C. V. FOWLER.

SCREW JACK.

APPLICATION FILED APR. 9, 1908.

938,840. Patented Nov. 2, 1909.

Fig. 1.

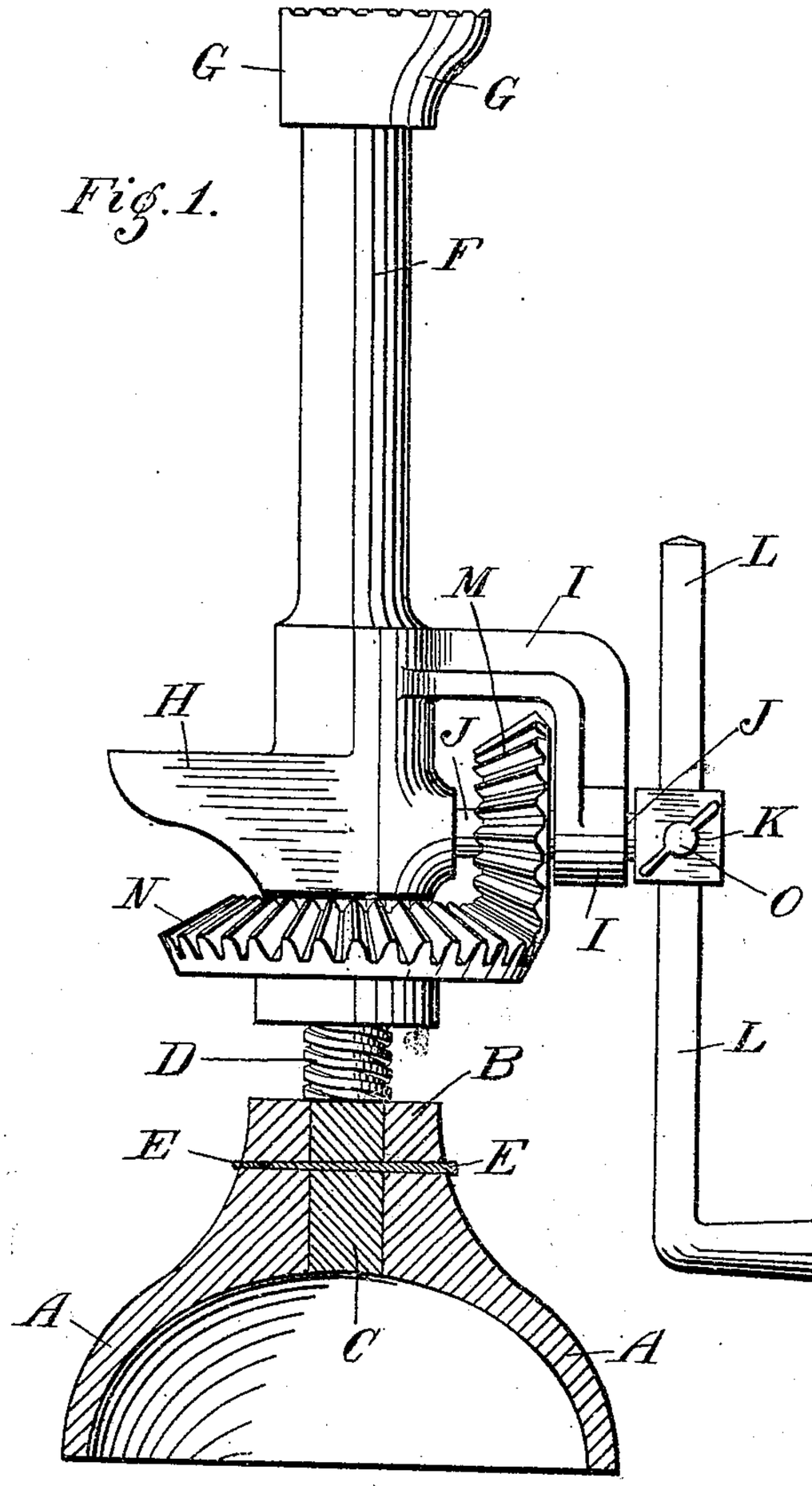


Fig. 2.

