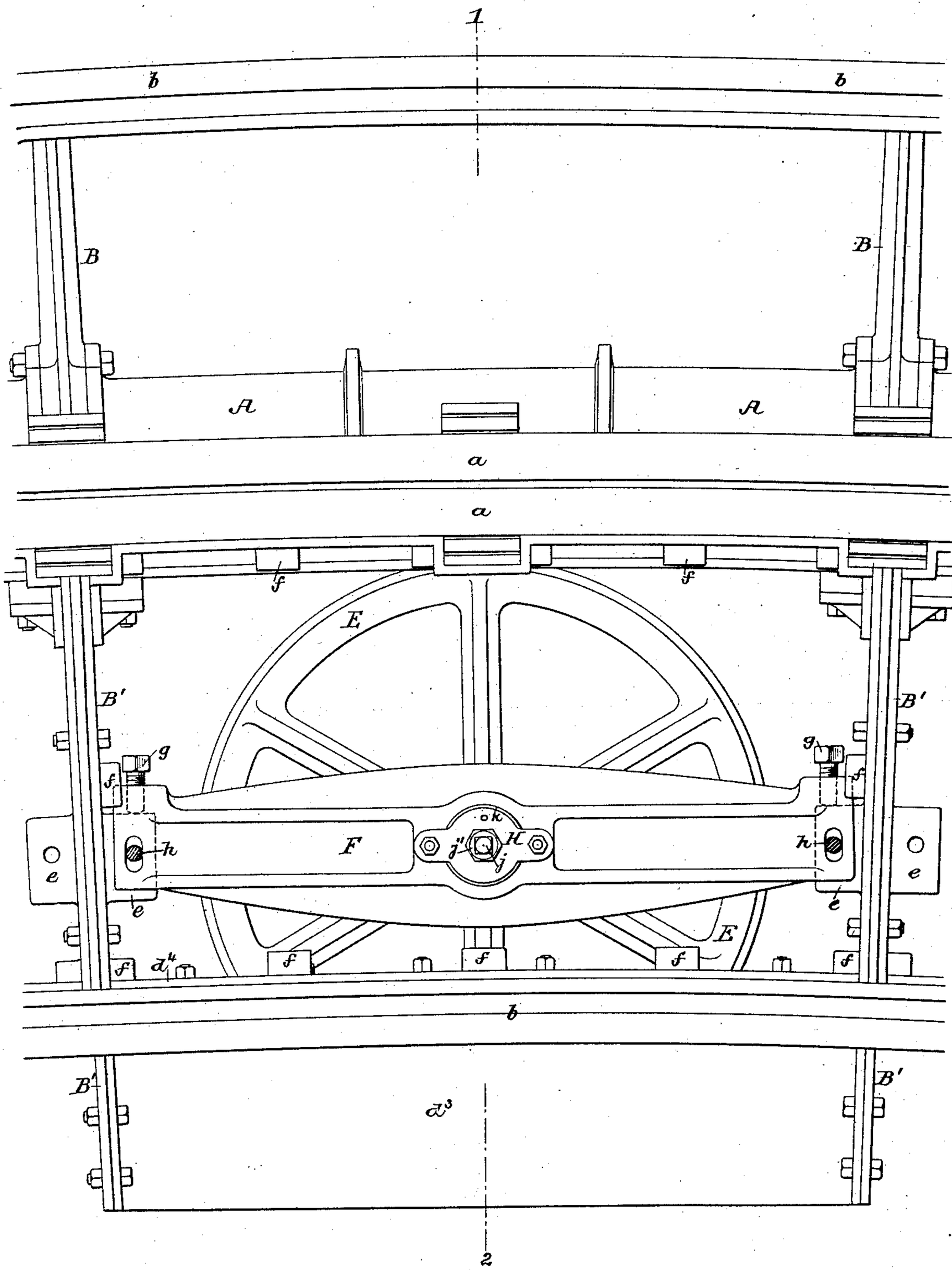
(No Model.) 3 Sheets—Sheet 1.

E. SAMUEL.

CONSTRUCTION OF CURVED PORTIONS OF CABLE RAILWAYS.

No. 363,545. Patented May 24, 1887.

FIG. 1.



