

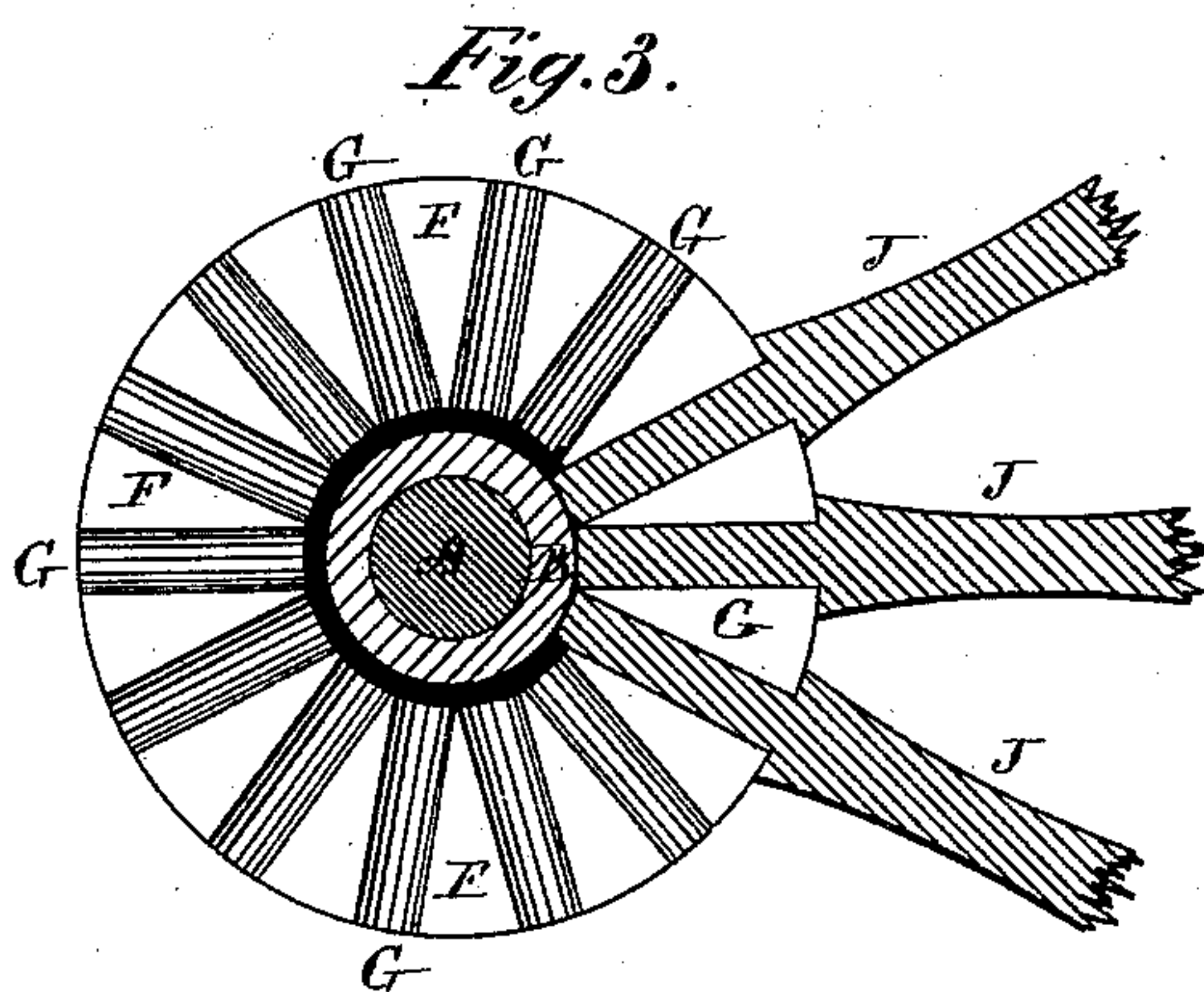
