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(54) **Display element support**

(57) A display element support comprises a support member having a display end, and a gripping member. A slot (42) is formed in the support member from the display end in which a display element (11) may locate. The gripping member has a pair of gripping arms adapted

in use to engage the display element (11) therebetween. The gripping member is configured for insertion in the display end of the support member so that an engaged display element (11) extends through the slot and is securely retained.

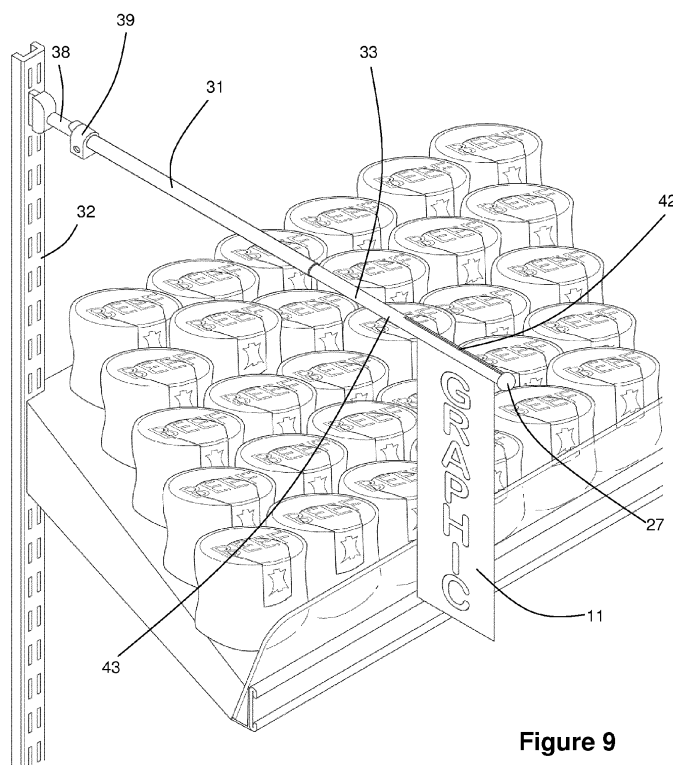


Figure 9

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Description

[0001] This invention relates to a display element support. In particular, the invention relates to a display element support having a gripping member in which a display element may be securely engaged.

[0002] The display of flags and banners providing information or graphics to a customer is an important factor in many retail operations. The retailer must take into account the ease of connection of the banner to a support as well as the ease of mounting the support to an aisle shelf or other fixture. The safety issues associated with the secure engagement of the banner with the support must be considered as well as the visual accessibility of the banner to customers and the efficient use of space.

[0003] Supports comprising a pole arranged at one end to mount to an aisle shelf or other fixture and having a slot formed through the other end for sliding insertion of a banner are known. In this arrangement the banner must have an abutment, for example a row of staples, which serves to prevent the display element from passing through the slot within the tube. This is not only cumbersome but does not provide a particularly secure engagement and thus may have inherent safety implications. Moreover, the support is limited to a horizontal or upward orientation to prevent the banner from sliding out of the support. Supports having resilient gripping arms have been developed in an attempt to address these issues, but the arms of these supports do not retain their resiliency over time and with continued use are less efficient. Thus, the use of these supports could lead to safety issues if a banner becomes disengaged. The engagement of a banner in such a support may also be difficult to achieve since the resilient arms need to be separated so that the banner can be inserted therebetween - the thicker the banner the more difficult this becomes.

[0004] Other types of support exist which do not include a pole arrangement. One such example of support has internal studs and requires the banner, which is to be displayed, to have a hook formation thereon for engagement with the internal studs. A problem associated with such a support is that an engaged banner may be disengaged very easily by slight upward movement thereof. There is thus a risk of the banner falling from the support which could result in serious safety implications.

[0005] It is a principal aim of the present invention to provide a display element support which addresses some or all of the above problems associated with known supports.

[0006] According to this invention, there is provided a display element support comprising a support member having a display end, a slot formed in the support member from the display end in which a display element may locate, and a gripping member having a pair of gripping arms adapted in use to engage the display element therebetween, wherein the gripping member is configured for insertion in the display end of the support member so that an engaged display element extends through the

slot and is securely retained.

[0007] The term "display element" as used herein means any display item that can extend through the slot formed in the display end of the display element support. It includes flags, banners, posters, signs, labels and other items, usually carrying information of a textual or graphical form. These are usually formed of flat material such as paper, card, fabric or plastics and may have a degree of flexibility.

[0008] The support member may be part of a shelving unit, an extension thereof or indeed any object in which a slot is formed for the extension of a display element therethrough. The support member may be telescopic so that the length thereof is variable. The support member may be of any suitable shape, for example it may be a tubular member, the slot being formed in the display end thereof. The term tubular member as used herein means a member having a tube-like shape defined by a hollow region formed therein, and is not limited to a cylindrical formation. In such an arrangement, the tubular member may in cross-section be substantially cylindrical, rectangular or any shape and is preferably configured in at least two parts telescopically engaged so that the length of the tubular member may be adjusted.

[0009] The gripping member serves to engage a display element securely and is inserted into the display end of the support member in such a way that the display element may extend through the slot formed therein. The assembled display element support may be mounted for display.

[0010] More than one slot may be formed in the support member, and this is usually from the display end thereof. This may allow a display element to extend from selected different slots or to extend from more than one slot. The support member may comprise two opposed slots formed therethrough to enable a display element to extend on two sides of the support member.

[0011] The gripping arms may be configured frictionally to engage a display element therebetween. This could be achieved by providing resilient gripping arms or could be achieved simply by configuring the gripping arms such that insertion of the gripping member into the display end of the support causes the gripping arms to be urged together to grip the display element.

