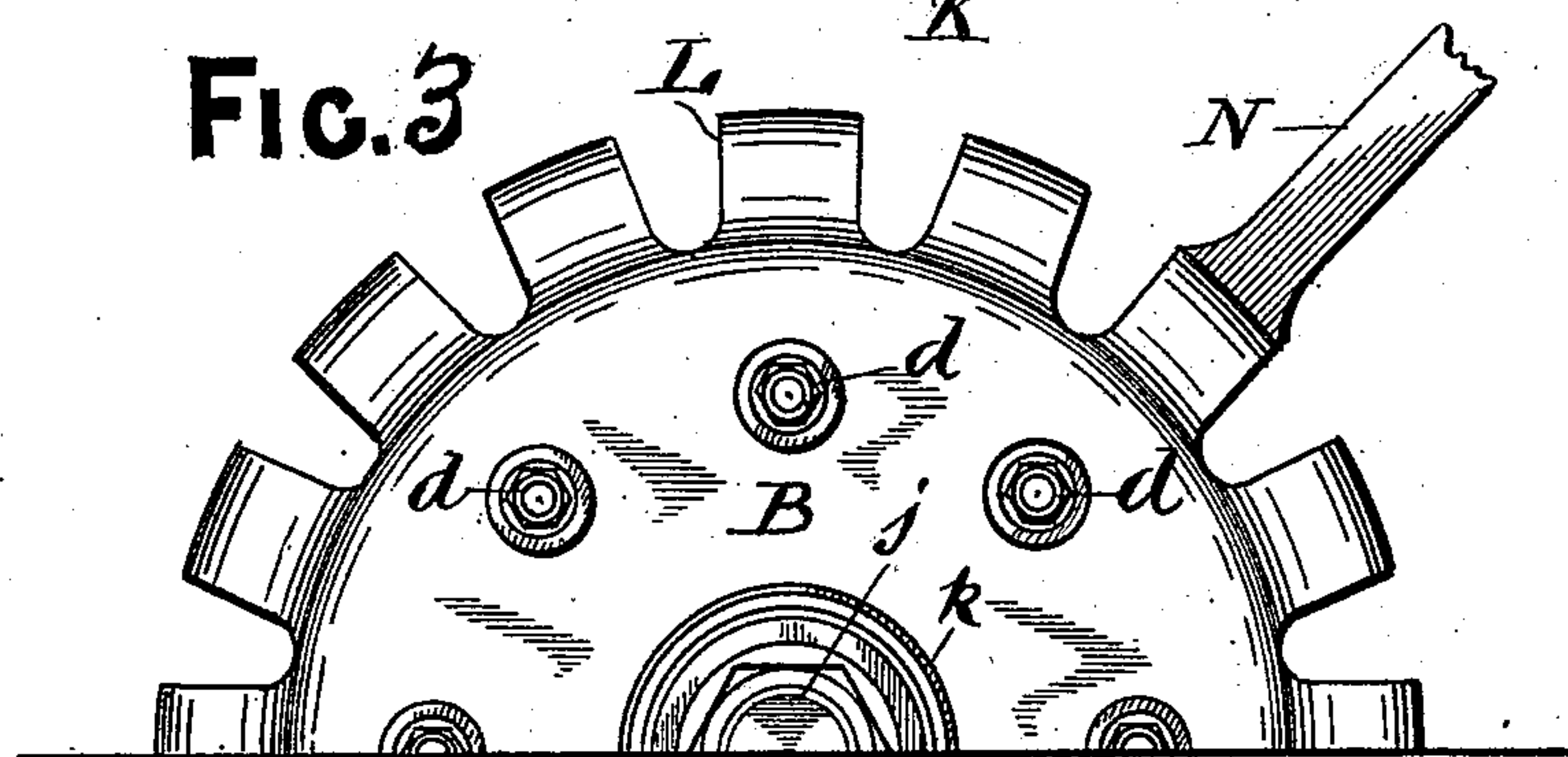
