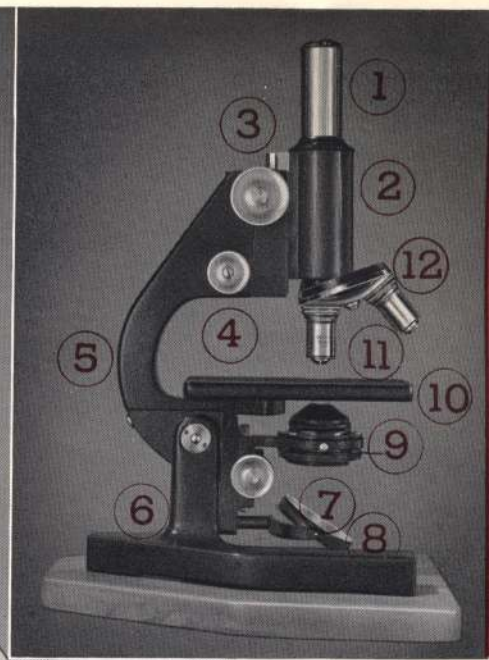
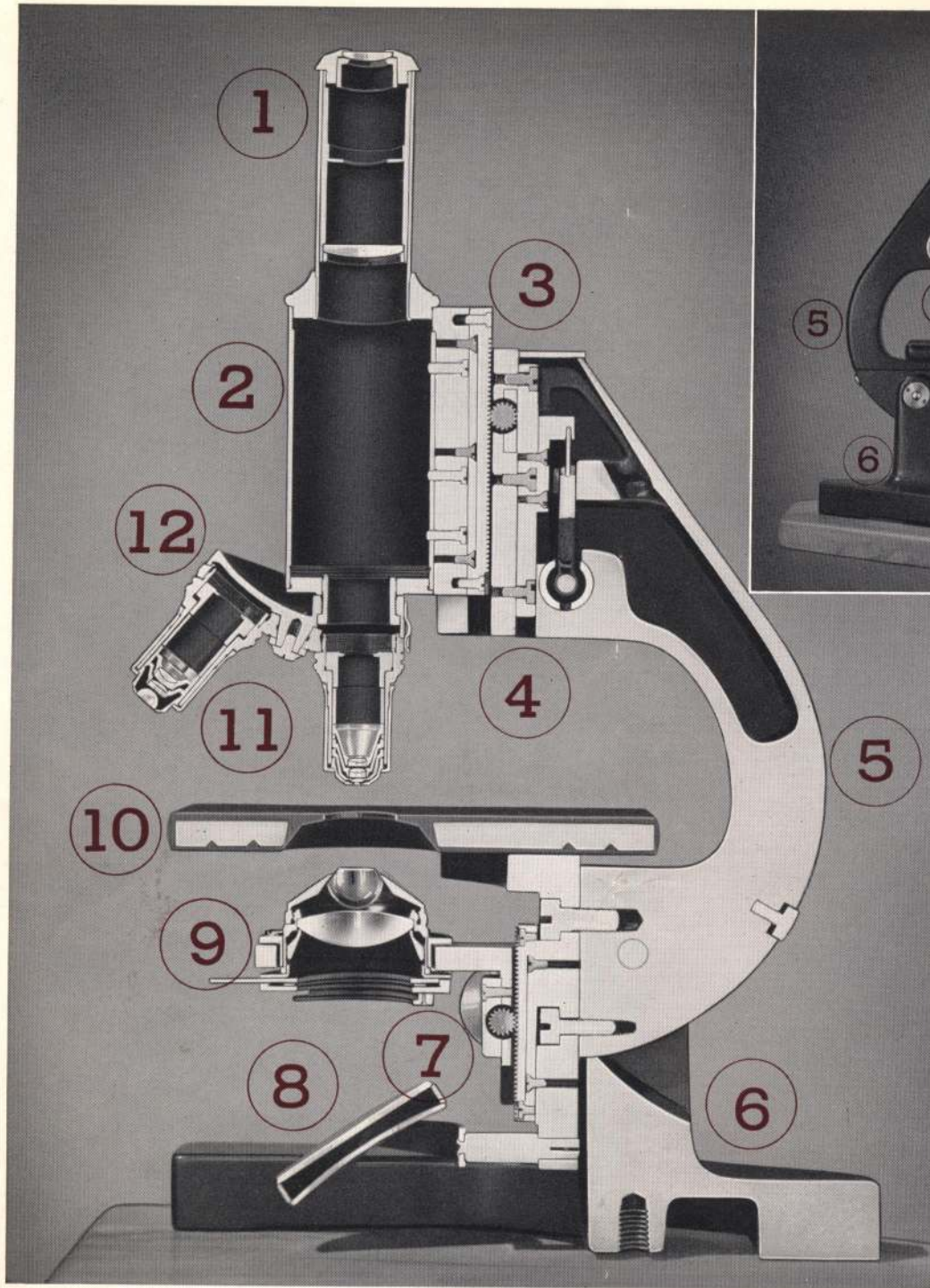