[0012] Preferably, the gripping arms of the gripping member are provided with attachment means to aid engagement of a display element therebetween.

[0013] Such attachment means may be arranged frictionally to engage the display element. In this arrangement, the attachment means may comprise one or more substantially flexible or resiliently deformable protrusions, on one or both gripping arms. For example, the protrusions may take the form of a strip or strips of material, one or more studs or fins. Co-operating indents or apertures may also be provided on one or both arms to co-operate with protrusions on the opposed arm.

[0014] Alternatively, attachment means may be configured to pass through the display element. The passing

of attachment means through a display element may be achieved by one or more preformed openings in the display element or the use of attachment means that are configured to form the required openings in the display element, for example, by having a sharp configuration that pierces or deforms the display element. The attachment means may comprise protrusions or spikes. A corresponding engagement formation may be provided for engaging such a protrusion or spike.

[0015] In a preferred arrangement, the attachment means comprises a protruding stud formed in one of the gripping arms. An aperture may be formed on the other of the gripping arms, said aperture being of complementary size and shape to the stud, and being adapted to receive the stud therein when the arms are brought into registration. The stud is ideally configured to engage in the aperture in a tight-fitting arrangement so as to prevent accidental disengagement of the arms from each other (and thus of the display element). In this arrangement, a hole is preferably pre-formed in the display element so that the stud can be located into the hole and the display element engaged by both gripping arms when the stud is located in the aperture. This has the advantage of ensuring correct final alignment of the display element relative to the support member.

[0016] The gripping arms may be provided with a plurality of studs and complementary apertures. In this way, if the display element accidentally passes through one of the studs, it will still be retained in the gripping member by the remaining stud or studs. Ideally, holes corresponding to the studs and apertures are pre-formed in a display element. Preferably three studs and three complementary apertures are provided.

[0017] The gripping arms may be separate components or may be connected to each other. Preferably, the gripping arms are hingedly connected to each other. This not only keeps the arms together but also serves to aid the bringing of the arms into registration with each other so that the studs, or other attachment means if present, may be easily directed into the apertures (or appropriate formation). The gripping member is configured for insertion into the display end of the support member and the hinge is preferably provided at the insertion end of the gripping member. In this arrangement a display element can be engaged between the gripping arms so as to extend from both sides of the gripping member. This is particularly advantageous where two opposed slots are provided in the support so that the display element may extend from opposed sides thereof.

[0018] The gripping arms may be integrally formed whereby the hinge is a flexible linking region defined by folding the gripping member to bring the arms into registration. Where a hinged connection is desired this arrangement does not require a separate hinge component and thus provides a simple and cost-effective hinged connection.

[0019] It is preferred that when the gripping arms are engaged the outer periphery of the gripping member is

complementary to the internal profile of the support member or at least the display end thereof. In this way, the relative position of the gripping member within the support member may be maintained. The outer periphery may be square, rectangular, oval or any suitable shape but preferably it is cylindrical. With a cylindrical shape the gripping member may be rotatable within the support member and this may assist with the insertion and subsequent removal of the gripping member from the support member.

[0020] Each gripping arm may be substantially semi-cylindrical in shape, having a generally planar gripping face. A display element may be engaged between the respective gripping faces when the gripping arms are brought into registration.

[0021] The gripping member preferably further comprises an end cap. This may be connected to one or both of the gripping arms. The end cap may serve merely an aesthetic purpose but also may assist with the locating of the gripping member in the support member. The end cap may alternatively or additionally act as a stop and limit the insertion of the gripping member into the support member to a desired depth. The end cap may be configured selectively to engage the support member to retain the gripping member therein. The end cap may snugly locate on or around the display end of the support member with an interference fit. One way to achieve this is to provide in the end cap a channel into which the display end of the support member tightly engages. This arrangement would allow the gripping member to be held within the support member with sufficient resistance to removal to allow it to be mounted at a substantially vertical orientation with the display element not falling from the display element support.

[0022] The display element support may be mounted at any angle, including vertically without risk of disconnection of the display element. Furthermore, a display element may be displayed at any angle relative to the support member. Thus, the display element provides a secure, reliable and safe connection for the display of a display element.

[0023] By way of example only, preferred embodiments of display element support of this invention will now be described in detail, reference being made to the accompanying drawings in which:-

Figure 1 is a first embodiment of gripping member constituting a component of a display element support according to the present invention, fully opened;

Figure 2 is a perspective view of the gripping member of Figure 1;

Figure 3 is a perspective view showing the step of locating a display element in the gripping member of Figures 1 and 2;

Figure 4 is a perspective view showing the display element engaged in the gripping member of Figures 1 to 5;

Figure 5 is a perspective view of a first embodiment

of display element support according to the present invention, showing the gripping member of Figures 1 to 4 being introduced into the end of a tubular support member;

Figure 6 is a view of the display element support of Figure 5 with the gripping member inserted into a tubular support member;

Figure 7 shows a second embodiment of display element support according to the present invention with a cranked tubular support member;

Figure 8 is a front view of a display element to be gripped by the gripping member of Figures 1 to 4;

Figure 9 is a perspective view of the display element support of Figures 5 and 6, in use;

Figure 10 is a perspective view of a third embodiment of display element support according to the present invention; and

Figures 11 to 15 are perspective views of alternative embodiments of gripping member constituting a component of a display element support according to the present invention, fully opened.

[0024] Referring initially to Figures 1 to 4 there is shown one embodiment of gripping member 10 for engaging a display element 11. Figures 11 to 15 show five alternative embodiments of gripping member 46, 47, 48, 49, 50, the differences of which relate purely to the display element attachment means as discussed in detail below. The gripping member in each embodiment includes two elongate integrally formed gripping arms 12, 13. The gripping arms 12, 13 are defined by a hinge 14 produced by deforming the gripping member centrally and perpendicularly to its longitudinal length. Each gripping arm 12, 13 is semi-cylindrical in shape having a curved outer periphery 15 (as shown in figure 4) and a generally planar gripping face 16.