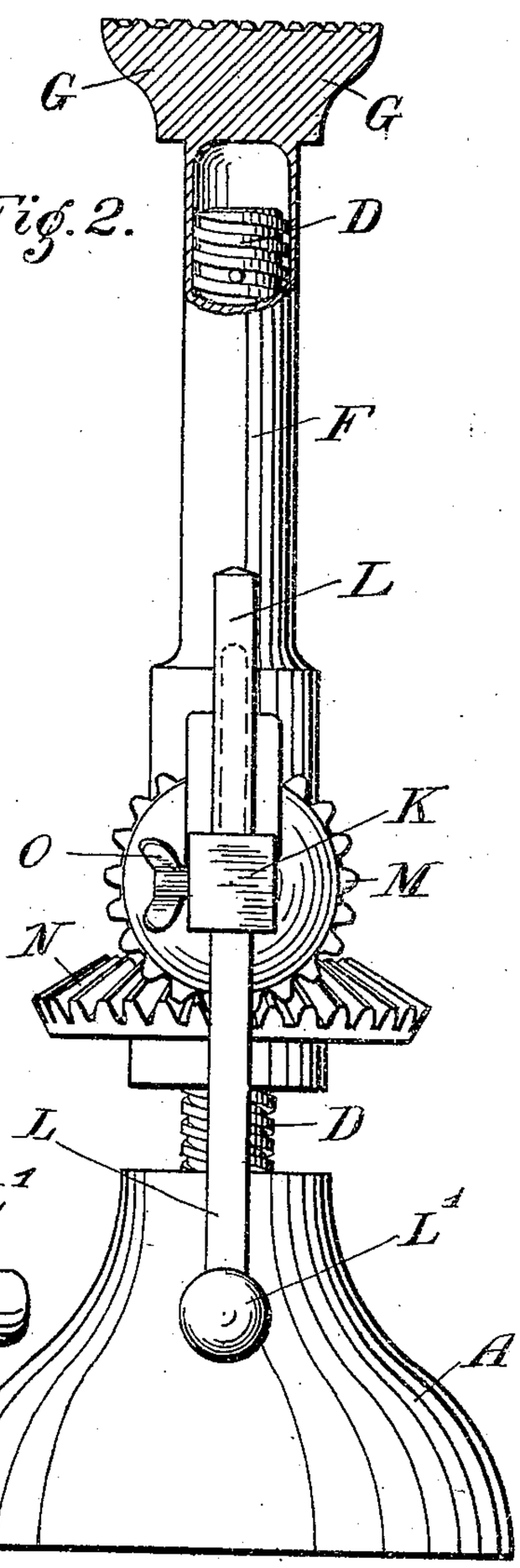
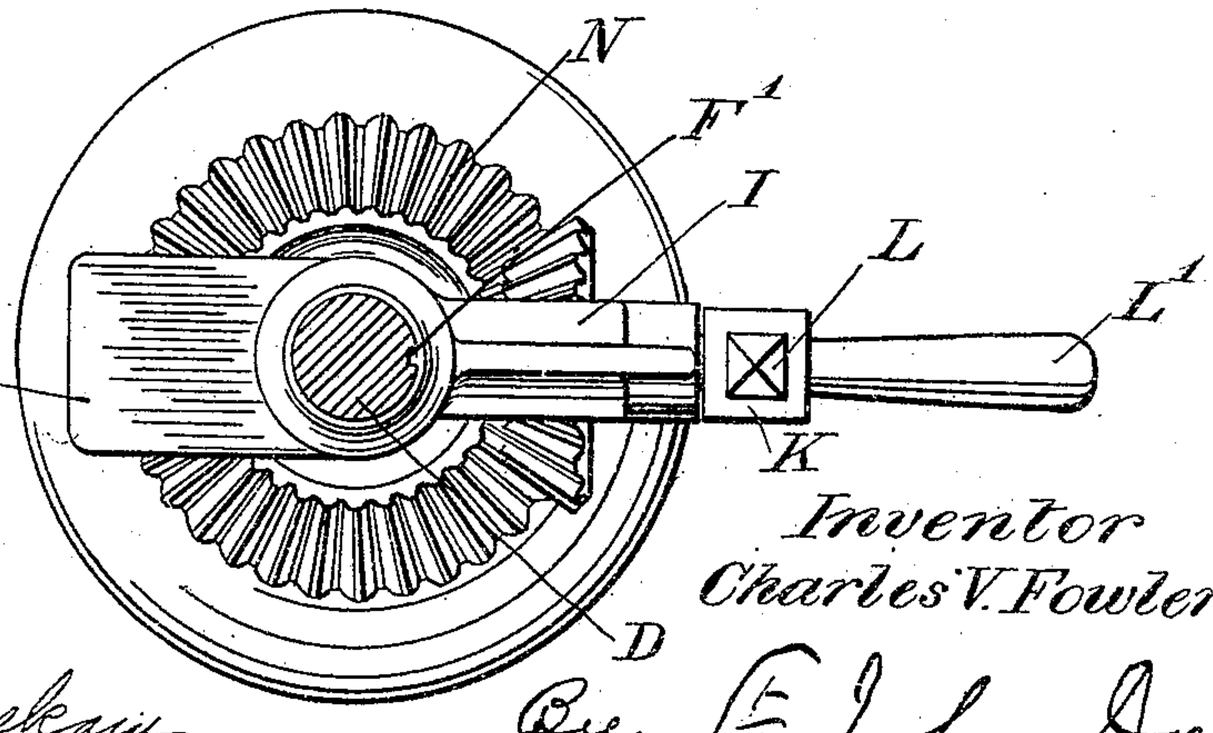


Fig. 3.



Witnesses

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UNITED STATES PATENT OFFICE.

CHARLES V. FOWLER, OF LOS ANGELES, CALIFORNIA.

SCREW-JACK.

938,840. Specification of Letters Patent. Patented Nov. 2, 1909.

