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J. F. SMITH

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DISPLAY STAND

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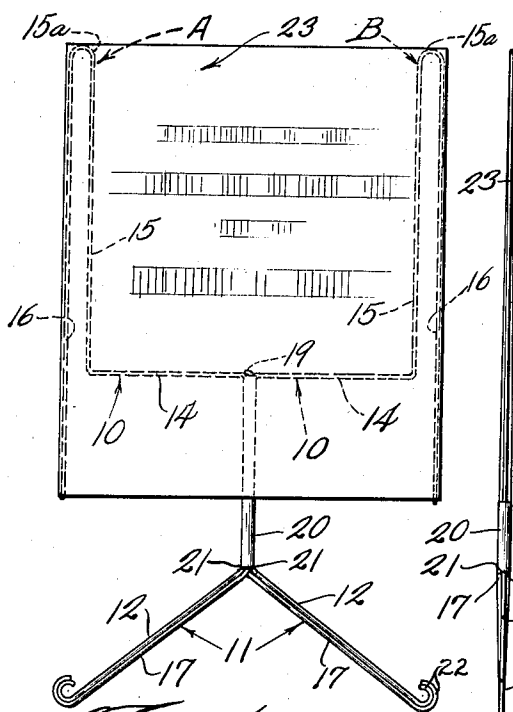


*Fig. 1.*

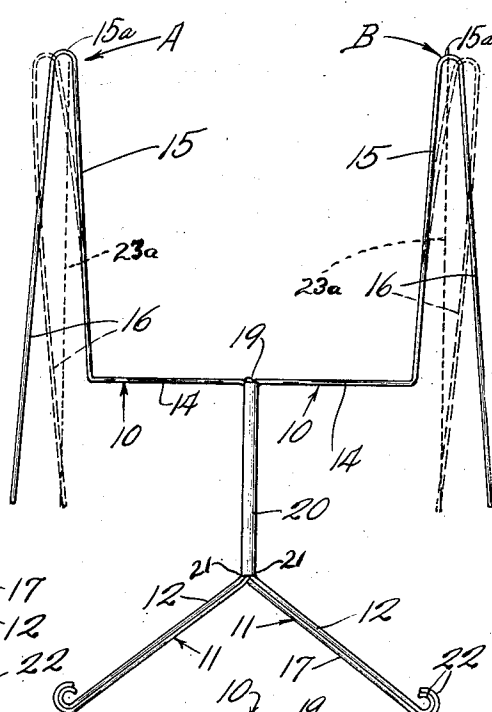


*Fig. 2.*

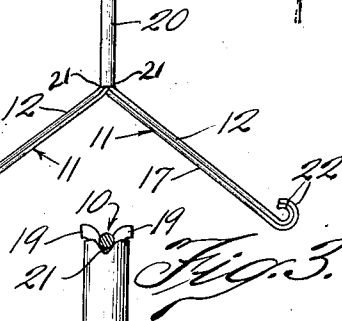


*Fig. 3.*

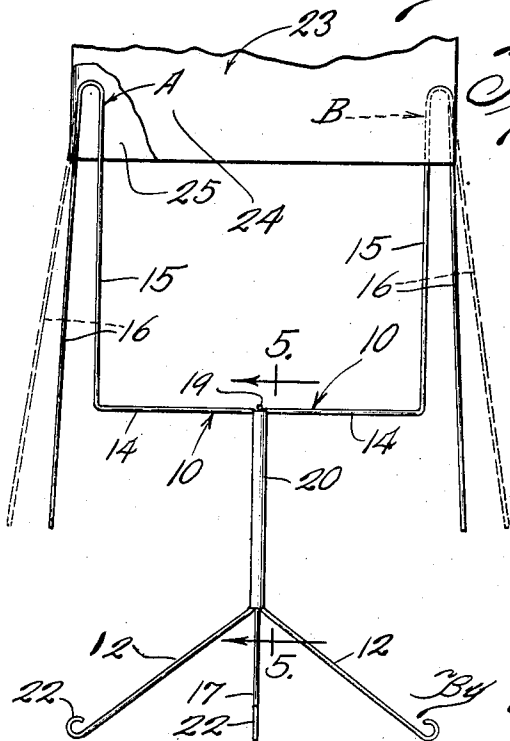


*Fig. 4.*

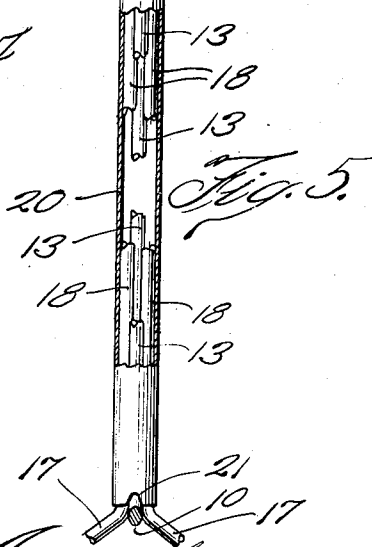


*Fig. 5.*

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## UNITED STATES PATENT OFFICE