Witnesses:
Alex. Barkoff
John E. Parker

Inventor:
Edward Samuel
by his Attorneys
Howson & Sons

(No Model.) 3 Sheets—Sheet 2.

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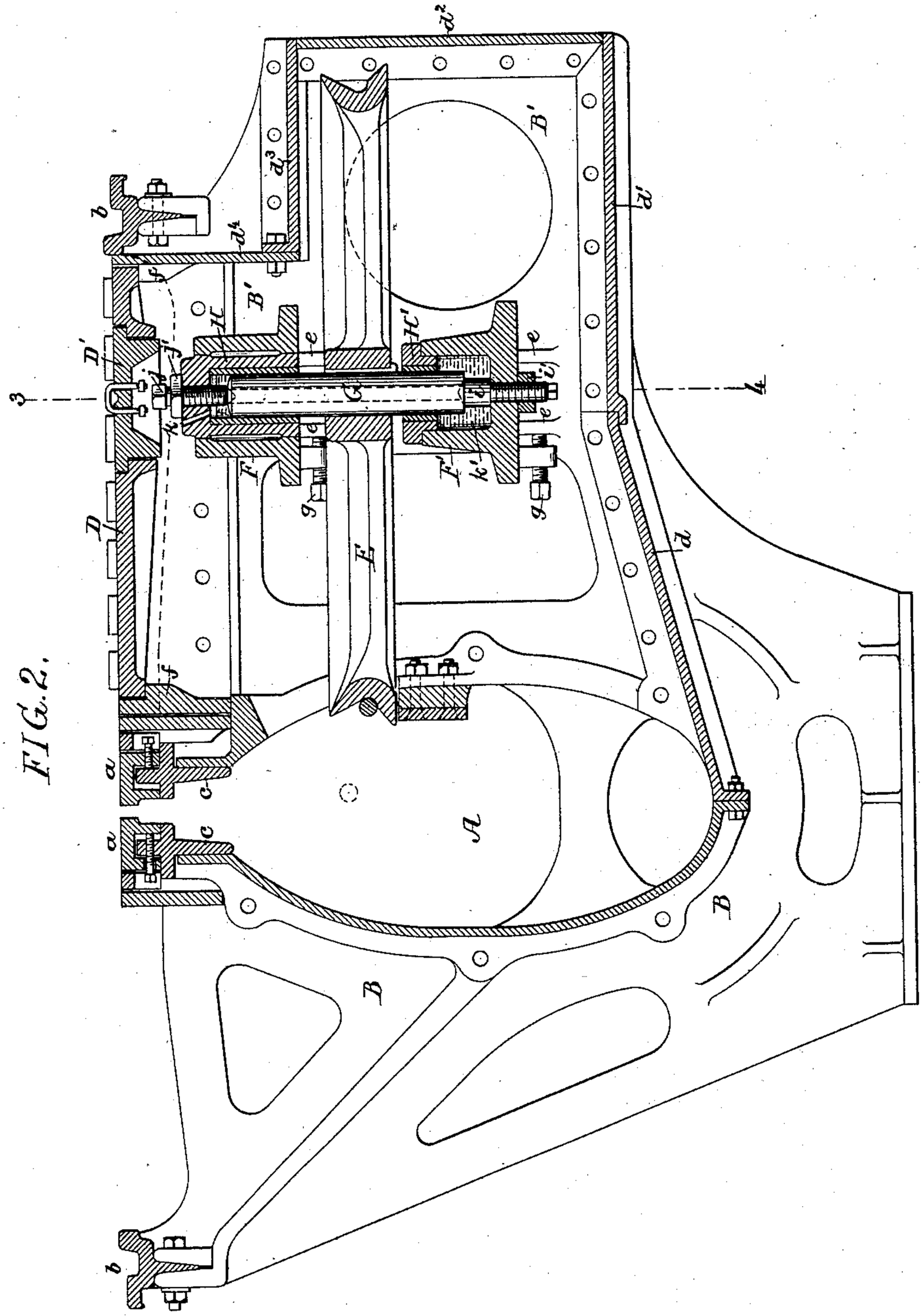

FIG. 2.

Witnesses:
Alex. Barkoff
John E. Parker

Inventor:
Edward Samuel
by his Attorneys:
Howson & Sons

(No Model.) 3 Sheets—Sheet 3.

