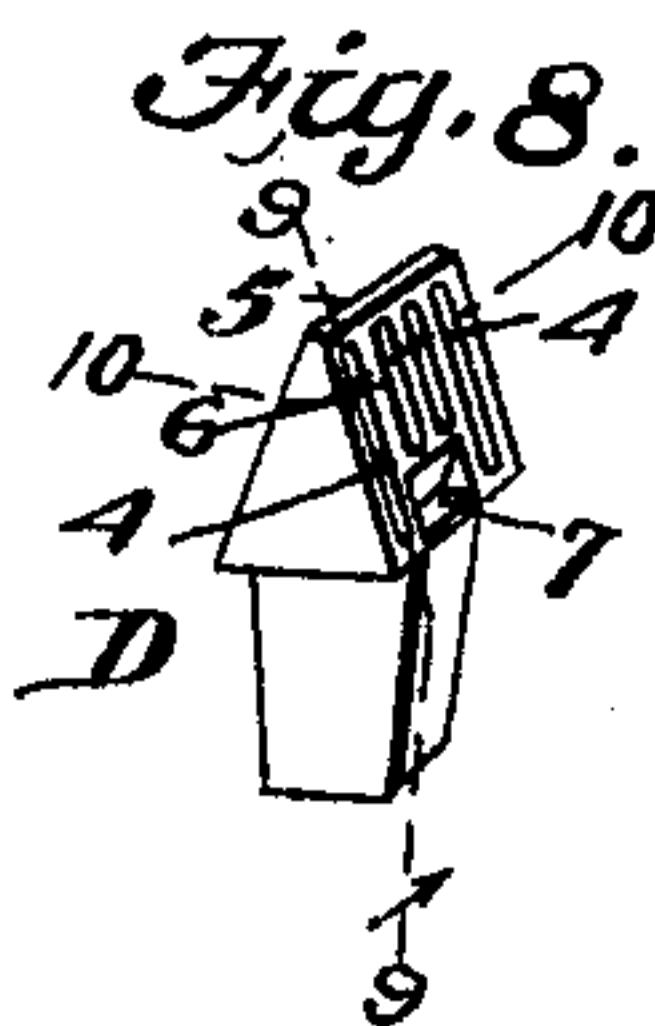
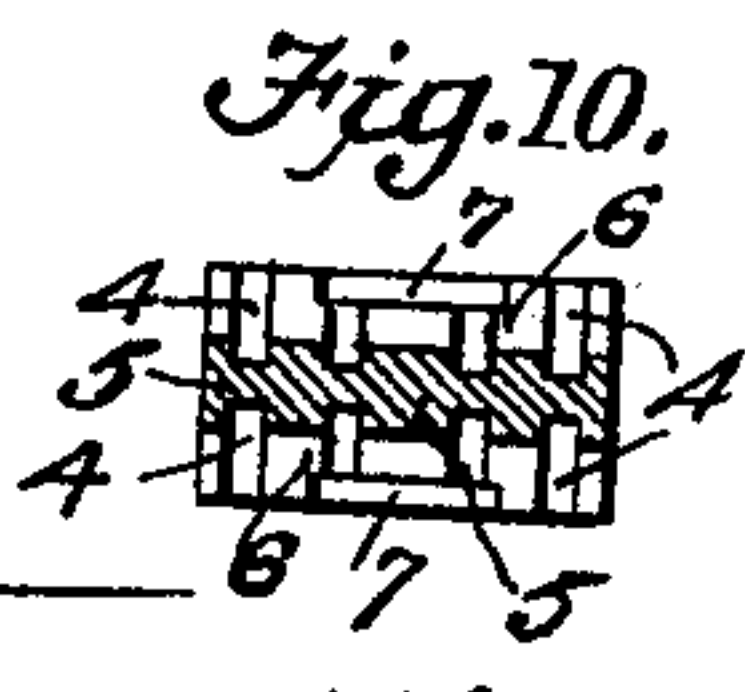
