Feb. 27, 1940. C. B. BIERBACH 2,191,979

SLEEPER ANCHOR

Filed Dec. 28, 1937 2 Sheets-Sheet 1

Fig. 1

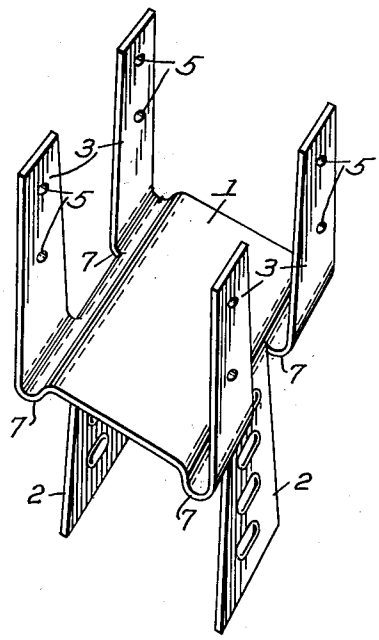


Fig. 2

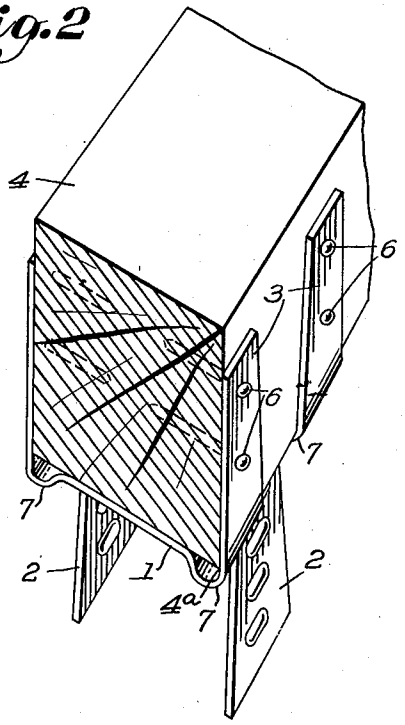


Fig. 3

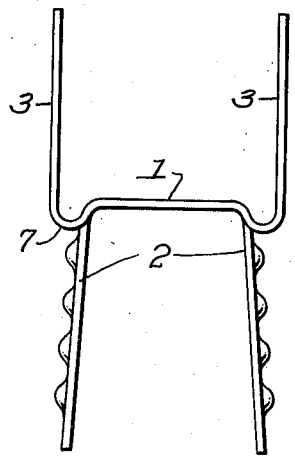


Fig. 4

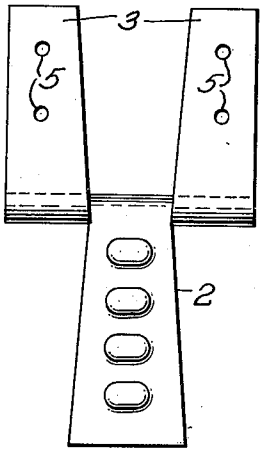
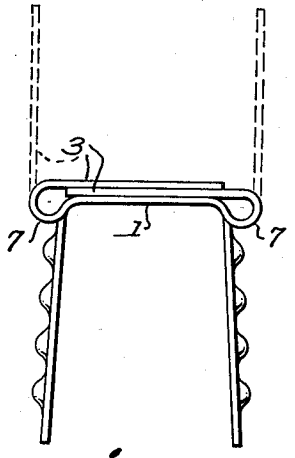


