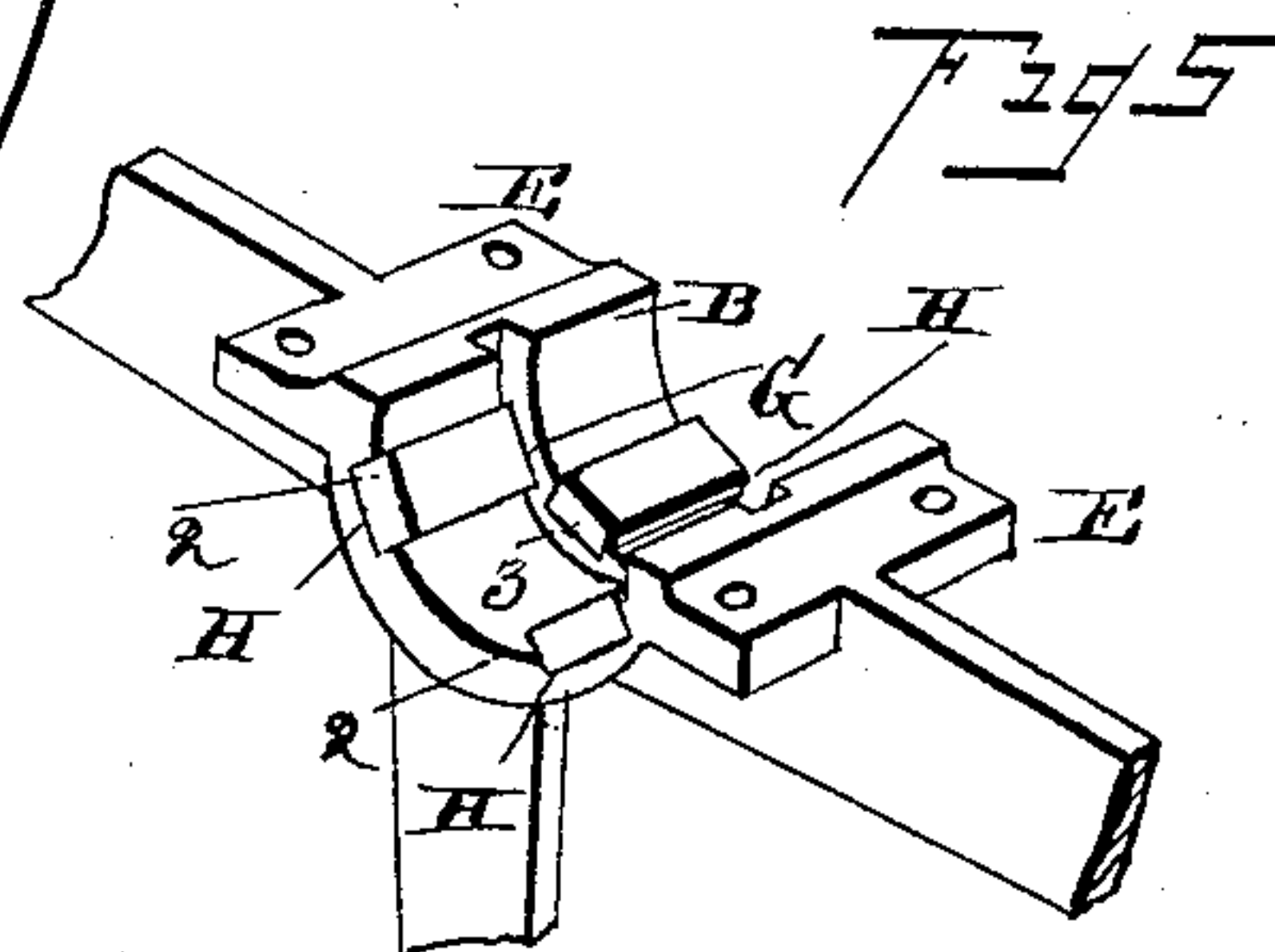