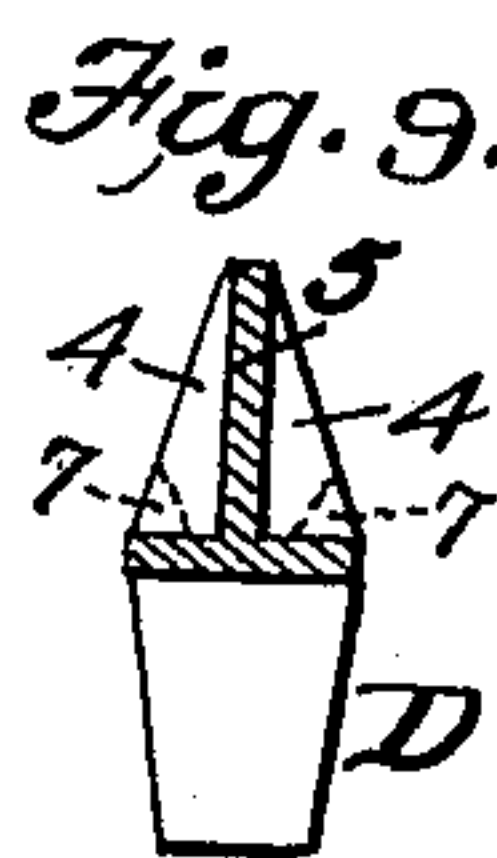
