

Brief, but Interesting.

FOR opening and closing the lock gates on the Soo Canal, electricity will be used.

MANGANIN is composed of 83 per cent. of copper, 4 per cent. nickel and 13 per cent. manganese.

It is claimed that by the Herault-Killian process of preparing, it is possible to sell aluminum at 15 cents per pound.

PAVEMENTS in London are now being made of granulated cork and bitumen, pressed in blocks. It is very elastic.

IN England, France and Germany, over 150 periodicals devoted to electricity are published each month.

BRICKS made of plaster of paris and cork are now used in the construction of powder mills. In case of explosion less damage is caused.

To prevent aluminum from being corroded by salt, hot or cold water, and to increase its power of tension, the addition of a little tungsten is recommended.

AN improved method of making steel consists in adding to the molten iron briquettes formed by compressing a mixture of pulverized anthracite and lime water. It is claimed that by this method any required temper and quality of steel can be produced with accuracy.

THE hottest part of the positive carbon of an electric light is said to be 3,500 C., the temperature at which carbon volatilizes.

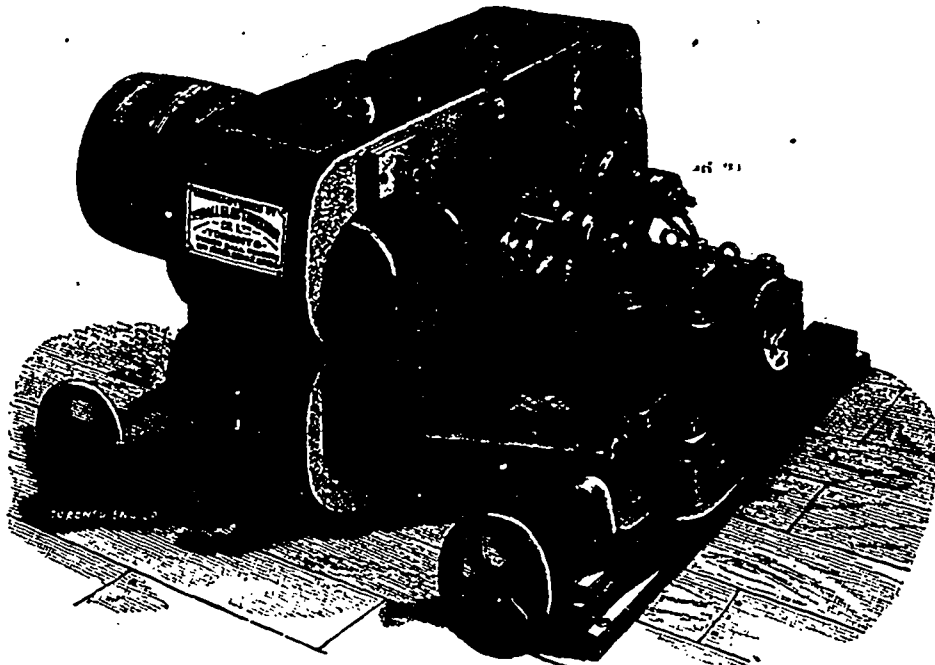
A HINDOO has just made a trial trip across the river Hooghly on a water bicycle which he has made. It is in the shape of a bicycle fixed on the sides of two strong horizontal buoys.

ALUMINUM is now being used in the manufacture of slate pencils. It is said that they write as clearly as ordinary pencils, with less pressure, that they never require sharpening and that the writing is easily erased.

COPPER has been found in a pigment obtained from the feathers of the turacou, an African bird. Each bird, it is calculated, possesses less than one-fifth of a grain of copper; so the discovery is hardly likely to result in anything more than a merely scientific interest.

DINGLER'S *Polytechnic Journal* describes a new glass which is nearly impervious to the calorific rays, a plate one-third inches thick only allowing about 11 to 12 per cent. of the total heat from a bat's-wing burner to pass. The glass is made from 70 parts of sand, 25 of china clay, and 34 of soda.

A PECULIAR form of steam tug has been invented, which can be used either on land or water. In the latter it is worked by side-wheels either backward or forward; while on land it is propelled by means of a cable drum on which is coiled a steel wire cable fastened by pulleys to some fixed object in front, the boat moving as the wire is coiled up. It draws about 28 inches of water, is 37 feet long, and on land will move over an elevation of one foot in three.



ELEVATOR MOTOR.

ACCORDING to a new instrument called the sclerometer for determining the hardness of minerals, pure copper is rather harder than pure zinc.

THE Empire State express, on the New York Central Railway, has beaten all previous records by attaining a speed of a mile in thirty-five seconds, or, a rate of 112 miles an hour.

RAOUL PICKET has succeeded in obtaining the lowest temperature known, 491°F. below the freezing point. He has also been able to reduce the atmosphere to a liquid state.

NICKEL steel is beginning to be used in the manufacture of guns. It is believed that for weapons subjected to high pressures the incorrodibility and great elasticity of this alloy render it peculiarly adapted.

A NOVEL electroscope has just been made by E. C. Rimington, an English electrician. A small T-shaped tube terminating in two bulbs is rotated between the finger and thumb or by a small motor. On bringing a rubbed ebonite or glass rod near, a set of double fan-shaped images of light appears in the tube.

A STREAM of water from a nozzle with a diameter any place between 6 and 9 inches, with the surface of the source of supply 150 feet high, will furnish power enough to lift a boulder of 1,000 pounds into the air and hold it there. A stream of this character cannot be cut with an axe, as it is made as impervious as a ball of tempered steel by the enormous pressure resting upon it.

IN making the old smelting furnaces clay was used, and it is supposed that the famous Damascus blades owed their excellence to the fact that this clay gave out a small quantity of its aluminum, which then entered into the composition of the steel.

G. JEREMIAH, Columbus, Ohio, has invented a new apparatus for the execution of condemned persons, which he claims to be painless. The victim's head is locked into a leather-lined helmet fastened to the back of a chair, to the seat of which the rest of his body is clamped in a similar way. Upon the movement of a trigger, a spring is released which throws the seat one way and the helmet another, so that the victim's neck is instantly dislocated.

ELEVATOR MOTORS.

THE accompanying cut represents a new electric motor manufactured by the Ball Electric Light Co., Toronto, for electric elevators and other work. This company supplied the electric apparatus in connection with the new Fensom electric elevators referred to in last issue. The motors made by this company are largely in use in the various cities of the Dominion, and the Ball Company claim that in all the work supplied by them they have not found it necessary to repair a single motor or incandescent dynamo of their own make. These motors are built in several designs, depending on the nature of the work required of them, and the company guarantee them to stand a heavier overload than any other motor in use.