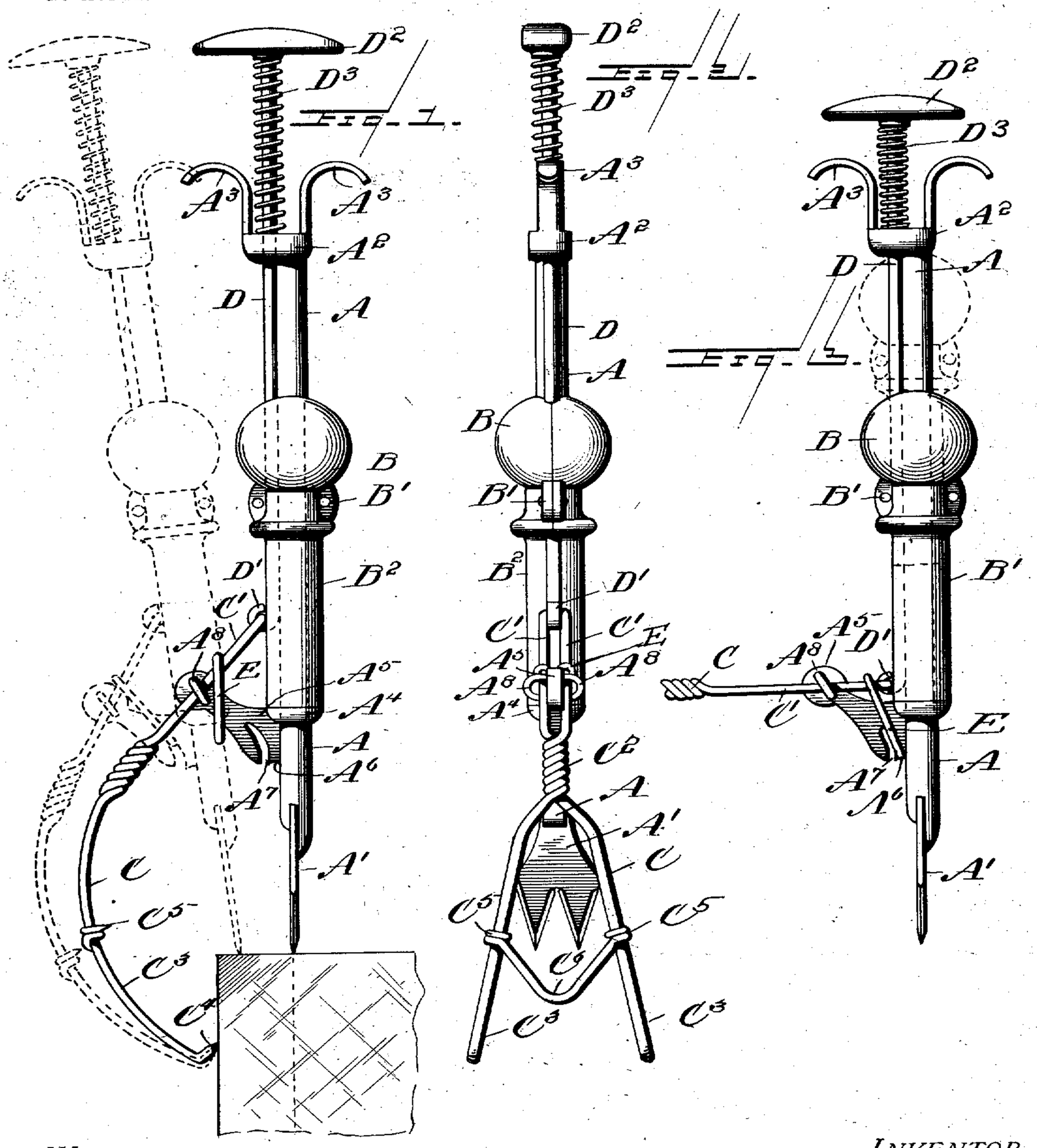
No. 747,981. PATENTED DEC. 29, 1903.

H. J. KINGSLEY.

ICE TOOL.

APPLICATION FILED MAR. 4, 1903.

NO MODEL.



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No. 747,981. Patented December 29, 1903.

UNITED STATES PATENT OFFICE.

HUGH J. KINGSLEY, OF RUTLAND, VERMONT.

ICE-TOOL.

SPECIFICATION forming part of Letters Patent No. 747,981, dated December 29, 1903.

Application filed March 4, 1903. Serial No. 146,133. (No model.)

