

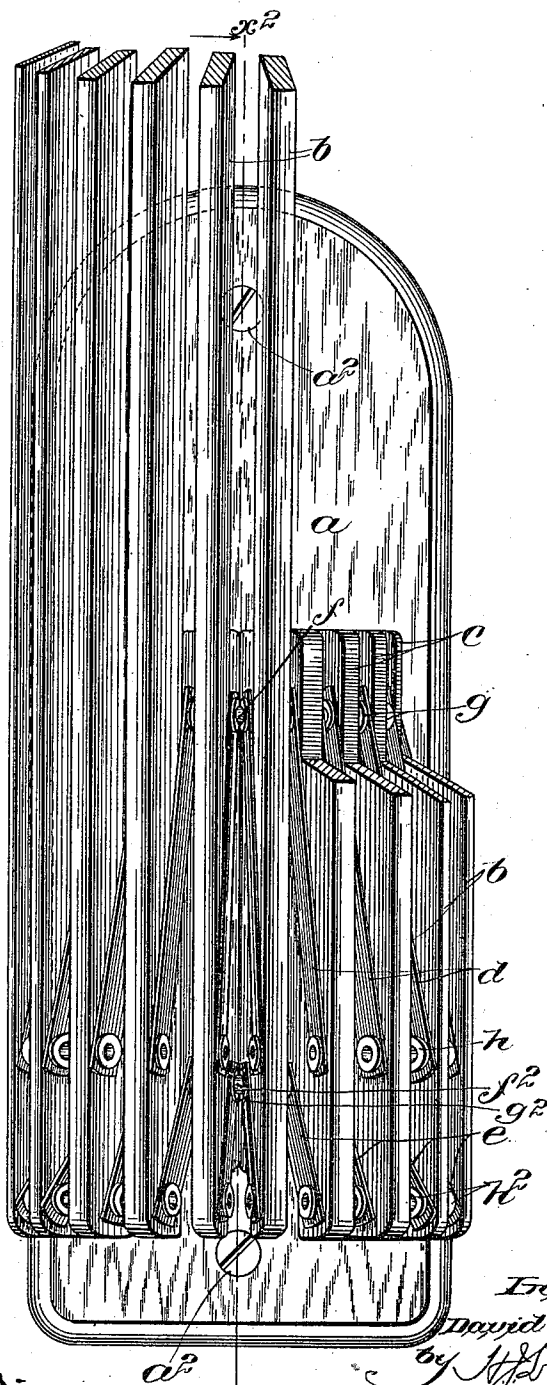
976,110.

D. C. WILLIAMS.
WALL RACK.
APPLICATION FILED APR. 11, 1910.

Patented Nov. 15, 1910.

2 SHEETS-SHEET 1.

Fig. 1.



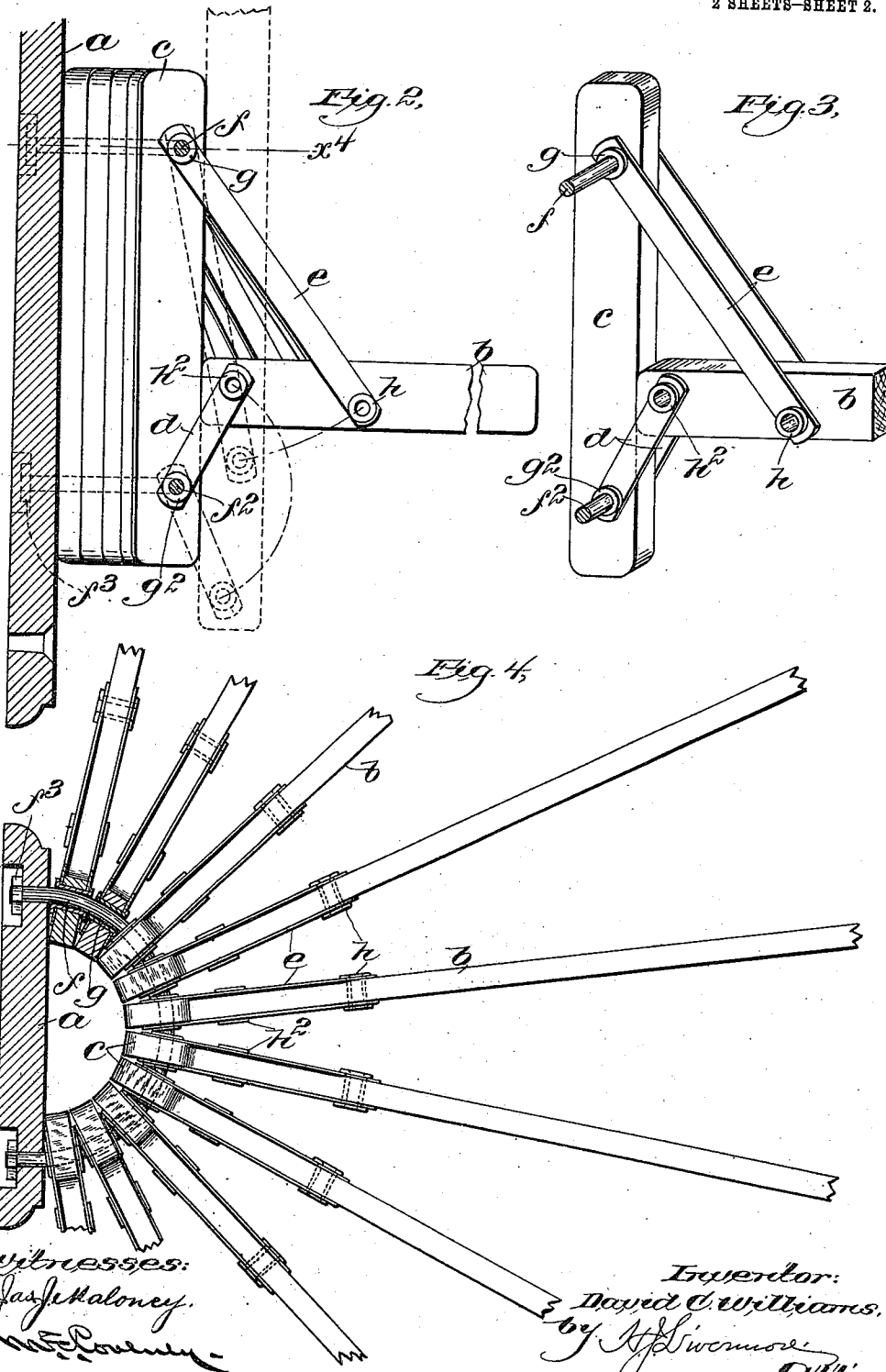
Witnesses:
Jas. J. Maloney.
and
Jas. J. Maloney.