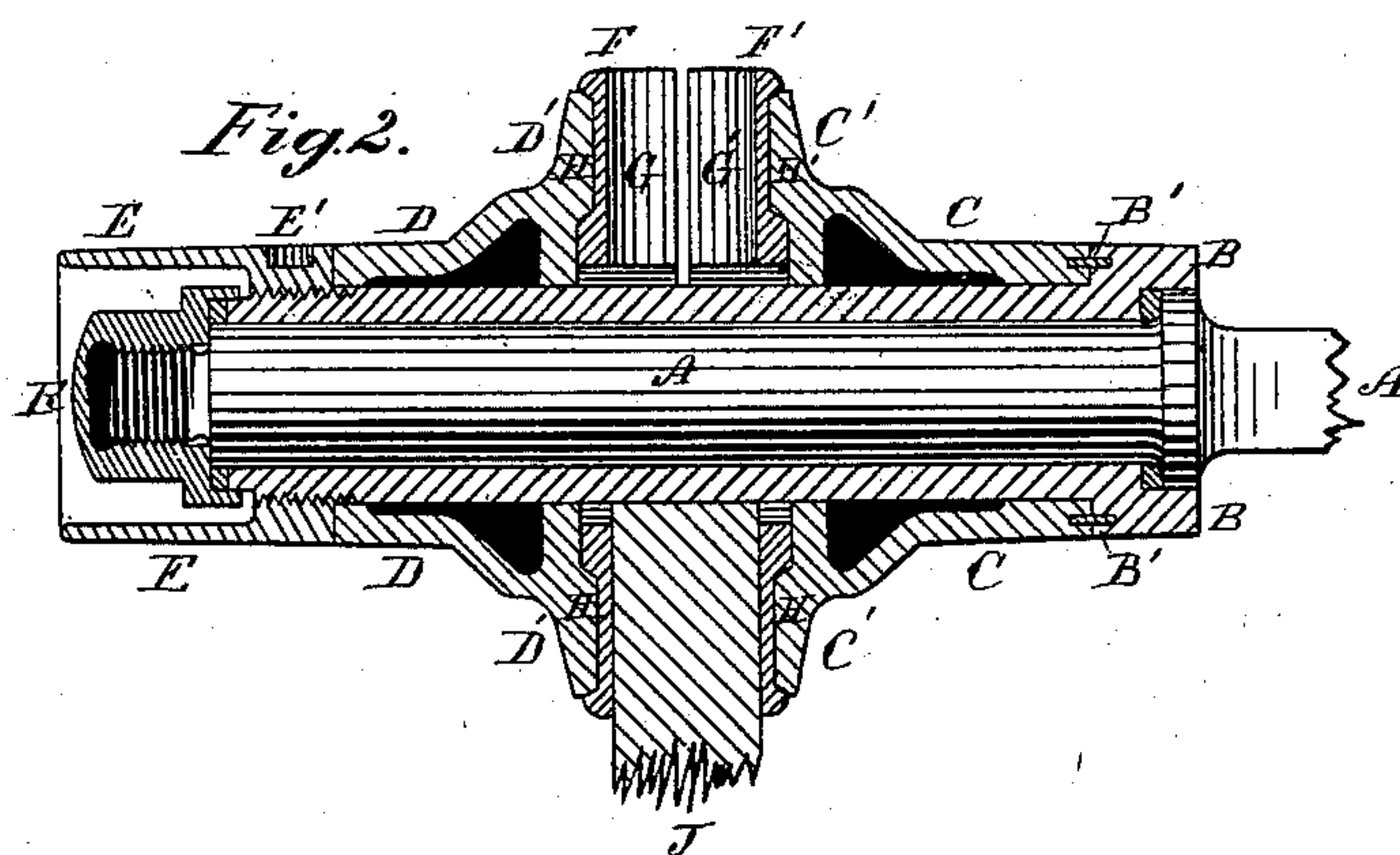