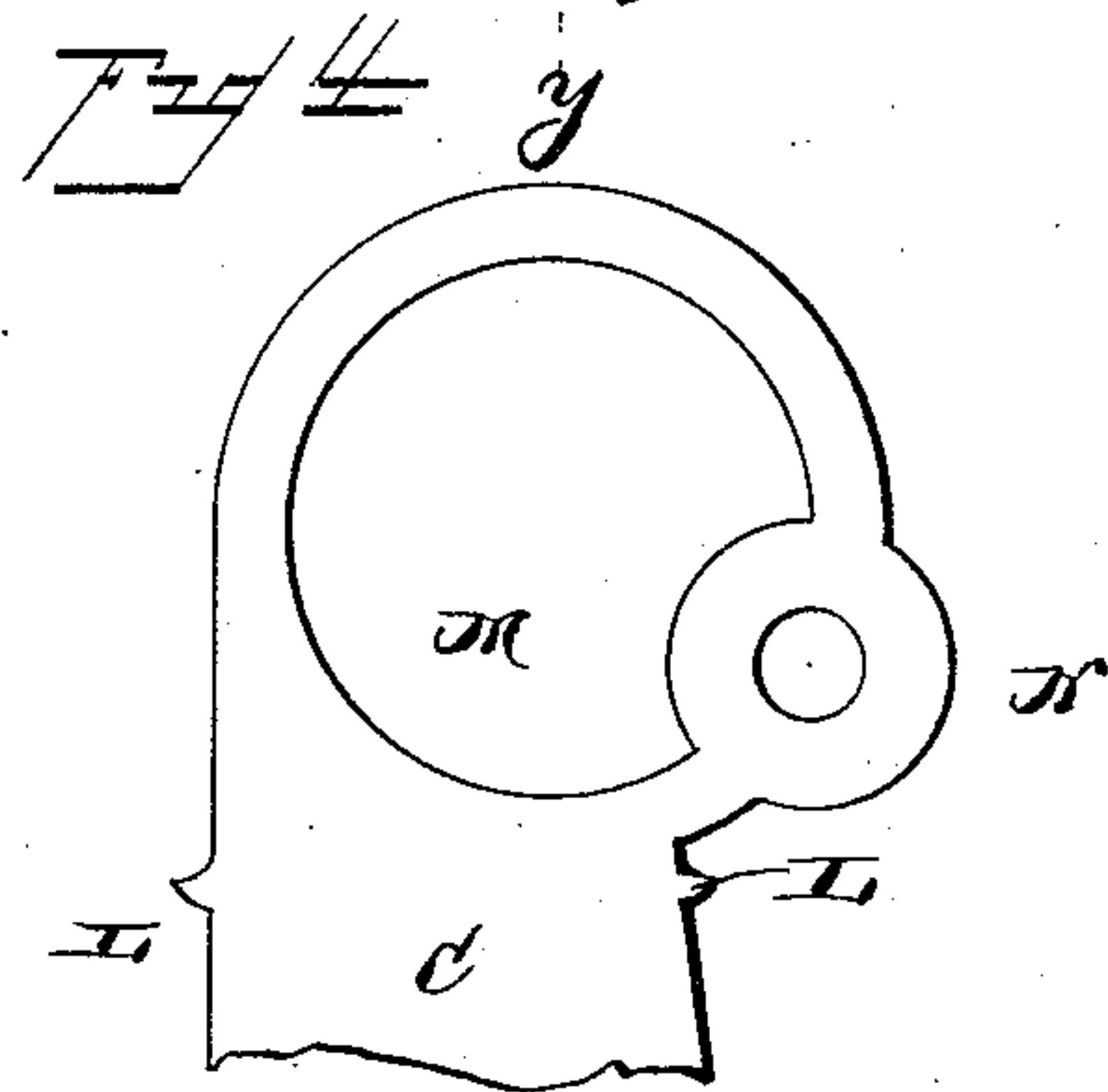
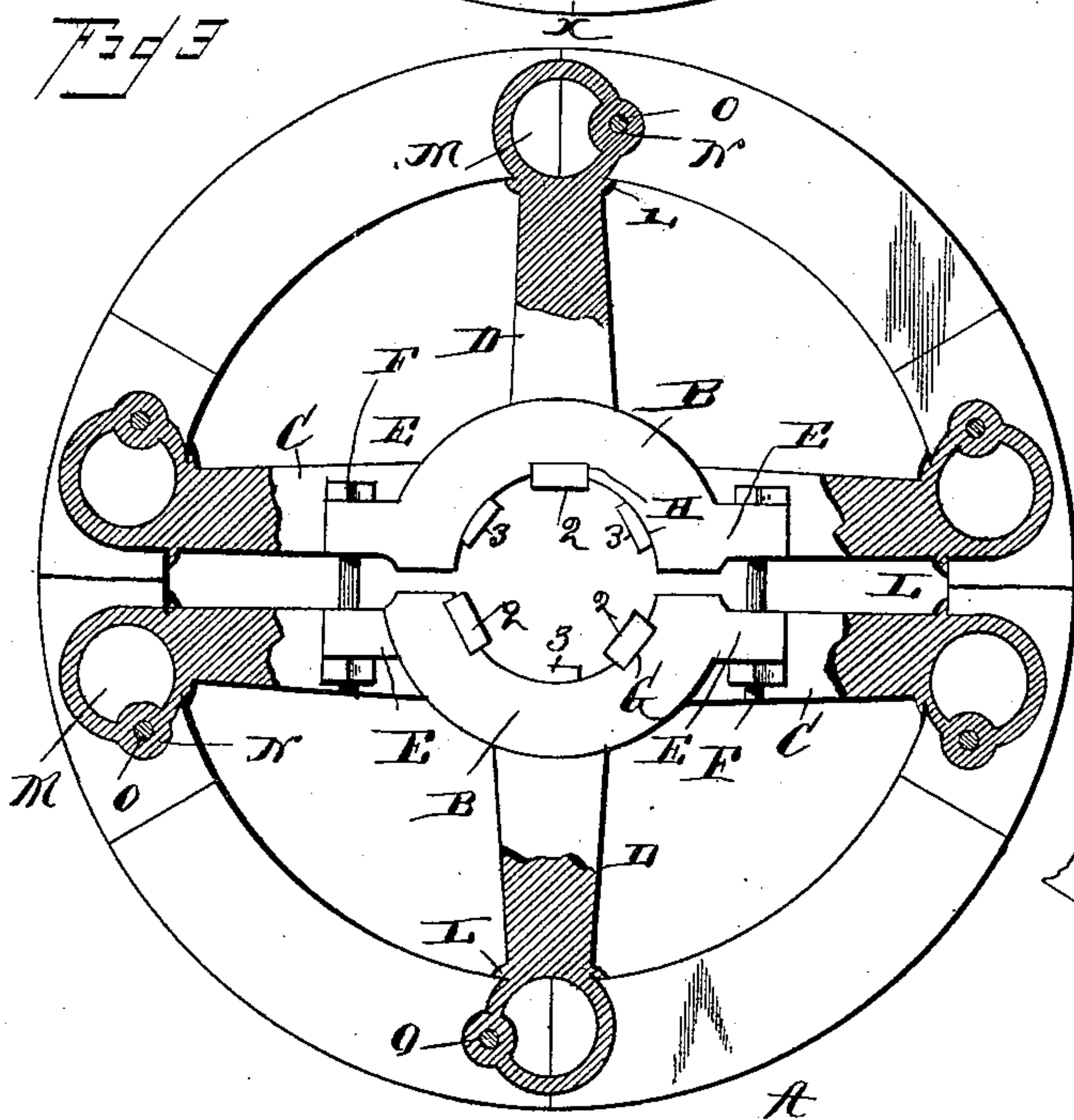
