Nov. 29, 1960 W. S. LANDSMAN 2,962,169

TIE RACK

Filed Aug. 1, 1958

2 Sheets-Sheet 1

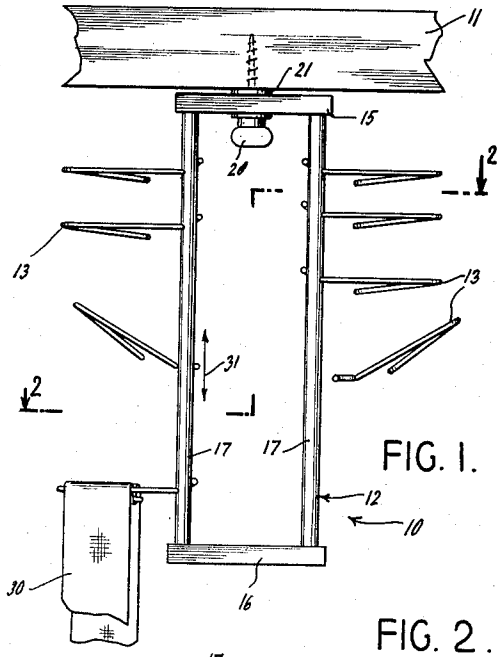


FIG. 1.

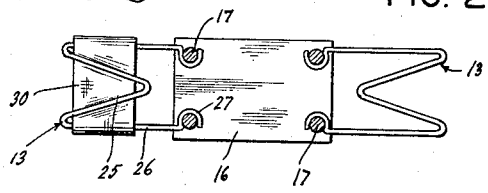


FIG. 2.

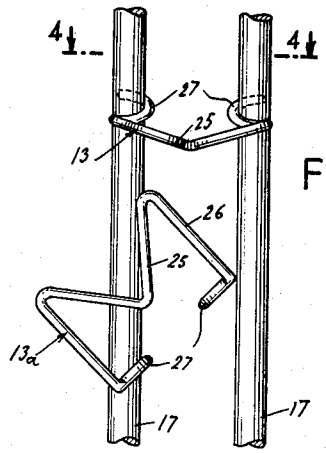


FIG. 3.

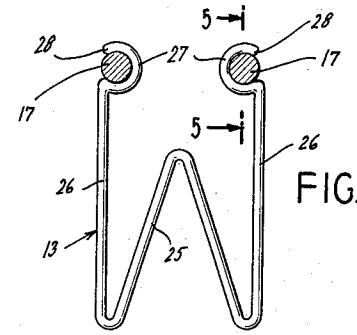


FIG. 4.

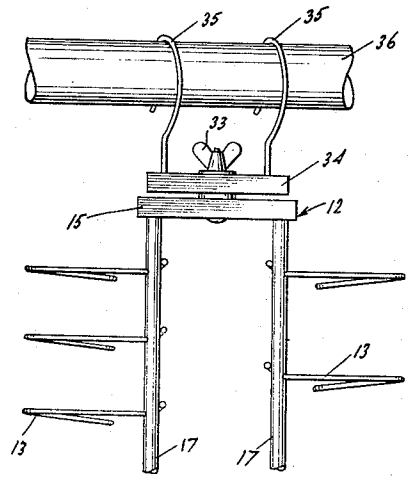


FIG. 6.

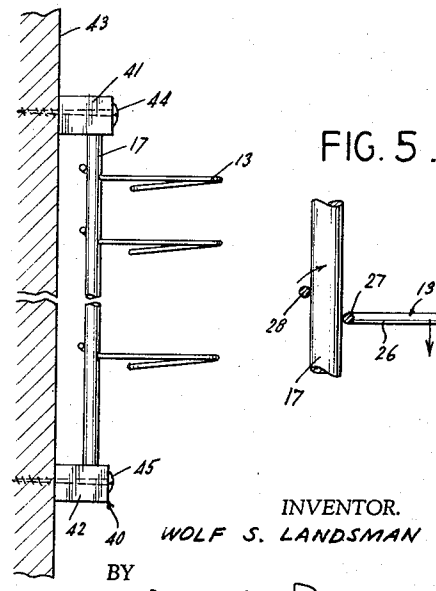


FIG. 5.

