

## A NEW METHOD FOR NARROWING MICRO-CAPILLARIES.

By: GYULA FÁBIÁN.

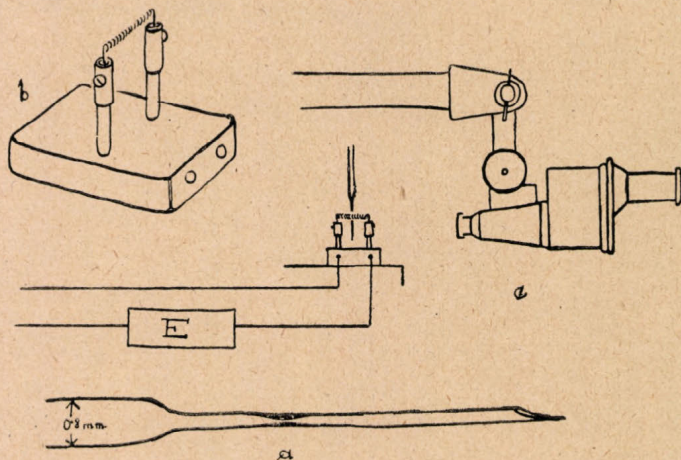
(From the Hungarian Biological Research Institute, Tihany,  
Lake Balaton).

With 1 Figure in the Text.

(Received for publication 20th October 1946.)

Narrowing of glass capillaries can be accomplished, according to previous descriptions, with horizontally opposite burning microflame. The apparatus described hereafter brings about this narrowing with the help of an electrically heated spiral instead of a microflame. The advantage of this method is that the degree of narrowing can constantly be controlled under binocular microscope, and further, very precise bends and curves can be given to the micropipette, a thing which is often necessary.

The following drawing shows the construction of the apparatus.



The heated body is a wire spiral 15 mm long and 1.5 mm in diameter (b). The usual 0.1 mm heating filament can be twisted to make this spiral. The heat can be supplied by the ordinary current if the right resistance is employed. The white-hot spiral is installed horizontally

in the field of a binocular microscope. (c). The drawn-out capillary to be narrowed approaches from the side in a downward, perpendicular direction, with the help of a PÉTERFI-JANSE micromanipulator. The narrowing of the capillary walls (a) can be observed through the microscope melting under the heat and when we reach the desired constriction it can be removed at the required moment from the vicinity of the heated body. Curves can be made in the capillary if it approaches the heated body horizontally from above, until the curve reaches the degree desired.

Grateful acknowledgment is made to Mrs. J. THOMPSON VASS for the English translation.