

(No Model.)

2 Sheets—Sheet 1.

C. W. & C. H. THRELKELD.
CHAIN PROPELLER.

No. 485,241.

Patented Nov. 1, 1892.

Fig. 1.

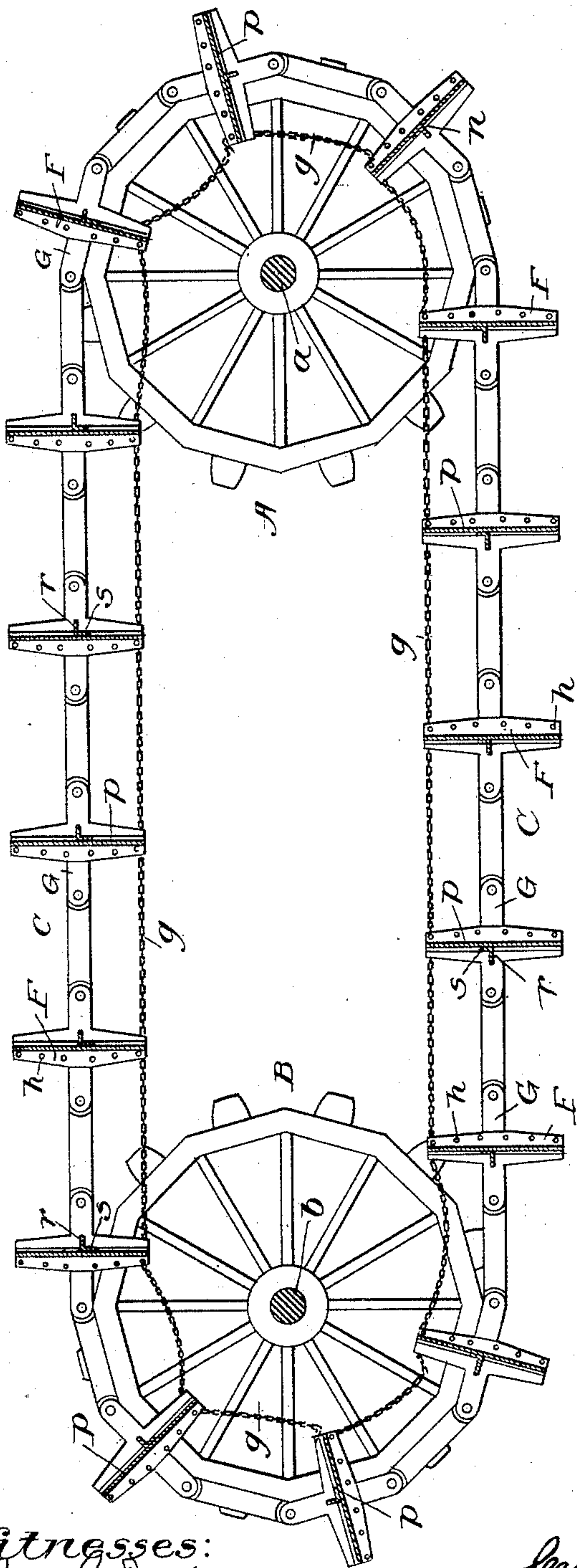
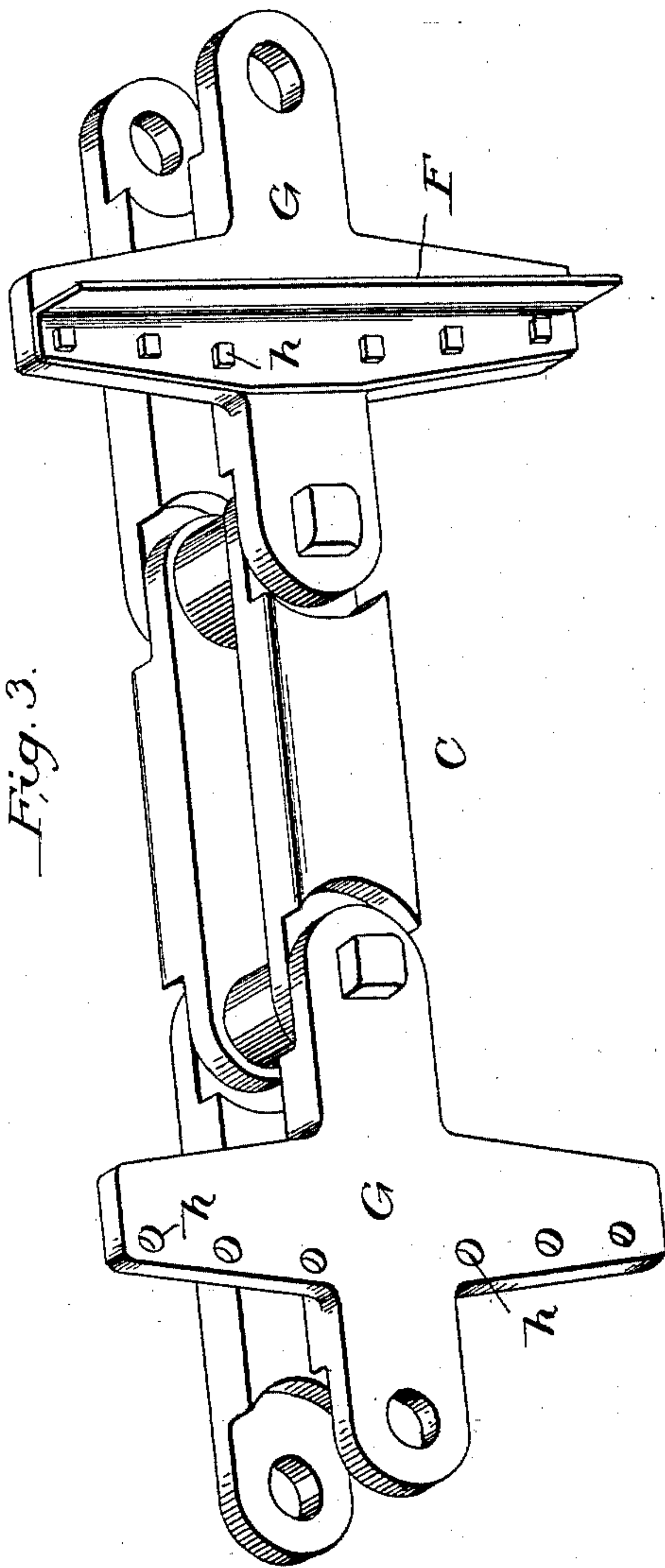