FIG. 7.

INVENTOR.
WOLF S. LANDSMAN
BY
Mock & Blum
ATTORNEYS

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FIG. 8.

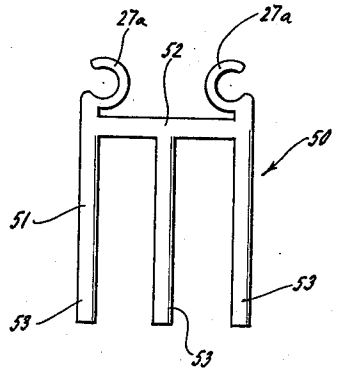


FIG. 10.

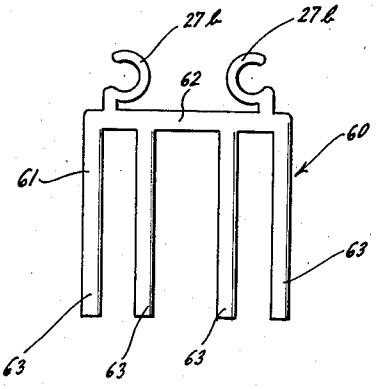
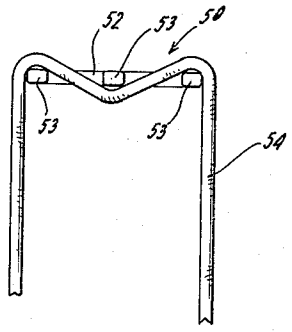


FIG. 9.



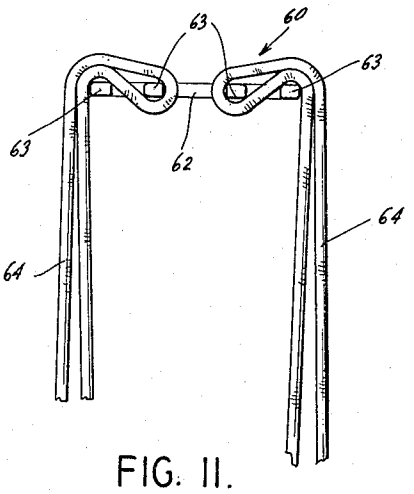


FIG. 11.

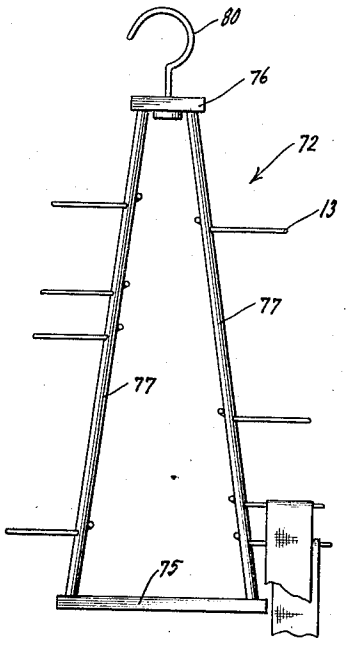


FIG. 12.

INVENTOR.
WOLF S. LANDSMAN
BY
Mock & Blum
ATTORNEYS

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TIE RACK

Wolf S. Landsman, 240 Berkeley Place, Brooklyn 17, N.Y.

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11 Claims. (Cl. 211—117)

This invention relates generally to supporting devices or racks, and is especially concerned with a rack for supporting ties and the like.

It is one object of the present invention to provide a supporting device for ties and the like which is extremely simple in construction and durable in use, occupying a minimum of space and adapted to carry a relatively large number of ties.

It is a further object of the present invention to provide a supporting device for ties and the like which is adapted to be selectively adjusted and arranged to accommodate a selected number of ties at desired locations thereon.

It is a more particular object of the present invention to provide a tie rack having the advantageous characteristics mentioned in the preceding paragraphs, wherein the aforementioned adjustability is capable of being quickly and easily accomplished in the desired manner without the exercise of more than average skill.

It is still another object of the present invention to provide a tie rack construction of the type described, which in its disassembled or non-use condition is adapted to occupy a minimum of space, as for economy in storage and transit.

