

No. 836,833.

PATENTED NOV. 27, 1906.

R. V. SAGE.
METALLIC SHEET PILING.
APPLICATION FILED SEPT. 27, 1905.

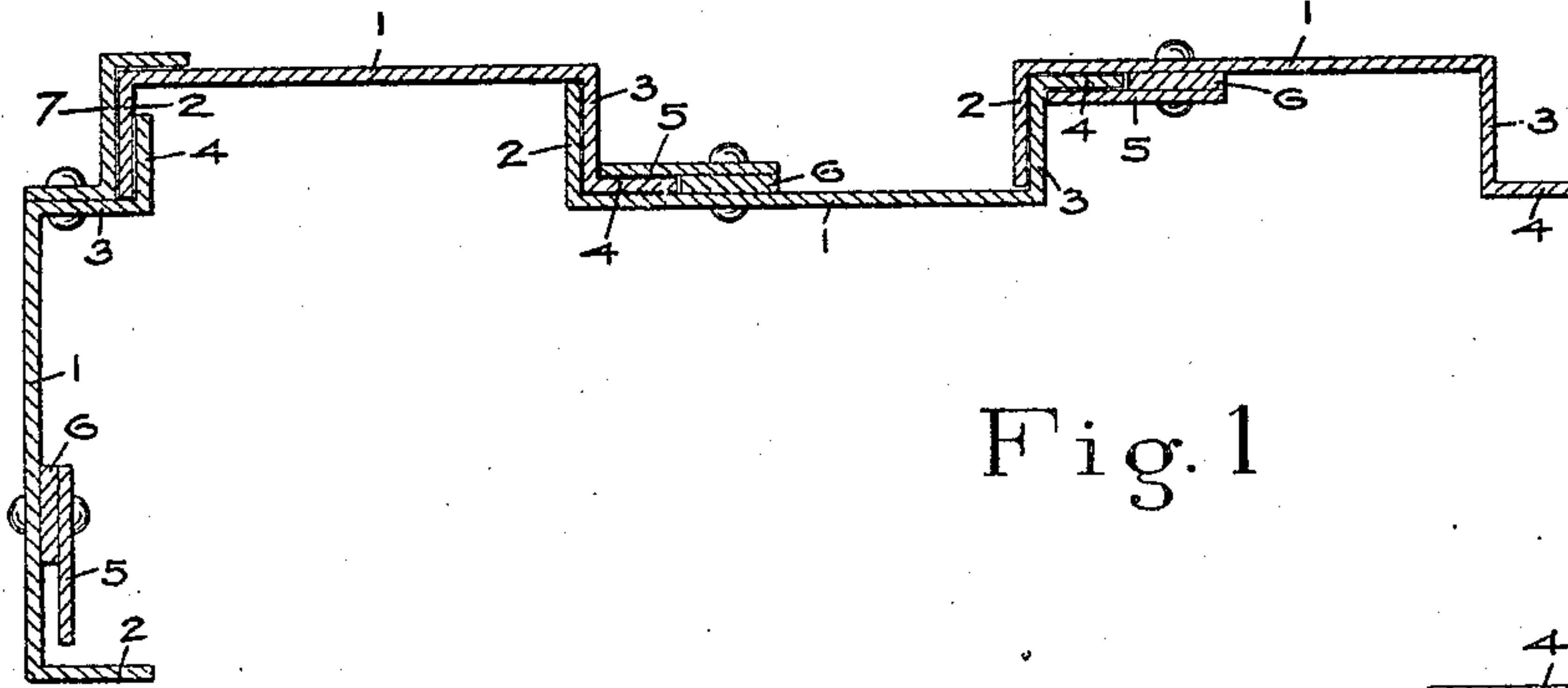


Fig. 1

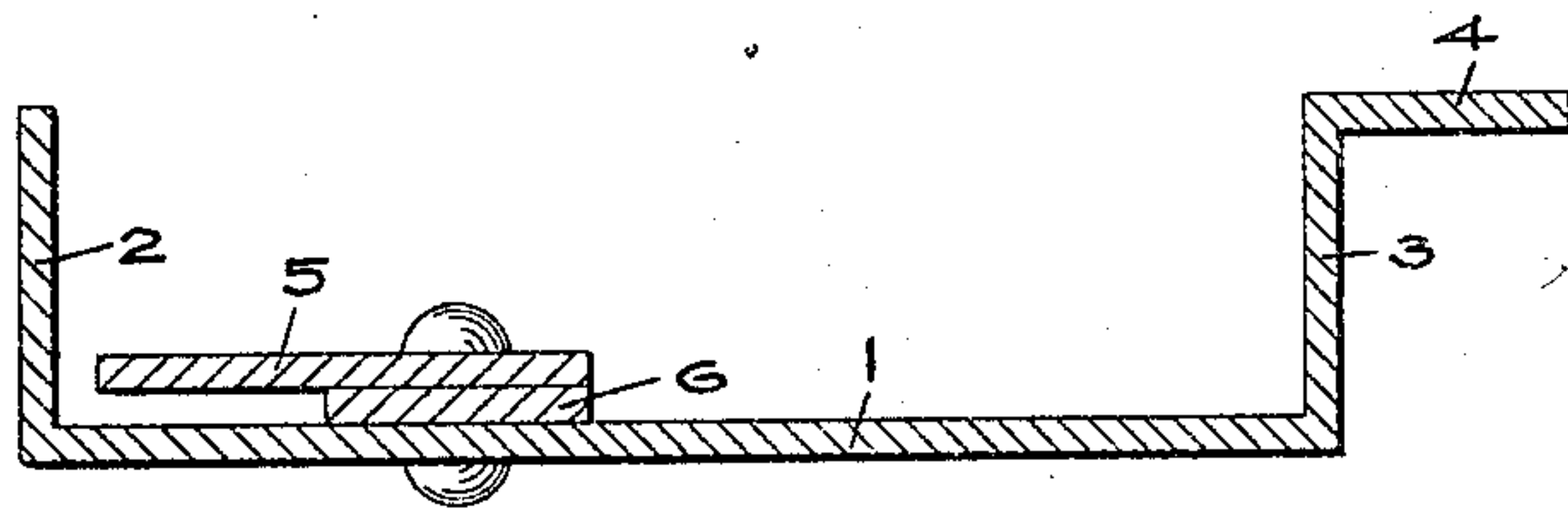


Fig. 2

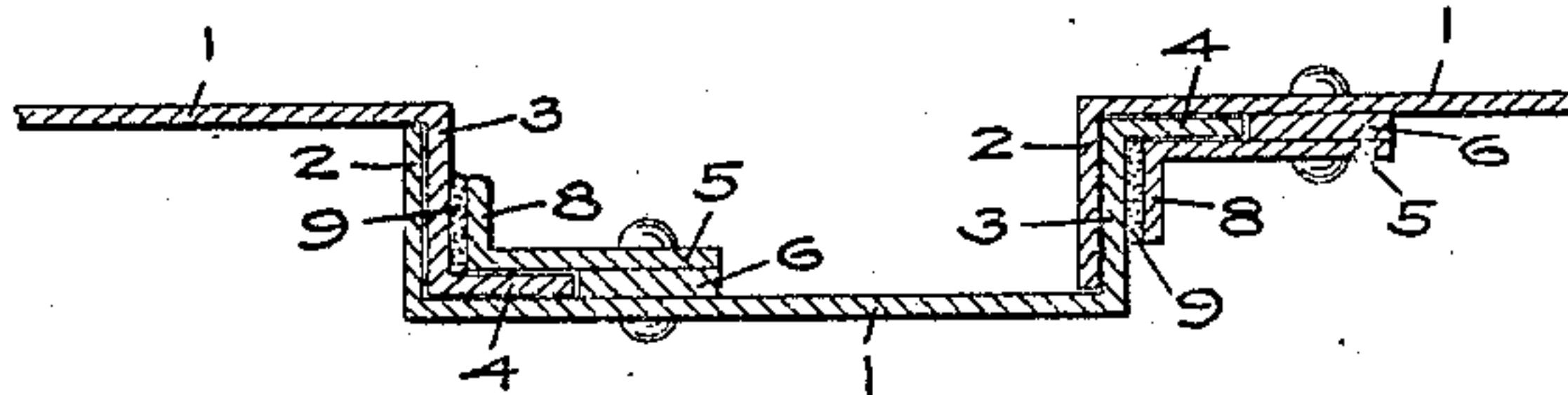


Fig. 3

WITNESSES,

J. R. Wernlinger
Stone & Co.

INVENTOR.

Ralph V. Sage
by Geo. E. Shackray
his ATTORNEY.

UNITED STATES PATENT OFFICE.

RALPH V. SAGE, OF WESTMONT, PENNSYLVANIA.

METALLIC SHEET-PILING.

No. 836,833.

Specification of Letters Patent.

Patented Nov. 27, 1906.

Application filed September 27, 1905. Serial No. 280,282.

To all whom it may concern:

Be it known that I, RALPH V. SAGE, a citizen of the United States, residing in the borough of Westmont, in the county of Cambria and State of Pennsylvania, have invented certain new and useful Improvements in Metallic Sheet-Piling; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in sheet-piling constructed of metallic shapes provided with locking means at their contiguous edges and designed for the protection of earth excavations, for walls of coffer-dams, wharves, and piers, for sinking shafts in quicksand or soft earth, for building foundations, or for any other use to which sheet-piling can be applied.

