Sept. 27, 1966 G. H. SAMPSON 3,275,281

EASEL STRUCTURE

Filed Jan. 12, 1965 2 Sheets-Sheet 1

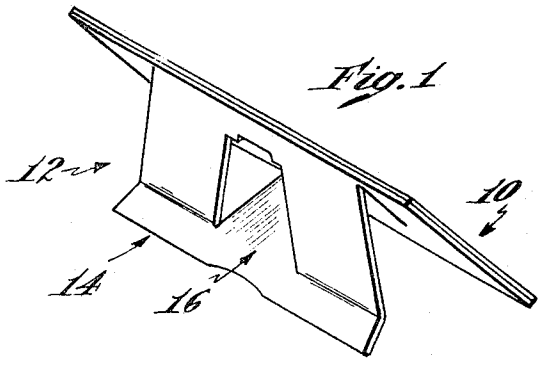


Fig. 1

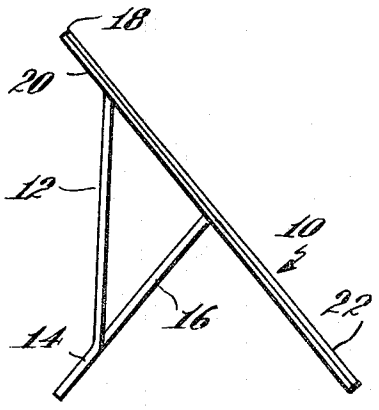


Fig. 2

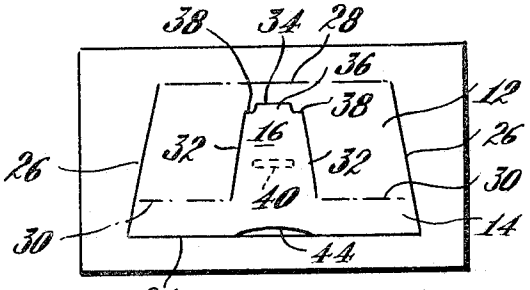


Fig. 4

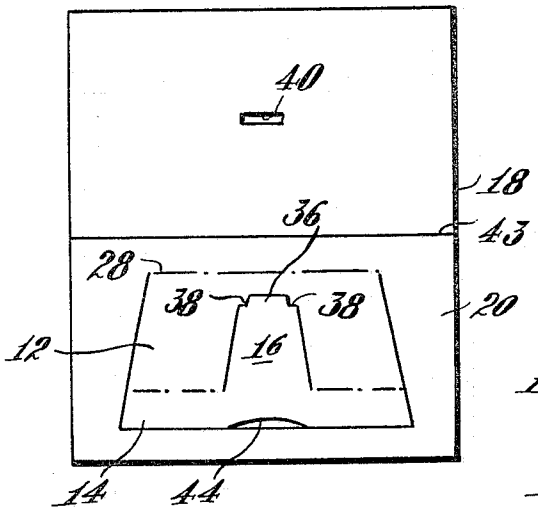


Fig. 5

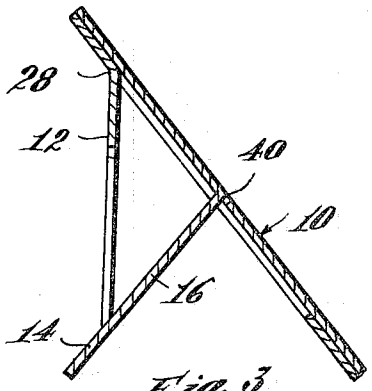


Fig. 3

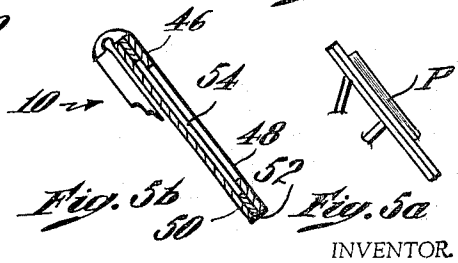


Fig. 5b

Fig. 5a

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Sept. 27, 1966 G. H. SAMPSON 3,275,281

