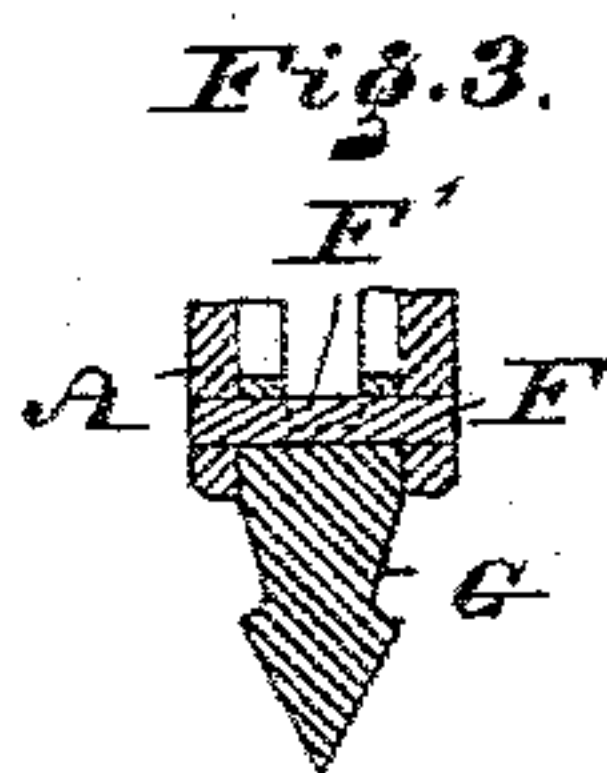
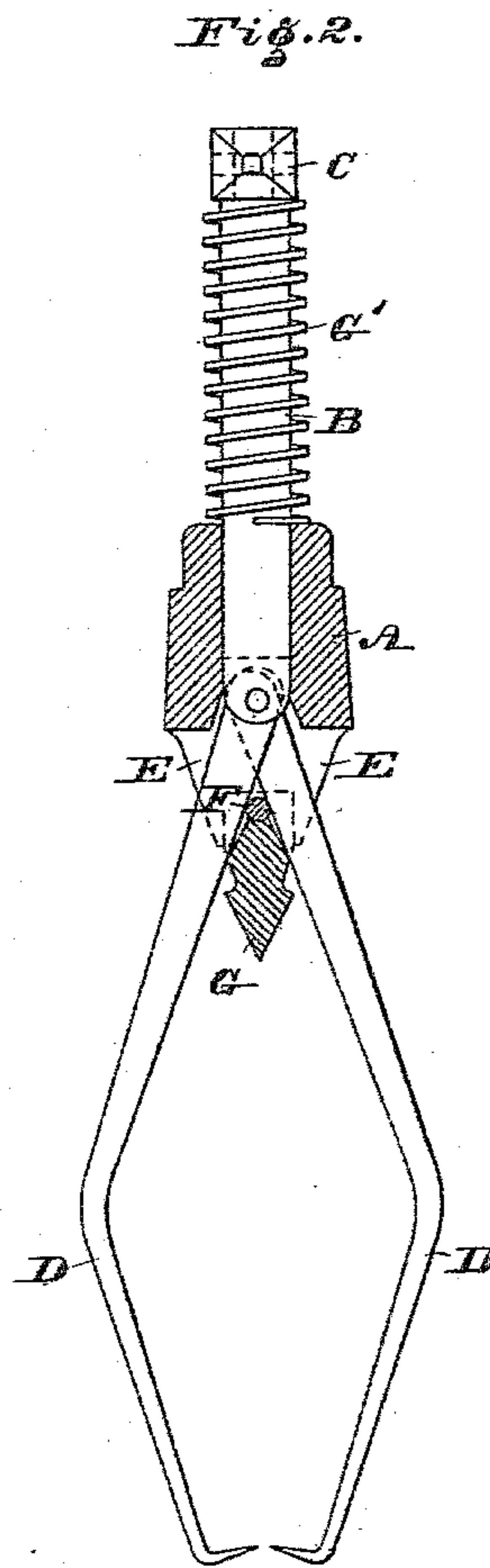
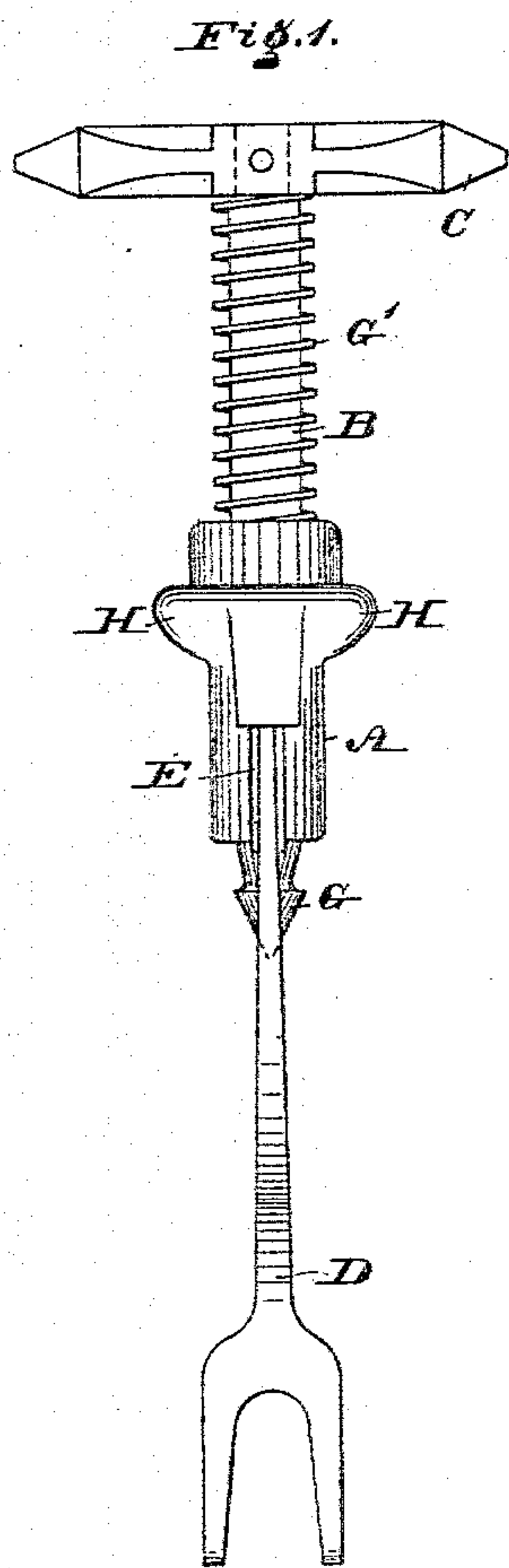


