

WILLIAM C. BIBB.  
Propulsion of Canal Boats.

No. 118,329.

Patented Aug. 22, 1871.

Fig. 1.

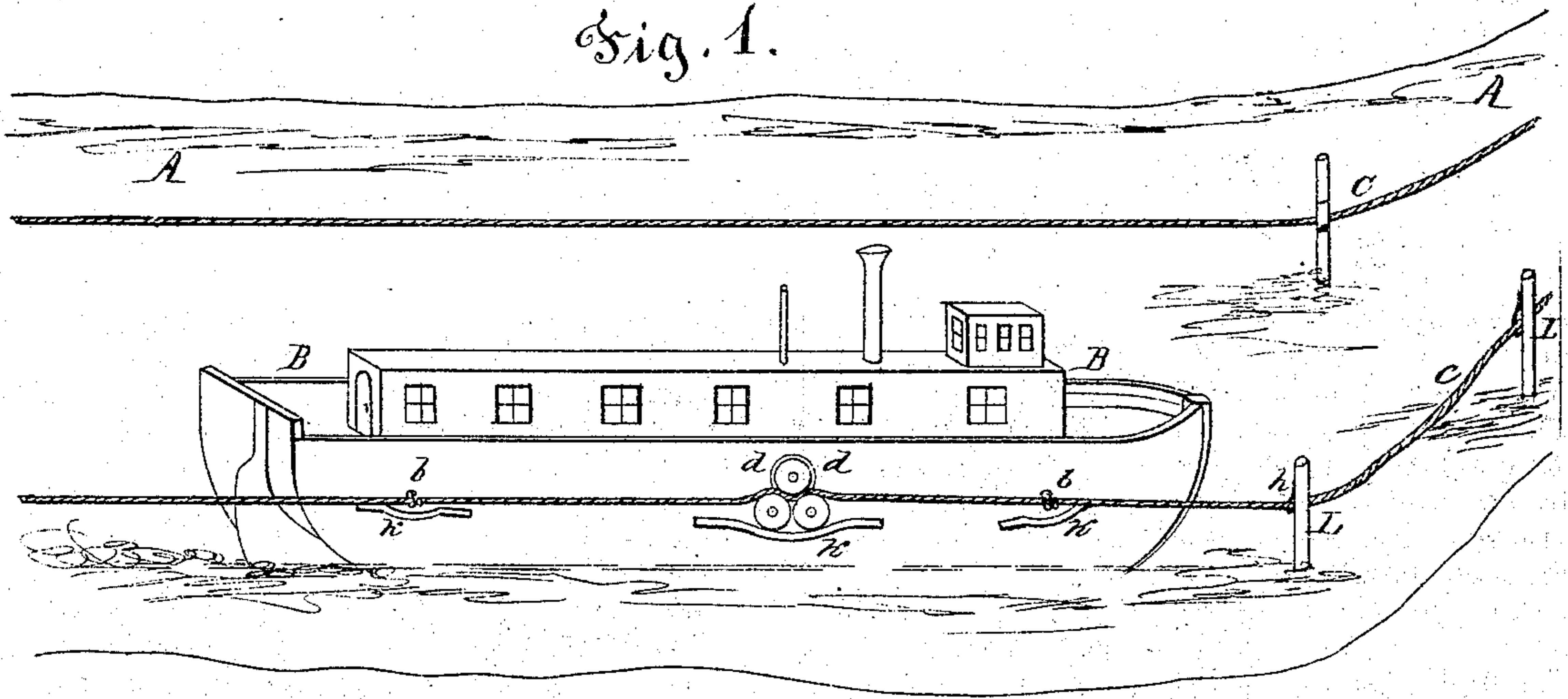


Fig. 2.