Inventor:
David C. Williams
by
J. J. Williams
Att'y.

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Witnesses:
Jas. J. Maloney.
Wm. J. Connelley.

Inventor:
David C. Williams.
by H. J. Swenson.
Atty.

UNITED STATES PATENT OFFICE.

DAVID C. WILLIAMS, OF ARLINGTON, MASSACHUSETTS, ASSIGNOR, BY MESNE ASSIGNMENTS, TO WOODENWARE SPECIALTY MFG. CO., A CORPORATION OF NEW YORK.

WALL-RACK.

976,110.

Specification of Letters Patent.

Patented Nov. 15, 1910.

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To all whom it may concern:

Be it known that I, DAVID C. WILLIAMS, a citizen of the United States, residing in Arlington, in the county of Middlesex and State of Massachusetts, have invented an Improvement in Wall-Racks, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

The present invention relates to a folding wall rack such as is sometimes termed a wall drier, and is embodied in a rack having a number of supports for the articles to be hung, said supports being arranged to stand vertically and parallel to each other when the rack is folded, and to be spread radially when moved to a horizontal position so that a number of supports can be employed for drying purposes without taking up any material amount of space when the rack is not in use and has been folded.

The rack embodying the invention consists of a base portion which is adapted to be secured to the wall of a room, and the "folding supports," as they may, for convenience, be termed, are secured by means of links to upper and lower curved rods which project outward from the front of the base portion. Each holding support is provided with two link connections pivotally connected respectively with the upper and lower rods. The links are so proportioned that when the folding support is moved to the vertical or folded position the weight of said support tends to hold it in engagement with and parallel to a vertical member which is mounted on the curved rods, and the two link connections, when the support is moved to its horizontal position constitute a hanger for the support of sufficient strength to sustain the weight of the articles hung on the horizontal members, while the vertical member constitutes an abutment for the inner end of the support.

Since the projecting rods upon which the supports are secured are curved, it is obvious that the said supports, when moved to the horizontal position, will extend radially, so that each arm is separated from the others, affording ample space for hanging articles thereon.

In order to prevent the supports from having too much lateral play, they are arranged to be positioned at the lower ends

by means of separating devices which come in contact with each other, it being practicable to employ flanges at the ends of tubular rivets as the separators. These tubular rivets also afford the bearings for the supporting links, and constitute bushings for the vertical abutments where the bow-shaped supports extend through them.

Figure 1 is a front elevation of a folding rack embodying the invention with parts broken away and shown in section; Fig. 2 is a vertical section, on the line x^2 of Fig. 1; Fig. 3 is a detail in perspective showing one of the vertical supports and a portion of one of the folding supports in its operative position; Fig. 4 is a top plan view, a part of which is shown in section on the line x^1 of Fig. 2.

The rack embodying the invention is shown as provided with the base a which consists of a board adapted to be secured in a vertical position, being fastened, for example, to the wall of a room by means of the screws a^2 .

The supports b are so arranged as to stand vertically and substantially parallel to each other when the article is not in use, as shown in Fig. 1, and to be moved to a horizontal position, as shown in full lines in Fig. 2, when the article is in use. These supports are arranged in a curve projecting forward from the base a , each support being accompanied by a vertical stationary abutment c against the face of which the support b lies when the rack is folded, as shown in Fig. 1 and in dotted lines, Fig. 2. By arranging the supports b and the vertical abutments c in a curve, the supports, when let down into operative position, spread radially as shown in Fig. 4, so that there is ample space between them, while a considerable number of supports can be employed in a single rack without occupying any material valuable space when the rack is not in use.

