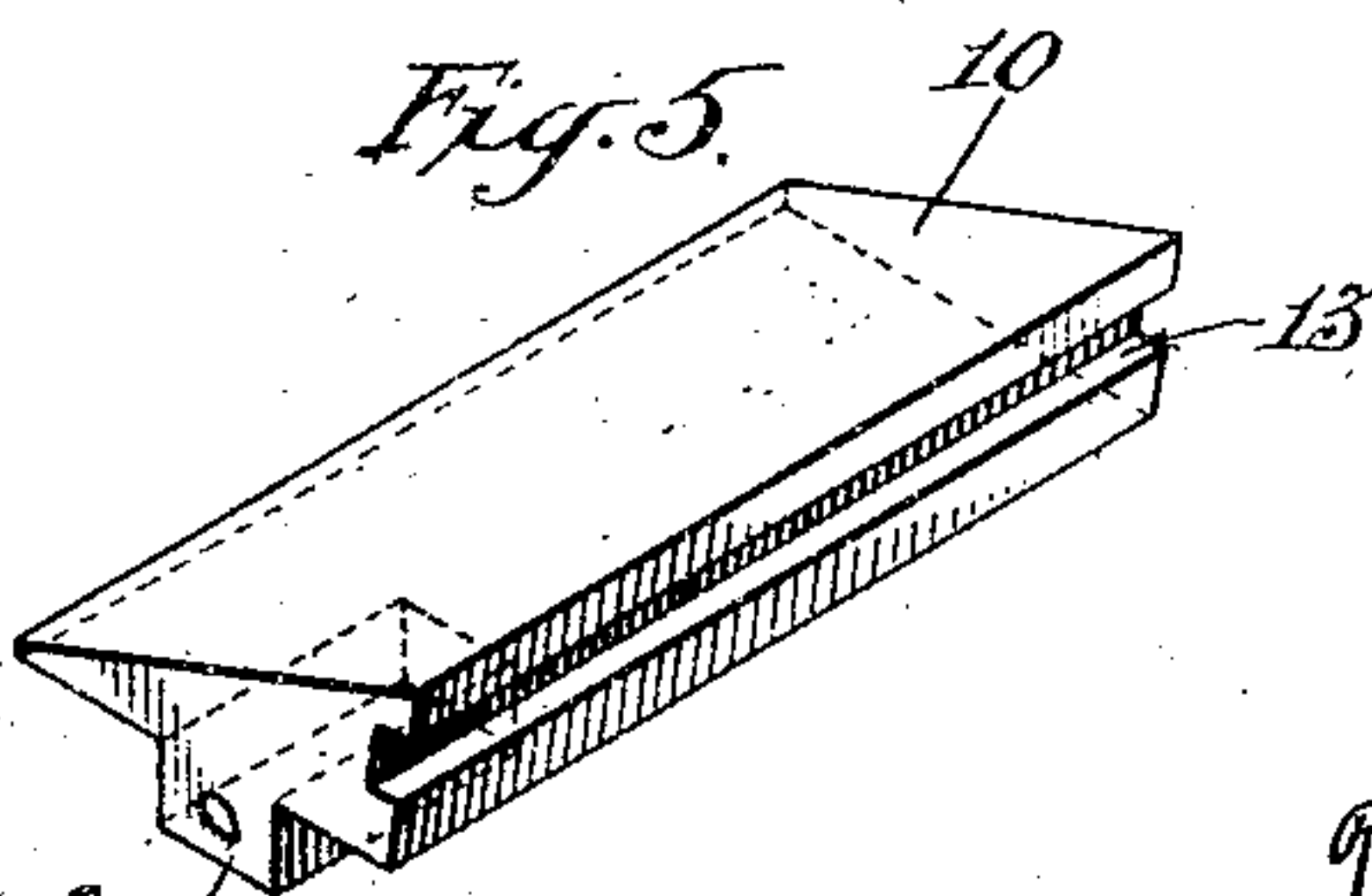
