No. 613,385. Patented Nov. 1, 1898.

H. McDERMID.

CAP FOR PILES.

(Application filed May 16, 1898.)

(No Model.)

Fig. 1.

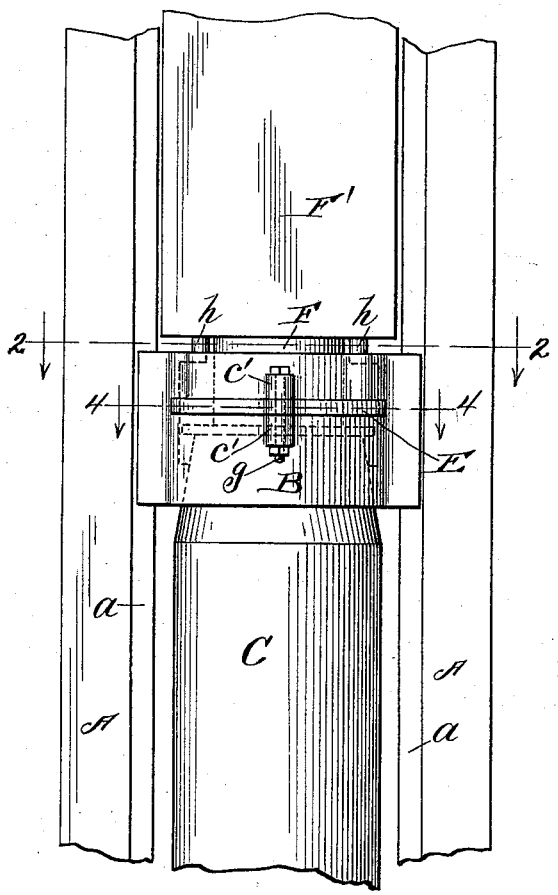


Fig. 3.

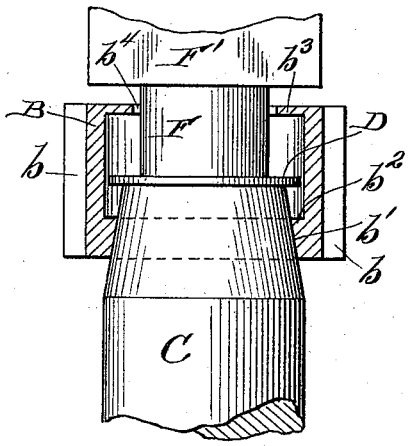


Fig. 4.

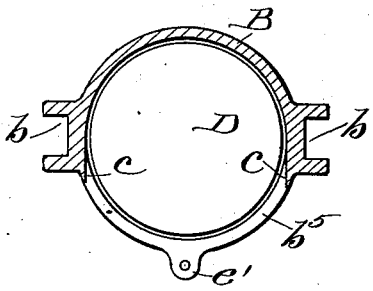


Fig. 2.

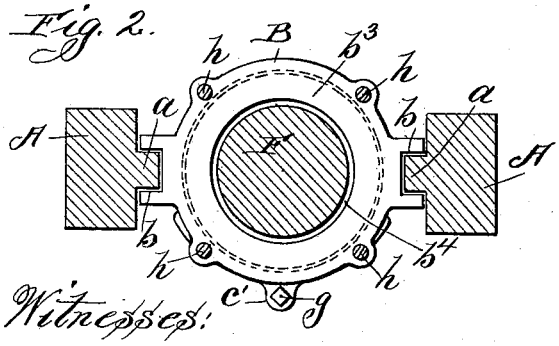
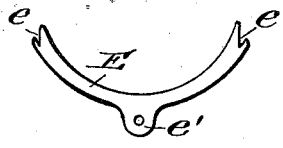


Fig. 5.



Witnesses:
R. J. Jaeter.
E. A. Duggan.

Inventor:
Hugh McDermid.
By Chas. C. Tillman
Atty.

UNITED STATES PATENT OFFICE.

HUGH McDERMID, OF CHICAGO, ILLINOIS, ASSIGNOR TO THE VULCAN IRON WORKS, OF SAME PLACE.

CAP FOR PILES.

SPECIFICATION forming part of Letters Patent No. 613,385, dated November 1, 1898.

Application filed May 16, 1898. Serial No. 680,817. (No model.)

To all whom it may concern:

Be it known that I, HUGH McDERMID, 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 Caps or Hoods for Piles, of which the following is a specification.

This invention relates to pile-driving, and especially to a cap or hood to be placed on the upper end of the pile.

The principal object of my invention is to provide a protection for the upper end of the pile to prevent its being split, battered, or crushed by the force of the blows from the drop or hammer of the driver, which protecting device shall be of simple and inexpensive construction and of such a character as to obtain or secure the full effect of the blows of the hammer on the pile.

Another object of my invention is to provide a hood or cap to receive and hold the upper end of the pile and a protecting-plate thereon, as well as to receive the lower portion of the hammer or drop, which hammer or drop may be guided by suitable rods secured to the cap or hood.

