

Oct. 2, 1956

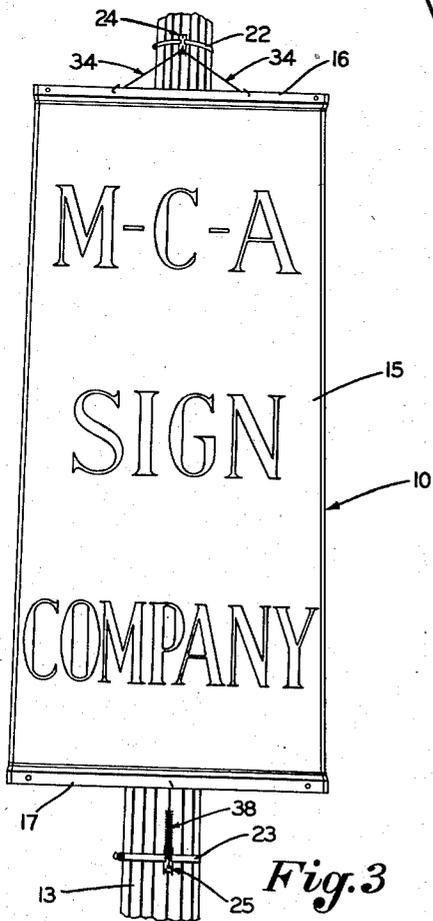
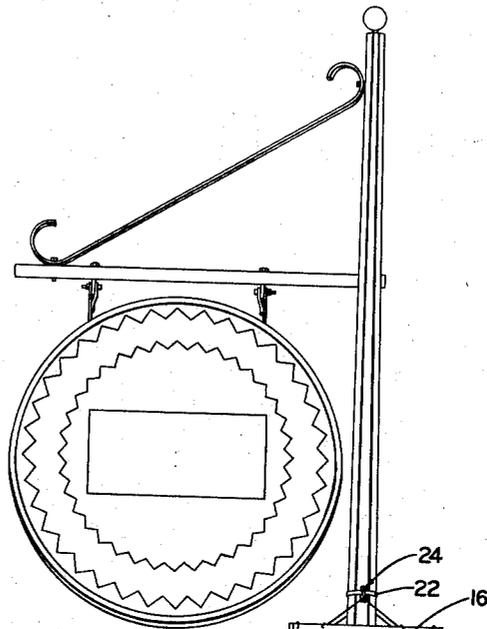
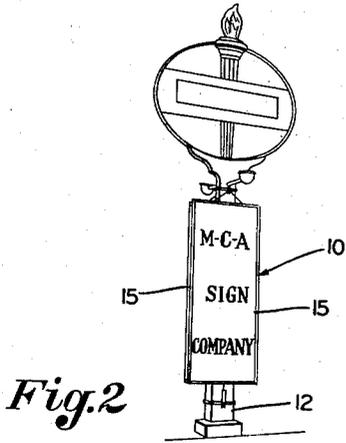
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2,764,830

ARTICULATED BANNER UNIT CONSTRUCTION

Filed Nov. 23, 1955

4 Sheets-Sheet 1



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ARTICULATED BANNER UNIT CONSTRUCTION

