S. L. SHAFFER.

APPARATUS FOR CONSTRUCTING CONCRETE PIERS, WALLS, AND THE LIKE.

APPLICATION FILED AUG. 11, 1911.

1,021,806. Patented Apr. 2, 1912.

FIG. 1.

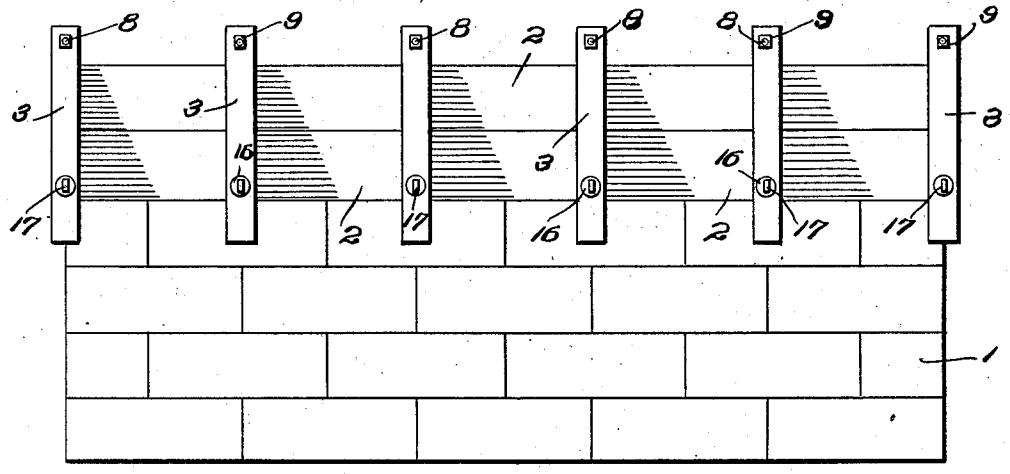


FIG. 2.

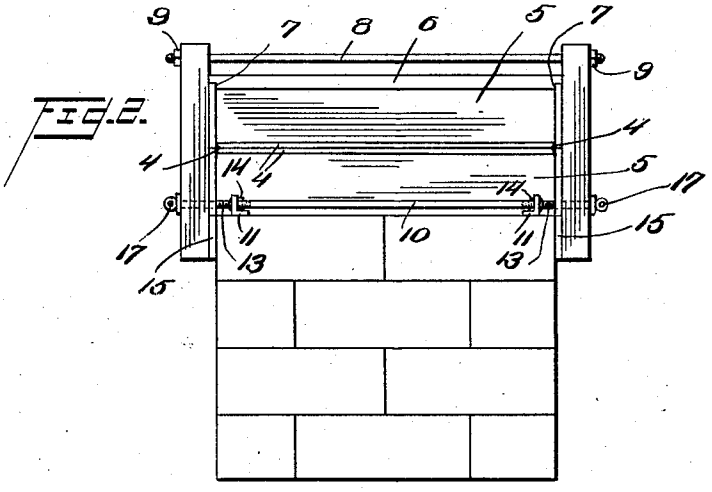
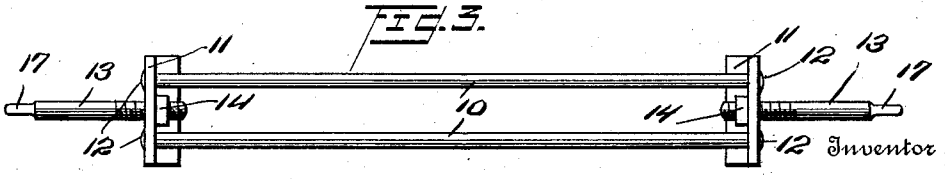


FIG. 3.



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APPARATUS FOR CONSTRUCTING CONCRETE PIERS, WALLS, AND THE LIKE.

1,021,806. Specification of Letters Patent. Patented Apr. 2, 1912.

Application filed August 11, 1911. Serial No. 643,533.

To all whom it may concern:

Be it known that I, SAMUEL L. SHAFFER, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Apparatus for Constructing Concrete Piers, Walls, and the Like, of which the following is a specification.

My invention relates to improvements in apparatus for constructing concrete piers, walls, and the like, the object of the invention being to provide an improved arrangement of parts which dispenses with the necessity of a large amount of supporting timber, and enables the mold to be formed in a very small space.

