

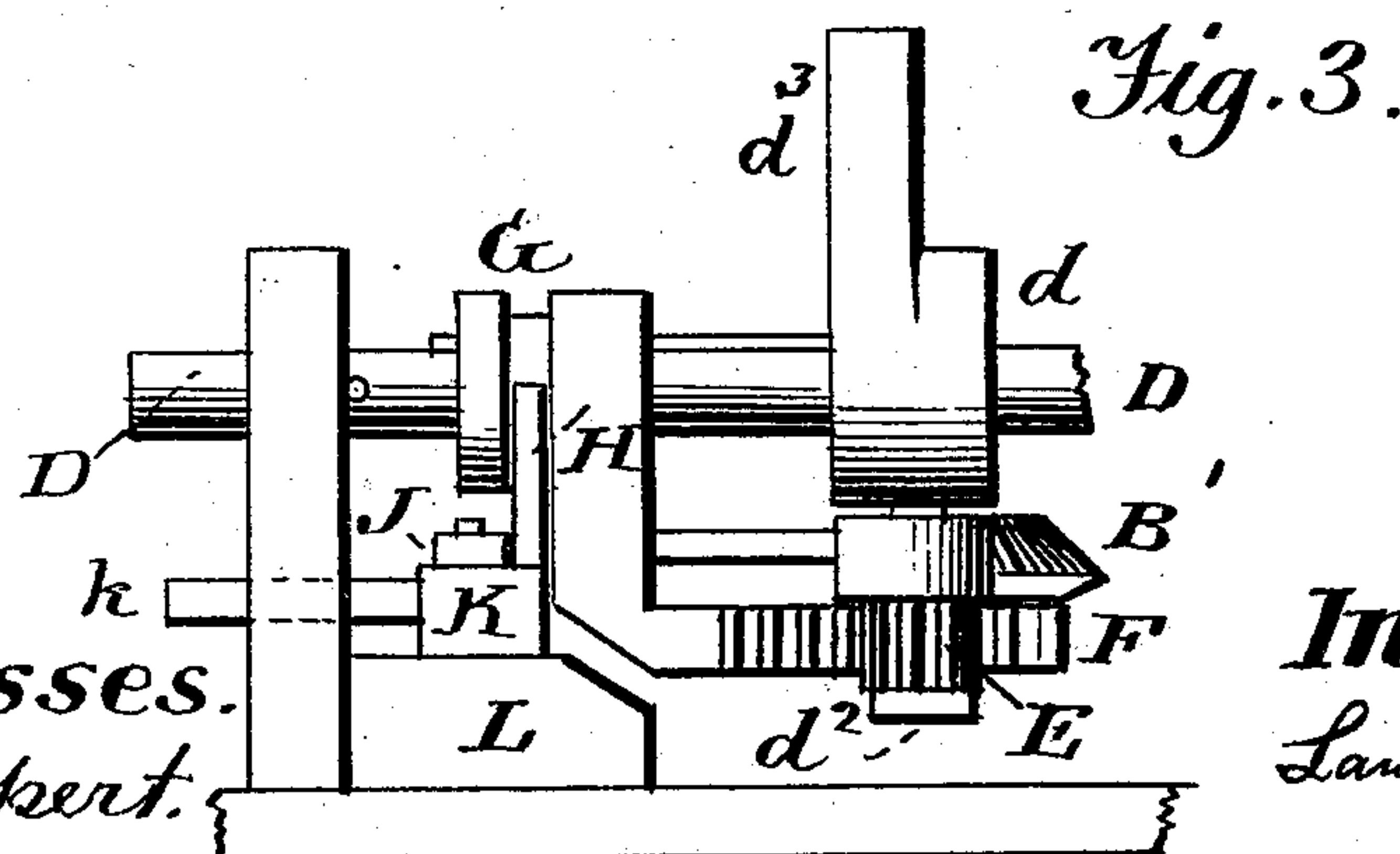
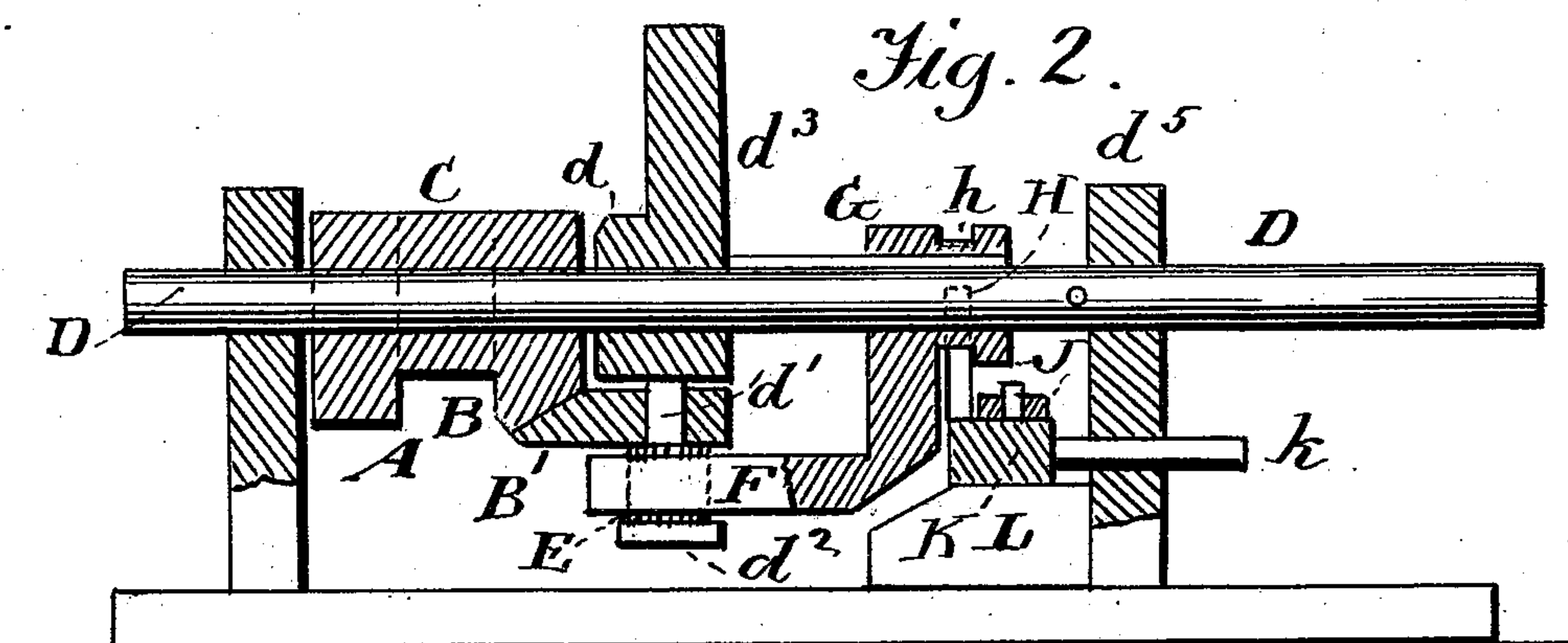
