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## New Process of Embalming the Dead

Dr. Lowell, of Brooklyn, N. Y., has devised a process of embalming bodies which bids fair to revolutionize the business of undertaking. If his plan shall be adopted and succeed, the use of the ice-box and other expensive appliances, generally in request for the preservation of cadavers by the agency of cold, will become entirely unnecessary, and will be superseded by an inexpensive and simple process, which we will briefly indicate as follows: A solution of chloride of zinc is the preservative fluid used; this is contained in a porcelain-lined vessel, which is elevated to a convenient height, so that the contents will be injected into the cadaver after the manner of a gravity-syringe. For the passage of the fluid from its receptacle into a vein of the cadaver, glass and rubber tubing are all that is required. A finely tapered glass tube is held tightly in place in the vein, while a glass U-shaped tube acts as a siphon to conduct fluid from the receptacle. The quantity of fluid will, of necessity, vary in different cases; four or five gallons may be required. This plan will not work when operations have been performed whereby large vessels have been opened. A body thus treated was transported from this city to Richmond, Va., this summer, without odor, and without disfigurement or any external signs of decay. All that is required is that the physician shall expose a vessel, adjust the glass tube, and the fluid will find its own way. Dr. Lowell has let the instrument run all night. There is promise in this of a saving to the City of Brooklyn alone of from \$75,000 to \$100,000 each year in the one item of ice, in addition to doing away with much unpleasant and cumbersome material in caring for the dead. Dr. Lowell writes: "The injection may be made by either artery or vein. I have tried both with success. I prefer the brachial artery above the elbow as the point for introduction of glass tube, for the primary incision is slighter, and consequently divides smaller and fewer veins than when I expose the femoral artery. I use the gravity method, and introduce about five gallons of the antiseptic fluid. The effects are eminently satisfactory. The color of the integument is improved, even at points where hypotaxis has been at work. I inspected a cadaver night before last—a lady. The body was in splendid condition—skin white and clear, and all points of discoloration

along spine, nates, posterior surface of thighs, neck, etc., etc., clearing up. The patient died of typhoid fever; post-mortem discoloration rapidly supervened, and decomposition was rife. All changes were arrested, the skin cleared up, and when I saw the body last, its appearance had im-

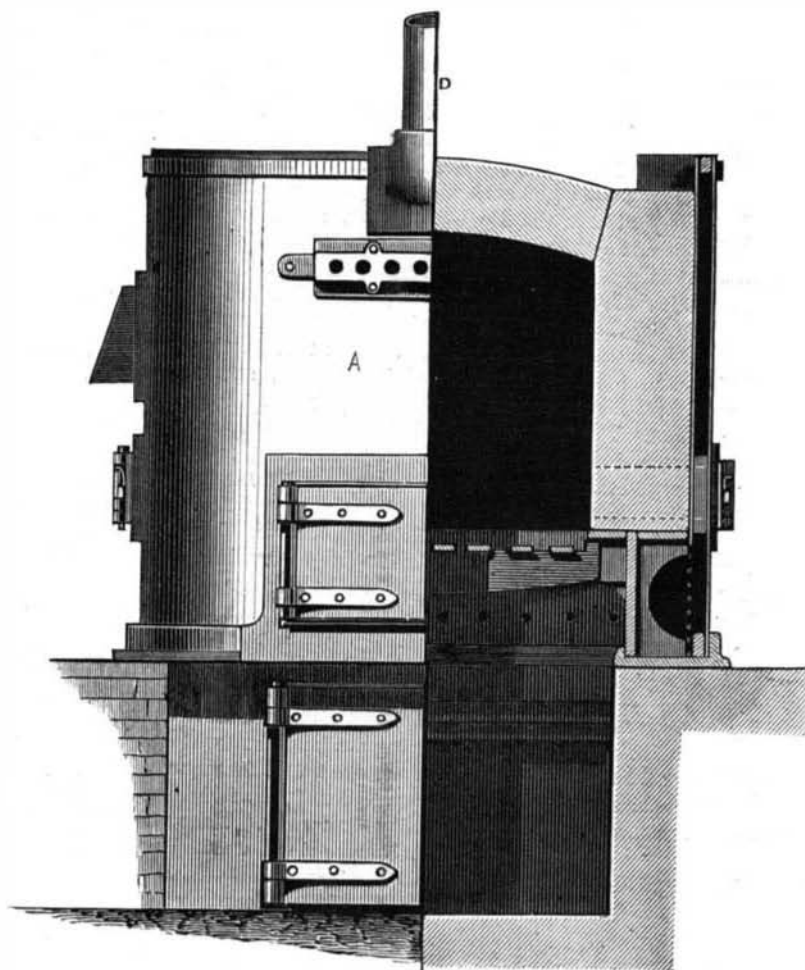


Fig. 1.—CADDICK AND MAYBERY PUDDLING FURNACE.

proved wonderfully.—*Proceedings of the Kings County Medical Society.*

News from Naples announces an increased activity of Mount Vesuvius. The glow of fire in the crater is so intense that it can be distinctly seen from Naples at night.

## IMPROVED PUDDLING FURNACE.

We illustrate from *The Engineer* a furnace patented by Messrs. Caddick and Maybery, which has been at work for some months at the Old Castle Iron and Tin-plate Works, Llanelly, South Wales. Mr. Caddick is a practical furnace builder, while Mr. Maybery is manager of the works.

Before proceeding to describe the furnace or particularize the results, it may be stated that the nature of the system of puddling employed is peculiar, not to the furnace but to the district, and materially affects the results obtained.