*Bausch & Lomb*  
**MEDICAL MICROSCOPES**







*Section through the optical axis of a standard Bausch & Lomb Laboratory Type Microscope showing construction of 43 $\times$  and 97 $\times$  objectives, eyepiece, and condenser. Mechanical features shown are the matched rack and pinion coarse adjustment, the B&L Patent Fitted Fine Adjustment, and substage construction. Note that all parts are oversize which insures flexure-free manipulation and focusing. In the smaller illustration is shown the other side of this same cut-open model.*

IN THESE NEW MODELS, we have the privilege of offering the finest medical microscopes that have ever carried the Bausch & Lomb name to the profession. It is not without significance that model designations B and C, first used over fifty years ago for corresponding series, were chosen for these modern microscopes. They are worthy in every way to bear the designation of the earlier series, which had such an important part in establishing recognition for American made scientific instruments and Bausch & Lomb quality.



Plans

..... For **LIFETIME SERVICE and SATISFACTION** .....

**T**HE choice of a microscope for his medical studies, practice, and possible future use in research is one of the more important decisions the future physician is called upon to make early in his medical career. Not only because usually only one microscope is purchased in a lifetime, but also because the microscope is so essential in modern medicine, it is desirable that his first choice will be suitable, optically and mechanically, for the variety of work it will be called upon to do for years.

This places a responsibility upon the microscope maker. In meeting this responsibility, Bausch & Lomb has proceeded along the following lines:

The design of Bausch & Lomb Medical Microscopes is based upon long experience and intimate knowledge of laboratory conditions. There has been continual study and development along mechanical and optical lines by the Bausch & Lomb Department of Engineering and Research, aided by suggestions from many of America's leading workers.

Complete control from raw stock to finished product insures proper selection for every part. All of the glass used is manufactured in the Bausch & Lomb Glass Plant. Castings are made in the Bausch & Lomb Foundry. All

purchased raw materials are checked to standards by the Bausch & Lomb Testing Laboratory. Those employed in instrument production have acquired the skill and experience essential to scientific instrument manufacture through long, intensive, and highly specialized training in the Bausch & Lomb Factory.

Climaxing the meticulous care in manufacture, is rigorous inspection of each instrument by an independent department, reporting directly to the management.

As a result, the uniformity and high quality of the optical parts are noteworthy and can be demonstrated on critical test objects. Likewise, the smooth functioning of all mechanical parts is assured.

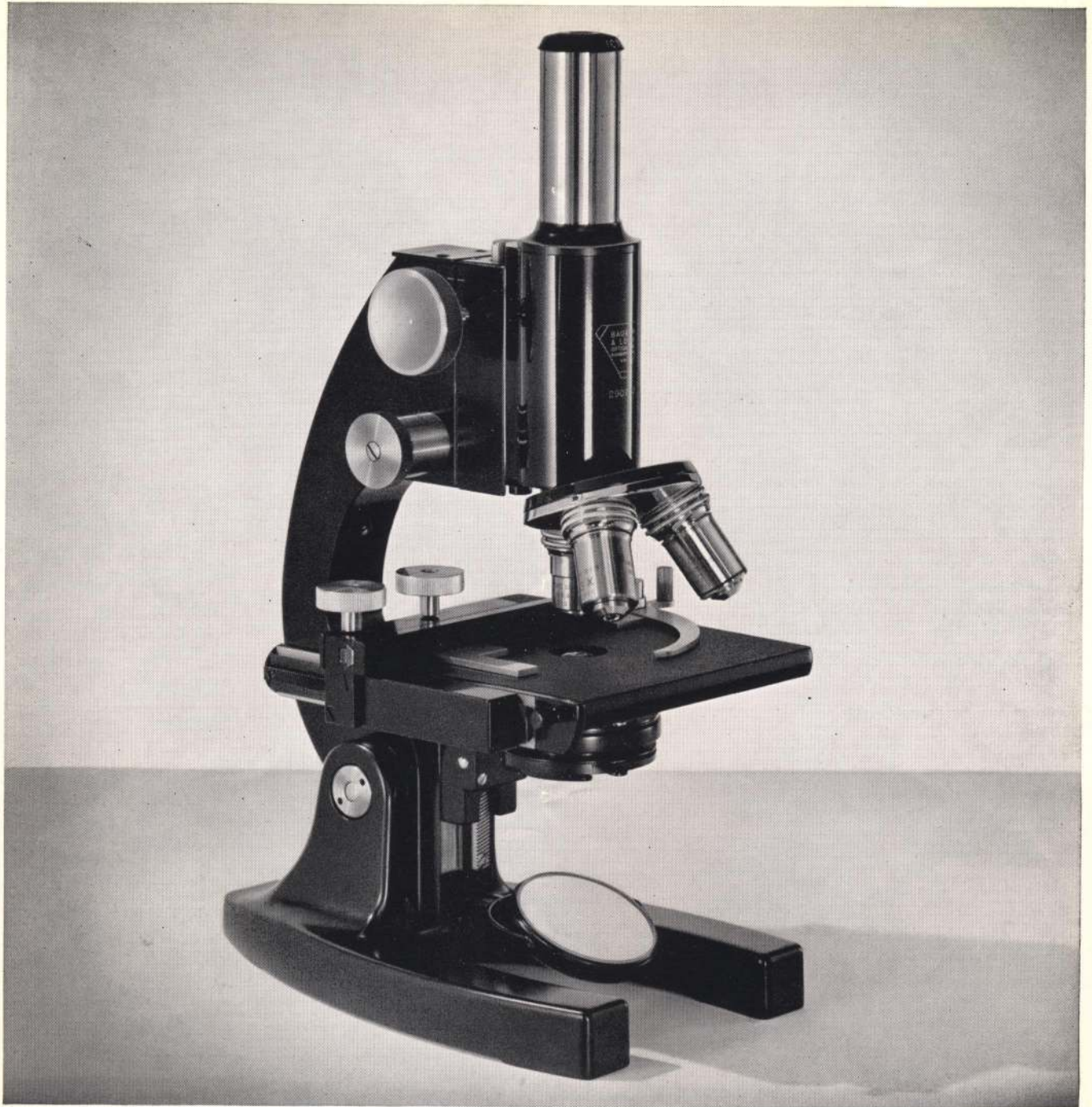
The equipments listed herein have been made primarily for medical work and with its severe service requirements in mind. There is no difference in basic design, optical or mechanical quality. Their performance in the hands of critical users has resulted in widespread acceptance.

