cost ; and many patterns could be cut out of wood which could not be cut out of marble. Therefore, in marble, breadth and simplicity should be aimed at, and only such designs adopted as might be used by the marble mason, which are principally geometrical patterns, formed of strap work, circles, octagons, pentagons, hexagons, etc. There is, of course, an endless variety of patterns which may be used for this purpose, always keeping in mind the caution before given as to simplicity and suitableness. Much of the prejudice against the use of imitation marbles has arisen from the use of marbled paper-hangings, the majority of them being such gross caricatures of the marbles they profess to represent ; and even the best of them are so utterly inferior to really first-class painted marble, that no comparison can be instituted between them. A wall covered with paper never can have that evenness of surface and smoothness of finish that a painted wall properly prepared has. Consequently we see at once that it is paper, which fact destroys all illusions at once. If we can see at once how an effect is produced, that effect will not be near so pleasing as if the manner of its doing is effectually concealed ; the greater and more complete the deception, and the more pleasure and wonder it excites, the greater the pleasure we receive from its beauty.

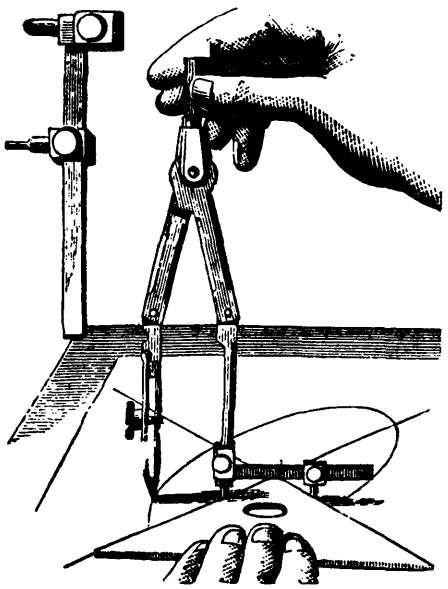
Another good style of treatment is to panel vestibule walls with lines and flat ornaments, and borders stencilled in quiet neutral tints, in accordance with the style of the architecture. The staircase may be treated in the same manner, or it may be painted dado high, with two shades of the same color, the darkest tint about three or four feet above the skirting, and a suitable border stencilled upon the line of division ; or the stencil may be divided ; a black or dark-colored border may be stencilled upon the lower or dark color, and a line and stops, or small repeating ornament, upon the upper or lighter tint, in any properly contrasting color, or it may be done with the same color as the dado is painted with. A good effect may be got by stencilling a diaper upon the dado of a darker or lighter shade of the same color, with a border of course, but we object altogether to the upper part being treated in the same manner, thus making too busy what *ought*, in reality, to be a relief and contrast to the busy rest of the house. Nothing can be in worse taste than to cover every part of our houses with busy ornament, creating a feeling of unrest and oppression utterly opposed to the true principles of decorative art.

Fossil Footprints in Coal.—At the last meeting of the New York Academy of Natural Sciences, Dr. Joseph Leidy read a letter from Mr. W. Lorenz, chief engineer of the Philadelphia and Reading Railroad Company, referring to a fossil specimen presented to the academy by Mr. William D. H. Masson, of Williamstown, Pa. The specimen is a mass of coal shale with footprints, and was discovered by the donor at the Ellengowan colliery, in the Mahanoy coal field. Mr. Lorenz remarks that it is of special interest as having been the first specimen of the kind found in the anthracite coal field. The specimen is an irregular slab, upwards of a foot long, and less than half the breadth. The upper surface is obscurely ripple marked longitudinally, and is crossed in a slant by seven tracks, which are in pairs, except one, in advance on the right. The four tracks on the right occupy a line of six inches, and are about an inch and a half apart from those on the left. The more perfect impressions exhibit four widely divergent toes, successively increasing in length from within outwardly, excepting that the fourth toe is slightly shorter than the third. The expanse of the tracks is about one inch. The impressions probably pertain to some salamandroid animal ; and as it had been found useful to refer to fossil foot tracks as the representatives of the animal by which they were made under distinct names, he would in accordance with a suggestion from Mr. Lorenz, name the form represented by the Ellengowan anthracis.

Carbolic Acid Inhalation.—The inhalation of carbolic acid spray (two per cent. solution) in phthisis has been tried in the Mount Sinai Hospital, New York. The first case had fetid expectoration, with an average temperature of 102½°. The first effect of the inhalation was to increase to a marked extent the sputa, but at the same time to check the fetor. The most important effect of the inhalations was to decrease the temperature from 102° to 101°, 100°, and 99°. In some of the cases carbolic acid acted as an irritant, giving rise to considerable spasmodic effects, and in these cases salicylic acid was substituted. The latter agent did not produce such a decided effect on the temperature, but its action on the fetor was equally marked.—*Medical Times.*

A SIMPLE ELLIPSOGRAPH.

The accompanying illustrations represent a simple attachment for compasses for drawing ellipses. It consists in adding an extra point to the compass and then employing it in a manner similar to the way the trammel is used for the same purpose. From the consideration that the draughtsman does not have many ellipses to draw, the crossbars have been dispensed with for the sake of simplicity and the triangle made to take their place. It will be observed that the point inserted in the com-



pass leg, and also the one on the sliding piece, are blunt at the end, so as not to catch on the paper in sliding along the edge of the triangle.

This instrument has the disadvantage of only drawing a quarter of the ellipse at a time, and of requiring a little practice in its manipulation on the part of the draughtsman. On the other hand, it possesses the advantages over the trammel of a greater range of work, of not requiring an additional pen and pencil to keep in order, of compactness, of simplicity, and cheapness.

DISTINGUISHING BUTTER FROM LARD, BEEF FATS, ETC.

Mr. William Gustavus Crook, public analyst for Norwich, England, describes a method which will in a few minutes distinguish butter from the fat of beef, mutton, or pork, or mixtures of them.

The sample to be examined (if in the form of butter) must be first melted and rendered pretty free from water and salt, by filtration if necessary ; 10 grains are then to be put into a test tube and liquified by placing the tube in hot water at about 150° Fah. ; remove the tube when ready, and add 30 minims of carbonic acid (Calvert's No. 2 acid, in crystals, one pound ; distilled water, two fluid ounces). Shake the mixture, and again place it in the water bath until it is transparent. Set the tube aside for a time. If the sample thus treated be pure butter, a perfect solution will be the result ; if beef, mutton, or pork fat, the mixture will resolve itself into two solutions of different densities, with a clear line of demarkation ; the denser of the two solutions, if beef fat, will occupy about 49.7 °/₀ ; lard, 49.6 °/₀ ; mutton, 44 °/₀ of the entire volume ; when sufficiently cooled, more or less deposit will be observed in the uppermost solution. If olive oil be thus tested, the substratum will occupy about 50 °/₀ ; with castor oil, there is no separation. With some solid fats (not likely to be used fraudulently) no separation whatever takes place ; the addition of a minute portion of alkanet root will render the reading of the scale extremely distinct by artificial light. The author states that the above method (although not intended to surpass other processes) is capable of wide application, the saving of a large amount of time, and the reliability of its results will at once recommend it as a "first step" in butter analysis.