Fig. 3.



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Fig. 2.

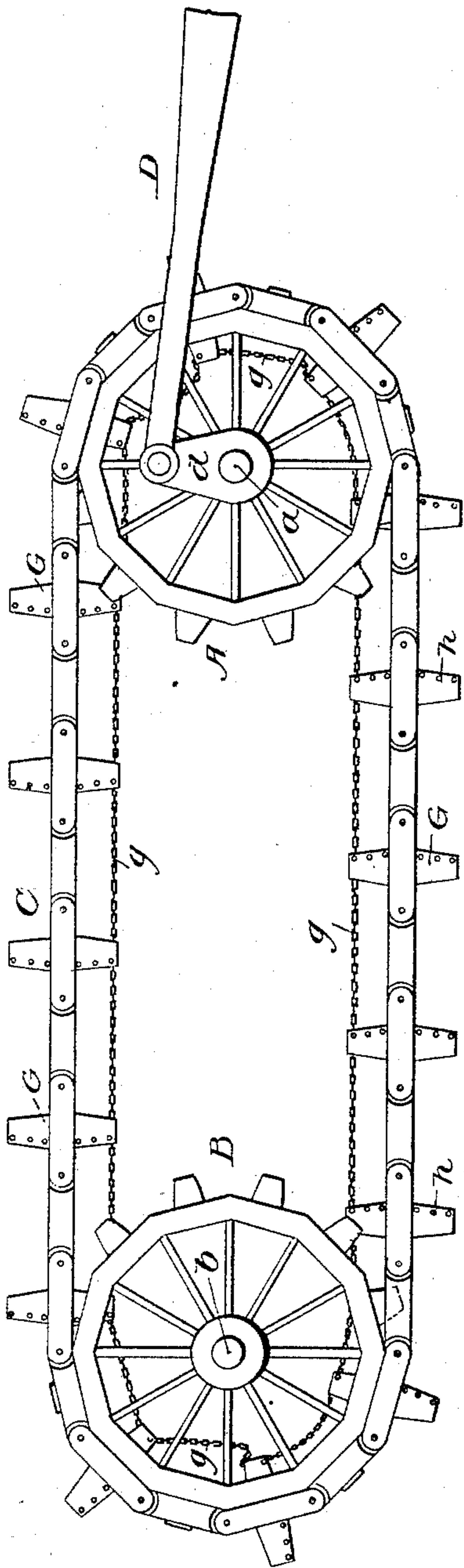
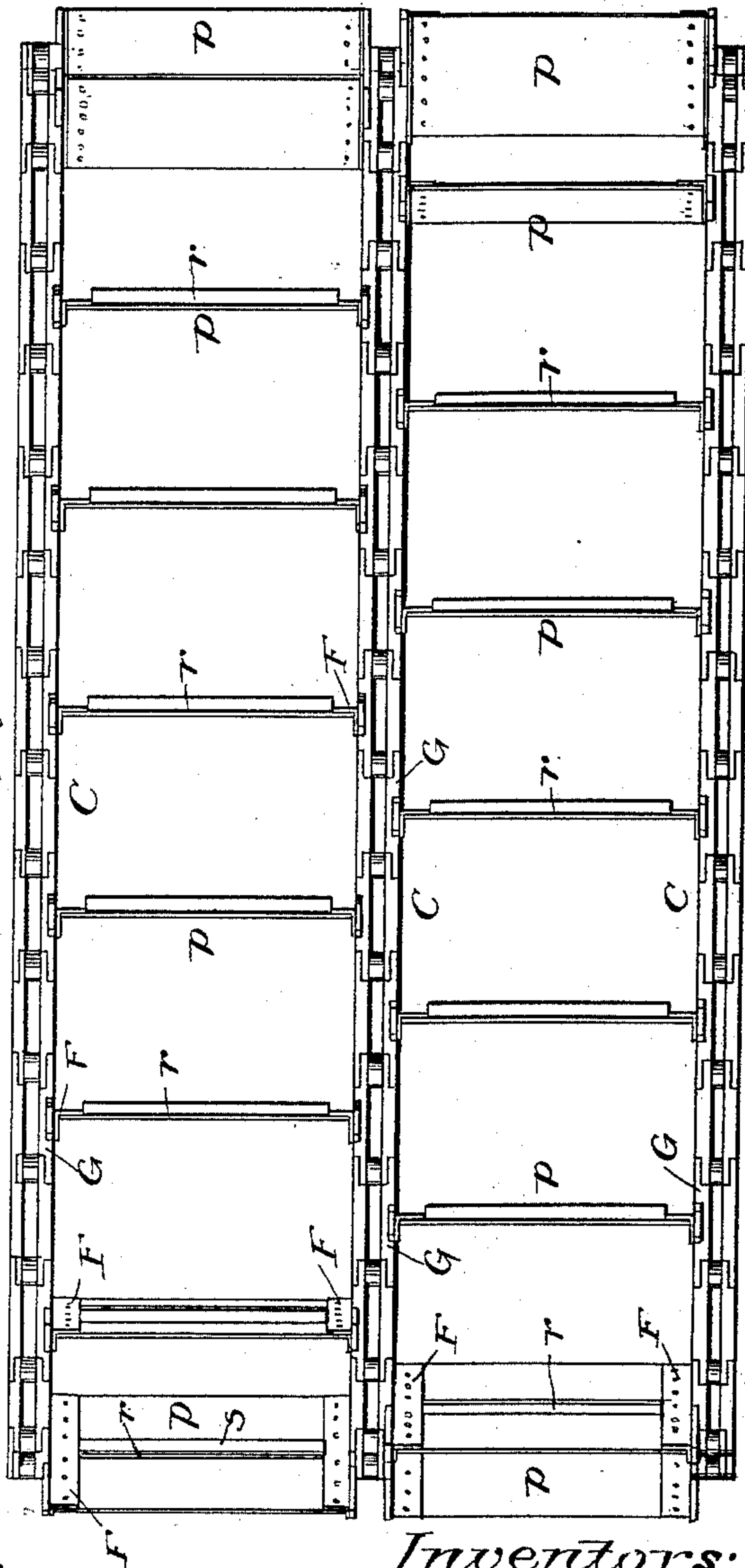


Fig. 4.



