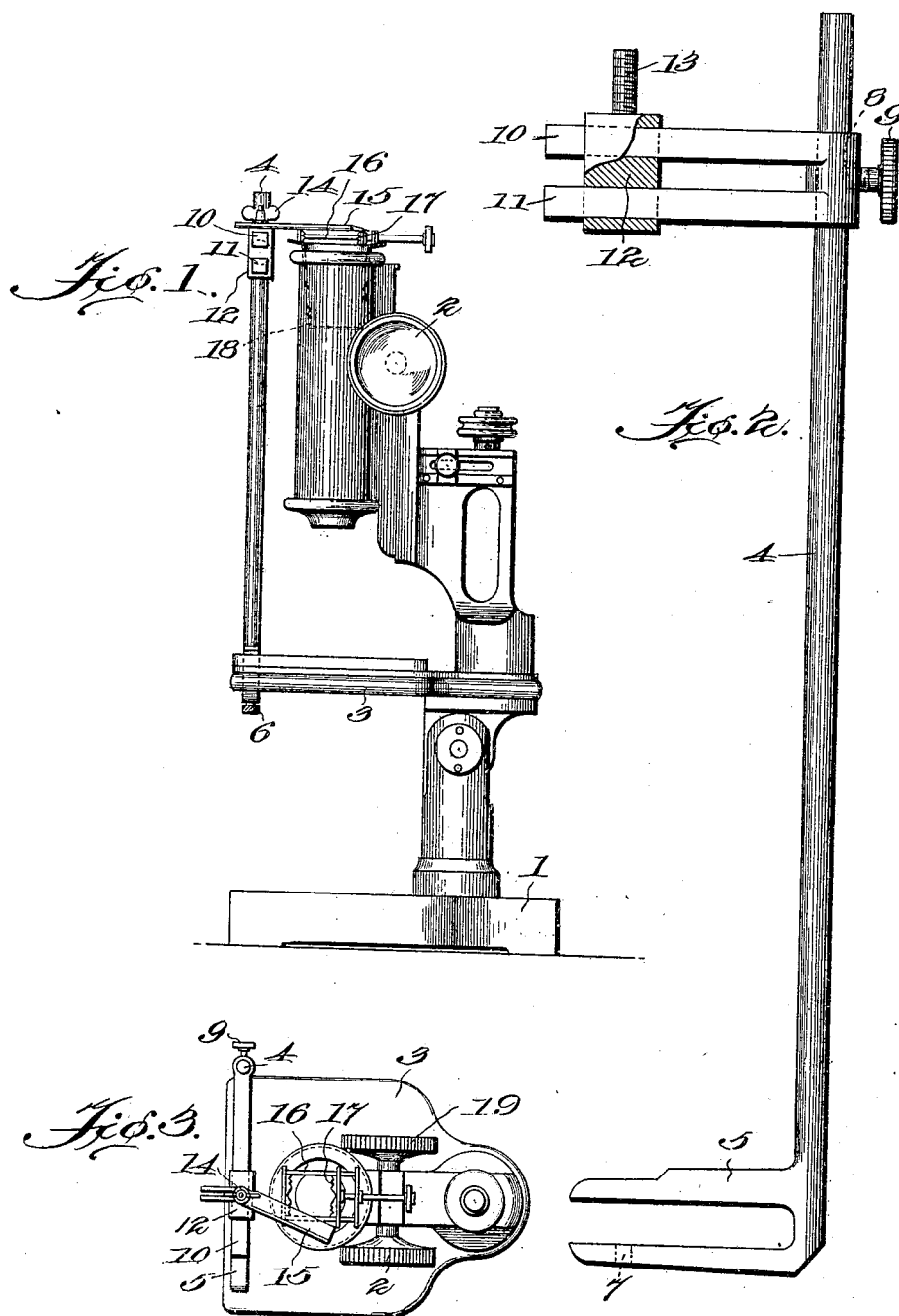


J. G. POE.
MICROTOME ATTACHMENT FOR MICROSCOPES.
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979,333.

Patented Dec. 20, 1910.



Witnesses
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UNITED STATES PATENT OFFICE.

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MICROTOME ATTACHMENT FOR MICROSCOPES.

979,333.