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## DISPLAY STAND

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11 Claims. (Cl. 40—125)

The invention relates generally to display stands and more particularly to that type of stand adapted to support posters for advertising purposes. It is a primary object of the invention to provide a new and improved stand of this character.

It is customary in the use of such stands to provide the necessary rigidity and smoothness for the paper poster proper by backing it with a heavy, relatively expensive backing board or by printing the advertising matter directly onto such a board. In order to eliminate the expense and weight of the backing board and as a further object of the invention, a novel stand is provided which permits the use of a poster made entirely from cheap, relatively light weight paper-like material and which will impart to such a poster the characteristics and appearance of the above mentioned heavier type of poster, the stand having means which engage the poster and place it under tension uniformly throughout the length thereof, so that it is held taut and retains a smooth appearance.

Another object of the invention is to provide an improved device of this character having yieldable poster supports on which posters of varying sizes may be mounted.

Another object of the invention is to provide a new and improved display stand of this character which is cheap to manufacture, is of relatively light weight and which may be "packed flat" for shipment or storage by folding all of its parts into substantially the same plane.

Other objects of the invention are to provide a poster display stand which is constructed to facilitate changing the posters in a multiple advertisement campaign; which permits the use of "double faced" posters having advertising material on both sides; which is constructed from wire, the resiliency of which is utilized to place the poster under tension when supported in the stand, and which is so constructed that the tensioning forces on the poster are substantially uniform throughout the length of the poster.

Another object of the invention is to provide a poster of thin paper-like material which is readily attachable to and removable from the stand by merely slipping it on or off the supporting elements thereof and which is so constructed that it is readily engageable at its edges by said elements whereby the latter may place it under tension to impart rigidity and a smooth neat appearance thereto.

Still another object of the invention is to provide a poster for the above purpose which has

an envelope-like body, open along at least one edge and adapted to be slipped over poster supporting members.

In the form disclosed herein, the invention is embodied in a poster supporting device comprising a somewhat U-shaped frame formed from bent wire, this frame occupying a single plane and being carried on an upright standard having diverging legs at its lower end, said legs being movable into an open position whereby a stable base may be provided for the poster supporting device and into a closed position whereby the entire base lies in the plane of the U-shaped frame, the vertical members of the frame being adapted to support an envelope-like, double faced poster and being resilient to engage opposed edges of the poster to apply uniform tensioning force to said edges whereby the surface of the poster is held taut throughout.

Further objects and advantages of the invention will become apparent from the following description and accompanying drawing, in which:

Fig. 1 is a front elevation of a preferred form of the invention with a poster mounted thereon and the legs folded.

Fig. 2 is a side elevation of the display stand of Fig. 1.

Fig. 3 is a front elevation of the display stand, the full lines showing the positions of the poster stretching or tensioning parts of the stand when released, the dotted lines indicating the side edges of the poster envelope, and the dashed lines indicating the extent to which the upper portions of parts tend to move outwardly when the lower ends thereof are confined within the envelope.

Fig. 4 is a front elevation of the stand with the legs thereof open and a poster partly mounted.

Fig. 5 is a view looking in the direction of the arrows on line 5—5 of Fig. 4 partly in elevation and partly in section.

While the invention is susceptible of embodiment in many different forms, there is shown in the drawing and we shall herein describe in detail one such embodiment, with the understanding that the present disclosure is to be considered as an exemplification of the principles of the invention and is not intended to limit the invention to the embodiment illustrated. The scope of the invention will be pointed out in the appended claims.

