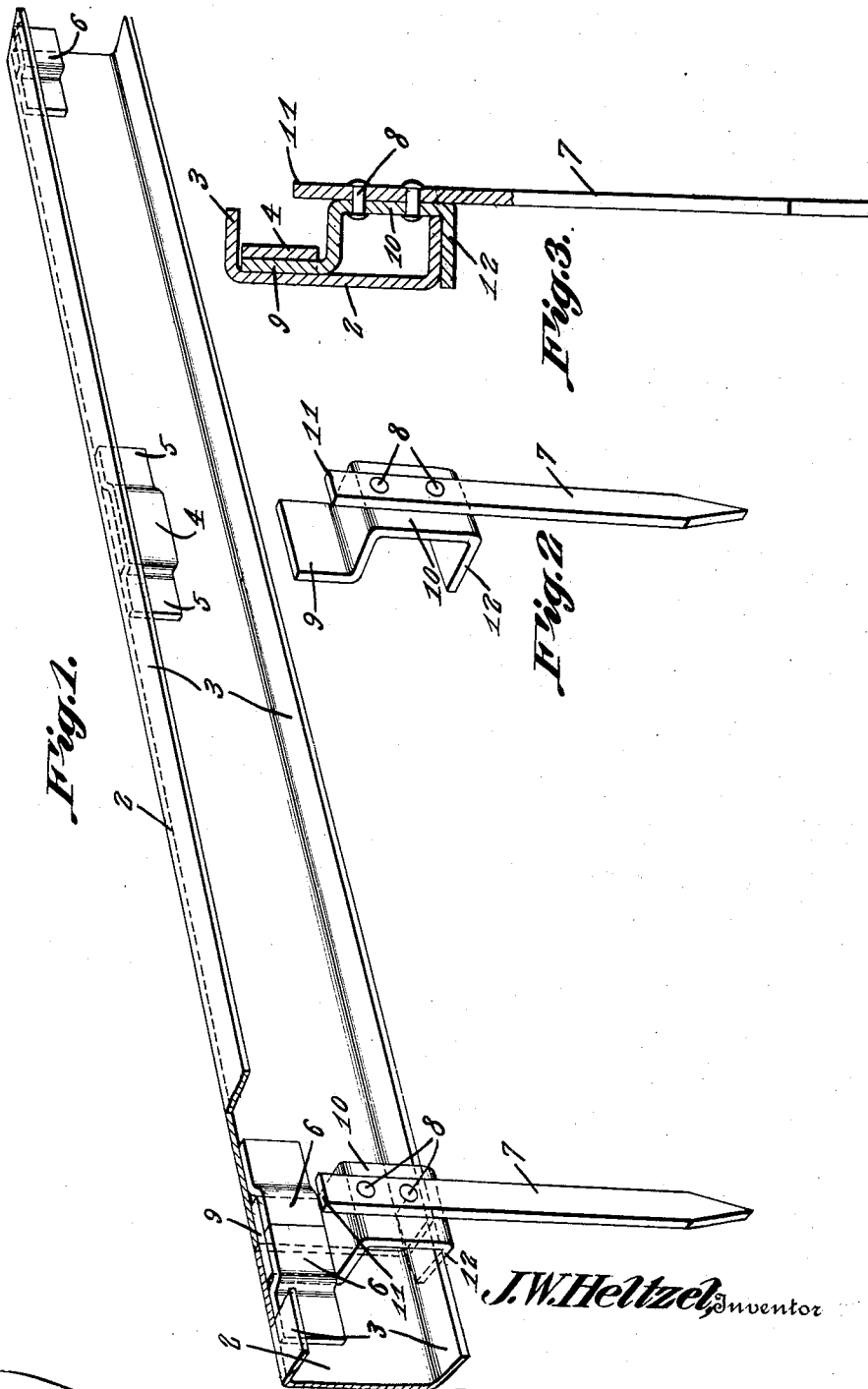


1,309.068.

J. W. HELTZEL,
CONCRETE FORM,
APPLICATION FILED APR. 18, 1919.

Patented July 8, 1919.



Witness

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JOSEPH W. HELTZEL, OF WARREN, OHIO.

CONCRETE-FORM.

1,309,068.

Specification of Letters Patent.

Patented July 8, 1919.

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To all whom it may concern:

Be it known that I, JOSEPH W. HELTZEL, a citizen of the United States, residing at Warren, in the county of Trumbull and State of Ohio, have invented a new and useful Concrete-Form, of which the following is a specification.

This invention relates to improvements in concrete form construction, the object of the invention being to provide an improved side rail and stake for connecting and supporting the rails, whereby the provision of sleeves projecting from the ends of the side rails is eliminated.

With the foregoing and other objects in view, which will appear as the description proceeds, the invention consists in the novel features of construction and combination of parts which will be more fully described hereinafter and particularly pointed out in the claims.

In the drawings accompanying and forming part of this specification,

Figure 1 is a perspective view showing two adjacent side rails connected together by means of my improved stake, only a portion of one of said rails being shown, the upper flange of the rails being broken away at the point of connection to better illustrate the manner in which the stake connects the rails together.

Fig. 2 is a perspective view of the stake; and

Fig. 3 is a side elevation, partly in section, showing the manner in which the side rail is supported by the stake.

