

F. W. GEISSENHAINER & M. S. CUMNER.

ICE PICK.

APPLICATION FILED JULY 1, 1909.

949,470.

Patented Feb. 15, 1910.

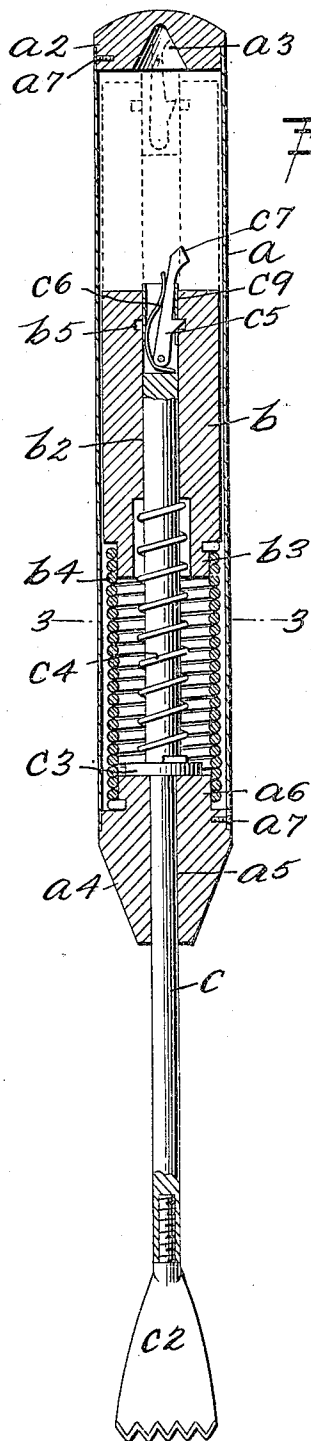


FIG. 1.

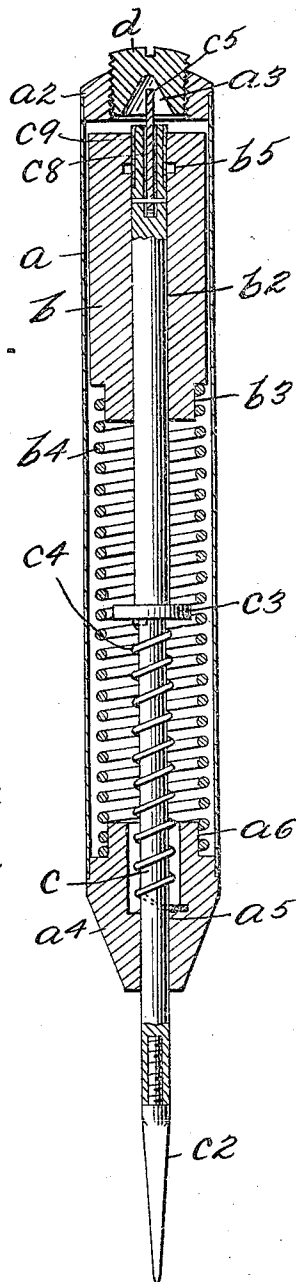


FIG. 2.

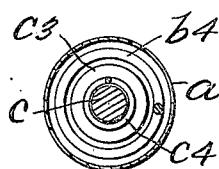


FIG. 3.

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UNITED STATES PATENT OFFICE.

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ICE-PICK.

949,470.

Specification of Letters Patent. Patented Feb. 15, 1910.

Application filed July 1, 1909. Serial No. 505,308.

To all whom it may concern:

Be it known that we, FREDERICK W. GEISSENHAINER and MATTHEW S. CUMNER, citizens of the United States of America, and residing at Freehold and New York, in the counties of Monmouth and New York and States of New Jersey and New York, have invented certain new and useful Improvements in Ice-Picks, of which the following is a specification, such as will enable those skilled in the art to which it appertains to make and use the same.

This invention relates to cutting tools, particularly ice picks, and the object thereof is to provide such a tool which obviates the necessity for the chopping incidental to the use of tools of this class at present employed.

A further object is to provide means whereby the cutting may be accomplished by merely pressing said tool toward the material being cut.

A further object is to provide a tool of this class which may be used in a limited space, as an ice-box, without injury to said box common to ice picks at present employed.

A further object is to provide such a tool which accurately cleaves the material at a predetermined point and without waste.

A further object is to provide a detachable cutting blade for such tools whereby they are rendered applicable to different uses by the substitution of suitable blades; and a still further object is to provide such tools which are simple and economical in construction and use, and which are well adapted to the purposes for which they are intended.

Our invention is fully described in the following specification, of which the accompanying drawings form a part, in which the separate parts are designated by the same reference characters in each of the views, and in which:—

Figure 1 is a longitudinal sectional view through our invention, adapted for use as an ice pick, with the parts in normal position; Fig. 2 is a similar view, at right angles thereto, with the parts in a different position, and showing a modification; and Fig. 3 is a transverse section taken on the line 3—3 of Fig. 1.