To all whom it may concern:

Be it known that I, HUGH J. KINGSLEY, a citizen of the United States, residing at Rutland, in the county of Rutland, State of Vermont, have invented certain new and useful Improvements in Ice-Tools, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to an ice-tool, and particularly to a construction having a spring-operated jaw or fork coöperating with the cutting-blade, as shown in my prior patent, No. 579,325, dated March 23, 1897.

The invention has for an object to provide an improved construction of the spring-operated jaw or fork, by which the same is pivoted at one side of the blade and adapted to oscillate toward and from the same in a downward path extending below the blade.

A further object of the invention is to improve the construction and arrangement of the sliding weight mounted upon the blade for the purpose of effecting a cutting action in the reciprocation thereof.

Other objects and advantages of the invention will be hereinafter set forth, and the novel features thereof defined by the appended claims.

In the drawings, Figure 1 is an elevation of the tool in position for cutting and shown by dotted lines in its position for shredding ice; Fig. 2, a similar view at a right angle to Fig. 1 with fork partly open, and Fig. 3 an elevation similar to Fig. 1 with the fork broken off and held out of operative position.

Like letters of reference refer to like parts in the several figures of the drawings.

The letter A designates a rod or standard provided at its lower end with a cutter-blade A′ and at its upper end with a handle A^2, having at opposite sides finger-holds A^3, and upon this rod or standard a sliding weight B is mounted and is preferably composed of opposite parts suitably channeled to fit the standard or rod and secured together by any desired means—for instance, bolts or rivets B′. Below the weight B an extension B^2 is formed, which at its lower end contacts with a flange or shoulder A^4, secured to the rod A, so that the weight in its reciprocations applies the force of impact upon this shoulder, and thus produces the cutting action of the tool. This construction of weight, having an extension at its lower portion, protects the hand of the user against an injury by contact between the same and the shoulder on the rod or the handle.

At one side of the rod A a bracket-arm A^5 extends and is provided with one or more recesses in its under face, as shown at A^6 and A^7, while the free end thereof is provided with an eye A^8, through which the shank C′ of the jaw C is adapted to extend. This jaw may be of any desired construction—for instance, as herein shown, where the shank C′ is formed as a loop passing upon opposite sides of the bracket-arm A^5 and adapted to slide through the opposite eyes A^8 and oscillate therein. Beyond this loop portion the fork may be provided with a twisted body C^2 and extended diverging forked ends C^3, each provided at its extremity with a sharpened tooth or point C^4 and intermediate of its ends with auxiliary teeth C^5, they being connected by a bridge-piece C^6, which braces and maintains the ends of the fork in proper position. For the purpose of operating this fork or jaw a sliding rod D extends downward through the handle A^2 parallel to the rod A and also through the weight B, said rod being provided at its lower end with a hook D′ for connection with the loop C′ of the jaw. The upper end of the rod is provided with a push-plate D^2, adapted to receive the palm of the hand when the fingers engage the holds A^3, while this plate is normally supported in its raised position by means of a tension-spring D^3, surrounding the upper end of the rod D and bearing against the under face of the plate D^2 and the upper face of the handle A^2. For the purpose of retaining the jaw or fork in any desired position a latch-link E is mounted upon the loop portion C′ and adapted at its lower end to engage either of the recesses A^6 or A^7 in the bracket-arm A^5 or when the fork is not to be held to swing clear of said bracket, as shown by full lines in Fig. 1. The cutter-blade shown in connection with the movable jaw comprises a relatively fixed coöperating jaw with the fork when the device is used to grasp and convey an object.

In operation the tool is adapted for use as an ice-cutter, a tongs or carrier formed by the fork and blade working in conjunction, and

