Feb. 1, 1966 H. I. BERMAN 3,232,573

SUPPORT BRACKET

Filed Nov. 1, 1961

Fig. 1

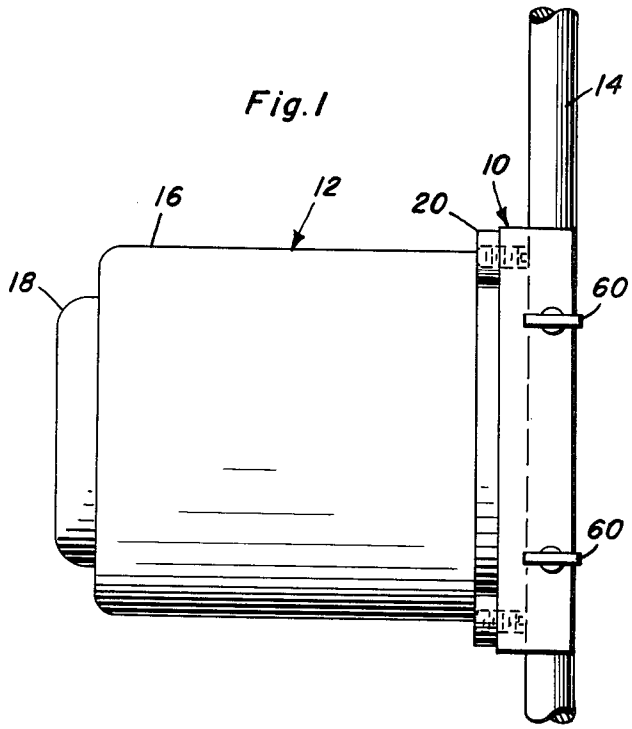


Fig. 3

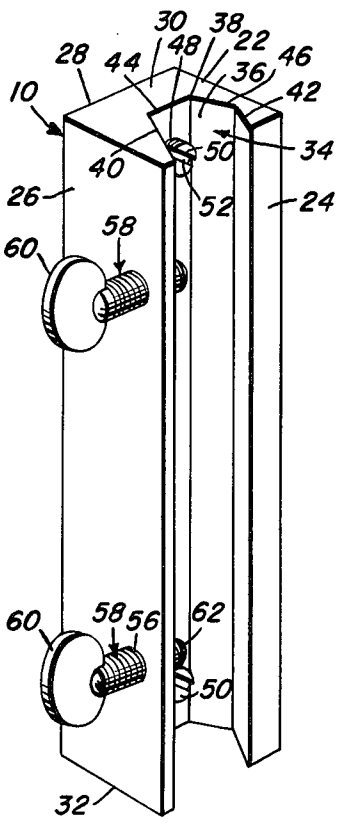


Fig. 2

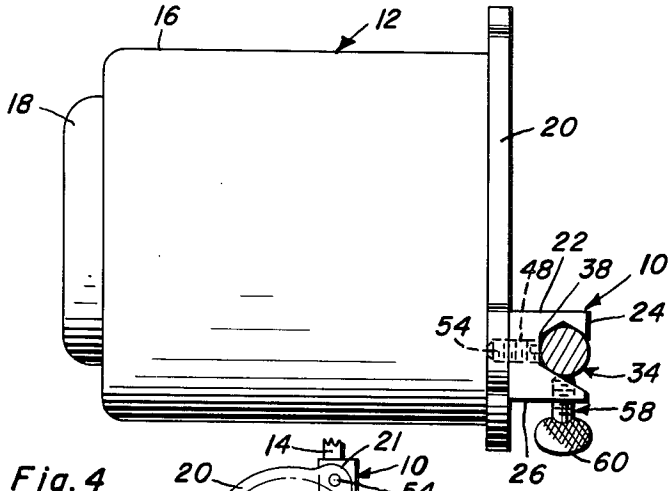
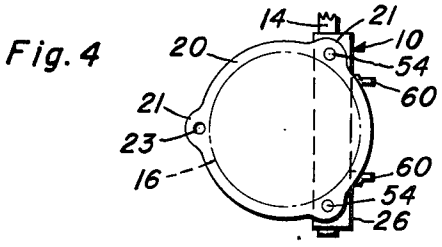


Fig. 4



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INVENTOR.

