

machine of the seventeenth century, which, of course, was manually operated throughout.

We called the machine a "mechanical brain," and in watching it perform the operation of division, a striking resemblance to the process of thinking becomes apparent. The machine performs this operation by successively subtracting the divisor from the dividend, each subtraction adding one to the quotient, all of which is done in plain sight. The machine will, however, always subtract the divisor once too often; whereupon an

as many figures as possible, in which latter case the remainder is also indicated, and, if desired, the quotient can be set to zero and the division continued into this remainder, this being repeated indefinitely if necessary. It might be thought that the method of division by successive subtraction would be quite slow; however, the application of the motor drive causes the process to be gone through with much rapidity.

As has probably been inferred from the illustrations, the capacity of the machine is sixteen figures in the product.

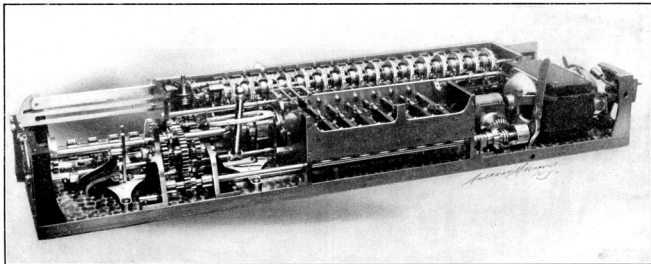


FIG. 2. MECHANISM OF THE AUTARITH.

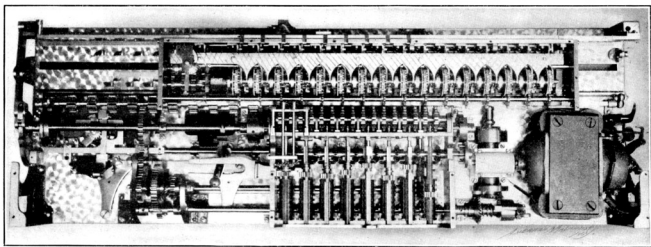


FIG. 3. LOOKING DOWN ON THE MECHANISM OF THE AUTARITH.

inscription at the left of the sliding carriage changes from "right" to "wrong" in red letters, the carriage moves up one decimal place, the machine adds the divisor to the dividend once, thus neutralizing the error, and starts on the process of subtraction again to obtain another figure of the quotient, this being analogous to the proceeding of a person bringing down another figure to the remainder in performing long division with pencil and paper. The process described is continued until either the exact quotient is found or until the machine has run out

This machine is the design of Alexander Rechnitzer, of Vienna, and it is made by the Keuffel & Esser Company, of New York. It has been named the Autarith.