an ice-shredder. To use the tool as a pick, the push-rod is forced downward, throwing the fork outward at substantially a right angle to the blade, as shown in Fig. 3, when the latch-link by a slight inclination of the tool may be dropped into the recess next the rod, thus holding the fork entirely out of operation, and to effect the cutting action by the reciprocation of the weight, which is necessary when a large piece of ice is to be cut which cannot be grasped by the fork. The fork is released from this engagement with the socket by simply compressing the spring and holding the tool in a vertical position, when the link will swing free of the bracket-arm and the tension of the spring draws the lower end of the fork toward the blade, the bearing or fulcrum therefore being within the eyes carried by the bracket-arm. When in this position, as shown by full lines in Fig. 1, the fork may be engaged with the side of a cake of ice and is automatically held in contact therewith by the tension of the spring, so that when a piece of ice has been cut by the blade it is retained in the grasp of the tool and does not at any time touch the hands of the user. If the piece of ice be of a small size, so that the lower teeth pass beneath the same, the supplemental teeth are adapted to engage and retain the ice in contact with the blade. The ice may be released from the tool by a slight pressure upon the spring, which removes the jaw or fork from the blade. When it is desired to use the tool as an ice-shredder, the spring is compressed until the link carried by the fork is adapted to engage the outer recess of the bracket-arm, which holds the free points of the fork at a predetermined distance to one side of the blade, as shown by dotted lines in Fig. 1. Pressure is then applied to the handle of the tool and the same reciprocated across the surface of the ice, the fork ends acting as a gage to determine the depth of the cut to be effected by the blade. By varying the inclination of this blade a coarse of fire shredding may be effected, as desired. It will be understood that there will be no pressure upon the push-rod when the tool is used for shredding purposes. By the use of this tool practically the exact size of the piece of ice may be determined, so that there is no waste of material, and the piece thus carried in the grasp of the tool to any desired place, so that the ice does not come in contact with the hands of the user.

It is obvious that changes may be made in the form of fork and blade here shown, as well as in the other details of construction and configuration, without departing from the spirit of the invention as defined in the appended claims.

Having described my invention and set forth its merits, what I claim, and desire to secure by Letters Patent, is—

1. In a device of the class described, a standard having a handle at its upper end, a bracket extended from said standard, a jaw slidingly mounted to oscillate on said bracket, a push-rod to operate said jaw, and means carried by said jaw to engage said bracket and retain the jaw in a substantially horizontal position.

2. In a device of the class described a standard having a handle at its upper end, a bracket extended from said standard, a jaw slidingly mounted to oscillate on said bracket, a push-rod to operate said jaw, and a link carried by said jaw to engage a recess in said bracket.

3. In a device of the class described a standard having a handle at its upper end, a bracket extended from said standard, a jaw slidingly mounted to oscillate on said bracket, a push-rod to operate said jaw, a link carried by said jaw to engage a recess in said bracket, a cutting-tool carried by the lower end of said standard, and a sliding weight mounted upon the standard to contact with a shoulder thereon.

4. In a device of the class described a standard having a handle at its upper end, a bracket extended from said standard, a jaw slidingly mounted to oscillate on said bracket, a push-rod to operate said jaw, a link carried by said jaw to engage a recess in said bracket, a cutting-tool carried by the lower end of said standard, a sliding weight mounted upon the standard to contact with a shoulder thereon, a plate upon the upper end of the push-rod above said handle, and a tension-spring extending between said plate and handle.

5. In a device of the class described, a standard provided with a cutter at its lower end, a handle at the upper portion of said standard, a bracket-arm extending from said standard and provided with a plurality of recesses at different distances from the standard, an oscillating jaw mounted at the outer end of said arm, a link mounted upon said jaw to engage said recesses, and means for oscillating said jaw.

6. In a device of the class described, a standard provided with a cutter at its lower end, a handle at the upper portion of said standard, a bracket-arm extending from said standard and provided with a plurality of recesses at different distances from the standard, an oscillating jaw mounted at the outer end of said arm, a link pivotally mounted upon said jaw to engage said recesses, a push-rod connected to said jaw at its lower end and extending parallel to said standard, a plate upon the upper end of said rod above the handle of the standard, and a tension-spring extending between said plate and handle.

7. In a device of the class described, a standard provided with a handle at its upper end, a bracket-arm extended from said standard and provided with recesses in its under face, an eye at the free end of said bracket, a jaw having a looped portion extending

through said eye and a lower toothed end depending below the end of the standard, supplemental teeth intermediate of the ends of the jaw, a link carried by the jaw to engage the recesses in said arm, and an operating-rod supported upon the standard and connected to the looped portion of the jaw.

In testimony whereof I affix my signature in presence of two witnesses.

HUGH J. KINGSLEY.

Witnesses:
C. H. WEST,
F. E. BELLEVILLE.

Correction in Letters Patent No. 747,981.

It is hereby certified that in Letters Patent No. 747,981, granted December 29, 1903, upon the application of Hugh J. Kingsley, of Rutland, Vermont, for an improvement in "Ice-Tools," an error appears in the printed specification requiring correction, as follows: In line 46, page 2, the words "of fire" should read *or fine;* and that the said Letters Patent should be read with this correction therein that the same may conform to the record of the case in the Patent Office.

Signed and sealed this 12th day of January, A. D., 1904.

[SEAL.]

F. I. ALLEN,
Commissioner of Patents.

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