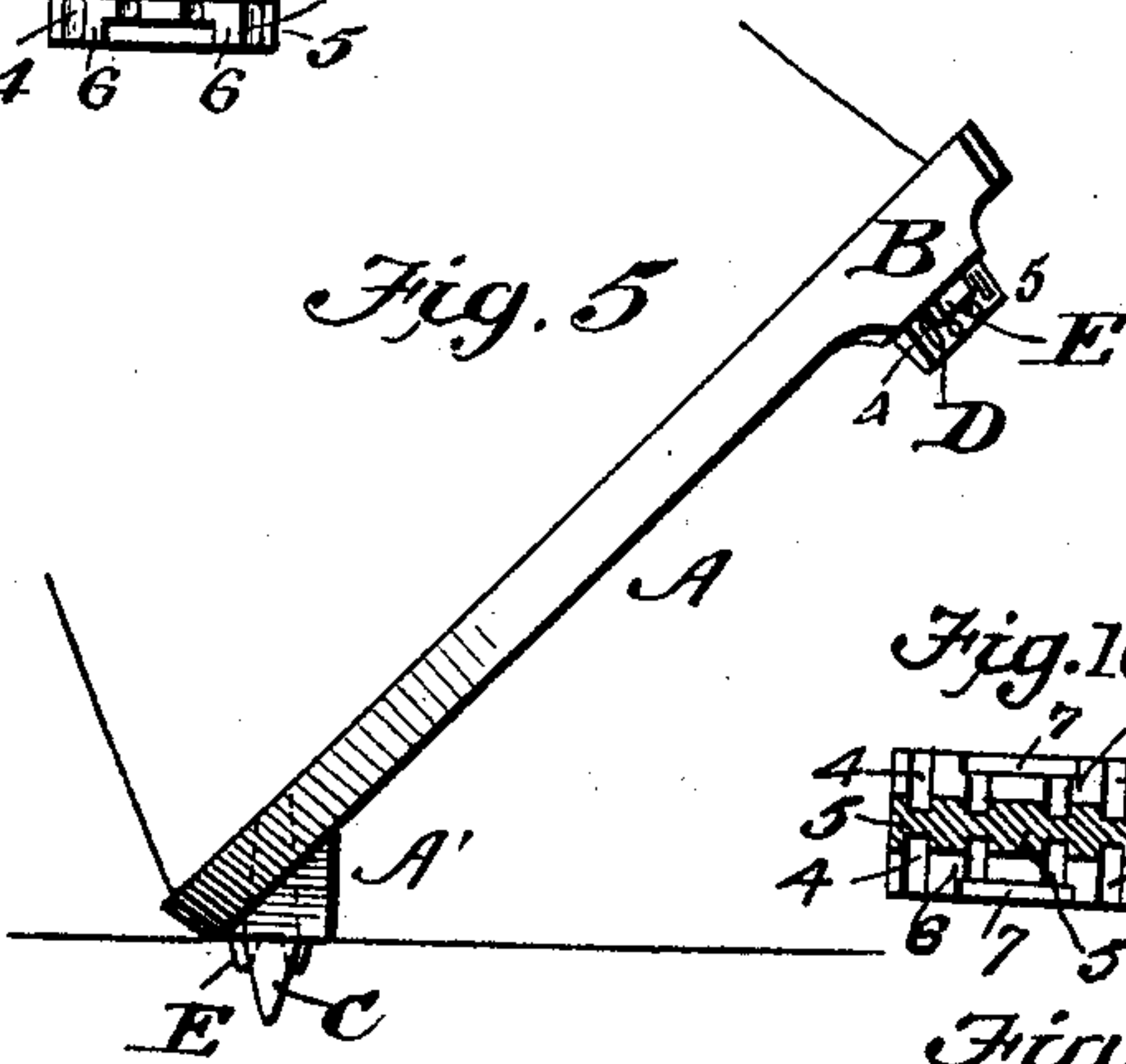
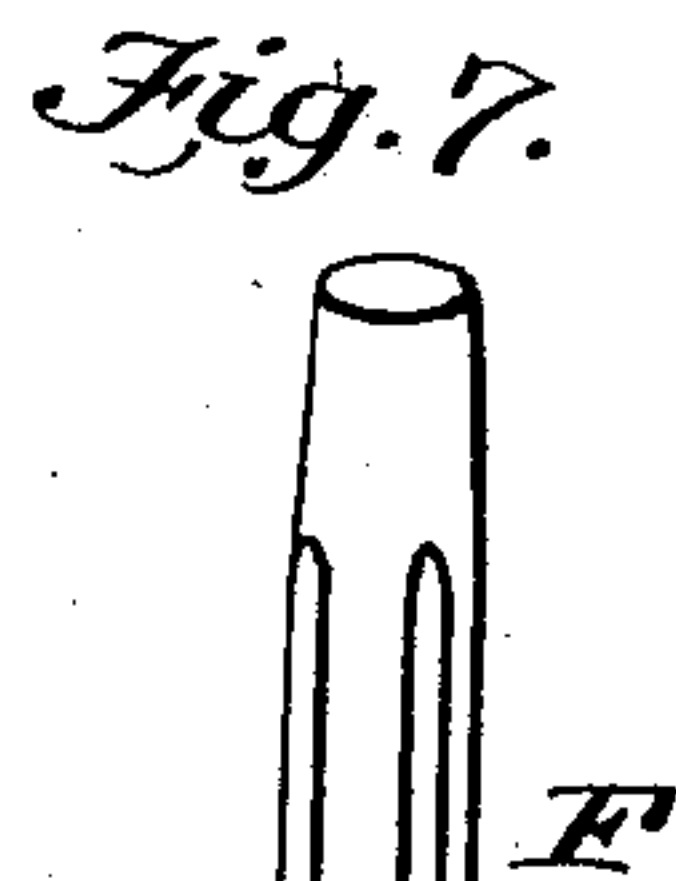