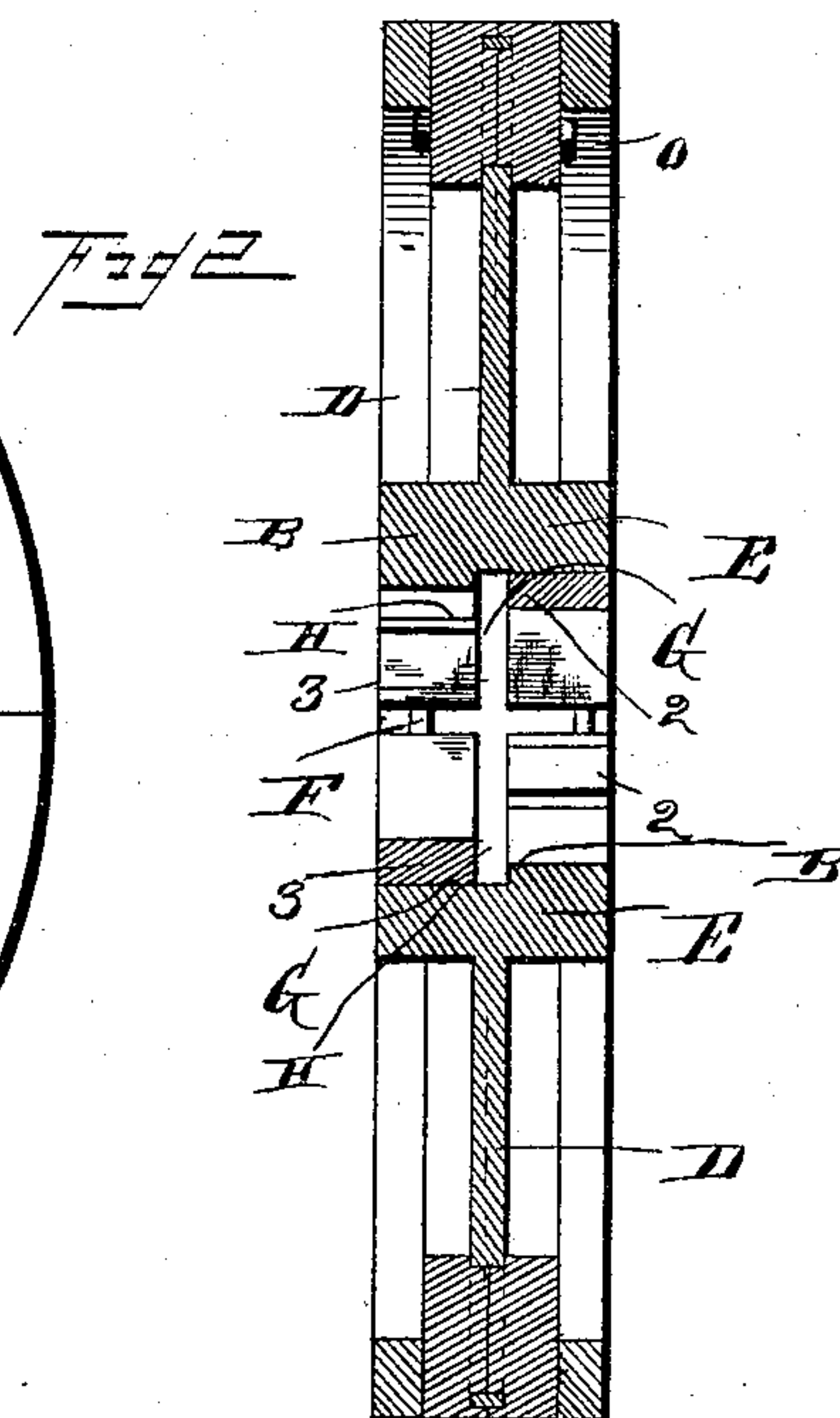
