United States Patent [19]

Gray

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[54] **TOE BOARD BRACKET**

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[52] **U.S. Cl.** ..... **248/229,** 248/226 E

[51] **Int. Cl.** **F16m 13/00**

[58] **Field of Search** ..... 248/201, 214, 226 E, 229; 403/231, 205; 182/113; 52/285

[56] **References Cited**

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[57] **ABSTRACT**

A toe board bracket made from a resilient material and having a toe board holding portion and a horizontal gripping portion formed integrally therewith. The toe board holding portion is comprised of a pair of spaced inner and outer vertically extending legs adapted to receive a toe board therebetween and the horizontal gripping portion is comprised of a pair of upper and lower spaced horizontally extending legs adapted for gripping engagement with the edge of a plank member. The lower leg of the gripping portion extends from the base of the inner leg of the toe board holding portion and the upper leg of the gripping portion extends from the middle portion of the inner leg of the toe board holding portion.

1 Claim, 2 Drawing Figures

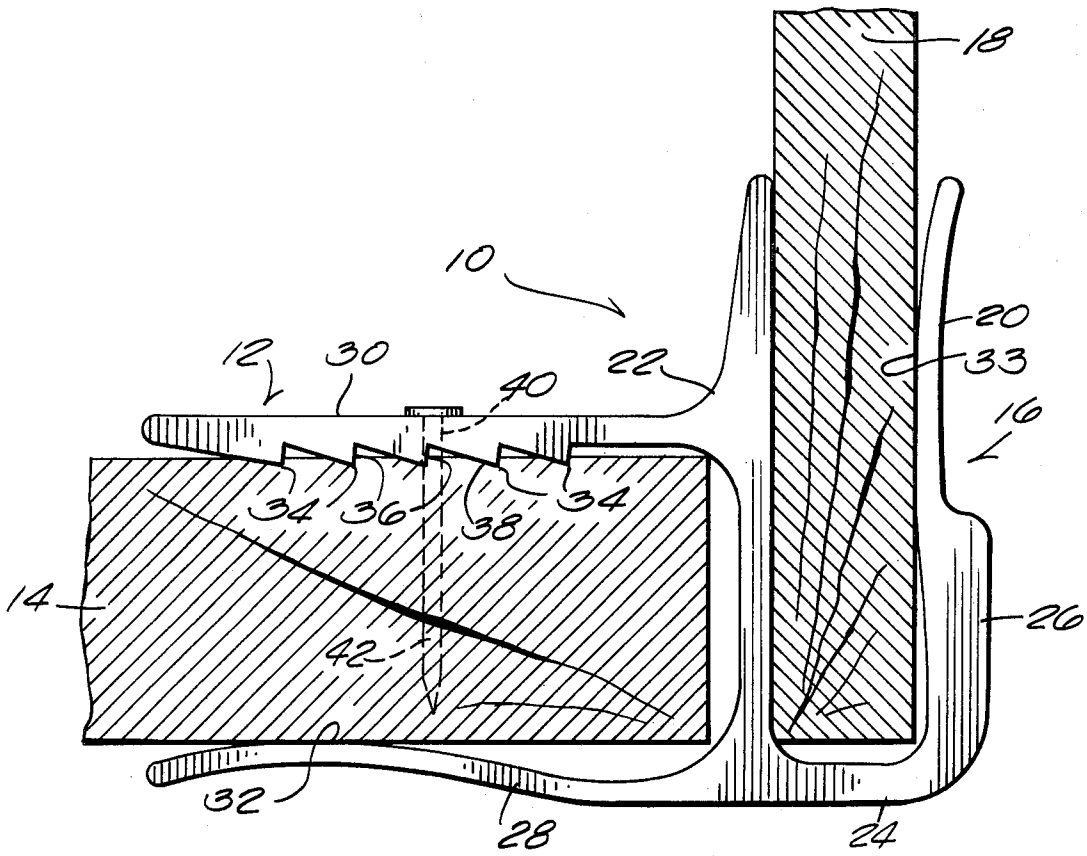


Fig. 1

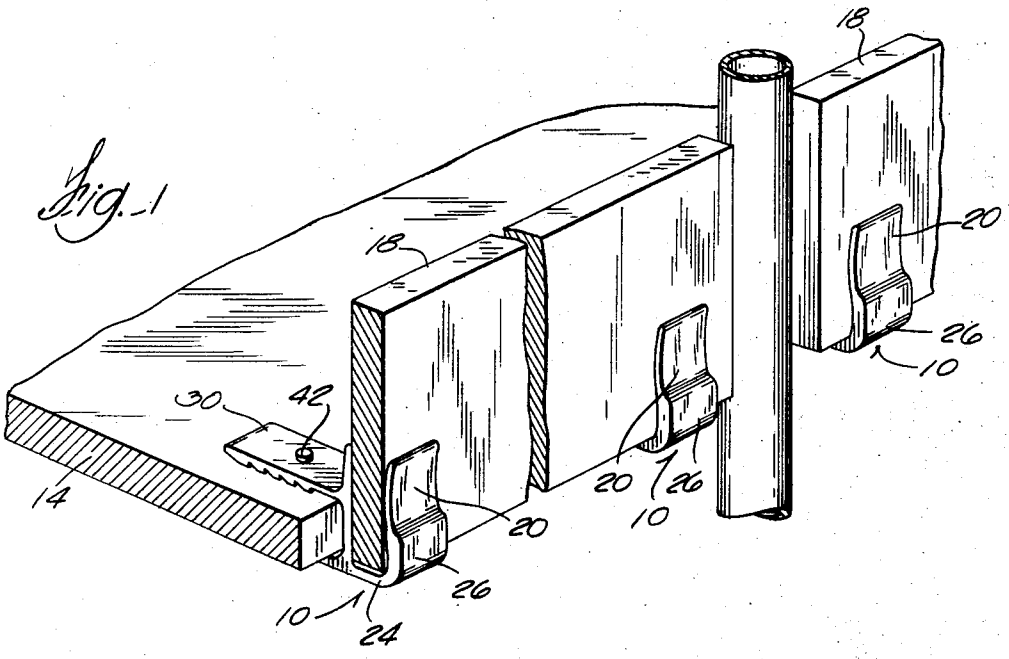
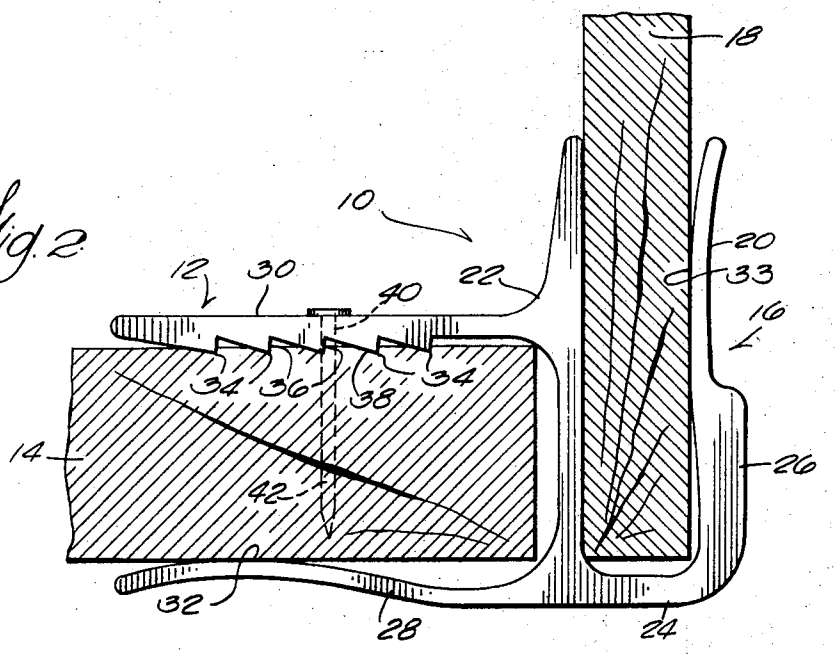

18
20
26
10
30
42
14
18
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26
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24
20
26
10

Fig. 2


18
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12
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40
22
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16
34
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38
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28
24

TOE BOARD BRACKET

BACKGROUND OF THE INVENTION

1. Field of the Invention

This invention relates to a bracket for mounting a toe board along the edge of a scaffold plank or similar structure.

2. Description of the Prior Art