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3,232,573

SUPPORT BRACKET

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1 Claim. (Cl. 248—226)

This invention relates to brackets or clamps, and more particularly to a clamp adapted to support a standard scientific laboratory transformer on a standard laboratory ring stand or on a one-half to fifty-four hundredths inch diameter metal rod or on a pipe having a similar outside diameter.

It is the primary object of the invention to provide a device for mounting transformers or other articles above a laboratory table or bench for saving space and removing the transformer to a relatively safe position where it is free from damage due to spillage of liquids, chemicals, compounds, etc. thereon.

Another object of the invention is to provide a support bracket for transformers which permits safe, quick and easy mounting of the transformer in an elevated position without requiring any skill or special tools on the part of the operator.

It is another object of the invention to provide a bracket for supporting various objects on a rod or pipe which is of relatively simple design, of economical construction, durable in use and requires a minimum of maintenance.

It is still another object of the invention to provide a bracket for supporting various objects which is particularly adapted to be manufactured by an extrusion process.

It is another object of the invention to provide a bracket for supporting objects on straight rods or pipes which may be inserted on and removed from the support in a radial direction, thereby not requiring that the bracket be inserted over the end of the support.

These together with other objects and advantages which will become subsequently apparent reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawing forming a part hereof, wherein like numerals refer to like parts throughout, and in which:

FIGURE 1 is an elevational view showing the bracket installed on a vertical rod and supporting a transformer thereon;

FIGURE 2 is a plan view of FIGURE 1;

FIGURE 3 is an enlarged perspective view of the novel bracket or clamp; and

FIGURE 4 is a front elevational view of FIGURE 1 on a reduced scale with the transformer removed.

With continuing reference to the various figures of the drawings wherein identical reference numerals indicate like parts, it can be seen that the bracket **10** is secured to the rear of a standard scientific laboratory transformer **12** and supports it in an elevated position on a vertically extending rod **14**. The rod **14** comprises a portion of a standard laboratory ring stand which has approximately one-half inch diameter. The transformer **12** is of the variable voltage type generally employed in scientific laboratories.

The transformer **12** has a generally cylindrical housing **16** and a control mechanism **18** on its forward vertically extending face. The back wall of the housing **16** includes a vertically extending circular plate **20**. The plate is slightly larger in diameter than the housing **16** and has three mounting wings **21** of arcuate shape spaced 120° apart around its periphery. Each wing has a threaded bore **23** for receiving a stud **50** of bracket **10**.

The bracket **10** is of generally rectangular configuration and includes four rectangular sides **22**, **24**, **26** and **28** of

equal size and of the same shape, and further includes two parallel end walls **30** and **32**.

The bracket **10** is formed with a groove **34** which extends longitudinally therethrough, and the groove further extends through the front wall **24** inwardly at an angle to the side walls **22** and **26** towards the center of the bracket. The groove **34** extends slightly beyond the center of the bracket and terminates in a V-shaped trough **36** having an apex **38**. The groove **34** has two parallel walls **40** and **42** which form an angle of approximately 30° with the side walls **22** and **26**. The walls **40** and **42** terminate inwardly at the outer edges of the side walls of the trough **36**.

The side walls **44** and **46** of trough **36** form an angle of approximately 120° with each other and the wall **44** is parallel to the back wall **28** of the bracket.

A plurality of threaded spaced bores **48** are provided in the center of the side wall **44** and extend perpendicular thereto. Threaded cylindrical studs **50** are screwed into the bores **48**. The studs **50** have conventional screwdriver slots **52** in their outer ends, and the inner ends thereof are provided with tapered surfaces **54**.

