

No. 607,194.

Patented July 12, 1898.

W. H. RUSSELL.

TROLLEY.

(Application filed May 24, 1897.)

(No Model.)

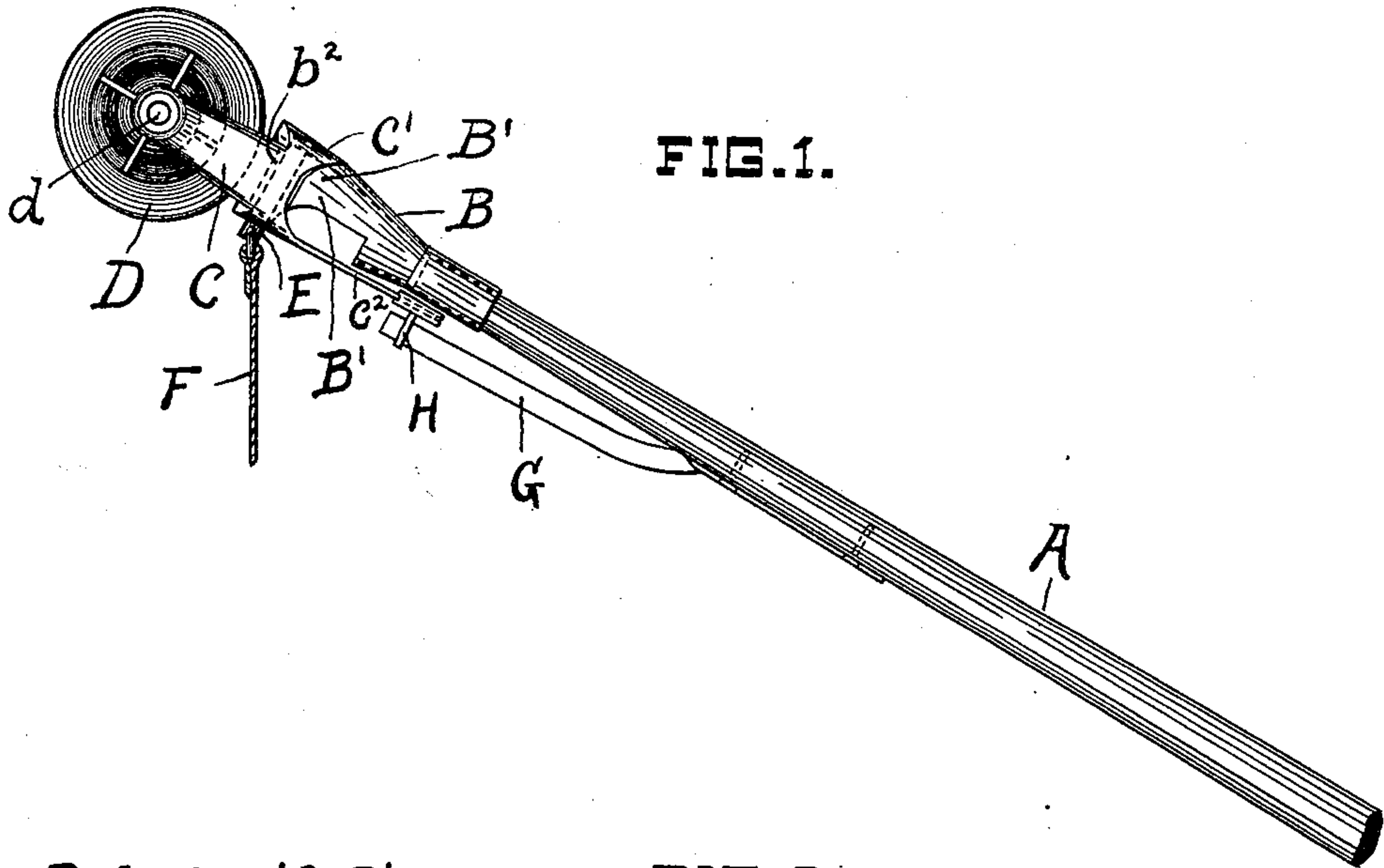


FIG. 1.

