

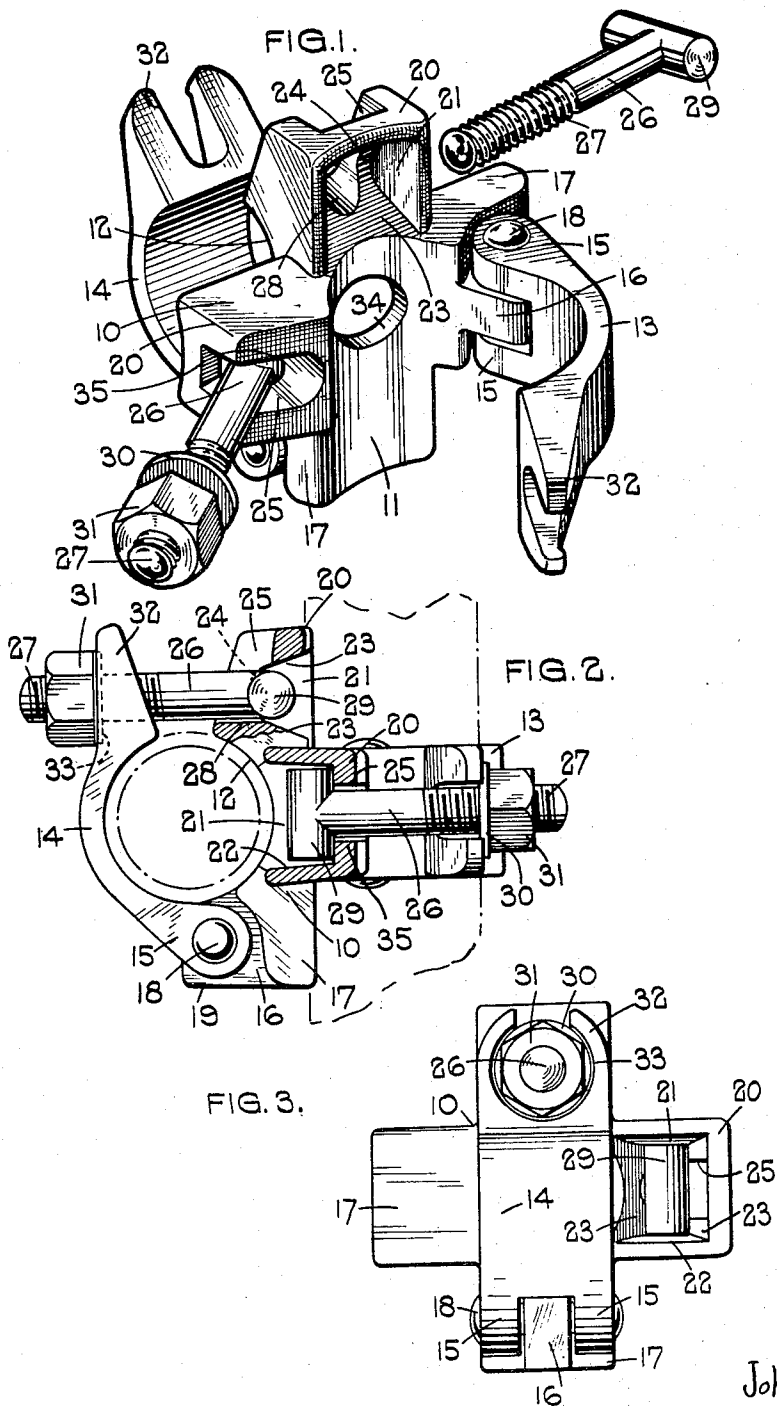
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SCAFFOLDING CLAMP

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SCAFFOLDING CLAMP

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6 Claims. (Cl. 304-40)

This invention relates to scaffolding clamps for use in the erection of scaffolding and like temporary or semi-permanent structures, and is concerned with clamps of the kind comprising a plurality of jaws or portions associated movably together, the jaws or portions being adapted to engage one or more scaffolding members such as a standard or putlog, suitable clamping means being provided for securing the jaws or portions relative to each other so that they are in gripping engagement with the scaffolding member.

