(No Model.) 2 Sheets—Sheet 1.

W. T. BUTLER.

COASTING APPARATUS.

No. 540,715. Patented June 11, 1895.

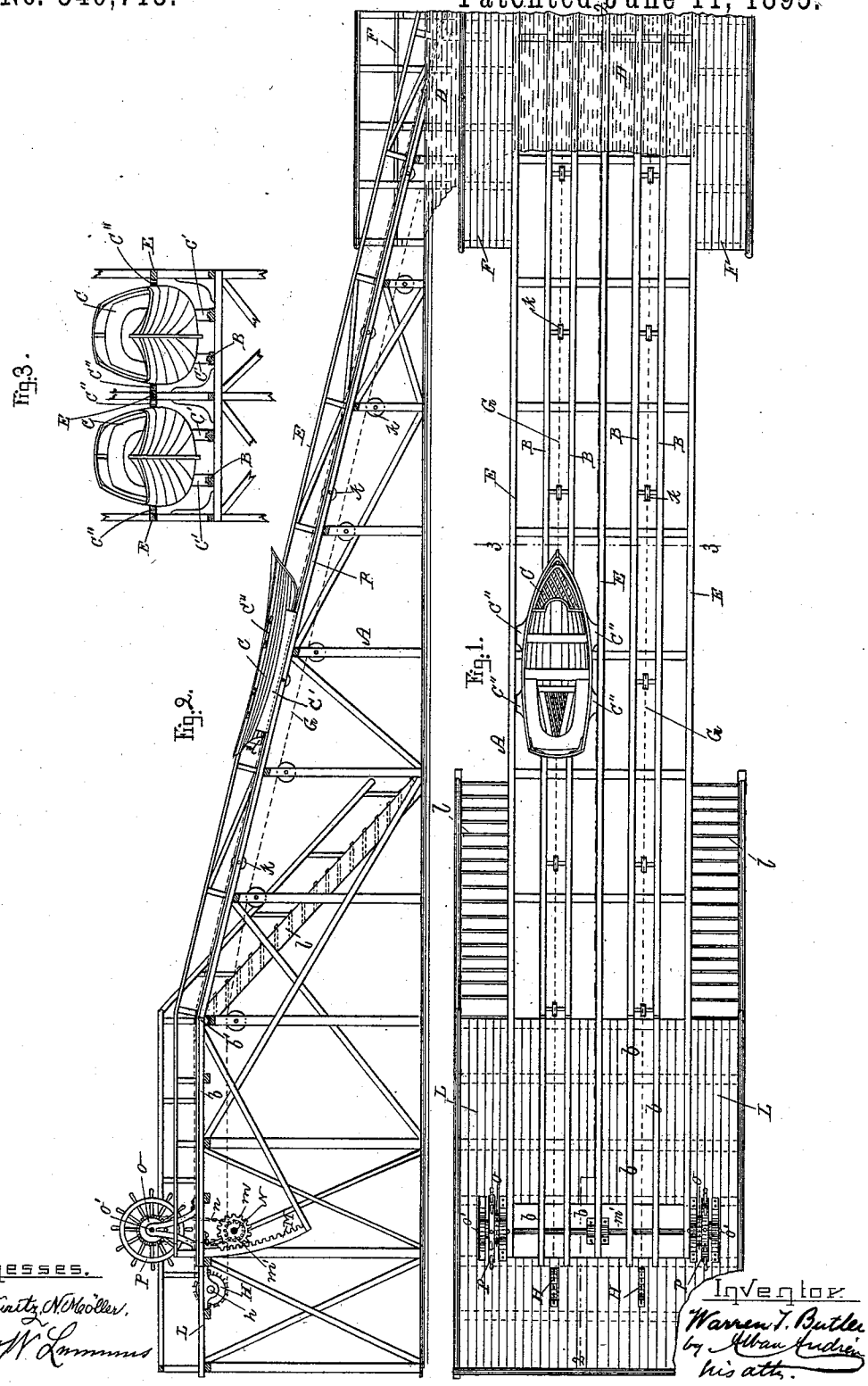

Fig. 3.

Fig. 2.

Fig. 1.

Witnesses.
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Wm. W. Lammmus

Inventor
Warren T. Butler
by Albert Andrews
his atty.

(No Model.) 2 Sheets—Sheet 2.