[0025] When the arms 12, 13 of each gripping member are brought together, as seen in Figure 4, each gripping member defines a first end 23 at the hinge 14 of the member 10 and an opposed second end 24.

[0026] One of the arms 12 of each gripping member has an external screw thread 26 provided at the second end 24 for screw threaded engagement with a cylindrical end cap 27. The end cap 27 provides a manually graspable region to assist with handling of the assembled gripping member, as described in more detail below. A channel 28 is defined between the end cap 27 and the gripping member 10.

[0027] In a first embodiment of gripping member 10, as best seen in Figures 2 and 3, three cylindrical studs 17 extend from the gripping face 16 of one of the gripping arms 12 and these are configured to engage with three complementary apertures 18 formed in the gripping face 16 of the other of the gripping arms 13. The apertures 18 and studs 17 are arranged to cooperate with a display element 11 to securely engage the display element 11 between the gripping arms 12, 13.

[0028] A second embodiment of gripping member 46,

as shown in figure 11, includes protrusions 51 along the length of both arms 12, 13. There are three longitudinal protrusions 51 on one arm 13 and two opposed but correspondingly offset longitudinal protrusions 51 on the other arm 12. Each protrusion 51 is arranged to bear against the opposing face 16 to frictionally engage a display element 11 therebetween.

[0029] In a third embodiment of gripping member 47 (figure 12), an array of studs 52 extend from the gripping face 16 of both of the gripping arms 12, 13. The studs 52 may be configured to be offset on one arms 12 relative to the other 13, or the studs 52 of one arm 12 may be arranged to co-operate with the studs 52 of the opposed arm 13 in order frictionally to engage a display element 11 between the arms 12, 13.

[0030] The gripping member 48 of a fourth embodiment shown in figure 13 is similar to that of embodiment two insofar as one of the arms 12 includes two longitudinal protrusions 53 extending from the face 16. These longitudinal protrusions 53 are generally triangular in cross section and are arranged to engage with two complementary indents 54 formed in the gripping face 16 of the other of the gripping arms 13 to hold a display element 11 frictionally therebetween.

[0031] In a fifth embodiment of gripping member 49, as shown in figure 14, one of the arms 12 includes a series of fins 55 upstanding from the gripping face 16. The other arm 13 has been generally hollowed out to define a curved interior face 56 with which the upstanding fins 55 are configured to engage. A display element 11 may be fictionally held between the fins 55 and the curved interior face 56.

[0032] Finally, as shown in figure 15, a sixth embodiment of gripping member 50 comprises a generally semi-cylindrical protrusion 57 extending from each of the arms 12, 13 and configured to co-operate to engage a display element 11 frictionally therebetween. In each embodiment, the studs 17, 52, protrusions 51, 53, 57 and/or fins 55 may be formed from a generally flexible material, such as a flexible plastics and are preferably co-moulded with the arms 12, 13.

[0033] Two different types of display element 11 to be displayed are shown in Figures 3 and 8. Each of these display elements is suitable for engagement with the first embodiment of gripping member 10, but could equally be engaged frictionally between the arms 12, 13 of the other embodiments of gripping member 46, 47, 48, 49, 50. The display element 11 is generally planar and formed from a sheet of material, such as paper that may be flexible. Holes 20 are formed in the display element 11, the number and configuration of which may correspond to the number and configuration of the apertures 18 and complementary studs 17 of the gripping arms 12, 13. The display element 11 of Figure 3 has holes 20 formed adjacent an edge 21 of the display element 11 but this is not a necessity as evidenced by the display element 11 of Figure 8 which shows holes 20 formed partway along the display element 11. Indeed, where the

gripping members 46, 47, 48, 49, 50 of any of figures 11 to 15 are utilised, holes need not be provided at all in display elements.

[0034] When the display element 11 is located in the gripping member 10 with the holes 20 inserted onto the studs 17, and the arms 12, 13 are brought together, the studs 17 fit tightly in the apertures 18 and the planar gripping faces 16 of the gripping arms 12, 13 engage the display element 11.

[0035] A first embodiment of display element support 45 is shown in in Figures 5, 6 and 9 and comprises a tubular support member 30 having two generally cylindrical tubes, one tube 31 defining a mounting end for securing to a fixed member, such as a shelf or a shelf bracket 32 (as shown in Figure 9) and the other tube 33 defining a display end into which the gripping member 10 is inserted. A slot 42 is formed through the side wall 43 and extends partway along the display tube 33. The gripping member 10 is inserted into the display tube 33 so that the display element 11 extends from the slot 42 formed in the side wall 43. The end cap 27 of the gripping member is engaged around the display end of the display tube 33 so as to retain the gripping member 10 in the display tube 33.

[0036] The display tube 33 has a smaller diameter than, and is telescopically engaged within, the mounting tube 31 so that the overall length of the tubular member 30 may be adjusted. A locking arrangement (not shown) is provided on the inserted end of the display tube 33 for securing it to the mounting tube 31 by twisting the display tube 33 relative to the mounting tube 31.

[0037] The mounting end of the tubular support member 30 includes a hook mechanism 35 having a hook including a head 36 for engaging a fixed member and a body 37 which is threadingly engaged to a cylindrical attachment tube 38. The attachment tube 38 has a smaller diameter than the mounting tube 31 and is slidingly located therein. A snap lock 39 is provided around the mounting tube 31 to secure the hook mechanism 35 to the mounting tube 31.

[0038] The display tube 33 may have either a single slot 42, as shown in Figures 5 and 6 or two diametrically opposed slots 42, as shown in Figure 9, formed through the side wall 43 and extending partway along the tube 33.

