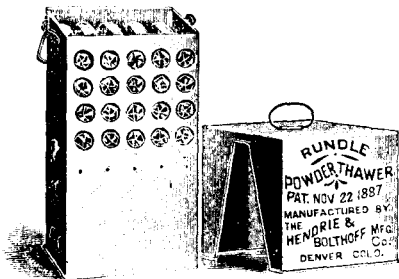


in accordance with your instructions would save the lives of many miners annually."

With reference to accidents from "the dangerous custom still prevalent in the mining camps in the handling of nitro-powder or dynamite" Mr. Lee also writes: "The records show . . . a total of twenty-two casualties from powder explosives in two months. The cause of these accidents are picking out missed shots, the use of iron or steel tamping bars and the warming or thawing of frozen powder. It seems strange that the almost daily reports in the press, detailing the powder explosions and their sad results, do not stop practices proven unsafe. That it does not is evidenced by the above showing and can only be accounted for on the ground of ignorance or carelessness bred from familiarity. At this season of the year explosions from thawing powder are most prolific. They are caused by thawing powder in front of a fire or blacksmith forge, on boiler walls and previously heated hot sand, by dipping in hot water, thawing, in can heated by candles or by holding in flame of the candle. Investigation demon-



strates that but comparatively few nitro-powder consumers are aware that quick thawing or the application of dry heat of high temperature is the cause of explosions. To state this in another manner: Frozen nitro-powder heated quickly to 120 F. is liable to explode at any time, but may not. Investigation further shows that the real danger lies in the fact that in a great majority of cases powder heated quickly does not explode and for this reason methods absolutely dangerous are accepted and considered safe. Of the twenty-two accidents above noticed, all of the men injured or killed were old miners and were pursuing customs which they had followed for periods varying from five to twenty-five years without fatal results."

We would strongly recommend to mine owners and others the advisability of writing to Messrs. Hendrie & Bolthoff for a more detailed description of the Rundle appliance.

TRIPLEX ELECTRIC SINKING PUMP.

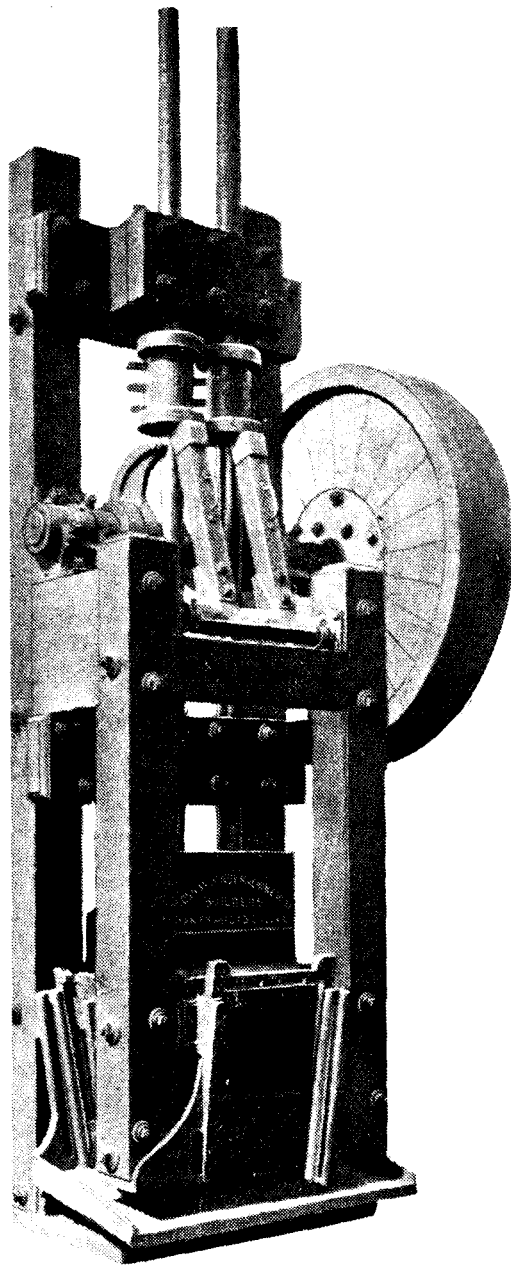
THE new triplex electric sinking pump illustrated herewith by the Jeanesville Ironworks Co., of Jeanesville, Pennsylvania, U. S. A., is claimed by the manufacturers to be satisfactorily susceptible of operation by an electric current direct from a water power situated miles from the point of application; that it produces no heating effect in the shaft—the steam pipe being entirely eliminated, and when in use current is consumed in the exact proportion to the work performed.

The design contemplates three single-acting plungers operating from a common crank shaft, with crank pins placed 120° apart, the resultant action of these

three plungers being to produce a continuous and constant stream to the column pipe, and tend to reduce to a minimum the shock and jar thereon.

The steel crank shaft is driven by two gears, fitted over the discs, which form the outside checks of the two end cranks, thus designed to relieve the shaft of one-half the strain that would be brought upon it if driven by a single gear at one end.

The motor is on top of the pump frame, and is



connected to the crank shaft by gearing to give the desired speed to the pump. The pump frame is made to receive any make of motor which is adapted to this kind of work, either direct or three-phase current.

The Joshua Hendy Machine Works of Nos. 38 to 44 Fremont Street, San Francisco Cal., are the Pacific Coast agents for the Jeanesville pumps, and will be pleased to furnish catalogues and detailed information.