

No. 730,755.

PATENTED JUNE 9, 1903.

L. P. FRIESTEDT.
SHEET PILING.

APPLICATION FILED JAN. 22, 1903.

NO MODEL.

Fig. 1.

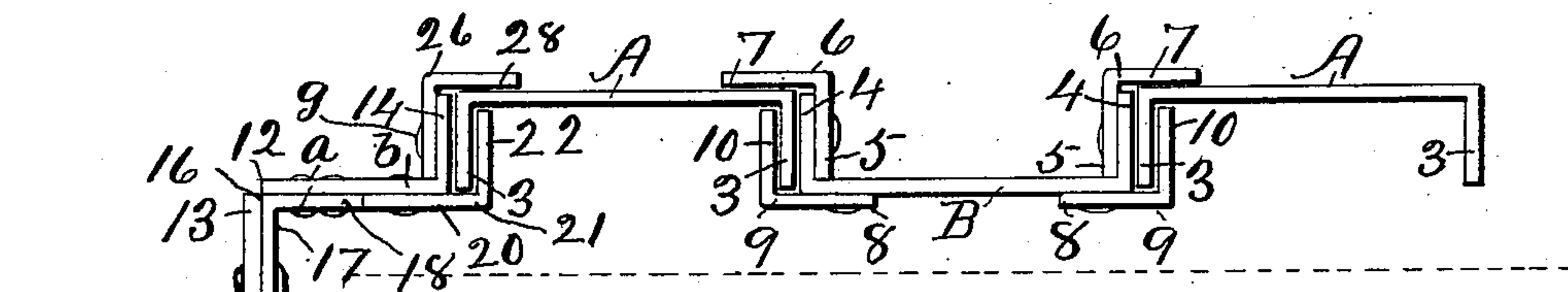
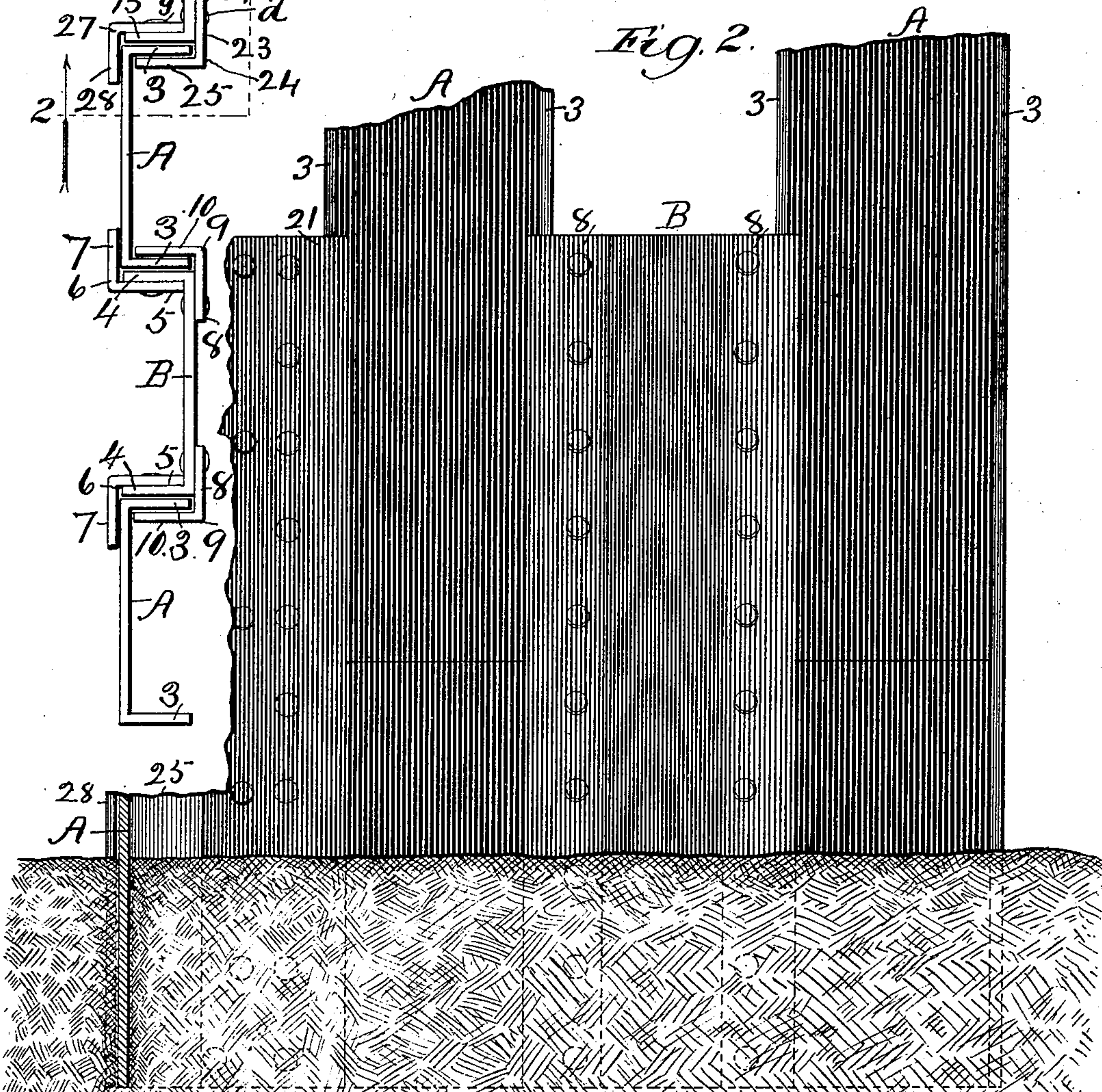


Fig. 2.



