Oct. 17, 1967 J. F. KORTAN 3,347,503

SUPPORT FOR CHRISTMAS TREES

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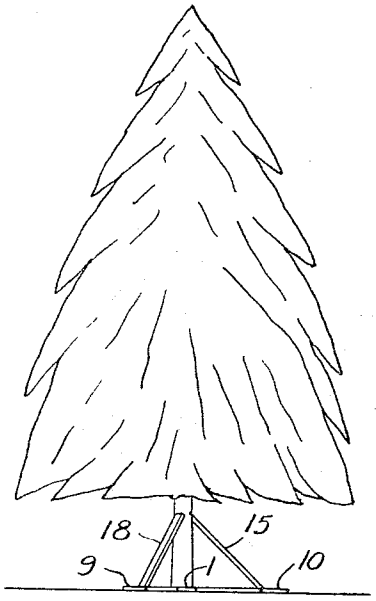


Fig. 1

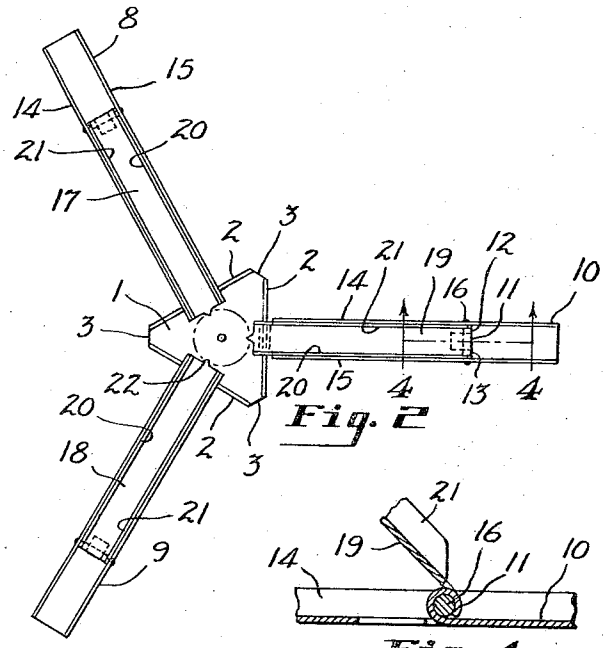


Fig. 2

Fig. 4

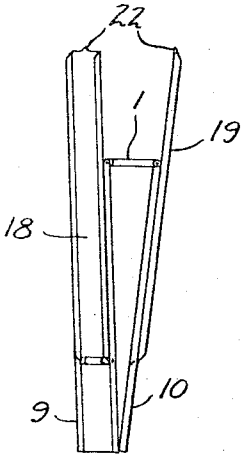


Fig. 7

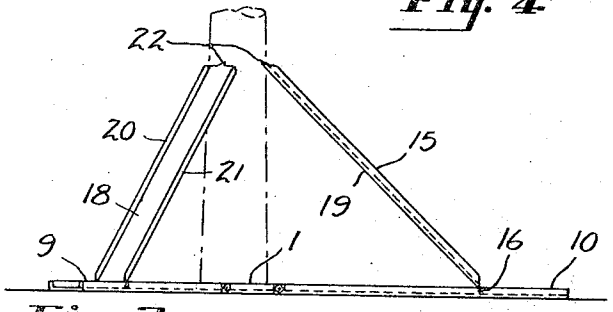


