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MARITIME MINING RECORD



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Browne's Vacuum Bailing Tank.

(PATENTED)

The handling of the water which slits through and flows into the opening when sinking a shaft is frequently a source of delay.

The usual practice has been to lift and force the water to the surface by means of suction and lift or force pumps with reciprocating buckets, pistons or plungers operated by steam compressed air, electric motors, etc., or by rods actuated by steam machinery on the surface.

The pump is placed in the shaft 15 to 25 feet above its bottom and draws the water by suction through a strainer and suction hose to the pump cylinder, whence the bucket piston or plunger lifts or forces it upward.

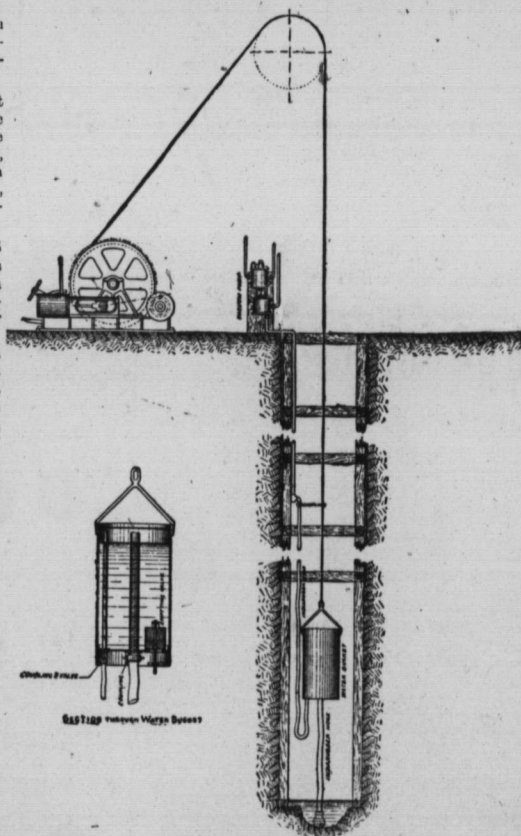
While the work of sinking is in progress, it is not practicable to provide more than a very small sump in the bottom of the shaft for the water to collect in and to pump from; the pump must therefore adapt itself to draughts of air, water, mud, sand, etc. resulting in much wear to the reciprocating parts and necessitating frequent re-packing, repairing and delays.

The pump must be lowered from time to time as the work progresses and the water columns and power supply pipes must be extended and re-connected.

During blasting operations, the pump must be removed or at least protected by a bulkhead of heavy timbers otherwise serious injury to the pump from flying missile is very probable.

The loss of time thus caused by handling, adjusting, etc. is no inconsiderable item of expense of sinking the shaft.

After the shaft is completed a deeper sump may be provided from which the water may be dipped by means of



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