It is still an additional object of the present invention to provide a tie rack of the type described capable of versatility in mounting to accommodate for various environments and the desires of different users.

It is yet another object of the present invention to provide a tie rack construction of the type mentioned hereinbefore which is capable of being economically manufactured for sale at a reasonable price.

Other objects of the present invention will become apparent upon reading the following specification and referring to the accompanying drawings, which form a material part of this disclosure.

The invention accordingly consists in the features of construction, combinations of elements, and arrangements of parts, which will be exemplified in the construction hereinafter described, and of which the scope will be indicated by the appended claims.

In the drawings:

Fig. 1 is a side elevational view showing a tie rack constructed in accordance with the present invention, with certain of the tie supporting elements in various operative conditions.

Fig. 2 is a sectional view taken substantially along the line 2—2 of Fig. 1;

Fig. 3 is a partial front elevational view showing the tie rack of Figs. 1 and 2, and illustrating an article support in an intermediate condition of adjustment;

Fig. 4 is a sectional view taken substantially along the line 4—4 of Fig. 3;

Fig. 5 is a sectional view taken substantially along the line 5—5 of Fig. 4;

Fig. 6 is an elevational view showing a certain modified embodiment of tie rack according to the present invention;

Fig. 7 is an elevational view showing still a further embodiment constructed according to the teachings of the present invention; and

Fig. 8 is a top plan view showing another slightly modified form of article support constructed according to the teachings of the present invention;

Fig. 9 is a front elevational view showing the article support of Fig. 8 with a tie in position supported thereon;

Fig. 10 is a top plan view showing another embodiment of article support of the present invention;

Fig. 11 is a front elevational view showing the article support of Fig. 10 with ties carried thereby; and

Fig. 12 is a side elevational view showing a slightly modified tie rack of the instant invention.

Referring now more particularly to the drawings, and specifically to Figs. 1 and 2 thereof, there is illustrated therein a tie rack of the present invention, generally designated **10**, suspended from a fixed support or shelf **11**. The tie rack includes a generally rectangular open frame **12**, and a plurality of article supports **13** carried by the frame.

The tie-rack frame **12** is constituted of a pair of vertically spaced, generally horizontal, lower and upper substantially rectangular members or plates **15** and **16**. Extending vertically between and secured at their opposite ends to the respective plates are a plurality of spaced, upstanding members or rods **17**. As best seen in Fig. 2, the rods **17** are four in number, being respectively located at the corners of rectangular top and bottom plates **15** and **16**, and may be considered as arranged in two pairs with each pair at a respective end of the top and bottom members. The frame **12** is therefore generally tetrahedral in configuration.

As shown in Fig. 1, the frame **12** is suspended from the underside of the fixed support or shelf **12** by a generally vertically disposed mounting member or screw **20** extending upward through a central region of the upper frame plate **15** and in threaded engagement into the underside of the shelf **11**. Suitable journal or bearing means **21** is carried by the screw **20** to make the upper frame plate **15**, and consequently the entire frame **12**, rotatable about the vertical axis of the screw, in the manner of a swivel.

It will now be appreciated that the frame **12** is substantially symmetrical about the axis of the swivel mounting means **20**, **21** for enhanced balance to minimize stresses and enable easy swiveling action. The pairs of laterally spaced upstanding members or rods **17** at opposite ends of the top and bottom plates **15** and **16** are substantially identical, and all of the article supports **13** are substantially identical to each other and in their cooperative relationship with the pairs of laterally spaced rods, so that a detailed description of a single article support and its cooperating relationship with a single pair of laterally spaced rods is sufficient. For purposes of terminology, each pair of rods **17** are considered as being laterally spaced, and the directions forward and rearward with respect to a pair of rods being equivalent to generally outward of the frame from between a pair of rods, and generally inward into the frame from between the pair of rods.