EASEL STRUCTURE

Filed Jan. 12, 1965 2 Sheets-Sheet 2

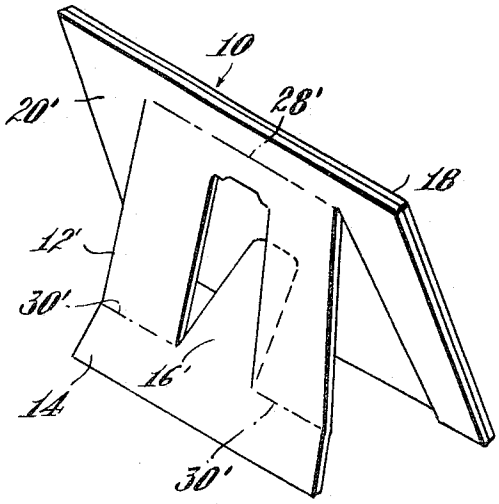


Fig. 6

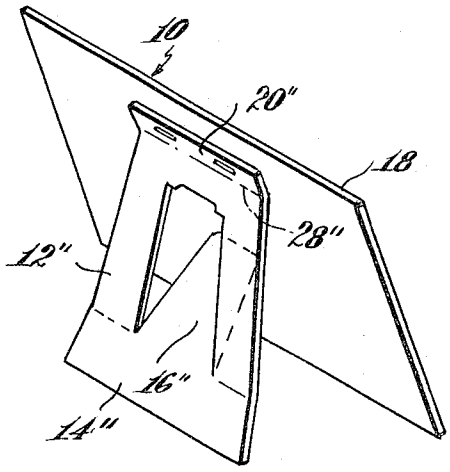


Fig. 8

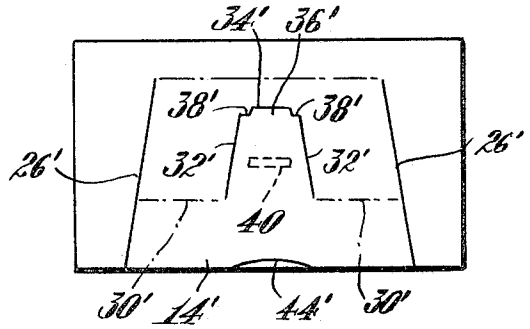


Fig. 7

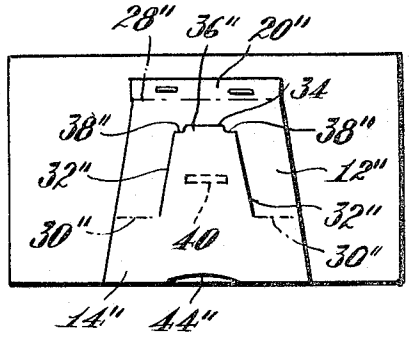


Fig. 9



Fig. 10

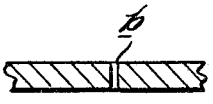


Fig. 11



Fig. 12

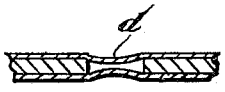


Fig. 13

United States Patent Office 3,275,281 Patented Sept. 27, 1966

3,275,281

EASEL STRUCTURE

George H. Sampson, Middleboro, Mass., assignor to Winthrop-Atkins Co., Inc., Middleboro, Mass., a corporation of Massachusetts

Filed Jan. 12, 1965, Ser. No. 424,941
17 Claims. (Cl. 248—465)

This invention relates to easel-type mounts for supporting calendar pads, photographs and the like, and has for its principal objects to provide a prop for supporting a panel in an upright, rearwardly inclined position to which may be attached a calendar pad, photograph or the like; to provide a prop which may be formed out of a single ply attachable to the panel; to provide a prop adapted to assume a predetermined position relative to the panel and to become locked at said position; to provide a structure which can be manufactured with commercial die pressing and glueing machines; and to provide a structure which is sturdy, durable and inexpensive.

The structure, as herein illustrated, comprises a supporting panel and a prop therefor comprising a leg connected at one end to the panel for angular movement away from the panel, a foot connected at one end to the distal end of the leg for movement relative to the leg, and a brace integral with the proximal end of the foot. The distal end of the brace is rotatable inwardly from the leg against the panel by rotation of the foot about the axis of the hinge connecting the foot to the leg and is operable, by such rotation, to effect angular separation of the leg and panel. There is means on the panel and at the distal end of the base interengageable to hold the leg and panel angularly displaced from each other.