In choosing a Bausch & Lomb Microscope for your medical career, "you have the satisfaction in knowing that for your purpose, no finer equipment is available."

**FEATURES of Bausch & Lomb Medical Microscopes**  
*Contributing to Efficient and Convenient Use . . . . .*

- 1 Comfort in use due to high eyepoint and conical mount of eye-lens. (Of special interest to spectacle wearers.)
- 2 The body tubes are made large and blackened inside to prevent internal reflections. This feature results in easier recognition of delicate contrast and fine detail.
- 3 Smooth coarse adjustment, due to accurately-cut matched rack and pinion and precisely fitted slides.
- 4 Critical focusing made easy by sensitive, positive, and responsive fine adjustment. (B&L Patent.)
- 5 Ample room for all manipulations on the stage due to deep-curve arm; its sturdy construction insures permanent alignment of optical system.
- 6 Stability, when tube is vertical or inclined, results from the design of the large base.
- 7 Substage focusable by matched rack and pinion. Precisely fitted slides maintain accurate centration of condenser.
- 8 Condenser aperture filled by large mirror.
- 9 Condenser in full ring mount to insure unvarying centration, yet conveniently accessible and removable for substitution of dark field equipment.
- 10 Steel-core rubber-covered stage, rigidly supported, resists reagents and flexure.
- 11 Bausch & Lomb Objectives have lens elements burnished in self-centering threadless cells without cement. This patented mounting insures permanent centration and parfocality. The high optical quality and uniformity due to this construction is recognized universally.
- 12 Any objective, with an outfit, may be used in any aperture of the Bausch & Lomb Improved Dustproof Revolving Nosepiece which is so accurately made that centration or parfocality is not sacrificed.





Medical Microscope BA-8 with Built-On Mechanical Stage A. Complete with three Achromatic Objectives: one divisible  $10\times$  of .25 N.A., one  $43\times$  of .65 N.A., one oil immersion  $97\times$  of 1.25 N.A., triple nosepiece, one Huygenian eyepiece  $5\times$ , and one Huygenian eyepiece  $10\times$ , and divisible Abbe Condenser 1.25 N.A. Magnifications from  $20\times$  to  $970\times$ . In hardwood case. No. 31-21-55-08 \$155.00

Medical Microscope B-8. Same as above, except with plain stage. No. 31-21-51-08..... 135.00

Professional Carrying Case, No. 31-39-72, in place of hardwood case, extra..... 2.00

Quadruple Nosepiece in place of Triple Nosepiece, extra..... 2.00

$3.2\times$  Achromatic Objective—parfocal with  $10\times$ ,  $43\times$  and  $97\times$  (See page 9) extra..... 9.00

For other objectives and eyepieces, see page 9. For Attachable Mechanical Stages, see page 11.



# The Bausch & Lomb

## MONOCULAR MEDICAL MICROSCOPES . . .

### B-8 • BA-8 • CS-8 • CSA-8

These new models are the result of further improvement and refinement of the Bausch & Lomb Type H Microscope which won the acceptance of the most critical faculties throughout the world in fulfilling all requirements, optical and mechanical, for advanced medical study. In these advanced designs the working needs of the profession have been considered carefully.

#### *Description of Model BA-8*

**BODY TUBE**—Outside diameter 39 mm, blackened inside to prevent reflections. Fixed tube length 160 mm standard. (Adjustable draw tube, graduated in millimeters and numbered—optional at no extra charge.)

