

Figure one-half actual size.

**CCDS** — CONTINENTAL MICROSCOPE.  
(New Construction.)

## CONTINENTAL MICROSCOPE.

### CCDS.

(NEW CONSTRUCTION.)

In relisting this stand, we offer an entirely remodelled instrument, with new stage and substage, and have been able at the same time to **materially reduce the price**. The stand is of brass throughout, highly finished and lacquered. The base is of the horseshoe form, but with the back claw projecting to form a tripod support, insuring the greatest stability in all positions of the body.

The pillar is massive, of graceful proportions, and the joint has locking lever for securing the body at any angle of inclination. The substage is our New Complete Substage, described and figured on pages 17 and 18. The stage is our New Mechanical Stage, described and figured on page 19, is revoluble on its axis, and has centering screws.

The fine adjustment is by micrometer screw acting on the triangular bearing of the arm, the construction being our improved (patented) device, doing away with set-screws and springs, and entirely eliminating lost motion either through wear, relaxation of parts, or other cause. The head of the micrometer screw is graduated for measuring the thickness of objects. The coarse adjustment is by diagonal rack and pinion of very great delicacy. The bearing of the sliding parts is not made directly upon the body tube, but upon a separate piece of metal attached to the body tube, whereby we obtain much greater accuracy in fitting and greater stability than can be had by the old method of construction, at the same time giving the proper combination of metals to insure the greatest amount of wear and least friction. Especial care is given to the fitting of the pinion box, our construction preventing the pinion from ever becoming loose.

The main tube has graduated draw tube working in cloth-lined sleeve.

The Abbe condenser, 1.20 N. A., is a part of this stand.

Each CCDS Microscope is furnished in a polished case, with nickeled handle and lock, and with receptacle for accessories.

<b>CCDS1.</b>	Stand CCDS with 1 eyepiece, $\frac{3}{8}$ inch and $\frac{1}{4}$ inch objectives	<b>\$115.00</b>
<b>CCDS2.</b>	CCDS1 with double revolving nosepiece	<b>120.00</b>
<b>CCDS3.</b>	Stand CCDS with 2 eyepieces, $\frac{3}{8}$ inch and $\frac{1}{4}$ inch objectives	<b>117.00</b>
<b>CCDS4.</b>	CCDS3 and double revolving nosepiece	<b>122.00</b>
<b>CCDS7.</b>	Stand CCDS with 2 eyepieces, $\frac{3}{8}$ inch and $\frac{1}{6}$ inch dry, and $\frac{1}{2}$ inch oil immersion objectives	<b>155.00</b>
<b>CCDS8.</b>	CCDS7 with triple revolving nosepiece	<b>162.50</b>

## REVOLVING MECHANICAL STAGE.

(NEW CONSTRUCTION.)