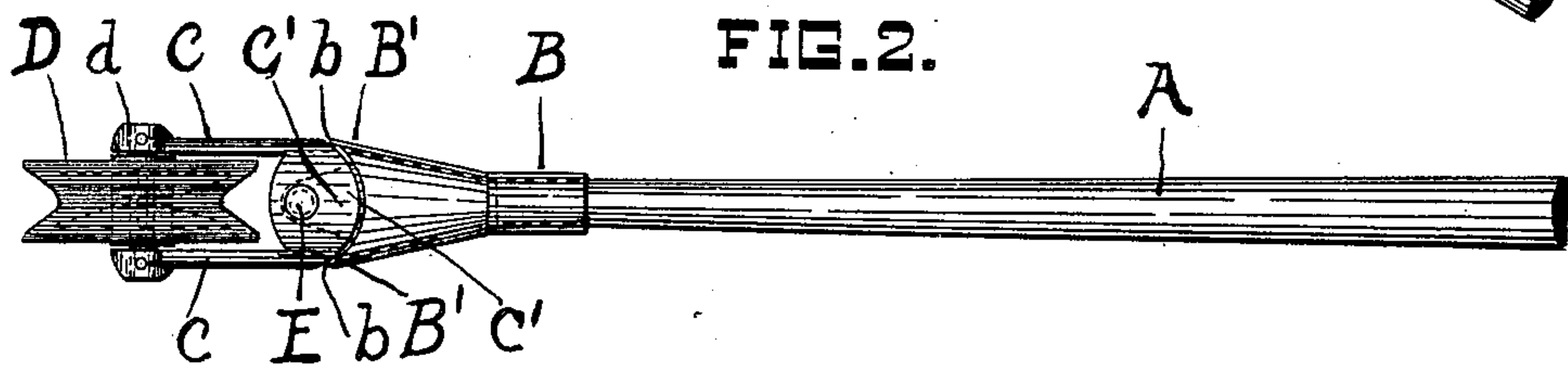


FIG. 2.

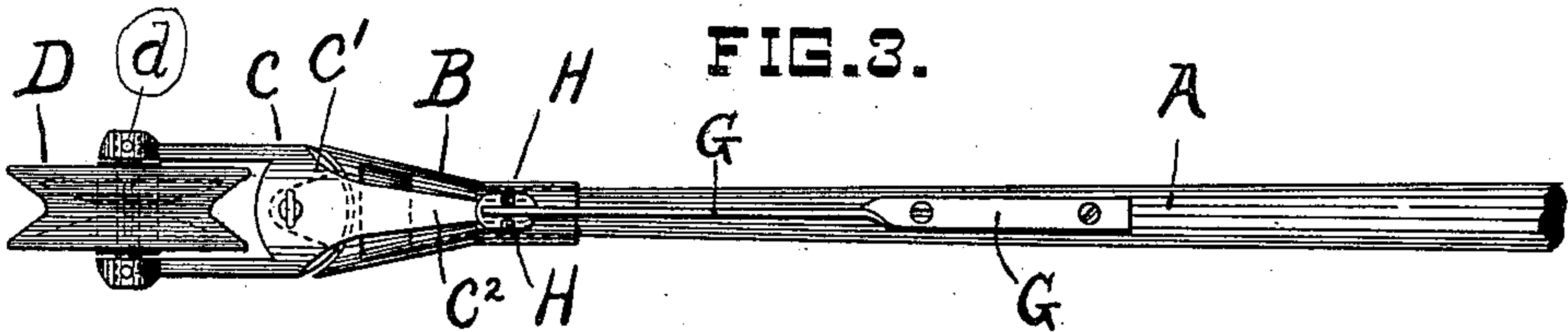


FIG. 3.

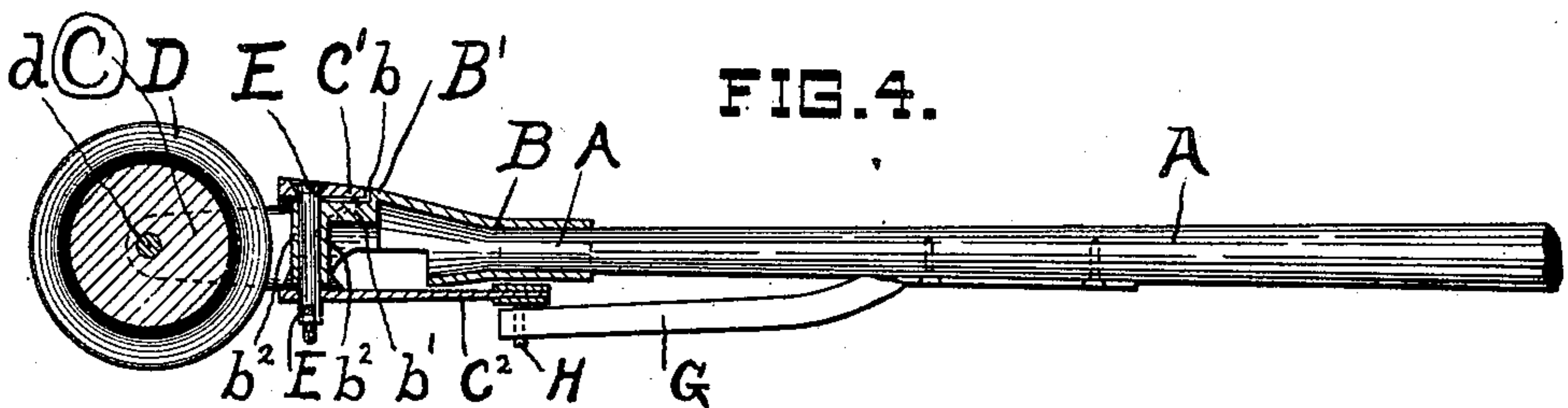


FIG. 4.