**ARM**—Deep-curve handle type, giving ample room for manipulation, manually or by mechanical stage.

**FOCUSING ADJUSTMENTS**—Coarse adjustment by rack and pinion with matched teeth, chromium plated to resist wear. Stop prevents pinion from overriding the rack. Large chromium plated heads.

Fine adjustment by B&L patent lever type with head on each side of arm. Right-hand focusing head drum is graduated, reading to 2 microns in widely spaced steps. Positive, precise, smooth, and delicate. Movement always in same direction as coarse adjustment heads. Automatic take up for wear. Positive, independent stops for upper and lower limits. Impossible to jam fine adjustment. Design and materials shop tested for service, representing many years of constant laboratory use without measurable wear. Fine adjustment ceases to act when objective touches slide. Entire mechanism in dustproof housing.

**STAGE**—The Built-On Mechanical Stage A is of extra rugged construction and improved design. Both movements are adjustable to suit personal preference.

Slide is held positively between one fixed and one movable bracket, a method that retains its efficiency in service. Mechanical stage can be racked off by removing the knurled stop screw, leaving a plain stage 115 x 130 mm for examination of gross specimens, large brain sections, and Petri dish work.

The mechanical stage accommodates 50 x 75 mm slides, permitting examination of entire area.

Plain stage has steel core, which prevents warping, imbedded in vulcanized rubber to make it reagent proof. **SUBSTAGE**—Adjustable by rack and pinion with chromium plated teeth. A full-size Abbe Condenser, 1.25 N.A., is held in a full ring mount. This construction precludes decentration or looseness caused by removal and replacement of condenser, and insures original accuracy after long service.

Condenser ring conveniently accessible for substitution of Dark Field Element, Paraboloid Condenser and use of lower condenser lens in low power work. Iris diaphragm permanently centered on condenser, with holder for blue glass and metal dark-field stops.

Both plane and concave mirrors, ground and polished, 55 mm diameter, are fitted on substage bar so that re-adjustment is not required when focusing condenser.

**OBJECTIVES AND EYEPIECES** regularly included listed with equipments.

**FINISH**—Satin smooth black and chromium—resists wear, and is reagent-proof.

**CASE**—Hardwood case, to hold microscope vertically, is regularly supplied. For greater portability, the Professional Horizontal Case may be substituted at an extra charge.

*Bausch & Lomb Medical Microscope CSA-8*



Bausch & Lomb Monocular Medical Microscopes CSA and CS have the new fine adjustment described on page 7 and interchangeable monocular body tube. These microscopes can be converted to binocular microscopes by the addition of binocular body tubes.

Medical Microscope CSA-8, same equipment as BA-8. In hardwood case. No. 31-21-86-08 \$169.00

Medical Microscope CS-8, same equipment as B-8. In hardwood case. No. 31-21-81-08... 149.00

Vertical Binocular Body as on CBA-8. No. 31-19-61..... 70.00

Inclined Binocular Body as on CTA-8. No. 31-19-75..... 90.00

Additional eyepieces as required, extra.

169  
90  
259





Medical Microscope CBA-8, with Built-On Mechanical Stage A. Complete with three Achromatic Objectives: one divisible 10X of .25 N.A., one 43X of .65 N.A., one oil immersion 97X of 1.25 N.A., triple nosepiece, one pair matched Huygenian eyepieces 5X and one pair matched Huygenian eyepieces 10X, and divisible Abbe Condenser 1.25 N.A. Magnifications from 20X to 970X. In hardwood case. No. 31-21-87-08.....	\$235.00
Medical Microscope CB-8. Same equipment as above, except with plain stage. In hardwood case. No. 31-21-82-08.....	215.00
Professional Carrying Case. No. 31-39-72 in place of hardwood case, extra.....	2.00
Quadruple Nosepiece in place of Triple Nosepiece, extra.....	2.00
3.2X Achromatic Objective, parfocal with 10X, 43X and 97X (See page 9), extra.....	9.00
For other objectives and eyepieces, see page 9. For Attachable Mechanical Stages, see page 11.	



# *The Bausch & Lomb*

## BINOCULAR MEDICAL MICROSCOPES . . . . .

### CB-8 • CBA-8 • CT-8 • CTA-8

Binocular vision is distinctly superior to monocular for protracted observations. It is possible to work for long periods without fatigue. Detail is more readily recognized and observed. At the same time, the apparent stereoscopic effect is very striking and often helpful in the correct interpretation of structure.

Accordingly, binocular microscopes have become increasingly popular in routine and diagnostic work.

The binocular models in the Bausch & Lomb C series have all the advantages of the popular HR series, which they replace, with further optical and mechanical refinement.

Microscopes CB-8, CBA-8, CT-8, CTA-8, CS-8, CSA-8 have the new Bausch & Lomb Patent Ball Bearing Fine Adjustment. This was designed especially to carry the greater weight of the binocular bodies. It works with exceptional smoothness and fineness. It is positive in action and free from backlash, or lost motion. Movement is always in the same direction as the coarse adjustment heads. Positive stops for upper and lower limits prevent jamming. The fine adjustment ceases to act when objective touches the slide. The right hand focusing head is graduated and reads to 2 microns in widely spaced steps. Entire mechanism is in dustproof housing.