The side wall **26** is provided with a plurality of bores **56** which in turn are provided with threads for receiving and mating with the threads on stud **58**. The stud **58** is provided with a conventional wing head **60** to facilitate manual rotation thereof and its inner end is rounded as shown at **62**. The bores **56** for studs **58** are arranged in a row parallel with the front wall **24**.

In operation, the bracket **10** is mounted in a vertical position offset from the vertical center of the back plate **20** of transformer **12** so that threaded bores **48** are aligned with two of the threaded bores **23** in the wings **21** of the plate **20**. Screws **50** are then rotated by a conventional tool such as a screwdriver so that the inner ends thereof are threaded into the bores in the plate **20** and the head of the studs **50** become flush with the side wall **44** or extend inwardly into the bores **48**. The transformer is then manually lifted and moved so that groove **34** receives rod **14** and the rod abuts against the side walls **44** and **46** of trough **36**. The transformer and bracket **10** are then rotated about the axis of rod **14** to the desired angular position and then slid or moved vertically along the rod **14** to the desired vertical position, and then the screws **58** are rotated until their inner ends **62** tightly abut one side of the rod **14** and urge it tightly against walls **42**, **44** and **46**. It is to be noted, that the rod **14** is a part of a conventional laboratory stand and is one-half to .540 inch in diameter. The axis of bores **56** and studs **58** are spaced a distance from the wall **44** which is slightly greater than the radius of the rod **14**, and this distance may be for example $\frac{9}{32}$ or $\frac{5}{16}$ of one inch. This ensures that the curved end **62** of stud **58** will contact the rod **14** so as to urge it inwardly within groove **34**.

While this novel clamp or bracket **10** has been particularly designed for laboratory use as explained above, it is apparent that the bracket may be made in larger or smaller sizes if desired to be used for other purposes.

The foregoing is considered as illustrative only of the principles of the invention. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction and operation shown and described, and accordingly, all suitable modifications and equivalents may be restored to, falling within the scope of the invention as claimed.

What is claimed as new is as follows:

For use in releasably mounting a unit having a substantially planar base on an elongated cylindrical support rod, a vertically elongated member, said member having

a groove formed in one side thereof, said groove extending longitudinally throughout the full length of the member, said groove being of a depth sufficient so as to accommodate a major portion of a support rod, said groove terminating in a flat bottom wall, said bottom wall being substantially parallel to the side of the elongated member opposite from said one side, this opposite side being substantially planar and adapted to receive the planar base flat thereagainst, a plurality of fasteners for securing said base to the elongated member, said fasteners being vertically spaced along said member and engageable with said base through the bottom wall of said member, and vertically spaced along said member and engageable with said base through the bottom wall of said member, and vertically spaced adjustable fastening means extending through said member and engageable with a support rod positioned within the groove for fixing the position of the member on a rod, the side walls of the groove diverging outwardly from opposite edges of the bottom wall toward said one side, one of said walls having the outer portion

thereof angled so as to extend substantially parallel to the other side wall, said outer portion terminating at said one side inwardly of the corresponding edge of the bottom wall, said side walls, including said outer portion, being flat, said fastening means extending into the groove from the other side wall in a manner so as to force a cylindrical rod into line contact with the bottom wall and inner and outer portions of said one side wall.

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CLAUDE A. LE ROY, *Primary Examiner.*

ROBERT C. RIORDON, *Examiner.*

UNITED STATES PATENT OFFICE

CERTIFICATE OF CORRECTION

Patent No. 3,232,573 February 1, 1966

Herbert I. Berman

It is hereby certified that error appears in the above numbered patent requiring correction and that the said Letters Patent should read as corrected below.

In the grant (only), line 1, for "Herbert L. Berman" read -- Herbert I. Berman --.

Signed and sealed this 20th day of December 1966.

(SEAL)
Attest:

ERNEST W. SWIDER
Attesting Officer

EDWARD J. BRENNER
Commissioner of Patents