

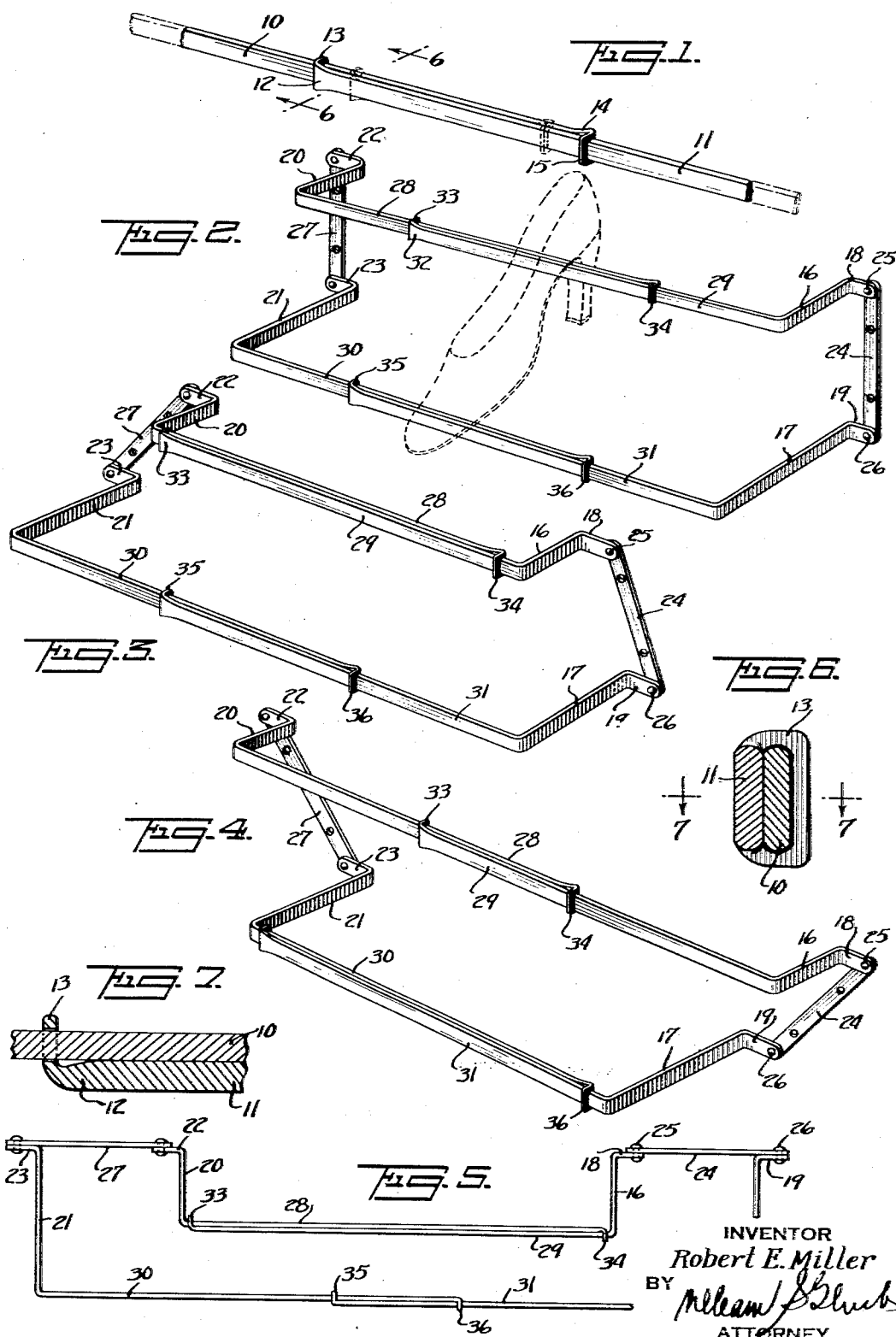
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COLLAPSIBLE AND ADJUSTABLE WALL RACK

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My present invention relates generally to racks, and has particular reference to wall racks of the character which are designed to support clothing, neckties, shoes, and the like.

It is a general object of my invention to provide a rack with at least one supporting portion arranged at a spaced interval from the wall, and wherein said portion is adjustable in length. In a preferred embodiment, the rack comprises a U-shaped element or strip, the arms of the U being provided with means for attaching them at their ends to a wall or the like, and the base of the U being adjustable.

A more particular object is to construct the supporting portion, i. e., the base of the U in the preferred embodiment, in a novel simplified manner which is inexpensive to manufacture, capable in a simple manner of the contemplated adjustment, and attractive in appearance.

It is another general object of my invention to provide a rack having at least two superposed shelf elements which are positionally adjustable with respect to one another and which are each individually adjustable as to length. In a preferred construction, each individual shelf element embodies the features hereinbefore referred to as to simplicity of construction and adjustability.