Fig. 5



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SLEEPER ANCHOR

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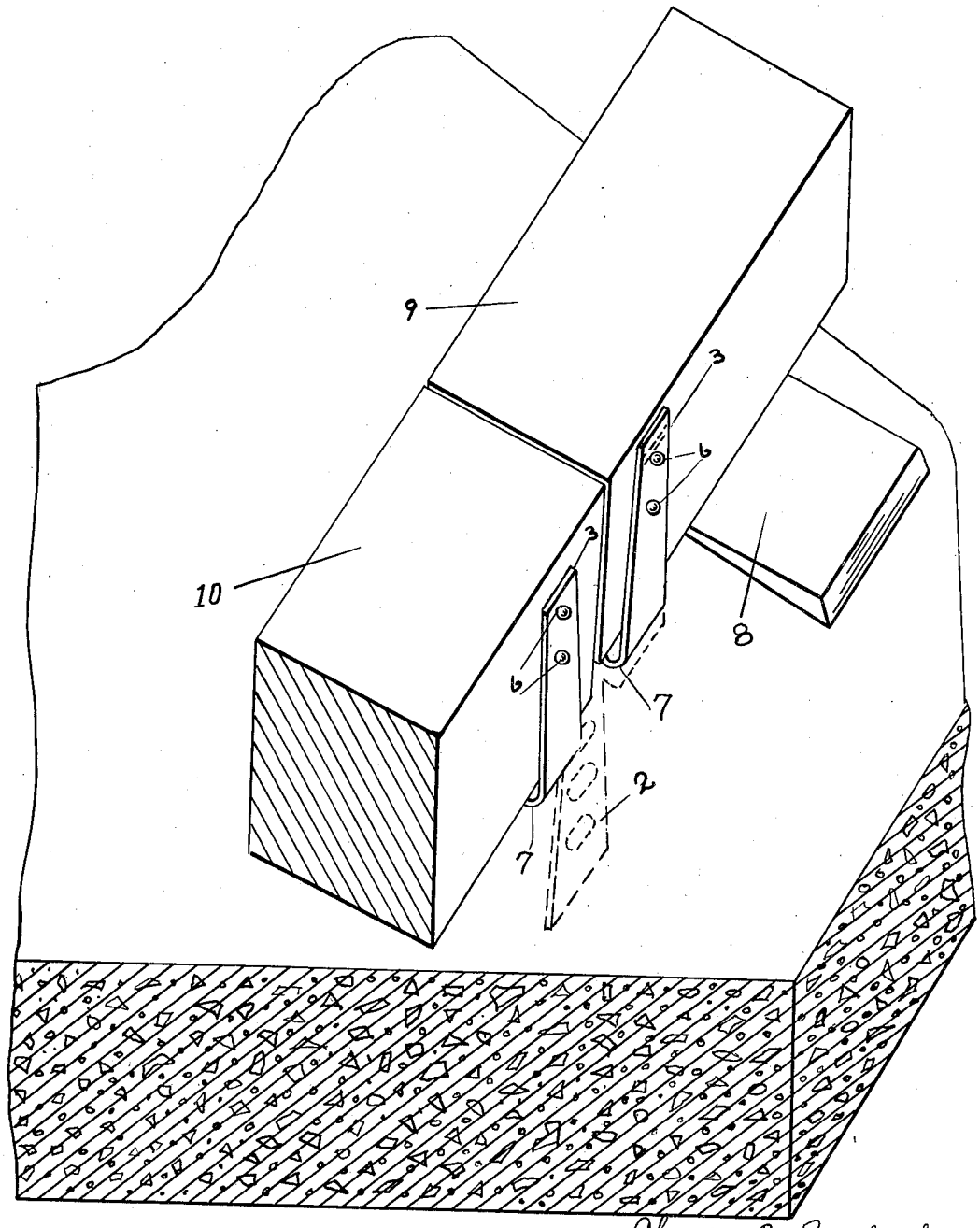


Fig. 6.

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UNITED STATES PATENT OFFICE

2,191,979

SLEEPER ANCHOR

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Application December 28, 1937, Serial No. 182,120

5 Claims. (Cl. 72—101)

Sleeper anchors of various forms have been made, but those commonly found on the market are subject to some defects. In the present invention the body portion of the anchor, which has ordinarily been flat throughout, is of channel form, thus stiffening or strengthening the anchor lengthwise thereof and permitting it to maintain its position and shape as the projections for securing the sleeper are bent to position. The devices with which I am familiar are provided with sleeper securing projections which initially extend from the body in a horizontal direction, some inwardly and some outwardly. In making the up-bend of the projection the bend at best takes a radius, and the point of the bend in most of them is not very certain. Most sleepers have square corners and consequently this radius between the body and the securing projection interferes with the proper seating of the sleeper. It also often happens that a sleeper is slightly out of level so that it is necessary to raise it. With those commonly on the market which have a simple bend between the projection and the body, it is difficult if not impossible, to make an adjustment of the sleeper after the projection is secured to the sleeper. In the present invention the upbending of the projection is improved so as to avoid the radius above the level of the bottom of the sleeper, also more definitely positions the bend and, further, permits of an upward movement of the sleeper to adjust its level without disturbing the body. Features and details of the invention will appear from the specification and claims.

A preferred embodiment of the invention is illustrated in the accompanying drawings, as follows:

Fig. 1 shows a perspective view of the anchor in the final sleeper receiving shape.

Fig. 2 a similar perspective view showing a sleeper in place.

Fig. 3 an end elevation of the anchor.

Fig. 4 a side elevation of the anchor.

Fig. 5 an end view of the anchor with the sleeper securing projections in their initial position.