The Vertical Binocular Body is furnished on the CB and CBA Stands. It consists of a prism system, of such size as to pass the full numerical aperture of the highest power objectives, in a dustproof housing with two eyepiece tubes. The binocular body is held in positive and accurate alignment by means of a screw operable from the top of the pinion slide working on a boss integral with the binocular prism housing.

Adjustment for varying interpupillary distance between 50 and 75 mm is made by rotating left eyepiece tube. A numbered millimeter scale indicates separation and provides easy and accurate setting to any predetermined interpupillary distance. Correction for any difference in vision between the eyes is made by spiral focusing sleeve on right eyepiece tube.

With the CT and CTA Equipments, the Inclined Binocular Body is supplied. This has all the desirable features of the Vertical Type, plus the additional advantage of being able to work in a natural position in studying specimens under oil immersion or in liquid mounts when the stage must remain horizontal. This is especially helpful when working for prolonged periods, and where perfect concentration is necessary.

In these Vertical and Inclined Binoculars, the eyepiece tubes are parallel. Since accommodation and convergence are inseparable functions in binocular vision, this construction results in full relaxation of ocular muscles. Eyestrain, due to unnatural convergence, is obviated. The parallel tube construction provides the additional advantages of right-angle reflections in the compound beam splitting prism, and the ability to use a standard camera lucida for drawing as required in reconstruction work. A Monocular Body Tube, fixed or adjustable tube length as desired, is easily interchangeable with either the Vertical or Inclined Binocular Bodies, for photomicrography and micrometry.

*Bausch & Lomb Medical Microscope CTA-8*



Medical Microscope CTA-8. Same equipment as Model CBA except provided with Inclined Binocular Body in place of Vertical Binocular Body. In hardwood case. No. 31-21-88-08..... \$255.00

Medical Microscope CT-8. Same equipment as CB-8 except provided with Inclined Binocular Body in place of Vertical Binocular Body. In hardwood case. No. 31-21-83-08 235.00

For Accessories, see listing under CBA-8 on page 6.



# OPTICAL EQUIPMENT *for* MEDICAL WORK

## *Objectives and Eyepieces*

Three Achromatic Objectives, of patented B&L construction, are regularly supplied with B&L Medical Microscopes as standard equipment. Each element is burnished in its individual self-centering mount; consequently, the lenses cannot work loose through deterioration of a cement.

### *The Low Power Objective*

The low power is a 10× (16 mm E.F.) of 0.25 N.A., giving fine central and marginal definition. This objective is divisible. By removing the front lens, a 4× lens remains which is useful for general views of brain and embryo sections.

### *The High Power Dry Objective*

The high power dry objective is a 43× (4 mm E.F.) 0.65 N.A., specially designed for medical work. It has sufficient working distance for use with the haemocytometer, and, at the same time, is satisfactory for tissue work. Within reasonable limits, it is not sensitive to departure from the correct cover glass thickness of 0.18 mm, a desirable feature with routine material.

### *The Oil Immersion Objective*

The oil immersion objective is a 97× (1.8 mm E.F.) of full rated 1.25 N.A., excellent correction and resolving power. It gives brilliant images, meeting the critical requirements of haematology and bacteriology.

The three objectives are precisely parfocal, so that only slight refocusing is required with change of power. All objectives regularly supplied in bakelite boxes with screw tops.

The triple nosepiece supplied is dustproof with completely enclosed center. Its design establishes such accurate centration that any one of the objectives can be placed in any aperture. The B&L Patented Objective Construction assures retention of original centration after long term service. The quadruple nosepiece in place of triple nosepiece is furnished for \$2.00 extra.

## *Eyepieces*

Two Huygenian Eyepieces, standard 23 mm diameter, a 5× and 10×, are regularly included with the monoculars, a matched pair of each power with the binocular models.

These eyepieces have conical eye-lens mounts which accentuate their high eyepoints and provide greater comfort to spectacle wearers. These eyepieces afford large, flat fields. All are parfocal, so that in interchanging them only very slight fine adjustment refocusing is required. With the objectives supplied, these give magnifications as follows: 20×, 40×, 50×, 100×, 215×, 430×, 485×, and 970×, sufficient for all practical work in medicine.

For those who desire higher magnifications, 12.5× and 15× Huygenian Eyepieces are available. Wide Field Eyepieces can also be furnished.