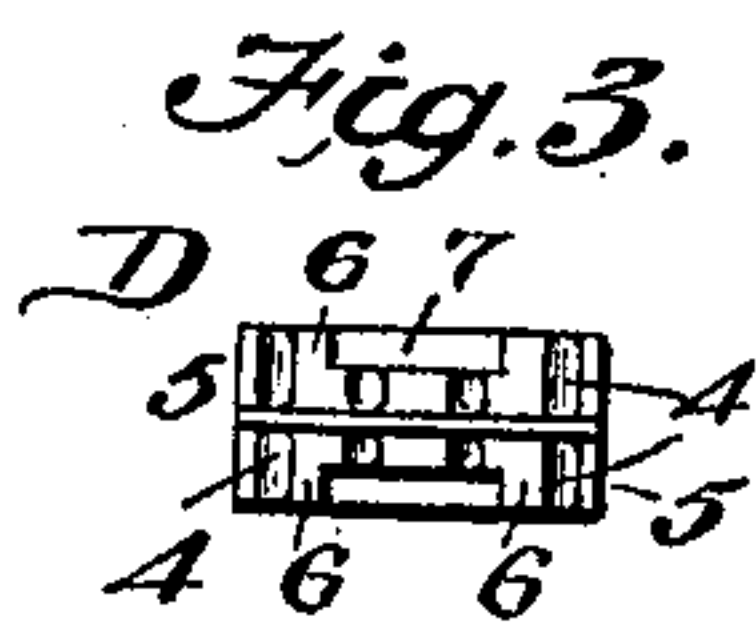
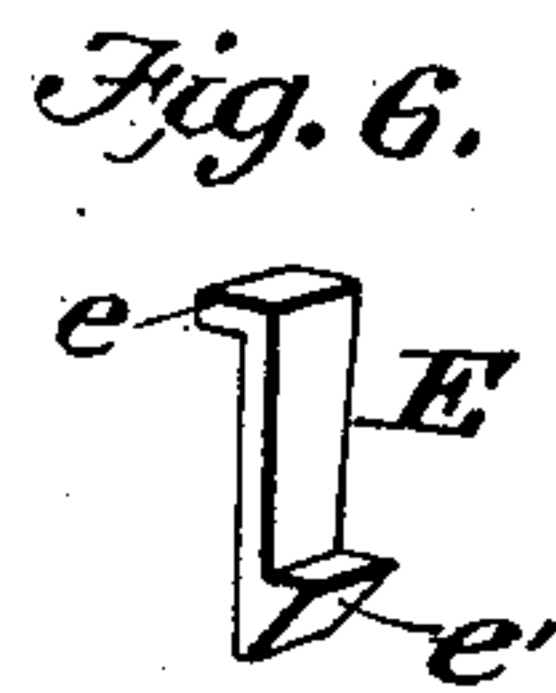