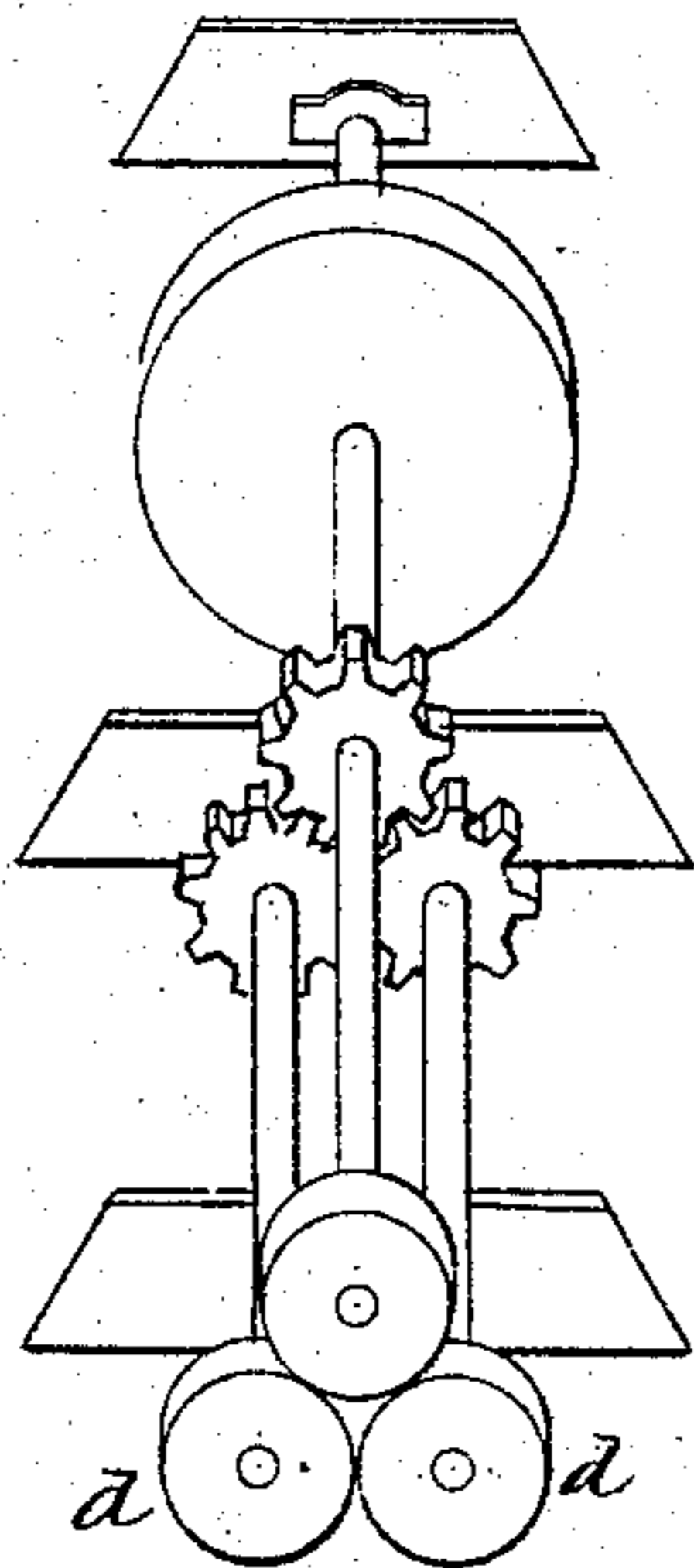


Fig. 3.

