

No. 689,647.

Patented Dec. 24, 1901.

L. DE INTINIS.  
CAR BRAKE.

(Application filed July 20, 1901.)

(No Model.)

2 Sheets—Sheet 2.

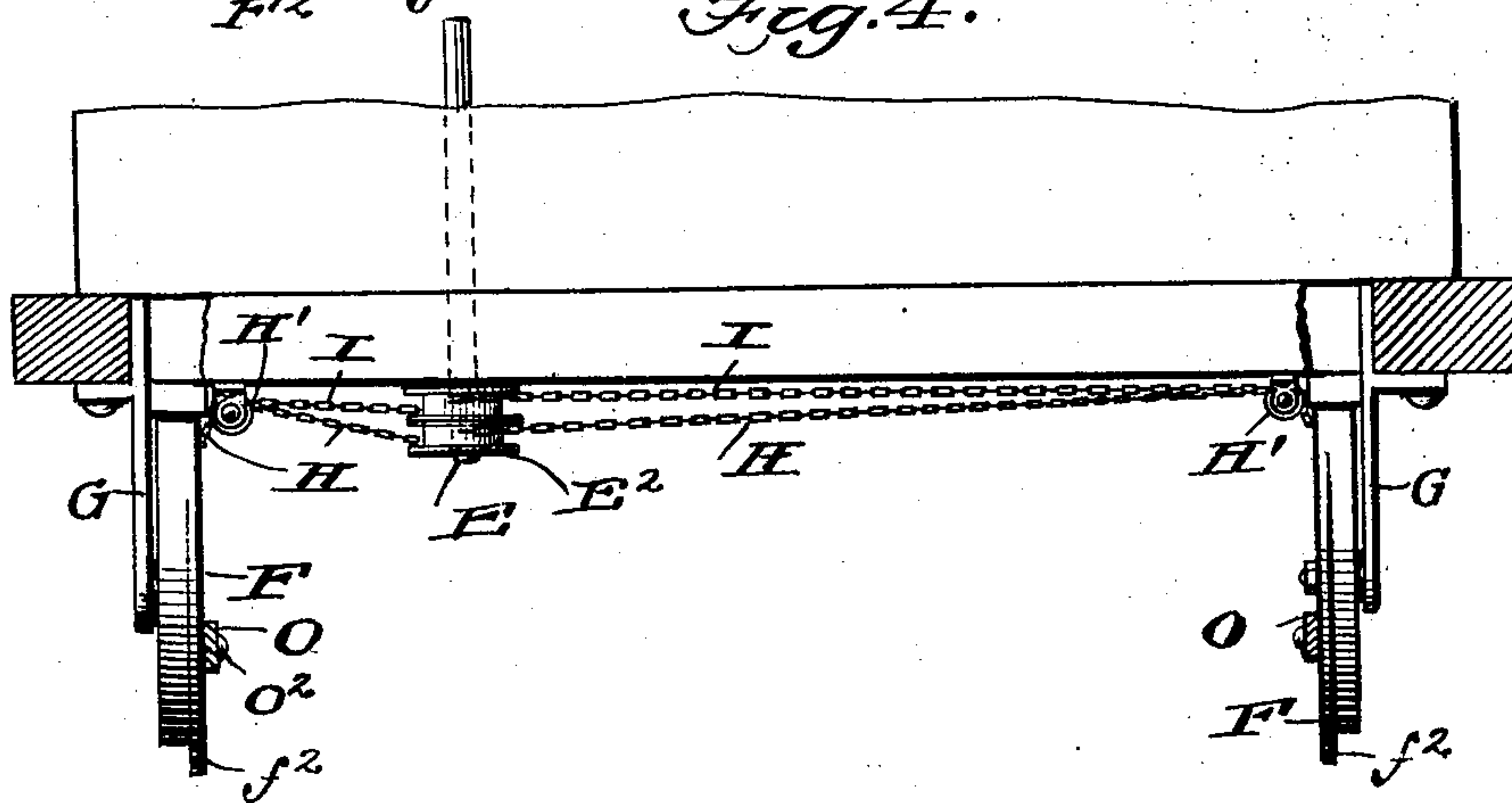
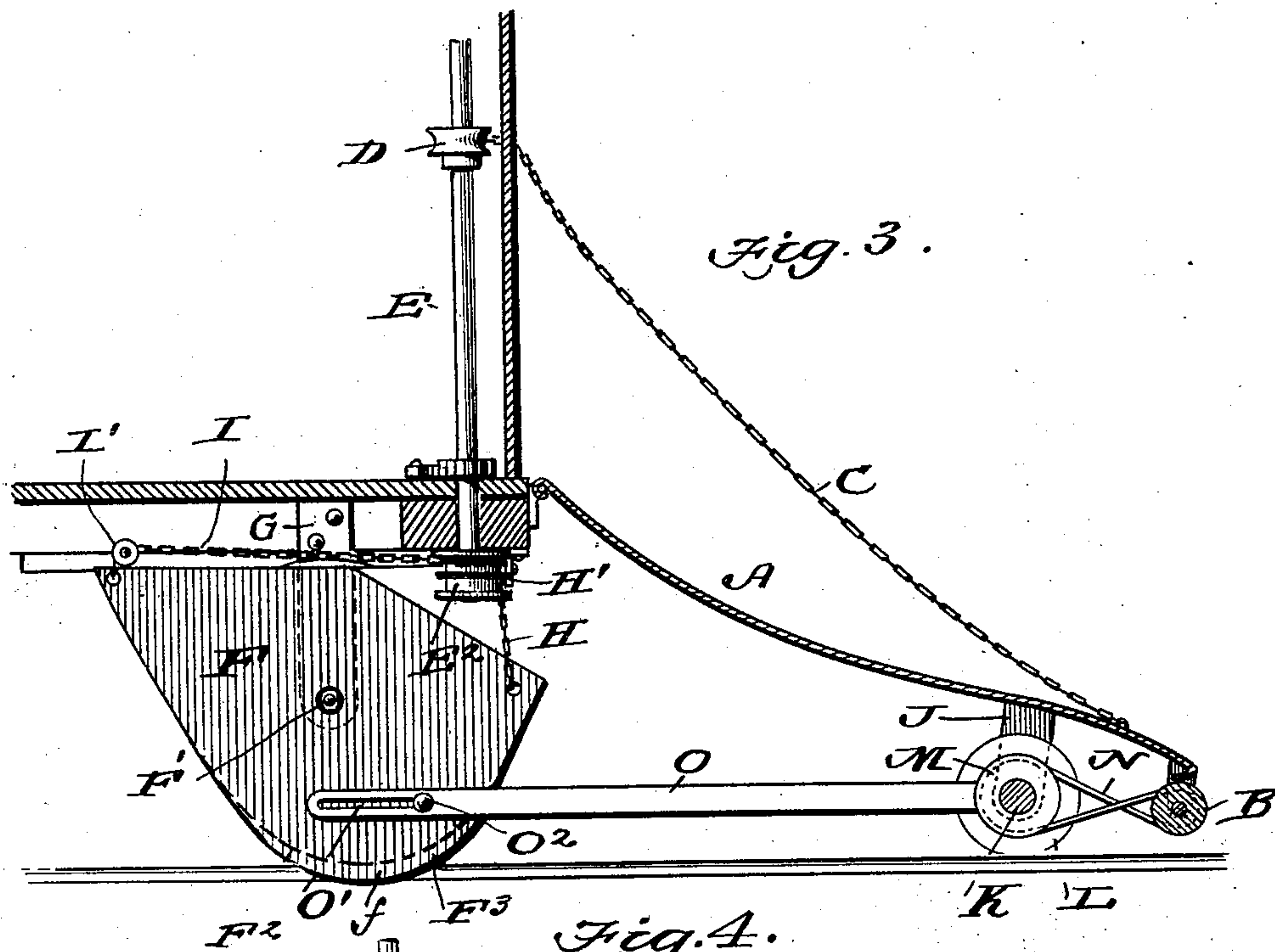
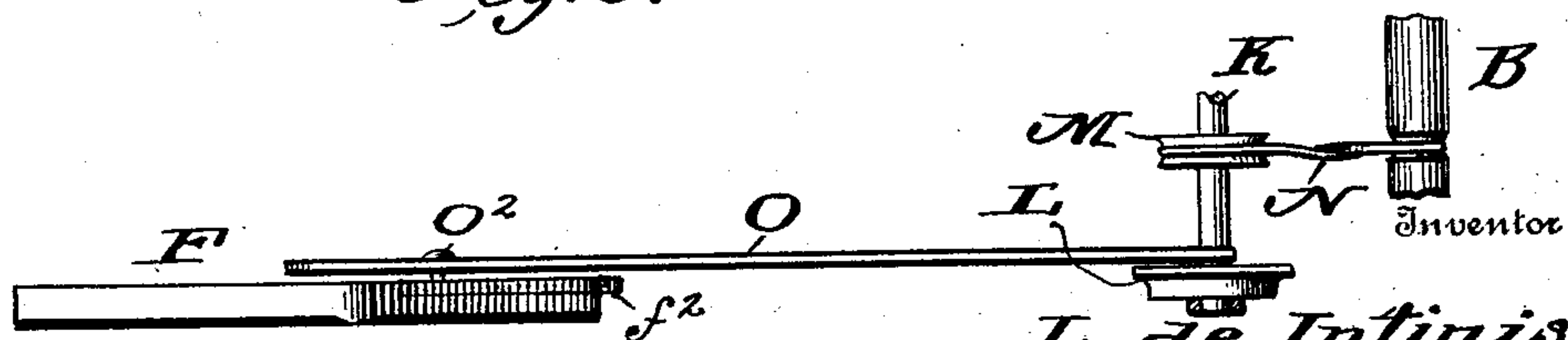