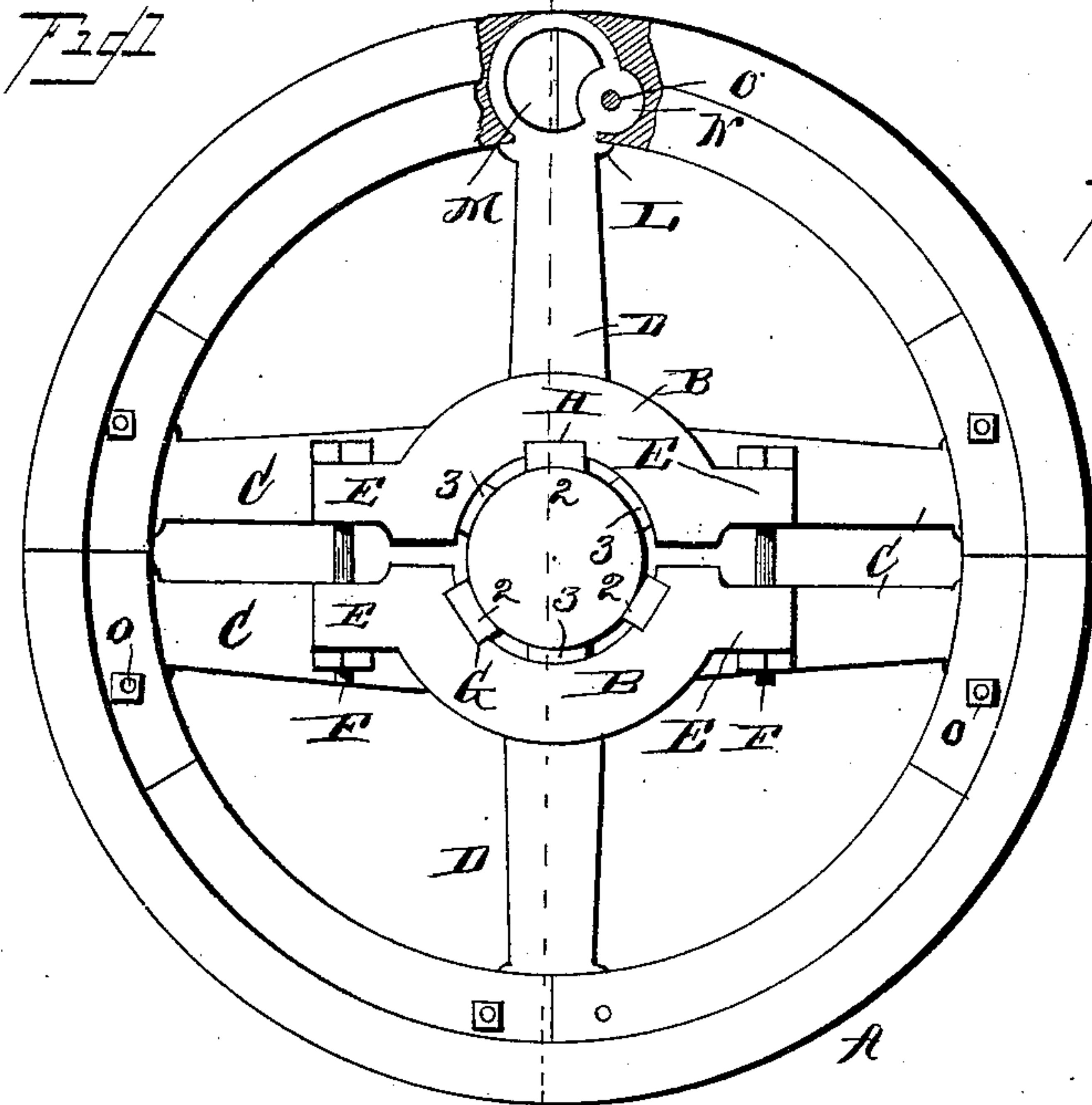


