TRANSACTIONS

OF THE

American Microscopical Society

Organized 1878

INCORPORATED 1891

PUBLISHED QUARTERLY

BY THE SOCIETY

EDITED BY THE SECRETARY

PAUL S. WELCH

ANN ARBOR, MICHIGAN

VOLUME XLI

Number One

Entered as Second-class Matter August 13, 1918, at the Post-office at Menashs, Wisconsin, under Act of March 3, 1879. Acceptance for mailing at the special rate of postage provided for in Section 1103, of the Act of October 3, 1917. authorized Oct. 21, 1918

The Collegiate Press
GEORGE BANTA PUBLISHING COMPANY
MENASHA, WISCONSIN
1922

DEPARTMENT OF METHODS, REVIEWS, ABSTRACTS AND BRIEFER ARTICLES

THE POCKET MICROSCOPE "TAMI"

It is a remarkable sign of progress and a proof of the never resting spirit of the microscope manufacturers, that lately an important innovation has been developed in the construction of a small microscope, the purpose of which is to replace effectively the larger instruments with low or medium magnification.

The idea of constructing such a small, compact and strongly built microscope of excellent optics, at a price which is much lower than those now in use, originated at the factory of M. Hensoldt & Sons, Wetzlar, Germany, who for the last 71 years have been producing high grade optical instruments of military character and for scientific research.





Especially will the botanist, zoologist, entomologist, mineralogist, biologist welcome this new model microscope "TAMI" which measures 4" in height and $1\frac{3}{4}$ " in width. The whole instrument is covered up with a solid metal hood; total weight is 15 ounces. Its slender and smooth shape is inviting to carry it in the pocket for outdoor's use.

"T A M I" magnifies 50x and any degree up to 225x by simply extending the tube-length, without changes of objectives nor eyepieces. By unscrew-

ing the lower objective system, the magnification ranges from 25x to $112\frac{1}{2}x$.

Illumination is furnished, for transparent objects, by a concave mirror from underneath. The mirror and entire stage is quickly removable and



This illustration shows detached base. The polished glass stage protects the mirror from dust and moisture.

the "TAMI" proper can be placed on extra large, opaque objects, giving the observer a chance to move it all over the surfaces of largest specimens of rock, metal plates, wood, paper, etc., etc.

The small dimensions of "TAMI," its extra light weight, slender shape, solid and compact construction, excellent optics, altogether are making a serious scientific instrument available at a very considerable cost price and will make it a desirable possession for a large circle of people.

A NEW POCKET MICROSCOPE

A great many American manufacturers produce miniature models which are duplicates of their standard products and which can be used by young folks. One of our largest optical plants has seemingly done a similar thing in producing an extremely small microscope which when folded can be



placed in a leather case pocket size. But this microscope, miniature though it is in size, has adjustments and magnifications equal to many standard models.



The construction allows telescoping of the draw tube and the use of one or both elements of the divisible objective in such manner as to give a wide range of magnifications up to 250x. With these magnifications it can be used in examining a great variety of objects, transparent or opaque, in the laboratory or especially in field work in botany, entomology, mineralogy and general nature study. The magnification is sufficient for clinical examinations, including blood counting, and due to its portability, the instrument may be used at the bedside of the patient.



As mentioned before, in adjustments and operation the pocket microscope resembles the standard models. It is fitted with coarse and fine adjustments which work in easy fashion. The stage is provided with two spring clips which hold the specimen; and the mirror, adjusting in two planes, serves in its regular position under the stage to illuminate transparent specimens. When detached from the mirror bar, it can be placed on a pin at the side of the arm to illuminate opaque specimens.

The instrument is supported by a tripod, the three legs of which fold together and swing back parallel with the tubes and ready to place in the leather covered pocket case, which measures $5 \times 2\frac{1}{4} \times 2\frac{3}{4}$ inches.

The microscope weighs 13 oz. and is finished in smooth, durable black. The eyepiece and divisible objective are of high quality and the instrument in every particular is made to the Bausch & Lomb standard. Already the demand has been surprisingly great and with the popularizing of a real microscope, the company predicts a sale beyond estimates.

A NEW DRAWING APPARATUS

As soon as there is a demand for certain research apparatus, it is found that some manufacturer has predicted the need or perhaps has been working along with the user of such equipment and therefore knows the wants of others in research. At any rate, it is certain that in these days apparatus