(No Model.)

J. S. FIELD & W. J. SHEDD.

ICE TOOL.

No. 589,254. Patented Aug. 31, 1897.

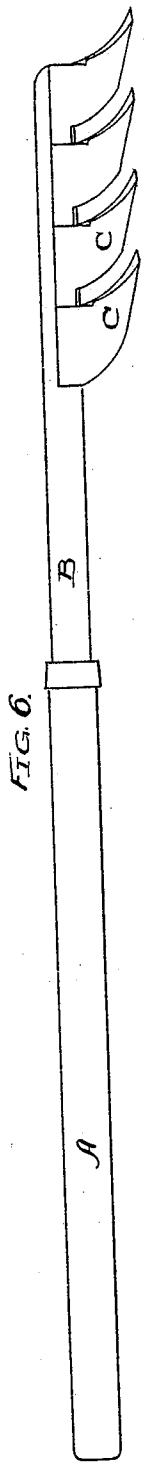


FIG. 6.

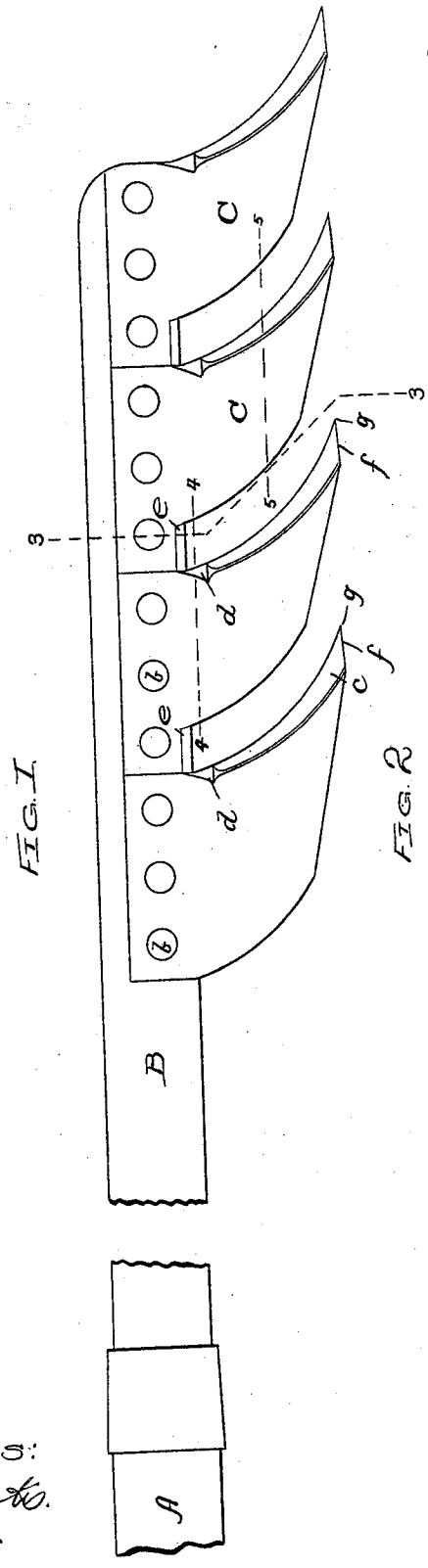


FIG. 1.

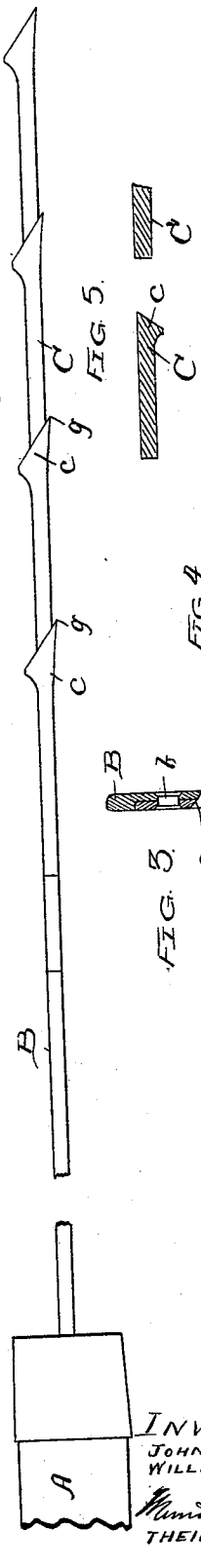


FIG. 2.

FIG. 5.



FIG. 4.

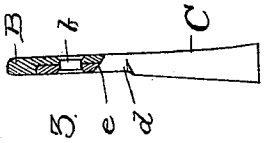


FIG. 3.