With these and other objects and advantages in view, which will appear in the description hereinafter contained, my invention consists in certain peculiarities of the construction, novel arrangement, and operation of the parts thereof, as will be hereinafter more fully set forth and specifically claimed.

In order to enable others skilled in the art to which my invention pertains to make and use the same, I will now proceed to describe it, referring to the accompanying drawings, in which—

Figure 1 is a view in front elevation of a portion of a pile-driver, showing my improved cap or hood in position on the upper end of the pile. Fig. 2 is a plan sectional view taken on line 2 2 of Fig. 1. Fig. 3 is a view, partly in elevation and partly in section, of a portion of the hammer, a part of a pile with the cap or hood, and the protecting or striking plate in position on the latter. Fig. 4 is a plan sectional view of the cap or hood, taken on line 4 4 of Fig. 1 and showing the protecting-plate in position; and Fig. 5 is a detached view of the door used for closing the opening through which the protecting or striking plate is inserted into the cap or hood.

Similar letters refer to like parts throughout the different views of the drawings.

A represents the uprights or leaders of the driving-frame, which may be of the ordinary or any preferred construction, and have on their adjacent surfaces ribs *a* to engage recesses *b* on the hood or cap B, which is preferably made of metal and is usually cylindrical in form, as shown in the drawings. The cap or hood B is formed with a hollow or cavity, usually cylindrical in form, and has in its lower portion an opening b', which communicates with the cavity to receive the upper end of the pile C, which portion may be tapered, as shown in Figs. 1 and 3, to fit the said opening.

The lower portion of the cavity of the hood or cap is provided with an annular shoulder b^2, on which the protecting or striking plate D may rest when the cap or hood is removed from the pile. This shoulder may be produced by making the opening b' tapered or flaring, as shown in Fig. 3, or it may be otherwise formed or provided.

The upper portion of the cap or hood is provided with an internal annular flange b^3, which forms an opening b^4 for the reception and operation of the head F of the hammer F', which may be operated by any suitable mechanism and power. The cap or hood is formed in its wall with a horizontal slot or opening b^5, through which the striking or protecting plate may be inserted into the cavity of the hood, and is preferably located some distance above the annular shoulder b^2 to prevent the possibility of the plate or disk passing through said opening when the cap shall have been removed from the pile. The edges *c* of that portion of the cap or hood at the ends of the slot or opening b^5 are preferably pointed or wedge-shaped (see Fig. 4) to engage the notches *e* in the ends of the door E, used for closing the opening or slot b^5, and which door is provided on its external surface with a lug e', having an opening through which a bolt *g* may be passed to secure the door in position on the cap or hood, and for

this purpose the cap or hood is provided with lugs or bosses c', having openings to receive the said bolt.

By reference to Fig. 3 of the drawings it will be seen and clearly understood that as the openings b' and b^4 are smaller than the plate or disk D it will be impossible for the same to be removed from the cavity of the cap or hood except through the opening or slot b^5, and as said slot or opening is located above the shoulder it will be securely retained within the hood when the latter is removed from the pile, thus avoiding danger of the plate falling therefrom. It is also apparent by the construction of my cap or hood that the full force and effect of the hammer is given directly to the plate which rests on the upper end of the pile through the opening b^4 in the hood. Secured to the upper portion of the cap or hood are a number of rods h, which pass through suitable openings in the hammer or drop and are used for guiding the same; but I may sometimes dispense with said rods without departing from the spirit of my invention. The cap or hood being formed with recesses b on its sides, which engage the ribs a on the standards or leaders A of the driving-frame, it is evident that the cap will follow the pile as it is driven downward and will retain it in a vertical position.

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

1. A hood or cap for piles, consisting of a hollow piece having an opening in its walls and openings in its top and bottom, said openings being smaller than the hollow of the piece, substantially as described.

2. The combination with a hollow piece having an opening in its walls and openings in its top and bottom, said openings being smaller than the hollow, and a plate or disk located within the cavity, substantially as described.

3. The combination with a hollow piece having an opening in its walls and openings in its top and bottom, said openings being smaller than the hollow, a door having recesses in its ends to engage portions at the ends of the opening in the walls, and a plate or disk located within the hollow, substantially as described.

4. The combination of a hollow piece provided with recesses on its sides, an opening in its walls and openings in its top and bottom, a door having recesses in its ends to engage portions at the ends of the opening in the walls, and a plate or disk located within the hollow, substantially as described.

5. The combination of a hollow piece having an opening in its walls and openings in its top and bottom, said openings being smaller than the hollow, a door to close the opening in the walls, and a plate or disk located within the hollow, substantially as described.

Signed at Chicago, Illinois, this 13th day of May, 1898.

HUGH McDERMID.

Witnesses:
CHAS. C. TILLMAN,
E. A. DUGGAN.