United States Patent

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[72] Inventors **Forest J. Lambert**
6729 W. Senior Place;
Philip T. Look, 3955 N. Oketo Ave.,
Chicago, Ill. 60634

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[54] **TELESCOPIC METAL PLANK FOR SCAFFOLDS**
6 Claims, 4 Drawing Figs.

[52] **U.S. Cl.** **182/223**
[51] **Int. Cl.** **E04g 5/08**
[50] **Field of Search** 182/120, 121, 223, 222, 195; 52/632, 726

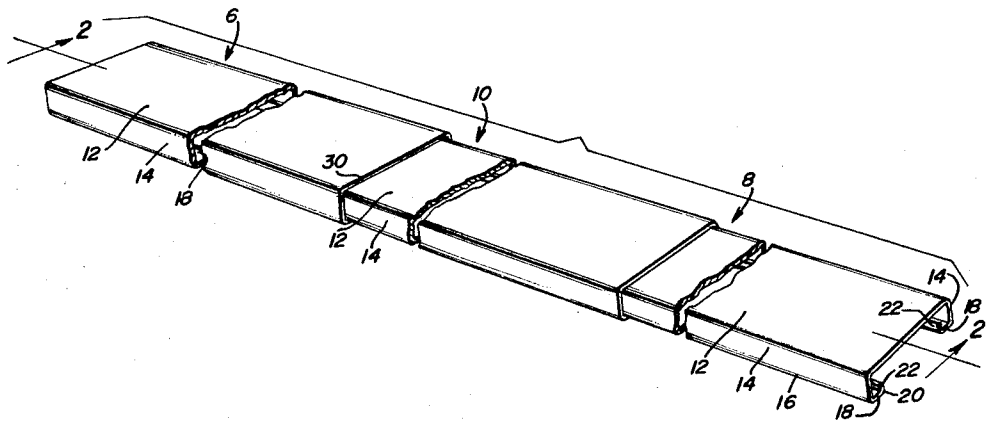
[56] **References Cited**

UNITED STATES PATENTS

1,285,817	11/1918	Sklar	182/120
2,485,165	10/1949	Pollman	182/223
2,899,011	8/1959	Babits	182/120
3,078,950	2/1963	Schramm	182/120
3,282,378	11/1966	Pierce	182/223

Primary Examiner—Reinaldo P. Machado
Attorneys—Clarence A. O'Brien and Harvey B. Jacobson

ABSTRACT: An extensible and retractable sheet metal plank made up of several, more or less, channel-shaped telescopingly connected plank-forming sections made, for example, in lengths of 4 feet, 6 feet or 8 feet and adapted for use when erecting a knockdown-type scaffold. The depending channel-forming flanges are provided with tracks slidingly nested together and having stop lugs which coact in limiting the positions of the fully extended sections.



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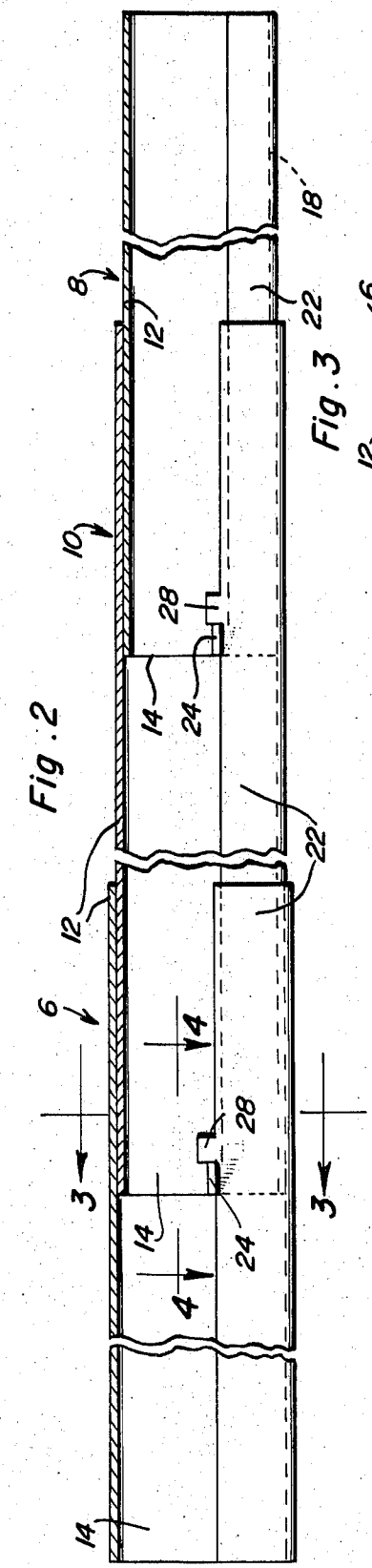