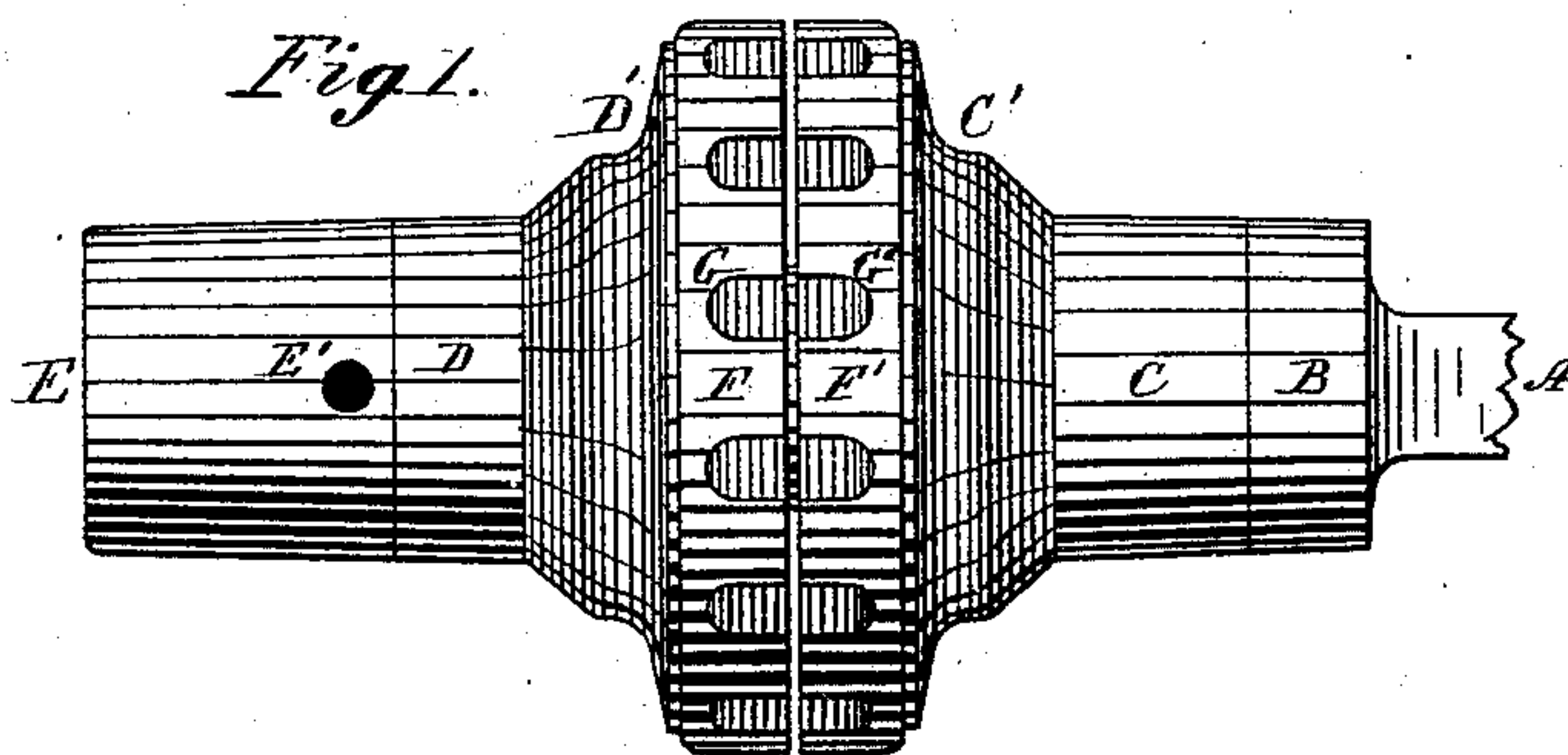
(No Model.)

