March 26, 1929. W. MERRILL 1,706,801

SCAFFOLDING CLAMP

Filed March 20, 1928

Fig. 1.

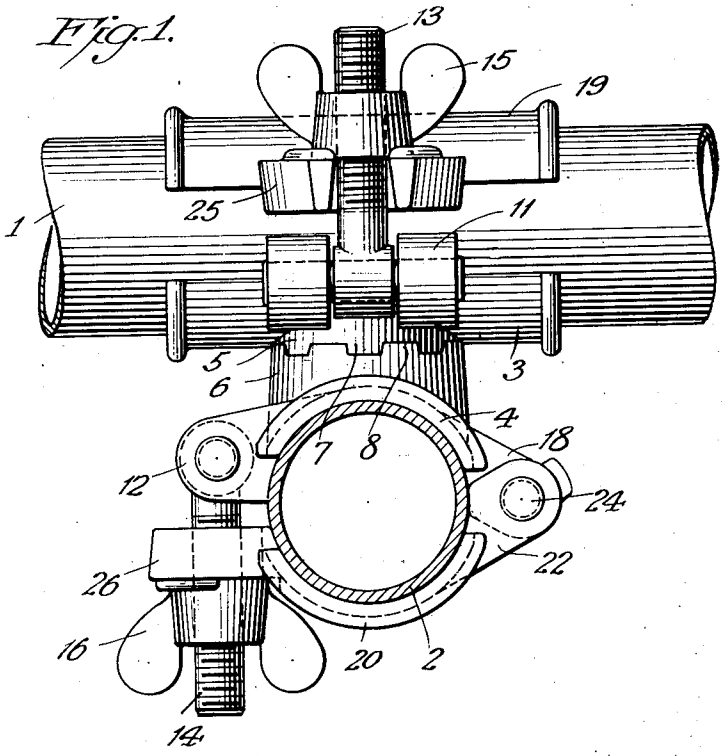
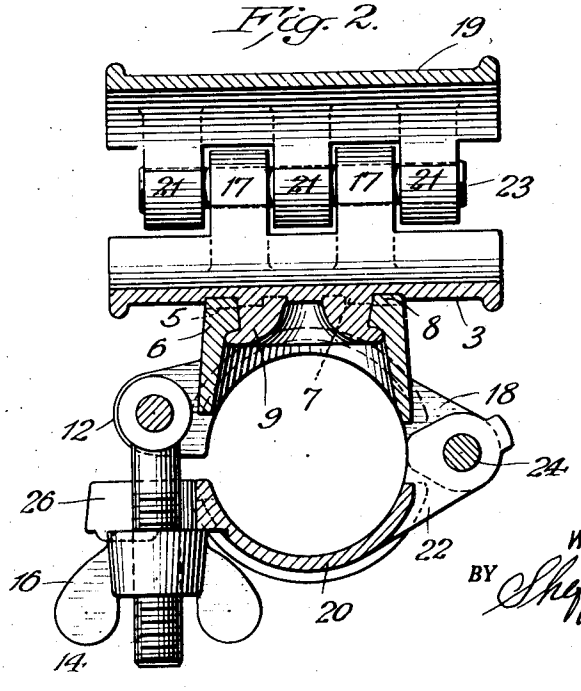


Fig. 2.



INVENTOR.
WHITNEY MERRILL.
BY Sheffield & Betts
HIS ATTORNEYS.

Patented Mar. 26, 1929. 1,706,801

UNITED STATES PATENT OFFICE.

WHITNEY MERRILL, OF BROOKLYN, NEW YORK.

SCAFFOLDING CLAMP.

Application filed March 20, 1928. Serial No. 263,046.

As incident to the modern practice of constructing buildings of stone, brick, concrete and other materials, it has become customary to use scaffolding composed of pipe sections or tubing instead of wooden joists and other wooden supports and connecting parts. The scaffolding thus constructed of pipes or tubes must be capable of easy assembly and be easily taken apart after the work is finished. Another most important requirement of such scaffolding is safety to the masons or other workmen who may of necessity have to stand upon the platforms carried by the scaffolding.

The pipes or tubes which compose the frame of such scaffolding are usually connected together by certain clamps which hold the pipes very rigidly at the points where they cross in horizontal or vertical directions, and must eliminate danger of slipping or breaking under the strains to which they are subjected.