In the drawing a poster display stand is shown which is made up generally of two pairs of wire

elements, one pair designated 10—10 having the lower portions 12 thereof bent to form supporting legs and the upper portions thereof bent to form wire members 14, 15 and 16 which constitute a poster frame having poster supporting and tensioning arms designated generally as A and B. The other pair of wire elements is designated 11—11, this pair also having the lower portions bent to form legs 17 which cooperate with the legs 12 of the elements 10—10 to form a stable structure. Intermediate upright wire members 13 of the elements 10 and 18 of the elements 11 extend into and are housed by a tubular retaining member 20, this retaining member being provided with notches 21 at its upper and lower ends into which the outwardly extending cross members 14 and leg portions 12 of the wire elements 10 fit so as to hold these elements in a common plane. The upper ends of the elements 11 are preferably bent over at 19 so as to prevent longitudinal movement thereof in the retaining member 20. These elements 11 may be swiveled in the retaining member 20 from the folded position (used for packing purposes) shown in Figs. 1 and 2, to the unfolded or operative position illustrated in Figs. 4 and 5. Preferably the elements 11 are so formed that when the legs 17 are swung into the plane of the legs 12 they may be sprung, due to the resiliency of the wire, into alignment with the legs 12 so that the entire stand then forms a relatively thin, flat package which greatly conserves space during shipment and storage.

In order that the surface upon which the stand is set will not be scratched or marred, the lower extremities of leg sections 12 and 17 are curled as at 22, the curls of legs 17 being larger than those of legs 12, so that when the stand is folded flat the curls interfit and the legs 17 may be positioned in the plane of legs 12 (see Figs. 1 and 2).

The members 14, 15 and 16 of the elements 10, as will appear readily from Figs. 1, 2, 3 and 4 of the drawing, lie in a single plane and combine to form a poster mounting or supporting frame of somewhat U or H-shaped construction, the cross members 14 of the elements 10 combining to form the horizontal bar of the frame and the members 15 and 16 forming the upright poster supporting and tensioning arms A and B. Preferably these arms are formed of two strands of wire, such as members 15 and 16, which members are joined at their upper ends at bends 15a and formed so that when released or permitted to spread they assume the shape shown in full lines in Fig. 3. From this figure, it will be apparent that in this condition the sections 15 extend upwardly and slightly outwardly from the ends of the horizontal cross members 14 and that the members 16 extend downwardly and also outwardly from the bends 15a.

The purpose of this construction will be appreciated more fully when the poster itself is taken into account, and more particularly the poster illustrated in the exemplary embodiment of the invention.

As illustrated herein, the poster 23 has an envelope-like body with integral front and back sections 24 and 25 respectively having edge folds at the junctions of said sections (see Fig. 4). The poster is adapted to be slipped over the upstanding supporting and tensioning arms A and B formed by the wire elements 10, with the front and back portions enveloping said arms to constitute a double faced poster, while depending

poster engaging members 16 bear resiliently against the inner surface at the edge folds of the envelope to place the sections 24 and 25 under tension. The envelope may be printed and constitute the poster itself or, if desired, it may be separate and have posters secured to the front and rear surfaces thereof.

In order that the envelope be placed under uniform tension throughout its entire length, it is desirable that the poster supporting arms A and B are yieldable throughout their length and to that end there is provided herein a structure which imparts what might conveniently be termed a dual resiliency to the supporting arms A and B. As previously explained, the depending members 16 are normally sprung at an angle outwardly from the bends 15a, and as the envelope 23 is slipped onto the supporting arms A and B (see Fig. 4), the members 16 are urged inwardly and, due to their resiliency, tend to bear outwardly against the inner surface of the edge folds of the envelope whereby the latter is held taut between the arms. However, the tensioning action will be greater at the lower, free ends of the members 16 and will become increasingly less toward the top thereof, at which point the tensioning action exerted by the member 16 alone is negligible. This change in the tensioning forces throughout the length of the poster will cause wrinkles in the upper portion thereof, and to avoid such a condition it is necessary to impart resiliency to the upper ends of the members 16 whereby they also will be urged resiliently outwardly to provide tensioning forces for the upper portion of the poster.

Furthermore, it is desirable that this outward tensioning force, applied by the upper end of arms A and B, be proportional to the degree of force applied by the lower ends of depending wire members 16 against the lower portion of the inner surface of the envelope whereby uniform tension will be applied to the poster throughout its length. In the particular embodiment disclosed herein, the necessary resiliency is obtained at the upper ends of members 16 by the provision of members 15 intermediate the cross members 14 and the depending members 16.

