

G. A. Fall,

Buoyant Propeller.

No. 95,785.

Patented Oct. 12, 1869.

Fig. 1.

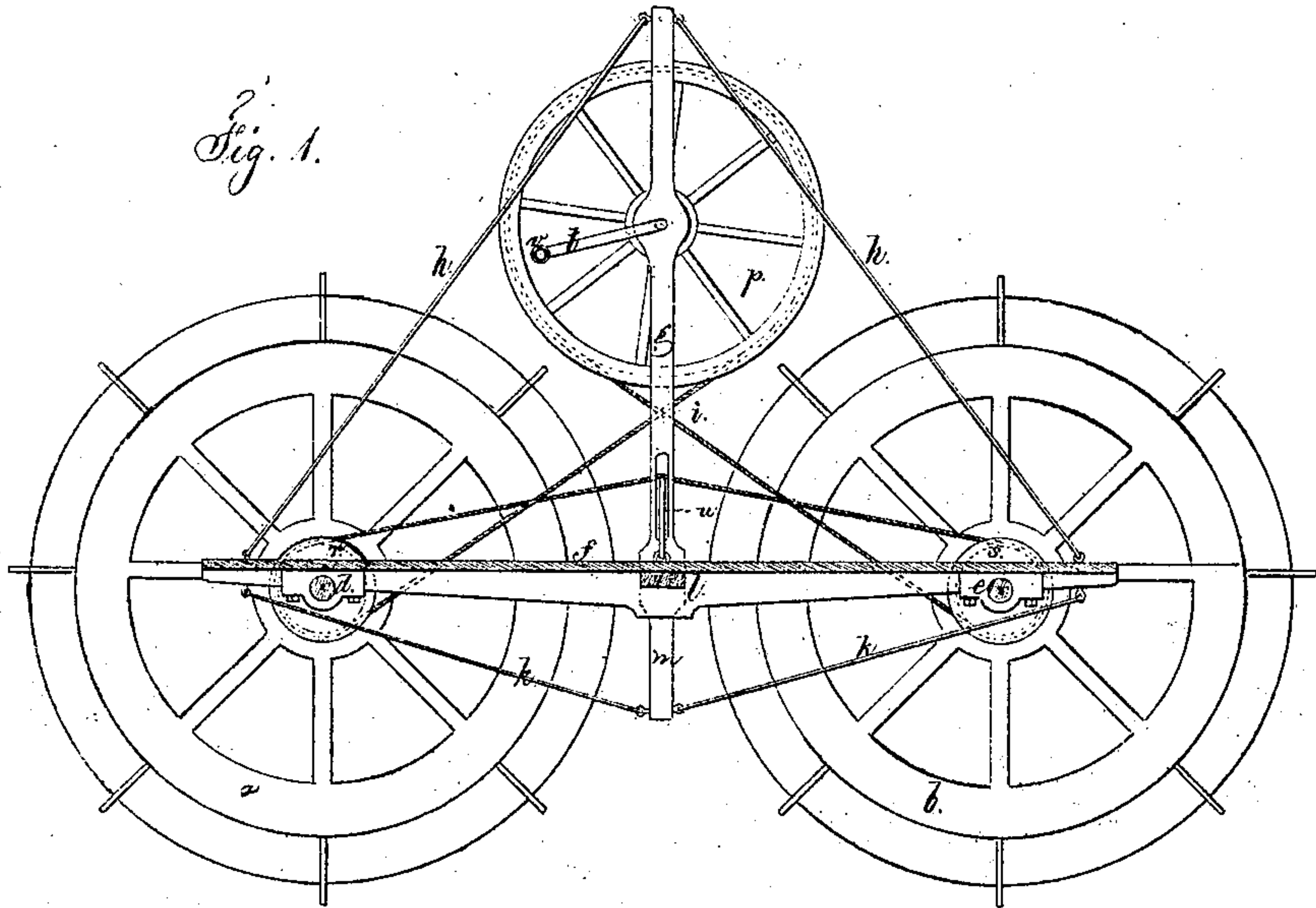
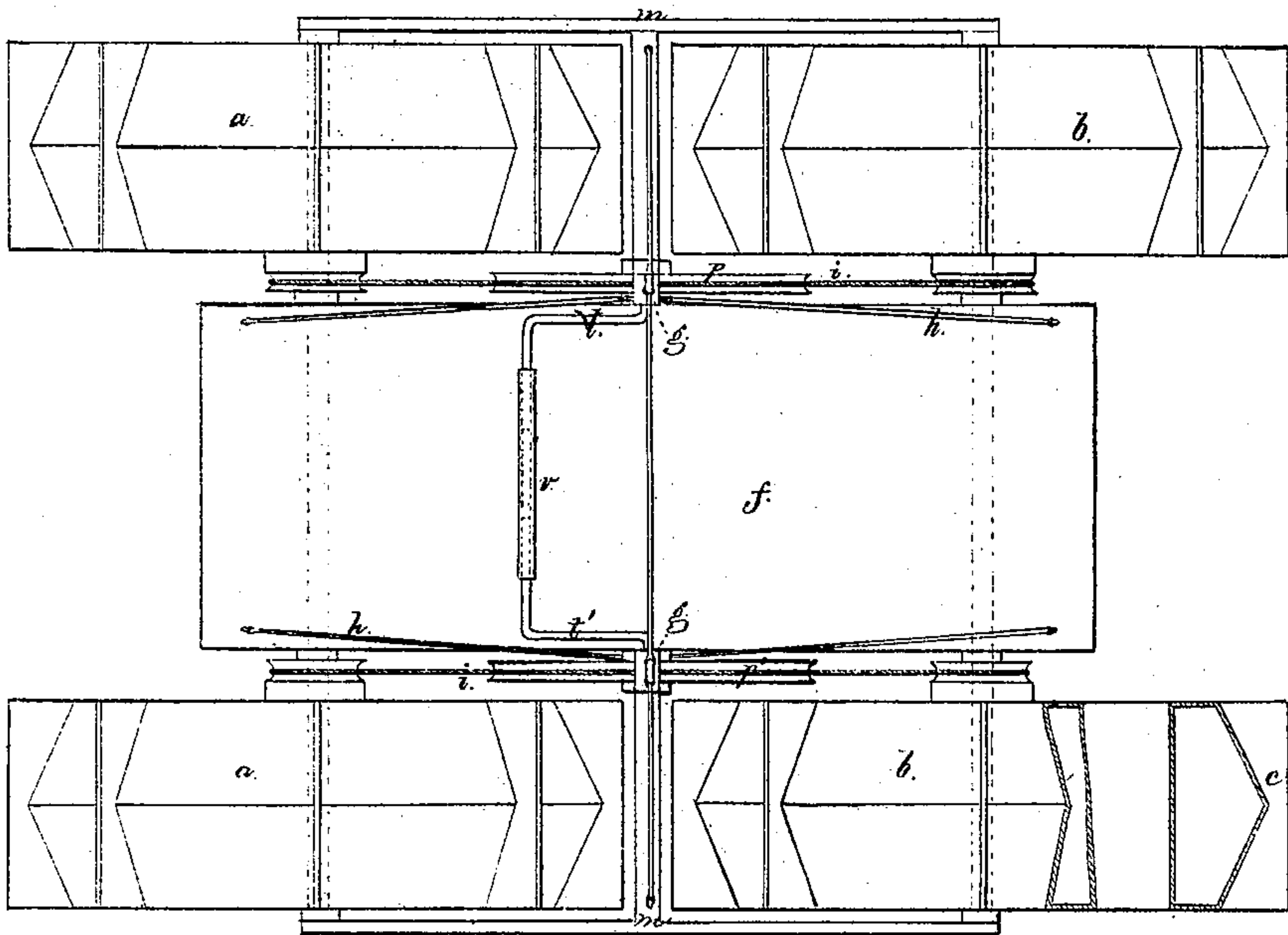


Fig. 2.



