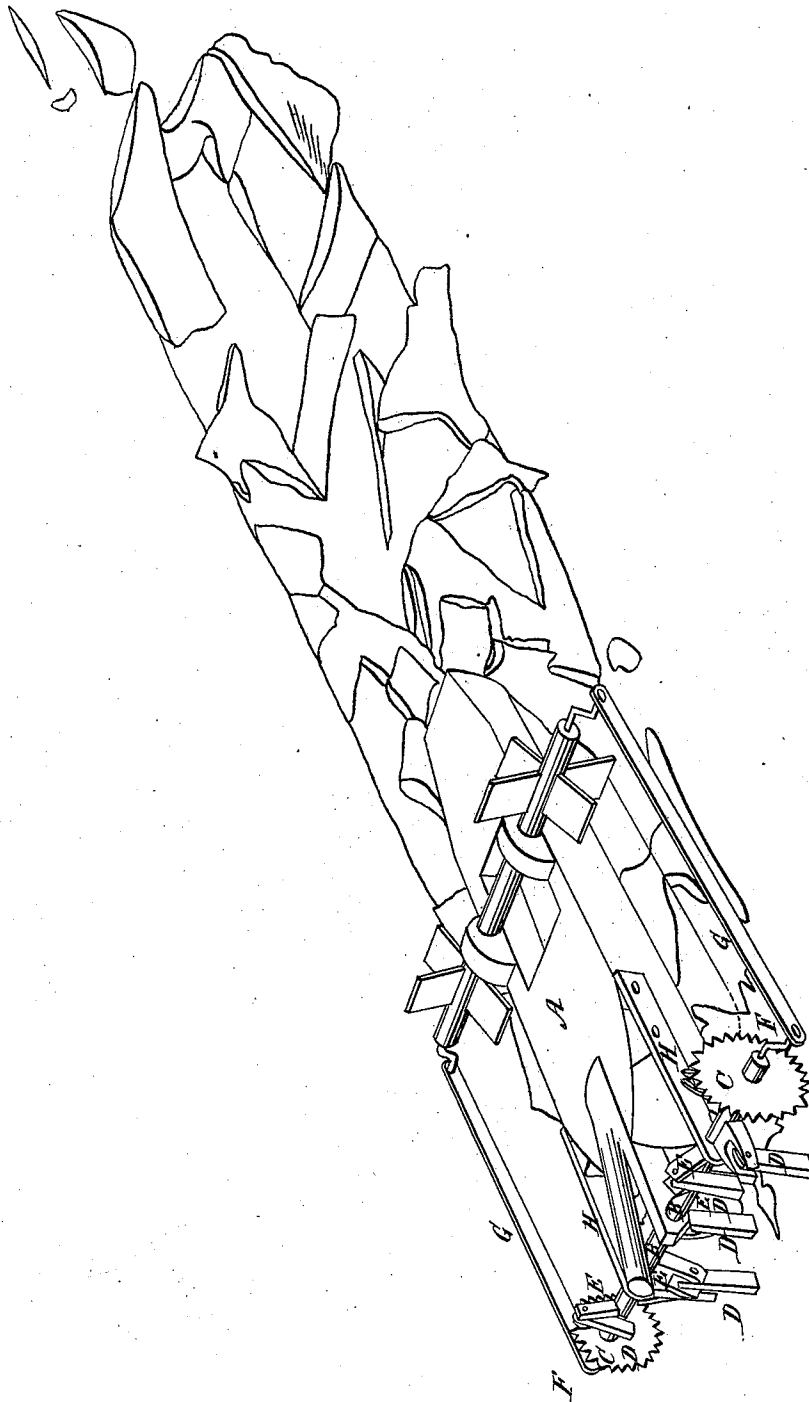


B. S. GILLESPIE.

Ice Implement.

No. 138.

Patented Mar. 8, 1837.



UNITED STATES PATENT OFFICE.

BARNABAS S. GILLESPIE, OF NEW YORK, N. Y.

ICE-BREAKER FOR NAVIGATING FROZEN WATERS.

Specification of Letters Patent No. 138, dated March 8, 1837.

To all whom it may concern:

Be it known that I, BARNABAS S. GILLESPIE, formerly of Erie, Pennsylvania, but now of the city of New York, have invented an improvement in machines for breaking ice to keep rivers, bays, and harbors open during the winter season, called "Gillespie's Ice-Breaker," which is described as follows, reference being had to the annexed drawing of the same, making part of this specification.

The boat A engine and wheels are made in the manner of the best constructed ice boats.

B represents a shaft lying across at the bow of the boat; on which are two circular saws C for cutting the ice; and a number of hammers D for breaking it up, attached by joints to the ends of arms E let into the shaft, said shaft being turned by cranks F by connecting rods G leading to and connected with cranks in the ends of the wheel

shaft of the boat, propelled by the action of the steam engine.

H arms or timbers extending from the boat to sustain the crank shaft and in which it turns. The shaft is separated in the center to allow the boat to back, or to cause one set of hammers to act at a time independently of each other. It may also be turned by chains and cogged wheels instead of the cranks and connecting rods.

The invention claimed and desired to be secured by Letters Patent consists in—

The use and application of the jointed hammers or beaters D attached to the revolving shaft B, for breaking the ice, in combination with the circular saws, substantially as above described.

BARNABAS S. GILLESPIE.

Witnesses:

WM. P. ELLIOT,
JOS. RADCLIFF.