In the drawings forming a part of this application, we have shown one form of embodiment of our invention, comprising a

tubular section *a*, provided with end caps *a*² and *a*⁴ collectively forming a handle, the cap *a*² being provided with an internal tapered recess *a*³ and the cap *a*⁴ with a passage *a*⁵ therethrough and with a reduced neck portion *a*⁶, said caps being in detachable connection with the tube *a* by means of screws *a*⁷ or their equivalent. Slidably mounted in the tube is a striker or hammer *b* having a passage *b*² therethrough and being provided with a neck portion *b*³ which, together with the neck *a*⁶, serves to hold a strong contractile spring *b*⁴ uniting the hammer *b* and cap *a*⁴ whereby the former is normally maintained near the latter, and said hammer is also provided with an internal groove *b*⁵ adjacent the outer end thereof.

Slidably mounted in the cap *a*⁴ and hammer *b* is a rod or spindle *c*, to the outer end of which is detachably secured, preferably, a blade *c*² and said rod also carries a flange *c*³ which serves as a rest for a normally expanded spring *c*⁴ of less strength than the spring *b*⁴ and the other end of which bears against the hammer *b*, thus serving to maintain the rod *c*, normally, in its extreme outward position. In Fig. 2 we have shown the spring *c*⁴ of a contractile type and secured to the rod and within a suitable recess in the cap *a*⁴, this type being preferable as it does not counteract the force of the spring *b*⁴.

Pivotally mounted in the inner end of the rod *c* is a latch *c*⁵ normally held in engagement with the groove *b*⁵ by means of a plate spring *c*⁶, said latch being provided with a finger *c*⁷ having an inclined end adapted to engage with the inclined surface of the recess *a*³ to disengage the latch from the groove and, in the form of construction shown, the rod is slotted at *c*⁸ to receive the latch and a sleeve *a*⁹ is then passed thereover to maintain the latch in position.

In the use of our invention as an ice pick, the blade *c*² is placed upon a cake of ice in the position in which it is desired to cleave the same and the handle is then forced toward the ice, thereby forcing the hammer upwardly because of the engagement of the latch with the groove *b*⁵ until the finger *c*⁷ is forced inwardly by the inclined surface of the recess *a*³ to release the latch from the groove, this position of the parts being shown in Fig. 2, and when so disengaged, the hammer is forced toward the ice at high speed through the medium of the spring *b*⁴

and strikes the flange c^3 , the spring c^4 having been collapsed within the recess therefor, and the blade c^2 is thus driven into the ice and cleaves the same, cleanly and without waste, and, if the cake of ice be too large to be split in one operation, the handle is raised to permit the spring c^4 to force the rod outwardly until the latch is again in engagement with the hammer, after which the foregoing operation is repeated until the ice is separated into portions of a desired size and shape, and it will be observed that slow and continuous pressure of the handle is all that is necessary to drive the blade.

In Fig. 2 is shown a means for accurately gaging the moment of hammer release, and thereby the length and force of the stroke thereof, consisting of a block d adjustable longitudinally of the handle, in the cap a^2 , preferably by means of a screwthread, and in which the recess a^3 is formed, and it will be readily seen that when the said block is moved inwardly or outwardly, the handle movement with relation to the blade c^2 is correspondingly decreased or increased and resulting in a decreased or increased hammer movement and correspondingly decreased or increased tension of the spring b^4 , thus decreasing or increasing the effectiveness of the blade according to the conditions under which the instrument is employed.

It will be obvious that our invention is applicable to various uses by but slight changes in the forms of construction shown and described and, with a reservation to ourselves of all such changes and modifications as may come within the scope of the following claims, what we claim as new, and desire to secure by Letters Patent, is:—

1. An instrument of the class described,

comprising a rod, a tool thereon, a handle slidable on said rod, an inner end cap and an outer end cap on said handle, the latter of which is provided with an inclined recess, a hammer slidable on said rod a contractile spring connecting said hammer to said inner end cap, and a latch normally locking said rod and hammer together, and adapted to release the same by moving over the inclined surface of said recess.

2. An instrument of the class described, comprising a rod, a tool thereon, a handle slidable thereon, and provided with inner and outer end caps, the latter of which is provided with an inclined recess, a hammer, provided with an internal groove, slidable on said rod, a latch on said rod and normally engaged by said groove but adapted to be disengaged therefrom by moving over the inclined surface of said recess, and a spring for actuating said hammer, when released, to strike said rod.

3. An instrument of the class described, comprising a tool, a handle therefor, a block adjustably mounted in the outer end of said handle, a spring actuated hammer for striking said tool, a latch normally locking said tool and hammer together, and means upon said block for operating said latch to release the tool and hammer engagement.

In testimony that we claim the foregoing as our invention we have signed our names in presence of the subscribing witnesses this 29th day of June 1909.

FREDERICK W. GEISSENHAINER.
MATTHEW S. CUMNER.

Witnesses:

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