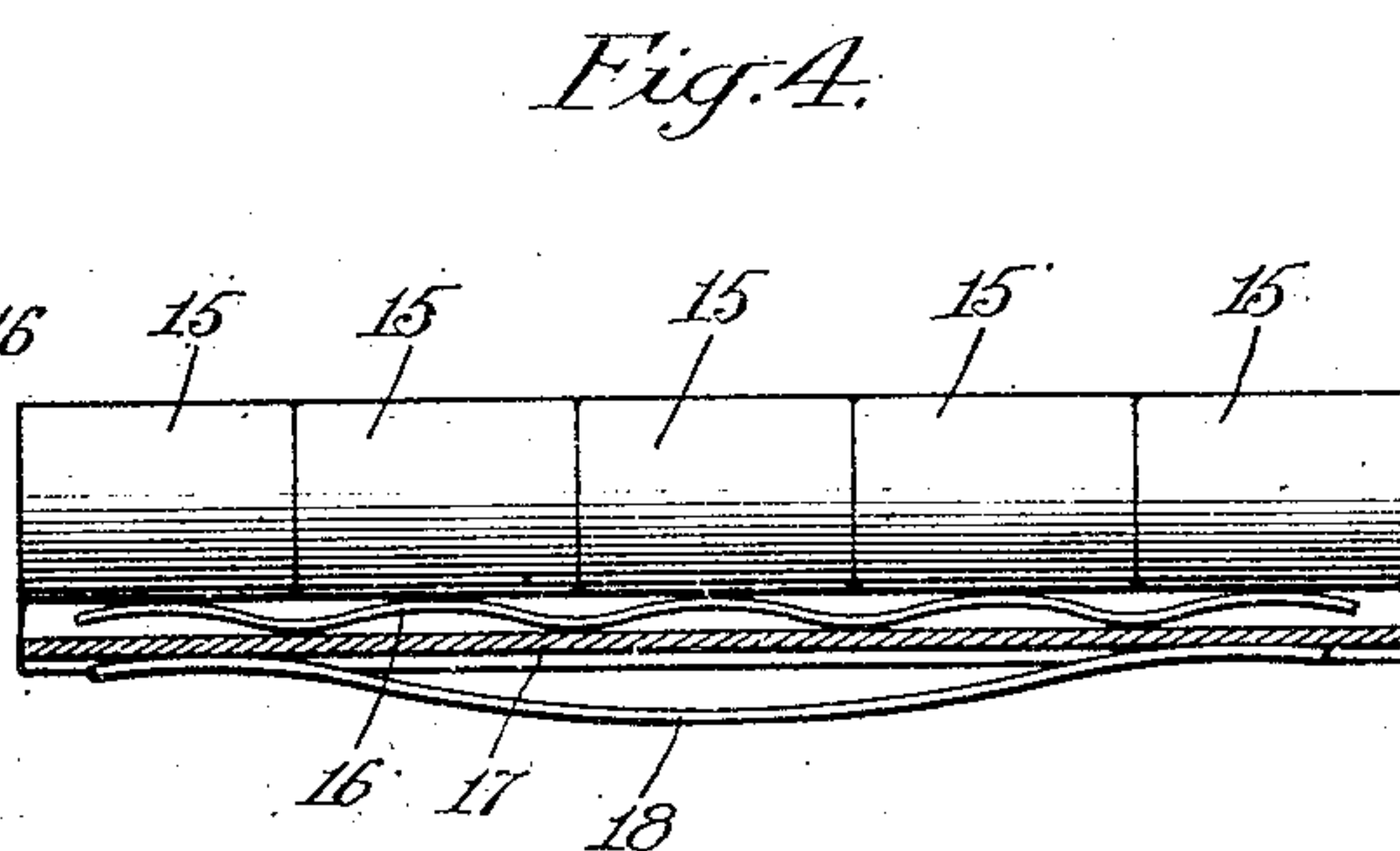
