No. 825,458. PATENTED JULY 10, 1906.

M. J. HANEY.

SHEET METAL PILING.

APPLICATION FILED FEB. 7, 1905.

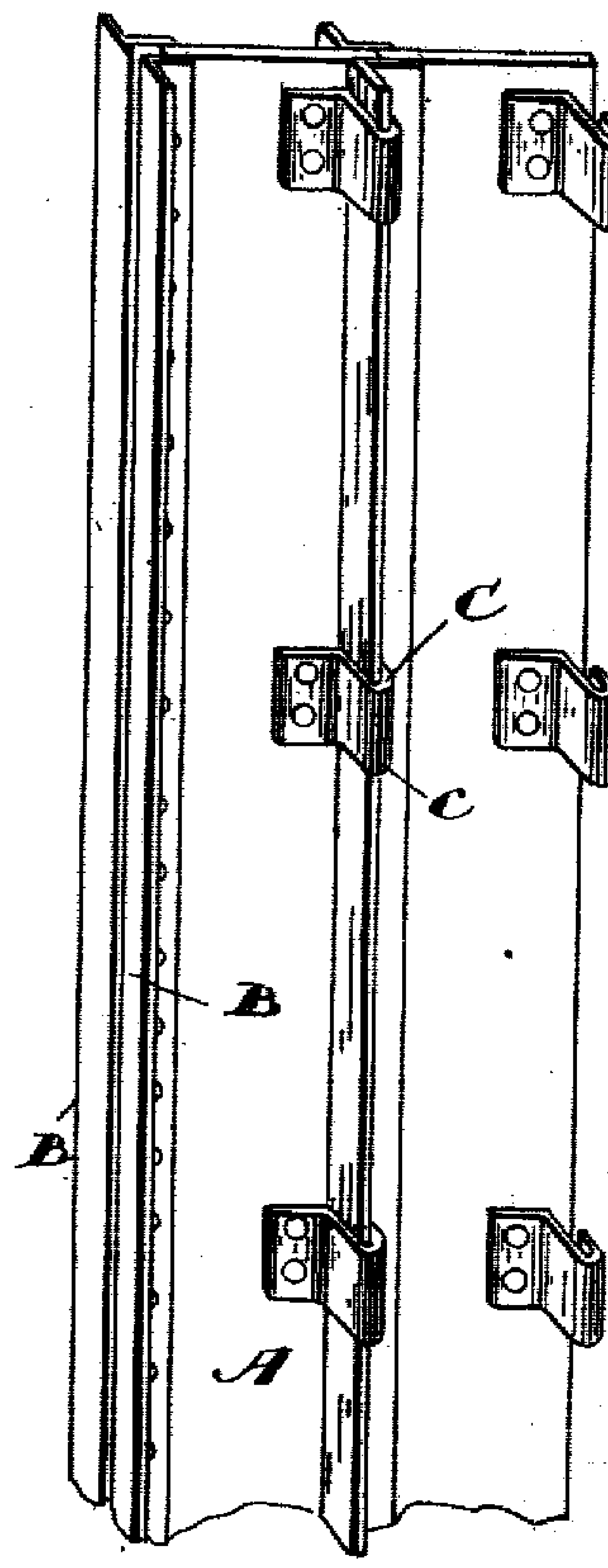

Fig. 1.

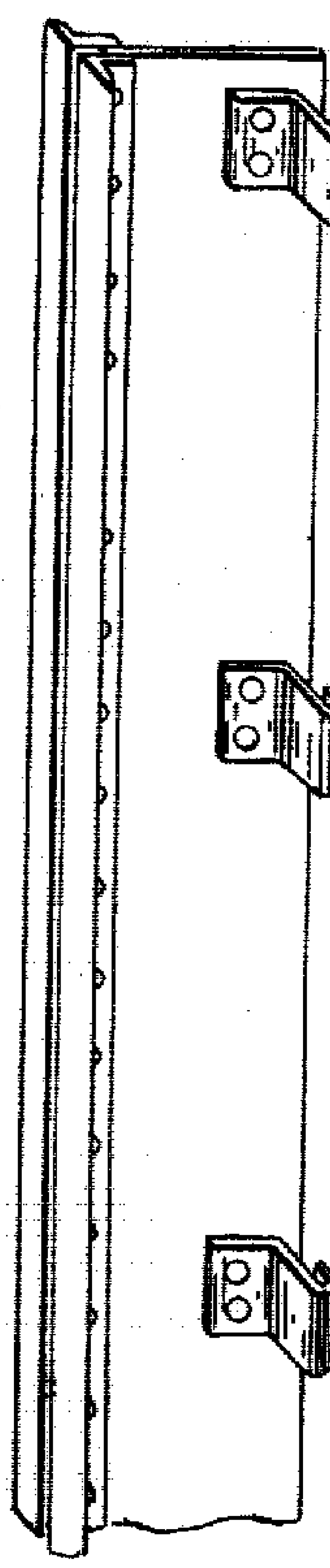

Fig. 2.