Fig. 3

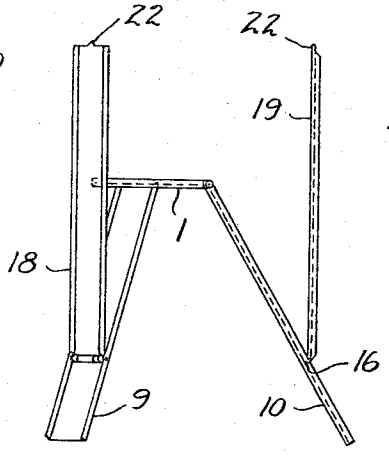


Fig. 6

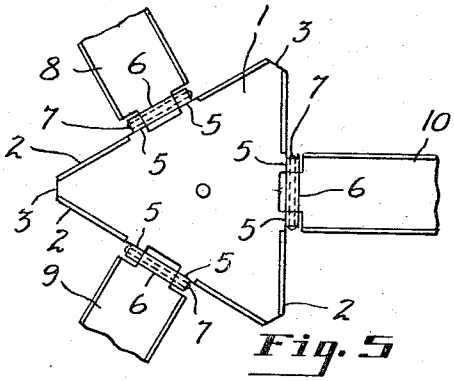


Fig. 5

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SUPPORT FOR CHRISTMAS TREES

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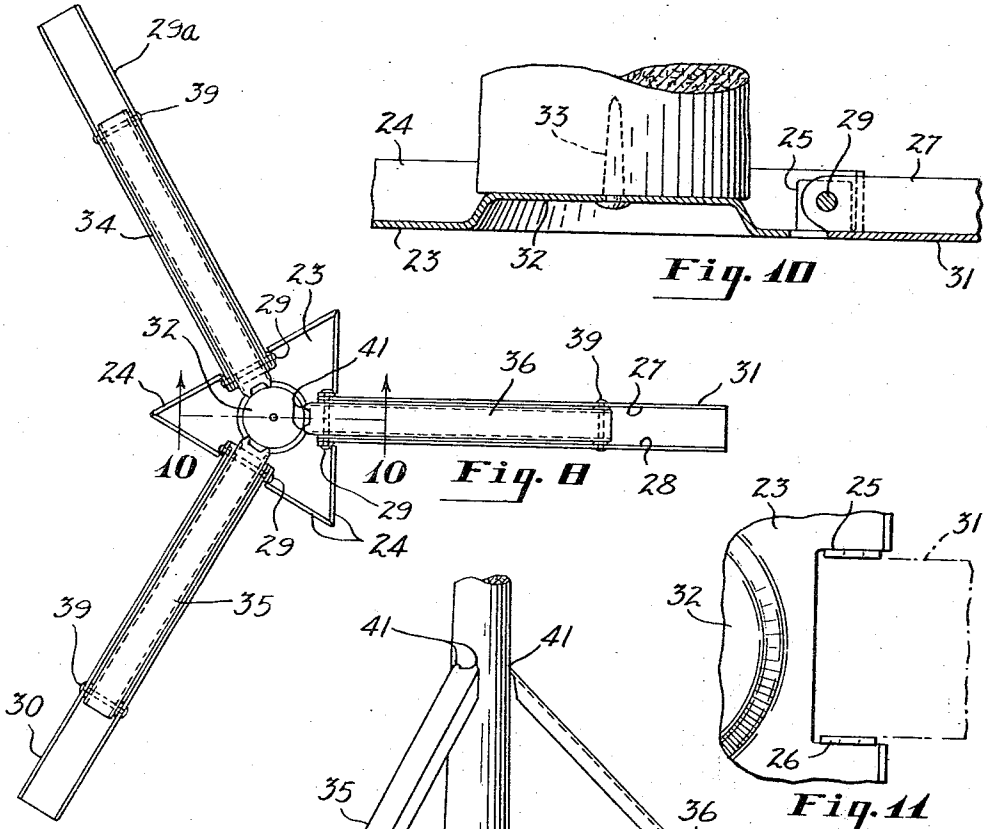


