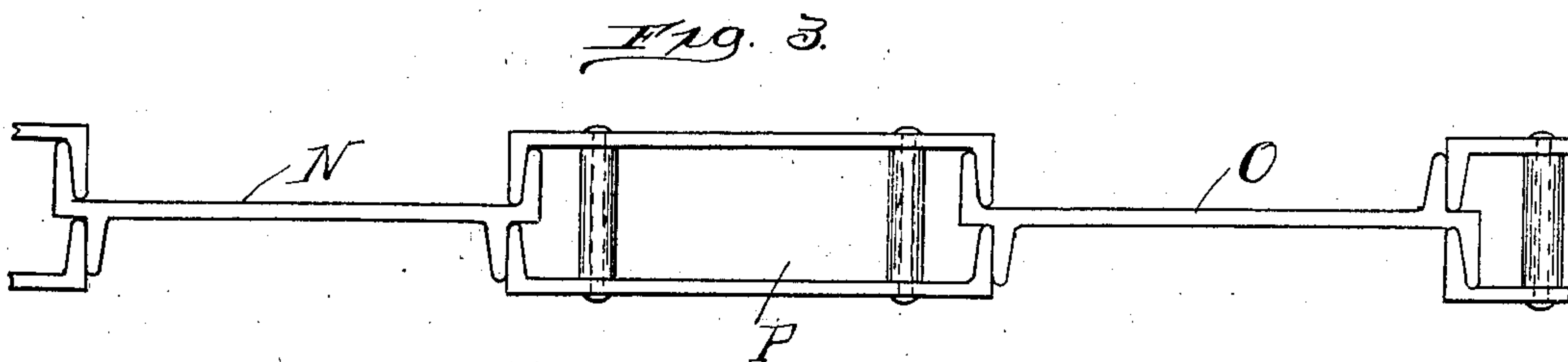
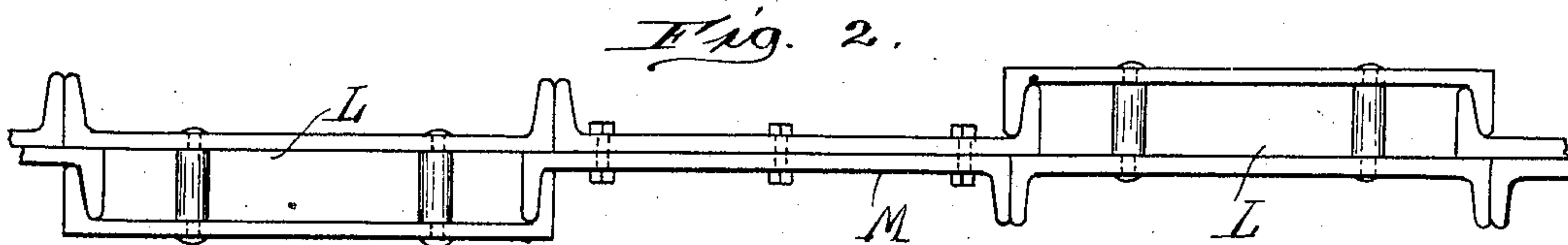
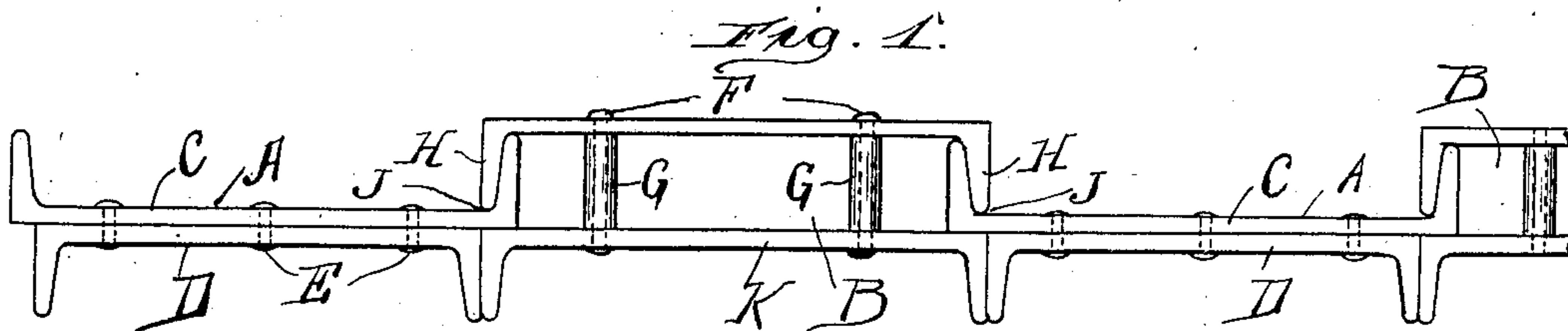


No. 832,407.

PATENTED OCT. 2, 1906.

G. E. NYE.
INTERLOCKING METAL SHEET PILING.

APPLICATION FILED JUNE 26, 1906.



Witnesses:

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UNITED STATES PATENT OFFICE.

GEORGE E. NYE, OF CHICAGO, ILLINOIS, ASSIGNOR OF ONE-HALF TO
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INTERLOCKING METAL SHEET-PILING.

No. 832,407.

Specification of Letters Patent.

Patented Oct. 2, 1906.

Application filed June 26, 1906. Serial No. 323,514.

