

No. 850,370.

PATENTED APR. 16, 1907.

W. L. HYNES.
WATER AUTOMOBILE.
APPLICATION FILED JUNE 5, 1906.

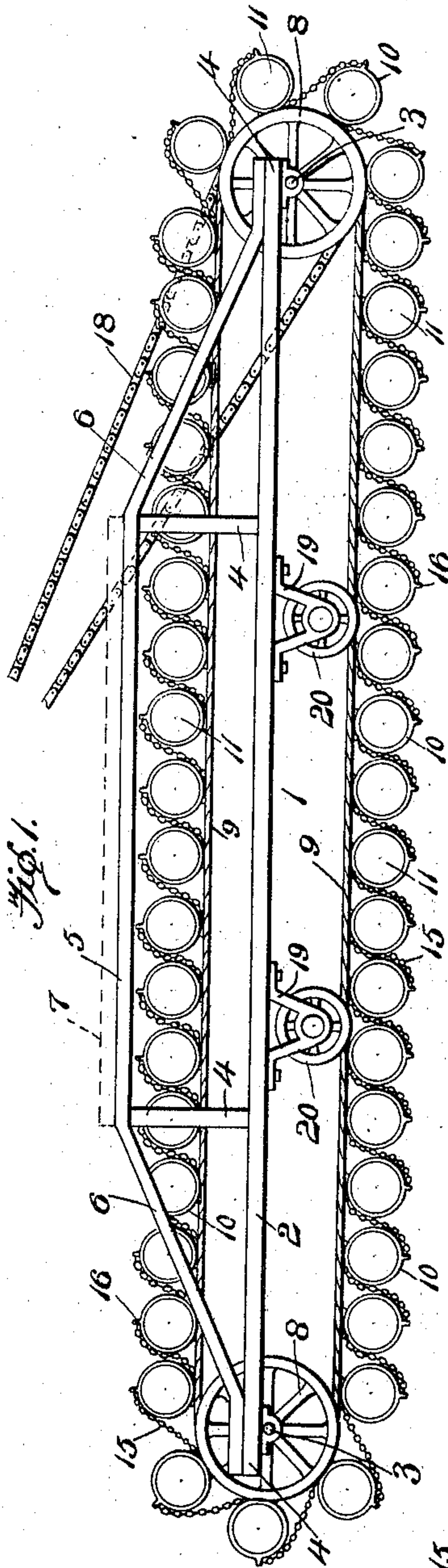


Fig. 2.