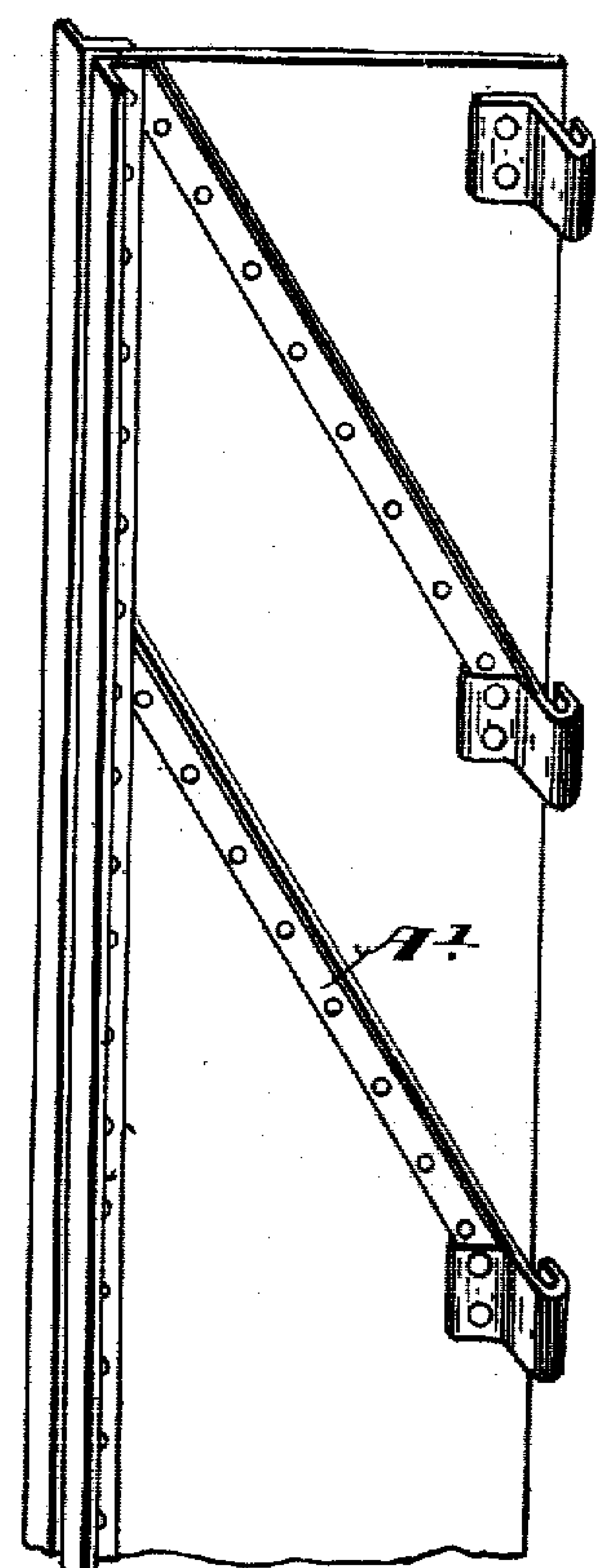

Fig. 3.

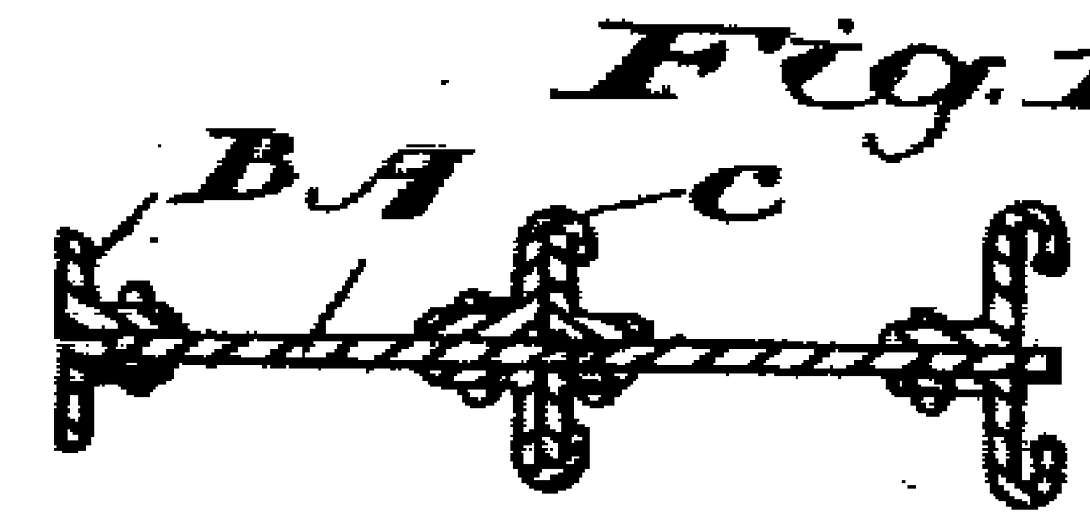

Fig. 4.

Witnesses.

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SHEET-METAL PILING.

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Application filed February 7, 1905. Serial No. 244,651.

