This invention relates to scaffolds, and more particularly to clamp means for securing together the boards or planks forming the floor of scaffolding to provide a platform thereon.

A main object of the invention is to provide a novel and improved clamp means for use in securing together the boards or planks forming the floor of scaffolding, said clamp means being simple in construction, and being easy to install, and providing a secure connection of the boards or planks employed in scaffolding.

A further object of the invention is to provide an improved scaffold board splicer means which is inexpensive to manufacture, which is durable in construction, and which may be readily and easily applied to fasten together a plurality of boards to form the floor of a scaffold, any desired number of intermediate elements being usable in the clamp means to provide any desired width of scaffolding.

Further objects and advantages of the invention will become apparent from the following description and claims, and from the accompanying drawings, wherein:

Figure 1 is a fragmentary top plan view of a portion of the floor of a scaffold wherein the longitudinal boards are fastened together by the use of clamp means according to the present invention.

Figure 2 is an enlarged transverse vertical cross sectional view taken on the line 2—2 of Figure 1.

Figure 3 is an enlarged fragmentary bottom view of the portion of the scaffold flooring of Figure 1 including the clamp means of the present invention.

Figure 4 is an enlarged cross sectional detail view taken on the line 4—4 of Figure 2.

Figure 5 is an enlarged cross sectional detail view taken on the line 5—5 of Figure 2.

Figure 6 is a fragmentary elevational detail view taken on the line 6—6 of Figure 2.

Figure 7 is an enlarged cross sectional detail view taken on the line 7—7 of Figure 2.

Figure 8 is an enlarged cross sectional detail view taken on the line 8—8 of Figure 2.

Figure 9 is an enlarged cross sectional detail view taken on line 9—9 of Figure 2.

Referring to the drawings, 11 and 12 respectively designate the outside end boards of a plurality of longitudinal boards forming the floor of a scaffold. In the specific flooring shown in Figure 1, the flooring comprises the outside longitudinal boards 11 and 12 and a pair of aligned longitudinal inside boards 13 and 14 which are shorter than the outside boards 11 and 12 and which abut at 15, whereby the inner longitudinal floor boards 13 and 14 must be spaced together as well as secured to the outside boards 11 and 12.

In accordance with the present invention, the boards 11, 13, 14 and 12 are fastened together by clamp means comprising respective T-shaped spaced bars 16 and 17 having their vertical flanges 18 and 19 respectively disposed between the inside longitudinal edge of board 11 and the adjacent longitudinal edges of the boards 14 and 13, and between the inside longitudinal edge of the board 12 and the adjacent longitudinal edges of said boards 14 and 13. The outside edges of the outer longitudinal boards 11 and 12 are received in respective longitudinal angle bars 20 and 21, as shown in Figure 2. The horizontal top flange of the T-bar 16 overlies the inner marginal portion of board 11 and the adjacent marginal portions of the boards 14 and 13, and the horizontal flange of the T-bar 17 overlies the inner marginal portion of the board 12 and the adjacent marginal portions of boards 13 and 14.

The vertical flanges of the T-bars 16 and 17 extend below the bottom surfaces of the boards 11, 12, 13 and 14. The angle bars 20 and 21 also depend below the bottom surfaces of the boards, as shown in Figure 2.

As shown in Figure 1, the angle bars 20 and 21 and the T-bars 16 and 17 are substantially the same in length and are transversely adjacent the transverse plane of the splice joint 15. Secured to the lower corner portions of the vertical flange 19 of T-bar 17 are the inwardly extending transverse sleeve elements 22 which telescopically receive inwardly extending transverse rod members 23 secured to the lower corner portions of the vertical flange 18. Secured to the lower corner portions of the angle bar 21 are respective transverse sleeves 24 which telescopically receive inwardly extending rod elements 25 secured to the lower corner portions of flange 19, as shown in Figure 2. Similar sleeves 26 are secured to the lower corner portions of the angle bar 20 and telescopically receive transversely extending rod elements 27 secured to the lower corner portions of the flange 18.

As shown in Figure 2, the rod 25 is secured to the outer surface of the angle bar 21 and extends below the bottom surfaces of the boards 12, 13, 14 and 26, and the rod 25, 23 and 27 also underlie the bottom surfaces, said rods being slidably received in the sleeves and acting to maintain the angle bars 20 and 21 and the spacer members 16 and 17 in transverse alignment.

The angle bar 21 is formed in its intermediate portion below the horizontal plane of the sleeves 24 with the transversely extending, square sleeve member 28 which extends horizontally, as shown in Figure 2, and which is directed toward the opposite angle bar 20. Said opposite angle bar has welded to the intermediate portion of its vertical flange a U-bolt 29 having the depending threaded arms 30, 30.

Engaged through the sleeve 28 is a tension screw member 31 provided on its outer end with a constant nut 32 and formed on its inner end with an eye 33. Screw member 31 is provided with a squared shank portion 29 which is slidably and non-rotatably received in the square sleeve 28, as shown in Figure 9. Designated at 34 is a cable having one end thereof secured to the eye 33 and having the other end thereof received between a first clamping plate 35 and a second clamping plate 36 secured to the legs 30, 30 of the U-bolt 29. As shown in Figure 8, the lower clamping plate 36 is formed with a channel 37 in which the end of the cable 34 is received, and forced against the upper plate 35 by clamping pressure exerted thereon by clamping nuts 38 provided on the threaded legs 30, 30 of the U-bolt 29.

Since one end of the cable 34 is anchored to the angle bar 20, when the nut member 32 is rotated to tighten the cable, clamping pressure is developed between the angle bars 20 and 21, whereby the outer scaffold floor boards 11 and 12 are urged inwardly against the flanges 15, 16, 18 and 19 of the T-shaped bars 16 and 17, developing clamping pressure on the inner boards 13 and 14, whereby said inner boards are rigidly secured between the spacer bars 16 and 17.

As will be readily apparent, any number of floor boards may be secured together, by employing additional spacer members similar to the spacer bar 17 between ad-
In a scaffold, a plurality of longitudinally extending boards, respective spacer bars between adjacent boards, flange elements on the spacer bars overlying the top surfaces of said adjacent boards, respective angle bars receiving the outer edges of the outermost boards, tension means connecting the angle bars and extending transversely beneath the boards, and transversely extending telescoping elements on the ends of the angle bars and spacer bars, said telescoping elements interengaging with each other to hold the angle bars and spacer bars in transverse alignment.

2. In a scaffold, a plurality of longitudinally extending boards, respective spacer bars between adjacent boards, flange elements on the spacer bars overlying the top surfaces of said adjacent boards, respective angle bars receiving the outer edges of the outermost boards, tension means connecting the angle bars and extending transversely beneath the boards, and transversely extending telescoping elements on the ends of the angle bars and spacer bars, said telescoping elements interengaging with each other to hold the angle bars and spacer bars in transverse alignment.

3. In a scaffold, a plurality of longitudinally extending boards, respective spacer bars between adjacent boards, flange elements on the spacer bars overlying the top surfaces of said adjacent boards, respective angle bars receiving the outer edges of the outermost boards, tension means connecting the angle bars and extending transversely beneath the boards, and a cable connected between the end of said tension screw member and the other angle bar.

No references cited.