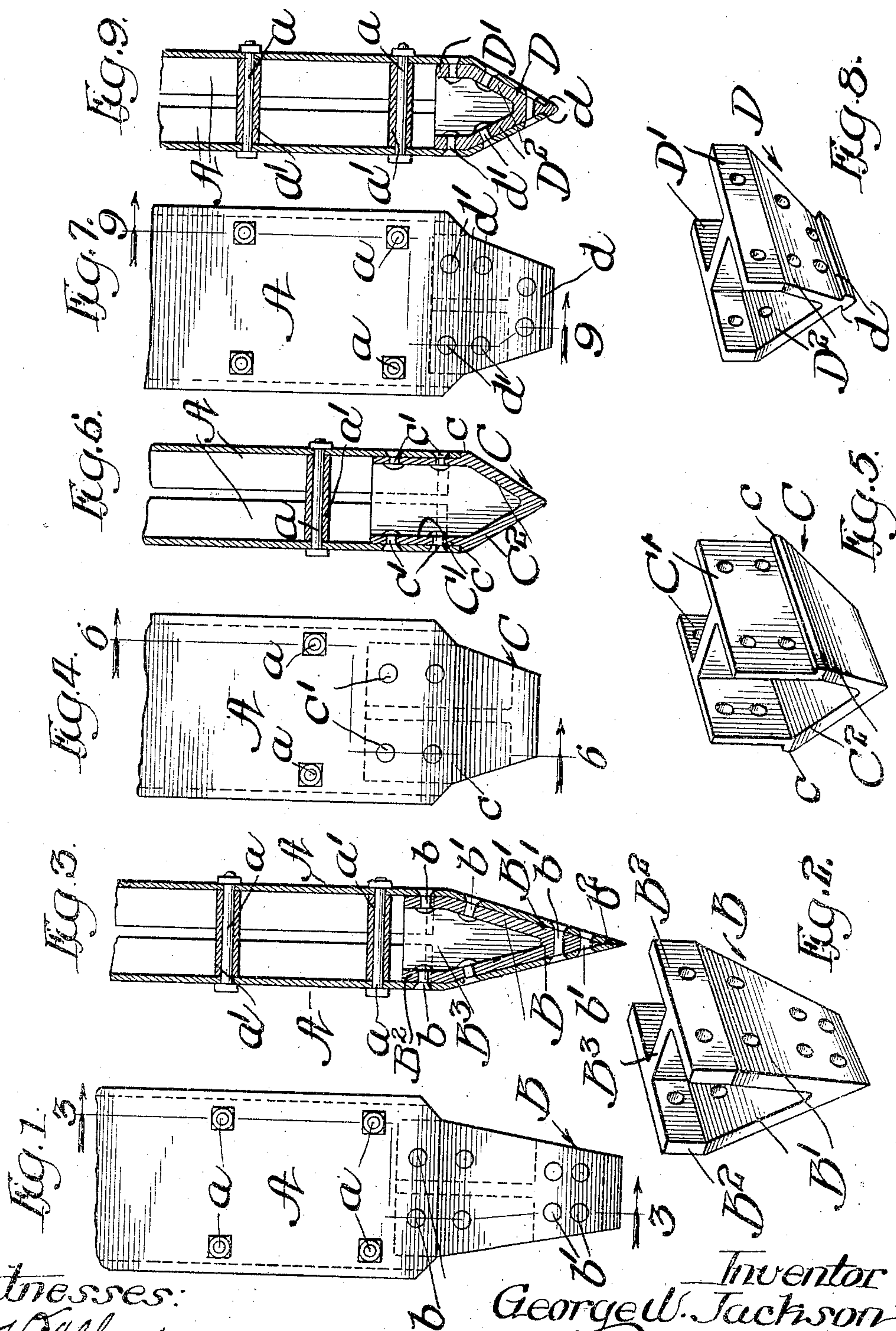


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PATENTED FEB. 4, 1908.

G. W. JACKSON.
METALLIC SHEET PILING, (DRIVING POINT).

APPLICATION FILED SEPT. 10, 1907.



Witnesses:
T. F. Kellie
W. Hall

Inventor
George W. Jackson
by Pool Brown
Attys

UNITED STATES PATENT OFFICE.

GEORGE W. JACKSON, OF CHICAGO, ILLINOIS.

METALLIC SHEET-PILING, (DRIVING-POINT.)

No. 878,141.

Specification of Letters Patent.

Patented Feb. 4, 1908.

Application filed September 10, 1907. Serial No. 392,160.

To all whom it may concern:

Be it known that I, GEORGE W. JACKSON, a citizen of the United States, and a resident of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Metallic Sheet-Piling, (Driving-Point;) and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to improvements in metallic sheet piling consisting of a plurality of rolled metal piling sections or units which are adapted to be driven into the ground edge to edge and have longitudinal interlocking guiding connections at their adjacent edges by parts so shaped as to guide a driven section from a section already driven and which permits connection and disconnection only by relative endwise movement thereof. The sections thus constitute, when driven, a continuous wall or structure, the parts of which are locked from lateral movement with respect to each other. The present invention relates to a driving point adapted to be attached to the lower ends of the sections to facilitate the driving thereof into the ground.