CONSTRUCTION OF CURVED PORTIONS OF CABLE RAILWAYS.

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FIG. 4.

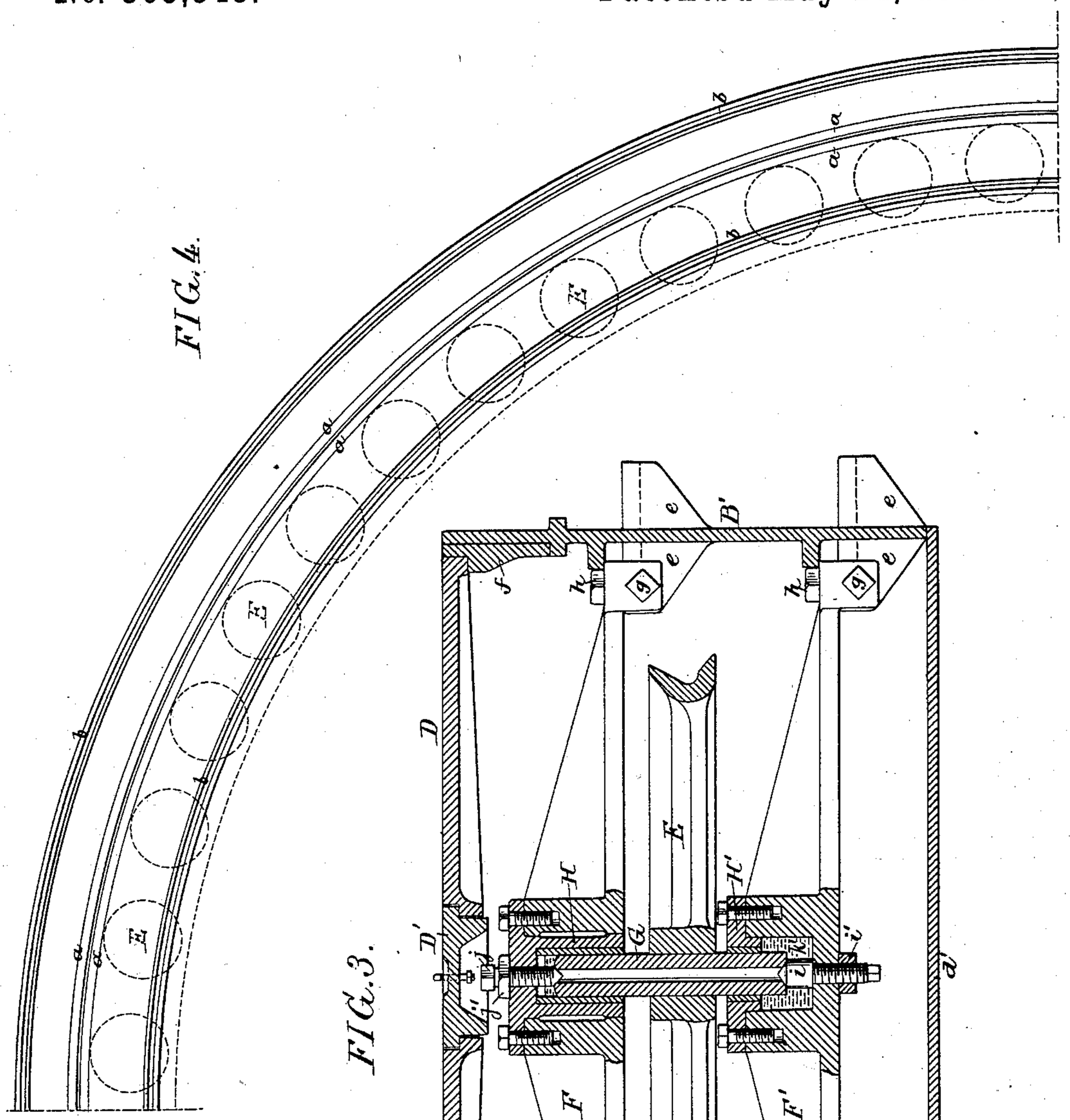

FIG. 3.

Witnesses:
Alex. Barkoff
John E. Parker

Inventor:
Edward Samuel
by his Attorneys
Howson & Howson

UNITED STATES PATENT OFFICE.