(No Model.)

J. E. FORD.
GRAPPLING TONGS.

No. 356,630.

Patented Jan. 25, 1887.



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UNITED STATES PATENT OFFICE.

JAMES E. FORD, OF PHILADELPHIA, PENNSYLVANIA.

GRAPPLING-TONGS.

SPECIFICATION forming part of Letters Patent No. 356,630, dated January 25, 1887.

Application filed September 6, 1886. Serial No. 212,827. (No model.)

To all whom it may concern:

Be it known that I, JAMES E. FORD, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in Grappling-Tongs for Ice, Meat, &c., which improvement is fully set forth in the following specification and accompanying drawings, in which—

Figure 1 represents a side elevation of a carrier for ice, &c., embodying my invention. Fig. 2 represents a partial vertical section and partial side elevation at a right angle to Fig. 1. Fig. 3 represents a vertical section of a detached portion.

Similar letters of reference indicate corresponding parts in the several figures.

My invention consists of a device for carrying ice, meat, &c., formed of grappling-hooks attached to a sliding stem, a head in which the stem is guided, a bearing for said hooks, a shoulder for the fingers, a spring, and a handle, as will be hereinafter fully set forth.

Referring to the drawings, A represents a tubular head, within which is fitted a sliding stem, B, the latter having secured to it at one end a handle, C, and pivoted to it at the other end the grappling hooks, jaws, or tongs D, said hooks entering slots E on opposite sides of the head A, and bearing against a transversely-extended rivet, F, or in lieu thereof a screw, which secures the filling-piece G of the head in position, the head being primarily cast with an opening to admit the hooks and stem and then receives said filling-piece, which closes the opening.

Pressing against the handle C and head A is a spring, G', which serves to return the parts to their normal position and force the hooks against the article to be carried. The upper part of the head has on its exterior a shoulder, H, for engagement of the fingers when the hooks are separated. In assembling the carrier, the hooks are pivoted to the stem and the latter is inserted in the head, and the spring G' and handle C are applied. The piece G is inserted in the head, and the rivet F driven through the head and piece and its ends headed, thus firmly connecting the piece with the head.

Referring to Fig. 3, it will be seen that the central portion, F', of the rivet is uncovered, the remaining portion being embedded in the piece G and head A, whereby the portions of the hooks adjacent to the rivet bear or rub against the uncovered part of said rivet as said hooks open and close, and in opening the hooks the stem forcibly abuts against said rivet, thus acting as a stop, and also relieving the piece G of strain, and transferring pressure and blows to the rivet instead of said piece, which latter is liable to be broken, while the former, made of superior metal, is well enabled to endure the harsh usage to which it is subjected.

In operating the implement, the fingers grasp the head A and abut against the shoulder H, whereby they are prevented from slipping from the head, and the palm of the hand or the thumb rests against the handle C. Pressure is now exerted on the handle, and consequently on the stem B, whereby the hooks are opened, said hooks then being applied to the article to be carried. The fingers are let go of the head and the hooks close tightly on the article, and the latter may now be carried by the handle without liability of having the hooks disengage therefrom. By pressing on the handle the hooks are separated and the article is released.

I am aware that it is not new to construct grappling-tongs having a head with side openings, a sliding stem inserted in said head and having pivoted to its lower end tongs extending through said side openings, and provided with a spring normally tending to close said tongs; but I am not aware that it is old to form the head with a shoulder, as and for the purpose herein described, nor that such devices have been constructed in such manner that the tongs and the end of the stem bear upon a fastening-rivet of wrought-iron, and not upon a cast filling-piece, whereby the wear and liability of breakage are greatly lessened.

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

1. In grappling-tongs, a stem with hooks pivoted thereto, a head, and a transversely-extending rivet embedded in said head, hav-

ing its central part uncovered, all combined substantially as and for the purpose described.

2. Grappling-tongs consisting of the tubular head A, the sliding stem B, the spring G',
5 the hooks D, pivoted to the inner end of said stem, the filling-piece G at the end of the stem, and the transverse rivet F, the latter connecting the filling-piece with the head, and

forming an abutment for the inner sides of the hooks and end of the stem, substantially as 10 and for the purpose described.

JAMES E. FORD.

Witnesses:

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