Feb. 5, 1963 H. L. GOODELL 3,076,522

BRIDGE SCAFFOLD APPARATUS

Filed Oct. 3, 1960

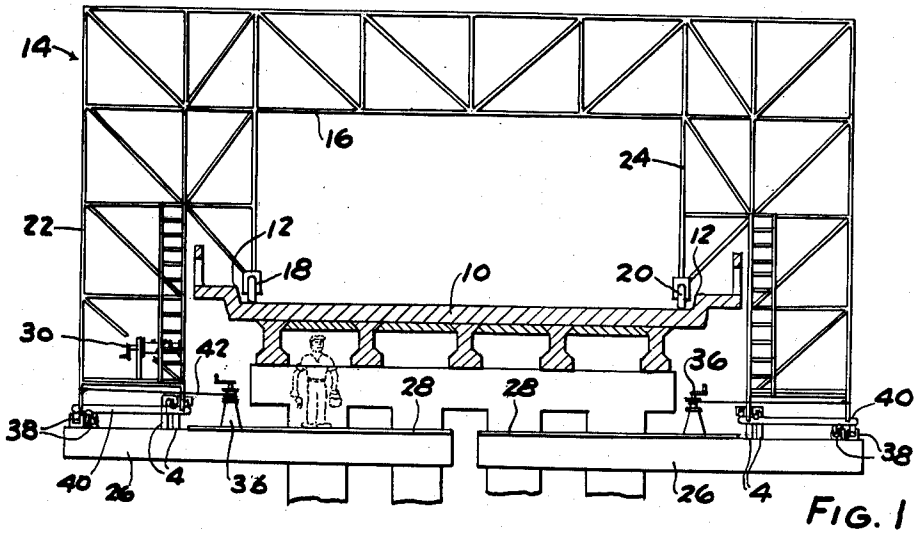


FIG. 1

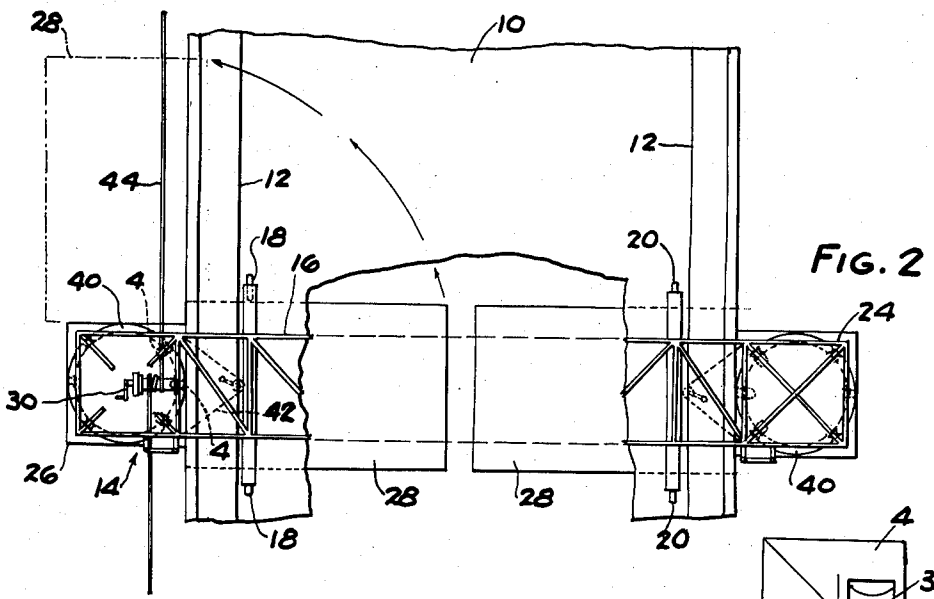


FIG. 2

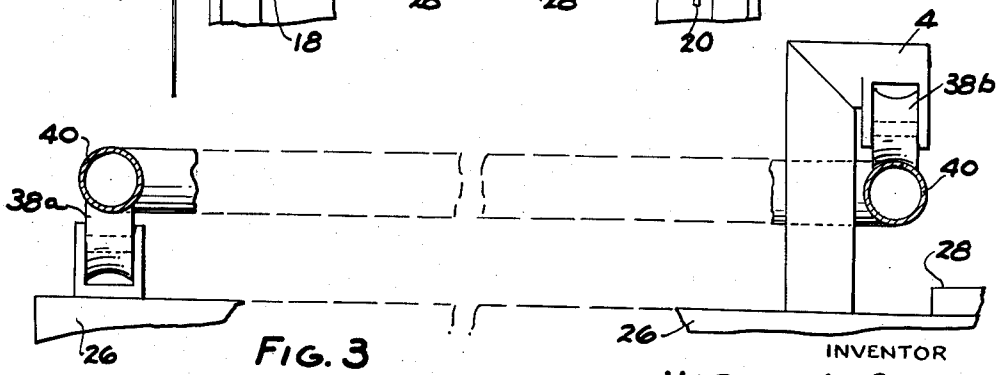


FIG. 3

INVENTOR

HARVEY L. GOODELL

BY Barnes, Kisselle, Raisch & Choate

United States Patent Office 3,076,522 Patented Feb. 5, 1963

3,076,522

BRIDGE SCAFFOLD APPARATUS

Harvey L. Goodell, Montgomery, Ala.
(1130 River Hill Drive, Kenton Hills, Covington, Ky.)