To all whom it may concern:

Be it known that I, GEORGE E. NYE, 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 Interlocking Metal 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 a novel construction in interlocking metal sheet-piling, the object being to provide piling which is made up practically exclusively of channel-bars and which is exceedingly stiff and therefore adapted for heavy work; and it consists in the features of construction and combinations of parts hereinafter fully described and claimed.

In the accompanying drawings, illustrating my invention, Figure 1 is a top plan view of sheet-piling constructed in accordance with my invention. Figs. 2 and 3 are similar views of modified forms of construction.

My said piling consists of a plurality of units each of which consists of two channel-bars, said units being respectively designated by A and B. The unit A consists, preferably, of two channel-bars C and D, the latter being of less width than the former—as, for example, a fourteen inch and a twelve inch channel-bar disposed so that the outer faces of their webs are in contact and being secured together by means of rivets E passing through said webs. Said channel-bars C and D are relatively so disposed that the side edges thereof are parallel and so that the side edges or outer faces of the flanges of the channel-bar D are disposed equidistant from the side edges or outer faces of the flanges of said channel-bars C. The unit B consists of two channel-bars of equal dimensions disposed parallel with each other and facing in the same direction. Said channel-bars are secured together by means of bolts or rivets F passing through the webs thereof and through interposed sleeves G of a length equal to the greatest width of the flanges of said channel-bars. The latter are thus disposed a given distance apart, so that between the free ends of the flanges H of one of said channel-bars and the outer face of the web of the other channel-bar slots J are provided

equal in width to the thickness of the web of the channel-bar C, which is adapted to be received therein. In driving said units the unit B; for example, may be first driven into the ground and the unit A then driven by inserting one flange of the channel-bar C into said unit B, while a flange of the channel-bar D abuts against the outer face of the channel-bar K of the unit B. Said unit A is thus guided while being driven and is held against lateral movement with relation to the unit B, or vice versa, in all directions.

The above-described construction may readily be modified by using channel-bars of equal width throughout, as shown in Fig. 2, in which the units L correspond in construction with said units B, while the units M consist of two channel-bars of equal width disposed with the outer faces of their webs in contact, but offset laterally, so that the edge portion of one of said channel-bars projects beyond the adjacent edge portion of the other channel-bar a distance equal to the thickness of the base of one of said flanges. Said last-named channel-bars are bolted or riveted together in the same manner as said channel-bars C and D. This construction I do not, however, consider to be as advantageous as the construction shown in Fig. 1 for the reason that the units L must be alternately oppositely disposed and zigzag piling thus produced.

In Fig. 3 I have illustrated further modifications in construction in which the units N and O, corresponding, respectively, to the units A and M of Figs. 1 and 2, consist, provided that they can be successfully produced by means of rolls, of a single piece of metal respectively. This would obviously be very advantageous in enabling the weight of such units to be considerably reduced and further avoiding the cost of riveting two channel-bars together in order to produce the shape desired. In said figure I have further illustrated a modified form of construction of hollow unit P. The latter consists of two channel-bars of equal width relatively disposed so that the free edges of their flanges oppose each other and are separated so as to provide longitudinal slots of a width sufficient to receive the web or webs of the units N and O or their equivalent, said channel-bars being secured together by means of bolts and sleeves in the same manner as said units B. (Shown in Fig. 1.)

The units A of Fig. 1 equivalent to the units N of Fig. 3, or the units M of Fig. 2, equivalent to the units O of Fig. 3, may obviously be used in place of the latter in connection with said units P. This I have omitted from illustration, however, as being superfluous.

This construction affords great strength and is particularly adapted, as before stated, for heavy work. The interlocking of adjacent units I deem particularly advantageous by reason of the fact that the overlapping of two flanges and the abutting against each other of two flanges at each point prevents relative lateral movement and at the same time affords great stiffness at these points. Aside from the sleeves G employed it will be noted that all material used in construction may be purchased on the open market and when removed after completion all coffer-dams or the like may be disassembled and again employed as structural iron for ordinary structural purposes without losing appreciably in value.

I claim as my invention—

1. Interlocking sheet-piling comprising in combination a hollow unit consisting of parallel channel-bars, and having longitudinal slots in its sides, and a unit comprising a flat plate provided with a flange on each of its side edges, and with two flanges disposed inwardly of its side edges; said flanges being relatively opposed and said edge flanges en-

tering said hollow unit engaging the inner faces of the side walls thereof, the inwardly-disposed flanges of said second unit abutting against the outer faces of the side walls of adjacent hollow units and coacting with the edge flanges to hold said units against relative lateral displacement.

2. Interlocking sheet-piling comprising in combination, a unit provided on opposite faces with flanges, the flanges on one face thereof being offset with relation to the flanges of the other face thereof, and a hollow unit consisting of two parallel channel-bars secured to each other and having the flanges of one thereof opposed to and separated from the other channel-bar to provide longitudinal slots in said unit, said hollow unit being adapted to receive an outer flange of each of the next adjacent first-named units, and the inner flanges of the latter being adapted to abut against the outer flanges of the channel-bars of said hollow unit, the inserted flange of said first-named unit abutting on its inner face against the inner face of one of the flanges of said hollow unit.

In testimony whereof I have signed my name in presence of two subscribing witnesses.

GEORGE E. NYE.

Witnesses:

RUDOLPH WM. LOTZ,
ARTHUR C. LOTZ.