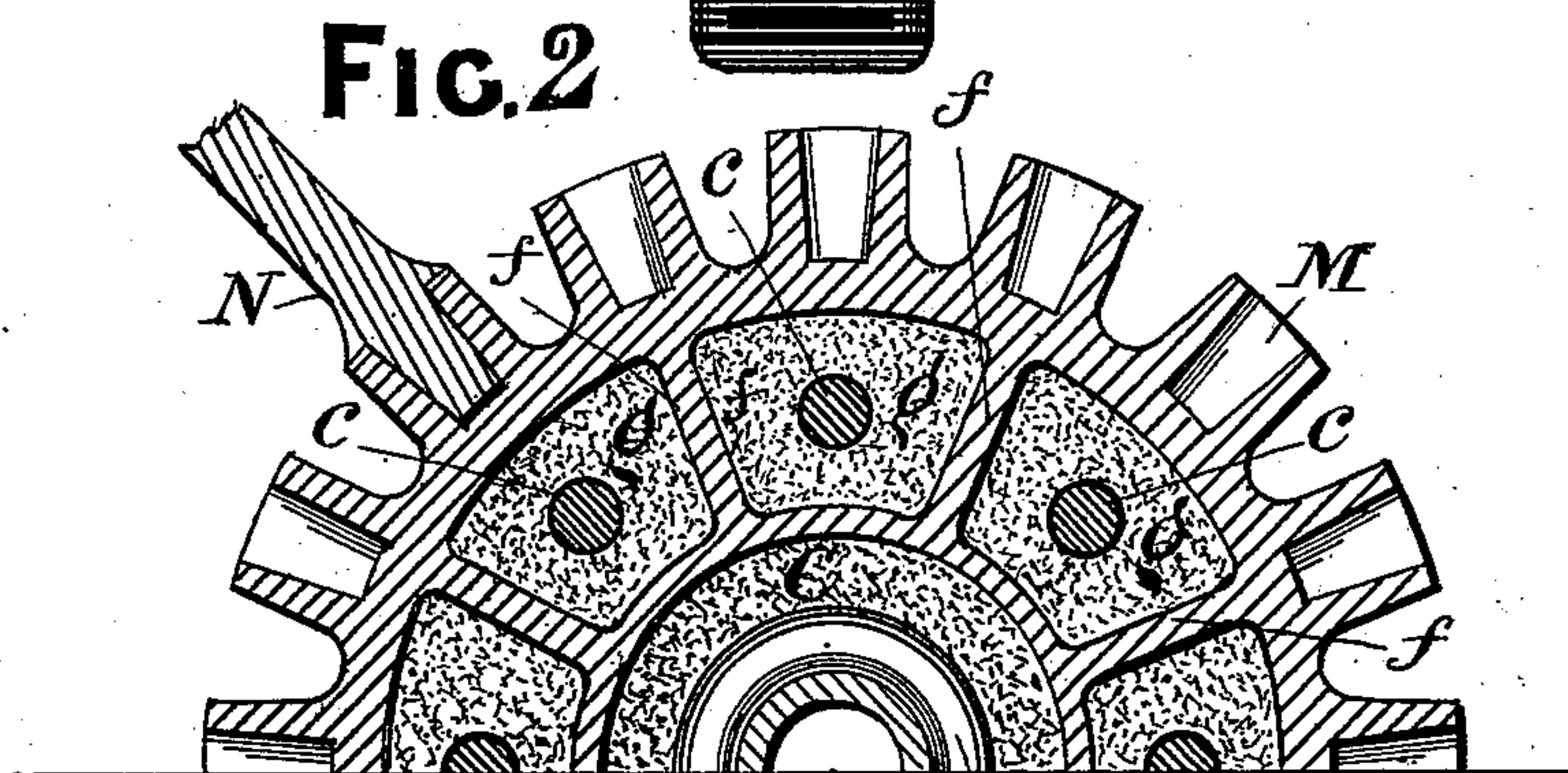