The invention consists in the matters hereinafter more particularly set forth and pointed out in the appended claims.

In the accompanying drawings:— Figure 1 is a view in side elevation of the lower end portion of a piling section, showing my invention applied thereto. Fig. 2 is a view in perspective of the driving point thereof detached from the piling section. Fig. 3 is a vertical section on line 3—3 of Fig. 1. Fig. 4 is a side elevation of the lower end of a piling section showing a modified form of driving point. Fig. 5 is a perspective view of the point shown in Fig. 4. Fig. 6 is a vertical section on line 6—6 of Fig. 4. Fig. 7 is a side elevation of the lower end of a piling section showing still another form of driving point. Fig. 8 is a perspective view of the piling point shown in Fig. 7. Fig. 9 is a vertical section, taken on line 9—9 of Fig. 7.

As shown in said drawings, (Figs. 1, 2 and 3), A A designate a pair of channel bars of which the units or sections herein shown are made. They are arranged parallel to each other and with their flanges directed inwardly and separated a distance to receive

a mating piling section. Said channel bars are held rigidly together by means of bolts *a* which extend through the webs of the bars and spacing sleeves *a*¹, the web portions of the channel bars being clamped between the heads and nuts of said bolts and the end faces of said sleeves.

B designates a wedge-shaped guiding point or fitting which may be made of cast metal. It comprises two flat, slanting side members B¹ B¹ arranged at an acute angle to each other to constitute a lower sharp edge or point and two upper parallel members B² B². Said parts are joined by a transverse connecting web B³.

The driving point is placed in position between the lower ends of the two channel bars A A of the piling section, with the flat, exterior faces of the slanting and parallel members engaging the inner or adjacent faces of the web portions of the two channel bars. From the portions of said channel bars which extend below the members B² B² the flanges are cut away and the webs of the members below the cut away parts of the flanges are bent inwardly into flat engagement with the side faces of the slanting portions B¹ B¹ of the driving point. Said points are held in position between the members by means of rivets *b* *b*¹. The bottom edges of said web portions of the channel members are beveled and brought together below the bottom edge of the driving point as indicated by the line *b*² in Fig. 3.

In Figs. 4, 5 and 6 is shown a driving point C similar to that shown in Figs. 1, 2 and 3, except that the parallel portions C¹ are longer than the portions B² of the first described construction, and the outer faces of said parallel portions are recessed to form exterior horizontal shoulders *c* between said parallel portions C¹ and the slanting portions C² of the point. The driving point C is placed in position between the webs or the channel bar members with the outer faces of its parallel members C¹ in engagement with the inner faces of the web portions of the two channel bar members and the lower end margins of said channel bar members rest upon the shoulders *c*. The point is fixed to the members of the section by means of rivets *c*¹.

In Figs. 7, 8 and 9 is shown a form of driving point D generally similar to that shown in Figs. 1, 2 and 3, it comprising upper parallel portions D¹ D¹ and lower slanting

side portions $D^2 D^2$. The slanting side portions are thickened at their lower edges to form exterior upwardly facing, horizontal shoulders d which are engaged with the lower end margins of the two channel bar members. The point is attached to said channel bar members by rivets d^1 . The shoulders c and d relieve the holding rivets c^1 and d^1 from shearing stress due to the action of the hammer on the piling section when the latter is being driven.

The points B, C and D are made narrower than the webs of the channel bar members so as to provide spaces at the sides thereof for the interlocking flanges of the adjacent or mating sections of the piling, which latter may be made of I-beam form, as shown in my prior United States Letters Patent No. 685,447, dated October 29th, 1901.

The driving point described facilitates the driving of the sections into the earth and avoids tendency of the side members of the section bending or springing outwardly in case the section being driven strikes an obstruction, such as a stone. Said driving point may be applied to other forms of piling sections, and possesses special utility in its application to a two-part section such as herein shown.

I claim as my invention:—

1. The combination with a metal sheet piling section comprising two side members secured rigidly together and provided with marginal inwardly directed flanges, of a tapered driving point fitting between and fixedly attached to the lower ends of said members, said driving point being narrower

than the side members and the flanges of the side members being cut away a distance above the lower end of said driving point.

2. The combination with a metal sheet piling section comprising two side members secured rigidly together, of a tapered driving point fitting between said members, said side members of the section fitting outside the tapered portions of the point and means for fixedly attaching the point to said members.

3. The combination with a metal sheet piling section comprising two side members secured rigidly together, of a tapered driving point fitting between said members, said side members of the section fitting outside the tapered portions of the point, and means for fixedly attaching the point to said members, said tapered portions of the point being provided with shoulders against which lower end margins of the section members abut.

4. An integral driving point for metal sheet piling sections comprising upper parallel portions, lower converging or tapered portions and a strengthening web extending between and connecting the lateral parts of said driving point.

In testimony that I claim the foregoing as my invention I affix my signature in the presence of witnesses, this 5th day of September A. D. 1907.

GEORGE W. JACKSON.

Witnesses:

MANLEY W. CLUXTON,
HOWARD SANSCOIK,
BEN. F. KIMMIT,
THOMAS C. JACKSON.