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 DEVICE FOR TWISTING STAY WIRES.
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1,045,994.

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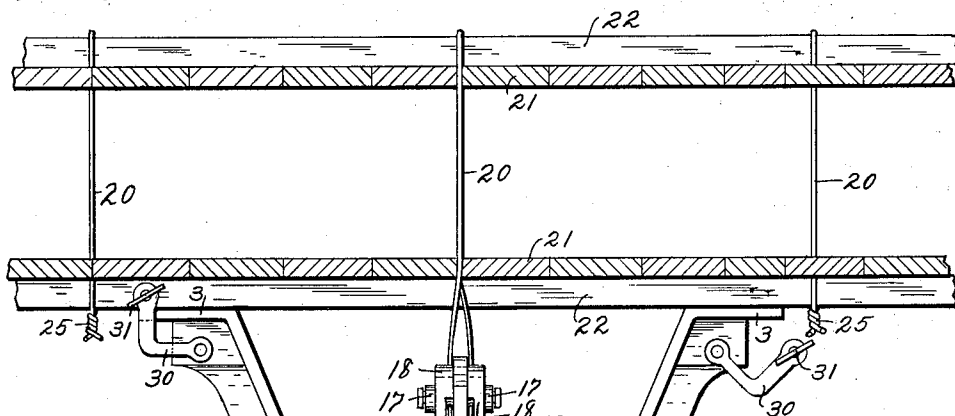


Fig. 1.

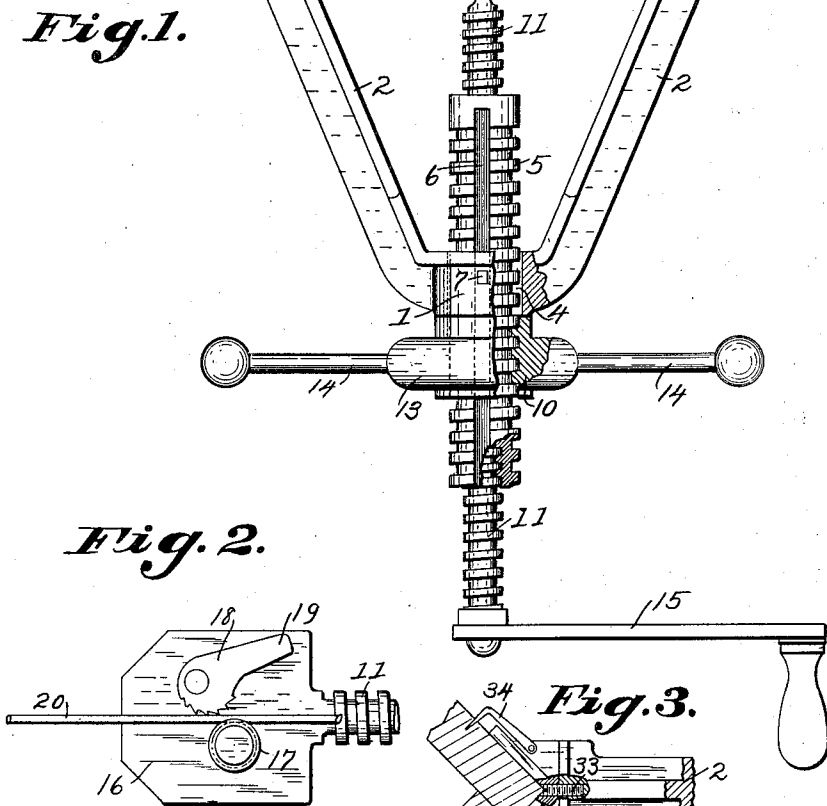


Fig. 2.

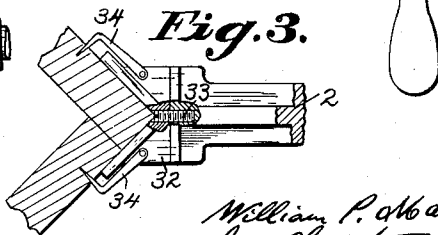


Fig. 3.

Witnesses
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UNITED STATES PATENT OFFICE.