[0039] A second embodiment of display element support 45 is shown in in Figure 7. This embodiment is similar to the first embodiment except that the mounting tube 31 is cranked (commonly referred to as an 'S Pole'). All other features of the display element support are the same as the first embodiment.

[0040] A third embodiment of display element support 45 is shown in Figure 10. In this embodiment the support member 29 is generally rectangular and is adapted to extend from a display shelf upright. The rectangular support member 29 is telescopically arranged having a mounting end 34 for attachment to the shelf and a display end 40 into which the gripping member 10 is inserted. The rectangular support member 29 has a slot 41 formed

in the display end for a display element to extend through when the gripping member is inserted into the display end.

Claims

1. A display element support comprising a support member having a display end, a slot formed in the support member from the display end in which a display element may locate and a gripping member having a pair of gripping arms adapted in use to engage the display element therebetween, wherein the gripping member is configured for insertion in the display end of the support member so that an engaged display element extends through the slot and is securely retained.
2. A display element support as claimed in claim 1, wherein the gripping arms of the gripping member are provided with attachment means to aid engagement of a display element therebetween.
3. A display element support as claimed in claim 2, wherein the attachment means comprises a protrusion formed on one of the gripping arms.
4. A display element support as claimed in claim 3, wherein an engaging formation is located on the other gripping arm to cooperate with the protrusion.
5. A display element support as claimed in claim 4, wherein the protrusion is a stud and the engaging formation is an aperture of complementary size and shape to the stud, and adapted to receive the stud therein when the arms are brought into registration.
6. A display element support as claimed in claim 5, wherein the gripping arms are provided with a plurality of apertures and complementary studs.
7. A display element support as claimed in any of the preceding claims wherein the gripping arms are hingedly connected to each other.
8. A display element support as claimed in claim 7, wherein the gripping arms are hinged at one end.
9. A display element support as claimed in claim 7 or claim 8, wherein the gripping arms are integrally formed and the hinge is formed by folding the gripping member to bring the arms into registration.
10. A display element support as claimed in any of the preceding claims wherein the outer periphery of the gripping member when the arms are in registration is complementary to the internal profile of the display end of the support member.

11. A display element support as claimed in any of the preceding claims, wherein each gripping arm is substantially semi-cylindrical in shape, having a generally planar gripping face, a display element being engaged between the respective gripping faces when the gripping arms are brought into registration. 5
12. A display element support as claimed in any of the preceding claims, wherein the gripping member further comprises an end cap. 10
13. A display element support as claimed in claim 12, wherein the end cap is configured selectively to engage the support member to retain the gripping member therein. 15
14. A display element support as claimed in claim 13, wherein the end cap has a channel into which the display end of the support member tightly engages. 20
15. A display element support as claimed in any of the preceding claims, wherein the support member is telescopic. 25

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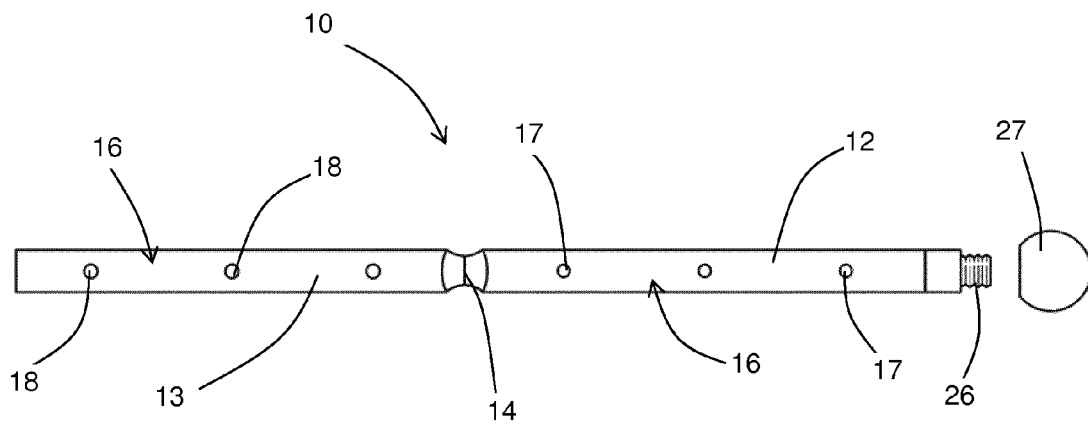