In accordance with my invention, a rack composed of superposed shelf elements of the foregoing character is adapted to be collapsed into a compact structure lying substantially in a single plane; is capable of adjustment into a wide variety of forms to satisfy differing requirements, and embodies a structural nature which permits these adjustments to be expeditiously effected.

For example, where my invention is applied to a shoe rack, I provide each of two shelf elements in the shape of a U, the lower element having longer arms and therefore extending outwardly to a greater extent. Between the ends of the U-shaped elements are a pair of connectors pivotally associated with the elements so as to permit of the relative positional adjustment herein-

before mentioned. In a preferred construction, both of the shelf elements have independently adjustable U bases to permit of a wide variety of supporting arrangements.

For the attainment of the foregoing objects and such other objects as may hereinafter appear or be pointed out, I have constructed a device embodying the features of my invention and illustrated in the accompanying drawing wherein—

Figure 1 is a perspective view of the main portion of a supporting rack embodying certain features of my present invention;

Figure 2 is a perspective view of a wall rack designed for the support of shoes, with the elements in one relative adjustment;

Figure 3 is a view similar to Figure 2, with the elements differently adjusted;

Figure 4 is a view similar to Figures 2 and 3, with the elements adjusted in a further manner;

Figure 5 is a plan view of the device of Figures 2, 3, and 4 in collapsed condition;

Figure 6 is an enlarged cross-sectional view taken substantially along the line 6—6 of Figure 1; and

Figure 7 is an enlarged cross-sectional view taken substantially along the line 7—7 of Figure 6.

In Figure 1, I have shown a supporting rack which consists of the two overlapping strips 10 and 11, each strip being preferably of metal having a smooth and polished exterior surface and rounded edges. Each strip is substantially rectangular in cross-section, although such a configuration is not essential.

The overlapping end 12 of the strip 11 is provided with an integral enlarged head 13 which is preferably produced by flattening the end of the strip, this head being turned into a transverse direction and being provided with an aperture of just sufficient size snugly and yet slidably to encircle the other strip 10. The overlapping end 14 of the strip 10 is similarly provided with a transverse integral head 15 which slidably engages around the strip 11.

The rack of Figure 1 is thus adjustable in length by varying the extent of overlap,

the strips being axially movable with respect to each other and being retained in proper closely overlying position by the inter-engagement with them of the heads 13 and 15. In dot-and-dash lines, I have shown the manner in which the heads would vary their relative positions as the length of the rack is increased.

In Figure 1, I have not illustrated the opposite supporting ends of the rack because of the wide variety of means for mounting the rack either between two walls, in suspended position from a horizontal wall, or upon a single vertical wall. One manner of supporting the rack of Figure 1 is to provide the opposite free ends of the strip 10 and 11 with transverse arms to make the entire rack U-shaped, these arms being then attached at their ends to a vertical wall.

The adjustability of the rack as to length renders it useful under a variety of conditions. For example, if the rack is applied to the inside surface of a door, it may be adjusted in length, prior to attachment, to the most suitable length to be carried by such door.

In Figures 2-5, I have shown a rack designed for the specific purpose of supporting shoes. The rack I have shown is composed of two shelf elements each of which is U-shaped, the U's being arranged in substantially parallel planes and the arms of the upper U being shorter than the arms of the lower U. More particularly, it will be noted that the arm 16 of the upper shelf element is shorter in length than the arm 17 of the lower one.

Where the device is used in the customary manner, the ends of all the U arms are turned to lie in a common vertical plane, as shown by the free end 18 of the arm 16 and the rear or free end 19 of the arm 17. The arms 20 and 21 correspond on the opposite end of the device to the arms 16 and 17, and the ends 22 and 23 correspond to the ends 18 and 19.

Between the ends 18 and 19, I provide a connector 24 which is pivotally associated at its extremities with pivots 25 and 26. The axes of these pivots are arranged substantially perpendicular to the common vertical plane referred to so that by adjustment of the connector 24 into positions other than vertical, the positional relationship between the two superposed shelf elements may be varied. A connector 27 corresponds to the connector 24.

In Figure 2, the elements have been so adjusted that the bases of the two U-shaped shelves are of substantially equal length. In this adjustment, the device may be attached to a suitable supporting wall for the support of shoes, as exemplified by the shoe shown in dotted lines. It is customary to support the heel of the shoe over the base

of the upper U, the shoe extending diagonally downwardly with its sole resting upon the base of the lower U.

In accordance with my present invention, at least one of the U bases is adjustable in length, and in the embodiment illustrated both bases are so constructed. The base of the upper U comprises, for example, the two overlapping strips 28 and 29, and the base of the lower U comprises the two overlapping strips 30 and 31. The portion or strip 28 is preferably made integral with the arm 20 and the turned end 22, and the other overlapping strips are correspondingly made integral with the corresponding elements.

In accordance with my invention, the overlapping end 32 of the strip 29 is provided with the transverse integral head 33 which encircles the strip 28, and the head 34 carried by the strip 28 similarly encircles the strip 29. An adjustment in length is therefore exceptionally simple, as previously pointed out with respect to Figure 1, the two strips of each shelf element being axially or longitudinally adjustable with respect to each other and the apertured heads serving as guides and holding the structure together in a firm and reliable manner.

