Nov. 25, 1930. M. B. BRENNEMAN 1,782,644

PHYSICS LABORATORY APPARATUS

Filed Dec. 26, 1929

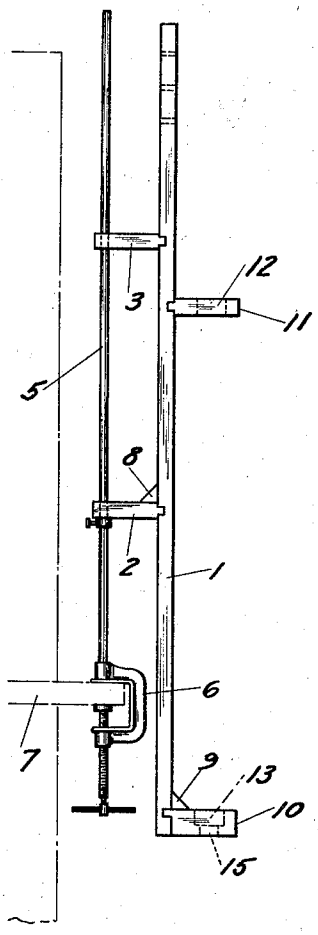


FIG-1

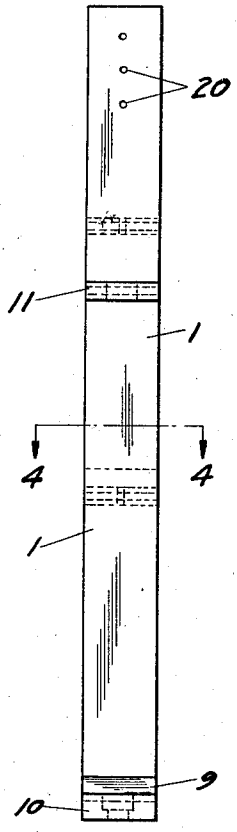


FIG-2

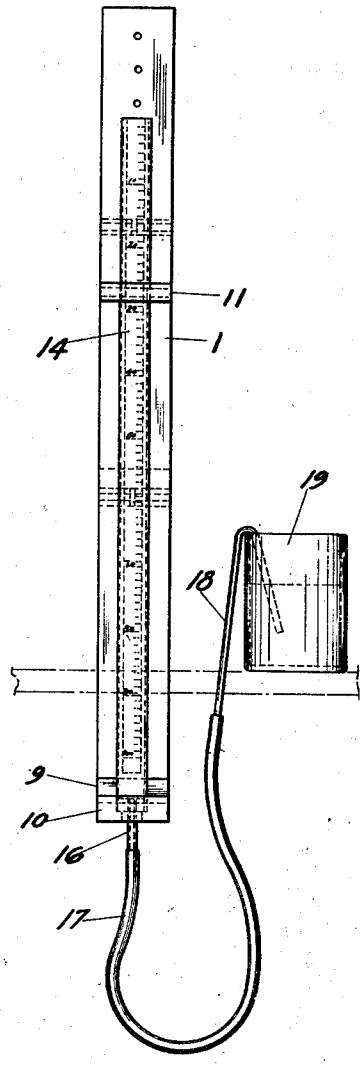


FIG-3

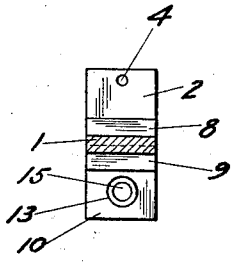


FIG-4

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UNITED STATES PATENT OFFICE

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PHYSICS LABORATORY APPARATUS

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The present invention relates to equipment for the support of apparatus used in laboratory experiments, either physical or chemical though the same was designed with physical experiments, primarily, in view. Among the objects of this invention are to provide equipment for adjustably supporting apparatus at positions convenient for use; to provide equipment of the nature indicated which will support glass tubing closely adjacent but out of contact with the floor so that there will be substantially no danger of breaking the glass tubing; to provide apparatus of the character indicated which will support the apparatus being used in readily adjustable positions and capable of being moved up and down quite readily; to provide equipment of the nature indicated which will make it possible to move the laboratory equipment from one place to another, easily and without danger of breaking; and such further objects, advantages and capabilities as will hereafter appear and as are inherent in the construction disclosed herein. My invention further resides in the combination, construction and arrangement of parts illustrated in the accompanying drawing and, while I have shown therein what is now considered the preferred embodiment of this invention, I desire the same to be understood as illustrative only and not to be interpreted in a limiting sense.