Fig. 5.



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# UNITED STATES PATENT OFFICE.

GEORGE A. LOWRY, OF CHICAGO, ILLINOIS.

## SAIL.

SPECIFICATION forming part of Letters Patent No. 689,648, dated December 24, 1901.

Application filed April 2, 1901. Serial No. 54,082. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE A. LOWRY, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Sail, of which the following is a specification.

This invention relates to sails.

The object of the invention is to provide a construction and arrangement of sail whereby a greater area of canvas is presented to the action of the wind without increasing the space occupied by an ordinary sail.

A further object of the invention is to provide a construction of sail wherein the spilling of the dead-wind is readily accomplished.

A further object of the invention is to provide a construction of sail and operating-rigging therefor whereby the handling of the sail is easily and efficiently accomplished.

Other objects of the invention will appear more fully hereinafter.

The invention consists, substantially, in the construction, combination, location, and arrangement, all as will be more fully hereinafter set forth, as shown in the accompanying drawings, and finally pointed out in the appended claims.

Referring to the accompanying drawings and to the various views and reference-signs appearing thereon, Figure 1 is a view in side elevation of a sail-boat, showing the application thereto of sails constructed in accordance with and embodying the principles of my invention. Fig. 2 is a view in sectional plan on the line 2 2 of Fig. 1 looking in the direction of the arrows. Fig. 3 is an enlarged detail view, in sectional plan, of the sails embodying the principles of my invention, showing the application thereof to a mast and boom and also showing the arrangement of rigging for manipulating the sections of the sail.

The same part is designated by the same reference-sign wherever it occurs throughout the several views.

In the construction of sails for sail-boats, ships, and the like it is exceedingly desirable to provide for a given space a maximum amount of canvas area to be presented to the action of the wind. It is also desirable to provide means whereby in tacking or wearing, for instance, the dead-wind may be easily and readily

spilled from the sail in order that the tacking or wearing of the vessel may be effected quickly and with the least possible retardment to the vessel. The accomplishment of these objects, among others, is among the important features of my invention, and in carrying out my invention I propose to employ sails made up of sections, which when in properly spread relation occupy the same general or bounding dimensions as an ordinary sail, but which by arranging the sections to overlap each other, as will be more fully explained hereinafter, present a greater effective area of canvas to the wind. I also provide means whereby each section of the sail is controllable in the shifting thereof—as in tacking or wearing, for instance—whereby the dead-wind may be easily and readily spilled.

Referring to the accompanying drawings, reference-sign G designates a mast, which may be of the usual or ordinary construction and arrangement.

