

INDUSTRIAL NOTES.

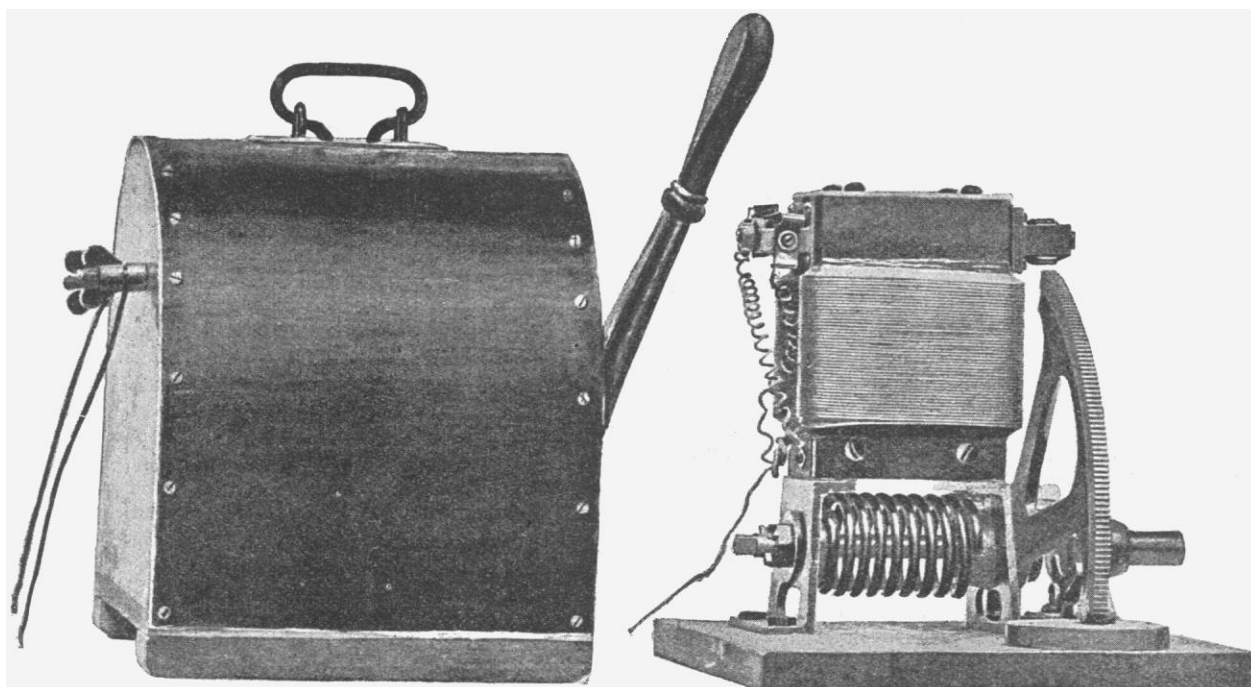
Electric Blasting Battery.

THE small dynamo-electric machine shown in the accompanying illustrations is intended for use in exploding blasts in mining and similar operations. It is called the "Crescent" battery, and is manufactured by the Ingersoll-Sergeant Rock Drill Company of this city. It is said to be the only electric blasting-machine which discharges a uniform current of electricity at every operation, no matter who may use it. Its action does not depend upon the skill of the operator, and, what is very important, there are no parts liable to break or get out of order.

The following is a description of the machine: A strong steel-wire spring is fixed to a shaft which carries a racked segment. The operator, when he presses the lever over, simply tightens the spring, and at a certain fixed point the lever is automatically released from its contact with the shaft, and the recoil of the spring gives a rapid and uniform movement to the armature, which generates the current. A nut is provided for giving greater or less ten-

motor is used, and it does its work without a hitch. It is a small arrangement, and is stowed away under the seat in the stern, where it is entirely out of the way. Two hundred and forty revolutions per minute are made by the screw, which gives the boat a speed of about five miles an hour. The boat being a very wide one, this is a very good result. There is no puffing little engine, as in a steam-yacht, heating up the little craft to an uncomfortable degree, requiring the constant attention of the engineer in shovelling coal and watching the steam-gauge, and rendering the boat top-heavy by the weight of the boiler. The batteries are directly over the keel, taking up no room which is needed, as their wood-casing makes good seats; and, as they weigh nearly five hundred pounds, they make excellent ballast.

The master of the craft moves a little lever, which starts the motor, and then, seating himself directly over it, he has nothing further to do but steer the boat. The batteries take about eight hours to discharge, and the motor will run that length of time without a particle of attention. The motor makes no jar in the boat, as an engine always does on a small boat, and the only noise



ELECTRIC BLASTING BATTERY.

sion to the spring, thus adjusting the capacity of the battery. The spring never breaks.

Those who are familiar with electric blasting will not fail to appreciate the great importance of a uniform discharge. Missfires and serious accidents are often due directly to a lack of uniform strength in the battery-current: one hole will fire while another in the same circuit will miss. With the Crescent, it is claimed that one can estimate with certainty that a certain number of holes will go off at each operation.

An Electric Boat on the Housatonic.

A BOAT propelled by electricity was first launched Sept. 20 by George G. Grower, electrician and chemist, of Ansonia, Conn.; and about 4 P.M., Monday, Sept. 23, a party, consisting of Mr. Grower, Frank A. Kirkham, and Fred Wehrle, of Ansonia, and a reporter, stepped into the boat and pushed off.

There is nothing unusual in the appearance of the boat, except a long, box-like structure extending the length of the boat over the keel. When the party was seated, and Mr. Grower pressed a little lever, the boat started up the river at a good rate of speed, although stemming a strong current, as the tide was running out.

The boat is an ordinary-sized row-boat, fourteen feet in length, and four feet wide. The structure in the centre contains the storage-battery, of fifty cells, which furnishes the power. A Perret

motor is used, and it does its work without a hitch. The little vessel gliding along as smoothly as an ocean steamer. Electric lights could easily be arranged, the power of the batteries being calculated for the purpose.

Many persons watched the craft from the shore, and they had good reason to be puzzled. The picture of a number of persons in a boat, no one being occupied except the pilot, with no oars, sails, or even a smoke-stack visible, and with the boat rushing through the water, would naturally excite the curiosity of the uninitiated.

The trip made Monday was the third one, and on no occasion has there been the slightest hitch or cause for discouragement. The Perret motor, which is used, is a light one, weighing but ninety pounds, but is of one horse-power, and is of 100 volts electromotive force. It is very simply managed, all four of the party Monday taking a turn as "engineer," with equal success. It can be reversed quickly, and stopped instantly. It is built so that in starting the power is applied gradually to the motor, thus obviating the danger of burning out the armature.

Mr. Grower is now introducing the Perret motors into factories, where power is lost by the large quantity of shafting required. Several of the motors scattered through a factory do away with a lot of the shafting, and save a large proportion of the power which is otherwise lost.