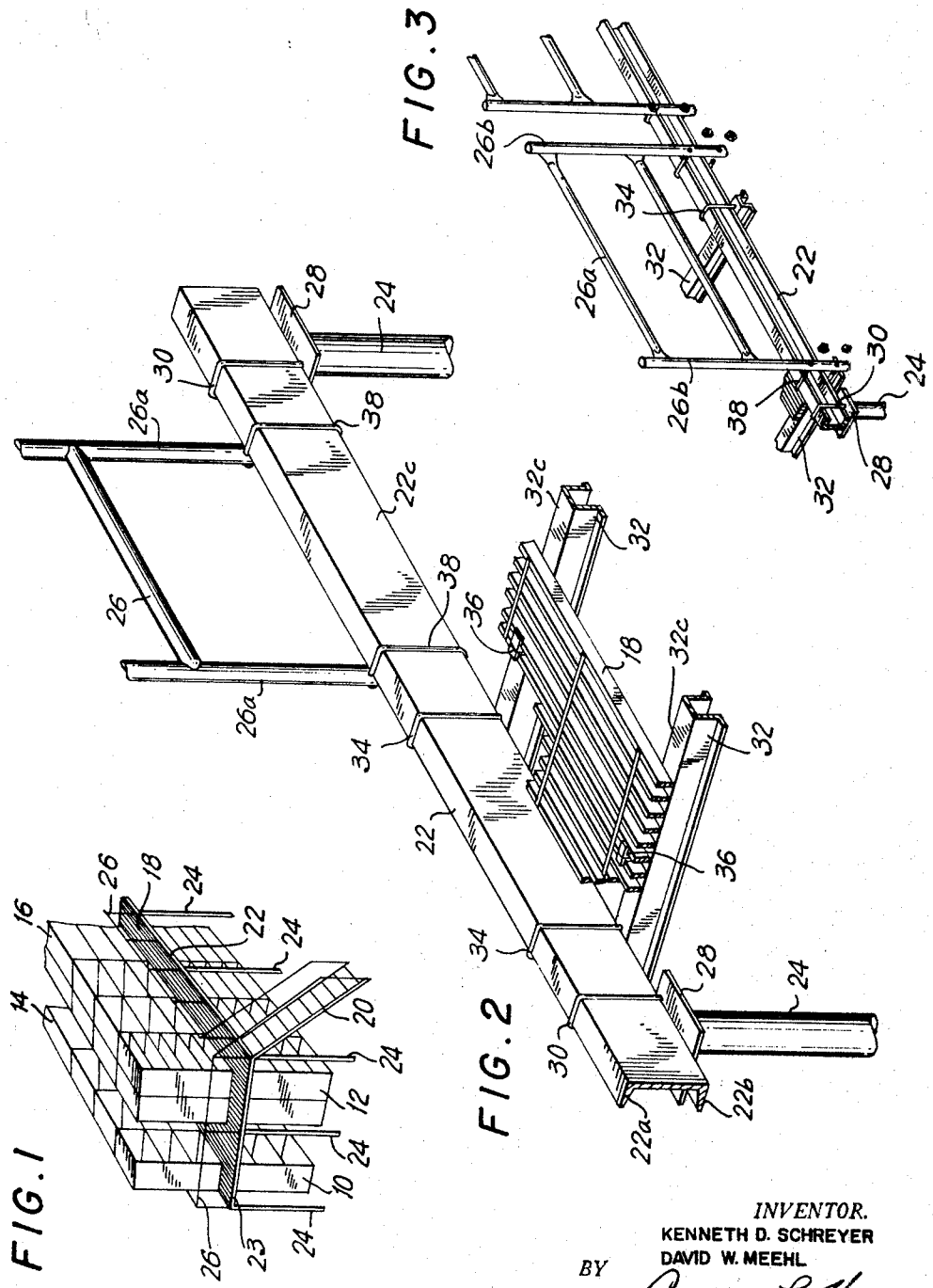
March 11, 1969 K. D. SCHREYER ET AL 3,432,147

DECKING CONSTRUCTION WITH RAIL MEMBERS

Filed April 5, 1967



INVENTOR.
KENNETH D. SCHREYER
DAVID W. MEEHL

BY Andrew L. Hey
ATTORNEY

United States Patent Office 3,432,147
Patented Mar. 11, 1969

3,432,147

DECKING CONSTRUCTION WITH RAIL MEMBERS

Kenneth D. Schreyer, Doylestown, and David W. Meehl, Hatboro, Pa., assignors to Standard Pressed Steel Co., Jenkintown, Pa., a corporation of Pennsylvania

Filed Apr. 5, 1967, Ser. No. 628,637
U.S. Cl. 256—59 5 Claims
Int. Cl. E04h 17/14; E04b 1/18

ABSTRACT OF THE DISCLOSURE

A decking construction in which the kick-plate on a second or higher level deck also serves to support rail members and flooring beams across which the flooring is laid. The kick-plate is in the form of a channel having a pair of flanges joined together by a web. The channel is disposed with its web vertical. The flooring beams are secured against the lower flange of the channel, while the rail members are secured against the free edges of the flanges of the channel.

