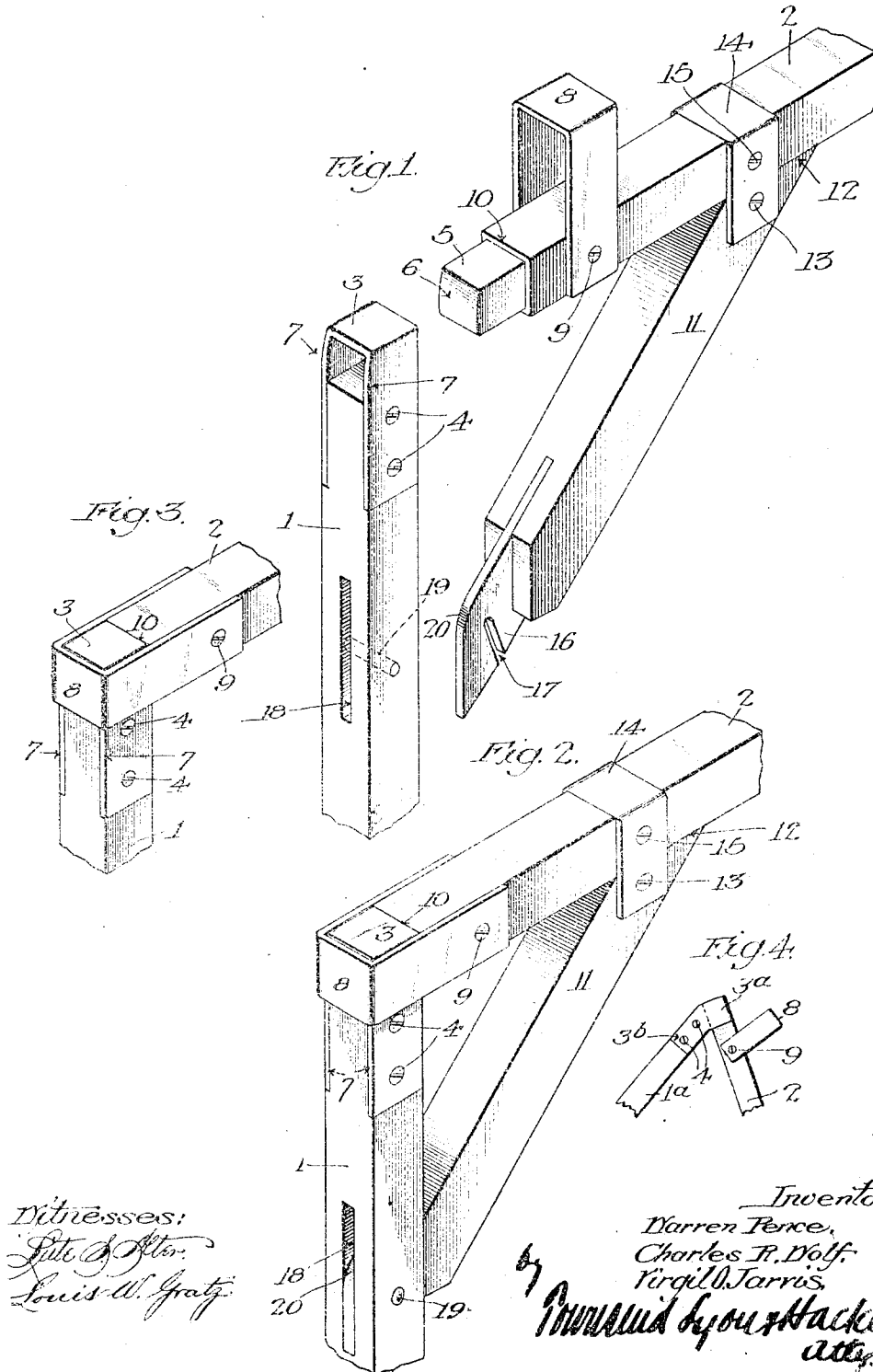


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UNITED STATES PATENT OFFICE.

WARREN PENCE, CHARLES R. WOLF, AND VIRGIL O. JARVIS, OF LOS ANGELES,
CALIFORNIA.

JOINT.

958,276.

Specification of Letters Patent.

Patented May 17, 1910.

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To all whom it may concern:

Be it known that we, WARREN PENCE, CHARLES R. WOLF, and VIRGIL O. JARVIS, citizens of the United States, residing at Los Angeles, in the county of Los Angeles and State of California, have invented a new and useful Joint, of which the following is a specification.

This invention relates to a joint adapted for a variety of uses. For example, it may be employed in a folding extension horse to detachably unite the top part to the vertical posts, as shown in a previous application of ours filed May 10, 1909, Serial No. 495,191. The joint is also adapted for securing tent poles together. It is also of great value in the construction of portable houses. The joint is adapted for use in many other situations not herein named.

The object of the invention is to provide a joint whereby two bars or posts may be detachably secured to each other at an angle to each other, the said joint when secured preventing either of the members so joined from being drawn away from the other, it being first necessary to unlock the joint before the joined members can be separated.

Preferably, the invention comprises in combination with the two members joined together, a loop on each member which receives the end of the other member, and one of said loops being movable to jointed or unjointed position, permitting engagement or disengagement of the two members. Thus when the two members are joined together the end of each member projects into and is at an angle to the loop on the end of the other member, so that both ends of both members are securely locked by the respective loops, which loops prevent either member from being drawn away from the other.

