

# OPERATING INSTRUCTIONS

## Gold Leaf No. 00691-16

### 1. Introduction

This gold leaf is specially cut to replace the original leaf supplied with the No. 78715 Projection Electroscopes. Each package contains 25 leaves.

### 2. Installation

Even if the greatest care is taken in packing and unpacking, fragile gold leaf occasionally sticks to the electroscopes stem or is torn. If any damage occurs to the leaf in the electroscopes, new leaves can be installed following these directions. Care must be taken when handling the delicate gold leaf. All work with gold leaf should be done in a place absolutely free from drafts. The gold leaf supplied in the package has been cut to the proper size for use in the electroscopes. Remove the top sheet of protecting paper, exposing the uppermost gold leaf. Using a pair of fine pointed forceps, lift the protecting paper leaf which carries the uppermost gold leaf and place it on a flat object such as a box or book, with the wide end of the gold leaf very near the surface.

Remove the insulated stem on the electrometer housing and wipe it clean with a cloth. Apply a small amount of library paste or mucilage in a very narrow strip across the plate at a point about  $1 \frac{5}{8}$ " (41mm) from the lower end of the plate, just below the bent section and inside. Carefully bring the plate down on the gold leaf as nearly parallel to the latter as possible and in such a position that the adhesive strikes the end of the leaf which is near the edge of the supporting object. A match stem may be placed under the end of the plate to serve as a fulcrum about which the plate may be turned as it is slowly raised to a vertical position.

While this is being done, the gold leaf will gradually separate from its supporting sheet, although it may be necessary to hold the sheet down to facilitate the separation. When the entire stem has been pulled upward to a nearly vertical position, the gold leaf should be free from its supporting sheet and adhering to the metal plate. The plate is then carefully replaced in the housing and the instrument is ready for use.

In order to install the stem and gold leaf in the electroscopes, remove the shield from the top of the instrument. With the spring clamp and paper guard removed as described above, tilt the leaf plate slightly with the gold leaf on the top side. Slowly lower the system into the top of the electroscopes housing, literally holding your breath as you do so, as a slight breeze will catch and tear the leaf. Carefully press the sulfur insulated bushing as far down into the opening as it will go. The instrument is now ready for use.

### 3. Care

Gold leaf is extremely fragile and should be handled with extreme care at all times. Tweezers or forceps are recommended for handling gold leaf, as it is very thin and easy to tear. In the event of any difficulty with the gold leaf, contact Central Scientific Company, giving details of the problem. Do not return this item without written authorization from Central Scientific Company.

Revised 1/88