(No Model.)

P. McNAUGHTON.
PULLEY.

No. 407,367.

Patented July 23, 1889.



Witnesses

John Imrie
Wm. Bagger

Inventor

Peter McNaughton

By his Attorneys

Ch. Snowdon

UNITED STATES PATENT OFFICE.

PETER MCNAUGHTON, OF KALAMAZOO, MICHIGAN, ASSIGNOR TO CHARLES H. BIRD AND ERASTUS W. CRANE, OF SAME PLACE.

PULLEY.

SPECIFICATION forming part of Letters Patent No. 407,367, dated July 23, 1889.

Application filed February 14, 1889. Serial No. 299,906. (No model.)

To all whom it may concern:

Be it known that I, PETER MCNAUGHTON, a citizen of the United States, residing at Kalamazoo, in the county of Kalamazoo and State of Michigan, have invented new and useful Improvements in Pulleys, of which the following is a specification.

This invention relates to split pulleys; and it contemplates certain improvements in the construction of the same, having for their object to enable pulleys of this class to be more conveniently and accurately centered upon their shafts than by the construction which has heretofore been commonly used.

The invention further consists in the improved construction and arrangement of details, which will be hereinafter more fully described, and particularly pointed out in the claims.

In the drawings hereto annexed, Figure 1 is a side view, partly in section, of a split pulley embodying my improvements. Fig. 2 is a vertical sectional view taken on the line *x x* of Fig. 1. Fig. 3 is a side view and partly a vertical sectional view taken on the line *y y* of Fig. 2. Fig. 4 is a detail view of the end of one of the spokes. Fig. 5 is a detail perspective view of one of the semi-hubs of my improved pulley.

The same letters refer to the same parts in all the figures.

