J. & E. ENEBO.

CONVERTIBLE SLED AND BOAT.

APPLICATION FILED SEPT. 3, 1909.

945,309.

Patented Jan. 4, 1910.

2 SHEETS—SHEET 1.

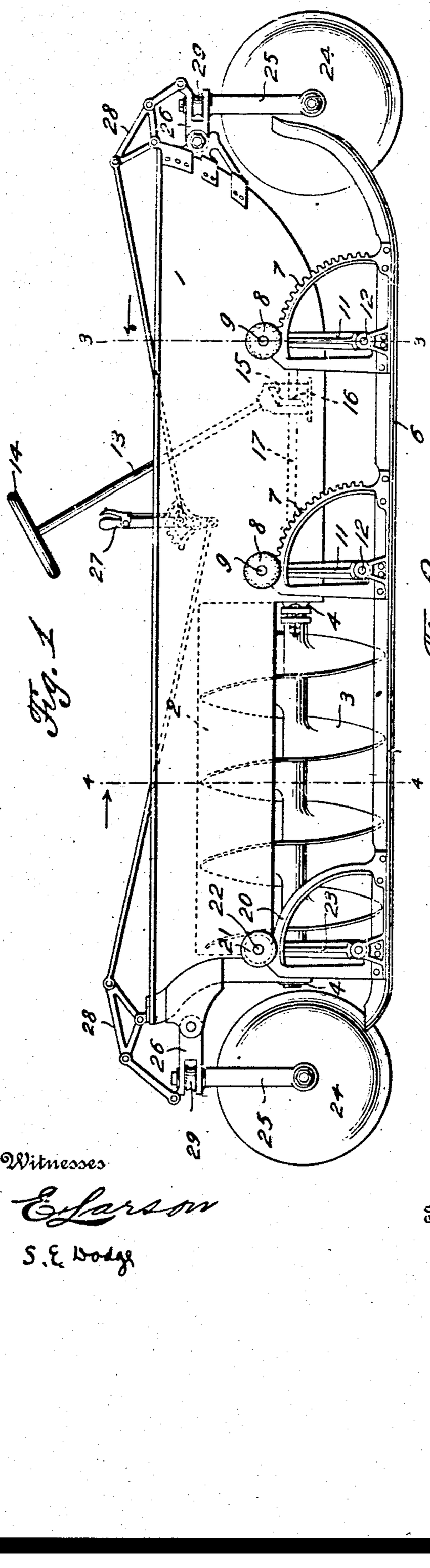


Fig. 1.

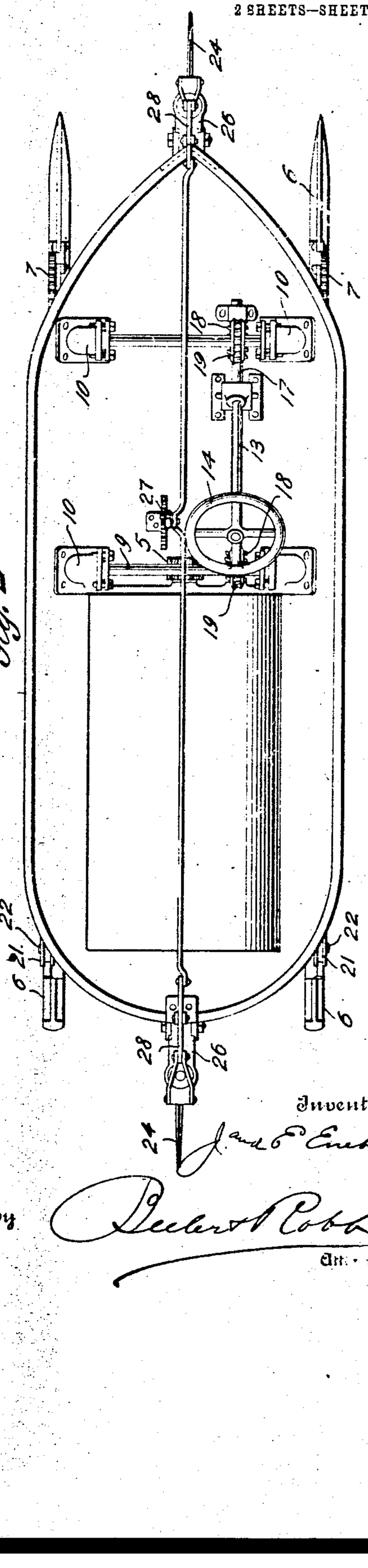


Fig. 2.