A designates a sail-boom, yard-arm, or spar, and B a cooperating gaff, yard-arm, or spar suitably connected and supported from the mast G in the usual or any convenient manner.

*a a a* designate the different sections of the sail. One of the lower corners of each section *a* of the sail may be firmly clewed or fastened to the boom, yard-arm, or spar A, as indicated at *b b b*, &c., and each of the upper corners of each section of the sail may be suitably secured, as indicated at C C, to the gaff, spar, or yard-arm B. Each section of the sail is of increasing width from the upper toward the lower ends thereof, as clearly shown, and the several sections respectively overlap each other from their upper toward their lower ends, said sections not overlapping at their upper ends, as clearly indicated in Fig. 1. The connections of the upper ends of the sail-sections and of the inner lower corners of such sections to the gaff-boom, yard-arm, or spar B A, respectively, may be rigid and permanent connections, as shown, or, if desired, may be by means of gaskets movable along such boom, gaff, spar, or the like, or removable therefrom in the usual or well-known manner for convenience in taking in and spreading the sail, and said gaff, boom, spar,



when the fender is dropped. Pulley-wheels M are also mounted upon the shaft K, and cross-belts N are arranged upon the said pulleys M and journaled around the grooved portions of the roller B, so that when the fender is dropped the wheels L will contact with the track-rails and during the forward motion of the car will rotate the roller B, so as to prevent anything striking the said roller passing under the same, the rotary motion of said roller being such that it tends to throw any article upwardly upon the fender.

In order to prevent anything passing under the fender and contacting with the brake-blocks, I employ guard-rails O, which are pivotally connected at their forward ends to the shaft K and at their rear ends to the brake-blocks F, said rear ends being slotted longitudinally, as shown at O', to receive the pivot-pin O<sup>2</sup>, which connects said guard-rails and brake-blocks.

It will thus be seen that I provide an exceedingly cheap, simple, and efficient construction of combined car-brake and fender and one in which the braking mechanism will be simultaneously operated by the dropping of the fender.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent of the United States, is—

1. In a car-fender, the combination with the fender proper hinged to the front of the car, of the chains for supporting the said fender, a roller arranged at the forward end

of the fender, track-wheels arranged adjacent to the forward end of the fender and adapted to contact with the track-rails when the fender is lowered, and the pulleys and belts operated by said track-wheels for rotating the roller carried at the forward end of the fender, substantially as shown and described.

2. The combination with the fender and brake-blocks, of the chains for raising and lowering the said fender and brake-blocks, the track-wheels attached to the fender and the guard-rails connecting the fender and brake-blocks, substantially as set forth.

3. The combination with the hinged fender having a roller at its forward end, of the depending brackets attached to said fender, the shaft journaled in said brackets and carrying track-wheels and pulleys, cross-belts traveling around said pulleys and roller, the vertical rotary shaft, the chains connecting the said shaft and fender, the brake-blocks pivotally suspended beneath the car-platform, the chains connecting the opposite ends of said brake-blocks to the vertical shaft, and the guard-rails pivotally connected at their forward ends to the shaft arranged beneath the fender, their rear ends being slotted longitudinally and pivotally connected to the sides of the brake-blocks, substantially as and for the purpose described.

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Witnesses:

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a pair of shifting ropes or sheets for the outer corner of each section, as and for the purpose set forth.

5 6. The combination with a gaff and a boom, of a sail composed of sections, the upper ends of each section being secured to said gaff and one corner of the lower end of each of said sections being secured to said boom, and shifting sheets or ropes connected to the other  
10 corner of the lower end of said sections, as and for the purpose set forth.

7. The combination with a gaff and a boom, of a sail composed of sections, the upper ends of each section being connected to said gaff,

the lower ends of said sections overlapping 15 each other and connected at the forward corner thereof to said boom, and a pair of independent shifting sheets or ropes connected to the aft corner of the lower end of each section, and guiding-leads for said shifting sheets 20 or ropes, as and for the purpose set forth.

In witness whereof I have hereunto set my hand, this 26th day of March, 1901, in the presence of the subscribing witnesses.

GEORGE A. LOWRY.

Witnesses:

WM. M. RHEEM,  
LOUISE CORNELL.