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To all whom it may concern:

Be it known that I, JAMES G. POE, a citizen of the United States, residing at Dallas, in the county of Dallas and State of Texas, have invented certain new and useful Improvements in Microtome Attachments for Microscopes; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in microtome attachments for microscopes, and the object of my invention is to provide a simple attachment which may be fixed upon a microscope, to do the work of a microtome, using the fine adjustments of the microscope itself for the cutting of thin plates instead of having to purchase a separate instrument, accurately adjusted, for making such plates.

With this object in view, my invention consists in the construction and combinations of parts as hereinafter described and claimed.

In the accompanying drawings—Figure 1 is a side view of a microscope, showing my attachment applied thereto. Fig. 2 is a side view, partly in section, on a larger scale, showing the means for holding the microtome attachment, and Fig. 3 is a top plan view of the device as shown in Fig. 1.

1 represents the base of a compound microscope, made in the ordinary form, and provided with a hand wheel 2 for adjusting the microscope. The construction of the microscope will not be described, as it is of any ordinary or preferred type.

3 represents the supporting stage, held on the lower part of the microscope.

The microtome attachment includes a bar 4, having a forked lower end 5, bent at right angles to the bar and adapted to be slipped into engagement with the stage 3, and clamped thereto by a set screw 6, passing through an opening 7 in the lower part of the forked end. On the upper part of the bar 4 is a sleeve 8, which swings freely on the bar 4 and may be firmly set in any desired position on said bar by means of a set screw operated by the hand wheel 9. By this means, the microtome attachment may be thrown out of use or into position for use, as desired.

Made integral with the sleeve 8 are two parallel arms 10 and 11, preferably square or rectangular in shape, and on these arms a block 12 is adapted to slide. This block 12 is provided on its top with a projecting screw-threaded rod 13, with which a thumb nut 14 is adapted to engage.

15 represents a knife, having a perforated end adapted to fit over the rod 13, on which it may be screwed, and set in position by means of the thumb nut 14. As shown in Fig. 3, this knife is preferably set at an incline to the object to be cut, so as to cut it with a shear cut.

16 represents a clamp in which the object 17 to be cut is held. This clamp is of an ordinary type as used in microtomes, but it is adapted to enter the top of one of the barrels of the microscope, the eye piece thereof having first been removed, and is of such a shape that it will fit down into the barrel of the microscope and be secured therein, as indicated by dotted lines at 18 in Fig. 1.

When it is desired to use the microtome attachment, the eye piece is removed, the object to be cut is firmly clamped in the holder 16, and this holder inserted in the top of one of the barrels of the microscope. The knife 15 is then swung into position and fixed by means of the set screw 14, just touching the object to be cut. The block 12 is then slipped on the arms 10 and 11 until the knife is out of engagement with the object to be cut, and the latter is then raised by means of the hand wheel 2 a very slight distance, depending on the thickness of the plate to be cut from the object 17. The knife 15 is then drawn, by means of the block 12, across the top of the object 17, cutting a very thin plate. It will thus be seen that by use of this attachment the accurate construction of the microscope itself may be taken advantage of to regulate the thickness of the plates cut by the microtome.

The lower part of the clamp or false eye-piece 18 is hollow, to serve as a receptacle for any excess of alcohol or other liquid with which the specimen to be cut is moistened continually, as usual, thus preventing the liquid from getting into the barrel of the microscope.

The screw 2 is used for the ordinary coarse adjustments and the screw 19 for fine adjustments, as usual.

I claim:—

5 1. The combination of a microscope and a microtome attachment removably attached thereto, said attachment being provided with means for securing it to the stage of the microscope, and including a holder
10 adapted to be placed in the barrel of the microscope and adjusted by the movement of said barrel, and a movable knife adapted to be swung into position over said barrel
15 and to be drawn across said holder, substantially as described.

2. The combination of a microscope and a microtome attachment, said attachment being provided with means for securing it to the stage of said microscope, and including
20 a holder adapted to be placed in the barrel of the microscope after the removal of the eye piece, said attachment also including a sliding knife adapted to be swung away

from the barrel of the microscope, when desired, and to be drawn over the top of said
25 holder to cut thin plates, substantially as described.

3. The combination of a microscope, including a stage and a barrel, with a microtome attachment including a bar having a
30 forked end secured to said stage, said bar having thereon a swinging sleeve provided with a movable guide, a set screw for fastening said sleeve to said bar, a block carrying a knife adapted to slide on said guide,
35 and an object clamp adapted to be dropped into the barrel of a microscope and held thereby after the removal of the eye piece, substantially as described.

In testimony whereof, I affix my signature, in presence of two witnesses.

JAMES G. POE.

Witnesses:

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