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DEVICE FOR TWISTING STAY-WIRES.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that we, WILLIAM P. MADSON, ROY CHRISTENSON, ALBERT INGBRETSON, and WILLIAM NOWSHIP, citizens of the United States, residing at Milwaukee, county of Milwaukee, and State of Wisconsin, have invented new and useful Improvements in Devices for Twisting Stay-Wires, of which the following is a specification.

Our invention relates to improvements in devices for twisting stay wires with particular reference to the tie wires employed for holding together the opposing walls of concrete molds.

The object of our invention is to provide means to facilitate twisting the wires.

In the drawings—Figure 1 is a plan view of our improved stay wire twisting device, showing the same in position of use with reference to a concrete mold, the walls of which are shown in section. Fig. 2 is a detail view of the wire gripping member, showing a portion of the twisting screw. Fig. 3 is a detail view, showing the corner of a mold and a modified form of foot piece for the wire twisting device adapted to fit a mold-corner.

Like parts are identified by the same reference characters throughout the several views.

The supporting member comprising a head piece 1, side arms 2 diverging therefrom, and foot pieces 3, is adapted to fit against the wall of the mold. The foot pieces 3 may be flat surfaced, as shown in Fig. 1, or they may be formed in an angle adapted to fit the corner of a mold, as shown in Fig. 3. The head piece 1 is provided with an aperture 4, through which passes an adjusting member 5, interiorly and exteriorly screw-threaded and provided with a key channel 6 in its outer surface, adapted to receive a key 7, which projects inwardly into the channel 6 from the head-piece aperture. A nut 10 has threaded engagement with the exterior threads on the member 5 and a screw-threaded rod 11 extends through the member 5 and has threaded engagement with its interior threads. The nut 10 is provided with a hand-wheel 13 and is also preferably provided with removable handle-bars 14. A crank 15 is secured to the outer end of the screw 11, and at the inner end this screw is provided preferably on

each side with a gripping block 16 provided with a bearing member 17 and an eccentric member 18, the latter having an operating handle 19. The stay wires 20 are passed through openings in or between the planks 21 of the concrete mold. These stay wires are passed around the studding 22 of the mold, and the ends are gripped between the bearing member 17 and the eccentric gripping member 18. By turning the nut 10, the adjusting member 5 may then be moved outwardly until the stay wire is drawn tightly to the position in which it is illustrated in Fig. 1. Neither the member 5, nor the screw 11 will be rotated during this movement.

With the parts in the position illustrated in Fig. 1, the crank 15 may be rotated to turn the screw 11 inwardly through the member 5, thus twisting the end portions of the wire 20. The inward feed of the screw 11 compensates for the shortening of the wire during the twisting operation. This prevents the wire from breaking or from tearing away from the gripping members. It will of course be understood that the pitch of the screw threads 11 is such that the screw will feed inwardly in direct proportion to the shortening of the wire. When the twisting operation is completed, the wire will have been twisted substantially as shown at 25 on either side of the twisting device in Fig. 1. The supporting member may be conveniently secured to the studs 22 by swinging arms 30 and set screws 31, one of these being provided on each side of one of the foot pieces. The corner foot pieces 32 may be adjustably secured to the foot pieces 3 of the device shown in Fig. 1, by a screw 33, and instead of using the swinging members 30 on these corner foot pieces, we preferably use swinging hooks 34, which may be driven into the woodwork.

We claim—

1. The combination of a supporting member, an adjusting member carried thereby, means for feeding the adjusting member inwardly and outwardly, a screw supported in a threaded bearing in the adjusting member and independently movable therein, and a wire gripping device at the inner end of said screw.

2. The combination of an apertured supporting member provided with foot pieces adapted to bear against the wall of a concrete mold, a tubular adjusting member hav-

ing exterior threaded engagement in the aperture of the supporting member and keyed thereto to prevent rotation in said aperture, a feed nut for moving said adjusting member inwardly and outwardly, a screw having threaded bearing in said tubular adjusting member, and a wire gripping device on the inner end of said screw.

3. The combination with a supporting member, a non-rotatable inwardly and outwardly movable adjusting member carried thereby, a feed nut having threaded engagement with the exterior of the adjusting member, a screw having threaded engage-

ment with the interior of said adjusting member, a wire gripping device carried by said screw, and operating handles for the screw and feed nut.

In testimony whereof we affix our signatures in the presence of two witnesses.

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