Filed Oct. 3, 1960, Ser. No. 59,918
8 Claims. (Cl. 182—13)

The present invention relates to scaffolds in general and in particular to a scaffold for use on bridges.

In the construction and maintenance of bridges, the erection movement and dismantling of scaffolding presents a major problem. It is a time consuming and expensive procedure to erect scaffolding between each pair of piers supporting a bridge for the purpose of providing support for the construction and maintenance workers such as carpenters, painters or the like.

An object of the present invention is to provide a scaffold apparatus which may be erected so as to straddle a bridge without interrupting traffic over the bridge and one which may be readily shifted from one end of the bridge to the other with ease and facility, the apparatus providing support for workmen constructing, painting or repairing the bridge under structure.

Another object is to provide a scaffolding apparatus for use in an elevated roadway or bridge which has a walkway swingable from a position transversely of the roadway to a position in which it may be moved from one side to the other side of a pier, without dismantling the scaffold apparatus.

A further object is to provide a scaffold apparatus for a bridge which lends itself to efficient use by painters or others, is easily and quickly assembled and disassembled, and one which is economically feasible.

These objects and advantages of the invention will be fully understood from the following description when considered with the attached drawings, in which:

FIGURE 1 is an elevational view of the apparatus of the present invention shown on a bridge.

FIGURE 2 is a top plan view.

FIGURE 3 is a fragmentary exploded view, on an enlarged scale, showing the roller means for supporting the walkway.

Referring to FIGS. 1 and 2, the bridge scaffold apparatus is generally designated by the reference numeral 14 and is adapted to be moved along the roadway 10 of a bridge or the like having a curb 12. The apparatus 14 comprises a horizontal frame 16 that is supported in vertically spaced relation to the roadway 10 by wheels 18, 20. The apparatus 14 further includes vertical frames 22, 24 that extend downwardly from the ends of the horizontal frame 16 below the roadway 10 of the bridge. Frames 16, 22 and 24 are made of conventional box-type members.

Walkway members 26 are mounted on the lower ends of vertical frames 22, 24 for swinging movement through an arc of 360 degrees. As shown in FIG. 3, a horizontal ring 40 of tubular construction is fixed on the lower end of each vertical frame 22, 24 and rollers 38*a*, 38*b* mounted on each walkway 26 engage the tube 40 to swingably mount the walkway on the lower end of its respective vertical frame. As further shown in FIG. 3, the roller 38*a* adjacent the end of walkway 26 engages the underside of the tube 40 while the roller 38*b* which is furthest from the end of the walkway 26 is mounted by a bracket 4 so that it engages the upper surface of the tube 40. In this manner, each walkway 26 has a cantilever mounting on the lower end of its respective vertical frame and may be swung through 360 degrees. The movement of the walkway 26 can be achieved manually without any mechanical device or, alternatively, can be accomplished by a winch assembly 36 that includes a cable 42 that

engages the lower end of the vertical frame and causes the winch and, in turn, the walkway 26 to swing about the vertical frame. In practice, a plurality of rollers 38 are preferred.

The construction of the bridge scaffold apparatus permits the walkways 26 to be swung into position adjacent any portion of the understructure of the bridge so that a workman can stand on floors 28 thereof in order to construct, inspect, repair or otherwise maintain the bridge. When it is desired to move the scaffold apparatus to a new position, the walkways 26 are swung outwardly permitting the entire apparatus to be rolled along the roadway 10. In order to facilitate the movement of the apparatus along the roadway, a winch assembly 30 is provided on the apparatus and the ends of the cable 44 thereof is adapted to be fastened to a fixed point on the bridge so that actuation of the winch assembly 30 will cause the apparatus to move along the roadway 10. A winch assembly 30 is provided on either one or both of the vertical frames 22, 24.

I claim:

1. A scaffold apparatus for use on an elevated roadway comprising an elongated upstanding mobile frame adapted to straddle and rest upon an elevated roadway, a vertically disposed support member mounted on one end of said mobile frame and having a portion extending below said mobile frame, the lower end of said mobile frame extending vertically beneath the roadway, and a horizontally disposed walkway mounted on said support member for swinging movement in clockwise and counterclockwise directions of said walkway about said support member as a vertical axis into and out of position below and in longitudinal alignment with said frame, said walkway, when said mobile frame straddles and rests upon an elevated roadway, being of a length to extend beneath said roadway and adapted to support workmen thereon for the purpose of treating the underside of said roadway.