Fig. 2

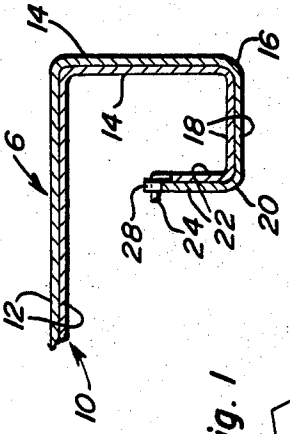

Fig. 3

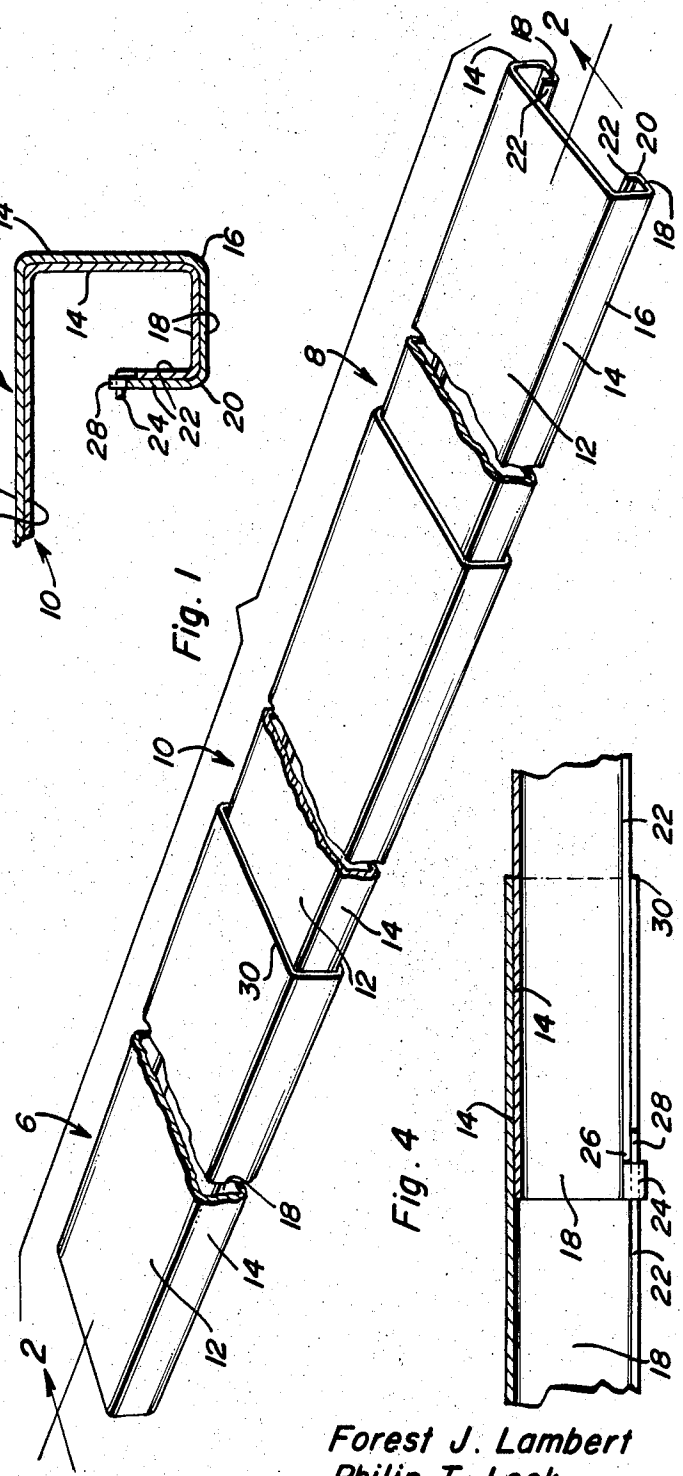

Fig. 1

Fig. 4

Forest J. Lambert
Philip T. Look
INVENTOR.

