E. H. Angamar.

Pile Driver.

No. 24,708. Patented Jul. 12, 1859.

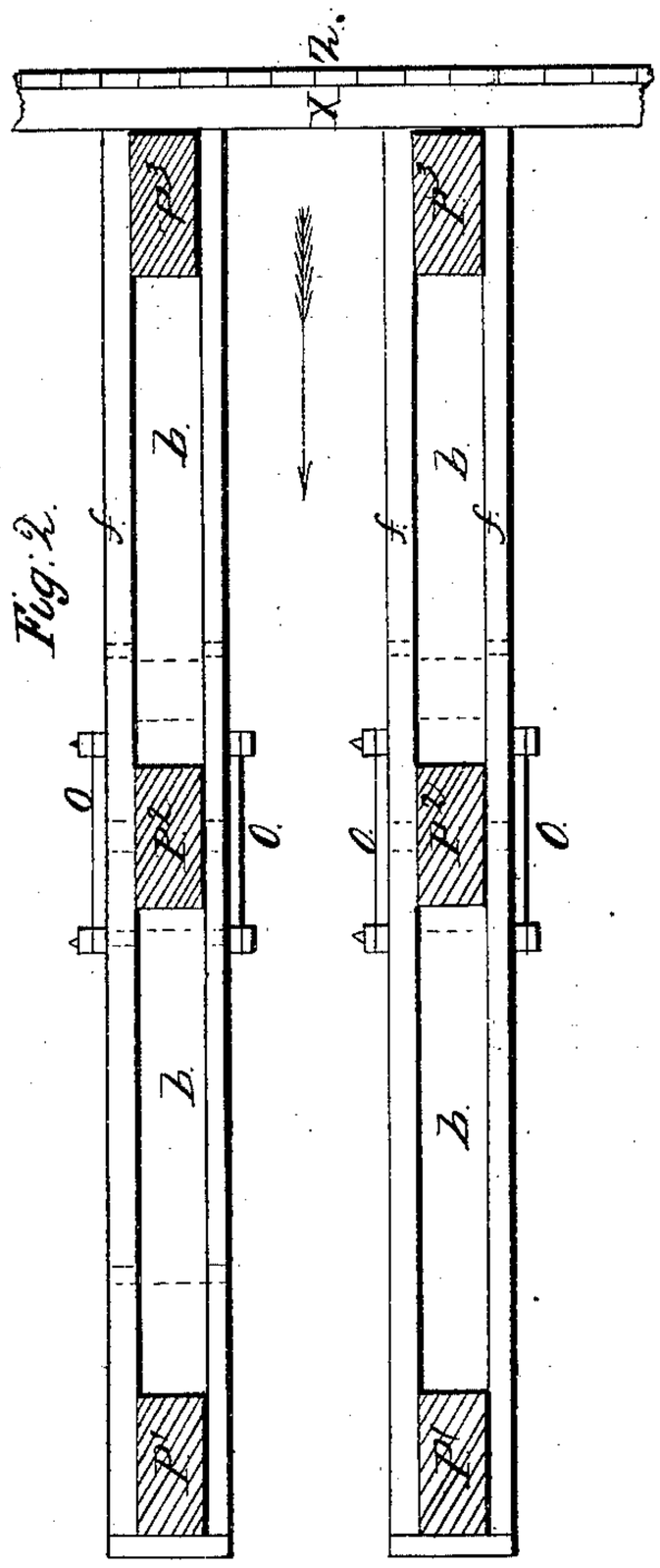

Fig. 2.