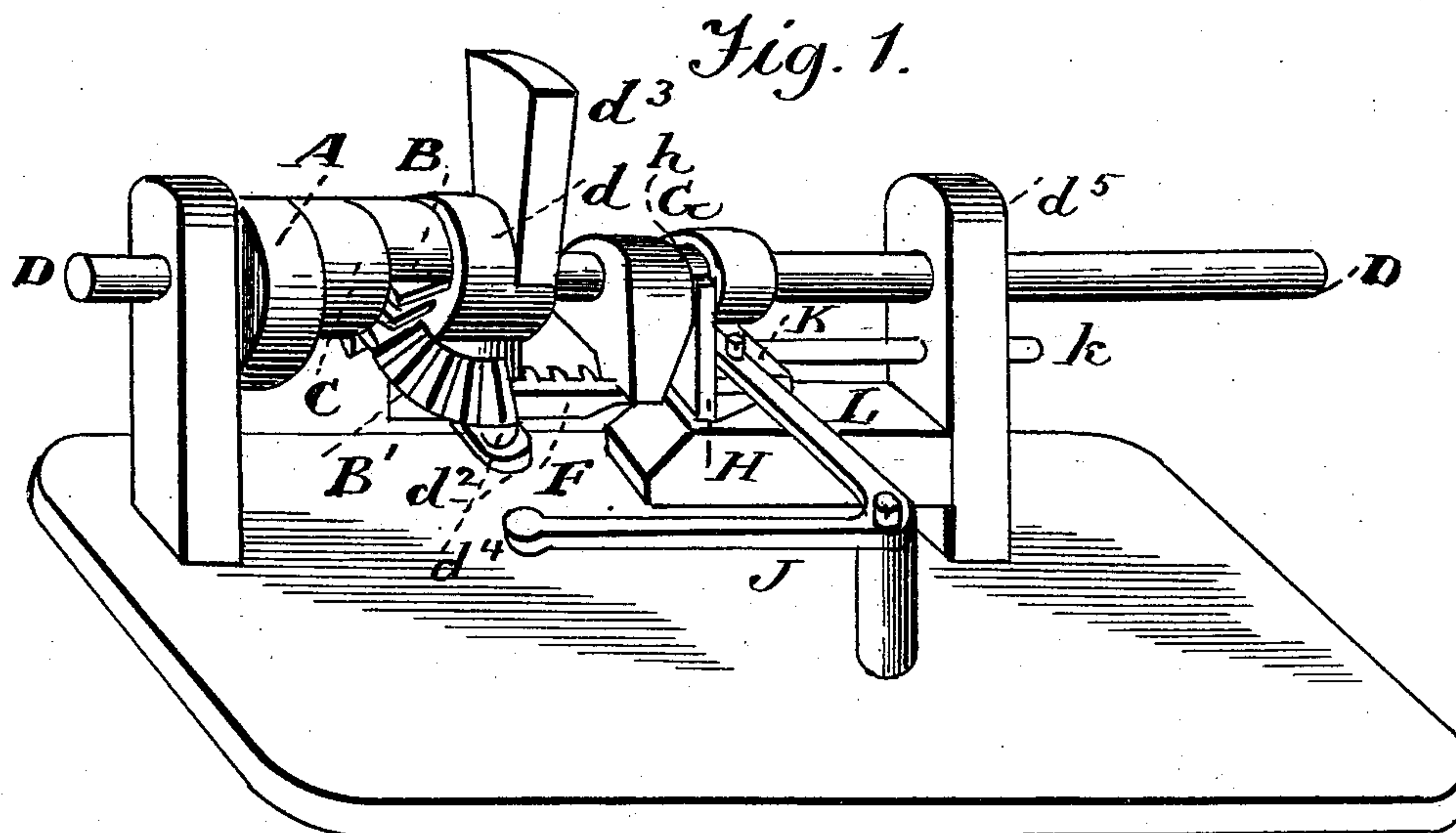
(No Model.)