The supports b are hung upon links d and e , there being two sets of such links connected with the supports b at different points, and at their opposite ends connected with the bowed or curved portions f , f^2 , mounted on the base a . The arrangement is such that the weight of the support b , when in its vertical position, tends to swing the links inward until the inward movement is prevented by the engagement of the support b with the abutment c , it being necessary, in

moving the support *b* to its horizontal position, to bodily lift the same during the first outward movement of the upper end of the support. As shown in dotted and full lines, Fig. 2, the movement of the support *b* from the vertical to the horizontal position, raises and wholly reverses the lower link connection *d*, and at the same time swings outward the upper link connection *e*, so that when the support is in its horizontal position, it is firmly held by means of the upper link support *e*, and the tendency of the outer end of the support *b* to be pulled down by any weight hung upon it is resisted by the link connection *d*. When in this position, furthermore, the end of the support *b* is in engagement with the face of the abutment *c*, so that any further turning movement on the link connection *e* is prevented. In the construction shown, the bowed or curved portions *f* and *f*² consist of wires which are passed through transverse openings in the abutments *c*, and extended through the base *a* where they are secured as by nuts *f*³.

In order to prevent, as far as possible, the lateral play of the supports *b* when in their horizontal position, it is necessary to have the supporting links held from lateral movement, and it is also desirable to lock the abutments and hold them firmly on the wires. In the construction shown, the link connection for each support *b* consists of two links, one at each side of the support, and the curved wires *f* and *f*² are utilized as the pivotal supports for the upper and lower links. The links of each support are held snugly against the sides of the abutment therefor, and adjacent abutments are held from movement by inserting any suitable spacing device between adjacent links. For this purpose, the links, instead of being directly mounted on the wires *f* and *f*², may be mounted, as shown, on tubular rivets *g* and *g*², which form bushings for the openings in the stationary member *c*, the said rivets then being flanged to hold the links snugly against the sides of the abutment, the flanges lying in contact with each other, as best shown in Fig. 4, and thereby constituting the necessary spacing devices. As a matter of convenience, it is practicable to use a similar tubular rivet connection between the supports *b* and the links, the links on the upper and lower wires *f* and *f*² bearing respectively on rivets *h* and *h*², and being held in place by the flanges formed thereon after the rivets are in place.

The arrangement of the links is such as to afford a compound pivotal hanger, whereby the support is firmly held by its own weight in either position, so that no fastening devices are required to hold it. As clearly shown in Fig. 2, the first part of the movement of the support *b* from its vertical position is around the pivotal connection be-

tween said support and the lower link *d* as an axis, the upper link *e* at the same time being moved from an approximately vertical position toward a horizontal position, thus raising the lower end of said link, and with it the support itself. The raising of the support, however, swings the lower link outward, and the continued movement turns it wholly over. The parts are so proportioned, however, that when the support is horizontal, its inner end engages the vertical abutment *c* and, at the same time, any further upward movement of said inner end would tend to swing the lower link toward said abutment. Consequently, the support is firmly held between the upper link, the lower link, and the abutment, and the weight of any article on the support tends to bind it more firmly.

Claims.

1. A rack having a base and horizontal, stationary curved members projecting from the face thereof; abutments mounted on said curved members; a plurality of folding supports adapted to stand vertically or horizontally; and two links for each support, said links constituting the sole connecting means between the said supports and the said abutments, and being pivotally connected with said supports at different points.
2. A rack comprising a plurality of stationary vertical abutments mounted on a curved support; a plurality of folding supports one for each abutment; and double link connections extending from said vertical abutments to said folding supports, whereby the latter may be moved to a vertical or horizontal position.
3. In a rack, the combination with the base; of parallel, curved members projecting forward from said base; stationary vertical abutments mounted on said curved members; movable supports; and links pivotally connected respectively with said curved members and said movable supports, substantially as and for the purpose described.
4. A rack having a vertical, stationary abutment; a folding support adapted to lie parallel to, or at a right angle with, said abutment; an upper link pivotally connected with said support at one end, and with said abutment at the other end; and a lower link pivotally connected at one end with said support, and at the other end with said abutment, the pivotal connection of the lower link with the support being nearer the inner end thereof than the pivotal connection of the other link.
5. A rack having a vertical, stationary abutment; a folding support; an upper link connection pivotally connected at one end to said abutment, and at the other end to said support, and a lower link connection also pivotally connected at one end to said abut-

ment and at the other end to said support, said lower link connection being shorter than the upper link connection, and said link connections constituting the only means 5 for connecting the support with the abutment.

6. A folding rack having a base; curved rods having their ends secured to said base; vertical abutments provided with openings 10 through which said rods extend; tubular rivets in said opening constituting bushings therefor and having upset ends or flanges;

folding supports; and links pivotally connected with said folding supports, and also having pivotal bearings on said tubular rivets between the flanges thereof and the vertical abutments. 15

In testimony whereof, I have signed my name to this specification in the presence of two subscribing witnesses.

DAVID C. WILLIAMS.

Witnesses:

S. CARL CARPENTER,
LAURA V. MARVIN.