Witnesses

E. Larson

S. E. Dodge

Inventors

J. and E. Eneboe

By Richard Cobb

Attorneys

J. & E. ENEBO.

CONVERTIBLE SLED AND BOAT.

APPLICATION FILED SEPT. 3, 1909.

945,309.

Patented Jan. 4, 1910.

2 SHEETS—SHEET 2.

Fig. 3

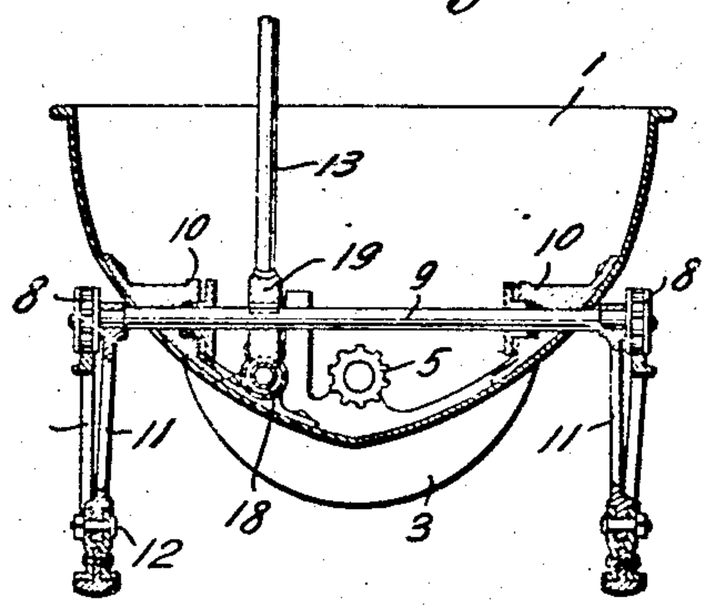
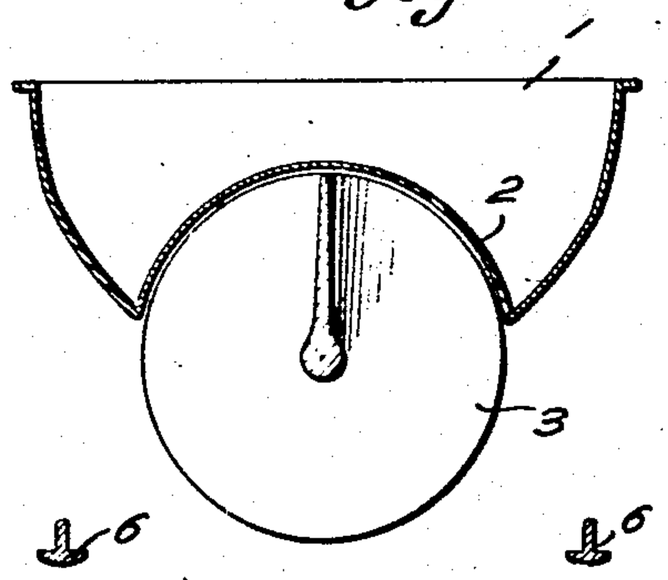


Fig. 4



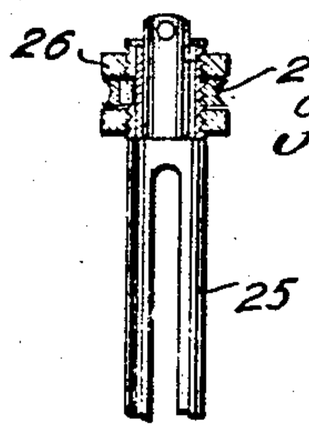


Fig. 5

Witnesses

E. Larson

S. E. Dodge

Inventors

J. and E. Enebo

By Dewey & Dodge

Attorneys

UNITED STATES PATENT OFFICE.

JOSEF ENEBO AND ELIAS ENEBO, OF ERIE, MINNESOTA.

CONVERTIBLE SLED AND BOAT.

945,309. Specification of Letters Patent. Patented Jan. 4, 1910.

Application filed September 3, 1909. Serial No. 516,070.

To all whom it may concern:

Be it known that we, JOSEF ENEBO and ELIAS ENEBO, citizens of the United States of America, residing at Erie, in the county of Red Lake and State of Minnesota, have invented certain new and useful Improvements in Convertible Sleds and Boats, of which the following is a specification.

The object of this invention is to provide a construction of boat involving suitable propelling means, and associated with a desirable arrangement of runners and guiding devices, whereby the boat may be converted into a sled to facilitate travel over snow or ice.

The invention involves especially the mounting of the runners and the mechanism for actuating the same whereby they may be moved into and out of operative position according to whether or not the boat is to travel through water or form the body of a sled.