Figure 1

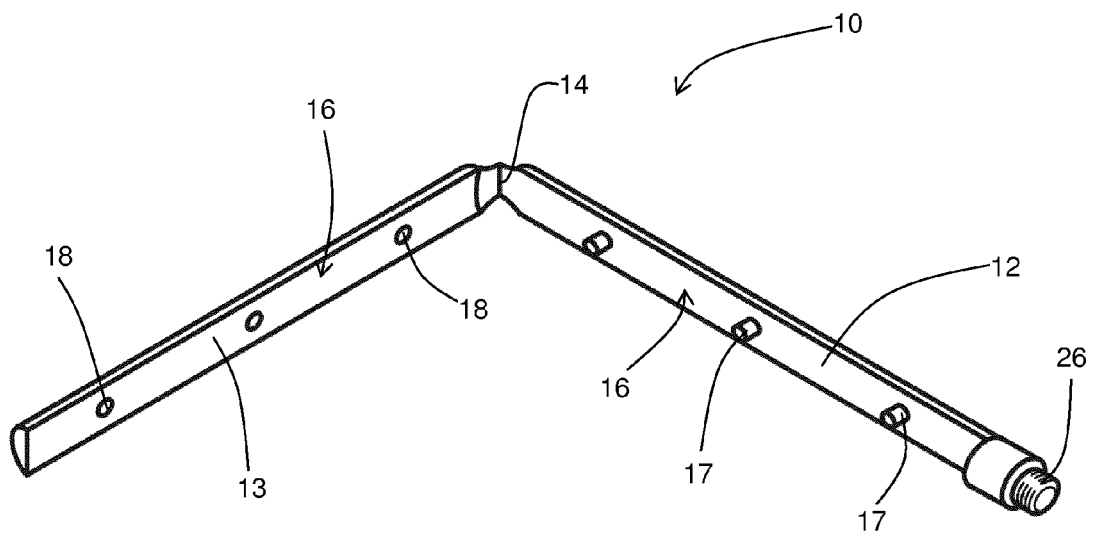


Figure 2

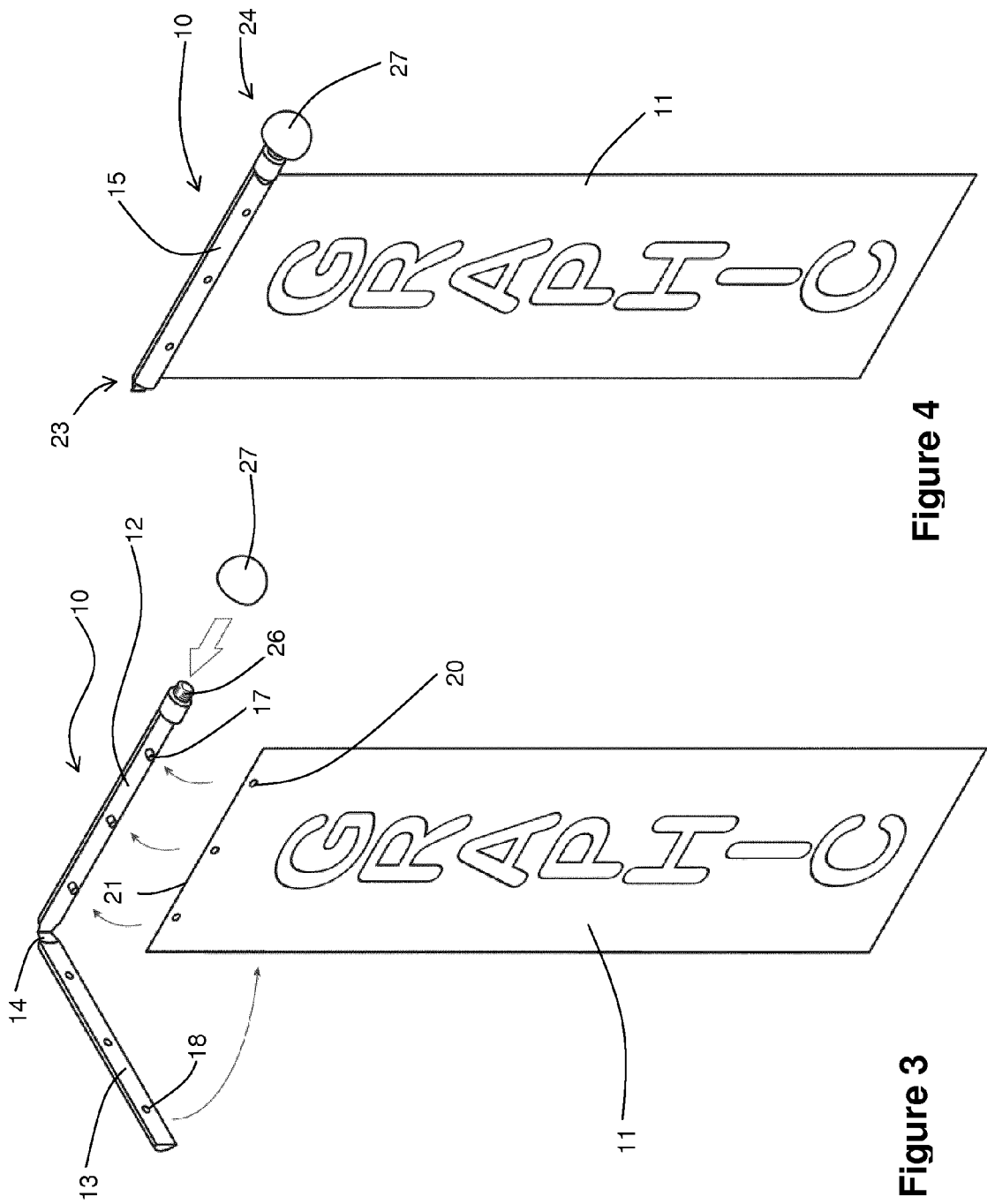
