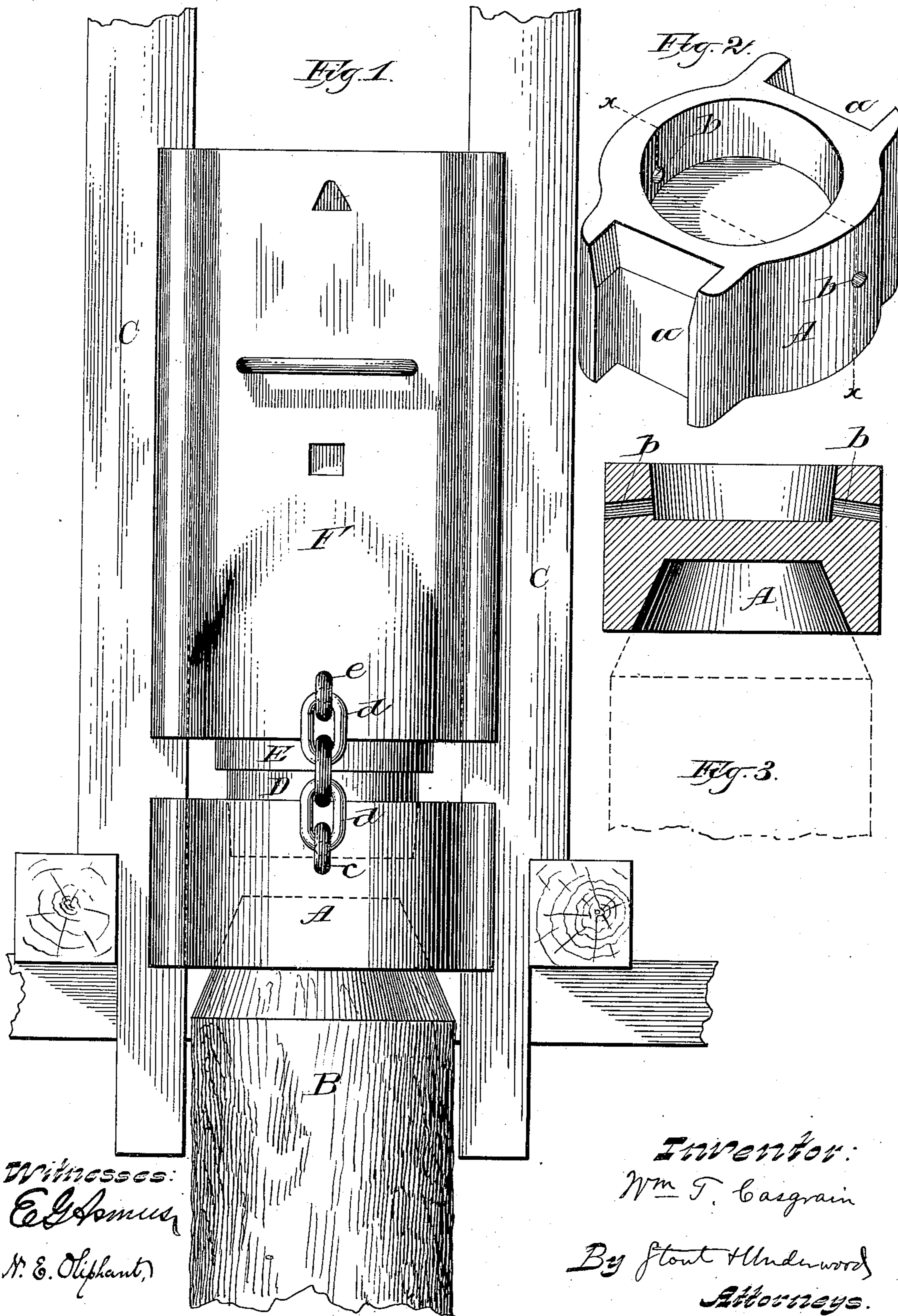


(No Model.)

W. T. CASGRAIN.
HOOD OR CAP FOR PILES.

No. 333,392.

Patented Dec. 29, 1885.



Witnesses:
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UNITED STATES PATENT OFFICE.

WILLIAM T. CASGRAIN, OF MILWAUKEE, WISCONSIN.

HOOD OR CAP FOR PILES.

SPECIFICATION forming part of Letters Patent No. 333,392, dated December 29, 1885.

Application filed September 10, 1885. Serial No. 176,664. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM T. CASGRAIN, of Milwaukee, in the county of Milwaukee, and in the State of Wisconsin, have invented certain new and useful Improvements in Hoods or Caps for Piles; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention relates to pile-driving.

10 In the operation of pile-driving it often occurs that the piles are either split or mashed down upon their tops by the concussion of the monkey or rammer. To overcome these difficulties, it is usual to strengthen the piles by
15 securing a band around their upper ends; but this means of protection has been found unsatisfactory, owing to the expense and trouble attendant upon placing and removing the bands.

20 Another disadvantage attending the ordinary method of driving piles lies in the use of toggle-blocks placed on each side of the pile to hold it in place between the leaders to prevent lateral displacement.