The Old Castle Works are employed solely in the manufacture of black, tin, and terne plates. It is scarcely necessary to say that the iron used in making tin plates must be of very fine quality or the plates would be worthless. Two or three different grades or classes of sheet are made. At one end of the scale is found the finest charcoal plates, at the other a very excellent iron made in the puddling furnace. The furnace as illustrated is double. It consists of a chamber or gas generator of fire bricks surrounded by a casing of thin iron plates, say, three sixteenths inch thick, and a puddling hearth. The whole of the plates are of wrought iron, the buckstaves, as we may term them, being cast iron columns, held together at the top by suitable tie rods. It is impossible to imagine a neater, simpler, or more compact furnace than that thus produced. The ordinary sliding firebrick door is used, but outside of this is provided a second door of thin plate iron, in which a suitable aperture is made to admit the rabble; this door acts to perfection in protecting the puddler from radiant heat.

Referring to the engraving, Fig. 1 is a half end view and half transverse section of the combustion chamber or generator; Fig. 2 is a longitudinal elevation; Fig. 3 a longitudinal section; and Fig. 4 a sectional plan. A is the generator; B the inner casing, and C the outer casing. Blast is admitted into the space between the inner and outer casing

through the pipe, D; the air becomes heated by coming into contact with the inner casing, and passes into the inclosed space below the grate bars, through holes formed in the lower part of this casing. Here the already heated blast is heated to a further degree by the red hot ashes. A portion

[Continued on page 274.]

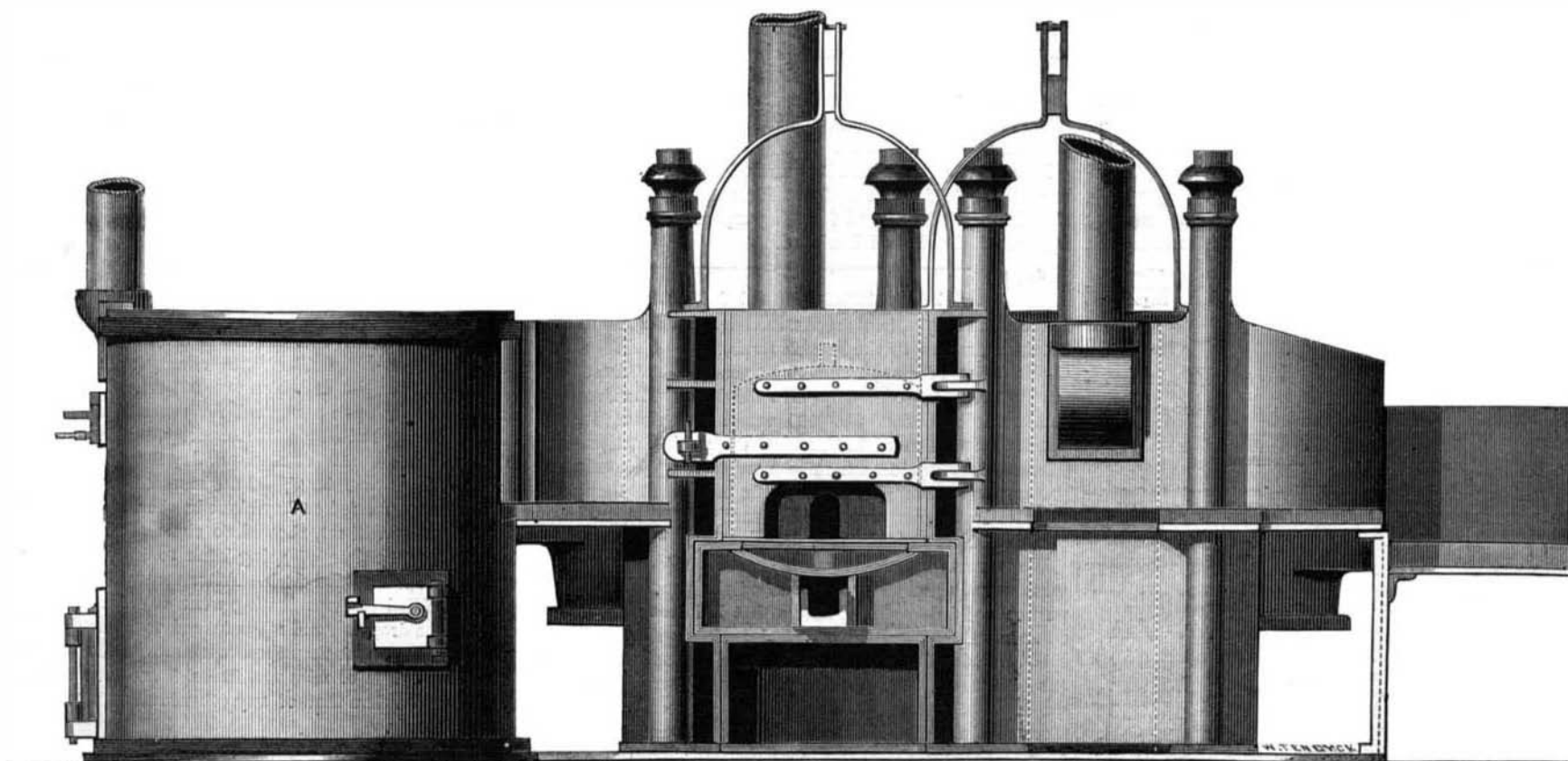


Fig. 2.—CADDICK AND MAYBERY PUDDLING FURNACE—LONGITUDINAL ELEVATION.