WITNESSES

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TROLLEY.

SPECIFICATION forming part of Letters Patent No. 607,194, dated July 12, 1898.

Application filed May 24, 1897. Serial No. 637,923. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. RUSSELL, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Trolleys, of which the following, when taken in connection with the drawings accompanying and forming a part hereof, is a full and complete specification, sufficient to enable those skilled in the art to understand, make, and use the same.

This invention relates to trolleys used in connection with electrically-driven railway-cars for electrically connecting the portion of the circuit on the car with the portion thereof extending along the track, whether the same be an overhead wire or a metallic circuit placed in a conduit.

The object of the invention is to obtain a trolley so constructed as to have embodied therein what I term a "taker"—that is, to obtain a trolley the framework whereof is so made as to permit such movement in the trolley-wheel that the wheel will readily move along a curved conductor extending along the track without breaking the electrical connection between such trolley-wheel and the conductor, whether the same be an overhead or an underground metallic circuit and straight or curved.

A further object of the invention is to obtain a trolley the frame whereof, in case the trolley-wheel jumps off and becomes electrically disconnected with the line-circuit, will not constitute an obstruction liable to come in contact with such line-circuit and tear the same from its supports (which are usually, in case of an overhead line-circuit, transversely-extending wires) or otherwise injure such line-circuit.

To obtain the results above set forth, I have found it necessary to so construct the frame of the trolley that a limited amount of lateral movement in the trolley-wheel relative to the end of the trolley-pole adjacent thereto is obtainable in the ordinary use of the trolley, and also to so construct the trolley-frame that it will present no sharply-defined projections liable to come in contact with the line-circuit in case the trolley-wheel "jumps," as it is called, such line-circuit.

The several constructions arranged to meet

the above-named requirements and embodying my invention are fully set forth in the drawings referred to, in which—

Figure 1 is a side elevation of the trolley embodying my invention and of the trolley-pole on which it is mounted; Fig. 2, a top plan view of such trolley and the end of the trolley-pole on which it is mounted; Fig. 3, a bottom plan view thereof, and Fig. 4 a vertical sectional view of such trolley and a side elevation of the trolley-pole on which it is mounted.

A reference-letter applied to designate a given part is used to indicate such part throughout the several figures of the drawings wherever the same appears.

A is a trolley-pole.

B is a base, preferably of cast metal, fitting on the upper end of the trolley-pole A. This base B is hollow, as is well shown in Fig. 4 of the drawings.

C is the fork in which the trolley-wheel D is rotatably mounted on pin *d*. Fork C is pivotally secured to the base B by pin or bolt E.

F is the trolley-rope, which is ordinarily attached to the upper end of the trolley-pole for the purpose of controlling the trolley. This trolley-rope F is by me preferably attached to the pin or bolt E, as is well illustrated in Fig. 1 of the drawings. The base B is made to fit into the lower end of the fork C, and in order to present a smooth surface at the point of junction I make shoulder or offset *b*, continuing such base, as at *b'*, within the lower end C' of such fork C. To obtain the desired socket in the base B for the pin or bolt E, such continuation *b'* is provided with projection or lug *b²* on the under side thereof, (see Fig. 4 and dotted lines in Fig. 1,) through which projection or lug a hole is made corresponding with the pin or bolt E, which fits therein. The diameter of the lower end C' of the fork C is substantially the same as the largest diameter of the base B, which is immediately adjacent to such part C' of fork C, such part of the base B of largest diameter being lettered B'.

C² is an arm extending on the under side of fork C, underneath the base B to near the lower end thereof, and constituting means by which the turning of such fork C on its pivotal pin or bolt E can be controlled, and G is

a spring attached at one end thereof to trolley-pole A and at the other and free end engaging with the arm C², as by extending between pins or projections H H.

5 Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

10 The combination with a trolley arm or pole, of a base, comprising a tubular portion fitting over the trolley arm or pole, a flaring portion extending from such tubular portion upward and outward and a table at the upper end thereof, and a fork having a trolley-wheel ro-

tatably mounted therein, such fork comprising a tubular portion fitting over the table 15 on the base, a pivot extending, in a vertical plane, through such fork and base, an arm on the underside of the fork, extending under the base and a spring on the trolley-pole engaging with such extension; substantially as 20 described.

WILLIAM H. RUSSELL.

In presence of—

CHARLES T. BROWN,
WM. F. BARNARD.