25 The object of my invention is to thoroughly overcome the difficulties above enumerated and dispense with the bands and toggle-blocks named by providing a hood or cap designed to rest upon a pile during the operation of
30 driving, and which hood or cap may be raised and suspended with the monkey or rammer when not in use, said hood or cap also acting to steady the pile between the leaders of the driver-frame. These objects I attain by the
35 construction substantially as shown in the accompanying drawings, in which—

Figure 1 is a front elevation of a portion of a pile-driver, showing the application of my invention; Fig. 2, a perspective view of the
40 hood or cap; and Fig. 3, a vertical cross-section on line *x x*, Fig. 2.

A represents my hood or cap, which consists of a metallic casting, preferably recessed at its lower portion to receive the upper end of a
45 pile, B. This recess is generally beveled and the upper end of the pile formed with a bevel corresponding thereto. The hood or cap A is formed at its ends with grooves *a*, designed to engage the leaders C of the driving-frame.
50 These grooves *a* are preferably beveled at their tops, so as to permit the ready entrance of the lower ends of the leaders should the pile be

driven to such a depth as to disengage the hood or cap from its normal position between said leaders. The upper portion of the hood 55 or cap may be also recessed to receive and retain a short timber or cushion, D, provided with a strengthening-band, E, and designed to take the blow from the monkey or rammer F, sufficient thickness of metal being left between the upper and lower recessed portions of said hood or cap, as shown in Fig. 3. In the sides of the hood or cap A are provided perforations *b*. Said perforations extend upwardly at an angle to the horizontal plane of 65 the hood or cap, and are designed to receive pins *c*, connected to links *d*, which in turn connect with pins *e*, designed to enter perforations in the sides of the monkey or rammer F, these latter perforations having an angle 70 opposite to those in said hood or cap. By this pin-and-link connection the hood or cap can be readily united to the monkey or rammer, and the whole raised suspended at any height between the leaders of the driving- 75 frame when not desired for use.

In place of the links described, I may use wire rope, with hooks or rings at each end to engage with the described pins; or the rings or hooks may be on the ends of the pins, as 80 found most convenient in any given case.

In the operation of my invention the pile to be driven is started and the hood or cap A placed in position thereon, the lower recessed portion of this hood or cap fitting upon and covering the upper end of said pile. The monkey 85 or rammer F, being disconnected from the hood or cap A, the former is operated by the general well-known means employed in this class of work. As the monkey or rammer descends 90 it strikes against the timber or cushion D, set in the upper recessed portion of the hood or cap, and the pile is forced down by the blow, this operation being repeated as often as is necessary to sink the pile to the requisite 95 depth, the latter being steadied and retained in position by the weight of said hood or cap and its engagement with the leaders of the driver-frame.

By the employment of a hood or cap for 100 piles such as I have described the upper end of said piles are protected from the blows of the monkey or rammer, and prevented from splitting or being mashed down during the

process of driving, at the same time the expensive and troublesome operation of putting a band around each pile is done away with. After the pile is driven down to a sufficient
 5 depth the hood or cap is connected to the monkey or driver by means of the linked pins being relatively inserted in the perforations in said hood or cap and monkey or rammer, and the whole hoisted up and secured until ready
 10 for another operation. Should a pile be at any time driven to such a depth as to disengage the hood or cap from its position between the leaders of the driver-frame, the beveled upper portions of the grooved ends of said hood or cap
 15 will permit of the ready entrance of the lower ends of the leaders when it is desired to hoist the hood or cap to its normal position.

This cap or hood is designed as a part of and intended to be always in position for use with
 20 relation to the other mechanism of a pile-driver.

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

25 1. A hood or cap for piles, consisting of a metallic casting having a recessed lower portion and end grooves beveled at their tops, substantially as and for the purpose set forth.

30 2. A hood or cap for piles, consisting of a metallic casting having recessed upper and

lower portions and end grooves beveled at their tops, substantially as and for the purpose specified.

3. A hood or cap for piles, consisting of a metallic casting having beveled recesses in its
 35 upper and lower portions and beveled grooves at its ends, substantially as set forth.

4. A hood or cap for piles, consisting of a metallic casting having beveled recesses in its upper and lower portions, beveled grooves at
 40 its ends, and perforations in its sides at an angle to its horizontal plane, substantially as set forth.

5. A hood or cap for piles, consisting of a metallic casting having recesses in its upper
 45 and lower portions, grooves at its ends, and perforations in its sides, in combination with a short timber or cushion designed to fit the upper recessed portion of said hood or cap, and means, substantially as described, for con-
 50 necting the latter with the monkey or rammer of a pile-driver, substantially as set forth.

In testimony that I claim the foregoing I have hereunto set my hand, at Milwaukee, in the county of Milwaukee and State of Wis-
 55 consin, in the presence of two witnesses.

WILLIAM T. CASGRAIN.

Witnesses:

H. G. UNDERWOOD,
 MAURICE F. FREAR.