M. C. JOHNSON.

WHEEL HUB.

No. 273,548.

Patented Mar. 6, 1883.



Witnesses.

Edwin T. Dimock.
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Inventor.

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att'y.

UNITED STATES PATENT OFFICE.

MOSES C. JOHNSON, OF HARTFORD, CONNECTICUT, ASSIGNOR TO HIMSELF
AND WILLIAM N. WOODRUFF, OF SAME PLACE.

WHEEL-HUB.

SPECIFICATION forming part of Letters Patent No. 273,548, dated March 6, 1883.

Application filed October 12, 1882. (No model.)

To all whom it may concern:

Be it known that I, MOSES C. JOHNSON, of Hartford, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Wheels; and I do hereby declare that the following is a full, clear, and exact description thereof, whereby a person skilled in the art can make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

Like letters in the figures indicate the same parts.

My improvement relates to wheels for carriages and other vehicles.

The object of my invention is to provide a wheel-hub which shall be stronger and hold the spokes more firmly than the metallic hubs now in use, and at the same time be simpler and more easily constructed than adjustable hubs heretofore known.

In the accompanying drawings, illustrating my invention, Figure 1 is an exterior side view of my improved hub with the spokes of the wheel removed. Fig. 2 is a longitudinal section through the middle of the hub, showing one of the spokes inserted in the lower socket. Fig. 3 is a section through the middle of the line of spokes, showing three of the spokes in their sockets and the others removed.

A is the axle, which may be of any common construction.

B is the wheel-box, which fits and turns upon the axle.

C is an annular sleeve or box, fitting upon the box B, and provided with a raised flange, C', for clasp and holding the ring which supports the spokes. This sleeve is prevented from turning upon the box B by dowels B' or any other common mechanical expedient. The sleeve C could also be cast in one piece with the box B.

D is a sleeve exactly similar to C, as shown in the drawings, fitting upon the box B in a reverse position to C, and provided with a raised flange, D', which acts, in connection with the flange C', to clasp and hold the ring in which the spokes are set.

E is the ferrule at the outer end of the hub.

It serves as a nut which screws upon the outer end of the box B to press the sleeve D toward the sleeve C. It is provided with a hole, E', or other device by which it can be forcibly turned with a spanner or wrench to bring the flanges C' and D' together.

F and F' are two rings, which form the part of the hub containing the sockets for the inner ends of the spokes. They are made of hard rubber or other similar composition, which possesses a certain degree of elasticity, and which can be cast in molds to an exact form, which it will retain when finished and placed in the wheel. Metal cannot be conveniently used for these parts, as it will not retain its exact form when cast, but would require to be accurately cut and turned after cooling. Hard rubber will not only retain its form after cooling, but possess sufficient elasticity to press upon the spokes and firmly hold them in place, besides somewhat relieving the shocks upon the wheel in use.

The rings F F' are provided with sockets G G' upon their inner sides, in which the ends of the spokes rest. These sockets are intended to be one half in each ring, so that when the rings are forced together by the plates or flanges C' D' the spokes will be firmly held.

On the outside of each ring are annular grooves H and H', into which the flanges D' and C' fit, for the purpose of holding the rings F F' in their exact position.

J J, &c., are the spokes. They are intended to be of the usual form and construction, with shoulders resting upon the exterior of the hub to prevent them from being driven inward in the customary manner. In my improved hub these shoulders rest on the elastic rings F F', which receive the shock of the wheel in striking an obstacle, and prevent the shoulders from being worn or injured. If at any time the spokes become loose in the hub, they can be tightened by simply turning the nut E, so as to bring the sleeves C and D nearer together.

My improved wheel is held onto the axle by a nut, K, or in any other customary manner.

Besides the advantages of being stronger and simpler than as heretofore made, my im-

proved wheel-hub admits of the sockets for the spokes being cast in the proper line for the dishing of the wheel, thus dispensing with the angular tenons commonly made upon the ends of the spokes for this purpose.

I am aware that it is not new to make the spoke-sockets of a wheel in two metallic disks, which, when clamped together, complete said sockets; also, that it is not new to combine with said disks washers of india-rubber which allow the metallic flanges forming the walls of the sockets to protrude through them. I do not claim this construction and combination; but

What I do claim is—

1. In a wheel-hub, two flanged disks of india-rubber, which form a series of complete spoke-sockets, in combination with devices for clamp-

ing said disks together, substantially as set forth.

2. In a wheel-hub, two flanged disks of india-rubber, which form a series of complete spoke-sockets, said disks being provided on their outer faces with grooves, in combination with a fixed metallic collar and a movable metallic collar, said collars having flanges which fit into said grooves to hold said rubber disks in place, and a clamping device, which forces said movable collar against the other parts for the purpose of clamping all together, substantially as set forth.

MOSES C. JOHNSON.

Witnesses:

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