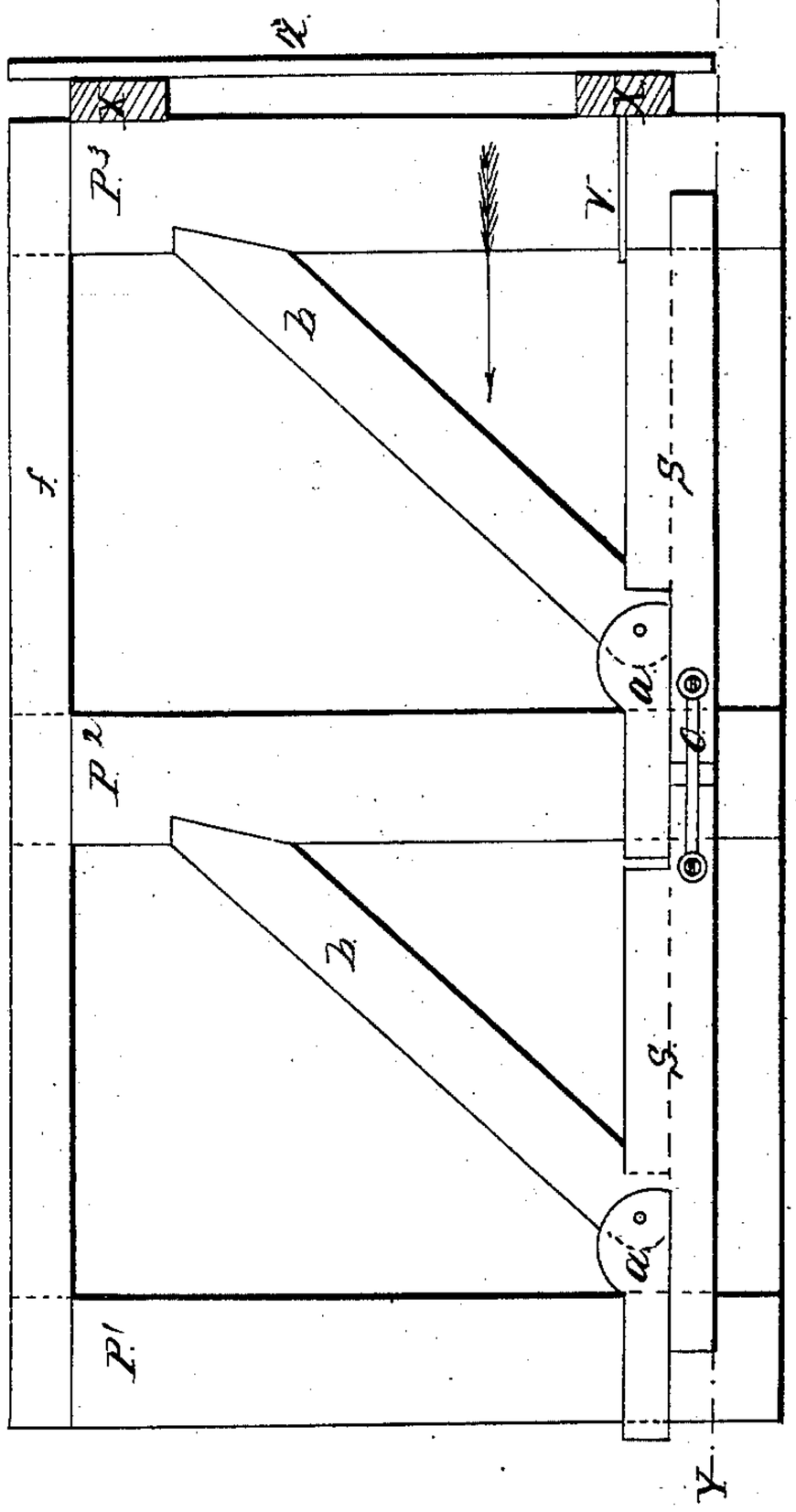

Fig. 1.