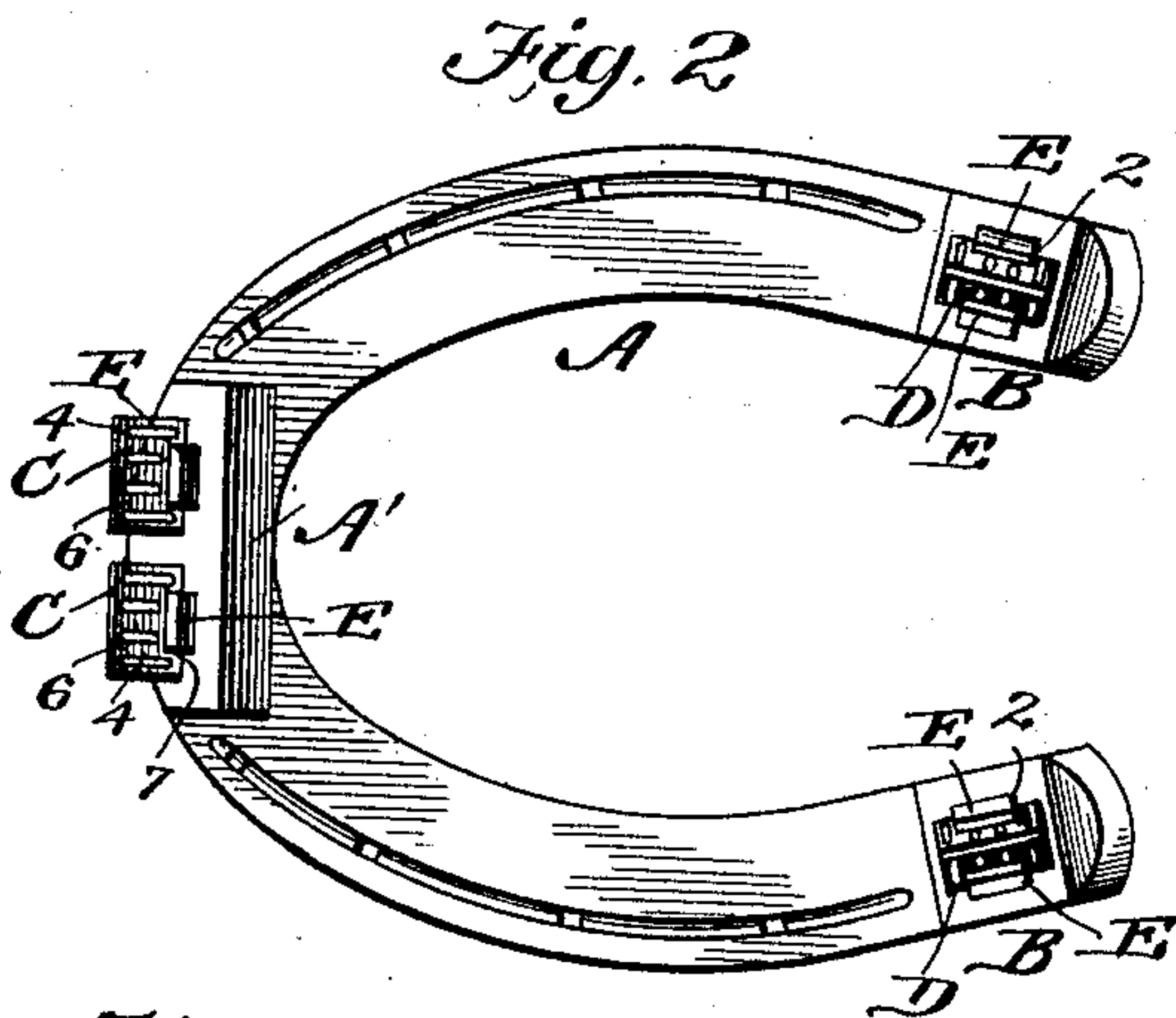