Application filed April 9, 1908. Serial No. 426,600.

To all whom it may concern:

Be it known that I, CHARLES V. FOWLER, of the city of Los Angeles, in the county of Los Angeles and State of California, have invented a new or Improved Screw-Jack, of which the following is a full, clear, and exact specification, reference being had to the annexed drawings, and to the letters marked thereon.

This invention which relates to a new or improved screw-jack, has for its object not only to provide a screw-jack of high efficiency and safety, but also to enable the screw of the jack, as well as the lifted member thereof, to be kept stationary, that is to say, without rotating, while engaged in the act of lifting or supporting a load.

My said invention has also for its object to enable the screw nut of the jack to be rotated during lifting operations instead of being made a stationary part of the base of the screw-jack as hitherto.

Upon the annexed drawings Figure 1, is a side elevation of my new or improved screw-jack with the lower part or base shown in section. Fig. 2, is in part an end elevation corresponding to Fig. 1, but with the upper part of the lifted member of the jack shown in section. Fig. 3, is a plan corresponding to Fig. 2.

In Figs. 1, 2, and 3, the base of my new or improved screw-jack is marked A. In the upper part of this base A, a vertical hole B, is formed to receive the lower part C, of the vertical screw D, which extends vertically upward to about the extent shown by Fig. 2. The vertical screw D, is secured into the base A, of the screw-jack by means of the pin E, driven tightly thereinto, or it may be otherwise suitably secured therein..

The lifted member of the screw-jack consists of the tube F, having the top or lifting head G, cast or forged in one piece therewith, also having a lower lifting member H, integral with, or attached thereto. From the lower end of the tube F, and opposite to that part whereat the lifting member H, projects, a bracket I, is situated as shown at Figs. 1, 2, and 3. In the lower part of this bracket I, a hole is bored to constitute a bearing for the bevel pinion shaft J, upon the outer end of which the handle K, and adjustable rotating hand lever L, are carried. The bevel pinion M, is carried upon the shaft J, on that part thereof between the inner face of the lower end of the bracket I, and the adjacent part of the lifted member of the jack. The bevel pinion M, gears into the bevel wheel N, as shown at Figs. 1, 2, and 3, and the central part, hub, or boss of the bevel wheel N, constitutes the screw nut of the jack.

For the purposes of obtaining a lesser or greater leverage in rotating the bevel wheel N, and the screw nut within the bevel wheel N, when lifting a load by means of my new or improved screw-jack, I prefer that the operative length of the handle L, should be adjustable, and for this purpose I preferably make the handle L, square in section, as shown in plan in Fig. 3, and I provide the part K, with a winged set screw O, which on being loosened permits of the operative length of the handle L, being lengthened or shortened, and also permits of the handle L, being firmly retained in the part K, when the screw O, is tightened.

From the explanation now given of Figs. 1, 2, and 3, it will be seen that on rotating the handle L, by applying the hand of an operator to the lower part L′, thereof, so as to rotate the bevel pinion M, the bevel wheel N, and the screw nut within the center, hub, or boss of said bevel wheel, is rotated upon the fixed screw shaft D, so that the bevel wheel N, and the screw nut D, rotate upward and downward upon the screw D, and beneath the lower face or bottom of the lifted member F, and its connections.

By rotating the operative part L′, of the handle L, sufficiently, the lifted part F, of the screw-jack, its head G, and its other portions, may be raised to the upper end of the screw shaft D, and by lowering the bevel wheel N, and its contained screw nut by operating the handle L, in the opposite direction, the lifting and lowering parts F, G, and their connections are caused to descend, or lowered to the bottom of the screw D.

The tube F, may be provided at its interior with a feather or key F′, as shown in Fig. 3, for engaging with a parallel slot cut in the screw threads at one side of the screw, as also shown in Fig. 3, but such feather or key, and parallel slot may be dispensed with, as when the screw-jack has a load upon it the pressure of the load upon the upper member or head G, of the jack prevents any of the lifted portion F, of the jack from being rotated.

When it is required to lift, carry or support a load by the screw-jack at a lower level

than that which corresponds to the resting of the load upon the head G, then the jack may be so applied that its projecting lifter H, is brought under the load to be lifted.

I claim as my invention.

A screw jack wherein the screw is rigidly fastened to, and as one member with the base of a screw jack, and immovable in relation to said base rotatively as well as upward and downward, a tubular member fitting over said fixed screw, said tubular member having a lifting head or top, and a second lifting member at a lower level than the head, a bracket on said tubular member carrying a rotatable axle, said axle having at its inner end a bevel pinion, a bevel wheel having a screw thread and rotatable upon the screw of the jack, said bevel pinion and bevel wheel gearing with each other and operable rotatively so as to raise or lower the tubular member of the jack, the lifting head and second lifting member thereof.

In testimony whereof, I, CHARLES V. FOWLER, have hereunto set my hand and seal at the city of Los Angeles aforesaid, in the presence of two subscribing witnesses.

CHARLES V. FOWLER. [L. S.]

Witnesses:

ST. JOHN DAY,

J. D. CORY.