A further object is to provide improved means for clamping the stanchions of the wall or pier, such means comprising double clevises, a portion of which being left within the molded pier or wall, and serves as reinforcement in addition to its function of clamping the stanchions in place.

With these and other objects in view, the invention consists in certain novel features of construction and combinations and arrangements of parts, as will be more fully hereinafter described and pointed out in the claims.

In the accompanying drawings: Figure 1, is a view in side elevation illustrating my improvements. Fig. 2, is a view in end elevation of Fig. 1, and Fig. 3, is an enlarged plan view illustrating one of my improved double clevises.

1, represents the pier or wall in the process of construction, against which at opposite sides, form planks 2 are held by means of stanchions 3, and constitute the mold. The form planks may be provided with beads 4 to form a groove in the surface of the wall or pier, and the end planks illustrated at 5, may be secured in any desired manner, the said planks forming no part of the present invention. The upper planks 2 are spaced apart by means of a stay piece 6 having recessed ends as shown at 7 to engage over the upper edges of the planks 2. The upper ends of the stanchions are clamped by means of rods 8, which are screw-threaded at their ends, and project through openings in the upper ends of the stanchions. Nuts 9 are screwed onto these rods 8 against the stanchions, so as to move the upper ends of the stanchions inwardly as far as permitted by the stay pieces 6. To clamp the lower ends of the stanchions, and thereby secure the parts in position for molding, I employ my improved double clevises, one of which is illustrated on an enlarged scale in Fig. 3. Each of these clevises comprises a rod frame 10 consisting of parallel rods having their ends projected through angle irons 11, and riveted or upset at their extreme ends as shown at 12. These angle irons 11 between the rods 10, are provided with openigs through which screw-threaded eye-bolts 13 project, said eye-bolts being screwed through nuts 14 located against the inner faces of the angle irons, and of such a diameter as to prevent rotary movement of the nuts. These eye-bolts are projected through registering openings in the stanchions, and in the plank 2, and to enable said planks 2 to position their inner faces in alinement with the outer wall of the partially completed pier or wall, blocks 15 are inserted between the lower ends of the stanchions and the wall. Washers 16 are interposed between the enlarged eye ends 17 of said eye-bolts and the stanchions, so that when said eye-bolts are turned in one direction, they serve to tightly clamp the stanchions against the pier. These eye-bolts may be turned so as to exert any desired pressure, so as to withstand the most extreme pressure of the pier as it is formed.

After the concrete is partially set, the eye-bolts 16 are unscrewed and removed, leaving the rod frame 10 and nuts 14 in the concrete, and said rod frame then serves as a reinforcement for the structure. The eye-bolts 16 may then be utilized again and again, and the holes in the wall formed by the said eye-bolts are filled by hand troweling after the bolts are removed.

Various slight changes might be made in the general form and arrangement of parts described without departing from my invention, and hence I do not limit myself to the precise details set forth, but consider myself at liberty to make such changes and alterations as fairly fall within the spirit and scope of the appended claims.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent is:

1. A device of the character described, comprising side planks, stay pieces spacing the upper edges of the upper planks, ver-

tical stanchions against the side planks, rods projected through the upper ends of said stanchions, nuts screwed onto said rods, said stanchions and said planks having registering openings near their lower ends, rod frames positioned between the planks, and comprising angle irons, parallel rods projected through said angle irons and upset at their ends, said angle irons having openings, nuts against said angle irons registering with the openings, and held against rotary movement by the engagement of said nuts with the horizontal members of said angle irons, and bolts projected through the openings in the stanchions, planks and angle irons, and screwed into the nuts, substantially as described.

2. A device of the character described, comprising side planks, stay pieces spacing the upper edges of the upper planks, vertical stanchions against the side planks, rods projected through the upper ends of said stanchions, nuts screwed onto said rods, said stanchions and said planks having registering openings near their lower ends, rod frames positioned between the planks, and comprising angle irons, parallel rods projected through said angle irons and upset at their ends, said angle irons having openings, nuts against said angle irons registering with the openings, and held against rotary movement by the engagement of said nuts with the horizontal members of said angle irons, eye-bolts projected through the openings in the stanchions, planks and angle irons, and screwed into the nuts, and washers around said eye-bolts interposed between the eye ends of the bolts and the stanchions, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

SAMUEL L. SHAFFER.

Witnesses:

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CHAS. E. POTTS.