WITNESSES:
Sew. C. Curtis.
A. Mundy

INVENTORS
JOHN S. FIELD
WILLIAM J. SHEDD
BY
Munday, Evarts & Adcock
THEIR ATTORNEYS

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

JOHN S. FIELD AND WILLIAM J. SHEDD, OF CHICAGO, ILLINOIS.

ICE-TOOL.

SPECIFICATION forming part of Letters Patent No. 589,254, dated August 31, 1897.

Application filed May 28, 1896. Serial No. 593,405. (No model.)

To all whom it may concern:

Be it known that we, JOHN S. FIELD and WILLIAM J. SHEDD, citizens of the United States, residing in Chicago, in the county of Cook and State of Illinois, have invented new and useful Improvements in Ice-Tools, of which the following is a specification.

This invention relates to the class of hand-tools for sawing ice, of which the one shown in Patent No. 425,325, to Jaques, dated April 8, 1890, is a type, and is an improvement upon previous constructions of such tools. We find by our use of tools of this class that sufficient facility for the escape of the chips and shavings is not afforded, and in consequence the openings between the teeth of the tool soon become clogged or choked with the shavings. Our main object in this invention is to remove this difficulty, and at the same time to render the tool more speedy in its operation and easier to manipulate.

In our improved construction the teeth are provided with lateral flanges along their forward edges from the points nearly to their junction with the supporting-blade of the tool, and these flanges are all located on the same side of the teeth, leaving the other side substantially flat. Another feature of the teeth is the beveling of their points so as to adapt them to impart what is known as a "draw cut." These and other features of our improvement are fully shown in the accompanying drawings, wherein—

Figure 1 is a partial side elevation of the tool. Fig. 2 is an edge or bottom view. Figs. 3, 4, and 5 are detailed sections on the lines 3 3, 4 4, and 5 5, respectively, of Fig. 1. Fig. 6 shows the tool complete upon a reduced scale.

In said drawings, A represents the handle, adapted to be grasped by both hands; B, the tooth-carrying blade or plate secured to and projecting from the lower end of handle A, the handle and blade lying in the same plane and forming a long implement adapted to be used by the operator while standing upright upon the ice to be operated upon, and C C the cutting-teeth, arranged as shown and secured to the blade B by rivets *b*. Upon their forward and upwardly inclined edges the teeth are swaged laterally upon one side, so as to broaden such teeth, as seen at *c*. The flanges added by this swaging are preferably widest at the bottom and taper gradually upward and inward, and their forward surfaces are also inclined from the flat or unflanged side of the tooth rearwardly toward the flanged side, as indicated in the sectional views, Figs. 4 and 5, so that the major portion of the shavings will be diverted or thrown off at the flanged side. The flanges are continued upward to a point somewhat below the blade B, as shown at *d*, so that such of the shavings as may rise in the open space between the teeth may pass out freely over the top of the flanges. The metal of the blade and teeth at the tops of the open spaces is also beveled off, as shown at *e*, to increase the facility with which the shavings may escape.

The horizontal bottom cutting edges or points of the teeth (shown at *f*) are beveled to accord with the inclined front faces of the flanges, so that such cutting points will make what is called a "draw cut," and thereby be enabled to cut into the ice faster than they would if they were formed at right angles to the longitudinal plane.

One important advantage attending this construction is found in the fact that the tool can be kept sharp by grinding this bottom edge whenever necessary, so that its usefulness is not gone until the flanged portions of the teeth are worn substantially away.

We prefer to grind the teeth inwardly slightly upon the flat side, so that the extreme points *g* will stand a little outside of the plane of that side. This gives better clearance and avoids some friction, which would otherwise be caused.

It will be noticed that the blade B is thinner than the cut made by the teeth, so that the operating end of the tool is perfectly adapted to sink entirely below the surface of the ice.

We claim—

1. The hand ice-tool provided with a series of teeth adapted to cut with a draw cut arranged in a straight line and provided with flanges upon one side of their front edges, such flanges tapering upwardly and inwardly, substantially as specified.

2. The hand ice-tool provided with a series of teeth adapted to cut with a draw cut arranged in a straight line and provided with

flanges upon one side of their front edges, such flanges tapering upwardly and inwardly, said teeth being also provided with beveled cutting-points, substantially as specified.

3. The hand ice-tool consisting of a series of bevel-faced and pointed teeth C adapted to cut with a draw cut arranged in a straight line and also having upwardly-tapering flanges upon one side, a supporting-blade to which the teeth are attached made thinner than the cutting-points of the teeth, and a handle to which the blade is secured, substantially as specified.

JOHN S. FIELD.
WILLIAM J. SHEDD.

Witnesses:
H. M. MUNDAY,
L. E. CURTIS.