2. A scaffold apparatus for use on an elevated roadway comprising an elongated upstanding mobile frame adapted to straddle and rest upon an elevated roadway, a vertically disposed support member mounted on one end of said mobile frame and having a portion extending below said mobile frame, the lower end of said mobile frame extending vertically beneath the roadway, and a horizontally disposed walkway normally disposed at small angles with or in longitudinal alignment with respect to said frame and with one end adjacent the lower end of said support member, means connecting said one end of said walkway to said support member for swinging movement of said walkway from the normal position below and in longitudinal alignment to said frame to a position perpendicular to said frame, said walkway, when said mobile frame straddles and rests upon an elevated roadway, being of a length to extend beneath said roadway and adapted to support workmen thereon for the purpose of treating the underside of said roadway.

3. A scaffold apparatus for use on an elevated roadway comprising an elongated upstanding mobile frame adapted to straddle and rest upon an elevated roadway, a vertically disposed support member mounted on one end of said mobile frame and having a portion extending below said mobile frame, the lower end of said mobile frame extending vertically beneath the roadway, and a horizontally disposed walkway, means for mounting said walkway on the lower end of said support member for swinging movement about said support member as a vertical axis into and out of position below and in longitudinal alignment with said frame, said means comprising a ring mounted on the lower end of said support member, at least one roller adjacent the outer end of said walkway and adapted to engage the underside of

said ring, and at least one roller mounted on the walkway and adapted to engage the upper side of said ring, said latter roller being spaced inwardly from the end of the walkway, whereby said walkway is mounted on said support member in a cantilever fashion.

4. The combination set forth in claim 3 including hand operated means for swinging said walkway about said support member.

5. A scaffold apparatus for use on an elevated roadway comprising an elongated upstanding mobile frame adapted to straddle and rest upon an elevated roadway, means on said frame for facilitating movement of said frame longitudinally of said roadway, a vertically disposed support member mounted on one end of said mobile frame and having a portion extending below said mobile frame, the lower end of each said support member extending vertically beneath said roadway, and a horizontally disposed walkway mounted on said support member for swinging movement about 360 degrees with said support member as a vertical axis, said walkway being adapted to extend beneath said roadway and support workmen thereon.

6. A scaffold apparatus for use on an elevated roadway comprising an elongated upstanding mobile frame adapted to straddle and rest upon an elevated roadway, a vertically disposed support member mounted on each end of said mobile frame and having a portion extending below said mobile frame, the lower end of said mobile frame extending vertically beneath the roadway, a horizontally disposed walkway mounted on each said support member for swinging movement in clockwise and counterclockwise directions of said walkway about said support member as a vertical axis into and out of position below and in longitudinal alignment with said frame, each said walkway, when said mobile frame straddles and rests upon an elevated roadway, being of a length to extend across and below said roadway and adapted to support workmen thereon for the purpose of treating the underside of said roadway.

7. A scaffold apparatus for use on an elevated roadway comprising an elongated upstanding mobile frame adapted to straddle and rest upon an elevated roadway, a vertically disposed support member mounted on each

end of said mobile frame and having a portion extending below said mobile frame, the lower end of said mobile frame extending vertically beneath the roadway, a horizontally disposed walkway mounted on each said support member for swinging movement in clockwise and counterclockwise directions of said walkway about said support member as a vertical axis, each said walkway, when said mobile frame straddles and rests upon an elevated roadway, being of a length to extend across and below said roadway and adapted to support workmen thereon for the purpose of treating the underside of said roadway, and hand operated means for propelling said mobile frame along said roadway when resting thereon.

8. A scaffold apparatus for use on an elevated roadway comprising an elongated upstanding mobile frame adapted to straddle and rest upon an elevated roadway, a vertically disposed support member mounted on each end of said mobile frame and having a portion extending below said mobile frame, the lower end of said mobile frame extending vertically beneath the roadway, a horizontally disposed walkway on each said support member normally disposed at small angles with or in longitudinal alignment with respect to said frame and with one end adjacent the lower end of said support member, means connecting said one end of each said walkway to said support member for swinging movement of said walkway from the normal position below and in longitudinal alignment to said frame to a position perpendicular to said frame, each said walkway, when said mobile frame straddles and rests upon an elevated roadway, being of a length to extend across and below said roadway and adapted to support workmen thereon for the purpose of treating the underside of said roadway, and hand operated means for propelling said mobile frame along said roadway when resting thereon.

References Cited in the file of this patent

UNITED STATES PATENTS

1,718,979	Protzeller	July 2, 1929
2,639,950	Wheeler	May 26, 1953
2,669,490	Kaufman	Feb. 16, 1954