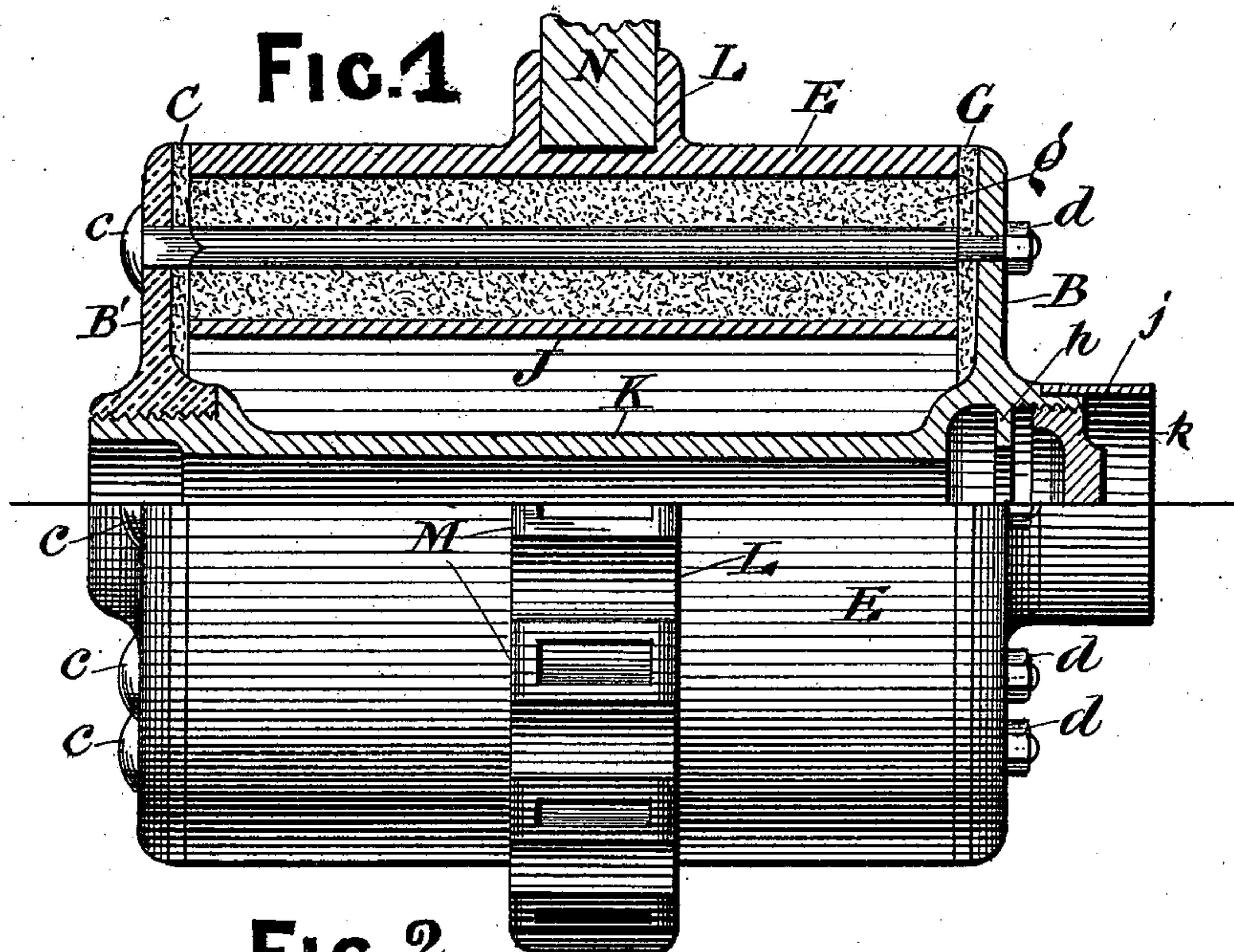