W. T. BUTLER.

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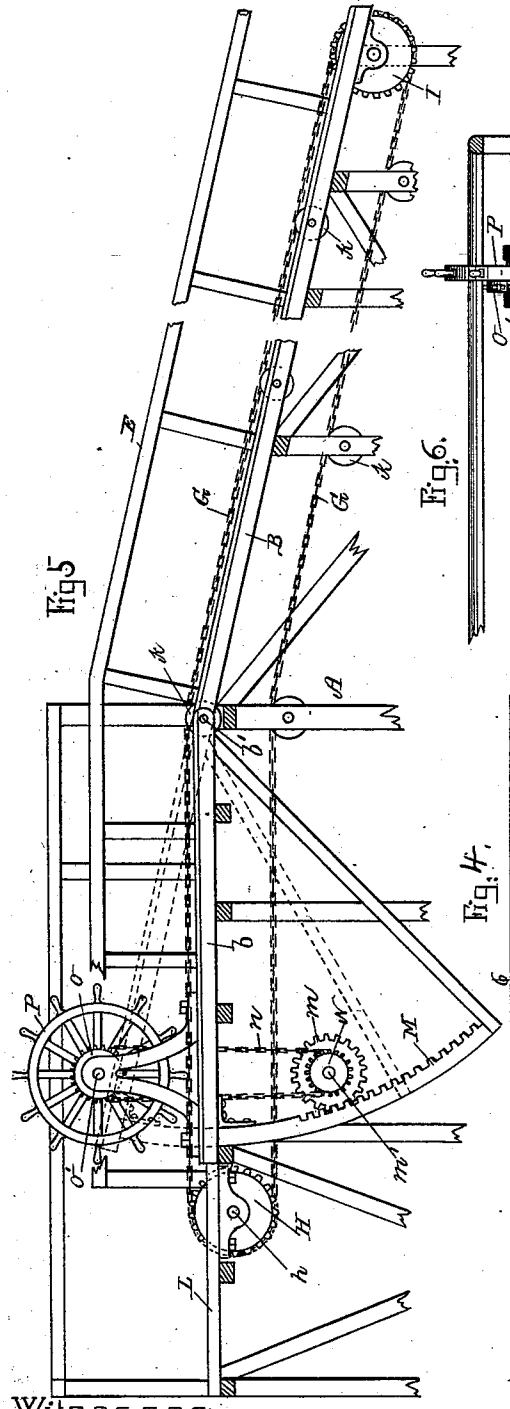

Fig. 5

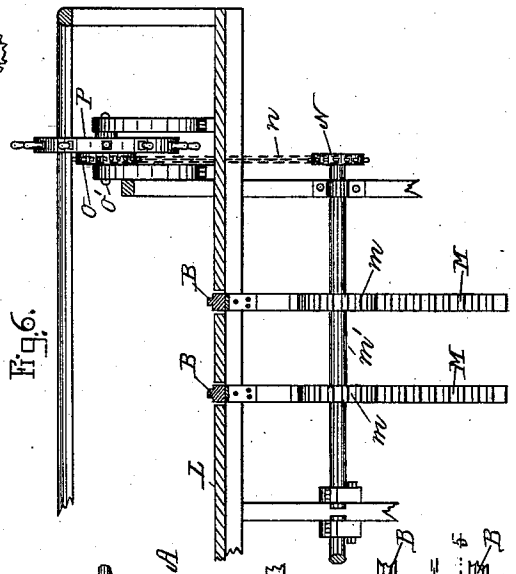

Fig. 6.

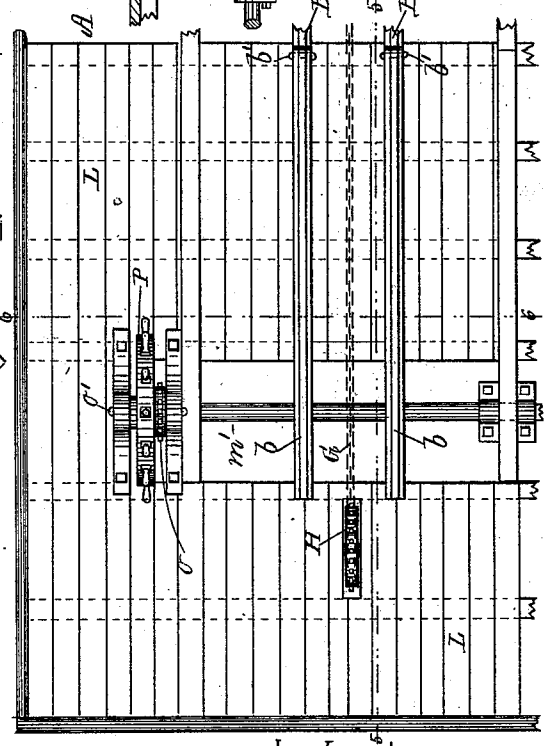

Fig. 4.

Witnesses:

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UNITED STATES PATENT OFFICE.

WARREN T. BUTLER, OF CHELSEA, MASSACHUSETTS.

COASTING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 540,715, dated June 11, 1895.

Application filed April 3, 1893. Serial No. 468,760. (No model.)

To all whom it may concern:

Be it known that I, WARREN T. BUTLER, a citizen of the United States, and a resident of Chelsea, in the county of Suffolk and State of Massachusetts, have invented new and useful Improvements in Coasting Apparatus, of which the following, taken in connection with the accompanying drawings, is a specification.