BY Clarence A. O'Brien and Harvey B. Jacobson
Attorneys

TELESCOPIC METAL PLANK FOR SCAFFOLDS

This invention relates to a portable compact and convenient scaffold erecting panel which is made of lightweight durable sheet metal, rigid aluminum for example, and which comprises several or more telescopingly united sections featuring interconnected stabilizing tracks having complemental stop means which comes into play when the sections are fully extended.

Briefly, the plank herein disclosed lends itself to feasible and practical use when the user is called upon to erect a scaffold, several, more or less, basically similar sections are provided, these sections being preferably, but not necessarily, constructed of appropriately selected and serviceable aluminum. Each section is fabricated from lightweight but rigid aluminum and is of a prescribed length and width. Each section is channel-shaped in cross section and embodies a web portion which is provided along its respective lengthwise edges with depending spaced parallel flanges which in conjunction with the web provide an open ended channel. The bottom or lower edges of the respective channel-flanges are provided with integral complemental rigidifying tracks. These tracks are coextensive in length and are integrally joined with the respectively cooperable depending flanges. It follows that the sections themselves are telescopingly interconnected for extensible and retractable use. In addition, the respective tracks are nested together and they too provide the desired telescoping and stabilizing result.

More specifically, and in carrying out a preferred embodiment of the invention, each guide track is characterized by a first horizontal flange which assumes a position at right angles to the companion channel-forming flange. This first flange in turn is provided with a second vertically disposed flange which is joined to the lengthwise edge and is commensurate in length with the first flange and has an upper longitudinal edge which is spaced in parallelism below the level of the underside of the web. Then, too, the edges of the second or vertical flange are provided at predetermined positions with lugs. These lugs coact in providing limit stops which in turn check the relative extended positions of the cooperating sections.

These together with other objects and advantages which will become subsequently apparent reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming a part hereof, wherein like numerals refer to like parts throughout, and in which:

FIG. 1 is a view in perspective showing the several telescopingly connected extensible and retractable sections which go to make up the ready-to-use plank, portions of the sections being broken away and appearing in section.

FIG. 2 is a central longitudinal sectional view taken approximately on the plane of the section line 2–2 of FIG. 1.

FIG. 3 is a fragmentary detail cross section taken on the plane of the vertical section line 3–3 of FIG. 2.

FIG. 4 is a fragmentary horizontal detail section taken on the plane of the horizontal section line 4–4 of FIG. 2.

By way of introduction to the description of the details it may well be mentioned that the several units or sections which go to make up the jointed telescoping plank are preferably but not necessarily made of strong durable and lightweight sheet aluminum .075 gauge. In actual practice the sections or units are manufactured in 4 ft., 6 ft. and 8 ft. lengths. Each plank is preferably made up of three proportionally made sections so that the extended plank may be caused to extend to a point of 10 ft., 16 ft. or 20 ft. as the case may be.

With reference now to the views of the drawing and in particular with respect to FIGS. 1 and 2 one end section, the one at the left is denoted by the numeral 6, the other end section or unit by the numeral 8, at the right, and the intermediate or intervening section by the numeral 10. These sections are properly proportioned and of equal length and, broadly stated, each section is channel-shaped in cross section. The sections are dimensioned to fit telescopingly together and to permit proper extension and retraction. When the sections are fully retracted the thus collapsed plank can be easily handled, stored and transported. Structurally each section is the same