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4 Sheets-Sheet 2

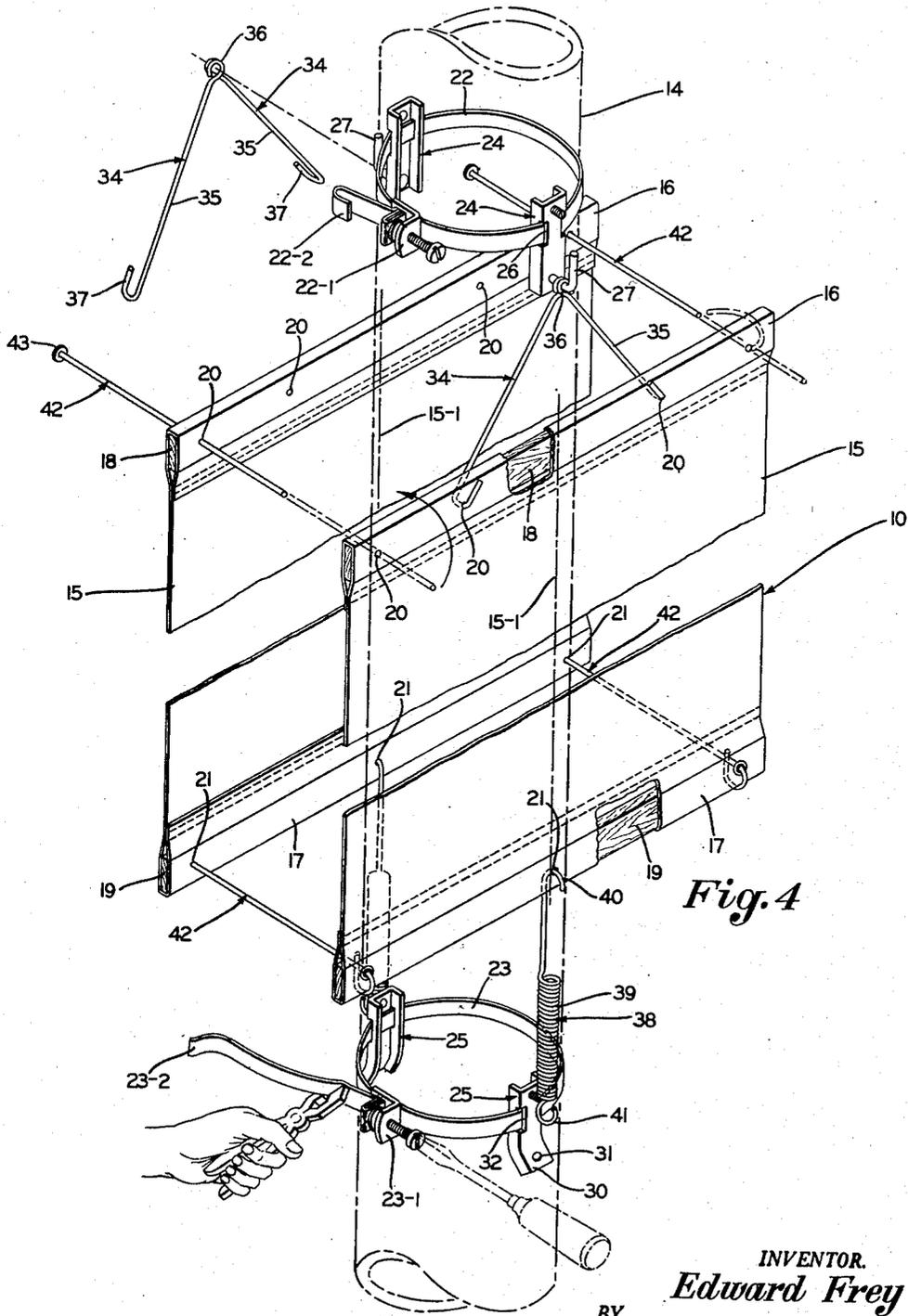


Fig. 4

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ARTICULATED BANNER UNIT CONSTRUCTION