In Figure 3, I have shown a possible arrangement of parts wherein the base of the upper U is shorter than the base of the lower U. As a result, it will be noted that the heads 33 and 34 are further apart in Figure 3 than they are in Figure 2, while the heads 35 and 36 carried by the strips 31 and 30 respectively are closer together than in Figure 2.

The adjustment of Figure 3 provides a construction which is pyramidal in nature and achieves the desirable result of imparting shoe-supporting utility to the arms 16, 17, 20, and 21. For example, at least one shoe might be supported upon the arms 16 and 17 of Figure 3 in the manner hereinbefore described.

The adjustment of the base lengths in Figure 3 is accompanied of course by an adjustment of the connectors 24 and 27 into upwardly converging positions and, accordingly, in Figure 3, the superposed shelf elements are closer together than in Figure 2. This distinction alone results in imparting different characteristics to the device of Figure 3, because it may, for example, be employed for supporting smaller shoes or shorter articles.

In Figure 4, I have shown a different adjustment wherein the base of the upper U has been extended and the base of the lower U has been reduced in length. In this adjustment, the connectors 24 and 27 converge downwardly and still different characteristics are thereby imparted to the device. For example, shoes or similar articles may be supported across the bases of the U's, as

shown in Figure 2, while additional articles of a similar character are capable of support within the confines of the U's, as, for example, upon the arms 16 and 17, or upon the arms 20 and 21. Or, if desired, stockings or the like may be supported upon these arms in a depending relationship.

The adjusted positions illustrated in Figures 2, 3, and 4 are merely illustrative of a wide variety of possible manipulations made possible by the structural nature of my present device. It is to be understood that although I have shown both of the U bases as being independently adjustable as to length, one or the other thereof may be of fixed length while the other is adjustable; and similar yet not quite as efficient results are obtained.

Whether one or both U bases are adjustable, it is a feature of my invention so to proportion and construct the several elements that the entire device may be collapsed, as shown in Figure 5, wherein the shelf elements are in a single plane for purposes of shipment or the like.

Thus, in Figure 5, the overlapping strips 28 and 29 have been adjusted to reduce the length of the upper base to a minimum, and the connectors 24 and 27 are in substantial alignment with one another. In this condition, I provide for great facility in packing, handling, stacking, and shipping, although it will be obvious that the entire device may actually be attached to a supporting wall in the adjusted condition of Figure 5, in which case the device may be efficiently employed just like an ordinary shelf or for suspending various articles therefrom.

It is to be noted that in Figure 5 the lower base is adjusted to a length which is substantially equal to the combined lengths of the connectors 24 and 27 and the minimum length of the upper base.

It will thus be seen that I have provided a wall rack whose uses are extremely varied. For example, in none of the figures have I shown the U with the smaller arms arranged beneath the other U. Adjustments of this character are not only quite feasible, but may in a number of cases render the device applicable to still different methods of employment. In certain cases, it may be desirable to adjust the device so that the superposed shelf elements will not lie in parallel planes but will lie in planes oblique to one another.

Furthermore, it will be understood that certain features of my improved rack are

independent of the manner of length adjustment shown most clearly in Figure 1; while the last-mentioned feature is from one aspect independent of the specific multi-shelf construction shown in Figures 2-5.

In general, it will be obvious that changes in the details herein described and illustrated for the purpose of explaining the nature of my invention may be made by those skilled in the art without departing from the spirit and scope of the invention as expressed in the appended claims. It is therefore intended that these details be interpreted as illustrative and not in a limiting sense.

Having thus described my invention and illustrated its use, what I claim as new and desire to secure by Letters Patent is—

1. A wall rack comprising a pair of substantially parallel U-shaped strips, the U's being of different depths, the ends of said strips being arranged to lie in a common plane; a connector between each set of adjacent ends and having its extremities pivoted to said ends; and means for adjusting the length of a least one of the U bases independently of the other, said adjustable base being so constructed with respect to the lengths of the connectors and the length of the other base as to permit adjustment of the entire device into a collapsed form lying in a common plane.

2. A wall rack comprising a pair of substantially parallel U-shaped strips, the U's being of different depths, the ends of said strips being arranged to lie in a common plane; a connector between each set of adjacent ends and having its extremities pivoted to said ends; and means for independently adjusting the length of each base, the base of the U of greater depth being extensible to at least an amount equal in length to the combined lengths of said connectors and the minimum length of the base of the other U, whereby the entire device may be collapsed into a common plane.

3. A wall rack comprising a pair of substantially parallel U-shaped strips, the U's being of different depths, the ends of said strips being arranged to lie in a common plane; a connector between each set of adjacent ends and having its extremities pivoted to said ends; each U comprising a base formed of complementary overlapping portions, and means for independently varying the degree of overlap of each set of said portions.

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