

Their capacity to resist evaporation by the heat generated at the cutting edge, with their capillary power, gives the varying qualities to various lubricants.

(4505) G. A. W. asks: 1. I have a Grenet battery about 1 1/2 or 2 volts and I would like to make an induction coil to use for giving shocks to people.

(4506) G. H. L. asks: 1. How can I determine the voltage and amperage of an incandescent electric lamp? A. By measuring the resistance of the lamp and taking number of ohms and dividing electromotive force by the resistance, you will find the amperage.

(4507) E. B. asks: 1. Suppose two cylinders were filled, one with steam at 1 pound pressure, the other with an ordinary gas mixture at 1 pound pressure. The gas is exploded and free to expand at the same time the steam is free to expand.

(4508) A. H. asks what tri-sodium phosphate is made of. A. Acid calcium phosphate, made by decomposing bone ash with sulphuric acid, is precipitated with a slight excess of sodium carbonate.

(4509) O. D. asks: What causes brass to break when bisulphate of mercury is applied to it? A. The mercury being reduced from the bisulphate forms an amalgam with the brass, which is weaker than the unamalgamated brass.

(4510) G. K. C. asks: Can a sheet of mica be softened by any process? If so, how? A. No. It is sometimes ground up and mixed with shellac and the mixture moulded by heat and pressure.

(4511) H. P. S.—The plant is Cassia nitidiana, "wild sensitive plant."

(4512) K. M. I. says: Suppose a reservoir stands 100 feet or more above the point of discharge of a line of pipe and all points in the pipe line to be below the level of reservoir, is it known to engineering practice that not a drop of water might be discharged at the outlet, owing to the presence of air in the pipes? An individual supposed by many to be eminent authority has told me that he himself was an eyewitness to such a phenomenon.

(4513) L. P. G. asks: 1. Is it true that drowned bodies which have sunk may be brought to the surface of the water by firing heavy guns? A. It is said that sunken bodies have been brought to the surface by firing cannon near the spot.

tion or shock of the discharge is supposed to liberate or expand confined gases in the body, making the body lighter by its enlargement. 3. Is it dangerous to leave windows open during a thunder storm? A. It is safer to close windows during a thunder storm. 4. If so, why? A. There is some danger that a current of warm moist air from the interior of the room may act as conductors for the discharge.

(4514) F. S. T. says: In a complete vacuum A says that the attraction the earth has is the same to a feather as it is to a cannon ball weighing 10,000 pounds, and if dropped from the same distance that they would both reach the ground together.

(4515) A. W. N. says: I understand that pneumatic street cars are a success, but that stations are required to charge the cylinders. Would not a small 1 or 2 horse power steam motor and air pump, continuously running on board the car or adjoining car, charge an 8 or 10 horse power air engine?

TO INVENTORS.

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INDEX OF INVENTIONS

For which Letters Patent of the United States were Granted August 23, 1892.

AND EACH BEARING THAT DATE. [See note at end of list about copies of these patents.]

Table listing various inventions such as 'Aeration of liquids, E. Williams', 'Air compressor pistons, speed regulator for, E. C. Fasold', 'Alkalies and chlorine, production of caustic, F. M. Lyte', etc., with corresponding page numbers.

Continuation of the invention index table from the previous block, listing items like 'Painting with distemper and other colors, A. Pereira', 'Paper board tubes, manufacture of, W. W. McEwan', 'Paper feeding and cutting mechanism, R. T. Johnston', etc., with corresponding page numbers.