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4 Sheets-Sheet 3

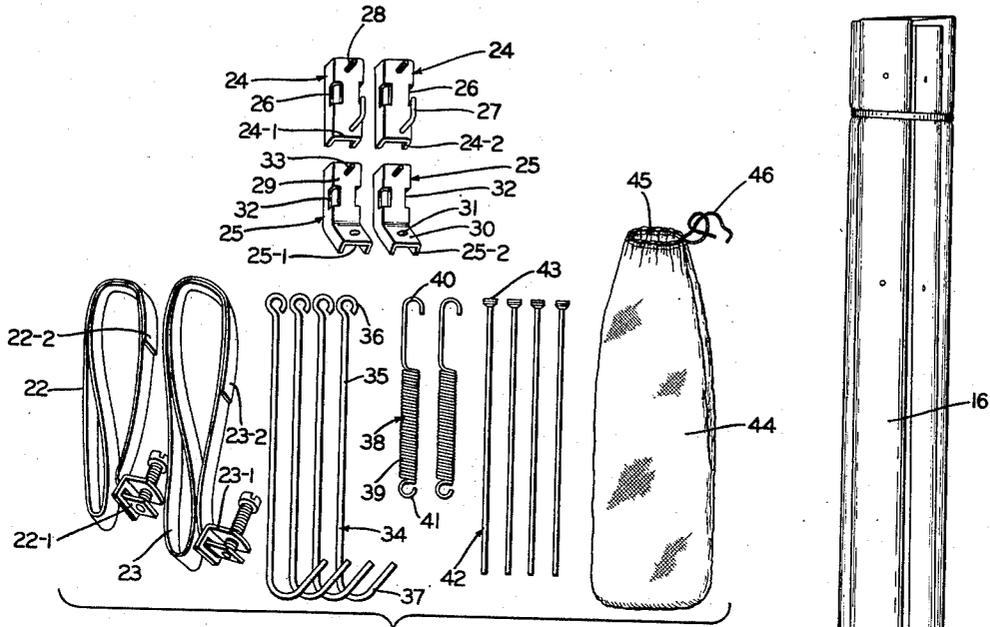


Fig. 5

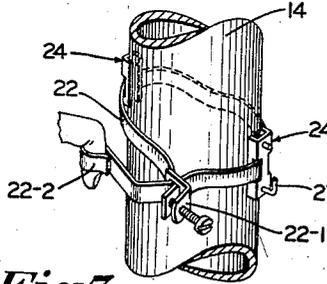


Fig. 7

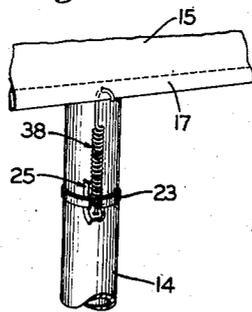


Fig. 9

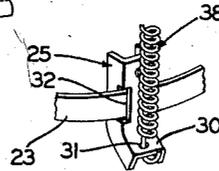


Fig. 10

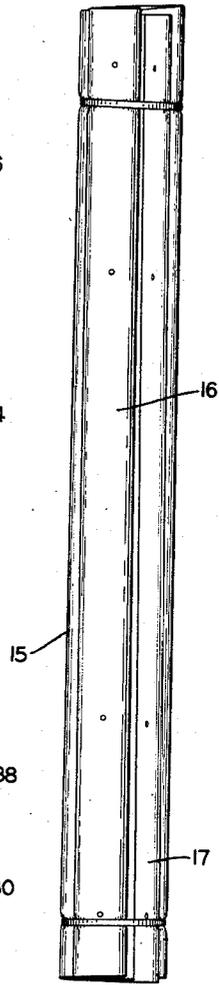


Fig. 6

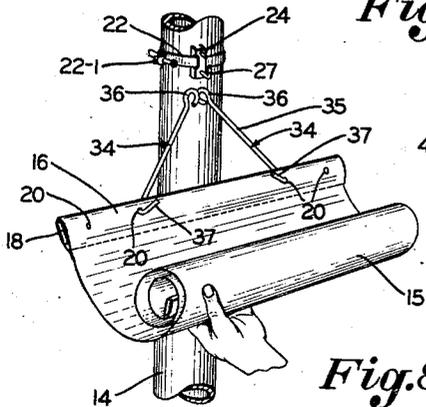


Fig. 8

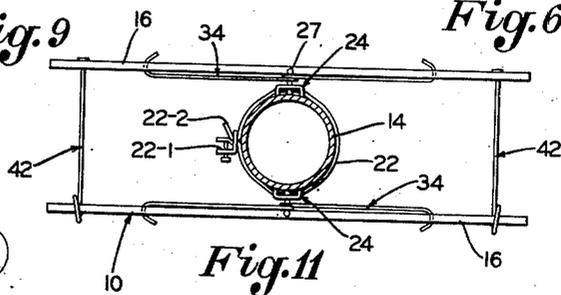


Fig. 11

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2,764,830

## ARTICULATED BANNER UNIT CONSTRUCTION

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Application November 23, 1955, Serial No. 548,594

12 Claims. (Cl. 40—125)

The invention relates to articulated banner unit construction particularly adapted for use as a pole sign, and including two parallel spaced banners mounted on an upright pole extending between the banners.

Prior to the present invention, such a double faced pole sign has usually included two parallel spaced panels mounted on an upright pole extending between the banners. Each panel has been made of stiff weatherproof cardboard. Bolts, nuts, and lock-washers have been used to mount each panel on a cross-piece bolt connected to the pole.

Such double faced pole signs are used extensively on light poles located on a gasoline filling station lot. The stiff weatherproof cardboard panels have advertising copy on their exposed faces, and the panels are changed frequently to present different advertising copy.

The filling stations served by a particular oil company obtain such double faced pole signs from the manufacturer under the orders of and through the oil company. The sign manufacturer in supplying a group of filling stations with original and replacement advertising panels for double faced pole signs has encountered numerous difficulties.

From the production standpoint, an undesirable time delay is encountered where the sign manufacturer does not have facilities for mounting on the weatherproof cardboard the lithographed sheets on which the signs are printed. In such a case, the lithograph sheets must be sent to a distant mounting specialist, and the panels consisting of the lithographed sheets mounted on the stiff weatherproof cardboard must then be returned to the sign manufacturer. This mounting procedure may require a week or longer to carry out.