As best seen in Fig. 4, each article support **13** is bent from a single piece of stiff, but resilient wire or rod stock and includes a medial portion **25** disposed forward of the space between the associated pair of rods **17**, a pair of laterally spaced legs **26** extending rearward from the medial portion and provided on their rearward ends with end pieces **27** defining open loops in embracing engagement with respective rods. More specifically, the legs **26** extend in substantial parallelism generally horizontally forward from the forward and laterally outward regions of adjacent rods **17**; and, the medial portion **25** extends integrally from the forward ends of the legs and is defined by a rearwardly pointing V-shaped configuration located in spaced relation between the legs. Further, the rearwardly pointing V-shaped medial portion **25** extends inward and declines downward at a slight vertical angle

with respect to the legs **26**, terminating short of the rearward leg ends.

The end pieces or open loops **27** on the rearward ends of leg **26** are of arcuate, slightly greater than semi-circular configuration, having their open sides facing laterally outward away from each other for receiving respective rods **17**. Stated otherwise, each open loop or end piece **27** extends from the rearward end of the adjacent leg **26** laterally inward along the forward side of the adjacent rod **17**, thence curving rearward along the laterally inner side of the adjacent rod, and thence curving laterally outward along the rearward side of the adjacent rod and slightly forward as at **28**. Thus, the opening of each loop on its laterally outward side is slightly less than the diameter of the received rod **17** for snap engagement of the loops on the rods. Further, each open loop or end piece **27** is disposed in angulate relation with respect to the adjacent leg **26**, to lie in a rearwardly inclined plane when the legs are substantially horizontal, as may be observed in Figs. 1 and 3. The internal forward and rearward dimension of each end piece **27** in its rearwardly inclined plane is therefore of a dimension greater than the diameter or forward and rearward thickness of the received rod **17**.

In the operatve condition of use, as illustrated by the upper article supports **13** in Fig. 1, and in Fig. 5, it may be observed that the major portion of the weight of the article support is located forward of the upstanding members **17** to which the support is attached, and as indicated by the arrows in Fig. 5, the article support tends to turn generally clockwise about the end pieces **27**. That is, the medial portion **25** and legs **26**, which combine to define the article carrying section of the support, tend to swing downward. This causes the forward and rearward portions of the end pieces to firmly frictionally engage with the forward and rearward sides, respectively, of the adjacent rods **17**, and thus effectively maintain the article support in position on the rods. This action is increased or reinforced by the weight of a tie **30** or other article carried on the forward regions of the legs **26**.

As seen in Figs. 1 and 2, the tie **30** extends over the forward regions of the legs **26**, being supported by the latter, and has its intermediate portion extending beneath the medial portion **25** of the article support. This engagement of the legs **26** and medial portion **25** with the under and upper surfaces, respectively, of the tie **30** effectively prevents longitudinal sliding of the tie from the article support, even when the tie is not properly balanced. In addition, the rearward declination of the medial article-support portion **25**, beneath which the intermediate portion of tie **30** is engaged, serves to efficiently prohibit rearward movement of the tie along the legs **26** or release of the intermediate tie portion from its depressed condition beneath the medial portion **25**.

As the internal forward and rearward dimension of the article-support end pieces **27**, in the plane thereof, are greater than the forward and rearward dimension of their adjacent rods **17**, it will be understood that upon upward tilting movement of the forward article-support region to locate the end pieces substantially horizontally, the end pieces will not bind on their rods **17**, but be relatively freely movable or slidable vertically along tthe latter, as indicated by the arrow **31** in Fig. 1. By this action, the article supports **13** are quickly and easily adjustable to any desired position on their associated pair of rods **17**. The article supports **13** may also be readily removed from and replaced on the rods **17**, as by angular movement of an article support, about a horizontal forward and rearward axis, when in its upwardly swung condition placing the end pieces **27** in a substantially horizontal plane, the condition of article support **13***a* in Fig. 3. Of course, this condition is illustrative of both removal and replacement of an article support. An article support may also be removed and replaced by effecting flexure or deflection of the legs **26** to disengage the open loops or end pieces **27** from their embracing engagement with the rods **17**. If

desired, a hook may be substituted for the threaded portion of screw **20** to enable the device to be removably and swivelly suspended from a closet rod or the like.

