

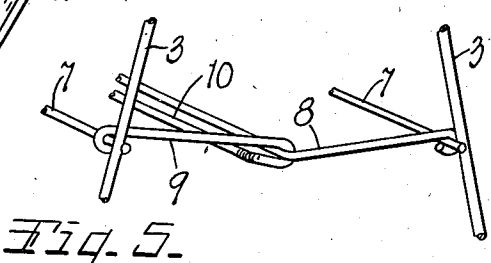
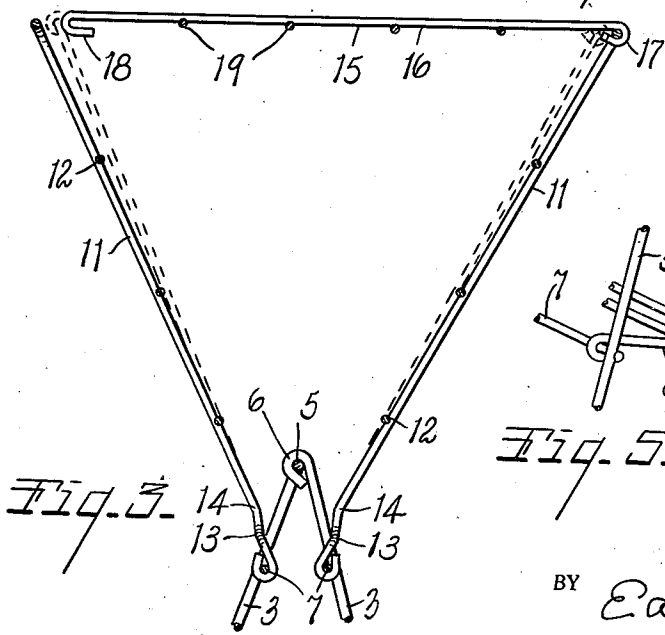
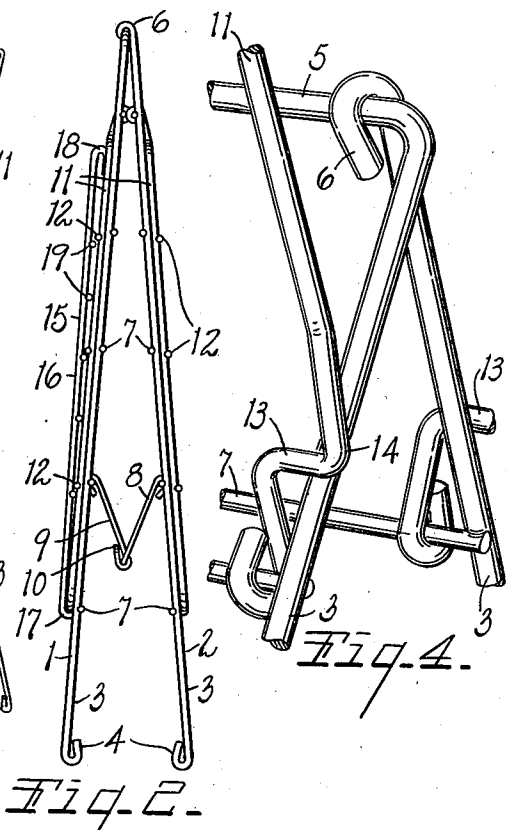
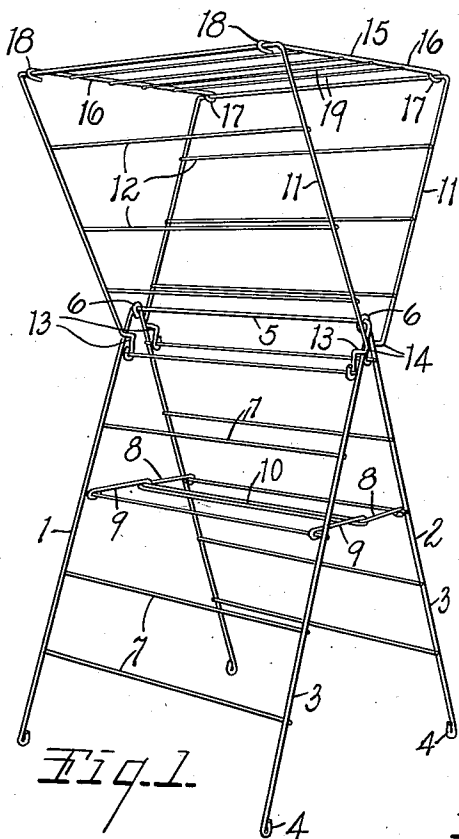
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CLOTHES RACK

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UNITED STATES PATENT OFFICE

2,274,772

CLOTHES RACK

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7 Claims. (Cl. 211-178)

The main objects of this invention are:

First, to provide a clothes drying rack which is of extremely simple, inexpensive construction, light in weight, and capable of being quickly and easily collapsed to an inoperative, knocked-down condition for storage.

