"This statement contains one misprint (1862 instead of 1882) and one misunderstanding. As pointed out in the Kremers-Urdang History the edition of 1882 was prepared under the dominant influence of the American Pharmaceutical Association, and the authors state on several occasions that American professional pharmacy, represented by the American Pharmaceutical Association, took over the patronage and became the guardian of the pharmacopoeial revision work. There is, however, nowhere said that at any time any edition 'was to be issued under the direct auspices of the American Pharmaceutical Association'.

"The issuance of the U.S.P. was prompted first 'By the Authority of the Medical Societies and Colleges' (1820), then 'By the Authority of the General Convention for the Foundation of the American Pharmacopoeia' (New York, 1830) and 'By the Authority of the National Medical Convention' (Philadelphia, 1831). Due to the official participation of representatives of pharmacy in the convention since 1850 the 'Medical' was dropped and it was 'By the Authority of the National Convention for Revising the Pharmacopoeia' that the U.S.P. was issued from 1864 to 1893 (5th to 8th edition). From 1905, *i.e.*, the 9th edition, finally the U.S.P. has been published by the Authority of the United States Pharmacopoeial Convention."

The official publication of the U.S.P. by the American Pharmaceutical Association as such would not have accorded with the urgent desire the association has had and evidenced at all times to make the U.S.P. the common work of American medicine and pharmacy. The growing active interest taken by official American medicine, represented by the American Medical Association, in the pharmacopoeial revision work has been by no one more welcomed by the American Pharmaceutical Association.

It is of especial historical interest that this voluntary undertaking of one hundred twenty years ago should have continued to eventually become recognized as legal standards by both state and national governments, including several of the Pan American republics. There are probably very few other instances of as long standing where professions have voluntarily chosen to submit themselves to such self-regulation and standardization, possible only under a free system of government.

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QUOTATIONS

THE MATHEMATICAL TOOL

THERE can be a bottleneck in mathematics just as surely as in machine tools. And to avoid it requires just as careful a program of long-range preparation. The War Preparedness Committee of the American Mathematical Society and the Mathematical Association of America is right in proposing that grade-school boys of 11 and 12 who have mathematical aptitudes be sought out and encouraged to take courses that will lay the foundation for careers in engineering, physics or directly in the technical branches of the armed forces.

The kind of training here needed is not the kind emphasized in certain New York City high schools which make such a fetish of accurate arithmetic that 100 per cent. is the only passing grade. Such a system may turn out some trustworthy bookkeepers, but it will not develop men with mathematical imagination, men who can use mathematics as a tool to shape out the approximations and compromises that are actually involved in engineering design.

The youthful mind, naturally imaginative, is riper than most pedagogues seem to think for symbols and instruments that offer interesting short-cuts through the drudgery of the multiplication table. The accountant doesn't add or multiply by hand—he leaves it to the calculating machine. The engineer doesn't fill a page with figures to extract a square root—he reads it from a slide-rule.

Thornton C. Fry, mathematical research director of the Bell Telephone Laboratories, estimates in a new survey of industrial mathematics that in the design of a modern four-engined transport plane about 100,000 hours are spent on mathematical analysis of structures, performance, lift distribution and stability. In calculations of such magnitude short-cuts and approximations are worth money—they may save thousands of hours. Such work, and similar calculations called for in electric power, communications and petroleum prospecting, must be directed by men who have got beyond the bugbears of arithmetic and are not afraid to look a differential equation in the face.

Probably a majority of the people are afraid of mathematics, and that awe is largely traceable to the early, teacher-inspired worry about not getting the example exactly right. Mathematics could be made a fascinating game. The pupil should be encouraged to approximate, or guess, the answer the minute the problem is put before him; then work it out the regular way and see how close he came; and finally check it with a slide-rule or calculating machine. That—skipping the middle stage of all-out arithmetic—is the way the engineer does it.—*The New York Times.*