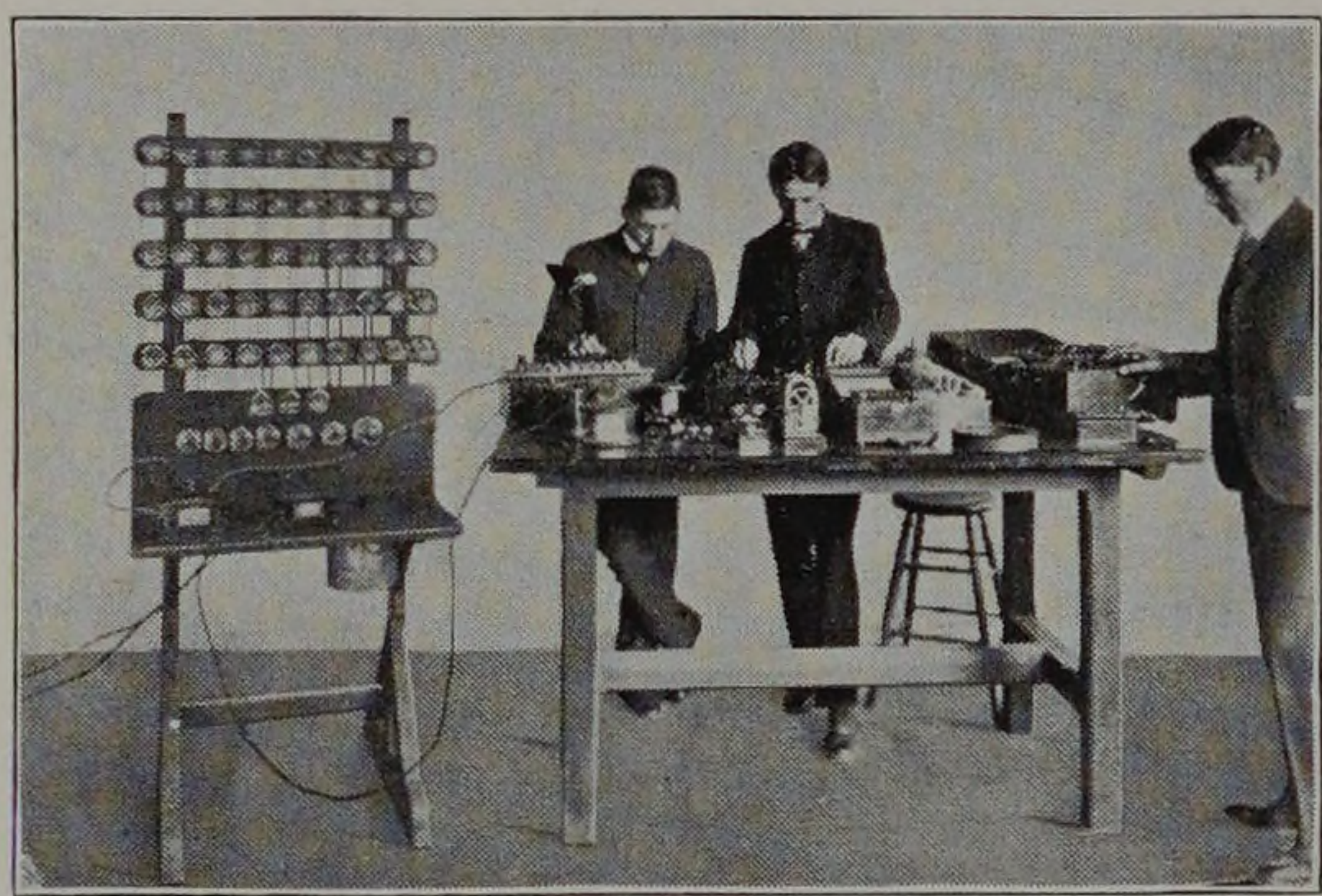


have been added:—One Azimuth, five Wye levels, one Thatcher slide rule, one set railroad curves, one set ship curves and four transits.

The Chemical Engineering Department has, in addition to the above mentioned Engineering Chemistry Laboratory, equipped a laboratory for the special study of Electro-Chemistry. It is expected that, in the near future, plans will be effected by which students may specialize in this subject during the Junior and Senior years of their course. The equipment of the Chemical Laboratories has been increased during the year by two complete Hempel gas analysis outfits, four Becker balances, platinum crucibles and other small pieces of apparatus.

The efficiency of the Physics Laboratories has been increased by a large specific heat apparatus and two heat of vaporization calorimeters, designed



by Prof. Wilcox, and made by our mechanic, Mr. Mulvey. Other pieces purchased for the department are a duplex Geryk vacuum pump, Becker balance, Bunsen effosometer and several Green thermometers. Some important instruments made by the mechanics and designed by Prof. Burnham are the following:—A photometer for measuring the time required for charge to burn in gas engine cylinder, an exten-

someter, a rotary gas engine indicator. The following were designed by Prof. Freeman:—A farader for measuring condenser capacity and a rotating commutator for measuring induction.

The removal of the lunch room to the north end of Ogden Field made it possible for the Electrical Engineering Department to enlarge its Dynamo Laboratory, so that it now occupies the entire south end of the main building, on the first floor. This laboratory has added to its already splendid equipment a 15 horse-power single phase induction motor, one 15 horse-power series motor and controller, one $9\frac{1}{2}$ kilo-watt alternating current generator and one 1.87 kilo-watt rotary converter. A 30 kilo-watt turbo-generator has been purchased and will be installed in the Steam Engine Laboratory. For the other electrical laboratories have been purchased a mercury vapor lamp, a Hefner amyl acetate standard lamp, resistance and post-office boxes, permeameters, ohmmeters, ammeters, voltmeters, Wattmeters, tachometers, galvanometers, condensers, hysteresis tester, and an additional storage battery of 120 cells. In addition to the above, several pieces of original design are being made by the mechanics.

The Telephone Engineering Department is now well equipped and valuable additions are being constantly made. This branch of engineering offers splendid inducements to those interested in this line of work, and as Armour Institute of Technology is the only institution in the United States