Fig. 8

Fig. 10

Fig. 11

Fig. 9

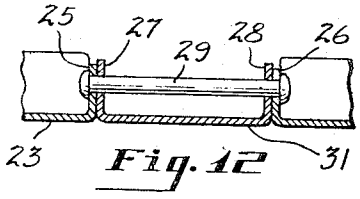


Fig. 12

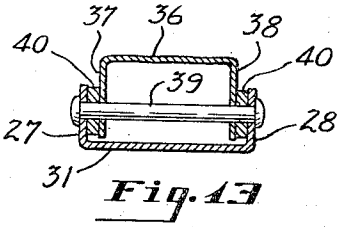


Fig. 13

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SUPPORT FOR CHRISTMAS TREES

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ABSTRACT OF THE DISCLOSURE

A support for a Christmas tree including a triangularly-shaped base portion having flanges extending upwardly from each edge which flanges are spaced from each other to form central interruptions and means for providing an apertured support which may be in the form of a flange or knuckle at the edge of each interruption. Three arms are also provided, each having upwardly extending flanges, the inner portion of each of which is provided with an aperture which is in alignment with the apertured flanges or knuckles at the opposite edges of each interruption. To provide a pivotal connection, a pin passes through the apertured inner end of the arm and the apertured support at each edge of each interruption. Three braces are also provided, each of which fits within the flanges of the respective arms and has upwardly extending flanges having apertures in its flanges adjacent its lower portion. Each of the arms is also provided with aligned apertures in its flanges at a spaced distance from its free end and a pin is passed through the aligned apertures in the flanges of the respective arms and the flanges of the respective braces.

Another method of connecting each of the braces to each arm at a spaced distance from its free end consists in forming an apertured knuckle in the base portion of each arm at a spaced distance from its free end and spaced knuckles on the free end of each arm having apertures therein which are in alignment with the apertures in the knuckles extending upwardly from the respective arms and a pin extends through the apertures in the aligned knuckles and the aperture in each side flange of the arm with which each brace is associated.

The support may be collapsed by pushing the central base portion upwardly in which case, the braces may also be moved upwardly into contact with the base portion.

My invention relates to a support for Christmas trees and more particularly to such a support that holds the tree in a substantially nontiltable position when in use and which may be collapsed to occupy a substantially small space when stored.

Because of the many hinges utilized in constructing the support shown in Patent 2,445,749 granted to me on July 27, 1948, it is somewhat expensive to produce. Another disadvantage of the support disclosed in that patent is that to prevent tilting of the tree when the support is in use, it is necessary that each pair of braces shall be of unequal length to bear against different circumferential portions of the tree.

In accordance with the present invention, I have provided an improved support for Christmas trees in which the number of hinges required is substantially less than in my prior patent and in which the braces that engage the tree are all of the same length, thus facilitating manufacturing and assembling costs. In accordance with the present invention, penetrating means is also provided on the free end of each brace which may be forced into the tree and which not only substantially eliminates any tilting movement of the tree but also aids in holding the tree in firm engagement with a central portion of the support which forms the base upon which the bottom of

the tree rests. In my improved structure, the support includes three arms and means formed integral with the central portion is provided which is connected to means formed integral with each arm to pivotally connect the arms to the central portion of the tree support, and means formed integral with each of the arms and the outer end portion of each brace is provided for connecting each of the braces to the respective arms, thereby eliminating the expense of providing separate hinges.

It is therefore an object of the present invention to provide a support for Christmas trees that is economical to manufacture, that holds the Christmas tree supported thereby against tilting movement when in use, and which may be collapsed to occupy a comparatively small space when stored.

My invention will be better understood by reference to the accompanying drawings in which:

FIG. 1 is an elevational view of my improved support having a Christmas tree mounted thereon;

FIG. 2 is an enlarged view of the support shown in FIG. 1 with the butt end of a Christmas tree mounted on its central base portion and showing braces in operative position for holding the tree in a nontiltable position;

FIG. 3 is an enlarged detil view of a fragmentary portion of a Christmas tree and showing penetrating means secured to the free end portion of the braces of my support which are embedded in the lower portion of the tree;

FIG. 4 is an enlarged cross sectional view taken on a plane passing through the line **4—4** of FIG. 2;

FIG. 5 is an enlarged view of the base of my improved support and showing detail views of the pivoted means for the arms extending therefrom;

FIG. 6 is an enlarged view of my improved support in a partly collapsed position;

FIG. 7 is a view similar to FIG. 6 but showing the support in a fully collapsed position;

FIG. 8 is a plan view of a modification of my improved support showing the braces engaging a portion of the Christmas tree;

FIG. 9 is a side elevational view of the support shown in FIG. 8;

FIG. 10 is an enlarged detail sectional view of the central portion of the support shown in FIGS. 8 and 9, taken on a plane passing through the line **10—10** of FIG. 8, and showing the inner portion of one of the arms pivotally connected thereto;

FIG. 11 is a detail plan view of part of the central base portion, showing spaced flanges at the central portion of each side of the support turned upwardly;

FIG. 12 is a cross sectional view taken on a plane passing through the line **12—12** of FIG. 9; and

FIG. 13 is a cross sectional view taken on a plane passing through the line **13—13** of FIG. 9.