To all whom it may concern:

Be it known that I, MICHAEL JOHN HANEY, of the city of Toronto, in the county of York, in the Province of Ontario, Canada, have invented certain new and useful Improvements in Sheet-Metal Piling, of which the following is a specification.

My invention relates to improvements in sheet-metal piling; and the object of the invention is to devise a durable and strong form of section and lock therefor, whereby sheet-metal piling may be set up economically and any liability of leakage prevented where required; and it consists, essentially, of a plate, angle-iron bars riveted on one longitudinal edge of same directly opposite each other and projecting beyond the longitudinal edge of the plate, and an angle-iron plate or plates located at a slight distance from the opposite longitudinal edge of the plate and having inturned lips extending, preferably, within the edge of the plate, the said latter plates being preferably located on each side of the plate and designed to receive within the lips the projecting members of the angle-iron bars on the opposite edge of the abutting plate and the edges of the plates proper being designed to abut within the angle-iron bars, as hereinafter more particularly explained.

Figure 1 is a perspective view of my improved sheet-metal piling. Fig. 2 is a detail of one plate. Fig. 3 is a detail of a wide form of plate provided with diagonal strengthening-ribs. Fig. 4 is a sectional plan.

In the drawings like letters of reference indicate corresponding parts in each figure.

A is a sheet-steel plate, which is provided on one of the longitudinal edges with the angle-iron bars B B, located directly opposite each other, one on each side of the plate and projecting beyond the longitudinal edge of the plate, as indicated. The angle-iron bars B are suitably riveted to the plate.

C represents angle-iron plates, which are also suitably riveted to the plate at a slight distance from the opposite longitudinal edge of the plate and are provided with inturned lips *c*, which, it will be noticed, in sectional plan (shown in Fig. 4) do not extend beyond the edge of the plate, being preferably located within such edge or within the width of the plate. The lip *c* is preferably made in curled form, as indicated in Fig. 4, leaving the free end a gripping edge. The plate C may be one longitudinal plate provided with the gripping-lips, and such lips are provided one on each side of the plate and located directly opposite to each other. As indicated in Figs. 1 and 2, the plates are fitted together, with the longitudinal angle-iron bars B extending through the holding-plate C, the free edges of the longitudinal bars being gripped by the lips *c*, as indicated. In Fig. 3 I show the same form of plate, but wider and having angle-bars *a'* diagonally arranged, such angle-bars serving to reinforce the plate from longitudinal edge to longitudinal edge, thereby enabling me to make a much wider plate and use less plates, and consequently cheapen the production of my sheet-piling. The diagonal angle-bars A' also serve, when our plate-section is being driven home, to force the plates C into position over the angle-bars B and prevent any liability of spreading as the plates are being driven into position.

I am aware that beams have been used in the construction of sheet-metal piling and that such beams are of various constructions, which necessitate much expense in their production, and I have particularly avoided the use of such beams for this reason, my object being to produce my sheet-metal piling from common stock. For this reason I have confined myself in the construction of my sheet-metal plate to plates and angle-bars or angle-plates which may be readily obtained from any sheet merchant or manufacturer. By this means, therefore, I am enabled to produce at a minimum expense and without the necessity of skilled labor an extremely strong and durable piling.

Although I have shown the angle-bars on one longitudinal edge of the plate and the angle connecting-plates on the opposite edge, it will of course be understood that I may without departing from the spirit of my invention provide angle-bars on each edge of one plate and the next succeeding plate with the angle gripping-plates on each longitudinal edge, and in this case I would make the plates with the gripping-bars preferably a lighter or thinner plate than the plate with the angle-bars, so as to provide for the ready insertion of the one within the other.

What I claim as my invention is—

1. A sheet-metal piling comprising plates abutting each other at their longitudinal

edges, angle-bars suitably riveted adjacent to one longitudinal edge on both sides of the plate and lugs disposed at desired distances apart at the opposite longitudinal edge and suitably riveted to the plate in pairs one at each side and having inturned lip designed to receive the outer-turned portions of the angle-bars of the adjacent plate as specified.

2. A sheet-metal piling comprising plates abutting each other at their longitudinal edges and angle-bars secured to one longitudinal edge of the plate on opposite sides thereof and projecting beyond such edge or width of the plate, and angle plates or bars secured to the opposite longitudinal edge of the plate, one on each side and opposite each other and so arranged that the opposite longitudinal edge projects beyond the angle bars or plates and provided with inturned lips for gripping the free edge of the angle-bars of the next plate, so as to cover the joint or abutting edges of the plate as and for the purpose specified.

3. In a sheet-metal piling a series of plates abutting each other means for interlocking the plates at their longitudinal edges and diagonal strengthening-bars or their equivalent extending across the plates as and for the purpose specified.

4. In a sheet-metal piling a series of plates abutting each other, an angle-plate secured on one edge of each plate and provided with a gripping-lip designed to lock onto the edge of the next angle-plate as and for the purpose specified.

MICHAEL JOHN HANEY.

Witnesses:
B. BOYD,
C. K. BAK.