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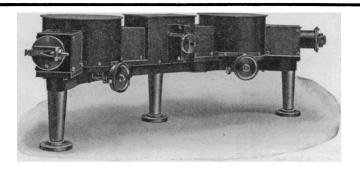
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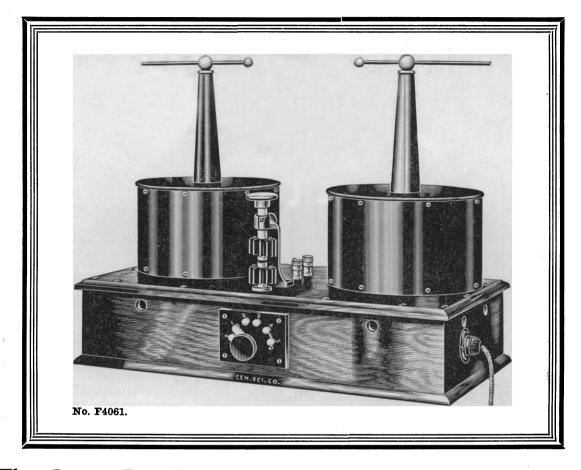
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Two-Student Science Table







# The Cenco Bipolar HIGH FREQUENCY GENERATOR

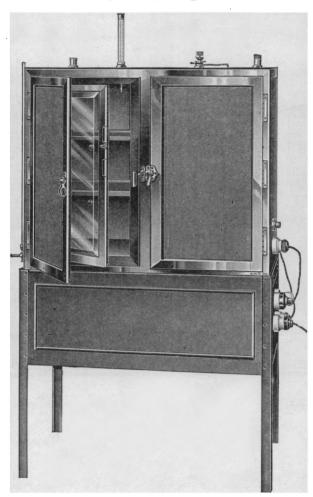
- ♠ A self-contained unit, requiring only connection to a 110 volt, 60 cycle, A. C. line by means of a connecting cord and plug, for operation. The high frequency spark produced jumps a 12 inch gap with ease and when the gap is reduced to 1 inch, a discharge current of 90 milliamperes is obtained. The oscillation frequency is in the neighborhood of 180 kilocycles.
- ♦ The transformer for producing the high voltage current for the oscillating circuit, the high voltage condenser and the impedance, adjustable by means of a 5 point switch, are all mounted permanently in the base.
- ♦ On the base are: two oscillation transformers, so wound that their instantaneous voltages are additive; an adjustable spark gap with radial cooling fins, and a pair of binding posts to permit the addition of an external inductance, when the high frequency current is desired in the inductance.
- ♦ The oscillation transformers are imbedded in a high dielectric wax in the Bakelite cylinders from which the high tension terminal of the secondary rises through a hard rubber pillar to the knob terminals with an at-

- tached, adjustable discharge rod. Both oscillation transformers are easily removed, when the external inductance is used, by lifting from the base, the electrical connections being of the plug-in type.
- ♦ The high voltage, high frequency current from the oscillator terminals can be passed through the body without the slightest harm and with only a perceptible "shocking" sensation. The power obtainable is suitable for operating X-ray tubes, melting thin steel wire held in the hand, producing striking corona effects, energizing gas discharge tubes at a distance of several feet, lighting 10 watt, 110 volt lamps by current passing through the body and performing many other experiments showing the phenomena of high frequency currents.

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#### 1931 BOARD OF HEALTH MODEL AMERICAN STANDARD INCUBATOR



1508

AMERICAN STANDARD INCU-BATOR, 1931 Board of Health Model. An improved model of the triple wall, water jacketed utensil which has been sold by us in the same general specifications and dimensions since 1899. While originally designed for gas heating, our listing is now restricted to electric heating and regulation. The triple wall construction with surrounding water jacket is retained, but the air jacket of the old gas heated incubator is now filled with air-cell asbestos.

The construction is of heavy polished copper, covered with gray enameled transite—much more durable than the brown linoleum formerly used-with outer walls thoroughly reinforced to prevent bulging because of lateral pressure of the water.