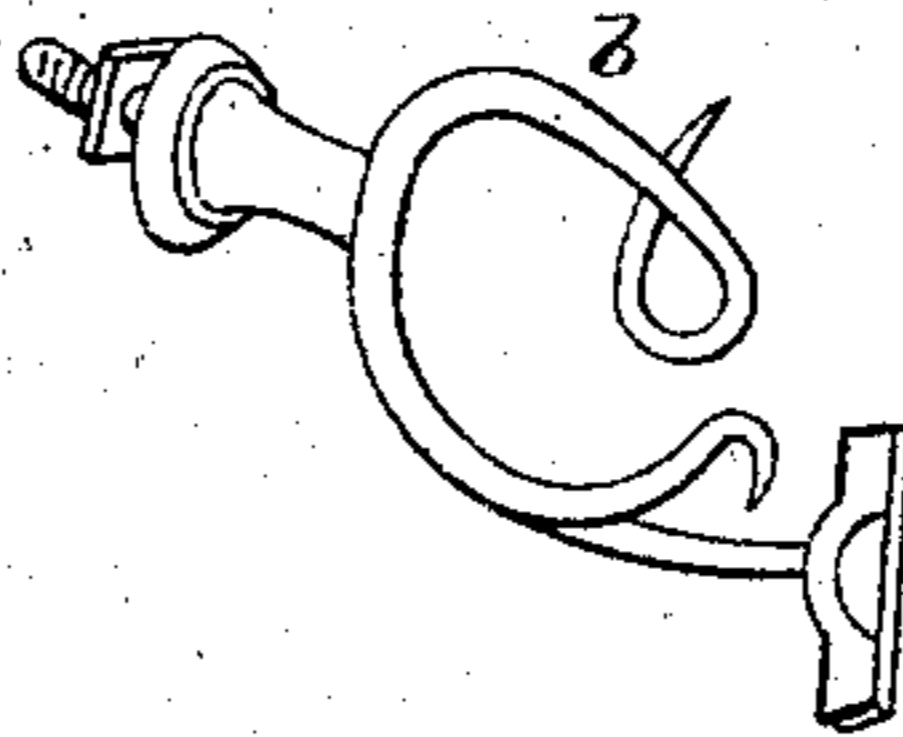


Fig. 4.

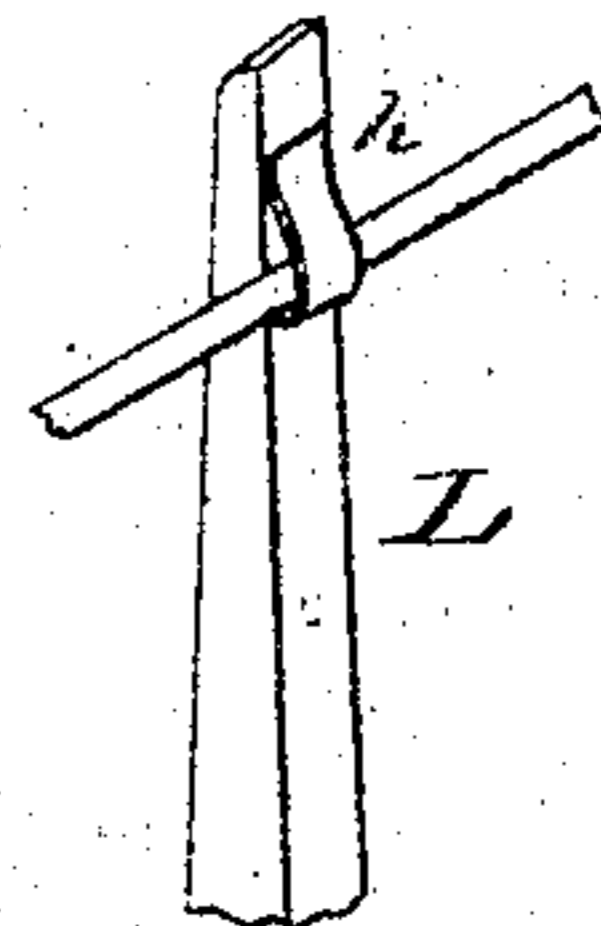
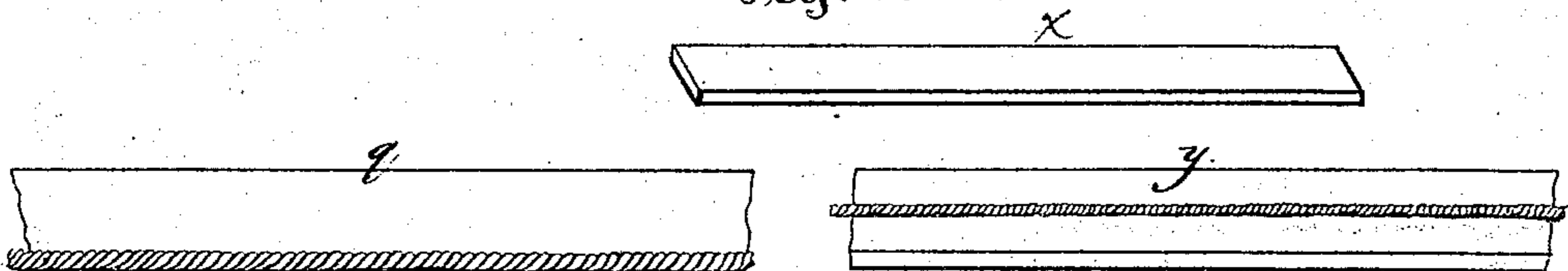


Fig. 5.