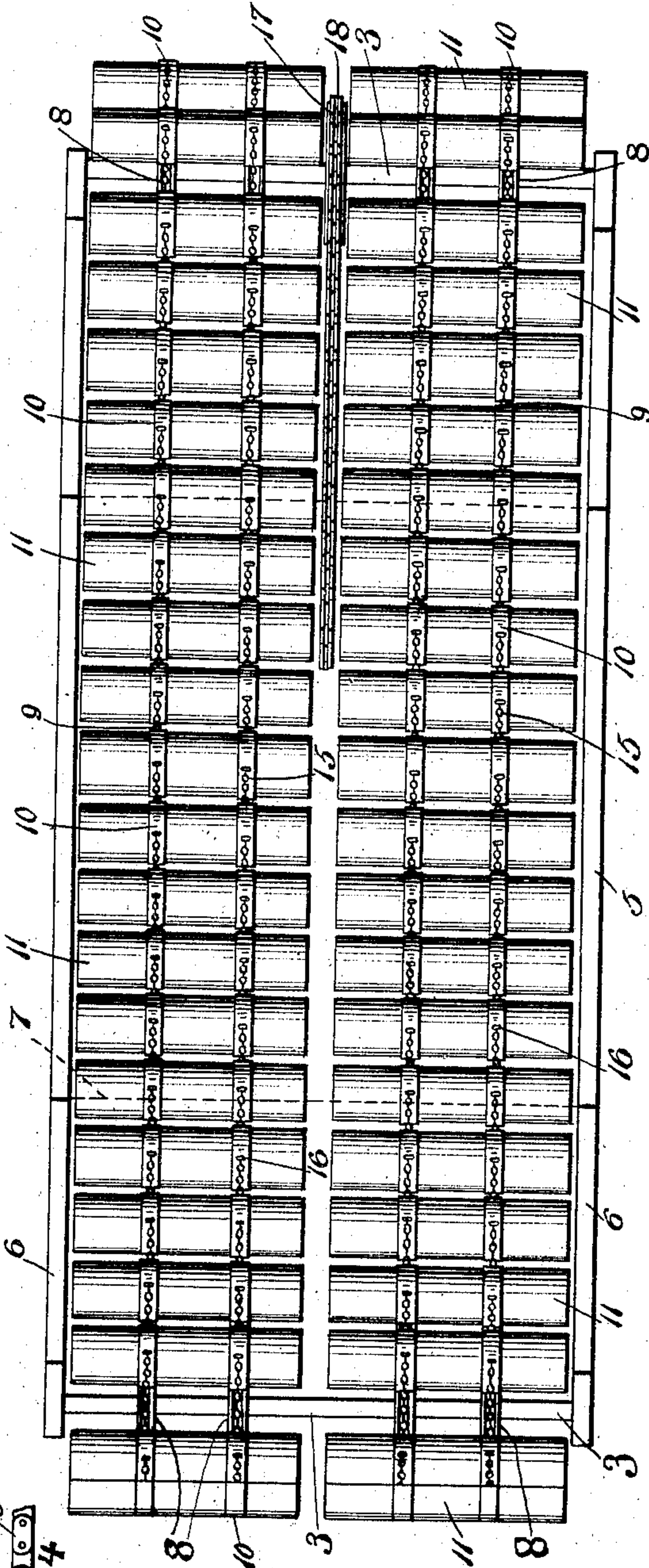
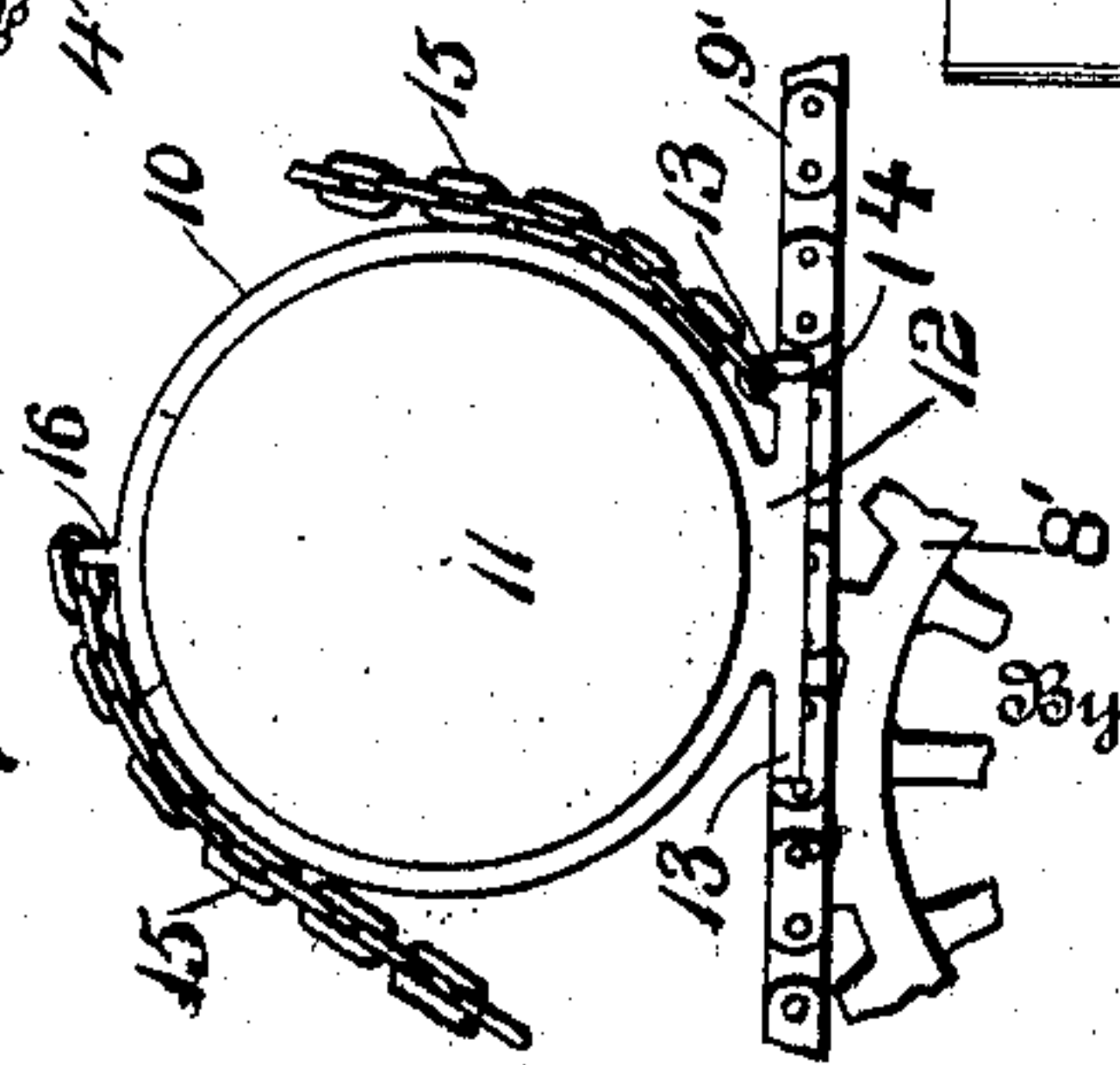