(No Model.)

G. TURNER & J. M. H. VENOUR.
WHEEL.

No. 528,575.

Patented Nov. 6, 1894.



Witnesses:

E. B. Holton

M. Sipple

Inventors:

George Turner

James Malcolm Hamilton Venour

By

Richard O. R.

their Attorneys

UNITED STATES PATENT OFFICE.

GEORGE TURNER AND JAMES MALCOLM HAMILTON VENOUR, OF LONDON,
ENGLAND.

WHEEL.

SPECIFICATION forming part of Letters Patent No. 528,575, dated November 6, 1894.

Application filed January 20, 1894. Serial No. 497,481. (No model.) Patented in England February 16, 1893, No. 3,458.

To all whom it may concern:

Be it known that we, GEORGE TURNER, engineer, residing at 219 Ivydale Road, and JAMES MALCOLM HAMILTON VENOUR, gentleman, residing at 156 Ivydale Road, Nunhead, in the county of Surrey, England, subjects of Her Majesty the Queen of Great Britain, have invented certain new and useful Improvements in Wheels, (for which we have applied for a patent in Great Britain, bearing date February 16, 1893, No. 3,458,) of which the following is a specification.

The improvements in and in connection with wheels constituting our invention, consist of the manner in which we construct the hub, or the accessories we employ in connection with the hub when applied to bicycles, tricycles, and similar manumotive machines, or in the construction of the nave, when applied to the wheels of carts, carriages and other road vehicles, the object of our said invention being in both cases to provide a maximum of elasticity to prevent vibration, without reducing the general and necessary stability of the wheel, as compared with the methods and means of constructing such wheels hitherto employed.

In the drawings, Figure 1, is a part sectional and side view of the invention. Fig. 2, is a transverse section of the upper part of Fig. 1, and Fig. 3, is an end view thereof.

We prefer to cast or otherwise provide the box K, integrally with the flange B, and arrange the flange B', to screw upon the opposite end of K. The cylinder E, inner cylinder J, and radial partitions f, we prefer to cast or otherwise provide in one piece, placing in between these blocks of rubber or other resilient material g, surrounding the bolts c, these being passed through resilient washers C, placed upon the inner surfaces of B, and B', and connected to B, B' by nuts d.

If the wheel is to carry wooden spokes after the manner of carriage wheels generally, we fix upon or form integrally with the cylinder E, a collar L, in which are formed a sufficient number of sockets M, tapered internally to receive the tapered ends of the spokes N, and when these are placed in position, the felloes

may be fitted thereto, and the metallic tire shrunk upon these in the usual way. The flange B, would be provided with a lubricant retaining ridge h, and arranged to receive an axle cap j, and be finished with a fancy rim k, after the manner of such wheels generally.

By this arrangement for building a cart or carriage wheel nave the box K, flanges B, and B', and the bolts c, remain always constant and firmly connected together, the vehicle and its load being virtually suspended by the elastic substance or substances g, the upward thrust imparted to E, through the spokes N, from the tread of the wheel, and the downward thrust of the box K, and its attachments, occasioned by the weight of the vehicle and its contents causing the compression of the material g, below K, and the expansion of same above K, such expansion and compression of g, being continually alternating across the cross sectional diameter of the nave, during the rotation of the wheel.

Having now particularly described and ascertained the nature of our said invention and in what manner the same is to be performed, we declare that what we claim is—

A wheel comprising the box K cast integral with the flange B at one end and having the flange B' screwed upon its other end, the bolts connecting the flanges, the inner and outer cylinders J E extending concentrically about the box and connected by radial partitions f extending longitudinally of the cylinder from end to end, said cylinders and partitions being cast in one piece, the rubber blocks in the compartments formed by the partitions and the elastic washers extending across the ends of the cylinders, the said flanges B B' extending over the washers and to the outer periphery of the cylinder E, substantially as described.

In witness whereof we have hereunto set our hands in presence of two witnesses.

GEORGE TURNER.

JAMES MALCOLM HAMILTON VENOUR.

Witnesses:

GEO. THOS. HYDE,

S. J. EARL.