Witnesses.

Charles H. Auchewy.  
Albert E. Andrews.

Inventor.

William C. Bibb.

# UNITED STATES PATENT OFFICE.

WILLIAM C. BIBB, OF MADISON, GEORGIA.

## IMPROVEMENT IN PROPULSION OF CANAL-BOATS.

Specification forming part of Letters Patent No. 118,329, dated August 22, 1871.

*To all whom it may concern:*

Be it known that I, WILLIAM C. BIBB, of Madison, in the county of Morgan and State of Georgia, have invented certain Improvements in Navigating Boats, Barges, &c., and moving cars on railroads, and vehicles on other roads, by means of traction, the power being placed on board of such boat, barge, car, or other vehicle to effect the same, of which the following is a specification:

The first part of my invention relates to the use of wire ropes, either suspended or submerged, and attaching the same securely at curves or locks in the canal, and passing between V-grooved pulleys, which are made to revolve inwardly on each by power on board of boat, the pulleys being attached to the boat also. By this device the pressure upon the rope, created by a collar around the shafts of the pulleys, supplied with thumb-screws or their equivalent, for the purpose of opening or closing the space between them, added to the bite of the V-grooves around the pulleys, and which hold the rope, an amount of traction-power is gained to drive the boat forward at the desired speed. The number of pulleys may be indefinitely increased, and the ropes to as many as two, if more traction-power is required. They may be fixed to run on top, bottom, or sides of the boat, and a double line of ropes may be used, so that boats ascending and descending may avoid delays or collisions. I use guides to hold the boat to the rope, and they, with the pulleys, are covered on the outside by a guard, to prevent injury to them from collision with other boats or objects. The pulleys, in addition to being grooved, have their outer flanges turned down a little, so that the flaps by which the rope is attached to posts or other stationary objects may pass freely through the pulleys without hindrance. I am aware that ropes and pulleys and chains and pulleys have been used to propel boats on canals, but, so far as I know, they have not been used in the manner specified herein, and have proved in a more or less de-

gree failures, because no provision was made or could be made under those modes of application for passing curves or locks in the canal. I use the wire rope because of its greater strength over other ropes, and because it is more elastic than iron rods, by which latter I obtain greater adhesion under less pressure. I use the V-grooves because their shape is better adapted to produce friction and prevent the slipping of the rope.

Figure 1 is a side view of canal-boat, showing pulleys, wire rope, guides, guards, and attachment of rope by flaps. Fig. 2 are the pulleys and gearing. Fig. 3 is a guide. Fig. 4 shows a flap-attachment for wire rope. Fig. 5 are a rope, band, and combination of ropes and bands.

A A is a canal, on which is the boat B B, intended to be moved. The power, being placed on board, is applied by means of a band running from the driving-wheel of the engine and over the large pulley in Fig. 2. When it is revolved the cog-wheels, Fig. 2, are turned, and, acting upon each other, cause the V-grooved pulleys *d d* to rotate inwardly on each other. Now, the rope C, Fig. 1, being attached by flap *h* securely, and passing through the guide *b* and the V-grooved pulleys *d d*, is drawn upon by the bite of the V-grooves, and, as the pulleys rotate, is drawn upon, and, their pressure added, the boat is forced forward.

I claim as my invention—

1. The combination of the V-grooved pulleys *d d* with the wire rope *c*, each arranged in relation to the other substantially as and for the purpose hereinbefore set forth.
2. The guide *b*, substantially as and for the purpose hereinbefore set forth,
3. The flap attachment *h*, for sustaining the wire rope, substantially as and for the purpose hereinbefore set forth.

WILLIAM C. BIBB.

Witnesses:

ISHAM S. FARNINI,  
HERMAN W. THURN.