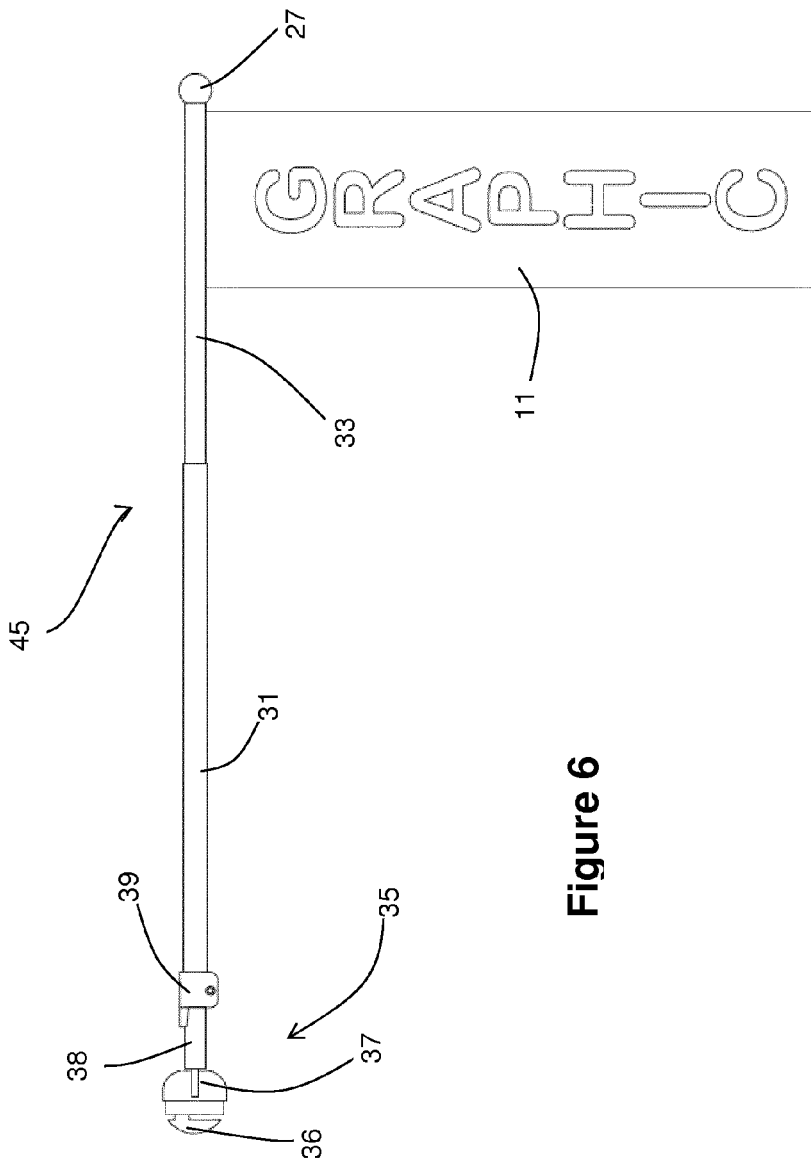
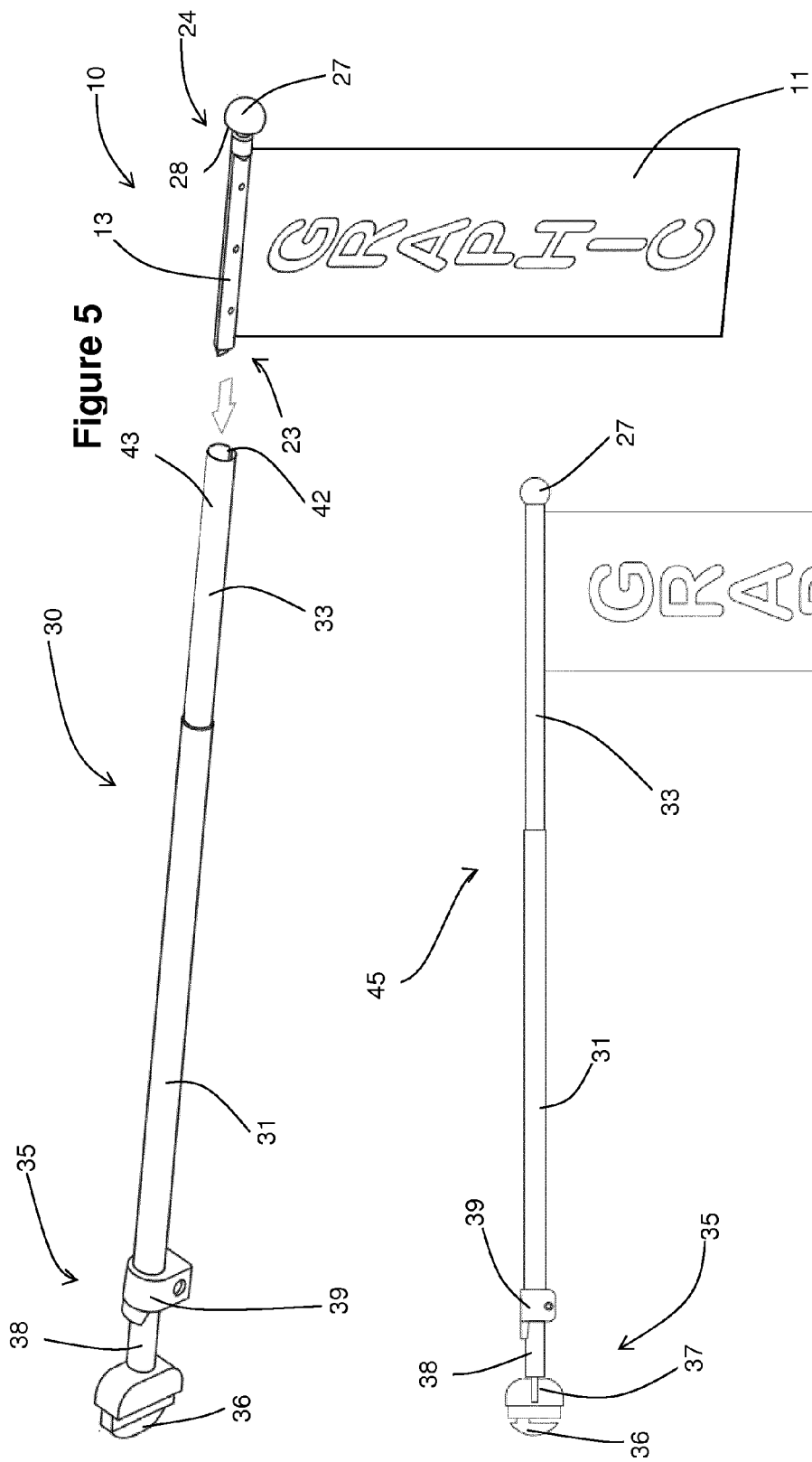