The invention will now be described in greater detail with reference to the accompanying drawings wherein:

FIG. 1 is a perspective view of the structure shown from the rear side;

FIG. 2 is an elevation of the structure;

FIG. 3 is a vertical section;

FIG. 4 is a rear view of the structure shown in FIG. 1 folded;

FIG. 5 is a plan view of the blank of which the structure shown in FIG. 1 is made;

FIG. 5*a* is a fragmentary end elevation showing a calendar pad applied directly to the face of the supporting panel;

FIG. 5*b* is a fragmentary end elevation, partly in section, showing an assembly attached to the upper edge of the supporting panel which includes a pocket for removably receiving a calendar pad or photograph;

FIG. 6 is a perspective view of one modification of the structure shown from the rear side;

FIG. 7 is a rear view of the modified structure folded;

FIG. 8 is a perspective view of another modification of the structure shown from the rear side;

FIG. 9 is a rear view of the second modified structure folded;

FIG. 10 is a fragmentary section of a hinge provided by making an impression;

FIG. 11 is a fragmentary section showing a hinge made by making perforations;

FIG. 12 is a fragmentrary section showing a hinge made by a cut score; and

FIG. 13 is a fragmentary section showing a paper hinge.

Referring to the drawings, the structure comprises a supporting panel **10** adapted to be supported in an upright, rearwardly inclined position by a prop comprising a leg **12**, a foot **14** and a brace **16**.

The panel **10** is comprised of a front ply **18** and a rear ply **20**, the latter being coextensive with the front ply and being secured thereto by suitable means, for example by

a wrapping **22** (FIG. 2), applied to the front face of the ply **18** and folded over the edges of the two plies onto the rear face of the ply **20**. Optionally, the plies may be joined at their edges exclusively of their contacting surfaces inwardly thereof by adhesive applied to the marginal edges or by staples driven through the plies adjacent the marginal edges.

In the form of the invention illustrated in FIGS. 1 to 5, inclusive, the leg **12**, foot **14** and brace **16**, constituting the prop, are formed out of the rear ply **20** by making a single cut **24** (FIG. 5) through the rear ply **20** spaced from and parallel to the lower edge of the ply, making a first pair of transversely spaced cuts **26—26** extending from the ends of the cut **24** upwardly toward the upper edge of the ply, forming a hinge **28** at the upper ends of the transversely spaced cuts **26—26**, forming transversely spaced hinges **30—30** intermediate the hinge **28** and the cut **24**, making a second pair of transversely spaced cuts **32—32** extending from the inner ends of the hinges **30—30** upwardly toward the top of the ply, and making a connecting cut **34** between the upper ends of the second pair of transversely spaced cuts **32—32**. The part formed by the aforesaid cuts provides above the hinge **30—30** the leg **12** which is rotatable rearwardly relative to the panel about the axis of the hinge **28**, the foot **14** which is rotatable about the axis of the hinges **30—30** relative to the leg, and the brace **16** which is an integral rigid extension of the foot **14**.

In the modified form of the invention illustrated in FIGS. 6 and 7, a prop, comprising the leg **12′**, foot **14′** and brace **16′**, is formed out of a rear ply **20′** by making a first pair of transversely spaced cuts **26′—26′** forming a hinge **28′** at the upper ends of the transversely spaced cuts **26′—26′**, forming transversely spaced hinges **30′—30′** spaced from and parallel to the lower end of the ply, making a second pair of transversely spaced cuts **32′—32′** extending from the inner ends of the hinges **30′—30′** upwardly toward the top of the ply, and making a connecting cut **34′** between the upper ends of the second pair of transversely spaced cuts **32′—32′**.

A second modification of the invention is illustrated in FIGS. 8 and 9, wherein the structure has only a single ply **18** and the leg **12″**, foot **14″** and brace **16″**, comprising the prop, are attached to the panel by part **20″** stapled or otherwise fastened to the rear side of the panel **18**. A hinge **28″** connects one end of the leg **12″** to the part **20″** and transversely spaced hinges **30″—30″** connect a foot **14″** to the other end of the leg. The brace **16″** is formed by a pair of transversely spaced cuts **32″—32″** extending from the inner ends of the hinges **30″—30″** into the leg and a connecting cut **34″** joining the ends of the cuts **30″—30″**.