Second, to provide a rack of the type described having provision for greatly facilitating erection of the same to operative position, and in which the parts co-act in operative, erected position thereof to take up looseness at the joints and prevent rattling.

Third, to provide a rack of the foregoing character which is of inexpensive, welded, wire rod construction throughout and may be produced and marketed at a very low figure, and which has large garment supporting capacity for the overall dimensions of the rack.

Further objects relating to details and economies of my invention will appear from the description to follow. The invention is defined in the claims.

A structure embodying the features of my invention is illustrated in the accompanying drawing, wherein:

Fig. 1 is a perspective view illustrating the rack of the invention in fully erected, operative position.

Fig. 2 is an end view illustrating the parts in practically entirely collapsed position, just prior to manipulation thereof to fully collapsed, compacted condition.

Fig. 3 is a fragmentary end view illustrating the uppermost portion of the rack in erected position and indicating the manner in which the parts are stressed or placed under tension to eliminate looseness and rattling.

Fig. 4 is an enlarged, fragmentary, perspective view illustrating in detail the relationship of certain of the rack members in erected position of the rack whereby automatic erection of the latter is effected.

Fig. 5 is a fragmentary, perspective view illustrating details of the cross-brace or strut arrangement of the rack.

This invention relates to various improvements in the wire, garment supporting rack shown and described in my co-pending application, Serial No. 269,608, filed April 24, 1939, whereby ease and economy of manufacture of such an article are greatly increased.

The rack of my present invention consists of a pair of base members 1, 2 including spaced uprights 3 of a suitably rigid gauge of wire rod stock bent upwardly at the lower extremities 4

thereof to provide floor engaging feet. One of the base members 2 is U-shaped in outline, the uprights 3 thereof being integrally connected by a horizontal bight or reach 5, and the uprights of the other base member are provided with eyes 6 pivotally connecting the same to said horizontal reach.

Each of the base members has a plurality of transverse wire rod rack elements or cross-bars 7 secured to the uprights thereof, this securement being preferably effected by a lap weld in the interests of ease and speed of production, as well as the strength and effectiveness of the connection which is had by such a weld. Care is taken that the ends of the rack elements 7 have no burrs or sharp projections such as would snag garments.

The spreading of the base members 1, 2 is limited by a pair of bracing elements 8, 9 each of which is in the form of a U-shaped member pivotally connected at the ends of its legs to a transverse rack element 7 of one of the base members. The braced members 8, 9 are pivotally connected to one another by bending the bight 10 of one thereof rearwardly through approximately 180 degrees and engaging the thus formed loop with the middle reach or bight of the other member. This provides a pivotal connection which is very readily and quickly formed and assembled.

The uppermost transverse element 7 of each of the base members 1, 2, immediately beneath the crossreach 5, has pivotally connected thereto an auxiliary garment supporting rack member 11, these members being similar in all respects. They are formed of a suitable gauge of wire rod stock bent in U-shaped outline, and the extremities of the arms of the thus formed frames are provided with eyes which encircle the upper rack elements 7 to pivotally connect the auxiliary racks thereto. Each of the frame members 11 has a plurality of garment supporting rods or cross-bars 12 welded thereto, which in the outwardly swung, erected position of the auxiliary racks greatly augment the capacity of the unit.

The present construction includes simplified means for enabling the base members 1, 2 to be automatically spread to the operative position of Fig. 1 when the auxiliary members 11 are raised to their outwardly divergent position, consisting of lateral outward offsets 13 formed in the arms of the frame members 11 immediately adjacent their pivotal connection to the base member cross-bars. Members 11 are preferably given a further outward, divergent bend at 14 immediately adjacent and above offsets 13 whereby,

prior to reaching the final operative erected position of the members 11, the lateral offsets 13 therein provide stops or abutments which engage the uprights of the base member, thereby causing a fulcruming action on the base members spreading the latter about their pivotal connection.

In order to maintain the auxiliary members 11 in erected position, I provide the cross-rack 15 which consists of a pair of side members 16 of rod stock provided with eyes 17 at one end thereof by which they are permanently hinged to the extreme outer cross-reach of one of the auxiliary members 11, and at the other ends thereof with downturned hooks 18 which are releasably engageable with the extreme outer cross-reach of the other auxiliary member 11, to hold the rack in erected position. The side members 16 are connected by transverse slats or rack elements 19 welded thereto.