and comprises and open ended channel embodying a flat faced relatively wide web portion 12 provided along its lengthwise or longitudinal edges with relatively narrow depending flanges 14. Thus the web and depending flanges form an open ended channel. The lower or bottom edge of each flange 14, that is the edge denoted at 16 in FIG. 3 is provided with integral rigidifying and guide track means. Each track means comprises a first horizontal flange 18 of the approximate width shown in FIG. 3 and which is provided at an inwardly longitudinal edge 20 with a second upstanding or vertically disposed flange 22. The upper lengthwise edge of the flange 22 terminates in a plane below the underneath side of the web of the channel. Thus these tracks are substantially channel-shaped and the tracks of the respective sections are nested together and slidingly connected to permit the extension and retraction at will. It will be further noted that means is provided to restrict or limit the extension of the several sections 6, 8 and 10. This means comprises limit stop lugs which are properly paired and coordinated to function in the manner shown in FIGS. 2, 3 and 4 in particular. Certain of the lugs, the ones denoted by the numeral 24 in FIGS. 2 and 4 are carried by the terminal end portion 26 of the upstanding flange 22 (FIGS. 3 and 4). These are the terminally disposed limit stop lugs and they cooperate with companion vertical lugs 28 which are carried by the vertical upstanding flange but are spaced inwardly from the terminal end thereof as at 30. This is to say the lugs 28 are spaced to the left of the terminal end 30 as shown in FIG. 4. It follows that these lugs are properly arranged and paired to come into abutting relationship in the manner illustrated whereby when the several sections 6, 8 and 10 are fully extended they still remain in telescoping plank-forming relationship.

It is believed that the views of the drawing when read singly and collectively and construed in the light of the descriptive specification will enable the reader to obtain a clear and comprehensive understanding of the subject matter of the invention and the inherent features and advantages attending the same. Accordingly, a more extended description is deemed to be unnecessary.

The foregoing is considered as illustrative only of the principles of the invention. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction and operation shown and described, and accordingly all suitable modifications and equivalents may be resorted to, falling within the scope of the invention.

We claim:

1. A portable, extensible and retractable plank adapted for incorporation in a knockdown scaffold comprising a plurality of companion plank-forming sections, each section being made of rigid sheet material, being elongated and channel-shaped in cross section and embodying a web portion provided along its respective longitudinal edges with depending spaced parallel flanges commensurate in length with the length of said web and having bottom edges provided with rigidifying and guide tracks coextensive in length and integrally joined with their respectively cooperably depending channel flanges, each guide track embodying (1) a first horizontal flange disposed at a right angle to its coacting channel-flange and underlying the channel-web in spaced parallel relation and (2) a second vertical flange which is joined to an inward lengthwise edge of said first flange and which has an upper longitudinal edge spaced below the level of said web, the upper marginal edges of said second vertical flanges being provided with coordinating limit stop lugs which are located and abut each other in a manner to check and limit the respective extended positions of the sections when they have been fully extended.

2. The plank defined in and according to claim 1, and wherein said plank sections and said guide tracks are open at their respective ends and the guide tracks of the respective sections are proportional in size and are telescopingly nested together, said thus nested guide tracks coacting in stabilizing the overall plank.

3. The plank defined in and according to claim 1, and wherein certain of said limit stop lugs are horizontal and are situated at the extreme terminal ends of the second vertical flanges on which they are mounted and certain others of said lugs are vertical and coplanar with their coacting vertical flanges and are situated inwardly of and spaced from an adjacent end of the coordinating channel.

4. For use in constructing a portable, extensible and retractable scaffold plank: an elongated plank constructing section made of rigid lightweight sheet material, said section embodying a relatively broad flat-faced web having longitudinal edges provided with relatively narrow depending spaced parallel flanges, said web and flanges providing an open ended channel, the bottom edge of each channel flange having a first horizontal track flange which is disposed at right angles to the channel flange and is spaced below and parallel with said web

and has an inward edge provided with a second integral vertical upstanding track flange which is parallel with the channel flange and has an upper longitudinal edge underlying and spaced below said web and which is provided with an integral lug constituting a limit stop.

5. The elongated plank section defined in and according to claim 4, and wherein said limit stop lug is disposed in a horizontal plane which is at right angles to the vertical plane of said track flange and is situated at an extreme free terminal end of said track flange.

6. The elongated plank section defined in and according to claim 4, and wherein said limit stop lug is coplanar with said vertical upstanding track flange and is situated inwardly and is thus spaced from an adjacent open end of said open ended channel.