My improved support is formed of metal and as shown in FIGS. 1 to 7 includes a central substantially triangularly shaped base portion **1** having upwardly extending flanges **2** along its sides which flanges are interrupted at its corners to form substantially flat portions **3**. In accordance with my invention, each arm is pivotally secured to the central portion of each side of the brace by means of pins extending through supports which may be in the form of apertured knuckles formed integral with the base and the inner portion of each arm. To provide this pivotal connection, spaced slits are formed in the central portion of each of the side flanges and the metal between the slits is bent to provide an outwardly extending flange and two additional spaced slits are formed in the metal of each flange to provide a pair of spaced tongues which are turned inwardly to provide supports in the form of knuckles **5** having aligned openings therein. The remainder of the outwardly extending flange between the

knuckles is then removed and each of the arms is provided with a flange **6** which is bent into the form of a support or knuckle having an opening therein which is in alignment with the opening in the knuckles **5** and a pin **7** extends through the aligned openings in the knuckles **5** and **6** and is headed at its opposite ends to hold the assembly together. The arms which are designated by the numerals **8**, **9** and **10** are of equal length and all are connected to the central base portion in a similar manner and consequently the connecting parts have been designated by the same reference numerals. It will be noted that the flanges extending upwardly from the central portion not only strengthen the portion of the device but also provide an economical manner in which the arms may be pivoted to the central portion.

The braces are connected to the arms in a somewhat similar manner .As shown, aligned apertures are provided in each arm at a short distance from its free end and a tongue is stamped from the bottom portion of each arm which is rolled backwardly to form an apertured support or knuckle **11** as shown more particularly in FIG. 4. Each brace is also provided with spaced tongues which are turned backwardly in a reverse direction to tongue **11** to provide apertured supports or knuckles **12** and **13**, the openings in which are in alignment with the opening in the knuckle **11** in the arm and with apertures in the oppositely disposed flanges **14** and **15** of the arm and a pin **16** extends through the tubular supports or knuckles **12** and **13** on each arm, the tubular support or knuckle **11** on each brace, and through the apertures in the side flanges **14** and **15** of each arm and is headed to hold the assembly together. The braces which have been designated by the numerals **17**, **18**, and **19** are provided with upwardly extending flanges **20** and **21** for strengthening purposes. The braces are each of the same length and each is connected to its respective arm in the same manner.

To hold the Christmas tree firmly on the central base portion **1** of my support, the base portion is provided with a central aperture through which a nail or screw may be driven or threaded into the base of the tree and each of the braces is provided with a sharp pointed prong **22** at its free end portion which may be forced into the lower portion of the tree and which forces the tree downwardly into firm engagement with the central portion of the support.

After the support has served its function during the Holiday Season, it may be collapsed to provide a small package for storage. For this purpose, the arms **8**, **9** and **10** are turned downwardly to raise the central portion **1** as shown in FIG. 6 and are then moved to abut each other as shown in FIG. 7. The braces **17**, **18** and **19** are then pivoted upwardly on their respective arms into engagement with the ferrules **5** and **6**.

Another modification of my invention is shown in FIGS. 8 to 13, inclusive, which includes a triangularly-shaped central base portion **23** having upwardly extending flanges **24**, each of which is interrupted midway of its length and a cut-out is provided in each side of the base portion from which a pair of flanges **25** and **26** are turned upwardly from the bottom portion, each of which has an aperture therein. Each of the arms is also provided with upwardly turned side flanges **27** and **28** having aligned apertures therein and a pin **29** extends through the aligned apertures in flanges **25**, **26**, **27** and **28**. The arms which are designated by the numerals **29***a*, **30**, and **31**, are each connected to the central base portion in the same manner. As shown in FIG. 10, the central portion of the support has a raised portion **32** having a central opening therein through which a nail or a screw **33** may be driven or screwed to hold the tree upon the central portion of the support.