Since, a large number of mountings are handled at one time, the transportation can be handled by truck.

In shipping the panels from the sign manufacturer to the individual filling station, economical parcel post cannot be utilized. The panels are usually each 3 feet by 5 feet or larger, which is too large for parcel post shipment even when each panel is centrally scored and folded the long way of the panel.

In mounting and changing the panels on the poles, considerable difficulties are encountered because of the substantial number of nuts, bolts, and washers which must be manipulated.

The objects of the present invention include the provision of an improved construction particularly adapted for use as a double faced pole sign, and which is made of separable parts which in the knock-down condition may be packaged as a unit whose dimensions permit parcel post shipment.

Further objects of the present invention include the provision of such an improved double faced pole sign construction, and which requires the use only of two tools for initial mounting on a pole, the two tools being pliers and a screw driver.

Further objects of the present invention include the provision of such an improved double faced pole sign

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construction, and which includes mounting or tender parts which may remain permanently on a pole, and other parts including two sign elements which may be separated and removed from the permanent pole mounted parts without the use of any tools, whereby the sign elements may be easily and rapidly changed.

Further objects of the present invention include the provision of such an improved double faced pole sign construction, and which has a weight of only about half the weight of a similar sign including two weatherproof cardboard panels.

Further objects of the present invention include the provision of such an improved double faced pole sign construction, and in which the parts are articulated and co-act with each other as a unit having wind resistance superior to prior double faced pole sign constructions, and in which the two sign elements do not independently flop and jiggle up and down and sideways, as do the separate sign elements of usual constructions.

Further objects of the present invention include the provision of such an improved double faced pole sign construction, and in which the permanent pole mounted parts are adapted to fit on straight or tapered poles having any cross-section, whether circular or polygonal.

The foregoing and other objects are attained by the improved articulated banner unit construction, parts, combinations, and sub-combinations, which comprise the present invention, and the nature of which is set forth in the following general statement, and preferred embodiments of which, together with their mode of use, are set forth in the following description, and which are particularly pointed out and set forth in the appended claims forming part thereof.

The nature of the improvements of the present invention may be described in general terms as constituting articulated banner unit construction which may be erected on a pole or pedestal which may be straight or tapered and which may have a circular cross section, a polygonal cross section, or an irregular cross section, by the use of only two tools: namely, pliers, and a screw driver. Each articulated banner unit includes two banner elements or components, and mounting or tender parts for the banner elements or components. Some of the mounting or tender parts are permanently mounted on the pole on which the articulated banner unit is erected, and others of the mounting or tender parts are replaceable with replacement banner elements or components.

Each banner element or component includes a rectangular piece of flexible fabric or other flexible material on the exposed face of which a sign is printed or otherwise applied. The flexible rectangular piece is formed with a top end sleeve and a bottom end sleeve. A top pull bar is inserted in the top end sleeve and extends throughout the entire length thereof; and a bottom pull bar is inserted in the bottom end sleeve, and extends throughout the entire length thereof.

The top end sleeve and the top pull bar therein of each banner element or component has formed therein four sets of registering holes. The outer two sets of top holes are adjacent and equally spaced from the opposite ends of the top end sleeve and the top hole bar. The inner two sets of top holes are equally spaced on opposite sides of the longitudinal center line or axis of the flexible rectangular piece.

The bottom end sleeve and the bottom pull bar of the banner element or component have formed therein three sets of registering bottom holes. The outer two sets of bottom holes are located adjacent and equally spaced from the opposite ends of the bottom sleeve and the bottom pull bar. The third set of bottom holes is located on the center line of the rectangular flexible piece.

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The permanent mounting or tender parts of the improved articulated banner unit include a short pole band having a pair of hook brackets slidably mounted thereon, and the short pole band being made of flexible material, and being adapted to be secured at an upper position on the pole or pedestal on which the articulated banner unit is erected.

Each hook bracket includes a hook protruding outwardly therefrom, and has formed therein a threaded aperture in which a set screw is screwed to tension the short pole band against the pole or pedestal. The upper hook brackets are located on opposite sides of the pole or pedestal and are aligned with each other in a vertical median plane of the pole or pedestal.

The permanent mounting or tender parts of the articulated banner unit furthermore include a long pole band slidably mounting a pair of anchor plates which are generally similar to the hook brackets, and each anchor plate includes a portion protruding outwardly from the band and having formed therein a hole.