The present invention relates, in general, to decking constructions and, in particular, to an arrangement wherein a single structural member may serve as a combination kick-plate and support for a flooring and handrails.

In double and multiple deck shelving, aisles or walkways are required on the second and higher levels for access to shelves on these levels. For an outside aisle or one which has shelves on one side only, the flooring on that side of the aisle opposite from the shelves must be supported by suitable means. In addition, a kick-plate and handrails must be provided along this side of such an aisle to prevent individuals from falling off.

A major factor in the cost of decking constructions is the cost of raw materials. Accordingly, a reduction in the weight and the number of the component parts of such constructions results in a savings in their manufacture. In addition, the fewer the component parts, the easier and quicker a decking construction may be assembled or disassembled.

An object of the present invention is to provide a new and improved decking construction in which a single structural member serves as a combination kick-plate, flooring support and handrail support. As a result, three functions are served by this member. In contrast, most deckings which are commercially available at the present time employ two or three parts for these three functions.

Another object of the present invention is to provide a combination kick-plate and flooring and handrail support for a decking which is relatively inexpensive to fabricate.

Briefly, a decking construction according to the present invention includes a channel having a pair of flanges joined together by a web with the web being disposed vertically. A plurality of flooring support beams are secured to the channel and extend horizontally from the channel. Extending across these support beams is a flooring. A plurality of rail members, secured to the channel, extend vertically upward from the channel.

For a better understanding of the present invention, together with other and further objects thereof, reference is made to the following description, taken in connection with the accompanying drawing, and its scope will be pointed out in the appended claims.

Referring to the drawing:

FIGURE 1 shows a typical double deck shelving unit in which the present invention may be employed; and

FIGURES 2 and 3 are perspective views, taken from opposite directions, of a decking construction according to the present invention.

The shelving unit in FIGURE 1 is seen to have shelves **10** and **12** on ground level and shelves **14** and **16** on the second level. In order to have access to shelves **14** and **16**, a flooring **18** is provided. A staircase **20** leads from ground level to the second level.

Flooring **18**, in the form of a grating, is supported from kick-plates **22** and **23** which extend between posts **24**. The kick-plates extend along the outside edges of the outside aisles on the second level. The kick-plates serve to prevent an individual on the grating **18** from sliding off of the edge. Extending vertically from the kick-plates **22** and **23** are rail members **26** which prevent an individual from falling off of the second level.

FIGURES 2 and 3 show in greater detail the arrangement of the kick-plate **22**, a rail member **26** and the grating **18**. The kick-plate is seen to be a channel having a pair of flanges **22***a* and **22***b* joined together by a web **22***c*. The channel is disposed with web **22***c* being vertical. Kick-plate **22** rests upon plates **28** at the tops of posts **24** and is secured to these plates by U-bolts **30** which extend around the kick-plate and through plates **28**.

Extending horizontally from kick-plate **22** and secured to this kick-plate is a plurality of grating support beams **32**, each in the form of a channel. In particular, the webs **32***c* of channels **32** are positioned against the lower flange **22***b* of kick-plate **22**. Channels **32** are secured to the kick-plate by U-bolts **34** which extend around the kick-plate and through webs **32***c*. Grating **18** extends across the webs **32***c* and may be secured to beams **32** by suitable means such as by clips **36**. FIGURE 2 indicates how web **22***c* rises above the top of grating **18** to protect against an individual slipping off of the edge of the grating.

Rail member **26** also is secured to kick-plate **22** and extends vertically upward from the kick-plate. Specifically, rail member **26** includes two vertical rail posts **26***a* and a handrail **26***b*. The vertical rail posts extend across the free edges of flanges **22***a* and **22***b* and are secured to the kick-plate **22** by U-bolts **38** which extend around the kick plate and through the rail posts.

While there has been described what is at present considered to be the preferred embodiment of this invention it will be obvious to those skilled in the art that various changes and modifications may be made therein without departing from the invention and it is, therefore, aimed to cover all such changes and modifications as fall within the true spirit and scope of the invention.

We claim:

1. A decking construction comprising:
   - a channel having upper and lower flanges joined together by a web, said channel disposed with said web being vertical;
   - a plurality of flooring support beams secured to said channel and extending horizontally from said lower flange of said channel;
   - a plurality of flooring members extending across said flooring support beams;
   - and a plurality of rail member secured to said channel and extending vertically upward from said channel.

2. A decking construction according to claim **1** wherein the flooring members are gratings.

3. A decking construction according to claim **1** wherein the flooring support beams and the rail members are secured to the channel by U-bolts.

4. A decking construction according to claim **4** wherein the rail members include vertical posts and horizontal

handrails and said vertical posts extend upward across the free edges of the flanges of the channel.

5. A decking construction according to claim 2 wherein the flooring support beams are channels.

References Cited

UNITED STATES PATENTS

2,053,462	9/1936	Chaplin	52—648
2,830,509	4/1958	Bustin	52—180

FOREIGN PATENTS

979,081	1950	France.
984,099	1951	France.
1,351,599	1963	France.

JOHN E. MURTAGH, *Primary Examiner.*

U.S. Cl. X.R.

52—263