

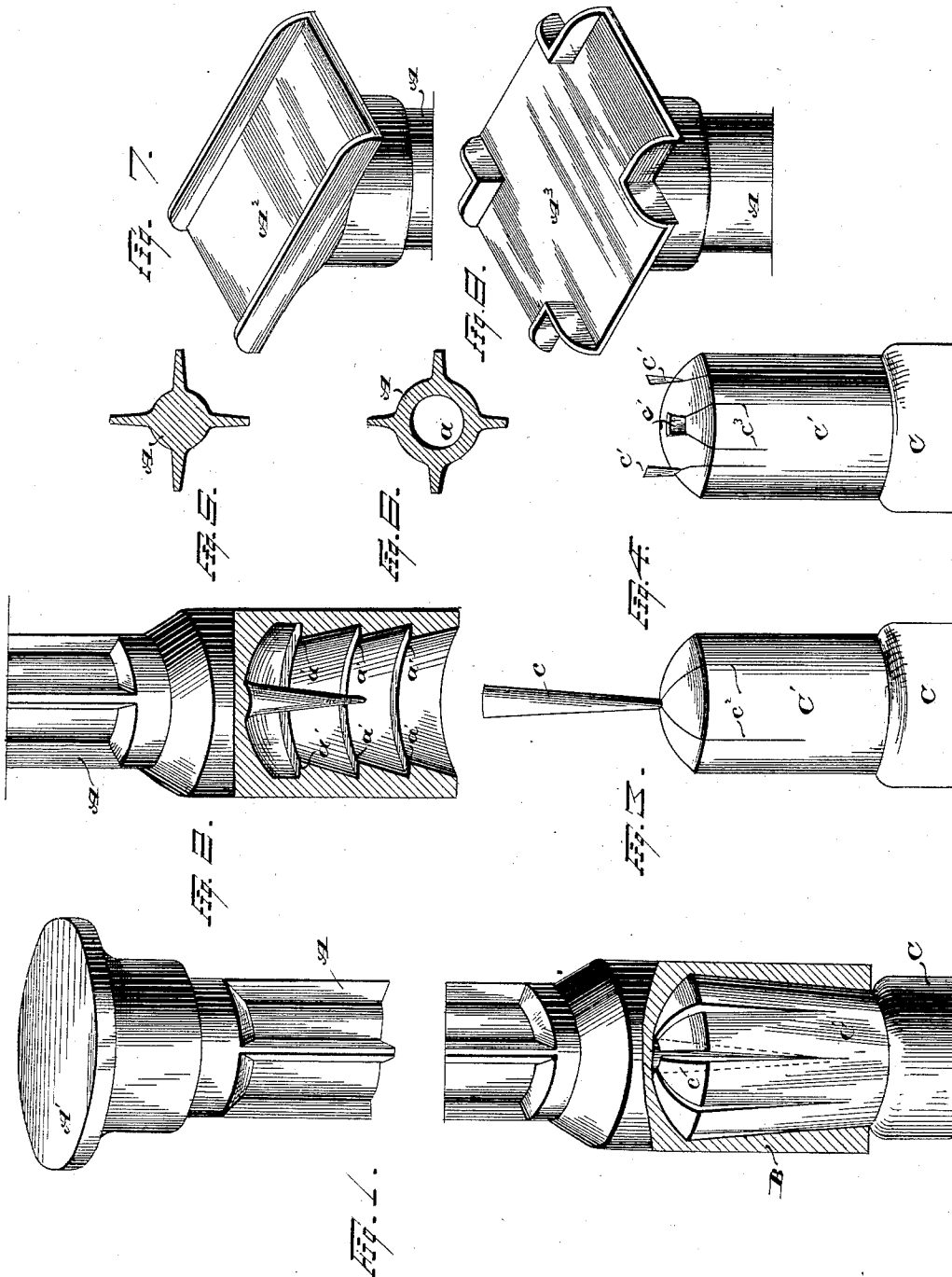
(No Model.)

H. SABINE.

METAL EXTENSION CAP FOR PILES.

No. 340,820.

Patented Apr. 27, 1886.



WITNESSES

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UNITED STATES PATENT OFFICE.

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METAL EXTENSION-CAP FOR PILES.

SPECIFICATION forming part of Letters Patent No. 340,820, dated April 27, 1886.

Application filed October 17, 1885. Serial No. 180,146. (No model.)