EDWARD SAMUEL, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO WILLIAM WHARTON, JR., & CO., (LIMITED,) OF SAME PLACE.

CONSTRUCTION OF CURVED PORTIONS OF CABLE RAILWAYS.

SPECIFICATION forming part of Letters Patent No. 363,545, dated May 24, 1887.

Application filed December 27, 1886. Serial No. 222,550. (No model.)

To all whom it may concern:

Be it known that I, EDWARD SAMUEL, a citizen of the United States, residing in Philadelphia, Pennsylvania, have invented certain Improvements in the Construction of the Curved Portions of Cable Railways, of which the following is a specification.

The object of my invention is to so construct the conduits and pulley-bearings for the curved portions of cable railways that the parts will be simple in construction and the bearings capable of adjustment and readily accessible for tightening or lubrication.

In the accompanying drawings, Figure 1 is a plan view of part of the curved portion of a conduit, with parts removed to illustrate my invention. Fig. 2 is a transverse section on the line 1 2, Fig. 1. Fig. 3 is a section on the line 3 4, Fig. 2; and Fig. 4 is a diagram drawn to a smaller scale and showing the full curve, with the pulleys in dotted lines.

A is the conduit, made in sections in the present instance and bolted to cast-iron frames B, which also support the rails *b b* of the track. The slot-irons *a a* are attached to and adjustable on stringer-bars *c c*, which are secured to the castings B.

Each casting B has an extension, B′, to which are bolted plates *d*, *d′*, *d²*, *d³*, and *d⁴*, forming, with the lid or cover D, a complete box or casing which contains the pulley E.

The lid D rests on ledges *f f* at the top of the plates *d⁴*, and secured to brackets *e e* on the extensions B′ of the casing B are the bars F F′, carrying the bearings for the pulley E. The bars F F′ can be adjusted laterally in respect to the conduit by means of set-screws *g*, retaining-screws *h* passing through slots in the bars and being tapped into the brackets *e*.

The pulley E is secured to an upright shaft or spindle, G, which is journaled in bushed bearing-boxes H H′, secured to the bars F F′, and said shaft rests on a cone center or toe, *i*, the stem of which is threaded for adaptation to a threaded opening in the bar F′, and is provided with a jam-nut, *i′*, the lower end of the stem being squared to receive a wrench for adjusting the center. The upper bearing-block, H, is also provided with a cone center, *j*, which bears upon the upper end of the shaft G, and is threaded and provided with a jam-nut, *j′*.

The bearing-box H has a passage, *k*, extending to the inner portion of the box, to permit the introduction of oil, and the shaft is hollow, so that oil can flow from the top box to the chamber *k′* at the lower end of the shaft, the oil finding its way between the upper and lower cone centers and the bearing-surfaces of the shaft, and serving not only to lubricate these centers, but also the bushings of the upper and lower boxes.

In the lid D, immediately above the upper box, H, is an opening provided with a cover-plate, D′, and when it is required to oil or tighten the bearings of the shaft G said cover-plate D′ is removed, whereupon free access may be had to the upper box and the center *j*. It will thus be seen that the cable-carrying pulley E can be adjusted laterally in respect to the cable-conduit as desired, and the bearings can be readily oiled or set up at intervals, the latter operations being effected without removing the large lid or cover-plate D.

I claim as my invention—

1. The combination of the conduit and its frames, having lateral side extensions forming part of a box, with a cable-pulley and bearing-bars for the pulley, extending from side to side of the box and supported upon said side extensions of the conduit-frame, and adjustable laterally in respect to the conduit, all substantially as specified.

2. The combination of the conduit and its frames, lateral extensions B′ B′, having brackets *e e*, with bearing-bars E E′, carrying the cable-pulley, and set-screws *g g* and retaining-screws *h h*, substantially as and for the purpose specified.

3. The combination of the pulley, the upper and lower bearing-bars and their boxes, the pulley-shaft, and upper and lower centers, all substantially as specified.

4. The combination of the shaft and its pulley, the upper and lower bearing-bars, shaft boxes and centers, and upper and lower oil-reservoirs communicating with each other, and each serving to lubricate its respective shaft box and center, all substantially as specified.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

EDWD. SAMUEL.

Witnesses:

WILLIAM SELFUCIE,

HARRY SMITH.