Each banner element or component is suspended from the hook of one of the hook brackets by a pair of angled hooks each including an elongated body portion having one end formed as a circular loop which is engaged with the upper hook of the hook bracket and having its other end formed as an arcuate hook which engages one of the inner sets of top holes in the top end sleeve and top pull bar of the banner element or component.

The lower end of each hook bracket suspended banner element or component has a yielding connection with one of the lower anchor plates, preferably by means of a tension spring including an elongated helical coil central portion with an elongated hook end engaged with the center set of registering holes in the bottom end sleeve and the bottom pull bar of the associated banner element or component. The other end of the elongated helical coil central portion of the tension spring terminates in a short hook end which is engaged with the hole in one of the lower anchor plates, said anchor plate being vertically aligned with the upper hook bracket suspending the banner element or component.

After the two banner elements or components are thus suspended and tensioned on opposite sides of the pole or pedestal, the outer set of top holes at each upper corner of each banner element or component is aligned with an outer set of holes in an upper corner of the other banner element or component. Similarly, the outer set of holes at each lower corner of each banner element or component is aligned with one of the lower corner sets of holes of the other banner element or component.

Tension means extend through each of the aligned sets of corner holes of the banner elements or components, and each tension means is connected with opposite corner portions of the two banner elements or components.

By way of example, preferred embodiments of the improved articulated banner unit construction and component parts of the present invention are illustrated in the accompanying drawings forming part hereof, in which

Fig. 1 is a close-up perspective view of a filling station sign pole which is tapered and is hexagonal in cross section, and which mounts one of the improved double faced articulated banner units.

Fig. 2 is a distant perspective view of a filling station sign pedestal which is straight and has a rectangular cross section, and which mounts another of the improved double faced articulated banner units.

Fig. 3 is a close-up fragmentary perspective view of another filling station sign pole which is tapered and has a fluted cross section, and which mounts still another of the improved double faced articulated banner units.

Fig. 4 is a fragmentary isometric view illustrating the method of assembly carried out in erecting on a cylindrical pole one of the improved articulated banner units.

Fig. 5 is a plan view showing disassembled and in the same scale all the banner mounting or tender parts of

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the articulated banner unit of Fig. 4, and also showing in the same scale, the bag in which the banner mounting or tender parts are packed for shipping.

Fig. 6 is a plan view of the two banners of the articulated banner unit of Fig. 4, rolled up around the bag containing the banner mounting or tender parts, and ready for being wrapped with kraft paper for parcel post shipment, the scale of Fig. 6 being the same as the scale of Fig. 5.

Fig. 7 is a fragmentary perspective view showing a preliminary step in mounting one of the pole bands of Fig. 4 on the pole.

Fig. 8 is a fragmentary isometric view showing the method of hanging the top of one of the banners of Fig. 4 by a pair of hooks on one of the hook brackets mounted on an upper portion of the pole by one of the pole bands.

Fig. 9 is a fragmentary perspective view of lower portions of the articulated banner unit of Fig. 4, after assembly.

Fig. 10 is an enlarged view of portions of Fig. 9.

Fig. 11 is a diagrammatic top plan view of the assembled articulated banner unit of Fig. 4 mounted on the pole, shown in transverse cross section.

Fig. 12 is a fragmentary isometric view, similar to Fig. 4, showing the method of assembly used in erecting the pedestal mounted articulated banner unit of Fig. 2.

Similar numerals refer to similar parts throughout the several views.

One of the improved articulated banner units of the present invention is indicated generally by 10, and is shown in Fig. 1 mounted on a tapered pole 11 having a hexagonal cross section.

Another one of the improved articulated banner units 10 is shown in Fig. 2 mounted on a straight pedestal 12 having a rectangular cross section.

Still another one of the improved articulated banner units 10 is shown in Fig. 3 mounted on a tapered pole 13 having a fluted cross section.

In Fig. 4 there is shown a straight pole 14 having a cylindrical cross section and indicated diagrammatically by dash lines, and on which one of the improved articulated banner units 10 is shown in the course of being erected.

Each articulated banner unit 10 includes two banner elements 15, each of which is rectangular and made of flexible fabric on the exposed face of which a sign may be applied, such as shown in Figs. 1, 2, and 3.

Each banner element 15 includes a top end sleeve 16 extending horizontally, and a bottom end sleeve 17 extending horizontally. A top pull bar 18, preferably made of wood, is located in the top end sleeve 16; and a bottom pull bar 19, preferably made of wood is located in the bottom end sleeve 17. The top end sleeve 16 of each banner element 15 has formed therein four laterally spaced sets of holes 20, which register with similar holes formed in the top pull bar 18. The bottom end sleeve 17 of each banner element 15 has formed therein three laterally spaced sets of bottom holes 21, which register with similar holes formed in the bottom pull bar 19.