A slightly modified embodiment of the present invention is illustrated in Fig. 6, wherein a frame **12** and the article supports **13** are substantially identical to those described hereinbefore in connection with Figs. 1–5. However, the upper end plate **15** of the frame **12** is provided with a central, vertically extending pivotal connection **33**, by means of which a generally horizontal plate or bar **34** is arranged above and connected to the frame plate **15** for rotation about the vertical axis of pivot means **33**. On opposite sides of the pivotal connection **33**, the horizontal bar **34** is provided with a pair of spaced, upstanding hanger elements or hooks **35**, which are fixed to the bar **34** and adapted for engagement over a horizontal supporting rod **36**. By this construction, the frame **12** is adapted to be suspended from a closet rod, or the like, as at **36**, with the suspension or mounting structure **33**, **34** and **35** substantially non-rotatable, while the frame **12** and article supports **13** are freely rotatable about a central vertical axis. If desired, a single centrally located hook may be substituted for the two hooks **35**.

An additional modification is shown in Fig. 7, wherein a frame, generally designated **40**, includes only a single pair of laterally spaced, vertical members or rods **17** which are secured at their upper and lower ends to upper and lower end pieces or mounting members **41** and **42**. The upper and lower mounting members **41** and **42** may be fixedly secured to a vertical wall **43**, as by fasteners **44** and **45** to locate the rods **17** spaced from the wall surface. In this manner, the frame **40** is fixedly secured in position; and, article supports **13** enjoy the same cooperating relationship with the rods **17** in the embodiment of Fig. 7 as disclosed hereinbefore.

In the embodiment of Figs. 8 and 9, an article support is there generally designated **50**, which may be stamped or otherwise fabricated, not necessarily bent of wire. The article support **50** includes an article carrying section **51** having a laterally extending element or bar **52** provided with a plurality of generally parallel spaced legs **53** projecting forward from the lateral element in coplanar relation with the latter and with each other. On the rearward side of the lateral element **52**, adjacent to opposite ends thereof, are provided a pair of open loops or end pieces **27***a*, which may be structurally and functionally the same as the end pieces **27** described hereinbefore.

Thus, the end pieces **27***a* are respectively embracingly engageable with upstanding members or rods of a frame, as at **17** in Figs. 1–7, with the lateral element **52** extending between the upstanding members on the forward side thereof, and the legs **53** projecting forward from the lateral element. A tie **54** may be supported on the supporting section **51**, or more properly on a leg or legs **53**, in any desired manner, such as is illustrated in Fig. 9, wherein the tie extends over and rests on the outer legs **53**, while being depressed beneath the inner or intermediate leg **53**.

The article support **60** of Figs. 10 and 11 is quite similar to the article support **50**, including a forward article carrying section **61**, and rearward outwardly opening loops or end pieces **27***b*. The loops **27***b* may be substantially identical to the loops **27***a* and **27** described hereinbefore.

The article carrying section **61** includes a laterally extending element **62**, which may be the same as the laterally extending element **52**, except that it extends at its opposite ends beyond the adjacent end loops **27***b*. Projecting forward from the lateral element **52**, in substantial parallelism with each other, and coplanar with the lateral element are a plurality of legs **63**. The legs **63** may receive and support a plurality of ties in any desired manner, Fig. 11 illustrating one mode of tie support. In that figure, a pair of ties **64** are each looped to have their loop

engaged about an inner one of the legs 63, extending therefrom in folded or doubled condition over the adjacent outer leg 63 and depending from the latter.

Obviously, the embodiments of Figs. 8–11 are susceptible of many variations, especially in relative size and number of legs, all of which variations are intended to be comprehended herein. In such modifications it is appreciated that the ties may be placed on and removed from the article supports from directly in front of the latter with relative ease and rapidity.

A slightly modified frame is generally designated 72 in Fig. 12. The frame 72 is substantially the same as the frame 12 of Figs. 1 and 2, with the exception that the upstanding pairs of support members or rods 77 are inclined upward and inward, oblique to the vertical. Also, the frame 72 is provided at its upper end with a single hanger hook 80.