For a full understanding of the invention, reference is to be had to the following detail description and to the accompanying drawings, in which—

Figure 1 is a side elevation of a convertible boat and sled embodying the invention; Fig. 2 is a top plan view; Fig. 3 is a transverse section taken about on the line 3—3 of Fig. 1; Fig. 4 is a transverse section taken about on the line 4—4 of Fig. 1, and Fig. 5 is a detail sectional view showing more clearly the adjustable mounting of the guiding disks or wheels located at the front and rear extremities of the machine.

Throughout the following detail description and on the several figures of the drawings similar parts are referred to by like reference characters.

Specifically describing the invention and referring to the drawings 1 denotes a boat of any suitable construction and the rear portion of which is formed at the bottom with a recess 2 providing a compartment in which the upper portion of a screw propeller 3 is arranged. The propeller 3 is mounted upon a suitable propeller shaft, which is supported in bearings 4 adjacent to the front and rear portions of the recess 2, the front end of the propeller shaft projecting through the front wall of the recess 2 into the boat and having mounted thereon a gear 5 with which any suitable manually or motor driven power mechanism may be connected in order to propel the boat through the water.

Beneath the boat 1 are mounted spaced runners 6 of any suitable type, said runners being provided at their front ends with two toothed segments 7 rigidly attached to the runners in any substantial way. The teeth of the segments 7 are in mesh with toothed pinions 8 mounted on the opposite ends of shafts 9 supported transversely in the boat.

The opposite ends of the shafts 9 pass through stuffing boxes 10 at opposite sides of the boat 1 and project from opposite sides of the boat in such a manner as to receive thereon the exterior pinions 8 that mesh with the segments 7. Links 11 connect the projecting ends of the shafts 9 with the runners 6, as shown at 12 and said shafts 9 are adapted to be rotated by means of an operating shaft 13 having a turning wheel or handle 14 at its upper end. The lower end of the shaft 13 has a gear 15 thereon meshing with a bevel gear 16 on a longitudinal shaft 17 supported in bearings inside of the boat. On the front and rear ends of the shaft 17 are worms 18 which mesh with worm gears 19 keyed or secured to the shafts 9. At the rear ends thereof the runners 6 are provided with rigid segment brackets 20 with which grooved wheels 21 engage in a manner somewhat similar to the cooperation of the pinions 8 with the toothed segments 7 at the front portions of the runners. The wheels 21 are supported upon a suitable shaft 22 which is connected at its end with the rear ends of the runners by means of links 23.

In order to direct the movement of the boat or sled it is contemplated to provide at the front and rear ends thereof guiding wheels 24 in the form of sharp edged disks carried by bifurcated standards 25, the upper ends of which are supported rotatably in pivoted arms 26 pivotally connected with the opposite extremities of the boat. The wheels 21 are adapted to be raised and lowered by means of a hand-lever 27 located at any convenient place intermediate of the ends of the boat, said lever being connected with bell crank levers 28, the latter being in turn connected by links with the arms 26.

When the boat 1 is to be propelled through the water the hand wheel 14 is turned so as to rotate the pinions 8 and cause the segments 7 to move rearwardly thereby elevat-

ing the runners with respect to the boat and so that they do not interfere with the movement of the latter through the water. When the machine is to travel over snow or ice, however, it is desirable that the runners 6 be adjusted so that they assume the position shown in Fig. 1 and whereby the boat is supported thereon and propelled under such conditions.

The standards 25 are freely rotatable on the arms 26 and vertical adjustment of said standards to vary the operative position of the wheels 24 with respect to the runners 6 may be effected by means of a nut 29 on the upper end of each standard and which has threaded connection therewith.

Having thus described the invention, what is claimed as new is:

1. In a convertible sled and boat, the combination of a boat, spaced runners beneath the same, toothed segments carried by said runners, means connecting the runners with the boat in a pivotal manner, pinions mounted on the boat to engage the toothed segments for moving the runners into and out of operative position, and means for operating said pinions.

2. In a convertible sled and boat, the combination of a boat, a pair of spaced runners beneath the same, links pivotally connecting the runners and boat together, toothed segments attached to the runners, shafts mounted in the boat, pinions carried by said shafts and meshing with the segments aforesaid, and means for turning the shafts and pinions to throw the runners into and out of operative positions with respect to the boat.

In testimony whereof we affix our signatures in presence of two witnesses.

JOSEF ENEBO.
ELIAS ENEBO.

Witnesses:
THEODORE RUSTAD,
ALEX. F. LATTIMORE.