As the poster is slipped downwardly over the supporting arms A and B, outward resilient movement of the upper ends of members 15 and 16 (see dashed lines of Fig. 3) is produced. When the poster engaging members 16 are moved inwardly at their lower ends to the dashed line positions shown in Fig. 3, the upper ends of the arms A and B move outwardly to the dashed line positions indicated, thus demonstrating that, when the envelope confines the arms A and B to the positions shown in Fig. 1, the poster-engaging sections 16 effectively apply a stretching tension to the poster throughout the length thereof. As the poster 23 is slipped over the supporting arms, it urges members 16 into the vertical position shown in Fig. 1, and the upper ends of wire members 15 and 16, at bends 15a, will have a tendency to move into the position shown in dashed lines in Fig. 3, which movement is limited by the engagement of the upper end of member 16 by the inner surface of the poster, the edges of which are represented by dotted lines 23a in Fig. 3. The degree of the tendency on the part of the upper ends of members 15 and 16 to move outwardly is proportional to the amount of inward movement imparted to the lower ends of member 16. Since the lower extremities of

these latter members have a tendency to move resiliently against the inner surface of the lower end of the poster, into their outward, angular position, a tensioning force will be imparted to the poster increasingly toward the lower end thereof. Since the upper ends of members 15 and 16 at bends 15a have this tendency to move resiliently outwardly against the inner surface of the upper end of the poster under the influence of, and proportionally to, the inward movement of the lower extremities of members 16 when the poster is slipped over the supporting arms A and B, a similar tensioning force will be imparted to the poster increasingly toward its upper end. The resultant of these two tensioning forces, the one decreasing toward the top of the poster and the other decreasing toward the bottom thereof, serves to impart a substantially uniform outwardly applied tensioning force to the poster engaging members 16 when the poster is mounted on the supporting arms A and B.

Since the lower ends of members 16 and the upper ends of members 15 and 16 are both urged inwardly an amount in accordance with the size of the poster mounted thereon, it will readily be seen that a uniform tensioning action is obtained along the entire edge of the poster. Such uniform tension serves to eliminate wrinkles in a paper-like poster and gives it the appearance of the board backed poster heretofore used.

Furthermore, since the supporting arms A and B are yieldable laterally throughout a relatively wide range, posters used thereon may vary somewhat in size without the variation in size effecting the advantageous results obtainable with the improved poster stand.

The effect of the above described dual resiliency arrangement may be readily embodied in other structures, the particular embodiment shown herein being used because of its extreme simplicity and its aptitude for illustrating the principle of my invention. Furthermore, the poster may be mounted on the stand to engage the supporting and tensioning arms A and B in a variety of ways but herein is shown a method which is very efficient and which is particularly adapted to a stand of the wire construction type here disclosed.

That both surfaces of the envelope are equally available for advertising copy and that the posters are conveniently and readily replaceable will be apparent from the foregoing.

I claim as my invention:

1. A stand for mounting paper-like posters of the type having a pair of integral surface sections with edge folds at their junctions comprising, in combination, four wire elements and an elongated tubular member for maintaining said wire elements in operative relationship, said elements having upright portions adapted to be retained within said tubular member, and integral lower outwardly extending portions constituting legs, a pair of said elements being adapted to swivel within said tubular member to swing those legs integral therewith into the plane of the remaining legs for folding the stand, the remaining pair of elements having their upper portions bent to form a U-shaped poster supporting frame having laterally spaced poster supporting arms extending upwardly from cross members of said wire elements and being adapted to be enveloped by said poster, each arm comprising an upstanding wire member integral at its lower end with a cross member and free to flex at its upper end, and a downwardly and outwardly extending poster engaging member free to flex at its lower end

whereby said supporting arms are urged in opposite directions against the inner surface of the poster at the edge folds thereof to maintain the surface of the latter taut.

2. A stand for mounting envelope-shaped posters comprising a plurality of wire elements and retaining means for maintaining said elements in operative relationship, said wire elements being bent to form upright members having legs integral therewith and diverging from the lower ends of said upright members, alternate wire elements terminating at the upper ends of the upright members thereof and being adapted with their legs to swivel within said retaining means, means for securing the remaining alternate upright members stationary with respect to said retaining means, each of said legs diverging from the first named uprights being movable into the plane of one of the remaining legs, each of the stationary uprights terminating at its upper end in a cross member integral therewith and diverging at an angle therefrom, yieldable poster supporting arms adapted to be enveloped by said poster, each arm comprising an upstanding wire member integral with one of said cross members and extending angularly therefrom, each of said wire members being bent at its upper end to provide a downwardly and outwardly extending poster engaging member whereby said supporting arms are urged in opposite directions against the inner surface of said poster at the edge folds thereof and the surface sections of said poster are maintained taut.