One object of my invention is to provide metallic sheet-piling the separate pieces of which will readily lock together as they are successively driven and can be arranged with means for calking the joints, if desired.

Another object of my invention is to provide a sheet-piling composed of sections or pieces that can be rolled readily and may be used with little additional work except a small amount of riveting.

A further object of my invention is to provide a sheet-piling in which all the separate pieces or piles are of one section only, thereby saving the time required to manufacture and handle pieces of different sections, and consequently greatly reducing the cost of my improved sheet-piling.

Referring to the annexed sheet of drawings, which form part of this specification, and in which like figures refer to like parts, Figure 1 is a sectional plan of a portion of one form of my improved sheet-piling, showing several pieces thereof joined at their contiguous edges and at a corner. Fig. 2 is an enlarged sectional view of a typical piece of the sheet-piling. Fig. 3 is a sectional plan of a portion of the sheet-piling arranged with means for calking the joints.

As shown in Fig. 2, the typical form of the pile which embodies my invention is composed of a trough or channel shape having a web 1, side flanges 2 and 3, and a flange 4 projecting from the extremity of the latter. The web 1 is provided with a locking-strip or splice 5 and a filler-plate 6, which are designed to hold and lock the several pieces that con-

stitute my improved sheet-piling. The sheet-piling is constructed by driving the individual pieces or piles separately in the usual manner so that the flange 4 of each piece projects under the splicing or locking bar 5 of the adjoining piece, as clearly shown in Fig. 1. The filler-plate 6 is preferably made slightly thicker than the flange 4 in order to provide a small clearance, and thereby facilitate the driving of the piles. The corner connections are very simply and conveniently made by securing a Z-bar 7 to the flange 3 of one corner-pile in such a way that the flange 2 of the adjoining pile is locked between the web of the Z-bar 7 and the flange 4 of the said corner-pile, while the free flange of the said Z-bar projects partly over the contiguous web 1 of the adjoining pile, all as clearly shown in Fig. 1.

In the modification shown in Fig. 3 the splicing or locking bar 5 of each pile is arranged with a flange 8, at a right angle thereto, and therefore parallel to the flange 3 of the adjoining pile. The said flange 8 is, however, at a small distance from the said flange 3 in order to provide space for inserting calking material 9 when required.

From the foregoing description it will be noted that my improved sheet-piling is exceedingly simple and consists of a small number of pieces, and all the shapes and forms used therein can be rolled and produced economically and secured together by machine-riveting.

The sections and arrangement of parts shown may of course be slightly modified without departing from my invention as defined by the scope of the appended claims.

Having thus fully described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a metallic sheet-piling, a section composed of a trough or channel shape provided with an integral outward flange at the extremity of one of the flanges only of the said trough or channel shape.

2. In a metallic sheet-piling, a section composed of a trough or channel shape provided with an integral outward flange at the extremity of one of the flanges only of the said trough or channel shape and parallel to the web thereof.

3. In a metallic sheet-piling, a section composed of a trough or channel shape provided with an integral outward flange at the extremity of one of the flanges only of the

said trough or channel shape and parallel to the web thereof, a locking or splicing bar and a filler-plate secured to the said web between the flanges thereof.

5 4. A metallic sheet-piling comprising sections each composed of a trough or channel shape provided with an integral outward flange at the extremity of one only of its side flanges, a splicing-strip and a filler-plate secured to the web thereof, said splicing-strip being adapted to project over and lock the integral outward flange of the adjoining section.

15 5. In a metallic sheet-piling, a corner-section composed of a trough or channel shape provided with an integral outward flange at the extremity of one of its side flanges, a Z-bar secured to the said side flange and adapted to project over the straight flange and a portion of the web of the adjoining section, thereby forming a locked joint at the corner of the sheet-piling.

25 6. In a metallic sheet-piling, a section composed of a substantially rectangular channel shape provided with an integral outward flange at the extremity of one of its side flanges, a flanged locking or splicing bar

and a filler-plate secured to the web of the said trough or channel shape, the flange of said locking bar being adjacent to and at a small distance from the straight flange of said channel shape. 30

7. A metallic sheet-piling comprising sections each composed of a trough or channel shape provided with an integral outward flange at the extremity of one of its side flanges, a rectangularly-flanged splicing-strip and a filler-plate secured to the web thereof, said splicing-strip being adapted to project over and lock the integral outward flange of the contiguous section, the flange of said splicing-strip being adjacent to and at a small distance from the straight flange of said channel shape, thereby forming a calking-space between the flange of said splicing-strip and the adjacent side flange of the contiguous section. 35 40 45

In testimony whereof I hereto affix my signature in the presence of two witnesses.

RALPH V. SAGE.

Witnesses:

C. E. BROWN,
STONE EDELEN.