Referring to the drawings:—Figure 1 is a perspective view of the joint showing the bars separated. This shows the form in which a brace is employed. Fig. 2 is a perspective view showing the bars jointed together. Fig. 3 is a perspective view of another form, in which the brace is omitted. Fig. 4 is a side elevation on a reduced scale, showing the joint constructed for a different angle, the pivoted loop is shown swung into disengaging position.

1 and 2 designate the two posts or bars to be united. As herein shown the post 1

is vertical and the post 2 horizontal, but it should be understood that they may occupy any desired position. The bar 1 is provided on its end with a loop 3, the latter, as shown, being rigidly secured thereto, in the present instance by two screws 4, although the loop 3 may be attached to the bar 1 by any other desired means. The end of the bar 2 is provided with a tenon 5 which is of a size forming a perfect fit within the loop 3. The end of the tenon 5 is slightly curved, preferably as at 6, and the edges 7 of the loop 3 are also preferably slightly curved. Pivoted on the end of the bar 2 is a loop 8, the screws 9 forming a pivotal support therefor. The two members may be put together by first inserting the tenon 5 into the loop 3. Then the loop 8 is swung down over the loop 3 into the position shown in Fig. 2. Thus when in such position the joint is what may be termed locked, and the parts are in jointed position. The curved edge 7 of the loop 3 and curved end 6 of the tenon 5 permit the loop 8 to be swung over the upper edge so that when the loop 8 is in final position it will securely bind the loop 3 and firmly unite the members. The shoulder 10 at the base of the tenon 5 abuts the inner edge of the loop 3 and thus prevents the bar 2 from slipping farther into the loop 3, while the loop 8 which engages over the loop 3 prevents the bar 1 from being moved away from the bar 2, that is to say, from slipping off the tenon 5. At the same time the loop 3 which is locked over the tenon 5 prevents the bar 1 from moving at right angles to the bar 2. It will thus be seen that when the members are secured together, the end of each member projects into the loop of the other member so that each locks the other, both loops being interlocked. By swinging back the loop 8 the bar 2 may be quickly withdrawn from loop 3, thus the two members may be instantly joined together or separated. When joined together the members are securely held in rigid relation to each other, but if desired, a brace 11 may be employed which at one end is beveled at 12 and pivoted at 13 to a strap 14 which is secured by a screw 15 to the bar 2, the brace 11 at its other end having a blade 16 with a slot 17, which blade is adapted to project into a slot 18 formed in the post 1, and the slot 17 of the blade 16

is adapted to be engaged with a pin 19 in the bar 1 which extends across the slot 18.

Fig. 2 shows the manner in which the blade 16 is inserted into the slot 18 and engaged by the pin 19. The corner of the blade 16 is rounded, as at 20, to permit the blade to be easily inserted into the slot 18, as by tipping the blade 16 enough so that the slot 17 first engages the pin 19, the blade may be slipped in with a slight rocking motion, and at the same time tenon 5 may be started into the loop 3, the tenon 5 being shoved into the loop 3 at the same time the blade 16 is shoved into the slot 18.

Fig. 3 shows the joint in which the brace 11 is omitted.

In Fig. 4 the construction is identical with that in Fig. 3, except that the end of the post 1^a is beveled, and the projecting end 3^a of the loop 3^b is at an angle to the bar 1^a. Obviously, the loop 3 could be arranged with its projecting portion at any desired angle other than the angle shown in Fig. 4 or the straight line position in Fig. 1.

What we claim is—

1. A joint comprising two bars, a loop on the end of each bar adapted to receive the end of the other bar.

2. A joint comprising two bars, a loop on the end of each bar adapted to receive the end of the other bar, one of said loops being pivoted on its bar to swing over the end of the other loop.

3. A joint comprising two bars, a loop on the end of each bar adapted to receive the end of the other bar, the end of one of said bars having a tenon to fit within the loop of the other bar, and the loop on the said bar having a tenon being pivoted and adapted to swing over the loop of the other bar.

4. A joint comprising two bars, a loop on

the end of each bar adapted to receive the end of the other bar, one of said loops being movable to permit its bar to be first inserted in the other loop, after which the movable loop is adapted to be engaged over the other loop.

5. A joint comprising two bars, a rigid loop on one bar, a loop pivoted to the other bar, the rigid loop having curved edges over which the pivoted loop is adapted to be swung, the end of the bar having the pivoted loop being curved to permit the swinging movement of the pivoted loop.

6. A joint comprising two bars, a loop on the end of each bar adapted to receive the end of the other bar, and a brace having a pivotal connection to one of said members, the other member having a slot with a pin across said slot, a blade in the end of said brace, said blade having a slot and adapted to be slipped into the slot in the bar, the slot of the blade being adapted to engage the pin.

7. A joint comprising two bars, a loop on the end of each bar adapted to receive the end of the other bar, and a brace having a pivotal connection to one of said members, the other member having a slot with a pin across said slot, a blade in the end of said brace, said blade having a slot and adapted to be slipped into the slot in the bar, the slot of the blade adapted to engage the pin, the corner of said blade being rounded.

In testimony whereof, we have hereunto set our hands at Los Angeles, California, this 27th day of November 1909.

WARREN PENCE.
CHAS. R. WOLF.
VIRGIL O. JARVIS.

In presence of —

G. T. HACKLEY,
FRANK L. A. GRAHAM.