The same characters of reference designate the same parts in the different figures of the drawings.

In concrete sidewalk and road forms as heretofore constructed a sleeve is usually riveted at one end of each side rail to project therefrom in such manner that the projecting portion of the sleeve slips into the adjacent rail so as to form a connection between the rails. In this form of connection, however, it has been found that the sleeves are easily broken off in the handling of the rails, which renders the rails useless. The object, therefore, of the present invention is to provide a means of connecting and supporting the rails whereby the provision of sleeves projecting from the rails is done away with.

Referring to the drawings, 2 designates a side rail adapted for use in concrete con-

struction. The rail is bent to provide a longitudinal flange 3 at each side thereof, thereby forming a rail which is trough-shaped in cross section, as shown in Figs. 1 and 3. Approximately at the longitudinal center of the rail, adjacent to the upper flange thereof, I provide a female member or socket, which is formed of a strap 4 offset at its central portion to provide a pair of ears 5 at its ends that are preferably welded to the side rail, as shown in Fig. 1, the offset portion forming a socket for the reception of the male member of the stake hereinafter described. Each rail is also provided at each end thereof with a half socket member 6, so that when the ends of two adjacent rails come together they form a complete socket or female member for reception of the male member of a stake, thereby to maintain the rails connected together. The members 4 and 6 may, of course, be riveted to the side rail, if desired.

The improved stake comprises in the present instance a stake proper 7, which is pointed at its lower end for facilitating its being driven into the ground. Secured to the stake, at some distance from the upper end thereof, by any suitable means, as for instance rivets 8, is a bracket approximately in the form of the numeral 5, the distance from the outer side of the offset portion or male member 9 thereof to the inner side of the part 10 that is secured to the stake being equal to the width of the lower flange of the rail, so that when the male member 9 is inserted into the socket or female member carried by the rail the lower flange of the rail will rest against the portion 10 and thus maintain the rail in upright position, while the base flange 12 of the bracket projects under the base flange 3 of the side rail, as clearly shown in cross section in Fig. 3. This construction provides a very solid rest or pedestal for the side rail by means of which the adjacent ends of two side rails are supported in a very reliable manner against sagging. It will thus be seen that I have provided a connecting means for the side rails part of which is carried by the side rails and a cooperating part carried by the stake. By securing the bracket at some distance from the end of the stake a driving portion or head 11 projects above the horizontal portion of the bracket, whereby free access is given thereto for driving the stake without danger of striking the horizontal por-

tion of the bracket or loosening the rivets which secure said bracket to the stake.

It is believed that the operation of the rail and stake described will be clear from the foregoing. The stakes are lined up to grade and the male member 9 of the stake inserted into the female member or socket 4 carried by the side rail, the half sockets at adjacent ends of two rails forming a complete socket for the insertion of the male member of a stake, which effectively connects the rails together.

It frequently happens that after the rails have been lined up it becomes necessary to remove one or more of the rails to permit the passage of teams, etc., and it will be observed that by the use of the present improved construction of rail and stake it will be possible to remove the rails and replace them without in any way disturbing the alinement thereof.

While I have shown and described the stake as being specially adapted for use with metal side rails, it will readily be understood that should it be desired to use wooden rails the stake is equally well adapted for such use, by merely securing straps similar to 4 and 6 to the wooden rails in the same manner as shown in connection with the metal rails. It is also to be understood that while I have described in detail the structure herein illustrated, I do not desire to limit my invention to the precise features of construction shown, as I am aware that many mechanical changes may be made therein without departing from the spirit and scope of the invention as set forth in the appended claims.

Having thus described my invention, what I claim is:

1. A structure of the class described, comprising a side rail and a stake, said side rail and stake having one a female member secured thereto and the other a male member adapted for insertion into said female member thereby to support the rail in vertical position, said stake having a laterally extending member adapted to project beneath the side rail.

2. A structure of the class described, com-

prising a side rail having a female member secured thereto, and a stake provided with an offset male member adapted for insertion into said female member thereby to support the rail in vertical position and a laterally extending member adapted to project beneath the side rail.

3. A structure of the class described, comprising a side rail having a female member or socket secured thereto, and a stake having secured thereto a bracket provided with an upwardly extending portion forming a male member adapted for insertion into said female member and a laterally extending portion adapted to project beneath the side rail thereby to support the rail in vertical position and prevent sagging thereof.

4. A structure of the class described, comprising a side rail having a female member or socket secured thereto, a stake adapted to be driven into the ground and having secured thereto a bracket provided with a portion forming a male member adapted for insertion into said socket for maintaining the rail in vertical position and a portion adapted to project beneath the rail to prevent sagging thereof, a portion of the stake projecting above the connection of said bracket therewith thereby to permit driving of the stake without injury to said bracket.

5. A structure of the class described, comprising, in combination, a plurality of rails each provided with a female member or socket between its ends and a half socket at each end thereof, and a plurality of stakes each provided with a male member adapted for insertion into one of said sockets thereby to support the rails in a vertical position and connect the ends of adjacent rails, said stakes each also having a horizontal portion adapted to project beneath the ends of adjacent rails thereby to support the same against sagging.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

JOSEPH W. HELTZEL.

Witnesses:

J. W. HELTZEL,
MARION D. LEA.