Witnesses.

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GEORGE A. FALL, OF HOBOKEN, NEW JERSEY.

Letters Patent No. 95,785, dated October 12, 1869.

IMPROVEMENT IN WATER-LOCOMOTIVES.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, GEORGE A. FALL, of Hoboken, in the county of Hudson, and State of New Jersey, have invented and made a new and useful Improvement in Water-Locomotives; and I do hereby declare the following to be a full, clear, and exact description of the said invention, reference being had to the annexed drawing, making part of this specification, wherein—

Figure 1 is a vertical longitudinal section of the said locomotive, and

Figure 2 is a plan of the same, with a portion of one float shown sectionally.

Similar marks of reference denote the same parts.

This invention is designed as a pleasure and exercise-vessel, for moderately smooth water, whereby one or more persons can give a direct forward propulsion to the vessel, or can steer the same with ease, regardless of any rudder.

My invention consists in arranging two cranks opposite to each other, so that they can be rotated separately, or united by a slip-tube, and combining, with these cranks, pulleys and bands, leading to circular floating paddles, that support a light and strongly-braced platform for the party or parties operating the locomotive.

By this construction, the two cranks can be rotated simultaneously by one or more persons, when united by the slip-tube, or one can be turned faster than the other, or in a reverse direction, so as to steer, the slip-tube of the cranks being disconnected.

In the drawing—

a a b b are circular floats, each being made with a double-inclined periphery, as seen in the section, at *c*, the shape being that of two conic frusta, with the bases placed together.

These floats may be entirely closed at the sides, or only in the ring-shape, as shown, and provided with arms extending to the hubs.

The hubs of the floats revolve upon the fixed shafts *d* and *e*, that are sustained by or connected with the platform *f*.

This platform *f* is stiffened and braced by the uprights *g*, side braces *h h*, lower braces *k k*, and cross-frame *l*, and transverse braces, to the bars *m*, that unite the outer ends of the shafts *d e*, so that the

frame becomes very strong, and braced in all directions.

Each of the uprights *g* is made double, so as to receive between the parts the driving-wheels *p p'*, the peripheries of which are grooved for the bands or belts *i*, that are led, as shown in fig. 1, each belt passing almost around the pulley or wheel *p* or *p'*, thence around the pulleys *r* or *s*, on the hubs of the respective paddle-floats, the endless band extending from one pulley to the other, on the same side, and over the tightener *u*, that operates by a spring or weight, to keep the proper tension on the belt or band, and prevent the same slipping upon the pulleys. This tightener is fitted with a lever-arm running out on the platform, so that the foot can be applied to loosen the belt, and allow the wheel to turn without the paddle.

The wheels *p p'* have cranks *t t'*, extending out from their respective axes, so that either one can be rotated in either direction, and the paddle-floats revolved accordingly, and these cranks face each other, so that the slip-tube *v* can be applied over said cranks, in order that the two may be moved together in giving a forward propulsion to the locomotive. The cranks might be made of tubes, and a bar be slipped in said tubes.

This apparatus is especially designed for pleasure and exercise in smooth water, and a protection, of canvas or other material, may be applied around the platform, to protect the person from being splashed by the water, and an awning may be employed over the platform.

What I claim, and desire to secure by Letters Patent, is—

The arrangement of four paddle-floats, with inclined surfaces, sustaining the braced platform, in combination with the bands and driving-pulleys, and the cranks and slip-pipe, substantially as and for the purposes set forth.

In witness whereof, I have hereunto set my signature, this 30th day of June, A. D. 1869.

GEORGE A. FALL.

Witnesses:

CHAS. H. SMITH,

GEO. T. PINCKNEY.