## MAGNIFICATIONS FOR OBJECTIVES AND EYEPIECES GENERALLY USED WITH MEDICAL MICROSCOPES

Tube Length 160 mm

\*Regular Equipment

Image Distance 250 mm

†See page 9

Achromatic Objectives				Eyepieces				
		E.F. mm	Numerical Aperture	Objective Magnif.	5×	10×	12.5×	15×
3.2×	†	28	0.08	3.2×	16×	32×	40×	48×
6×	†	22.7	0.17	6×	30×	60×	75×	90×
The 10× Divisible	*	32	0.10	4×	20×	40×	50×	60×
		16	0.25	10×	50×	100×	125×	150×
21×	†	8	0.50	21×	105×	210×	262.5×	315×
Long Working Distance 43×	*	4	0.65	43×	215×	430×	537.5×	645×
Oil Immersion 80×	†	2.2	1.25	80×	400×	800×	1000×	1200×
Oil Immersion 97×	*	1.8	1.25	97×	485×	970.0×	1212.5×	1455×



## WIDE FIELD and HIGH POWER EYEPIECES

Wide Field Eyepieces are offered especially to workers who consider it an advantage to utilize more of the marginal field of view than is possible with standard Huygenian forms.

Wide Field Eyepiece, 10 $\times$ , achromatic construction with high eyepoint. Supplied separately. No. 31-15-54. . . . . \$6.25

Wide Field Eyepiece, 10 $\times$ , Ramsden type. Supplied separately. No. 31-15-56 3.50

High Power Huygenian Eyepieces of 12.5 $\times$  and 15 $\times$  are available for monocular or binocular

microscopes when it is desired to use higher magnifications than provided by the 10 $\times$  eyepieces regularly supplied.

Huygenian Eyepiece, 12.5 $\times$ , No. 31-15-12, each. . . . . \$3.00

Huygenian Eyepieces, 12.5 $\times$ , Matched Pair, No. 31-15-12-02. . . . . 6.00

Huygenian Eyepiece, 15 $\times$ , No. 31-15-15, each. . . . . 4.50

Huygenian Eyepieces, 15 $\times$ , Matched Pair, No. 31-15-15-02. . . . . 9.00



## SPECIAL PURPOSE OBJECTIVES

For some types of medical work it is convenient to have a somewhat greater range of magnification, apertures, and fields than that provided in the standard equipment. See magnification table page 8.

For general views, the new Parfocal 3.2 $\times$ , 0.08 N.A. Achromatic Objective is both convenient and desirable. No. 31-10-08-01. . . . . \$ 9.00

At the suggestion of Dr. Edward F. Malone, a 6 $\times$ , 0.17 N.A. Achromatic Objective with large field, parfocal with other B&L objectives, has been added.

This lens is very useful on large sections, embryos, and general surveys. No. 31-10-18-01. . . . . 9.00



At times, magnifications between those supplied by the 10 $\times$  and 43 $\times$  objectives are helpful. To fill this need, the 21 $\times$  objective of 0.50 N.A. is suggested because of its long working distance and brilliant definition. No. 31-10-27-01. . . . . \$15.25

The 80 $\times$  Oil Immersion Objective 1.25 N.A. with the 12.5 $\times$  eyepiece gives a magnification of 1000 $\times$ . (See table page 8.) This is convenient as a factor in some counting techniques. This objective is also desirable where longer working distance than possible with the

1.8 mm objective is required. No. 31-10-68-02 \$35.00

In dark field work, an iris diaphragm built into the objective is more convenient and satisfactory than the use of the funnel stop. The iris diaphragm permits reduction of numerical aperture to the point best suited to the object at hand, while the full aperture of the objective is immediately available for work with transmitted light. The 97 $\times$  Oil Immersion Objective can be supplied with built-in iris diaphragm, graduated in N.A., for an additional charge of \$5.00.

## DARK FIELD ILLUMINATION

In several important diagnostic procedures, the use of dark field illumination is routine practice. It is also desirable as a supplement to observations by transmitted light, because it often provides a more comprehensive picture of structure than otherwise possible. No equipment can be considered complete without some provision for dark field work.

Although the complete Abbe Condenser 1.25 N.A. can be used with metal dark field stops for dark field illumination, more satisfactory work is possible with the special Dark Field Element. Upper lens element of the Abbe Condenser is removed and replaced by Dark Field Element. This converts the Abbe Condenser into a dark field condenser which is not critical in adjustment and can be used in ordinary dark field work.



Dark Field Element No. 31-58-77 for Abbe Condenser \$5.00

Funnel Stop required when using 97 $\times$  Objective, 1.25 N.A. for Dark Field. No. 31-50-15. . . . . \$ .50

## The PARABOLOID Dark Field CONDENSER

For critical work the Paraboloid Dark Field Condenser is recommended. It is a complete optical unit in a centering mount which fits the substage ring and is designed for use with high power oil immersion objectives and an intense illuminant. By using a parabolic surface as a reflector, a more perfect focus is secured, with the result that the object is shown in brilliant contrast against a dark field. Funnel stop for reducing aperture of the 97 $\times$ , 1.25 N.A. Objective is included with Paraboloid. The 97 $\times$  Oil Immersion Objective with Iris Diaphragm is suitable for use with this condenser.

Paraboloid Condenser, including funnel stop (No. 30-50-15), in centering mount. No. 31-58-48-21. . . . . \$26.00

Complete line of Dark Field Illuminators and Accessories is described in Catalog D-122.