Figure 4

Figure 3



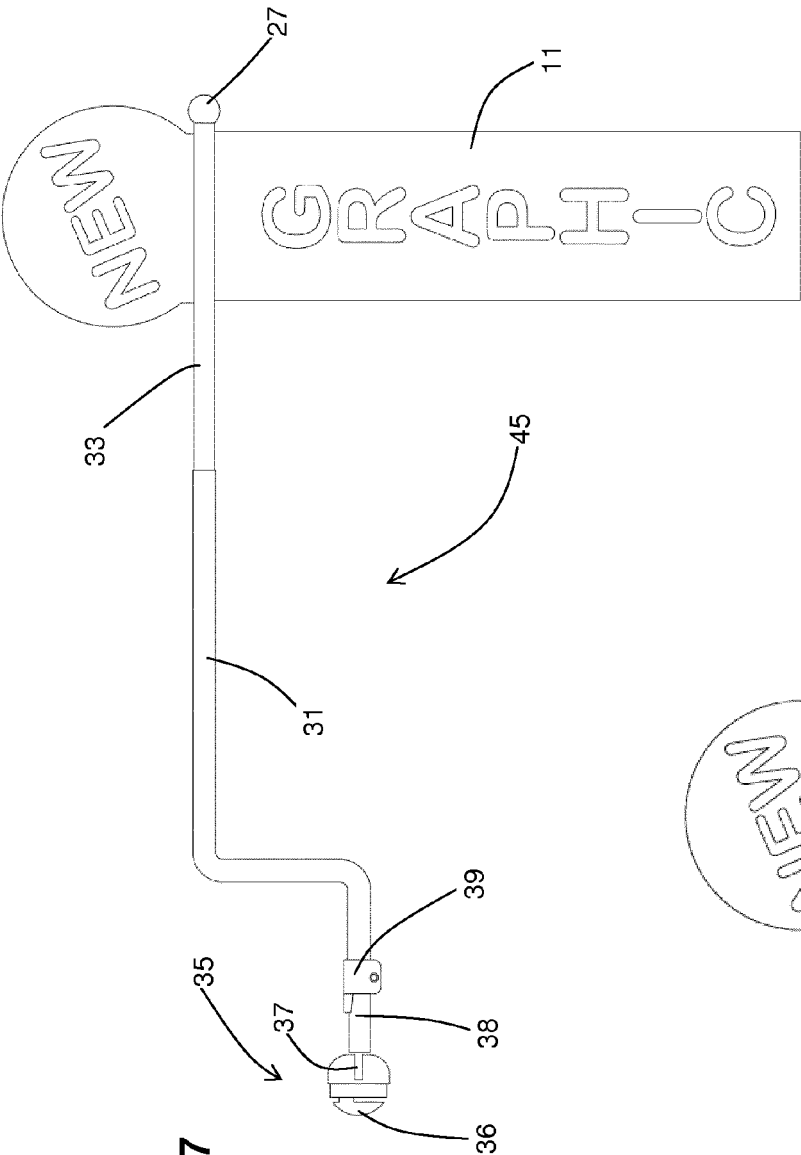


Figure 7

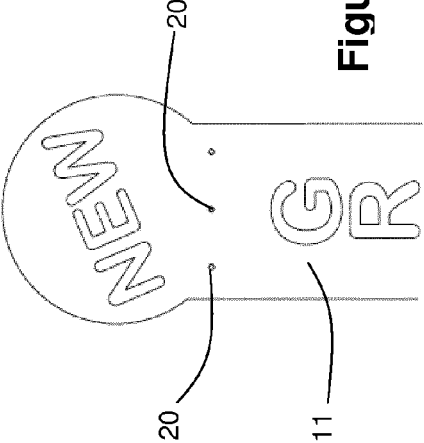