Fig. 3.



Witnesses
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UNITED STATES PATENT OFFICE.

WILLIAM L. HYNES, OF ELGIN, ILLINOIS.

WATER-AUTOMOBILE.

No. 850,370.

Specification of Letters Patent.

Patented April 16, 1907.

Application filed June 5, 1906. Serial No. 320,253.

To all whom it may concern:

Be it known that I, WILLIAM L. HYNES, a citizen of the United States, residing at the city of Elgin, in the county of Kane and State of Illinois, have invented a new and useful Water-Automobile, of which the following is a specification.

This invention relates to certain improvements in water-automobiles, and more particularly to the propelling mechanism of a vessel.

The object of the invention is the provision of means for facilitating the propulsion of a vessel and increasing the speed thereof.

With this and other objects in view the invention consists of certain novel constructions, combinations, and arrangements of parts as will be hereinafter fully described and claimed.

In the drawings, Figure 1 is an elevated side view of a mechanism constructed in accordance with the present invention. Fig. 2 is a top plan view of the mechanism depicted in Fig. 1. Fig. 3 is an enlarged detail end view of one of the floats and showing in side elevation the means for attaching the same to an endless carrier.

Referring to the drawings, 1 designates the frame of the mechanism, which comprises primary horizontal side beams 2, that are preferably connected at their ends by revoluble shafts 3. A superstructure is positioned upon each beam 1 and comprises vertical standards 4 4, which standards 4 are connected by a horizontal auxiliary beam 5. Inclined beams or brace portions 6 connect the ends of each horizontal beam 5 with a beam 2 near the ends 4 thereof. A platform 7 (shown in dotted lines) of any construction is preferably formed upon the horizontal auxiliary beams 5 and a motor or engine is carried by this platform or floor 7.

I preferably secure a plurality of pairs of grooved wheels 8 upon each shaft 3, and positioned upon these wheels 8 are endless carriers 9, which I have shown in the embodiment depicted in Fig. 1 as cables. The endless carriers may be sprocket-chains 9', as illustrated in Fig. 3, which are positioned upon and pass around sprocket-wheels, as 8', which may be substituted for the grooved

wheels 8 without departing from the spirit of this invention.

Each endless carrier or cable 9 is provided with a series of bands or casings 10, which comprise fastening means for securing tubes or floats 11 to said carriers. I employ two pairs of endless carriers, and consequently have a pair of propelling devices comprising endless carriers and a plurality of transversely-arranged tubes or floats. The bands 10 of each pair of endless carriers are positioned parallel, so that each tube or float 11 is surrounded by two bands 10. The bands 10 are each provided, preferably, with an integral base 12, having oppositely-extending portions 13. The base 12 is fixedly secured to the endless carrier or cable 9. One of the extensions 13 is provided with an eye 14, Fig. 3, to which eye a flexible member—as, for instance, chain 15—is secured at one end, and the opposite end of said chain 15 is secured to an eye 16, formed upon preferably the highest portion of the band 10. When the propelling devices are moving, as the tubes or floats 11 pass around the front wheels and engage the water, an extra strain is placed on each float at that time, and to strengthen the fastening means 12 and prevent the same from being injured or broken the chains 15 are employed, which hold each float rigid in its normal position at right angles to those portions of the endless carriers to which the base or fastening means 12 is secured. It will be obvious that this rigid securing of the floats to the endless carriers produces an efficient device that is not liable to become broken by suddenly increasing or decreasing the speed of travel, as the chains are an auxiliary fastening means for compensating varied movement or extra strain upon the floats, caused by said floats engaging the water.

Each float 11 may be formed of any suitable flexible material or of a non-flexible material and is in either instance preferably inflated, or within said floats compressed air or gas is stored for increasing their buoyancy. The chains 15 will not injure the floats 11 if said floats are constructed of flexible material—as, for instance, rubber or canvas—because when said chains are not taut they will lie against the bands 10.