Fig. 6 a perspective view showing the anchor embedded in a concrete support and supporting the ends of abutting sleepers, the bottom of one sleeper being slightly lifted to correct the level of the top of that sleeper.

1 marks the body of the anchor. This is of channel form, the side flanges of the channel extending slightly downward and stiffening the channel lengthwise. Downwardly extending flanges 2 are arranged at each side of the body, being preferably arranged centrally of the side. These in effect extend the channel flanges. Preferably they are of dovetail shape, having the wider portion at the bottom and are provided with a series of projections so that they may more definitely grip the engaging concrete.

Sleeper securing projections 3 also extend from the sides of the body. As shown, there are a pair of these projections at each side, and the projections at one side of the body are arranged at each side of the flange 2. These projections are adapted to receive a sleeper such as 4 between them and are provided with perforations 5, the perforations at the two sides of the projections being offset, their centers preferably being offset to a greater extent than the diameter of the opening to assure the clearance of securing nails 6 extending through the openings from opposite sides. These projections are slightly narrower at the top than at the bottom, affording the material for the greater width at the bottom of the flanges.

The projections 3 are connected with the body 1 through return loops 7 which extend downwardly slightly below the level of the body. It should be sufficiently below so that the radius incident to the up-bend of the projection will be below the corner 4a of an inserted sleeper so that a square edged sleeper may be set down on the top of the body without material interference through the radius at the edge. This relation needs only to be sufficient to substantially clear the corner so as to permit the seating of the sleeper on the face of the body. The projections 3 are initially forced down one over the other as indicated in Fig. 5. This horizontal arrangement of these projections is desirable in that as the anchors are placed in the concrete this horizontal position of the projections permits the proper leveling and working of the concrete and also avoids any obstruction. After the concrete is set these projections are bent up to a vertical position so as to receive the sleepers. While in the broader aspects of the invention these projections may be brought to the horizontal position in any desirable manner, it is preferable to bend them inwardly as shown, in that as they are bent upwardly they have the backing of the outer portion of the loop in the concrete so as to definitely localize the point of the bend. Thus a definite spacing is provided between the projection to receive the sleepers.

Very frequently the sleepers are not of exactly the same width and it is necessary to lift portions of the sleepers so as to bring their upper edges to

the level. This is ordinarily accomplished by placing a wedge or spacing material 8 under a sleeper and when abutting sleepers as 9 and 10 are encountered these are placed on the anchor, one pair of projections secured to one sleeper and the other to the other. The loop 7 permits this upward adjustment of the sleeper as 9 without difficulty or undue strain on the body in that this loop 7 provides a long enough radius to take care of this upward movement without disturbing the body so as to permit the continued level of the body on the concrete. The channel form of the body in this connection also stiffens it so that it may more readily hold its shape during this bending operation.

What I claim as new is:

1. A sleeper anchor comprising a body of channel form throughout its length having downwardly disposed flanges extending from opposite sides thereof, adapted for insertion into supporting concrete; and projections extending from opposite sides of the body adapted to secure a sleeper, said flanges and projections being integral with the body.

2. A sleeper anchor comprising a body having downwardly extending flanges from opposite sides thereof for insertion into supporting concrete; and projections extending from opposite sides of the body adapted to secure a sleeper, each projection being connected with the body and adjustable relatively thereto through a return loop, the anchor above the loop being unobstructed permitting the lift of the projection relatively to the body and the flange.

3. A sleeper anchor comprising a body of channel form throughout its length having downwardly disposed flanges extending from opposite sides thereof, adapted for insertion into supporting concrete; and projections extending from opposite sides of the body adapted to secure a sleeper, each projection being connected with the body and adjustable relatively thereto through a return loop, the anchor above the loop being unobstructed permitting the lift of the projection relatively to the body and the flange.

4. A sleeper anchor comprising a body of channel form having downwardly disposed flanges extending from opposite sides thereof adapted for insertion into supporting concrete; and a pair of projections extending from each side of the body and adapted to secure a sleeper, the projections at each side of the body being at each side of the flange at that side of the body, the flanges and projections being integral with the body.

5. A sleeper anchor comprising a body having downwardly extending flanges from opposite sides thereof for insertion into supporting concrete; and projections extending from opposite sides of the body adapted to secure a sleeper, each projection being connected with the body and adjustable relatively thereto through a return loop, the anchor above the loop being unobstructed permitting the lifting of the projection relatively to the body and the flanges, said projections being adapted to be initially bent inwardly over the body.

CHARLES B. BIERBACH.