It will be noted that prior to final engagement of hooks 18 with the frame the offsets 13 are already in engagement with the base uprights 3, as shown in solid line in Fig. 3, and the base members 1, 2 are fully spread, so that further movement of the cross-rack 16 to engage the intended cross-reach results in placing the wire rod parts under bending stress sufficient to take up looseness at the several pivotal connections and hold them all in relatively fixed relation. The position of the parts in this final engaged and stressed relation is shown in dotted lines in Fig. 3.

The foregoing clothes supporting rack is characterized by a notable garment supporting capacity considering the size of its parts. The auxiliary members 11, branching outwardly from one another in a vertical plane, as they do, serve to receive and support numerous articles in parallel vertical planes spaced from one another so that effective circulation of air through the garments is had. Of course, the cross-slats of the base members and of the upper connecting or bracing frame 15 receive and support additional clothes or articles to be dried. In collapsed position as suggested in Fig. 2 the rack occupies very little space and may be readily stored in a closet.

As stated, erection of the auxiliary members 11 to operative position simultaneously and automatically swings the base members 1, 2 to operative supporting condition and the several parts are snugly maintained in this operative supporting position without looseness or rattling by reason of the stressed condition of the parts described above. In an extremely lightweight wire rod unit this is an advantage of substantial importance. In addition to these features a factor of great importance in the present invention is the extreme simplicity of the various structural details and the ease and economy with which the same are manufactured and assembled, without in any way detracting from the strength thereof or effectiveness for their intended functioning. Absolutely no non-essential parts are present, nor is there anything but the simplest and cheapest of manufacturing operations involved in the production of the above described item.

An embodiment of the invention which incorporates the principles of the invention in a highly desirable manner has been illustrated and described. It should be understood that the foregoing terminology is used descriptively rather than in a limiting sense, and with full intention

to include equivalents of the features shown and described, within the scope of the following claims.

Having thus described my invention, what I claim is new and desire to secure by Letters Patent is:

1. A clothes rack of wire rod construction throughout comprising a pair of base members including wire rod uprights pivotally connected to one another at the top thereof for movement to operative spread position, means for limiting said movement, said base members having transverse horizontal cross-bars secured to the uprights thereof and extending thereacross, auxiliary garment supports on said respective base members, including U-shaped frame members pivotally engageable with cross-bars of the respective base members beneath the pivotal connection of the latter, said arms being integrally offset laterally outwardly adjacent said eyes for engagement with the respective base member uprights when the auxiliary supports are pivotally erected upwardly, said engagement serving to automatically spread the base members outwardly when the auxiliary members are erected, said auxiliary supports in operative position diverging upwardly and outwardly relative to one another and at substantially the same angular relation to the base member uprights and to the vertical plane through the pivot of said base members and having transverse article supporting bars effective to support articles in spaced vertical planes by reason of the divergence; and a cross-rack pivoted at one end to the outer extremity of one of said auxiliary supports and provided at its other end with hooks for releasable engagement with the outer extremity of the other auxiliary support, said engagement of the cross-rack biasing the parts about the pivotal connections thereof and bendably stressing the auxiliary supports.

2. A clothes rack of wire rod construction throughout comprising a pair of base members including uprights pivotally connected to one another at the top thereof for spreading movement to operative position, and transverse garment supporting bars secured to the uprights, means limiting said spreading movement, a pair of auxiliary garment supports, each having side members pivotally engageable with a bar of the respective base members beneath the pivotal connection of the latter, and bent laterally to provide an offset engageable with an adjacent upright of the respective base members when the auxiliary supports are pivoted upwardly, to thereby automatically spread the base members outwardly, said auxiliary supports in operative position diverging upwardly and outwardly relative to one another and to a vertical plane, a cross-rack pivoted at one end to the outer extremity of one of said auxiliary supports and at its other end having releasable engagement with the outer extremity of the other auxiliary support, said engagement of the cross-rack biasing the parts about their pivotal connections under springing stress.

3. A clothes rack of wire rod construction throughout comprising a pair of base members including uprights pivotally connected to one another for spreading movement to operative position, and transverse elements secured to the uprights, means limiting said spreading movement, a pair of auxiliary garment supports, each having side members pivotally engageable with an element of the respective base members ad-

jacent the pivotal connection of the latter, and bent laterally to provide an offset engageable with an adjacent upright of the respective base members when the auxiliary supports are pivoted upwardly, to thereby automatically spread the base members outwardly, said auxiliary supports in operative position diverging upwardly and outwardly relative to one another and to a vertical plane, a cross-rack pivoted at one end to the outer extremity of one of said auxiliary supports and at its other end having releasable engagement with the outer extremity of the other auxiliary support, said engagement of the cross-rack biasing the parts about their pivotal connections under springing stress.