When the endless carriers are passing along their upper or lower run, the chains will not be taut; but it is only when the floats are passing around the end revoluble supports 8, or, as in Fig. 3, 8', that the chains are taut. Each float is therefore provided with a plurality of fastening means for securing the same to its carrier or carriers, and said fastening means comprises pairs of fastening devices arranged upon opposite sides of the float or tubes, one of said pairs of fastening means at all times holding the float to its carrier or carriers, while the other pair of fastening means acts only to hold the float in its normal position when the float is passing around the revoluble end supports. It will be obvious that the floats or tubes 11 are positioned close together on their upper and lower run and are separated considerably when passing around the end supports. A sprocket-wheel 17 is fixedly secured to one of the shafts 3 between the propelling devices, and said sprocket-wheel is connected, preferably, by means of a sprocket-chain 18 to any suitable source of power—as, for instance, an engine or motor carried by the platform 7. Secured to each horizontal beam 2 and depending therefrom are brackets 19, which brackets 19 support idlers 20. These idlers 20 engage an endless carrier or cable 9 and prevent the same from sagging. The brackets 19 and idlers 20 constitute bracing means for the endless carriers for preventing sagging and also serve to retain said carriers tight or taut, thereby materially increasing the efficiency of the apparatus, not only because the carriers or cables 9 will not be permitted to sag, but will also prevent them slipping upon the revoluble end supports 8 or 8'.

What I claim is—

1. In an apparatus of the class described, the combination with a frame, revoluble end supports carried by said frame, of an endless carrier positioned upon said end supports, a float carried by said carrier, means for securing said float at its lower portion to said carrier, and auxiliary fastening means connected to said float and said carrier and adapted to retain the same in a rigid position with respect to said carrier, as said float passes around the end supports.

2. In an apparatus of the class described, the combination with a frame, an endless carrier positioned upon said frame, of a float, a band surrounding said float, means securing said band to said carrier, a flexible member secured at one end to said band and at its opposite end to said carrier, and means for driving said carrier.

3. In an apparatus of the class described, the combination with a frame, revoluble end

supports carried thereby, of pairs of endless carriers positioned upon said frame, floats positioned transversely to said carriers, bands connecting said floats to said carriers, and means for rigidly holding said floats in their normal position when passing around the revoluble end supports.

4. In an apparatus of the class described, the combination with a frame, revoluble end supports carried thereby, an endless carrier positioned upon said revoluble supports, of a float, means securing said float to said carrier, and means connected to said float near its top and to said carrier for retaining said float rigidly upon said carrier as said float passes around said end supports.

5. In an apparatus of the class described, the combination with a frame, an endless carrier positioned upon said frame, of a band provided with a base, means securing said base to said carrier, a float or tube positioned within said band, and auxiliary fastening means connecting said band to said carrier.

6. In an apparatus of the class described, the combination with a frame, an endless carrier positioned upon said frame, of a band provided with a base, means connecting said base to said carrier, said band provided with an eye, fastening means secured to said eye and to said carrier, and a float positioned within said band.

7. In an apparatus of the class described, the combination with a frame, a carrier positioned upon said frame, of a pair of surrounding means or bands, each of which is provided with a base, means for securing said base to said carrier, tubes or floats secured within said bands, a flexible connecting member secured to the base of one of said bands and to the other band above said base, and means for driving said carrier.

8. In an apparatus of the class described, the combination with a frame, an endless carrier carried by said frame, of bands secured to said carrier, each band provided with a base, an eye formed upon said base, eyes formed upon said bands, means connecting the eye of one band to the eye of the base of the other band, floats or tubes positioned within said bands, and means for driving said carrier.

9. In an apparatus of the class described, the combination with a support, a carrier mounted upon said support, a float positioned contiguous to said carrier, means securing said float to said carrier, of auxiliary fastening means connected to said carrier at one side of said float and to said float above said carrier.

10. In an apparatus of the class described, the combination with a support, revoluble

end supports carried by said support, an end-
less carrier positioned upon said revoluble
supports, of a float, means securing said float
to said carrier, and means connected to said
5 carrier at one end, and to said float above
said carrier for retaining said float rigidly
upon said carrier, as the float passes around
an end support.

In testimony whereof I have signed my
name to this specification, in the presence of 10
two subscribing witnesses, this 31st day of
May, A. D. 1906.

WILLIAM L. HYNES.

Witnesses:

R. D. HOLLEMBEAK,
O. R. HOPSON.