The cuts **34**, **34′** or **34″**, at the distal ends of the braces preferably deviate to provide tongues **36**, **36′** or **36″** and flanking shoulders **38—38**, **38′—38′** or **38″—38″**, and the ply **18** has formed in it, substantially midway between its upper and lower edges, a slot **40** for receiving one of the tongues **36**, **36′** or **36″**.

The hinges **28**, **28′** and **28″** are preferably formed by making an impression *a* in the outer side of the panel or part from which the leg is made, as shown in FIG. 10, so as to afford resistance to rearward displacement of the leg relative to the panel. Alternatively, the hinge connecting the leg to the panel may be formed by a line of performations *b* through the ply, as shown in FIG. 11. The hinges **30—30**, **30′—30′** and **30″—30″** may be formed by making an impression *a*, such as shown in FIG. 10; perforations *b*, such as shown in FIG. 11; a cut score *c*, such as shown in FIG. 12; or may be a paper connection *d*, such as shown in FIG. 13.

By employing in combination a hinge connecting the leg to the panel which resists displacement rearwardly

from the panel, such as an impression in the outer face, as shown in FIG. 10, and a flexible hinge connecting the foot to the leg, such as the cut score formed on the inner side as shown in FIG. 10, the brace can be rotated easily into operative position and the interlocking engagement between the inner end of the brace and the slot in the panel will be retained in engagement by the reactive force tending to restore the leg to a position parallel to the panel. Since the cut score must be made from the inside it is preferable from the standpoint of manufacture to form the hinge by perforations, as shown in FIG. 11, so that all of the hinges and cuts may be made simultaneously from one side.

In setting up the structure rotation of the foot relative to the leg moves the distal end of the brace downwardly along the rear side of the panel, forcing the leg rearwardly with respect to the front ply until its distal end reaches the slot **40** whereupon the tongue **36**, **36'** or **36''**, as the case may be, snaps into the slot **40**.

The structure, as described, can be used for supporting a calendar pad or photograph by attachment directly to the front face of the ply **18** by means of adhesive or staples (FIG. 5*a*). Optionally, the structure may be a support for a multi-ply assembly (FIG. 5*b*) in which there is a face panel **46** containing a window opening **48** and a back panel **50** held spaced therefrom by a spacer **52** so as to provide a pocket **54** for receiving a calendar pad, photograph or the like. Such an assembly may be connected to the support **10**, shown in FIGS. 1, 6 and 8, by a hinge or staple or glued thereto.

The structure illustrated in FIGS. 1 to 3, inclusive as shown in FIG. 5, is formed of a rectangular blank divided between its ends by a hinge **43** into two parts of equal area which constitute the plies **18** and **20** when the blank is folded. The slot **40** and the leg **12**, foot **14** and brace **16** are formed by suitable dies while the blank is flat. Preferably the hinges **28**, **30**—**30** and **43** are made from one side, so that the hinges and cuts can be made at the same time. The hinges may be formed in any of the ways illustrated in FIGS. 10 to 13, inclusive. If desired, a notch **44** may be made at the distal end of the foot to make it easier to separate the foot and leg from the front ply **18**. A decorative covering is applied to the outer face of the ply **20** before forming the leg, foot and brace and a decorative covering is applied to the ply **18** after folding and folded over the edges to hold the plies together. Optionally, the parts **18** and **20** may be made separately and joined by means of binding paper, adhesive or staples.

The structure shown in FIGS. 6 and 7 is made in a corresponding manner in the form of a single blank folded intermediate its ends after the leg, foot and brace are formed, or in two parts which are then joined together. This structure differs only in that the cuts **26'**—**26'** extend all the way to the lower edge of the part **20'**, whereas, in the structure shown in FIGS. 1 to 5, inclusive, the cuts **26**—**26** terminate short of the lower edge.

In the form of the invention shown in FIGS. 8 and 9, the prop, comprising the leg **12''**, foot **14''** and brace **16''** and a part **20''** for attaching the prop to the supporting panel, is died out of sheet material and then applied to one side of the panel by staples, adhesive, or the like.

It should be understood that the present disclosure is for the purpose of illustration only and that this invention includes all modifications and equivalents which fall within the scope of the appended claims.

I claim:

1. A structure comprising a panel, a leg connected to the panel for movement to an angular position relative thereto, a foot hinged to the distal end of the leg, a brace integral with the foot, said brace having a distal end rotatable inwardly from the leg against the panel, by rotation of the foot about the axis of the hinge connecting the foot to the leg, to effect angular separation of the leg and panel, and means on the panel and at the distal end of the brace interengageable to hold the leg and panel angularly displaced from each other.

