

C. SCHWAGER.
SLED-PROPELLER.

No. 171,179.

Patented Dec. 14, 1875.

Fig: 1

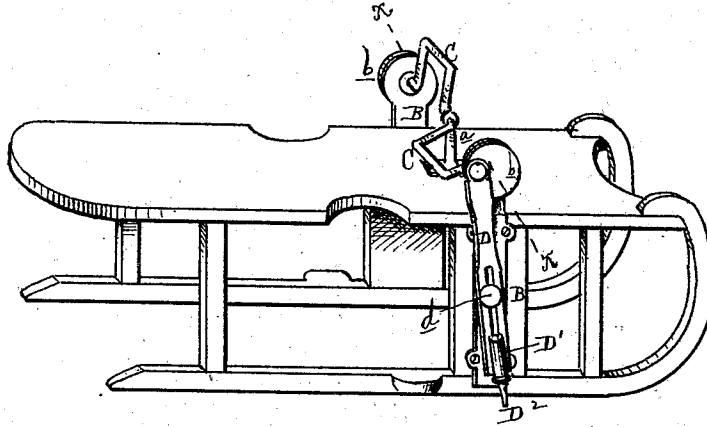
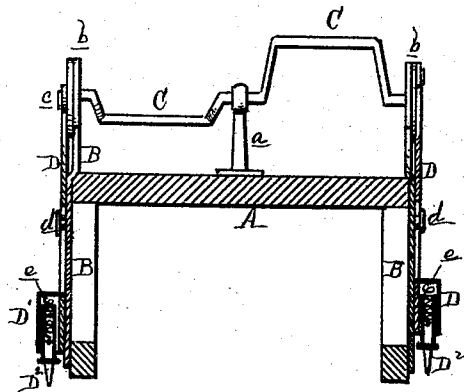


Fig: 2



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UNITED STATES PATENT OFFICE.

CHARLES SCHWAGER, OF INDIANAPOLIS, INDIANA.

IMPROVEMENT IN SLED-PROPELLERS.

Specification forming part of Letters Patent No. 171,179, dated December 14, 1875; application filed September 16, 1875.

To all whom it may concern:

Be it known that I, CHARLES SCHWAGER, of Indianapolis, in the county of Marion and State of Indiana, have invented an Improvement in Sled-Propellers; of which the following is a specification:

The nature of my invention relates to an improvement in devices for propelling a sled over ice by a person sitting astride it, and is more particularly designed as an improvement upon the sled-propeller for which Letters Patent No. 164,221 were issued to myself and Joseph Wissen on June 8, 1875. The invention consists, first, in operating the propeller of each side by an independent crank, whereby the rider can govern the course of the sleigh; and, secondly, in providing each fulcrum-lever with a spring-point to yield to any unevenness of the surface, and to give the levers a longer bearing thereon.

Figure 1 is a perspective view. Fig. 2 is a cross-section at *x x*.

In the drawing, A represents a sled, to the sides of which two plates, B B, are secured. C C are two independently cranked shafts, journaled at their outer ends through the tops of the side plates. Their inner ends are journaled in a short standard, *a*, rising from the center of the sled. At the outer end of each shaft is a face-plate, *b*, with a wrist-pin, *c*, to which is strapped the top of a lever, D, longitudinally slotted. The slot plays on a fulcrum-stud, *d*, projecting from the side plate.

By turning the cranks backward the levers D will execute or describe at their lower ends a movement akin to that of a person walking, as set forth in said Letters Patent. The lower end of each lever carries a cylinder, D¹, in which is hung or sleeved a steel point, D², which is pressed down by a spiral spring, *e*, which will allow the point to yield to any inequalities of the surface over which the sled is propelled, at the same time causing it to retain its hold thereon for a longer time than the rigid lever described in our Letters Patent aforesaid. The levers, being actuated independently, allow the rider to steer the sled by running one faster than the other.

What I claim as my invention is—

1. The combination of the standards B B, face-plates *b b*, reciprocating levers D D, and independent crank-shafts C C, when the several parts operate substantially as described and shown.

2. The combination of the standards B B, face-plates *b b*, reciprocating levers D D, independent crank-shafts C C, and standards *a*, when the several parts operate substantially as described and shown.

3. The yielding points D², in combination with the levers D, as and for the purpose set forth.

CHARLES SCHWAGER.

Witnesses:

LOUIS HOFFMANN,
S. D. WHARTON.