In connection with scaffolding clamps of this kind, it is already common practice for a pair of jaws or portions to be provided connected hingedly together at one end, the clamping means comprising a pin hinged to one jaw, the pin carrying a nut adapted to engage with the free end of the other jaw, the first jaw frequently forming part of a central block adapted for disposition between a pair of scaffolding members which may be connected together by the clamp.

Such an arrangement is, however, subject to the disadvantage that it sometimes happens that the pin fractures during use, and as the replacement of the pin is a somewhat difficult and expensive operation, the whole clamp may as a result be rendered useless.

A scaffolding clamp constructed in accordance with the present invention comprises a pair of jaws adapted to engage the scaffold member or members to be held, the jaws being connected together by directly hinging one pair of co-operating ends one upon the other, and the other pair of ends being adjustably and releasably connected together by a T headed bolt, the head of which engages the end of one jaw, and the shank of which engages in an opening formed at the end of the companion jaw.

The head of the T headed bolt may engage behind the end of one jaw, and the shank of the T headed bolt may extend through a slot adjacent the end of this jaw.

The two ends which are directly pivoted together may be provided with lugs through which a pivot pin passes, the axis of the pivot pin being parallel to the axis of the scaffolding member to be held.

The head of the T headed bolt or each of said bolts may be located in a pocket formed at the back of the end to which the T headed bolt is to be attached, and the said pocket may have a slot for the shank of the T headed bolt, one side of said slot being substantially at right angles to the plane of the back of the jaw and

forming a stop to limit the pivotal movement of the bolt.

The free ends of the caps may be forked and provided on their outer sides with recesses for receiving washers for positioning the outer ends of the bolts.

Referring to the drawing:

Figure 1 is a perspective view showing one construction of scaffolding clamp in accordance with the present invention.

Figure 2 is a sectional plan view.

Figure 3 is a side view looking on the left-hand side of Figure 2.

In the construction illustrated, the clamp comprises a cruciform plate 10 having a part-cylindrical seating 11 on one side, and a part-cylindrical seating 12 on the opposite side. In the construction shown, the seatings 11 and 12 are at right angles to each other.

Caps 13 and 14 are directly pivoted to opposite sides of the plate 10. Each cap 13 is provided with a pair of lugs 15 which are placed over a lug 16 on an arm 17 of the plate 10, and the lugs 15 and 16 are pivoted together by a pin 18.

The edge 19 of each lug 16 serves to limit the outward pivotal movement of the cap.

The caps 13 are pivoted in an exactly similar manner to opposite sides of the plate 10, the lugs 16 being situated on the two arms 17 of the cruciform plate. The remaining two arms 20 are formed with pockets 21, the pocket in the upper arm 20 (see Figure 1) being on one side of the plate, and the other pocket 21 being on the opposite side of the cruciform plate. Each pocket is provided with four converging sides 22, 23, and the base of the pocket is of part-cylindrical form as shown at 24.

In the base of each pocket is a slot 25 through which the shank 26 of a T headed bolt 27 extends. One side 28 of each slot 25 is adapted to be engaged by the shank 26 of its bolt, so as to limit the inward pivotal movement of the bolt. The sides 28 are substantially at right angles to the plane of the back of the cruciform plate.

Each bolt 27 is provided with a T head 29 which is situated on the surface 24 and can rock thereon, and each bolt near its outer end is provided with a washer 30 and a nut 31.

Each of the caps 13, 14 is forked at its free end 32, and adjacent the fork a circular recess 33 is provided so that the washer 30 can accurately position the free end of the bolt in the forked end 32.

The hinged ends of the caps 13 and 14 are directly hinged to the cruciform plate, but the

method shown in the drawing need not be used.

At the centre the cruciform plate is provided with a circular hole 34 for the purpose of reducing weight.

5 In order to locate each of the T headed bolts against movement lateral to its axis, or other undesirable movement, each of these pins may have flats on its sides engaging the sides 35 of the slots in the arms of the cruciform plate.

10 With the above construction, in the event of a pin fracturing, the T headed end thereof can readily be withdrawn out of the recess in the central block and a new pin inserted in position by inserting the threaded end thereof through the recess in the opening in the base thereof, the nut being then mounted in position and the threaded end riveted over if desired to retain the nut on the pin.

