Die Grundlagen der ägyptischen Bruchrechnung. By Dr. O. Neugebauer.
Berlin, Springer, 1926. 45 pp., and six tables.

This monograph is on the philosophy of Egyptian mathematics. The
author advances the thesis that "Egyptian mathematics rests exclusively
upon the fundamental operation of addition," that it is wrong to attribute
to the Egyptians a knowledge of the four fundamental operations of arith-
metic. According to him, Eisenlohr, Peet, Cantor, Hultsch and others
have read into Egyptian mathematics processes which are not really there.
It seems to the reviewer that Neugebauer establishes the possibility of
explaining the arithmetical operations of the Egyptians on the additive
principle alone, but that he has not demonstrated that the Egyptians
actually limited themselves to that principle. In general, it seems im-
probable that Egyptian mathematicians able to compute correctly the
volume of the frustrum of a pyramid, operated with an arithmetic that
did not involve the idea of multiplication. However, Neugebauer's claim
is worthy of careful study. An interesting process in Egyptian mathe-
matics, emphasized by our author, is the equivalent of the modern so-
called Russian process of multiplication. To multiply 7 by 5, put down

$$\begin{array}{cc} /1 & 7 \\ 2 & 14 \\ /4 & 28 \end{array}$$

and add the numbers marked by a stroke.

<div align="right">Florian Cajori</div>

Mathematische Instrumente. By F. A. Willers. Sammlung Göschen.
Berlin und Leipzig, Walter de Gruyter, 1926. 144 pp.

This little monograph, written by Dr. Willers of the Technische
Hochschule of Charlottenburg, is No. 922 of the well known Göschen
collection, and contains a clear and adequate description of the most
important and useful mathematical instruments and machines.

In the introduction, Dr. Willers stresses the necessity of familiarizing
oneself with the mechanical construction and with the theory of such
instruments, in order to be able to handle them intelligently and rapidly.
Only in this manner may one gain an enormous advantage over the
drudgery of many mental calculations.

The booklet is written especially with this purpose in view, and is
divided into eight chapters, dealing with continuous calculating apparatus,
like slide rules, calculating machines, instruments for graphing and measur-
ing curves, planimeters, harmonic analysers, mechanical solution of
boundary problems, geometrical apparatus, like affinographs, pantographs,
and perspectivographs.

Altogether, Dr. Willers' little treatise will be a welcome addition to the
literature for all those who do not want to make a special study of mathe-
matical instruments but who wish to be able to use such auxiliaries, when
necessary or desirable, for the solution of some particular problem requiring
arduous numerical work.

<div align="right">Arnold Emch</div>