My improved split pulley is of that class in which a ring of wood, paper, or other suitable material is combined with a hub and spokes of cast-iron or other suitable metal.

Referring to the drawings, A designates the rim of the wheel, and B B are the two semi-cylindrical parts which together constitute the hub, and each of which is provided with the spokes C C and D, radiating, respectively, from the ends and centers of the semi-hubs. The semi-cylindrical castings or semi-hubs are provided with flanges E E, for the passage of the bolts F, by means of which the pulley is eventually to be secured upon its shaft.

Each of the semi-cylindrical castings is provided on its inner side or face with a central longitudinal groove G, transverse to the axis of the shaft, on opposite sides of which are formed seats H for the bearing-blocks, numbered 2 2 2 and 3 3 3, respectively. Each

of the castings B is provided with seats for three such blocks, two of which are arranged on one side of the central groove, near the ends of the casting, and the third one on the opposite side of the groove, centering between the two other seats. The semi hubs or castings are so arranged with relation to each other that the side of each having two bearing-blocks shall be on the same side as the side of the other casting which has only a single bearing-block. It will thus be seen that on each side of a vertical plane laid transversely to the axis, centrally through the pulley, the hub of said pulley is provided with three blocks or projecting bearings adapted to bear against the shaft upon which the pulley is mounted, and numbered, respectively, 2 2 2 and 3 3 3 in the drawings, said blocks being located equidistantly from each other, and breaking joints with each other on opposite sides of such vertical plane. It will be seen that by this construction, when the semi-hubs are fitted to the shaft in the act of placing the pulley in position for operation, the said semi-hubs may be readily fitted and centered, each semi-hub being provided, as described, with three blocks or projections, forming bearings, which will readily adapt themselves to the shaft.

I am aware that bushing blocks or keys extending from end to end the entire length of the hub have been used in connection with split pulleys; but such construction differs materially from mine, in which the projecting blocks or bearings only extend half-way, or less than half-way, through the hub, and break joints on opposite sides, thereby enabling the semi-hubs to be instantaneously and accurately fitted and centered upon the shaft.

The spokes C and D are provided at their outer ends with annular flanges or shoulders L, which bear against the inner face of the rim, thus giving a firm support for the latter. The extremities of the spokes are formed with rings M, having the circular offsets N at one side, said offsets being perforated for the passage of the bolts O, which extend transversely through the offsets N and the rim of the pulley, and by means of which the said rim is secured to the spokes. The material of which the rim is constructed will fill the open rings

at the ends of the spokes, thus aiding in securing the latter in position. By this construction I am enabled to cut or halve the rim of the pulley before turning the same, and a more perfect and accurate job may thus be performed.

From the foregoing description, taken in connection with the drawings hereto annexed, the operation and advantage of my invention will be readily understood. The construction is simple and inexpensive, and my improved pulley may be readily secured upon a shaft for operation without the assistance of a skilled mechanic.

Having thus described my invention, I claim and desire to secure by Letters Patent—

1. In a split pulley, the herein-described hub, consisting of two semi-cylindrical castings the inner face of each of which is provided on one side of a central transverse annular groove with a single recess and on the other side of such groove with two seats or recesses, breaking joints with each other and adapted to receive bearing-blocks to be interposed between the hub and shaft, substantially as and for the purpose herein set forth.

2. In a split pulley, the hub composed of two sections provided interiorly on opposite sides of a central transverse line with projecting bearings so arranged as to break joints with each other and adapted to bear against the shaft, substantially as set forth.

3. In a split pulley, the hub composed of two sections provided on their inner faces with central transverse grooves, and having on opposite sides of said grooves projecting bearings so arranged as to break joints with each other, substantially as herein set forth.

4. In a split pulley, the combination, with the semi-hubs having outwardly-extending arms or spokes provided at their outer ends with rings, as herein described, of the rim or flange the material of which completely fills the said rings at the outer ends of the spokes, substantially as and for the purpose set forth.

5. In a split pulley, the combination, with the semi-hubs having outwardly-extending arms or spokes provided at their outer ends with rings and circular perforated offsets adjoining said rings, of the rim the material of which completely fills the said rings, and the transverse fastening-bolts passing through the perforated offsets, substantially as herein set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

PETER McNAUGHTON.

Witnesses:

E. A. CRANE,
C. W. YOUNG.