H. P. JOSEWSKI.
STEAM ICE CUTTER.
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Fig. 1.

Fig. 2.

Fig. 3. Henry P. Josewski

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HENRY P. JOSEWSKI, OF SEATTLE, WASHINGTON.

STEAM ICE-CUTTER.

No. 856,348.


To all whom it may concern:

Be it known that I, HENRY P. JOSEWSKI, a citizen of the United States of America, and a resident of the city of Seattle, in the county of King and State of Washington, have invented certain new and useful Improvements in Steam Ice-Cutters, of which the following is a specification.

The primary object of my invention is to provide an improvement of the above type which is particularly adapted for the sinking of shafts for mining purposes through bodies of ice or the like.

A further object is to provide an improvement of this character which will be comparatively simple in construction, embracing but few parts and very efficient in operation.

Referring now to the accompanying drawings in which like numerals of reference indicate like parts throughout the several views: Figure 1 is a plan view of my invention. Fig. 2 is a similar view of one of the component sections thereof, showing the internal construction thereof. Fig. 3 is a section taken on line 3—3 of Fig. 1, and Fig. 4 is a section taken on line 4—4 of Fig. 1.

The invention comprises a head 1, and handle 2, which are formed in two longitudinal sections secured together by bolts 3.

Head 1 is comparatively narrow but elongated as shown and its lower or working edge is tapered as at 1' so that it will be enabled to more easily enter the ice, and provided with a groove or mouth 4, having end walls 4'.

Conduits 5 leading in divergent paths from a steam chamber 6 direct the steam for discharge into mouth 4. Steam is supplied to chamber 6, from a suitable source (not shown) through a flexible pipe 7 and conduit 8, the latter being formed in handle 2, and a suitable valve, as 9 is provided in handle 2 for controlling the supply of steam to said chamber.

In operation head 1 is positioned with its mouth resting on the ice, then the steam is allowed to flow through conduits 5. Steam flowing through the head melts that portion of the ice over which mouth 4 is disposed, thereby forming a slot in the ice, and also heats said head so that as the head gradually lowers by reason of the melting of the underlying ice, it will enlarge the slot to permit of the device lowering freely to a considerable depth. After this slot has been formed, the device is elevated and other slots formed which in conjunction with said first slot will sever a block from the surrounding ice. The block thus severed can be removed by grapplers or any other well known appliances. This operation is continued until sufficient ice has been removed from a shaft or the like of the desired depth.

While my invention is particularly adapted for the character of work hereinbefore indicated yet it is obviously also adapted in the cutting of ice generally.

Reference numeral 10 indicates packing which will prevent steam from escaping between the respective sections of which the head is composed.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent of the United States of America, is:

1. An ice cutter embodying a body formed with an elongated outer edge and a gradually tapered portion forming a handle, said elongated edge being formed with an elongated mouth which is disposed inwardly of said outer edge, said body having a main fluid conduit extending lengthwise thereof and terminating in an enlarged portion above the mouth, and means for conducting the fluid from said enlarged portion to a plurality of points along the length of said mouth.

2. An ice cutter formed of a body having an elongated mouth at the lower end thereof which is disposed inwardly of the outer edge of said end and having a fluid conduit, and means for conducting the fluid from said conduit to a plurality of points along the length of said mouth.

3. A steam ice cutter embodying a body formed with an enlarged steam chamber intermediate its ends and with an elongated mouth at the outer end of said body, said body having a steam conduit extending through the inner end thereof, and terminating in said chamber, said body also being formed with a plurality of divergent conduits leading from said chamber into said mouth.

4. An ice cutter embodying a body formed with an enlarged steam chamber and an elongated mouth, having closed sides and ends, means for conducting heated fluid to said chamber, and a plurality of fluid conducting means terminating at one end in said chamber, and at their opposite ends at points along the length of said mouth.

5. An ice cutter embodying a head formed in two longitudinal sections provided in its lower portion with an elongated inwardly ex-
tending mouth, means extending through the head for supplying a heated fluid to said mouth, packing carried by each section, the packing of one section being in engagement with that of the other, said packing extending lengthwise of the head from end to end, and being disposed on opposite sides of said means, and means beyond the packing for securing said sections in engagement with one another.

Signed at Seattle, Washington this 1st day of December 1906.

HENRY P. JOSEWSKI.

Witnesses:

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