The construction therefore possesses the advantage that in the event of a pin fracturing, the same can be replaced very simply and rapidly and while the scaffolding clamp is actually in use.

Further, the strength of the construction is generally superior to that of existing clamps provided with the hinged pins already referred to.

25 Further, the clamp possesses the additional advantage that it is generally lighter in weight than existing similarly shaped clamps of the same overall size.

30 Although I have described my invention as applied to scaffolding clamps of a particular construction, it should be clearly understood that its application is not limited thereto, and it may, for instance, be applied to scaffolding clamps for connecting two scaffolding members together in varying angular relationship.

What I claim then is:

1. A scaffolding clamp comprising a pair of jaws adapted to engage the scaffold member or 40 members to be held, the jaws being connected together by directly hinging one pair of co-operating ends one upon the other, and the other pair of ends being adjustably and releasably connected together by a T headed bolt, the head of which is received detachably within a pocket on the end of one jaw, and the shank of which is adapted to engage with the other jaw and apply clamping pressure thereto.

2. A scaffolding clamp comprising a cruciform 50 plate having seatings on opposite sides for the scaffolding members and arranged transversely in respect to each other, and caps disposed one on each side of the plate and directly pivoted on opposite sides of the plate each to one arm of the cross, the remaining two arms being 55 formed as pockets for receiving detachably the heads of T headed clamping bolts, the shanks of which extend in opposite directions through slots in the bottoms of the pockets and are adapted to engage the free ends of the caps and apply clamping pressure thereto.

3. A scaffolding clamp comprising a cruciform plate having seatings on opposite sides for the scaffolding members, two adjacent arms of the

plate having hinge lugs, the hinge lug on one arm projecting from one side of the plate and the hinge lug on the other arm projecting from the opposite side of the plate, a pair of caps each having at one end hinge lugs embracing a hinge 5 lug on the plate, a pivot pin hingedly connecting said associated lugs together, the edge of each hinge lug on the plate co-operating with its associated cap to limit pivotal movement thereof, the other two arms of the plate having slots 10 and T headed bolts extending through said slots in opposite directions, said T headed bolts engaging the free ends of the caps, and said arms being of a width sufficient only to provide the necessary support for the caps and bolts.

4. A scaffolding clamp comprising a cruciform plate having seatings on opposite sides for the scaffolding members, two adjacent arms of the plate having hinge lugs, the hinge lug on one arm projecting from one side of the plate and 20 the hinge lug on the other arm projecting from the opposite side of the plate, a pair of caps each having at one end hinge lugs embracing a hinge lug on the plate, a pivot pin hingedly connecting said associated lugs together, the other two arms of the plate being formed as pockets having converging sides and slots in their bottoms, and T headed bolts extending through said slots in opposite directions, the heads of which are received detachably within said pockets, said T headed 30 bolts engaging the free ends of the caps.

5. A scaffolding clamp comprising a cruciform plate having seatings on opposite sides for the scaffolding members and arranged transversely in respect to each other, caps disposed one on each side of the plate and directly pivoted on opposite sides of the plate each to one arm of the cross, a pair of T headed clamping bolts one for each cap, each of said bolt heads being engaged detachably with the remaining two arms of the cross, clamping nuts on the bolts adapted to 40 apply clamping pressure to the free ends of the pivoted cap, and said arms being of a width sufficient only to provide the necessary support for the caps and bolts.

6. A scaffolding clamp comprising a cruciform plate having seatings on opposite sides of the scaffolding members and arranged transversely in respect to each other, caps disposed one in each side of the plate and directly pivoted on opposite sides of the plate each to one arm of the cross, the remaining two arms of the cross being formed as pockets, a pair of T headed clamping bolts one for each cap, each of said bolt heads being received detachably within each of said 45 pockets, said last mentioned arms having also slots in the bottom of the pockets through which the bolt shanks extend in opposite directions, one side of each of the pockets being adapted to engage a side of one of the T headed clamping bolts, clamping nuts on the free ends of the bolt shanks adapted to apply clamping pressure to the free ends of the pivoted caps.

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