# MICROSCOPE ILLUMINATORS

Artificial illumination is essential to careful, informative, and trustworthy observations. A good microscope lamp should form a part of every outfit. The lamps listed below were specially designed for routine use. Either one will

add, not only efficiency, but also greater comfort and convenience. If available current is other than that listed below, equipment can be supplied. Send complete specifications for estimate.

## *The B&L SUBSTAGE LAMP*



The Bausch & Lomb Substage Lamp is a compact, efficient illuminating unit for use with monocular microscopes, either with the mirror or directly below the substage condenser. The all metal housing is bright-bronzed inside. A blue-tint fibreloid\* with ground glass or special strong-curved frosted diffusing lens corrects Mazda light to approximate daylight quality, which is very desirable for recognizing diagnostic color differences. Adequate illumination is provided by a 10 watt Mazda bulb. Ample ventilation and low wattage prevents overheating, makes longer bulb life possible and when lamp is used below the stage, avoids damage to specimens. Furnished complete with bulb and rubber covered cord with connector.

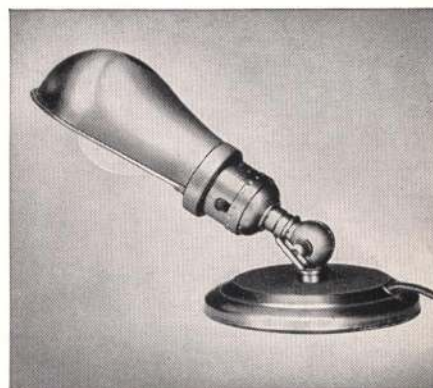
Substage Lamp, with frosted diffusing lens. No. 31-33-13-02 ..... \$3.00  
 Substage Lamp, with plain ground glass. No. 31-33-13-01 ..... 2.50

\*If preferred, glass filter is furnished in place of fibreloid.

## *The B&L UNIVERSAL LAMP*

The Bausch & Lomb Universal Lamp may be used for either substage or above stage illumination, or as a desk lamp. The reflector concentrates and directs the light rays and also acts as a shield which prevents disturbing indirect light. A blue bulb is available to give daylight effect. The divided ball joint with clamp permits the lamp to be adjusted to any angle of inclination. This lamp offers the most economical means of providing adequate illumination for either monocular or binocular microscopes. Any standard bulb of reasonable intensity may be used.

Universal Lamp, with 40 watt, 120 volt colorless frosted bulb. No. 31-33-10-25..... \$3.50  
 Universal Lamp, same as above, except with blue frosted bulb. No. 31-33-10-26..... 3.75



## *Professional CARRYING CASE*

The Professional Carrying Case fills the need of the student, interne or practitioner who must have his microscopical equipment in compact, portable form.

The microscope is held in a horizontal position against padded stops. A slide box is regularly furnished. Space is provided to hold a haemocytometer, extra eyepieces, and objectives.

This case is sturdily made to give the necessary protection to its contents. It is covered with deep maroon waterproof leatherette which retains its handsome appearance in service. Case is fitted with lock and key.

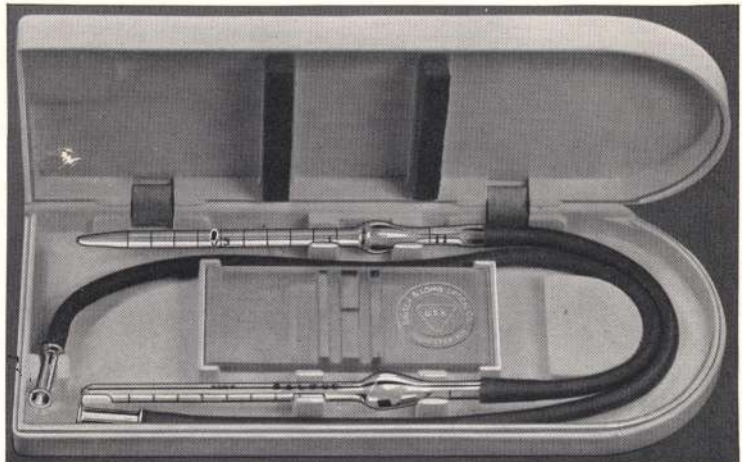
The Professional Carrying Case, No. 31-39-72, is supplied in place of the vertical hardwood case regularly included with the microscope at an additional charge of \$2.00.



## The Bausch & Lomb HAEMACYTOMETER

The B&L Haemacytometer is of one-piece construction. A special glass, made for this purpose and well seasoned, is used. Initial accuracy is permanent. Special attention is paid to grinding and polishing the counting chamber, so that its depth is correct and uniform. The ruling of the counting areas is done very precisely. The cross section of the ruling is of special shape, so that the lines have high visibility. The cover glasses are made with equal precision. Both sides are optically worked. This is another feature contributing to accuracy and satisfaction. Counts can be made with confidence in critical diagnostic studies.

Each B&L Haemacytometer is provided with a moulded plastic case, two pipettes and two cover glasses.