Figure 8

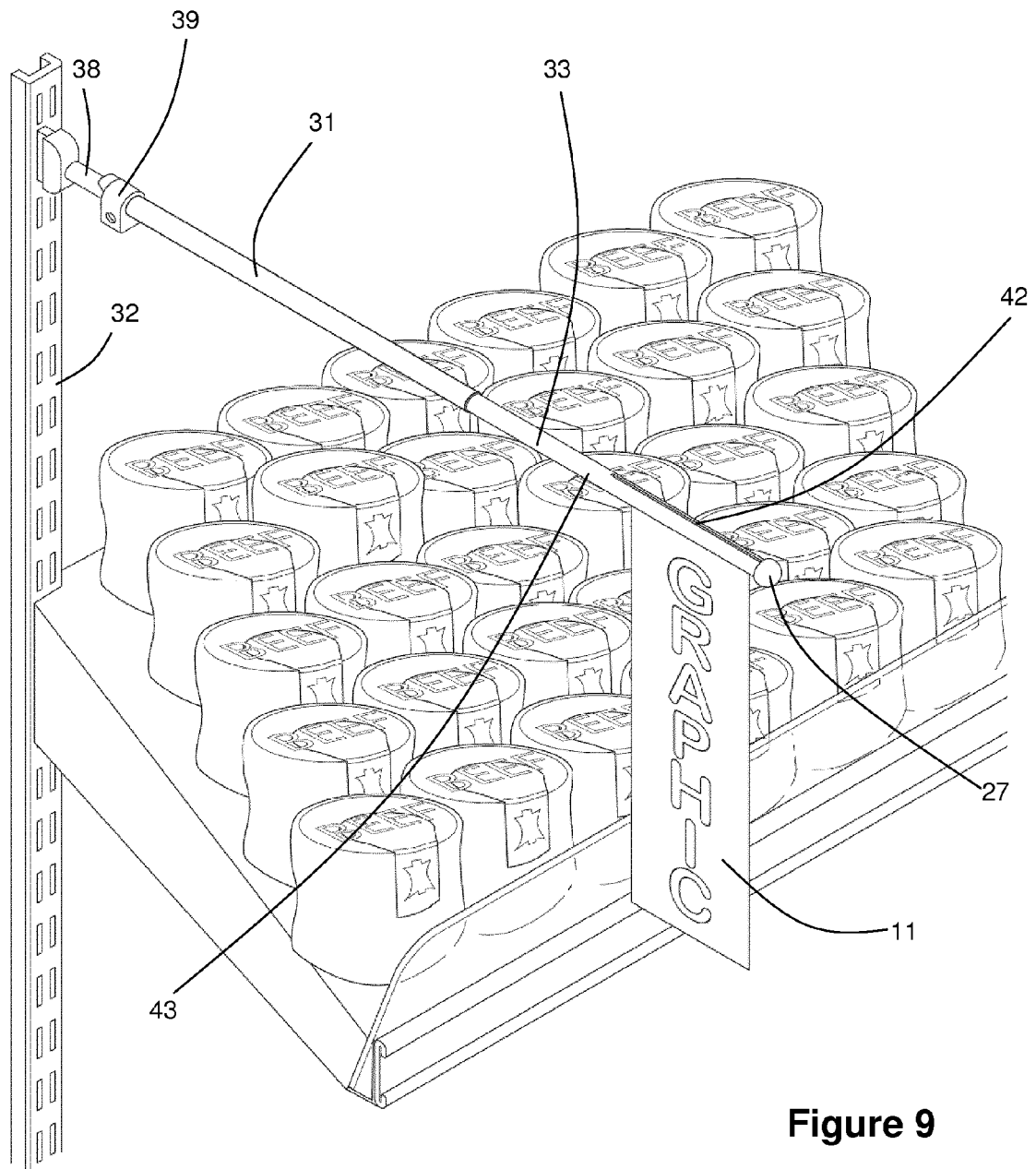


Figure 9

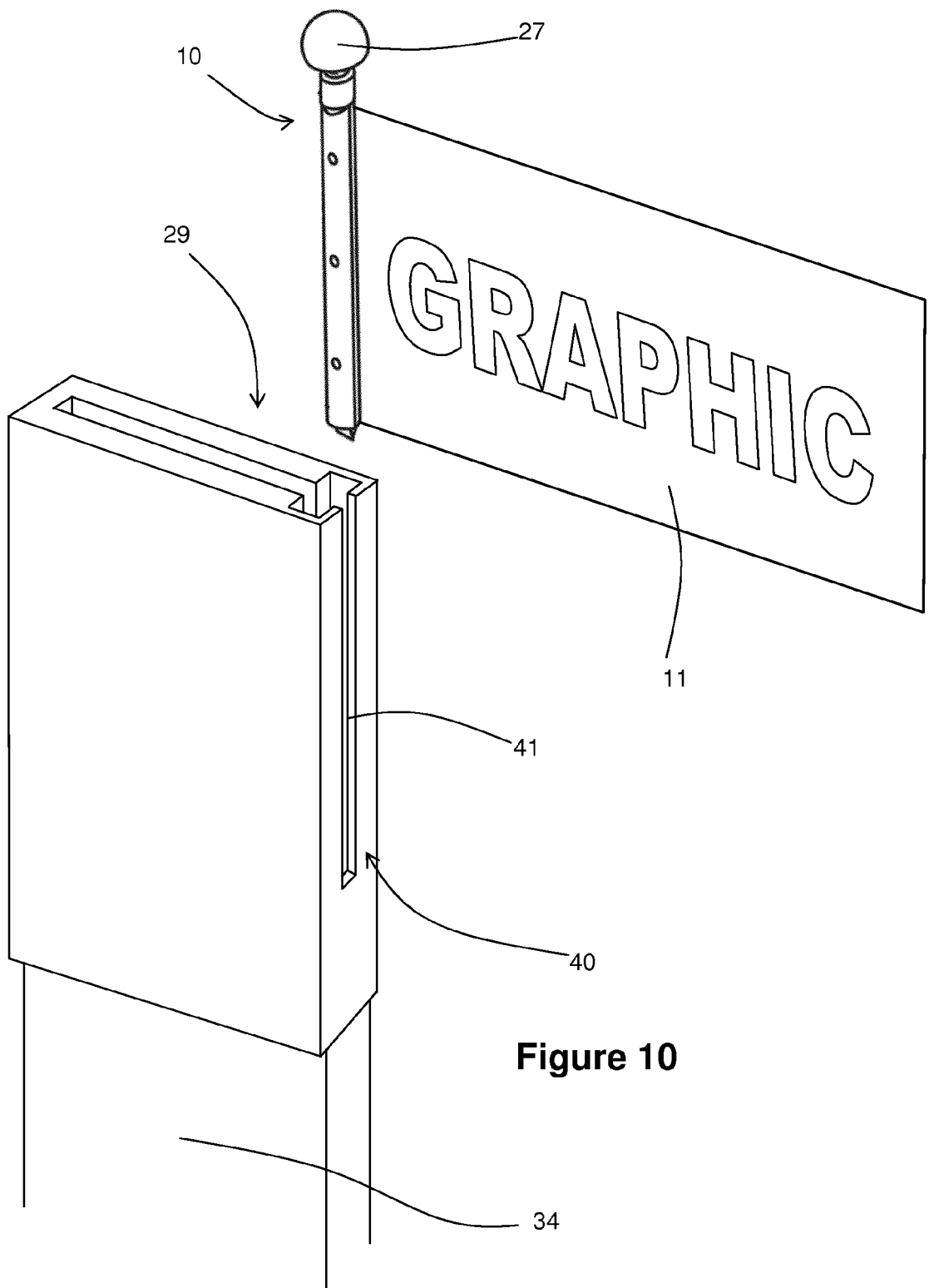


Figure 10

