F. Changing magnification.

1. Position the 10X objective (4) in the optical path.

2. This microscope has been parfocalized, although it is possible that small differences exist between objectives. If so, adjust focus slightly using the fine focus knob (20).

3. When changing to the 40X and 100X objectives, take care that objectives do not touch the sample, to prevent possible damage to the front lens of the objectives.

4. In order to obtain maximum resolution of the 100X oil immersion lens, it is necessary to apply immersion oil between the cover glass of the slide, and the front lens of the objective.

    a. Use a very small amount of immersion oil, a tiny drop should be enough.

    b. If air bubbles appear, they can be removed by slightly moving the revolving nosepiece (3) and repositioning it.

    c. After viewing all parts which have come into contact with the immersion oil must be cleaned. For cleaning, use a soft cotton cloth, lightly dampened with Xylene. Failure to clean the 100X objective could result in the oil drying on the lens surface, thus blocking view when the objective is used again, and possibly damaging the lens.

    NB: Immersion oil must ONLY be used with the 100X objective, which is the only objective prepared for it. If any other objective comes into contact with immersion oil, it must be cleaned immediately.

G. Critical illumination.

The ideal level of illumination is when all illumination elements are brought into proportion, basically, by the condenser (10). To achieve critical illumination an object over the illuminator (22) must be in focus.

1. Focus on a sample with the 10X objective (4).

2. Place a flat object on the illuminator which permits light to pass through, a slide for example.

3. Without letting go of the slide, focus, using the collar to move the condenser (Fig.1).

4. When critical illumination is achieved, the slide can be removed. If any irregularity appears in the field of view, i.e. an optical element from the focussed illuminator, move the condenser just enough to take it out of focus, thus obtaining the best level of illumination possible, and closest to critical illumination.

How to adapt a photographic, or a video camera. (Only for model B1-223)

Model B1-223 comes equipped with a vertical port on the top of the head which permits the attachment of a photographic, or reflex type camera through use of the corresponding adapters. (Fig. 3)

The three position sliding rod (Fig. 4) allows the microscope image to appear easily through this third path.