L. D. EPPERSON.

REVERSING MECHANISM FOR STEAM ENGINES.

No. 547,849.

Patented Oct. 15, 1895.



Witnesses.
A. Ruppert.
H. A. Daniels

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UNITED STATES PATENT OFFICE.

LANDY D. EPPERSON, OF ARTHUR, MISSOURI.

REVERSING MECHANISM FOR STEAM-ENGINES.

SPECIFICATION forming part of Letters Patent No. 547,849, dated October 15, 1895.

Application filed February 11, 1895. Serial No. 537,912. (No model.)

To all whom it may concern:

Be it known that I, LANDY D. EPPERSON, a citizen of the United States, residing at Arthur, in the county of Vernon and State of Missouri, have invented certain new and useful Improvements in Reversing Mechanism for Steam-Engines; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

The special object of the invention is to obtain a convenient mechanism by which a steam-engine may be reversed.

Figures 1 and 2 of the drawings are elevations in perspective, showing the construction and arrangement of the several parts which constitute my invention. Fig. 2 is a detail view showing the connection of the rack, pinion, and sliding sleeve; and Fig. 3, a side elevation.

In the drawings, A represents the cam, which actuates the engine-valve by being oscillated in opposite directions. I make this cam and a bevel spur-wheel B integral with a collar C, the whole being loose, so as to turn upon the shaft D, which has its bearings in two opposite posts d^4 d^5 . On this shaft is a fixed collar d , carrying on its under side a shaft d' with an end cap d^2 and diametrically opposite the balance-weight d^3 . On the shaft d' is a bevel spur-wheel B', which gears with the corresponding wheel B, both being preferably spurred only half way around the circumference. Integral with the wheel B' is a pinion E, which is actuated by a recip-

rocating rack F, which is made fast at its rear end to the under side of a sliding sleeve G, which is splined to the shaft D, so that it may be unable to turn, but slide, thereon. The rack F is made to slide on the cap d^2 between the pinion and the wheels, being reciprocated by the sliding sleeve G. The sleeve may be slid by any suitable device; but I prefer a fork H, working in a groove h and secured to a head K, having the rear extension k , working in a hole of the bearing-post d^4 to keep it in a straight line when moving. To this head I pivot one end of an elbow-lever J, fulcrumed at the vertex of its angle.

The advantages of my mechanism for reversing engines are as follows: First, the mechanism is exposed to wear only when the engine is being reversed and will therefore be very durable; secondly, there is only one cam or eccentric and rod to drive or operate the valve.

What I claim as new, and desire to protect by Letters Patent, is—

The elbow lever J, the head K having an extension k guided in a post-hole, pivotally connected with the said lever and carrying a fork H, a ring-grooved sliding sleeve G carrying the rack F and splined to the shaft D, and the bevel wheel B' carrying the pinion E, in combination with the collar C, bevel spur wheel B and cam A, all fast on the same loose sleeve as shown and described.

In testimony whereof I affix my signature in presence of two witnesses.

LANDY D. EPPERSON.

Witnesses:

J. A. PAYNE,

G. W. EPPERSON.