More specifically, the frame 72 includes a pair of vertically spaced, generally horizontal, lower and upper substantially rectangular members or plates 75 and 76, the upper plate being smaller in the forward and rearward direction than the lower plate. The upstanding members or rods 77 extend between and have their opposite ends respectively secured to the lower and upper plates, there being two pairs of such rods, with the rods of each pair extending in substantial parallelism and converging upward toward the rods of the other pair. Detachably carried by each pair of rods are one or more article supports, which may be of any of the above described constructions, but are here designated 13, corresponding to the first described article support. In this embodiment, it appears that the article supports on each pair of rods 77 are located in both vertically and forwardly and rearwardly spaced relation with respect to each other. That is, the vertically spaced article supports 13 on each pair of rods 77 are spaced forwardly and rearwardly with respect to each other by the inclination of the supporting rods.

From the foregoing, it is seen that the present invention provides a supporting device for ties and the like which fully accomplishes its intended objects and is well adapted to meet practical conditions of manufacture, distribution and use.

Although the present invention has been described in some detail by way of illustration and example for purposes of clarity of understanding, it is understood that certain changes and modifications may be made within the spirit of the invention and scope of the appended claims.

What is claimed is:

1. In a device for supporting ties and the like, the combination comprising, a pair of members, means maintaining said members in laterally spaced, upstanding relationship and an article support carried by said upstanding members, said article support comprising a medial portion disposed in front of said upstanding members, a pair of laterally spaced legs extending rearward from said medial support toward respective upstanding members, and a pair of end pieces each extending from the rearward end of a respective leg on the forward side of the adjacent upstanding member inward thereof and rearward therebeyond and terminating on the rearward side of the respective adjacent upstanding member short of the rearward end of the respective leg, the weight of said medial portion and legs causing wedging engagement of said end pieces with the forward and rearward sides of said upstanding members, said end pieces each comprising an open loop in embracing engagement with the forward, inner and rearward sides of the adjacent upstanding member, said open loops each having its internal forward and rearward dimension greater than the forward and rearward dimension of the adjacent upstanding member for loosely receiving the latter while engaging the inner side of the received upstanding member when said medial portion and legs are swung upward, to thereby effect vertical adjustment of said article support along said upstanding members.

2. The combination according to claim 1, said medial portion extending rearward from the forward ends of and in spaced relation between said legs, whereby a tie is adapted to be supported on said legs and retained beneath said medial portion.

3. The combination according to claim 2, said medial portion extending rearward and declining, to urge a tie forward and more positively retain a tie on said legs.

4. A combination according to claim 1, wherein said article support consists of a single piece of wire.

5. A combination according to claim 1, in combination with means carried by said upstanding members for mounting the latter on a fixed support.

6. A combination according to claim 5, said mounting means comprising generally vertically disposed swivel means for connection to the fixed support, to mount said upstanding members for rotation about a vertical axis.

7. A combination according to claim 6, said mounting means further comprising a pair of laterally spaced hanger elements carried by said swivel means for nonrotative engagement over a horizontal rod.

8. The combination according to claim 1, said upstanding members being inclined to the vertical to locate a plurality of vertically spaced article supports at different forward and rearward positions.

9. In a device for supporting ties and the like, the combination comprising, a pair of members, means maintaining said members in upstanding, laterally spaced relationship and an article support carried by said upstanding members, said article support comprising a tie carrying section disposed in front of said upstanding members, and a pair of laterally spaced end pieces extending from said tie carrying section each on the forward side of the adjacent upstanding member and thence inward therefrom and rearward therebeyond and terminating on the rearward side of the respective adjacent upstanding member short of the rearward end of the respective leg, the weight of said tie carrying section causing wedging engagement of said end pieces with the forward and rearward sides of said upstanding members said end pieces each comprising an open loop in embracing engagement with the forward, inner and rearward side of the adjacent upstanding member, said open loops each having its internal forward and rearward dimension greater than the forward and rearward dimension of the adjacent upstanding member for loosely receiving the latter while engaging the inner side of the received upstanding member when said medial portion and legs are swung upward, to thereby effect vertical adjustment of said article support along said upstanding members.

10. The combination according to claim 9, said tie carrying section comprising a lateral element extending between and connected to said end pieces on the forward side of said upstanding members, and a plurality of laterally spaced legs projecting forward from said lateral element.

11. The combinations according to claim 10, said lateral element extending laterally beyond said end pieces, said legs projecting forward from opposite ends of said lateral element.

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