Means consisting of braces **34**, **35** and **36** are provided for bracing the tree in place and for forcing it in firm

engagement with the raised portion of the central support. To strengthen the braces, each is provided with downwardly turned flanges and means are provided for pivotally connecting each of the braces to the respective arms with which it is associated. As shown, flanges **37** and **38** of each of the braces extend downwardly between flanges **27** and **28** of the respective arms and a pin **39** extends through apertures in the flanges **27**, **28**, **37** and **38** and through washers **40** arranged between flanges **27** and **37** and flanges **28** and **38** of the arms and braces. In this modification, it will be noted that each of the braces is provided with a pair of prongs **41** which may be forced into the lower portion of the tree to hold it in firm engagement with the base portion.

The support shown in FIGS. 8 to 13 may be collapsed for storage in the same manner as the brace shown in FIGS. 1 to 7, inclusive.

What is claimed is:

1. A support for a Christmas tree including a triangularly-shaped base portion having three edges and a pair of flanges integral with the base portion extending upwardly from each of said edges which flanges are spaced from each other at substantially the central portion of each edge to provide an interruption, means providing an apertured support at each edge of each interruption which apertured supports at the opposite sides of each interruption are in alignment with each other, an arm having upwardly extending flanges at its opposite sides and an apertured inner portion extending between the supports adjacent each edge of each interruption, means pivotally connecting the aperture portion at the inner end of each of the respective arms to the apertured supports adjacent the edge of each interruption, a U-shaped brace having an apertured lower portion extending between the flanges of each of the respective arms at a spaced distance from the end of such arms and the flanges of each of said arms having aligned apertures therein which are aligned with the apertures in the lower portion of the brace associated therewith and means extending through the apertures in the lower portion of each of said braces and the apertures in the flanges of each of the respective arms for pivotally connecting each brace to its respective arm.

2. A support for a Christmas tree as defined in claim **1** in which each of the spaced supports extending upwardly from each edge of each interruption is in the form of an apertured knuckle and the portion of the arm extending between the spaced knuckles adjacent the opposite edges of each interruption is in the form of a knuckle.

3. A support for a Christmas tree as defined in claim **1** in which the apertured lower portion of each brace extending between the flanges of each of the respective arms with which it is associated is in the form of spaced knuckles having aligned apertures therein.

4. A support for a Christmas tree as defined in claim **1** in which each of the supports extending upwardly from each edge of each interruption in the spaced flanges extending upwardly from each edge of the base portion is in the form of an apertured knuckle and the inner portion of the arm extending between the spaced knuckles adjacent the opposite edges of each interruption is in the form of a knuckle, an apertured knuckle extending upwardly from the central portion of each of said arms at a spaced distance from its free end, and the lower portion of each brace extending between the flanges of the arm with which it is associated being in the form of spaced knuckles having aligned apertures therein which are in alignment with the apertures in the knuckle extending upwardly from the arm with which it is associated and with the aligned apertures in the oppositely disposed flanges of each arm.

5. A support for a Christmas tree as defined in claim **1** in which each pair of supports extending upwardly from each edge of each interruption is in the form of an apertured flange integral with the base portion and in

which the flanges on the inner portion of the arm extending between each pair of apertured flanges have aligned apertures therein which are also in alignment with the apertures in the pair of spaced flanges extending upwardly from the base portion of the support at the opposite edge of each interruption and in which the means for pivotally connecting the inner end of each of the arms to the spaced flanges extending upwardly from the base portion at the opposite edges of each interruption extends through the aligned apertures in the flanges on that portion of the arm arranged between said apertured flanges and the apertures in the flanges extending upwardly from each edge of the

base portion on opposite sides of the inner portion of the arm which extends between each pair of apertured flanges.

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JOHN PETO, *Primary Examiner.*