3. A stand for mounting paper-like envelope-shaped posters comprising a plurality of wire elements and retaining means for maintaining said wire elements in operative relationship, said elements being bent to form upright members adapted to be secured together by said retaining means, said uprights having a base for the stand at the lower ends thereof, some of said elements terminating near the upper end of their uprights, other of said elements having cross members integral with and located angularly of the upper ends of the uprights, poster supporting arms for said stand, each arm comprising a wire member integral with one of said cross pieces and upstanding angularly therefrom, said wire member being bent at its upper end to provide downwardly and outwardly extending poster engaging member.

4. A stand for mounting posters comprising a plurality of wire elements and a retaining member for maintaining said wire elements in operative relationship, said elements being bent to form upright members adapted to be secured together by said retaining member, said uprights having legs integral with the lower ends thereof, said legs being bent to diverge from the lower end of said retaining member, some of said uprights terminating at their upper ends in angular tips bent to overlie the upper edge of said retaining member, said last named uprights being adapted to swivel within said retaining member and with the diverging legs integral therewith whereby said diverging legs may be swiveled into alignment with the plane of the remaining legs for folding the stand, notches in the upper and lower extremities of the retaining member in which the wire at the ends of other of the uprights is adapted to be seated thereby to prevent swivel action of said last named uprights relative to said retaining member, poster supporting means associated with said stand, said leg sections, standard and poster supporting

means all being in substantially the same plane when said stand is folded.

5. A stand for mounting paper-like envelope-shaped posters comprising a plurality of wire elements and a retaining member for maintaining said wire elements in operative relationship, said wire elements being bent to form upright members adapted to be secured together by said retaining member, a base for said stand at the lower end of said retaining member, said up-  
rights terminating at their upper ends in cross members located angularly of said uprights and diverging from the top of said retaining member, resilient poster supporting arms over which said envelope-shaped poster may be slipped comprising wire members integral with said cross members and upstanding angularly therefrom, said members being bent at their upper ends to provide downwardly and outwardly extending members.

6. A mounting device for posters including wire elements, means for maintaining said elements in assembled relationship, said wire elements being bent to form poster supports, each comprising a member anchored at its lower end, free to flex at its upper end and bent back upon itself at said upper end to provide a depending member for engaging the poster which is free to flex at its lower end with all portions of the wire elements located in a common plane.

7. In combination, an envelope-shaped poster and a stand therefor, said poster having integral front and back sections and edge folds at the junction of edges of said sections to form an envelope-like body open along at least one edge, said stand comprising wire elements held in assembled relationship with one another in association with a base and comprising strands of wire bent to form a pair of poster supports each including an upwardly extending member anchored at its lower end and free to flex at its upper end, said member being bent back upon itself to provide a depending, outwardly extending member free to flex at its lower end, said poster being adapted to be slipped over said poster supports to envelope the same, said depending members being adapted to engage said poster at the edge folds with uniform outwardly applied ten-

sioning force throughout the length of said members.

8. A poster support comprising, in combination, a pair of wire members bent into U-shape with one leg shorter than the other, and means for supporting said members in laterally spaced, substantially parallel relation connected to the ends of the short legs thereof so that both legs of each member are in a common plane with both legs of the other member.

9. A poster support comprising, in combination, a pair of wire members bent into inverted U-shape, and means for supporting said members in laterally spaced, substantially parallel relation with all legs thereof in a common plane and including a cross bar connected to the ends of the adjacent legs thereof.

10. A stand for mounting posters comprising, in combination, a U-shaped poster supporting frame having a cross member, a first pair of resilient members extending substantially parallel to each other from the ends of said cross member, and a second pair of resilient members positioned alongside said first pair in a plane common to the first pair and secured at one end to the free ends of said first pair of resilient members for receiving a band-like poster and placing it in stretched condition.

11. A stand for mounting paper-like posters of the type having a pair of integral surface sections with edge folds at their junctions, comprising, in combination, a pair of wire elements having their upper portions bent to form a U-shaped poster supporting frame having laterally spaced poster supporting arms extending upwardly from cross members of said wire elements and being adapted to be enveloped by said poster, each arm comprising an upstanding wire member integral at its lower end with a cross member and free to flex at its upper end, and a downwardly and outwardly extending poster engaging wire member free to flex at its lower end whereby said supporting arms are urged in opposite directions against the inner surface of the poster at the edge folds thereof to maintain the surface of the latter taut, and means for supporting the cross members of said wire elements to maintain the elements in assembled relation.

JACK F. SMITH.