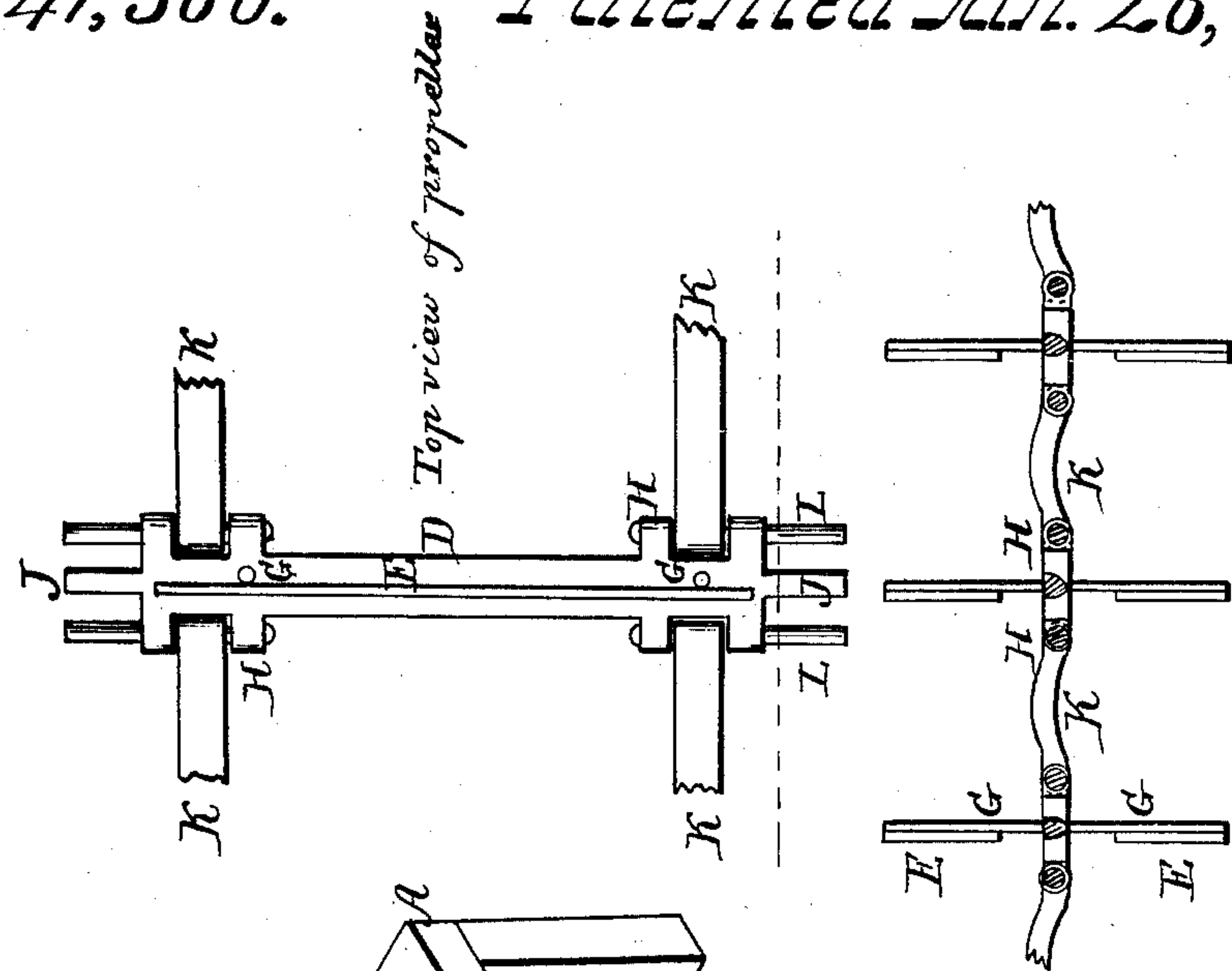


W. W. Bowman.

N^o 41,360.

Patented Jan. 26, 1864.



Side view of endless propeller:

Witnesses,
Darcorn, A. Gault
Franklin Peigart

Inventor.
W. W. Bowman

UNITED STATES PATENT OFFICE.

W. W. BOWMAN, OF GRAVES COUNTY, KENTUCKY.

IMPROVED ENDLESS-CHAIN PROPELLER.

Specification forming part of Letters Patent No. **41,360**, dated January 26, 1864; antedated January 20, 1864.

To all whom it may concern:

Be it known that I, W. W. BOWMAN, of Graves county, State of Kentucky, have invented new and useful Improvements in Endless-Chain Propellers; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawing, and to the letters of reference marked thereon, making a part of this specification.

The nature of my invention consists in the shape and construction of the endless-chain propeller, passing over open toothed wheels, in combination with inside and outside paddles.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

A represents a square frame, upon which four open or toothed side wheels, B, (two on each shaft,) revolve on their journals C, to be driven by a crank or other driving-gearing.

D are cross-stays, and part of the endless hinged chain extending horizontally across the wheels. To each one of these stays D two blades or paddles, E, are firmly attached (one on each side, above and below the stay) to iron braces or rods G, running vertically through the stays D. Each stay has hinged eyes H at its ends, and a center pin, J, pro-

jecting beyond the eyes. Between each stay D are connecting-plates K, slightly curved, convex on the outside, and eyes at each end to fit in between the eyes H, so that the pins L may pass through the eyes H and the eyes of connecting-plates K, forming a hinge or linked chain, while the pins L project beyond the ends of the stays D, so as to drop between the teeth or cogs of the side wheels, B, and carry the endless chain with the square paddles around upon the wheels B to give the paddles E a propelling power of an easy and regular motion. The pins L are easily replaced when any of them might be accidentally broken.

I am aware that endless-chain propellers, operating on cylinders and drum-wheels, have been used, but these I do not claim; but

What I claim as my invention, and desire to secure by Letters Patent, is—

The arrangement and construction of the endless-chain propeller (with inside and outside paddles) operating upon open toothed wheels, all in combination, as herein described, and for the purposes set forth.

W. W. BOWMAN.

Witnesses:

J. FRANKLIN REIGART,
D. ROWLAND.