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UNITED STATES PATENT OFFICE.

CALVERT WOODFORD THRELKELD AND COLIN HODGE THRELKELD, OF
ALFRED CENTRE, NEW YORK.

CHAIN PROPELLER.

SPECIFICATION forming part of Letters Patent No. 485,241, dated November 1, 1892.

Application filed March 17, 1892. Serial No. 425,360. (No model.)

To all whom it may concern:

Be it known that we, CALVERT WOODFORD THRELKELD and COLIN HODGE THRELKELD, citizens of the United States, residing at Alfred Centre, county of Allegany, and State of New York, have invented certain new and useful Improvements in Propeller-Wheels for Water-Craft, of which the following is a specification.

Our invention relates to chain propellers for steamboats and similar vessels, which are adapted to be located either at the sides or sterns of the vessels; and the object is to provide an improved construction whereby we obtain superior advantages with respect to efficiency in operation.

The invention consists in the novel construction and combination of parts hereinafter fully described and claimed.

In the accompanying drawings, Figure 1 is a central longitudinal sectional view of a propeller constructed in accordance with our invention. Fig. 2 is a side elevation of the same. Fig. 3 is a detail perspective view. Fig. 4 is a plan view showing a double propeller.

In the drawings the reference-letters *a* and *b* designate two shafts, which pass transversely through the vessel at suitable distances apart, one of which shafts is provided with a pitman *D*, connected with any suitable motive power by which rotating motion is imparted. At the ends of each of these shafts are secured sprocket-wheels *A* and *B*, arranged in pairs and each provided with a series of teeth or sprockets *A'* *B'*, which are adapted to engage with the pivots of the links, hereinafter described. Each of these propellers consists of four rows of links arranged in two rows each and are constructed as follows:

The letters *C C* designate a series of short metallic links, and each alternate link of the inner series is provided with two oppositely and outwardly extending projections or extensions *G*, provided with a series of bolt-holes *h*. Bolted to these extensions by means of bolts *h'* are transverse buckets or paddles *F*, which connect the flanged links together. These buckets are formed with flanges *h*², provided with bolt-holes registering with the

bolt-holes in the extension *G* for the passage of the securing-bolts *h'*. The paddles *F* are also provided with transverse strengthening-flanges *r* on the sides opposite to the flanges *h*². At their inner ends each of the extensions *G* is connected with the next adjoining one by means of chains *g* or other flexible connections, which serve to brace and hold the same.

The operation will be readily understood. As the shafts are rotated by the pitmen the propeller-chains will be actuated, and the paddles, acting against the water, will propel the vessel in a very rapid manner, as there will be no slip incident to the ordinary paddle-wheels in common use.

In the modification shown in Fig. 4 we have shown two propeller-chains, designed to be used on each side of a vessel; but this is a mere duplication and in no way affects the principle of the invention.

Having thus described our invention, what we claim is—

1. In a chain propeller for vessels, the combination, with the sprocket-wheels, of the outer and inner rows of links pivoted together, each alternate link of the inner rows being formed with opposite projecting extensions provided with bolt-holes, the propeller-blades having their ends bent at right angles and provided with bolt-holes coinciding with the holes in the extensions, and the securing-bolts, as described.

2. In a chain propeller for vessels, the combination, with the sprocket-wheels, of the outer and inner rows of pivoted links, each alternate link of the inner rows being formed with oppositely-projecting extensions provided with bolt-holes, the propeller-blades provided with strengthening-ribs and having their ends bent at right angles, the securing-bolts, and the flexible chain secured to said extensions, substantially as described.

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