hole and its stopper or screw-cap. Fig. 9 is a detached view, showing the mode of attaching the handling-ring. Figs. 10 and 11 are small diagrams, illustrating the mode of corrugating the metal of the receptacle. Figs. 12 and 13 show ellipsoidal forms of the receptacle; and Fig. 14 illustrates the mode of packing the receptacles in boxes, casks, or frames for shipment.

In Figs. 1, 2, and 3 I have shown a receptacle of substantially spherical form, composed of two hollow halves or hemispheres, A and B, having flanges *e* turned on their rims. These hemispheres are preferably stamped or formed out of sheet-iron, and, when properly made and

fitted, they are brazed, soldered, or otherwise secured together at their edges. The methods I prefer to employ in forming the joint are illustrated in Figs. 4 and 5. The former shows one flange *e* bent so as to clamp the other flange, to which it may be soldered to form a tight joint. The latter shows one flange *e* made to lap over the other, to which it may be brazed. To further strengthen the receptacle, I prefer to re-enforce it with flanged ribs or bands C and D, made to encircle the receptacle and following two diameters at right angles to each other, and both at right angles to the equatorial joint. At one of the nodes where these ribs cross I attach a ring, E, (shown detached in Fig. 9,) whereby the receptacle may be handled. Two or more of these rings may be employed. After the halves A and B are ready to put together, and before they are united, I provide a bung-hole and stopper, which is clearly illustrated in Figs. 6, 7, and 8. From the interior is passed through an opening in one of the halves a tubular screw-threaded plug, *a*, and on the exterior tip of this plug is screwed a ring, *b*, which has also an external screw-thread. A screw cap or stopper, *c*, is screwed onto the ring *b*, as clearly shown in Fig. 7. There may be a small aperture through the plug *a*, as shown in Fig. 6, to pass air as the liquid is being drawn off or the receptacle filled.

To prevent the metal of the receptacle from being dented, or bruised I prefer to cover it with an envelope, *d*, of pasteboard, webbing, or other soft, flexible, or yielding material. This is best shown in Figs. 1, 6, and 7.

In lieu of making the receptacle with a plain surface, I may, to add strength or enable me to use thinner material, corrugate the metal from which the receptacle is made. These corrugations may be meridional, as indicated in Fig. 10, or concentric with an axis of the sphere, as indicated in Fig. 11.

In Figs. 12 and 13 I have shown ellipsoidal receptacles which differ from each other only in placing of the ring E. These receptacles are formed of two halves joined in the plane of the largest axis.

In Fig. 14 I have shown the method of stowing receptacles constructed according to my invention in boxes or casks for shipment. The box is or may be provided with suitable par-

titions, and grooves are formed in its sides or walls to receive the equatorial flanges on the receptacle. By this means the receptacles may be safely transported to any distance very conveniently.

For the reception of acids and other corrosive substances, the receptacles may be lined with lead or varnished or provided with some other protective covering, or they may be made of iron and tinned or galvanized, to prevent oxidation.

When the receptacles are to be employed for the service of liquors at bars the receptacle may be placed in the cellar and tapped by pipes in the usual way for the delivery of liquids by compressed air, and the delivering-pipe may pass through a refrigerator.

Where gasoline, kerosene, or other explosive or inflammable liquids are contained in the receptacles, the latter may be submerged in tanks or casks of water.

I may employ any suitable material for the construction of my receptacles, as iron, steel, brass, paper, wood, papier-maché, celluloid, &c.

Having thus described my invention, I claim—

1. A receptacle of spheroidal or similar form, constructed of two halves joined together at their edges and re-enforced with exterior-flanged ribs arranged at right angles, or nearly so, to the equatorial joint, substantially as set forth.

2. A receptacle of spheroidal or similar form, constructed of two halves joined together at their edges, said receptacle being provided with two exterior-flanged ribs arranged at right angles to each other and to the equatorial joint, a handling-ring, and a bung, all constructed and arranged substantially as set forth.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

WOLDEMAR KOWALEVSKY.

Witnesses:

V. T. RAGVSINE,
B. FILOSOFETT.