To all whom it may concern:

Be it known that I, HYLAS SABINE, of Columbus, in the county of Franklin and State of Ohio, have invented certain new and useful
5 Improvements in Metal Extension-Caps for Piles; 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 pertains to make and
10 use the same.

My invention relates to improvements in metal extension-caps for piles, in which the lower end of the cap is provided with a socket that is preferably tapering, the larger end
15 presenting upward for embracing the end of the pile. The pile is cut off under water and sized down, forming a tenon to receive the cap, and one or more wedges, tapering plugs, or suitable devices are provided to expand
20 the tenon in the socket to hold the cap firmly in position on the pile, the object being to provide a cheap, convenient, and effective means of capping piles below the water-line.

With these objects in view my invention
25 consists in certain features of construction and in combination of parts, hereinafter described, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a view in perspective of my improved cap in
30 position on the pile, a portion of the cap being broken away to show the tenon of the pile in position in the socket of the cap. Fig. 2 shows a modification of the cap-socket. Figs. 3 and 4 are side elevations showing piles that
35 have been tenoned to receive caps, showing, also, different forms and locations of wedges for expanding the respective tenons. Figs. 5 and 6 are cross-sections of caps, taken through the respective shafts of the same. Figs. 7 and
40 8 are views in perspective showing different forms of detachable heads for the caps.

The cap is usually of cast-iron, with a shaft, A, of any desired length or form in cross-section and integral with the socket D, the latter being preferably of the dovetailed variety
45 shown in Fig. 1—that is, the inner surface is conical with the base thereof presenting upward.

The piles C are cut off, usually, under water
50 and sized down to form tenons, C', of suitable size and shape for entering the socket of the cap. Wedges are employed to expand the

ends of the tenons in the socket. These wedges may be round, rectangular, or of other forms in cross-section, according to cir-
55 cumstances. In Fig. 3 a round wedge or plug, c, is shown placed at the center of the tenon. In Fig. 4 a series of flat wedges, c', is shown located near the periphery of the tenon. The tenons may be slitted by saw or
60 other tool, as shown, respectively, by lines c² and c³, so that the tenons will expand easily and evenly. The wedges c' may be driven into the tenons far enough to hold them in place, and are then driven home by the cap
65 as the latter is forced down upon the tenon; or these wedges may depend from the upper wall of the sockets, being made integral with the cap, and the same arrangement may be had with the plugs c. A preferable construction
70 is to have the chamber a, shown in Fig. 6, extend to and in open relation with the socket, and to drive the plug c (by means of a bar, ram, or suitable tool operating in the chamber a) after the cap is in position on the pile.
75 The wedges c' may also be used as aforesaid in addition to the plug c.

If preferred, a series of inwardly-projecting sharp-edged ridges or projections, a', may be provided inside of the socket to indent the
80 surface of the tenon as the latter is expanded as aforesaid. The rough surface of the casting will, however, usually be found sufficient for the purpose, so that when the tenon is expanded as aforesaid the cap will be firmly
85 held in position on the pile.

Several forms of detachable heads are shown, respectively A', A², and A³, Figs. 1, 7, and 8. These or other forms may be employed, according to the timbers or other structure that
90 is to be placed on the cap.

The piles are cut off under water, usually, by means of a circular saw mounted on a swinging or sliding frame, and the piles sized
95 down to fit the socket of the cap by means of a hollow auger driven by power. These devices are well known, and as they form no part of my present invention, they will require no further description.

With suitable machinery, as aforesaid, the
100 piles are quickly severed and tenoned, and my improved cap may be applied with equal dispatch.

What I claim is—

1. The combination, with a metal extension-cap for piles, consisting, essentially, of a shaft having a tapering socket at the lower end adapted to receive the upper end of the pile, the said socketed portion of the shaft being integral with the main body of the shaft, of a wedge for expanding the upper end of the pile in the socket after the extension-cap has been placed on the pile, substantially as set forth.

2. The combination, with a metal cap for piles, said cap having a socket for receiving the tenon or end of the pile, said socket hav-

ing ridges or projections for indenting the wood, of one or more wedges, tapering plugs, or suitable device for expanding the tenon or end of the pile in the said socket, substantially as set forth.

In testimony whereof I sign this specification, in the presence of two witnesses, this 6th day of October, 1885.

HYLAS SABINE.

Witnesses:

ALBERT E. LYNCH,
CHAS. H. DORER.