The object, therefore, of this invention is to produce clamps for connecting the pipes or tubes of scaffolding so that they shall be very rigid in construction, very reliable in the material of which they are composed, and which at the same time may be cheaply and quickly manufactured without the necessity of accurate or extensive machine work.

Heretofore, in the manufacture of such scaffolding clamps, it has been usual to manufacture them of malleable iron, because the castings may be made quickly and of fairly strong material. The disadvantage of such castings, however, is that they are not all uniform in texture and are liable to contain weak spots, such as caused by blowholes, sand, and uneven flowing or cooling of the metal. In view of these disadvantages, it is extremely desirable to have the parts composing the scaffolding clamps made of forged iron, steel or some similar material, but, owing to the difficulty of forging or shaping the complicated clamps of the type heretofore used, it is not feasible to construct such clamps from forged metal by the drop forging method.

According to my invention, however, I have devised a scaffolding clamp which may be immediately and quickly shaped by the drop forging method and may easily and quickly be assembled into its final form in such a way that unreliability due to flaws or other defects is substantially eliminated. As one embodiment and example of this invention, reference may be had to the following description and to the accompanying drawing forming part thereof, in which

Fig. 1 is a side elevation of one form of my improved scaffolding as applied to the pipes or tubes with which it is used;

Fig. 2 is a vertical cross-sectional view similar to Fig. 1.

Referring to the drawings, the numerals 1 and 2 indicate the pipes to be clamped in position and forming a connected portion of a scaffolding or similar structure. The connecting portions of these clamps comprise two semi-tubular members or shells 3 and 4 which are provided with lateral bosses 5 and 6. Obviously the semi-tubular members may be made of any desired shape to hold the struts of the scaffolding whether the latter be round, square or angular in cross-section, the usual shape, however, being semi-cylindrical.

The margins of said bosses are preferably provided with interlocking projections 7 and 8 forming teeth arranged in the shape of crowns which adapt the two sections or parts when assembled together to be placed at various angles, depending upon the number of teeth provided. The crown 6 is provided with a central transverse opening as indicated in Fig. 2, and the crown 5 is provided with a stud or projection 9 preferably having a central recess in its end, said projection being headed or expanded at its lower end by a suitable punch or other pressure device, so that the two parts forming the connecting members are firmly fixed or riveted together. Each of the semi-cylindrical portions 3 and 4 are provided with lateral members 11 and 12 respectively, forming pivots for screw-threaded bolts 13 and 14 upon which butterfly or other suitable nuts 15 and 16 are placed.

The outer semi-cylindrical clamping members 19 and 20 are also provided with slotted projections 25 and 26 through which the bolts 13 and 14 pass, and when the pipes are placed between the semi-cylindrical members 3 and 19 or 4 and 20 the butterfly nuts may be screwed down tightly to force the outer semi-cylindrical members toward the inner ones, and thus firmly clamp the pipes in position.

Said semi-cylindrical members 3 and 4 are also provided with lateral projections along their opposite margins, as indicated at 17 and 18, these portions forming one-half of a hinged joint which pivotally retains the outer semi-cylindrical clamping members 19 and 20 in position, the latter having similar pro-

jections 21 and 22 provided for that purpose. These hinged joints are pivoted together by suitable pins 23 and 24.

Having thus described this form of my invention, it will be appreciated by those skilled in the art that various changes may be made without departing from the spirit and scope of my invention as set forth in the appended claims.

What I claim and desire to protect by Letters Patent is:

1. A scaffolding clamp comprising two semi-tubular members connected together intermediate their ends, one of said members having a transverse opening therein and a plurality of teeth at the margin of said opening and the other of said members having a laterally projecting stud adapted to enter said opening and having a plurality of teeth adjacent the base of said stud, said members constituting drop forgings shaped independently of each other, and connected together at the desired angle with said teeth intermeshing, by displacing the metal so that they constitute a substantially unitary structure, and external clamping members hinged to said connected members.

2. A scaffolding clamp comprising two semi-tubular members connected together intermediate their ends, one of said members having a transverse opening therein and a plurality of teeth at the margin of said opening and the other of said members having a laterally projecting stud adapted to enter said opening and having a plurality of teeth adjacent the base of said stud, said members being shaped independently of each other, and connected together at the desired angle with said teeth intermeshing, by having said stud fixed in said opposite member so that they constitute a substantially unitary structure, and external clamping members hinged to said connected members.

WHITNEY MERRILL.