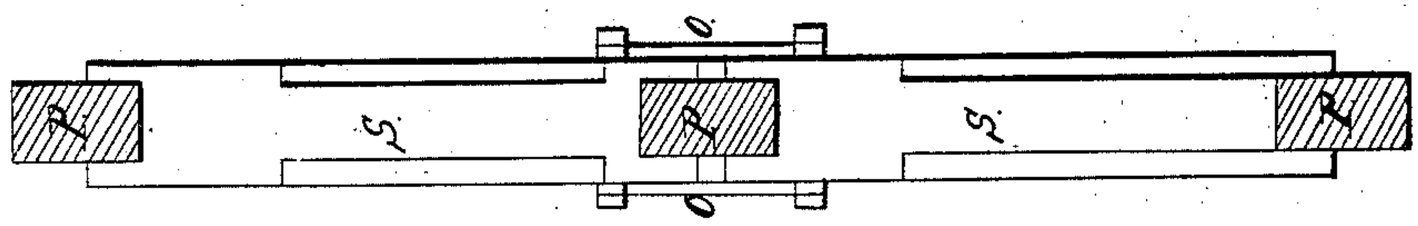

Fig. A.

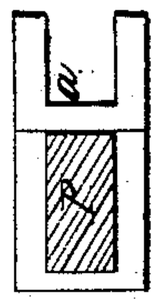

Fig. B.

Witnesses;
Seamen Ammerman
Wm. H. Holland.

Inventor;
E. H. Angamar

N. PETERS, PHOTO-LITHOGRAPHER, WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

E. H. ANGAMAR, OF NEW ORLEANS, LOUISIANA.

MODE OF STAYING PILES FOR WHARVES, PIERS, &c.

Specification forming part of Letters Patent No. 24,708, dated July 12, 1859; Reissued March 6, 1860, No. 925.

To all whom it may concern:

Be it known that I, E. H. ANGAMAR, of the city of New Orleans, parish of Orleans, State of Louisiana, have made a new and useful Improvement in the Mode of Supporting Piles to be Used in the Stopping of Crevasses, Erecting Breakwaters, &c.; and I hereby declare 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, making a part of this specification, the same letters being used to designate the same parts shown in the different figures.

Figure 1 a side elevation; Fig. 2, a top view; Figs. A and B, parts to be used in connection with the piles, and from the use of which the base of the improvement consists.

As I intend the application of this improvement particularly to be used in the stopping of crevasses, will confine my description more specially to this purpose, believing this will be ample to instruct how to use in the erection to resist currents of water requiring to be counteracted, by the use of piling. The water in passing through the frame work, is supposed to run the same direction as the arrows indicate; and the nearer the margin of the river the more difficult it is to make the piles permanent, owing to the water being deeper, with the tendency which the banks have to cave in, and wash away, as well as the force of the current soon loosening piles so placed, when not supported at both the base and the top. The base in which the piles are to be driven, having no uniformity of evenness, arrangements must be made to take the support for the piles from such a surface.

In driving the piles, I first drive the one farthest from the margin of the river designated by drawings P′ and after this drive the piles P^2 and P^3. When these have been driven, the frame, S, S, is passed over these piles, as seen by Fig. A, being joined by the links, O, for the purpose of allowing them to settle on the surface—which they can be loaded to cause them to do so. The line, Y, in Fig. 1 is supposed to be the surface of the earth below the water. The sleeves, *a*, seen in Fig. 1 and Fig. B make the hinges for the braces, *b*, that support the piles—after the frames, S, S, have been settled down to the base. The sleeves, *a*, having the braces attached, are passed over the head of the piles, and rest on the frames, S, S, which supports the braces *b*. After this, they are framed into the piles—the links, O, allowing the frames, S, S, to assume their position on the bottom, to meet the inequality of the surface at the foot of each pile, the lower frame, X, on piles, P^3, having a stirrup or clamp, which will go around the pile to insure its being retained in its desired position when forced down, the upper cross frame, X, making a cross tie to the piles, and a support for plank, X. The frames, *f*, are binders for the top of the piles.

After this my description, what I claim as new and desire to secure by Letters Patent—

I claim in combination with the piles, the frames, S, S, and sleeves, *a*, and the braces *b*—when made and arranged as, or substantially as, and for the purpose set forth.

E. H. ANGAMAR.

Witnesses:

FRANCIS ARMSTRONG,

WM. H. HOLLAND.