In the drawing annexed hereto and forming a part hereof, Fig. 1 shows my improved apparatus mounted upon a supporting rod secured to a table or ledge of any accessible and convenient type; Fig. 2 is a face view of the structure shown in Fig. 1, taken from the right side of that figure; Fig. 3 is a similar view showing the apparatus in use; Fig. 4 is a transverse section substantially along the plane indicated by the line 4—4 Fig. 2.

Reference will now be made in more detail to the annexed drawing in which a main upright member is indicated by the numeral 1, this upright member having secured to its rear side a pair of brackets 2 and 3 provided with openings 4 for the reception of the supporting rod 5. This rod is held in place by a clamp 6 on a ledge or table top 7. While it is not considered necessary, the bracket 2 is preferably braced by a triangular brace 8 which makes the structure more rigid. A similar brace 9 is located between the upright 1 and a shelf 10 adjacent the bottom of the upright. A second shelf 11 is secured to the upright 1 and has an opening 12 extending therethrough. This opening is preferably of substantially the same size as the opening 13 in the shelf 10 and is designed for the reception of a large tube 14. A smaller opening 15 extends from opening 13 through the bottom of the shelf 10 and is designed to receive a tube 16 which passes therethrough and through a stopper in the bottom of the tube 14.

In Fig. 3 the tube 16 is shown as connected by a flexible tube 17 with a tube 18 which dips into a jar 19 containing liquid. As illustrated in Fig. 3, a measure is shown between the tube 14 and the upright 1. This scale may either be a scale secured to the glass tube, etched thereon, mounted in an opening in the shelf 11, or otherwise associated with the tube so that it will be possible to make readings in connection with the tube 14. A very convenient arrangement of this is to have a notch cut in the edge of the brace member 9 for the reception of the lower end of a meter stick and a corresponding opening cut through the shelf 11 so that the meter stick can be inserted therethrough and into the notch in the brace 9. This brings the face of the meter stick close to the glass and in a convenient place to read. Openings 20 are formed in the upright 1 for any desired purpose, as, for example, the support of a tuning fork above the tube 14 when this apparatus is used in the performance of experiments in sound. This apparatus is also used in the determination of pressure beneath a fluid surface and for various other experiments. It is found extremely convenient because of the ease with which the height of the apparatus may be adjusted and because of the fact that breakage of glass tubes is practically entirely eliminated. This support can also be used in the performance of experiments in chemistry wherein a support of this type is desired.

It will of course be understood that the

structure disclosed herein may be departed from without departing from the spirit of my invention as set forth in the appended claims.

Having now described my invention, I claim:

1. A support for laboratory apparatus comprising a flat bar having pairs of brackets or shelves extending from opposite faces thereof, one of said pairs having aligned openings therein for the reception of a supporting rod and the other pair having aligned openings therein for the reception of tubular apparatus used in performing experiments.

2. Apparatus of the character indicated comprising an upright bar having upon one of its faces a pair of brackets perforated for the reception of a supporting rod, and on another face a pair of shelves provided with aligned openings for the reception of apparatus to be used in performing experiments, the opening in the lower shelf having a shoulder therein for the support of said apparatus.

3. A support for the purpose indicated comprising a body member having a shelf adjacent one end, said shelf having an opening therethrough, which opening is of a larger diameter in that portion which is to be directed upwardly, a second shelf on the body member on the same side as the first shelf and spaced therefrom, said second shelf having an opening therethrough of substantially the same diameter as the larger portion of the opening through the first named shelf, and a pair of perforated brackets on another side of said body member, the perforations in said brackets being aligned and adapted to receive a supporting rod whereby the body may be supported for vertical adjustment when in use.

In witness whereof, I hereunto subscribe my name to this specification.

MILTON B. BRENNEMAN.