Most prior bracket arrangements known to applicant are designed to mount the toe board member on the top surface of the plank. This arrangement not only reduces the amount of available walking surface on the plank but is susceptible to the existence of a gap between the plank and the toe board in the event there is any tendency of the planking to sag between its supporting members. One of the principal objects of this invention is to provide a toe board bracket wherein the toe board is mounted adjacent the edge of the scaffold plank to thereby provide a maximum walking area on the plank and to eliminate the gap problem referred to above. Another object is to provide a bracket which has a relatively simple construction and can be installed easily.

SUMMARY OF THE INVENTION

A toe board bracket including a toe board holding portion comprising a pair of spaced inner and outer vertically extending legs adapted to receive the toe board therebetween and a horizontal gripping portion comprised of a pair of upper and lower spaced horizontally extending legs adapted for gripping engagement with the edge of a plank member. The lower leg of the gripping portion is formed integrally with and extends from the base of the inner leg of the toe board holding portion. The upper leg of the gripping portion is formed integrally with and extends from the middle portion of the inner leg of the toe board holding portion. The bracket is made from a resilient material such as extruded aluminum with the outer leg of the toe board holding portion and the lower leg of the horizontal gripping portion curved to form a resilient spring arm to provide frictional engagement between the legs of the respective portions and the members positioned between the spaced legs thereof.

DESCRIPTION OF THE DRAWINGS

FIG. **1** is a fragmentary perspective view showing several toe board brackets of the present invention installed in position on a scaffold plank; and

FIG. **2** is a fragmentary end view of the assembly shown in FIG. **1**.

DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring to the drawings in detail, the toe board bracket of this invention is identified by reference numeral **10** and is comprised of a horizontal gripping portion **12** designed for gripping a horizontal member such as a plank **14** and a toe board holding portion **16** for receiving a toe board member **18.**

The two portions **12** and **16** of the bracket **10** are formed integrally with each other. In the preferred embodiment the bracket **10** is made from a resilient material such as extruded aluminum which can be manufactured as an elongated extrusion and then cut into

brackets of the desired width which in the preferred embodiment are 1 inch wide.

Portion **16** is comprised of a pair of spaced vertically extending legs **20** and **22** and a base leg **24.** Leg **20** is curved as shown in FIG. **2** to form a spring arm to frictionally grip toe board **18.** Arm **20** is provided with a nose portion **26** of increased thickness to facilitate driving the plank gripping portion **12** into engagement with plank **14.**

Portion **12** is comprised of a pair of spaced horizontally extending legs **28** and **30.** Leg **28** extends from and is integral with lower portion of leg **22** and in effect is an extension of base leg **24** of portion **16.** Leg **30** is integral with and extends from the upper central portion of leg **22** of portion **16.**

Leg **28** is curved as shown in FIG. **2** to form a spring arm to frictionally grip plank member **14.** By curving the legs **20** and **28,** as shown, the area of contact between the legs and the plank and toe board respectively is concentrating at areas **32** and **33** to thereby provide a relatively tight gripping action between such legs and the plank and toe board.

Leg **30** is provided with a plurality of teeth-like ridges **34** on the lower face thereof. Such teeth tend to dig into the surface of plank **14** when installed thereon. The faces **36** of ridges **34** angle upwardly at a much deeper angle than the opposite faces **38** to thus provide easy installation thereof and yet provide the desired gripping action once they are installed. A hole **40** is provided in leg **30** for installation of an anchoring nail **42.**

In a typical installation as shown in FIG. **1,** a plurality of toe board brackets **10** are installed along the outside edge of a scaffold plank **14** by first driving each bracket horizontally over the edge of the plank until the plank is fully seated between arms **28** and **30** of gripping portion **12** as shown in FIG. **2.** The bracket is driven into position by a hammer or other similar tool by striking the bracket on nose portion **26.** A nail **42** can then be driven into the plank through opening **40** to securely anchor the bracket in place.

After the brackets have been installed as described above, the installation is completed by the insertion of toe board members **18** which is accomplished by simply inserting each toe board into toe board holding portions **16** from above. The weight of the toe board **18** in the brackets **10** will tend to cause the arm **30** of each bracket to be pulled down and to the right as viewed in FIG. **2** which will tend to cause teeth **34** to dig into the surface of plank **14.**

The dimensions of bracket **10** are of significance. Since 2 inches planks or boards (actual thickness 1½inches) are generally used for scaffold planking, arms **30** and **32** are dimensioned to fit snugly over a member having an actual thickness of 1½ inches. Arms **20** and **22** are dimensioned to provide a tight fit with a 1 inch board (actual thickness three-fourths inch). By constructing the bracket **10** so that the lower edge of toe board **18** is at substantially the same level as the lower face of plank **14** (see FIG. **2**), a toe board cut from a length of 1 inch × 6 inches lumber (actual ¾ inch thick and 5½ inches width) when installed will provide a 4 inches high protective wall along the edge of the scaffold plank. This is the minimum height required under most safety regulations. Thus the bracket is adapted for use with commercially available standard-size lumber,

namely, 2 inches planks and 1 inch × 6 inches boards.

Another advantage of mounting the toe board **18** adjacent the edge of plank **14** as opposed to mounting it on the top surface thereof (as is the case with many prior mounting arrangements), is that any tendency of the plank to sag or bow in the middle will not create a gap between the bottom edge of the toe board and the top of the plank as would be the case if the toe board were mounted on the surface of the plank. Such a gap is undesirable since it might result in items such as workmen's tools to be accidentally kicked through the gap in which event they would then fall down to the ground below.

I claim:

1. A toe board bracket comprising:

a toe board holding portion comprising a pair of spaced inner and outer vertically extending legs adapted to receive a toe board therebetween; and

a horizontal gripping portion comprising a pair of upper and lower spaced horizontally extending legs adapted for gripping engagement with the edge of a plank member, said lower leg formed integrally with and extending from the base of said inner leg of said toe board holding portion, and said upper leg formed integrally with and extending from the middle portion of said inner leg of said toe board holding portion, said upper leg of said horizontal gripping portion being provided with a plurality of tooth-like ridges on the lower face thereof and an opening through which an anchoring nail can be installed, said toe board holding and horizontal gripping portions being made from a resilient material with said outer leg of said toe board holding portion and said lower leg of said horizontal gripping portion being curved to form a resilient spring arm to provide frictional engagement between the legs of the respective portions and members positioned between the spaced legs thereof, and said outer leg of said toe board holding portion being provided with a nose portion of increased thickness to facilitate driving the horizontal gripping portion of said bracket into engagement with a plank member.

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