This invention relates to improvements in coasting apparatus adapted for use in connection with boats descending on inclined ways into the water and is designed as a means of entertainment at lake and seaside resorts.

The invention is carried out as follows, reference being had to the accompanying drawings, wherein—

Figure 1 represents a plan view of the improved apparatus. Fig. 2 represents a longitudinal section on the line 2 2, shown in Fig. 1. Fig. 3 represents a cross-section on the line 3 3, shown in Fig. 1. Fig. 4 represents a detail plan view of the upper platform and its connections. Fig. 5 represents a longitudinal section on the line 5 5, shown in Fig. 4; and Fig. 6 represents a cross-section on the line 6 6, shown in Fig. 4.

Similar letters refer to similar parts wherever they occur on the different parts of the drawings.

A represents a suitable frame work or natural declivity having a proper and suitable inclination on which is firmly supported and secured one or more inclined tracks composed preferably each of a pair of parallel rails or ways B, B, as shown, on which the boats C, C, are guided while descending into the water D at the lower ends of said ways as well as when being drawn upward into position for descent. Each boat is provided on its under side with runners or keels C′, C′, adapted to slide on the ways B, B, said ribs being preferably made concave or grooved on their under sides to fit the correspondingly shaped rails B, B.

E, E, represent side rails at the sides of the tracks which side rails are arranged about even with the railing of the boats, as shown, the latter having guide rails C″, C″, secured level with the side rails E, E, so as to properly guide the boats and keep them on even keels while descending or when being drawn up on the inclined tracks.

F, F, represent stationary or floating platforms arranged at one or both sides of the lower end of the inclined ways for landing the passengers preparatory to hauling the boat or boats into their upper positions on the inclined ways.

Each track is provided with an endless chain G or its equivalent carried around a hoisting pulley H located at the upper portion of the track and a guide pulley I arranged at the lower part thereof and preferably guided on suitable intermediate wheels or rollers K, K, as shown.

h is the shaft of the hoisting pulley H which is located in suitable stationary bearings and may be operated by hand or machine power for raising the boats which, for this purpose are temporarily attached to said chain by means of a suitable grip, or other equivalent locking device.

L, L, are stationary platforms arranged at the sides of the upper ends of the inclined tracks, and *l*, *l*, are stairways leading therefrom to the ground, as shown, for enabling the passengers to reach the said upper platforms preparatory to descending the coast in the boats.

In a line with the upper part of each stationary track is arranged a movable track composed of rails *b*, *b*, which are pivoted at their forward ends at *b′*, *b′*, and provided with suitable mechanism by means of which said tracks may be swung to the inclined positions shown by dotted lines in Fig. 5. In the drawings I have shown the mechanism for raising and lowering said rails *b*, *b*, as consisting of toothed racks M, M, secured to the pivoted rails *b*, *b*, and having their teeth meshing in the teeth of the pinions *m*, *m*, secured to a shaft *m′*, located in stationary bearings, and provided with a chain pulley N, from which leads a chain *n* to a similar chain pulley O secured to a shaft O′, located in stationary bearings and provided with a crank or hand wheel P for its operation as shown. Any other suitable mechanism may, however, be used for this purpose without departing from the essence of my invention.

If so desired, the side guides and runners

or keels of the boats may be provided with antifriction rollers.

In using and operating the marine coaster the boat is temporarily connected by means of a suitable grip, &c., to the chain G, and as the latter is set in operation the boat is drawn upward on the inclined track and made to rest on the now horizontally held rails *b*, *b*, after which the passengers embark in the boat. The boat is then disconnected from the chain G, and the tracks or rails *b*, *b*, are swung upward in their rear ends causing the boat to descend swiftly on the inclined track and to shoot into the water when reaching the lower end of the track, after which, the boat is rowed to the landings, the passengers disembark and ascend the steps leading to the upper platforms of the coast, while the boat is again drawn up to its raised position on the track, and so on; or if so desired, the passengers may be drawn up with the boat.

Having thus fully described the nature, construction, and operation of my invention, I wish to secure by Letters Patent and claim—

1. A marine coaster consisting of one or more inclined tracks combined each with an upper pivoted track, one or more racks secured thereto, and a pinion or pinions meshing in said racks and means for actuating said pinions, substantially as and for the purpose set forth.

2. In a marine coaster one or more boats having each a pair of longitudinal runners on the under side combined with side guides at or near the upper portion, and a grip or equivalent means for attaching one end of the boat to the hoisting mechanism, substantially as and for the purpose set forth.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, on this 29th day of March, A. D. 1893.

WARREN T. BUTLER.

Witnesses:
ALBAN ANDRÉN,
LAURITZ N. MÖLLER.