With Single Neubauer Ruling. No. 31-75-48-22.....	\$10.00
With Double Neubauer Ruling. No. 31-75-68-24.....	12.00
With Bass-Johns Ruling (one pipette only; 1:100). No. 31-75-65-27.....	13.00

## Eye-piece MICROMETER DISC and Stage MICROMETER

At times it is desirable to have information as to the actual size of objects and fields under examination. For most medical student work, the simple micrometer disc, which

can be placed in the regular Huygenian Eyepiece, and a stage micrometer for establishing the value of the divisions, are all that is required.

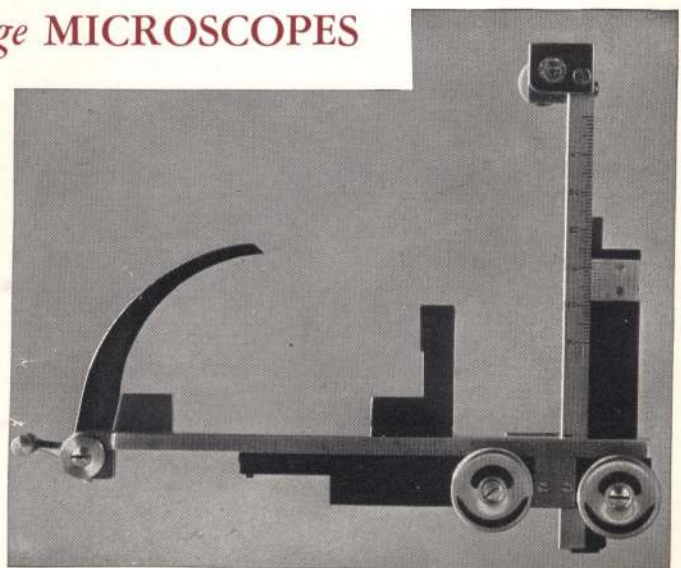
Eye-piece Micrometer—5 mm scale divided to 0.1 mm. No. 31-16-05.....	\$3.00
Stage Micrometer—2 mm scale divided to 0.01 mm. No. 31-16-90.....	7.00

## Attachable MECHANICAL STAGES for Plain Stage MICROSCOPES

For systematic searching, as in bacteriology, blood counting, and other diagnostic work, some mechanical method for moving the slide precisely and systematically is necessary. To meet this need on microscopes with plain stages, two types of mechanical stages can be furnished which are fitted, without tools, to the microscope at any time by the user, thus adapting plain stage models for quantitative work. The adjustments on both stages are made by well-fitted rack and pinion, giving equal speed in two directions at right angles one to the other.

When ordering a mechanical stage subsequent to the purchase of the microscope, please give serial number of microscope to which it will be attached.

MECHANICAL STAGE No. 31-59-59 has graduations in millimeters reading to tenths by verniers, thus permitting the making of records of particular fields on the slide for relocation and subsequent observation. The slide brackets, one of them spring actuated, accommodate standard specimen slides up to 50 x 75 mm. Pinion heads are close to-



gether in constant relative position. The stage can be securely attached by the double screw clamp \$33.00

MECHANICAL STAGE No. 31-59-53 (plain) is similar to No. 31-59-59, but has no graduations. . . 25.00





*America's Leading Optical Institution—devoted to the service of science and conservation and extension of vision.*

## BAUSCH & LOMB PRODUCTS

Modern Medicine employs many optical aids in its service. Below are listed a few of the many Bausch & Lomb Products used in such work. Information gladly furnished on lines of interest.

- Microscopes, Compound
- Monocular, Binocular and Greenough,<sup>†</sup>
- Types, Accessories and Illuminators
- Microtomes
- Photomicrographic Apparatus
- Refractometers—Colorimeters
- Spectrographic and Spectrometric Equipment
- Balopticons and Micro-Projectors
- Photographic Lenses
- Binocular Ophthalmoscope
- Clason Visual Acuity Meter
- Diagnostic Instruments
- Ferree-Rand Perimeter
- Ferree-Rand Projector
- (Acuity Meter)
- Greens' Refractor
- Keratometer
- Ophthalmic Hydraulic Chair and Unit
- Orthogon Lenses
- Precision Test Lens Set
- Shop Equipment for the Optician
- Spectacle and Eyeglass Frames
- Stereo-Campimeter
- Universal Slit Lamp
- Binoculars

Glass to meet the exacting specifications for all types of scientific instruments is made in the Bausch & Lomb Glass Plant, the only one of its kind in America.

Orthogon "wide vision" eyeglass lenses, designed by the Bausch & Lomb Scientific Bureau, afford perfect correction from center to edge. Enjoy their advantages—ask for them the next time you have your eyes examined.

*The prices herein are subject to change without notice and to addition or increase for applicable taxes, excises or other charges imposed by any governmental authority with respect to the articles listed herein or to the sale, use or consumption thereof. Orders are subject to final acceptance at Rochester, New York, and are accepted subject to prices prevailing at time of shipment.*

# BAUSCH & LOMB OPTICAL COMPANY

*Established 1853*

MAIN OFFICES AND WORKS

ROCHESTER, N. Y., U. S. A.