4. In a clothes rack of the type described, a pair of upright base members pivotally connected to one another at the upper extremities thereof for adjustment to downwardly diverging operative supporting position, said base members having side uprights and transverse horizontal garment supporting rods lap welded thereto, auxiliary rack members each including spaced parallel arms pivoted at one end to a transverse rod of the respective base members and bent laterally outwardly immediately adjacent said pivotal connection to provide offsets engageable with a side upright of the associated base member, said auxiliary members being collapsible downwardly about said pivotal connection to the base members to inoperative position and being swingably erectable to an outwardly and upwardly divergent operative position, said offsets engaging the base member uprights in said last named swinging to automatically spread the base members, and to constitute supporting abutments therefor when the auxiliary members are connected, and means for connecting the said auxiliary members.

5. In a clothes rack, the combination of a pair of base members pivotally connected at their upper ends, each base member comprising uprights, and cross-bars welded thereto, coating brace members pivotally connected to each other and to said base members and acting to limit the spreading movement of the base members in erected downwardly diverging relation, auxiliary supports comprising side members pivotally mounted at their inner ends on the upper cross-bars of said base members and provided with connecting cross-members at their swinging ends and having spaced parallel cross-bars welded thereto, said side members being provided with offsets adjacent their pivoted ends providing stops engaging the uprights of the base members when the auxiliary supports are swung to erected outwardly inclined diverging relation to each other and at substantially the same angular relation to the base members on which they are pivoted, and a cross-rack at one end to the outer cross-member of the one auxiliary support and provided with hooks at the other end for releasing engagement with the outer cross-bar of the other auxiliary support, said engagement of said cross-rack biasing the auxiliary supports about their pivotal connection with said base members with said stops of the said auxiliary supports in engagement with the uprights of said base members and bendably stressing the auxiliary supports and holding the base members in their erected downwardly diverging relation, the cross-bars to which said auxiliary supports are

pivotally mounted being lap-welded to the uprights of the base members and disposed on the side thereof opposite the side engaged by said stops.

6. In a clothes rack, the combination of a pair of base members pivotally connected at their upper ends, each base member comprising uprights, and cross-bars welded thereto, means acting to limit the spreading movement of the base members in erected downwardly diverging relation, auxiliary supports comprising side members pivotally mounted at their inner ends on the upper cross-bars of said base members and provided with connecting cross-members at their swinging ends and having spaced parallel cross-bars welded thereto, said side members being provided with offsets adjacent their pivoted ends providing stops engaging the uprights of the base members when the auxiliary supports are swung to erected outwardly inclined diverging relation to each other and at substantially the same angular relation to the base members on which they are pivoted, and a cross-rack at one end to the outer cross-member of the one auxiliary support and provided with hooks at the other end for releasing engagement with the outer cross-bar of the other auxiliary support, said engagement of said cross-rack biasing the auxiliary supports about their pivotal connection with said base members with said stops of the said auxiliary supports in engagement with the uprights of said base members and bendably stressing the auxiliary supports and holding the base members in their erected downwardly diverging relation.

7. In a clothes rack, the combination of a pair of base members pivotally connected at their upper ends, each base member comprising uprights, and cross-bars welded thereto, means acting to limit the spreading movement of the base members in erected downwardly diverging relation, auxiliary supports comprising side members pivotally mounted at their inner ends on the upper cross-bars of said base members and provided with connecting cross-members at their swinging ends and having spaced parallel cross-bars welded thereto, said side members being provided with offsets adjacent their pivoted ends providing stops engaging the uprights of the base members when the auxiliary supports are swung to erected outwardly inclined diverging relation to each other and at substantially the same angular relation to the base members on which they are pivoted, and a cross-rack at one end to the outer cross-member of the one auxiliary support and provided with hooks at the other end for releasing engagement with the outer cross-bar of the other auxiliary support, said engagement of said cross-rack biasing the auxiliary supports about their pivotal connection with said base members with said stops of the said auxiliary supports in engagement with the uprights of said base members and bendably stressing the auxiliary supports and holding the base members in their erected downwardly diverging relation, the cross-bars to which said auxiliary supports are pivotally mounted being lap-welded to the uprights of the base members and disposed on the side thereof opposite the side engaged by said stops.

DEWEY H. BITNEY.