Each banner element 15 has a longitudinally extending median axis indicated by the dot-dash line 15-1 and which intersects the top and bottom sleeves 16 and 17.

The two outer sets of top sleeve holes 20 are located adjacent the ends of the top sleeve 16. The inner sets of top sleeve holes 20 are equally spaced on opposite side of the longitudinally extending median axis 15-1. The two outer sets of bottom sleeve holes 21 are located adjacent the ends of the bottom sleeve 17, and the other set of bottom sleeve holes 21 is located on the longitudinally extending median axis 15-1.

In addition to the two banner elements 15, each articulated banner unit 10 includes mounting or tender parts shown disassembled and in the same scale in Fig.

5, and shown at a semi-finished stage of the erection operation in Fig. 4.

The mounting or tender parts of each of the articulated banner units 10 include parts which after initial mounting on a pole are permanently left on the pole. The permanent mounting or tender parts of each articulated banner unit 10 include a short pole band 22, a long pole band 23, two hook brackets 24 and two anchor plates 25.

Each hook bracket 24 includes a length of a channel bar having a web 24-1 and legs 24-2. Intermediate the ends of the channel bar, there are formed in the web 24-1 and opposite legs 24-2, opposite top and side opening slots 26. At one side of the slots 26, the channel bar web 24-1 mounts a hook 27; and at the other side of the slots 26, the channel bar web 24-1 has formed therein a threaded aperture, in which a set screw 28 is screwed.

Each anchor plate 25 includes a length of a channel bar having a web 25-1 and legs 25-2; and each anchor plate 25 has an upper anchor plate portion 29, and a lower anchor plate portion 30, there being an obtuse angle between the outer faces of the webs 25-1 of the upper anchor plate portion 29 and the lower anchor plate portion 30. The web 25-1 of the lower anchor plate portion 30 has formed therein a hole 31. The web 25-1 and opposite legs 25-2 of the upper anchor plate portion 29 has formed therein top and side opening notches 32. Above the notches 32, the web 25-1 of the upper anchor plate portion 29 has formed therein a threaded aperture, in which a set screw 33 is screwed.

The mounting or tender parts of each of the articulated banner units 10 include parts which after initial mounting on a pole are replaced along with replacement banner elements. The replaceable mounting or tender parts of each articulated banner unit 10 include four hooks each indicated generally by 34, two tension springs each indicated generally by 38, and four spacer rods each indicated generally by 42.

Each hook 34 includes an elongated central body portion 35 having one end formed as a circular hook loop 36, and formed at the other end as an arcuate hook 37.

Each tension spring 38 includes an elongated helical coil central portion 39 terminating at one end in an elongated hook 40, and terminating at the other end in a short hook 41.

Each spacer rod 42 has an enlarged head 43 at one end.

At the sign manufacturer's plant, all of the separate mounting or tender parts of each of the articulated banner units 10, are placed in a fabric bag 44 shown in Fig. 5. The fabric bag 44 includes an end opening 45 closable by draw strings 46. After being filled with the mounting or tender parts, the draw strings 46 of the bag 44 are pulled tight and tied, and the bag 44 and parts contained therein are rolled up inside the pair of banner elements 15, shown in the rolled condition in Fig. 6.

Usual dimensions of each banner element may be 3 feet by 5 feet, the end sleeves having the shorter dimension, and the banners being rolled about one of the sets of end sleeves and the pull bars contained therein, and about the parts filled bag 44.

Kraft paper may then be wrapped around the rolled up parts of the articulated banner unit 10, and the package unit thus formed, has dimensions acceptable for parcel post shipment.

The short pole band 22 and the long pole band 23 are provided for mounting on a tapered pole or a pole having any cross section which may be engirdled and clamped by the short pole band 22. The short pole band 22 is a stainless steel flexible band which has a stainless steel slotted buckle and screw clamp 22-1 at one end. The other free end 22-2 of the band 22 is passed through the side opening slots 26 in the pair of hook brackets 24, with the channel bar webs 24-1 of the hook brackets on the outside of the band 22.

After the hook brackets 24 are strung on the band 22, the band 22 is wrapped around the pole 14, and the free band end 22-2 is passed through the buckle slot of the buckle and screw clamp 22-1.