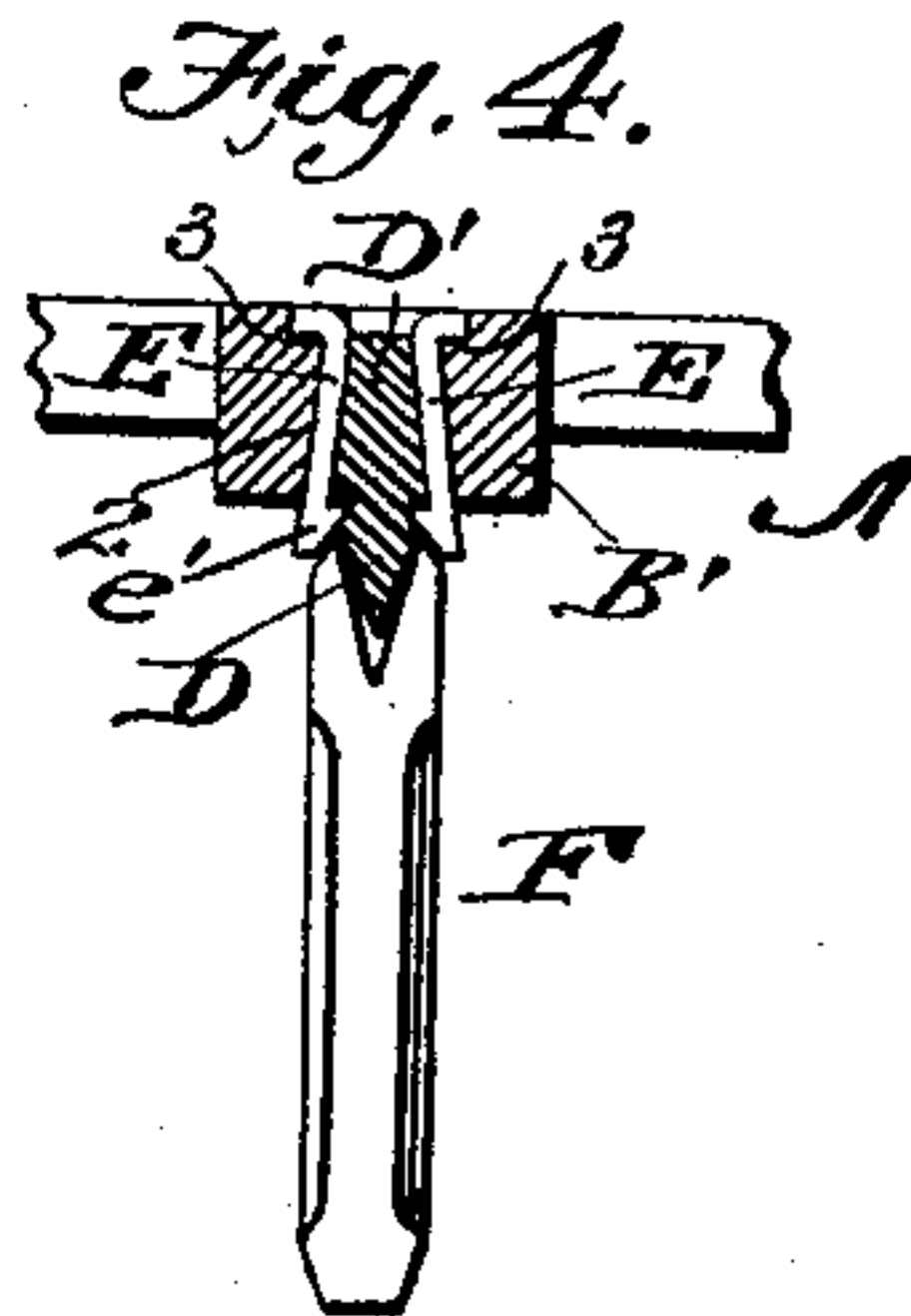
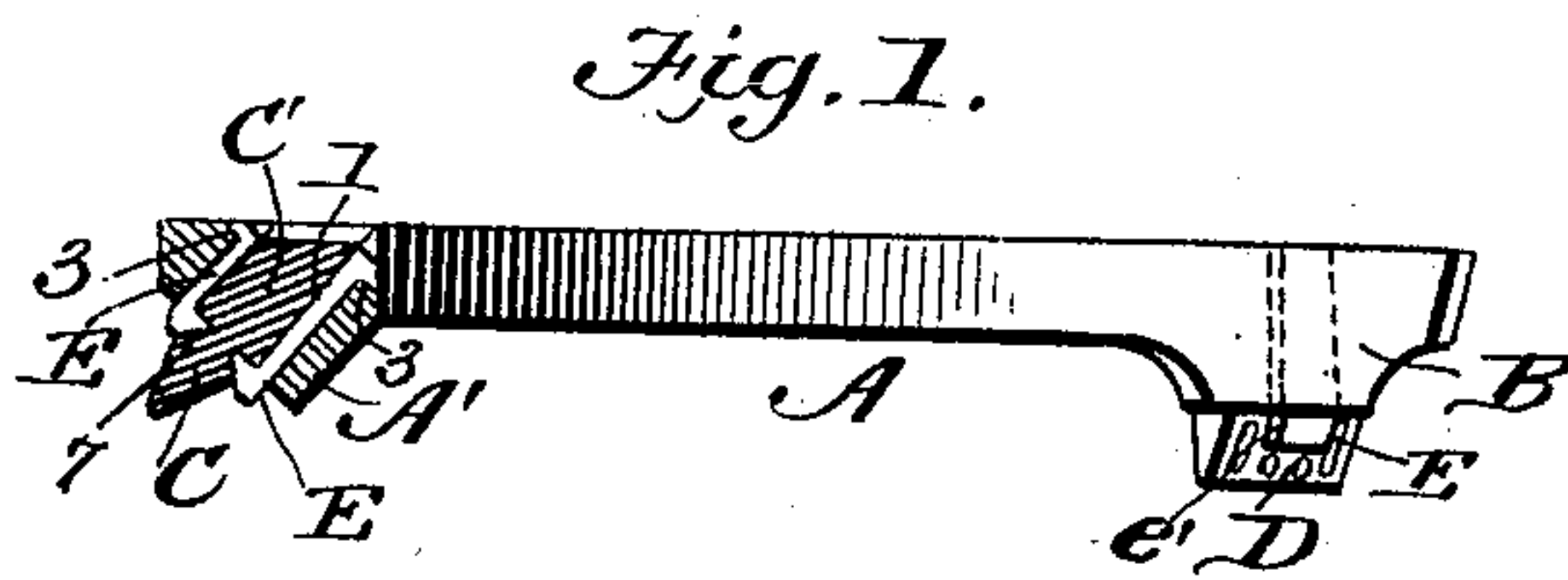