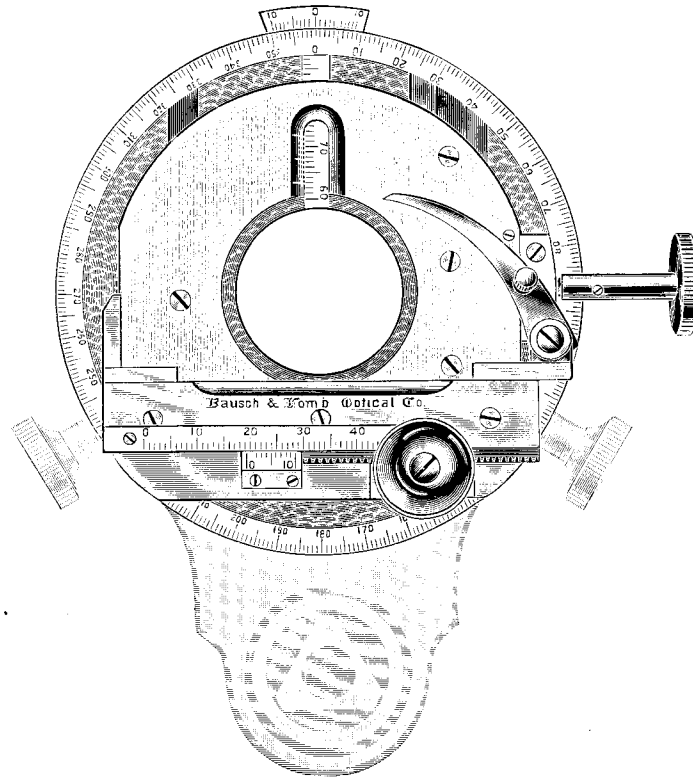


Fig. 6.

The Revolving Mechanical Stage is supplied with the DDS and CCDS Continental Microscopes, and with the K American Type Stand.

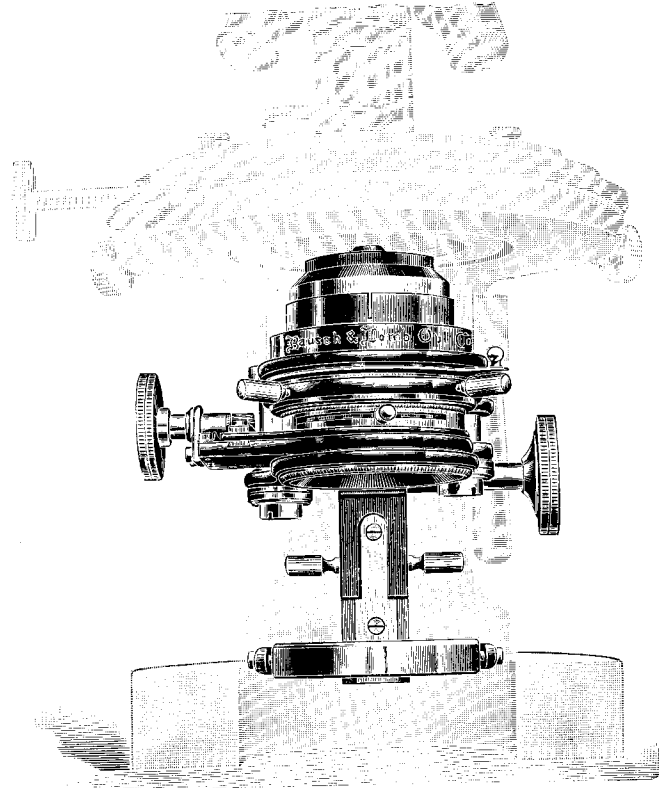
The rectangular movements and object carrier are the same in construction as those of the Attachable Mechanical Stage described on the following pages. The graduations are placed so as to be viewed conveniently and have verniers reading to tenths millimeter.

The entire stage rotates on its axis, the circumference being divided into 360 degrees and provided with vernier reading to tenths of a degree.

The whole construction is one of the greatest solidity, combined with delicacy of movements and convenience for working.

When desired for other microscopes than above mentioned, we shall be pleased to give information by letter.