In Fig. 7, the band 22 and hook brackets 24 are shown after the band 22 has been loosely mounted on the pole 14, after which the band 22 is tightened and the clamp 22-1 tightened, permanently mounting the band 22 and the hook brackets 24 on the pole 14, the brackets 24 being diametrically opposite each other, as best shown in Fig. 4.

The long band 23 is made of stainless steel and has a stainless steel slotted buckle and screw clamp 23-1 on one end and a free end 23-2 which is first passed through the slots 32 of the two anchor plates 25, and then the band is wrapped around the pole 14, and the free end 23-2 is passed through the slot of the buckle and screw clamp 23-1, and is tightened and securely and permanently mounted on the pole 14, the proper distance below the band 22. The tightening of the band 23 is best effected by the use of pliers, as shown in the lower portion of Fig. 4, and a screw driver shown in dash lines is used to tighten the clamp screw of the buckle and screw clamp 23-1. The pliers and screw driver are also used to mount the band 22 and hook brackets 24 on the pole 14. The channel bar webs 25-1 of the upper anchor plate portions 29 of the anchor plates 25 are on the outside of the band 23, and lower anchor plate portions 30 of the anchor plates 25 protrude outwardly from the pole 14, the anchor plates 25 being diametrically opposite each other, and being vertically aligned with the hook plates 24, as best shown in Fig. 4.

Referring to Fig. 8, a pair of the hooks 34 have their arcuate hook ends 37 hooked into the inner pair of sets of holes 20 in the top end sleeve 16 of the front banner element 15, the hooks 37 passing through the inner pair of holes in the top pull bar 18 located in the banner top end sleeve 16. The elongated hook body portions 35 slope towards each other and the top circular hook loops 36 are overlapped and aligned with each other and then hooked onto the hook 27 of the front hook bracket 24, and the top end of the front banner element 15 is thus suspended from the hook 27 of the front hook bracket 24, as shown in Fig. 4.

One of the tension springs 38 has its upper elongated hook end 40 engaged with the center set of bottom holes 21 in the bottom end sleeve 17 and the bottom pull bar 19 located therein, as shown in Fig. 4. The elongated helical coil central portion 39 of the front tension spring 38 in the retracted condition as shown in Fig. 4 has its lower short hook end 41 spaced about 1½ inches above the lower anchor plate portion 30 of the front anchor plate 25.

Accordingly, when the front tension spring short hook end 41 is pulled and the helical coil central portion 39 extended, and the short hook end 41 is hooked into the hole 31 of the lower anchor plate portion 30 of the front anchor plate 25, there is provided a yielding connection between the center of the lower end of the front banner element or component 15 and the lower pole band 23.

The two angled suspension hooks 34 engaged with the top end sleeve 16 and the top pull bar 18 therein, constitute upper rigid pivotal connecting means between the front banner element or component 15 and the hook 27 of the front hook bracket 24.

The back banner element or component 15 is similarly connected to the top pole band 22 and bottom pole band 23.

After the front and back banner elements or components 15 have been thus mounted on a pole such as the pole 14 shown in Fig. 4, each set of top holes 20 adjacent the end of the top sleeve 16 of each banner element or component 15 may be termed a set of corner holes which is located opposite a similar set of corner holes 16 in the other banner element or component 15. Similarly, each

set of bottom holes 21 adjacent the end of the bottom sleeve 17 in each banner element or component 15 may be termed a bottom set of corner holes located opposite a similar set of bottom corner holes 21 in the other banner element or component 15.

Each of the spacer rods 42 is made of aluminum alloy or similar bendable material. One of the spacer rods 42 is extended through each pair of aligned and opposite sets of corner holes 20 and 21 of the banner elements or components 15.

In Fig. 4, at the top left corner of unit 10, one of the spacer rods 42 is shown in full lines just after being inserted in the left set of corner holes 20 of the back banner element or component 15; and this rod 42 is shown in dash lines after being extended through the left set of corner holes 20 in the front banner element or component 15.

At the right end of the top sleeves 16 in Fig. 4, another of the spacer rods 42 is similarly shown in full lines and in dash lines, and in a second set of dash lines is further shown after being bent back over and partly down behind the top end sleeve 16 and the top pull bar 13 contained therein of the front banner element or component 15.

The lower spacer rods 42 in Fig. 4 are shown after being completely installed in the unit 10.

Fig. 12 is a fragmentary isometric view showing one of the improved articulated banner units 10 assembled and erected on the pedestal 12 of Fig. 2.

The poles 11, 13, and 14, and the pedestal 12, may each be broadly termed an upright support member.