The range for dependable operation is

from room temperature to 70°C. The electrical heating equipment consists of suitable heating units attached to the bottom of the incubator and a bimetallic thermo-regulator located on the inside of the chamber near the top. This combination results in the following details of performance:

Operating sensitivity, i.e. the maximum variation in temperature at location of thermometer bulb when working at the usual incubating temperature of  $37^{\circ}\text{C}$ , is  $\pm 0.5^{\circ}\text{C}$ .

Operating uniformity, i.e. the maximum variation in temperature throughout working shelf space in relation to the temperature at location of the thermometer bulb in the incubating compartment when working at the usual incubating temperature of 37°C, is ± 2.0°C.

This incubator is supplied with double doors with inside glass doors and two shelves. While not constructed on the unit system, the dimensions, i.e. 30 inches wide × 18 inches deep × 25 inches high (13,500 cubic inches), have been found convenient.

Because of its ample dimensions, triple wall, water jacketed and rugged construction, this utensil continues to be the preference of many experienced bacteriologists for work not requiring the utmost operating sensitivity and uniformity as provided in American Standard Incubators, 1930 Research Model.

1508. Incubator, American Standard, 1931 Board of Health Model, as above described, with inside dimensions 30 inches wide × 18 inches deep × 25 inches high (13,500 cubic inches). On angle iron stand 31 inches high. With two shelves, one No. 9584 Incubator Thermometer with 180 mm stem, cord and plug, and directions for use. For 110 volts \_\_\_\_\_\_\_\_\_375.00 Ajfac

1509. Shelves, only, of copper; for use in above incubator. In two sections. Per section 5.25 Ajfim

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#### RACE AND PROGRESS<sup>1</sup>

By Professor FRANZ BOAS

COLUMBIA UNIVERSITY

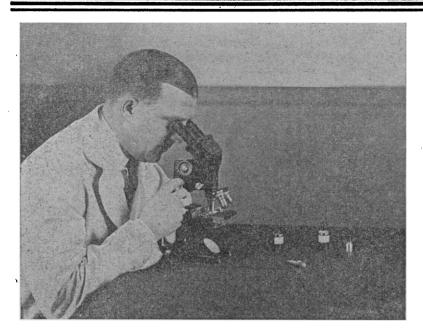
PERMIT me to call your attention to the scientific aspects of a problem that has been for a long time agitating our country and which, on account of its social and economic implications, has given rise to strong emotional reactions and has led to varied types of legislation. I refer to the problems due to the intermingling of racial types.

If we wish to reach a reasonable attitude, it is necessary to separate clearly the biological and psychological aspects from the social and economic implications of this problem. Furthermore, the social motivation of what is happening must be looked at not from the narrow point of view of our present conditions but from a wider angle.

The facts with which we are dealing are diverse. The plantation system of the south brought to our shores a large Negro population. Considerable mix-

<sup>1</sup> Address of the president of the American Association for the Advancement of Science, Pasadena, June 15.

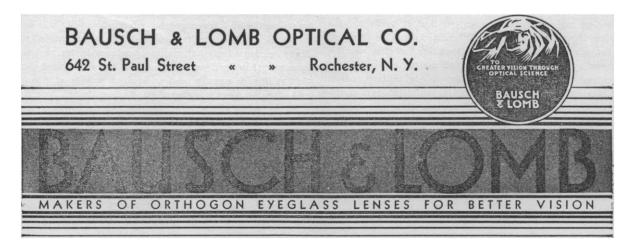
ture between white masters and slave women occurred during the period of slavery, so that the number of pure Negroes was dwindling continually and the colored population gradually became lighter. A certain amount of intermingling between White and Indian took place, but in the United States and Canada this has never occurred to such a degree that it became an important social phenomenon. In Mexico and many parts of Central and South America it is the most typical case of race contact and race mixture. With the development of immigration the people of eastern and southern Europe were attracted to our country and form now an important part of our population. They differ in type somewhat among themselves, although the racial contrasts are much less than those between Indians or Negroes and Whites. Through Mexican and West Indian immigration another group has come into our country, partly of South European, partly of mixed Negro



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#### ANNUAL SURVEY of **AMERICAN** CHEMISTRY

**Volume V-1930** Edited by Clarence J. West

chariman of the committee of the Division of Chemistry and Chemical Technology of the National Research Council.

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