## NEW COMPLETE SUBSTAGE.



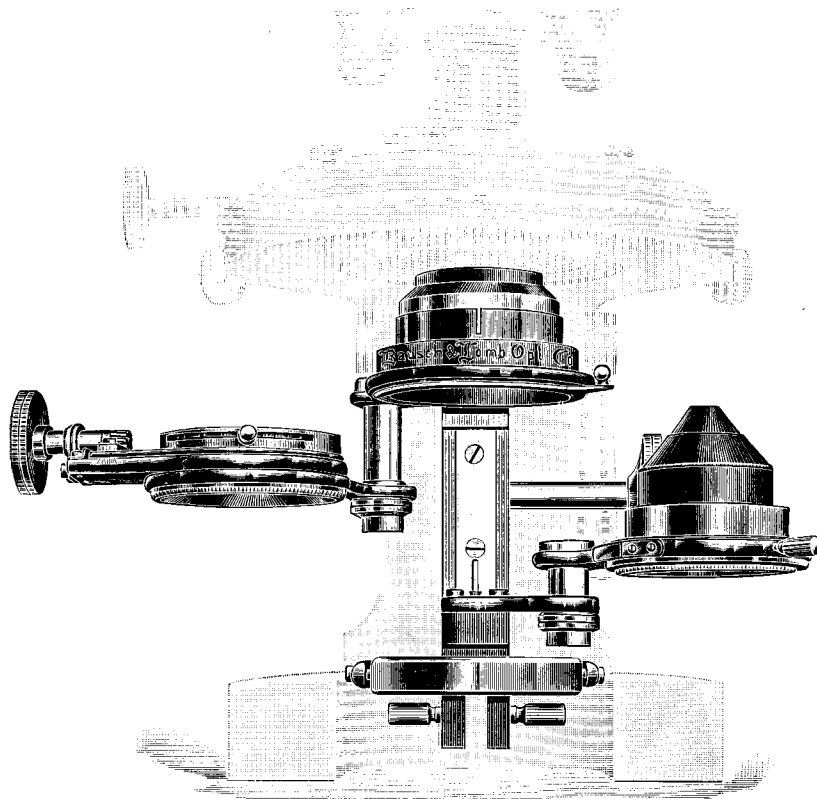
One-half actual size.

**Fig. 1.** Showing Substage closed.

We introduce herewith an entirely new construction of the Complete Substage. All substages heretofore constructed have been deficient either in stability or convenience, and more often than otherwise in both. The very limited space to be used and the variety of adjustments required in the substage have made it very difficult to design a form which, while sufficiently convenient, would be rigid enough to withstand constant wear and at the same time not be out of proportion to the microscope. Our New Complete Substage obviates all these difficulties in the simplest possible manner, and is without question the most complete and practical substage yet made.

The principal points of the construction are shown in the engravings: Fig. 1, showing the substage as in actual use; Fig. 2, the parts separated. The entire substage is supported on a heavy metal bar joined to the main arm of the microscope, and to which it is attached by slide with rack and pinion, whereby the whole substage may be adjusted with reference to the microscope stage. The slide and rack and pinion are the same as used on the coarse adjustment of the microscope, insuring the same accuracy and wearing qualities, the automatic device for retaining the pinion in adjustment, and the same thickness of metal having been retained.

The substage is composed of three parts, arranged one above the other. The upper part consists of a fixed ring, supporting the removable Iris diaphragm. This diaphragm is operated by a lever, easily accessible from the front of the substage, and is so arranged as to come directly in contact with the object slide if desired, thus being in the most effective position



One-half actual size.

**Fig. 2.** Substage with parts separated to show construction.

for use without the condenser. When the condenser is in use this Iris Diaphragm can be used to limit the volume of light entering the objective, without limiting the angle of the illuminating cone. This method of controlling the light is of the utmost importance in the examination of highly refractive transparent bodies, such as living bacteria, diatoms, and similar objects. The middle section of the substage is movable vertically on the main substage axis and consists of a ring, with centering screws, carrying Abbe condenser, 1.20 N. A. The condenser ring swings laterally to the left of the instrument in such a manner that the condenser is entirely out of the path of rays from the mirror, and is also perfectly free for changing accessories. The condenser ring, the arm on which it is carried, and the sliding support are all of the most stable construction, so that there is perfect rigidity and accuracy of centering throughout. The vertical adjustment of this section of the substage permits the condenser to be brought in immersion contact with the object slide or to be placed in any other position desired without reference to the position of the upper Iris Diaphragm. The lower section of the substage carries the large Iris Diaphragm which is used below the condenser. This diaphragm may be swung from under the condenser to the right of the instrument. It is so mounted that it may be rotated upon its own axis and is laterally movable by rack and pinion when oblique illumination is desired.

This substage is supplied with all microscopes the catalogue designation of which ends in S; for example, CCS, etc.

When desired for other microscopes we shall be pleased to arrange by letter for any fitting which may be required.