The set screw 28 in each hook bracket 24 is used to apply additional tension to the upper pole band 22 on which the two hook brackets 24 are threaded, when the upper pole band 22 is installed on a pole, as above described. Similarly, the set screw 33 in each anchor plate 25 is used to apply additional tension to the lower pole band 23 on which the two anchor plates 25 are threaded, when the lower pole band 23 is installed on a pole.

When the articulated banner unit 10 is installed on a tapered pole, the lower set screws 33 in the lower anchor plates 25 are screwed against the pole for applying additional tension to the pole band 23, as above described; and the lower set screws 33 have the additional function of preventing the anchor plates 25 and the lower pole band 23 from sliding up the tapered pole under the tension of the springs 38.

I claim:

1. Articulated banner unit construction including an upright supporting member, a banner component, and parts mounting the banner component on the upright supporting member; the banner component including a rectangular flexible piece, a top pull bar and a bottom pull bar, and means connecting the pull bars to the flexible piece; and the mounting parts including an upper band secured on the upright supporting member and a lower band spaced below the upper band and secured on the upright supporting member, rigid suspension means having a pivotal connection with the upper band and being connected with banner component top pull bar, and yielding means connecting the banner component bottom pull bar with the lower band.

2. Articulated banner unit construction including an upright supporting member, a banner component, and parts mounting the banner component on the upright supporting member; the banner component including a rectangular flexible piece, a top pull bar and a bottom pull bar, and means connecting the pull bars to the flexible piece; and the mounting parts including an upper band secured on the upright supporting member and a lower band spaced below the upper band and secured on the upright supporting member, rigid suspension means having a pivotal connection with the upper band and being connected with banner component top pull

bar, and yielding means connecting the banner component bottom pull bar with the lower band; the means connecting the pull bars to the flexible piece including a top laterally extending sleeve and a bottom laterally extending sleeve, the sleeves being formed in the flexible piece, and the top pull bar being located in the top sleeve, and the bottom pull bar being located in the bottom sleeve.

3. Articulated banner unit construction including an upright supporting member, a banner component, and parts mounting the banner component on the upright supporting member; the banner component including a rectangular flexible piece, a top pull bar and a bottom pull bar, and means connecting the pull bars to the flexible piece; and the mounting parts including an upper band secured on the upright supporting member and a lower band spaced below the upper band and secured on the upright supporting member, rigid suspension means having a pivotal connection with the upper band and being connected with banner component top pull bar, and yielding means connecting the banner component bottom pull bar with the lower band; the means connecting the pull bars to the flexible piece including a top laterally extending sleeve and a bottom laterally extending sleeve, the sleeves being formed in the flexible piece, and the top pull bar being located in the top sleeve, and the bottom pull bar being located in the bottom sleeve; the top sleeve and the top pull bar having two sets of registering holes formed therein and the rigid suspension means including two lower hooks, each hook engaging one of the sets of registering holes in the top sleeve and top pull bar.

4. Articulated banner unit construction including an upright supporting member, a banner component, and parts mounting the banner component on the upright supporting member; the banner component including a rectangular flexible piece, a top pull bar and a bottom pull bar, and means connecting the pull bars to the flexible piece; and the mounting parts including an upper band secured on the upright supporting member and a lower band spaced below the upper band and secured on the upright supporting member, rigid suspension means having a pivotal connection with the upper band and being connected with banner component top pull bar, and yielding means connecting the banner component bottom pull bar with the lower band; the means connecting the pull bars to the flexible piece including a top laterally extending sleeve and a bottom laterally extending sleeve, the sleeves being formed in the flexible piece, and the top pull bar being located in the top sleeve, and the bottom pull bar being located in the bottom sleeve; the top sleeve and the top pull bar having two sets of registering holes formed therein and the rigid suspension means including two lower hooks, each hook engaging one of the sets of registering holes in the top sleeve and top pull bar; the bottom sleeve and the bottom pull bar having formed therein a central set of registering holes and the yielding means including an upper hook end engaging the central set of registering holes in the bottom sleeve and bottom pull bar.

5. Articulated banner unit construction including an upright supporting member, two banner components, suspension and tension means mounting one of the banner components on one side of the upright supporting member, and suspension and tension means mounting the other banner component on the other side of the upright supporting member, a pair of upper spacer members, each upper spacer member being located and spaced from a side of the upright supporting member opposite the other upper spacer member, and each upper spacer member extending between and having connections with the two banner components.

6. Articulated banner unit construction including an upright supporting member, two banner components, suspension and tension means mounting one of the banner