(No Model.)

N. L. OLSON.
HORSESHOE.

No. 603,573.

Patented May 3, 1898.



WITNESSES:
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NEIL L. OLSON, OF BUTTE, MONTANA.

HORSESHOE.

SPECIFICATION forming part of Letters Patent No. 603,573, dated May 3, 1898.

Application filed May 15, 1897. Serial No. 636,703. (No model.)

To all whom it may concern:

Be it known that I, NEIL L. OLSON, of Butte, in the county of Silver Bow and State of Montana, have invented a new and useful Improvement in Horseshoes, of which the following is a specification.

My invention is an improvement in horseshoes, and particularly in the calks thereof; and it consists in certain novel constructions and combinations of parts, as will be hereinafter described, and pointed out in the claims.

In the drawings, Figure 1 is a longitudinal section, and Fig. 2 is a bottom plan view, of my improved horseshoe. Fig. 3 is a detail end view of the calk. Fig. 4 is a detail sectional view illustrating the manner of releasing the keys. Fig. 5 is a side elevation of a shoe as in use at the angle assumed in taking hold with calks to prevent slipping in starting heavy loads or in climbing a hill. Fig. 6 is a detail view of one of the keys. Fig. 7 is a detail view of the key-releasing tool. Fig. 8 is a detail perspective view of one of the calks; and Figs. 9 and 10 are detail sections on lines 9-9 and 10-10, respectively, of Fig. 8.

The shoe A, as shown in Figs. 1 and 5, is made double thickness at the toe A' and heel B. The toe-calk C projects from the shoe at an angle to the plane of such shoe approximating forty-five degrees. This is important, as it secures the foothold of the horse when the foot is in the position shown in Fig. 5, which is that assumed in exerting the greatest strain in starting on a level or on a hillside. The thickened toe and heel portions receive the toe-calks C and the heel-calks D, being provided with sockets 1 and 2 to receive said calks. The sockets 1 are formed at an incline approximating an angle of forty-five degrees to the body of the shoe, and such sockets 1 and the sockets 2 are made equilateral in cross-section, so the stems C' and D' of the calks C and D can be inserted therein to set the calks lengthwise or crosswise the shoe to adapt it for use in climbing hills or on hillsides, as might be desired.

At the inner ends of the sockets 1 and 2 I provide seats 3 for engagement by the inner ends of the keys E, which hold the calks in place. These keys E have at their inner ends portions *e* to rest on the seats 3, and are provided at their opposite or outer ends with head-like portions *e'* to engage the calks and

fit in the sockets 1 and 2 alongside the calk-stems. The calks are formed alike with the heads and stems, the former having the longitudinal grooves 4 in its opposite sides forming the head into the central web 5 and the longitudinal ribs 6, the latter gradually thickening from the point of the calk, giving the head a wedge shape, as best shown in Figs. 9 and 10. This calk may be of any suitable material, and by reducing the surface of its sides by the grooves 4, before described, will wear off on such sides more rapidly than at the center, thus rendering the calk self-sharpening.

In its opposite sides, near its center and usually at the juncture of the head and stem, I provide the calk with shallow sockets 7 to receive the portions *e'* of the stems E when the calk is locked in place, as shown in Fig. 1.

To release the calk, the portions *e'* may be turned back, as shown in Fig. 4, which may be conveniently accomplished by the tool F. (Shown in Figs. 4 and 7.) When the heads of the keys are in this position, the calk may be removed and another inserted and secured by driving in the heads *e'*, as will be readily understood.

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

1. The horseshoe described, having thickened toe and heel portions and sockets therein, the socket or sockets in the toe portion ranging at an incline approaching an angle of forty-five degrees to the plane of the shoe, and provided at the inner ends of said sockets with seats for the calk-keys, the calks having stems fitted to the shoe-sockets and grooved and notched heads, and the keys having at their inner ends portions to engage the seats of the shoes and at their outer ends heads to enter the notches or sockets in the calks, substantially as described.

2. A horseshoe-calk having a tapered head provided in its tapered sides near its upper end with sockets for the fastening-keys, and having said tapered sides grooved forming a central web, and ribs projecting therefrom, substantially as described.

NEIL L. OLSON.

Witnesses:

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