Witnesses:

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UNITED STATES PATENT OFFICE.

LUTHER P. FRIESTEDT, OF CHICAGO, ILLINOIS.

SHEET-PILING.

SPECIFICATION forming part of Letters Patent No. 730,755, dated June 9, 1903.

Application filed January 22, 1903. Serial No. 140,122. (No model.)

To all whom it may concern:

Be it known that I, LUTHER P. FRIESTEDT, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in 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.

This invention relates to improvements in sheet-piling such as set forth in applicant's pending application, Serial No. 126,497, and has for its object to provide improved features relative to the manner of loosely retaining the beam-sections in their relative position and in forming corner-joints.

In the drawings, Figure 1 is a plan; and Fig. 2 is a broken-away elevation on angular line 2, Fig. 1, looking in the direction indicated by the arrow.

The sheet-piling composed of channel-beam sections has the same alternate arrangement as that set forth in the pending application referred to; but in the present instance the sections A are set with the flange edges 3 facing inward and the companion sections B set with the flanges 4 facing outward. When assembled in a wall structure, the beam-sections are set edgewise, the exterior flange-surfaces bearing loosely against each other and not interlocking. The sections are retained in this relative position by means of angle-irons disposed in pairs for each joint and positioned to overlap the inner and outer corners. The flange or side 5 of the outside angle-iron 6 is rigidly secured to the inner side of the beam-flange 4 of section B, the flange 7 of the same angle-iron extending across the edge of flange 4 and loosely overlaps the corner part of section A. The flange 8 of the inside corner angle-iron 9 is rigidly secured to the back side of the section B and extends across the edge of flange 3 of section A. The flange 10 of angle-iron 9 loosely covers the inner side of flange 3. In this arrangement it will be noted that the edges of each beam-section B has a pair of angle-irons rigidly secured thereto in the relative position shown and which are adapted to overlap the adjacent edges of the sections A and loosely retain the same in their alternate po-

sition in forming a continuous wall. The beam-sections may be assembled or separated with the same facility as though the channel-flanges were interlocked.

So many different uses have been discovered for metal sheet-piling since the practical introduction thereof that it is found to be advantageous in some particular applications to change or vary the form of construction.

The corner construction in this instance is also different from that set forth in pending applications and is intended to conform to certain conditions that may be required in practical working. In some cases the nature of the work may require heavy substantial corners, other work light and strong corners, so that a saving may be made in material and weight in handling, and especially when the wall structure is to be of a temporary character instead of a permanent structure.

The two outside corner-sections consist of companion L-beam sections 12 and 13, which are in substance the splitting of a channel-beam longitudinally and turning the two parts at right angles with reference to each other, the flanges 14 and 15 forming the extreme edges and facing outward. On the inside corner 16, formed by the junction of the inner loosely-joining edges of the L-beams, is placed a bracing corner-iron 17, one flange or side 18 of which is rigidly secured to the L-beam 12, as at *a*, the other flange or side 19 being riveted to the adjacent surface of L-beam 13. The flange 20 of an angle-iron 21 is rigidly secured, as at *b*, to the inner side of the L-beam 12, the flange 22 covering the inner side of flange 3 of the loosely-joining beam-section A. The flange 23 of an angle-iron 24 is rigidly secured, as at *d*, to L-beam 13, the flange 25 covering the flange 3 of the next succeeding beam-section A after the corner is turned in running the wall at right angles. The inner edges of the inside angle-irons 21 and 24 closely abut the respective edges of corner angle-iron 17 and form a continuous solid corner-wall of great strength and distribute the strain equally in both directions. The outside companion angle-irons 26 and 27 in the corner construction are rigidly secured, as at *g*, to the flanges 14 and 15, respectively, of the L-beams 12 and 13. The outer disengaged flanges 28 of these angle-

irons extend across the edges of flanges 14 and 15 and overlap the corner and part of the outside surface of the two beam-sections A at their opposite connection with the corner-section. The companion L corner-sections are the equivalent of the sections B in the side walls, and the connections of the sections A with the corner structure is substantially the same as that of the A and B sections.

10 The different parts comprising the corner-sections are solidly put together at the factory, and therefore have the advantage of being handled as one piece in practical use and assembled with facility in the wall structure.

15 The first course of the assembled sections is shown in Fig. 2 as having just been started into the earth.

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

1. A sheet-piling, comprising a series of beam-sections having a loose edgewise contact but not interlocking, and means for retaining said sections in their relative position in a wall structure.

2. A sheet-piling, comprising a series of metal sections assembled edgewise but not interlocking within themselves, and means for loosely retaining said sections in place as they are set up in a structure presenting a single wall at all points.

3. A sheet-piling, comprising a series of metal sections loosely joining edgewise with-

out interlocking, and means carried by alternate sections for separably uniting all the sections in a continuous structure presenting a single wall at all points.

4. A sheet-piling, comprising a series of channel-beam sections arranged alternately with reference to the back and front sides thereof, and assembled edgewise without interlocking, and means for loosely retaining said sections together in forming a solid wall structure.

5. In sheet-piling, the combination with a series of beam-sections joined edgewise, of the angle-irons rigidly secured in pairs to the respective edges of each alternate section and loosely interlocking with the edges of the next succeeding section in forming a continuous wall structure.

6. In sheet-piling, a corner structure consisting of companion L-beam sections set at right angles with reference to each other and with the flange edges at opposite points, a bracing corner-iron inserted in the junction-corner of the L-sections, and the angle-irons rigidly secured to the corner-sections and loosely interlocking with the adjacent edges of the beam-sections in the main wall running at right angles from the corner.

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

LUTHER P. FRIESTEDT.

Witnesses:

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