2. A structure comprising a first panel, a second panel secured to the first panel, a part integral with the second panel, said part being connected along one edge to the second panel and swingable away from the first panel, a second part integral with the first part, second part being connected along one edge to the first part and rotatable relative to the first part, a third part integral with the second part, said third part extending from the second part toward the connection between the second part and the second panel, said third part being rotatable, by rotation of the second part, to force its distal end between the first part and the first panel to deflect the two relative to each other, and means on the first panel and at the distal end of the third part inter-engageable to hold the first part displaced relative to the first panel and the second part at an angle to the first part.

3. A structure comprising a first part, a second part secured to the first part, a third part connected to the second part for rotation away from the first part, a fourth part connected to the distal end of the third part rotatable relative thereto, a fifth part extending from the proximal end of the fourth part toward the proximal end of the third part, said fifth part being rotatable, by rotation of the fourth part relative to the third part, to force the first and third parts away from each other, and means on the first part and at the distal end of the fifth part elastically interengageable to hold the first and second parts separated.

4. A structure according to claim **1**, characterized in that the connection between the panel and the leg is elastically resistant to rearward displacement of the leg.

5. A structure comprising a panel, a part connected to one side of the panel for rotation from a position parallel to the panel to a position extending away from said one side, a second part connected to the distal end of the first part for rotation relative to the first part, a third part connected at one end to the second part, said third part being rotatable, by rotation of the second part relative to the first part, to force the distal end of the third part downwardly along the rear side of the panel and simultaneously to force the first part rearwardly relative to the panel, and means at the distal end of the third part and on the panel operable, when the distal end of the third part reaches a predetermined position, to be interengaged by the reactive force of the first part to displacement away from the panel.

6. A structure comprising a panel, a first part, a first hinge connecting the proximal end of the first part to one side of the panel for rotation from a position parallel to the panel to an angular position extending away from said side, a second part, a second hinge connecting the second part to the first part for rotation relative to the second part, a third part rigidly connected to the second part, said third part being an integral extension of the second part extending from the second hinge toward the first hinge, said third part being operable, by rotation of the second part away from said side of the panel, to force the first part away relative to the panel, and means on the panel and at the distal end of the third part interengageable by said rotation of the second part relative to the first part to hold the first part at a predetermined angular position away from the panel.

7. A structure comprising a first panel, a second panel coextensive with the first panel, said second panel being secured to the first panel, a part formed out of the second panel by a cut along a line parallel to the lower edge of the panel, transversely spaced cuts along lines extending from the ends of the first cut toward the top of the panel, an impression parallel to the first cut joining the upper ends of the spaced cuts, and a hinge parallel to and spaced from the first cut, the portion of said part above the hinge constituting a leg and being rotatable

rearwardly about the axis of the impression and the part below the hinge constituting a foot and being rotatable about the axis of the hinge, and a brace integral with the foot and extending from the proximal end thereof toward the proximal end of the leg, said panel and brace having interengageable means engageable, by rotation of the foot relative to the leg, to hold the leg at a predetermined angle relative to the first panel.

8. A structure comprising a first panel, a second panel secured to the first panel, a part formed out of the second panel by a first cut parallel to the lower edge of the first panel, transversely spaced cuts extending from the ends of the first cut upwardly toward the top of the first panel, an impression on the rear surface parallel to said first cut joining the upper ends of the spaced cuts, a hinge at the inner side of said part spaced from and parallel to its distal end, dividing said part into a leg above it and a foot below it, and a brace integral with the foot and extending from its proximal end, operable by rotation of the foot relative to the leg, by engagement of its distal end with the first panel, to displace the leg rearwardly from the first panel and to hold said leg at said rearwardly displaced position.

9. A structure comprising a first panel, a second panel secured to the first panel, a part formed out of the second panel by a cut parallel to the lower edge of the first panel, a first pair of transversely spaced cuts extending from the ends of the first cut upwardly toward the top edge of the first panel, an impression parallel to the first cut joining the ends of the spaced cuts, transversely spaced hinges parallel to and spaced from the distal end of said part, a second pair of transversely spaced cuts extending from the inner ends of the transversely spaced hinges upwardly toward the impressions and a cut joining the upper ends of the second pair of transversely spaced cuts, said hinges, second pair of transversely spaced cuts and joining cut dividing the part into a leg above the hinges, a foot below the hinges and a brace integral with the proximal end of the foot, said foot being operable, by rotation relative to the leg, to dispose the distal end of the brace against the inner side of the first panel, and means at the distal end of the brace engageable with the panel to hold the brace at a predetermined position.

10. A structure according to claim 9, wherein the transversely spaced hinges are comprised of cut scores formed in the inner side of the part.

11. A structure according to claim 9, wherein the transversely spaced hinges are formed by lines of perforation through the part.

12. A structure comprising a panel and a part secured to the rear side of the panel for holding the panel in an upright, rearwardly inclined position, said part comprising a leg, a foot and a brace, a hinge connecting one end of the leg to the panel, a hinge connecting the foot to the other end of the leg, said brace extending from the hinge connecting the foot and leg toward the hinge connecting the leg and panel, said foot being operable, by rotation relative to the leg, to rotate the distal end of the brace downwardly against the rear side of the panel about the axis of the hinge connecting the foot and leg, and means at the distal end of the brace and on the panel elastically interengageable, when the distal end of the brace reaches a predetermined position, by the restorative force of the hinge connecting the leg to the panel.

13. A structure comprising a two-ply panel, a first part of one ply being displaceable away from the other ply, a second part connected to the distal end of the first part, said second part being rotatable relative to the first part, a third part extending from the connection between the first and second parts toward the proximal end of the first part, said third part being rotatable by rotation of the second part relative to the first part to displace the first part from said other ply, and means on the other ply and at the distal end of the third part elastically interengageable by rotation of the second part relative to said other ply to hold the first part displaced from said other ply.

14. A structure comprising a first panel, a second panel secured to the first panel, a part formed out of the second panel by pairs of transversely spaced cuts extending from an edge of the second panel toward the other edge, and a hinge connecting said spaced cuts, said part being swingable away from the first panel about the axis of the hinge, a hinge dividing said part intermediate its proximal and distal ends into a leg above the hinge and a foot below the hinge, and a brace integral with the foot rotatable therewith about the axis of the hinge connecting the foot to the leg to dispose the distal end of the brace between the leg and the panel.

15. A structure comprising a first panel, a second panel secured to the first panel, a part formed out of the second panel by pairs of transversely spaced cuts extending from an edge of the second panel toward the other edge, a hinge connecting the cuts, said part being swingable away from the panel about the axis of the hinge, transversely spaced hinges situated between the proximal and distal ends of the parts, transversely spaced cuts extending from the inner ends of the transversely spaced hinges into the part at one side of said transversely spaced hinges, and a cut joining the distal ends of said spaced cuts, said transversely spaced hinges and cuts dividing the part into a leg at one side, a foot at the other side and a brace integral with the foot, said brace being rotatable with the foot about said transversely spaced hinges connecting the foot to the leg to place the distal end of the brace in abutting engagement with the rear side of the panel.

16. A blank for constructing in combination with a support an easel comprising a panel adapted to be secured to the support, said panel containing a first cut parallel to one edge, transversely spaced cuts extending from the ends of the first cut toward the opposite edge, an impression on one face of the panel parallel to said first cut joining the distal ends of the spaced cuts, transversely spaced hinges spaced from and parallel to the first cut, dividing the panel into a leg at one side of the hinges and a foot at the other side of the hinges, a second pair of transversely spaced cuts extending from the inner ends of the transversely spaced hinges toward the opposite edge of the panel, and a cut joining the distal ends of the second pair of transversely spaced cuts, said second pair of transversely spaced cuts and adjoining cuts forming a brace at the other side of the hinges integral with the foot.

17. A blank for constructing in combination with a support an easel comprising a part adapted to be fastened to the support, a second part hinged at one end to the first part, a third part, transversely spaced hinges connecting the third part to the distal end of the second part, transversely spaced cuts situated in the second part, said cuts originating at the inner ends of the hinges connecting the third part to the second part and extending toward the hinge connecting the first and second parts, and a cut in the second part substantially parallel to and spaced from the hinge connecting the first and second parts joining the ends of said spaced cuts, said spaced cuts and joining cuts separating from said second part a brace integral at its proximal end with the third part.

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