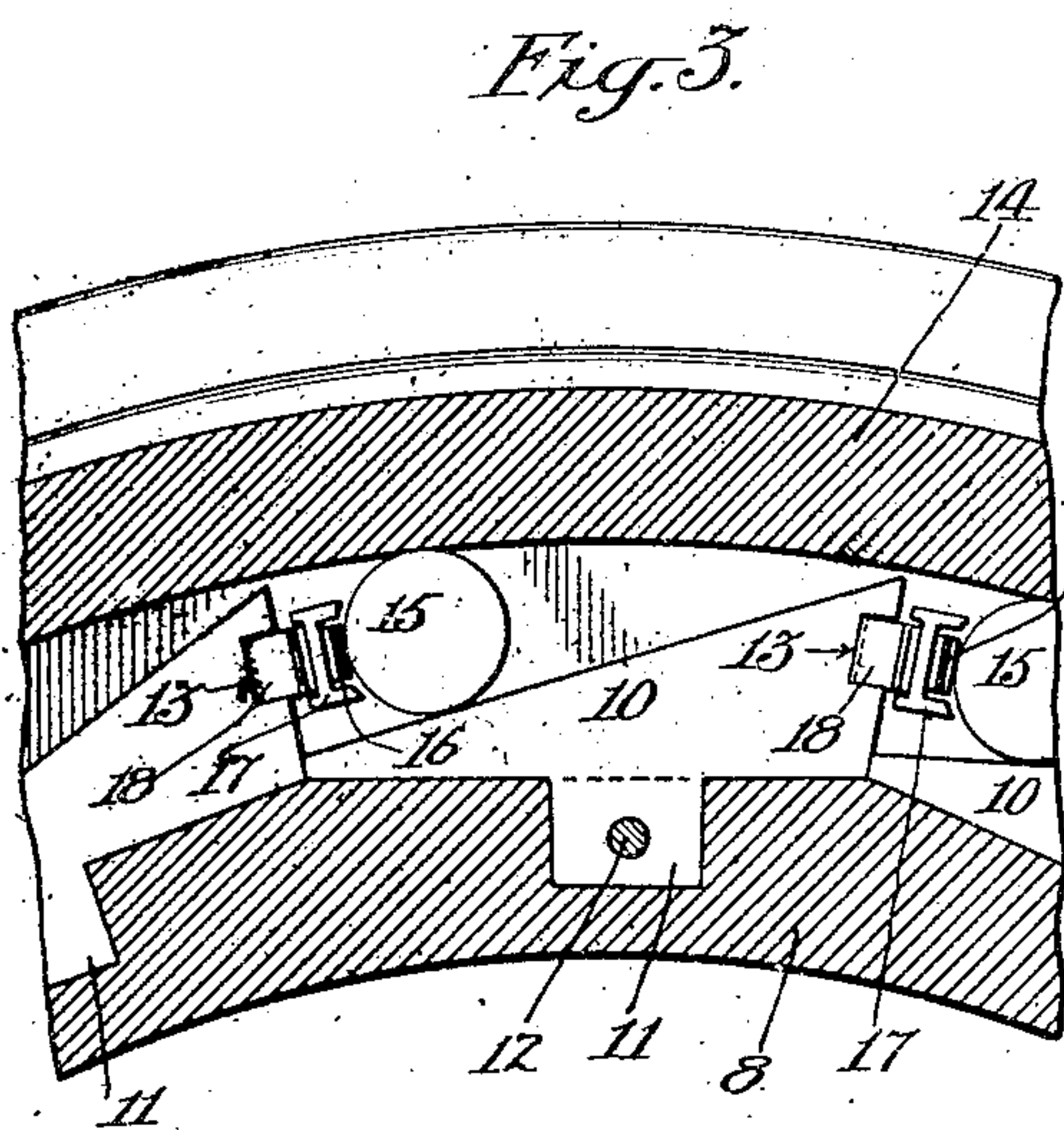
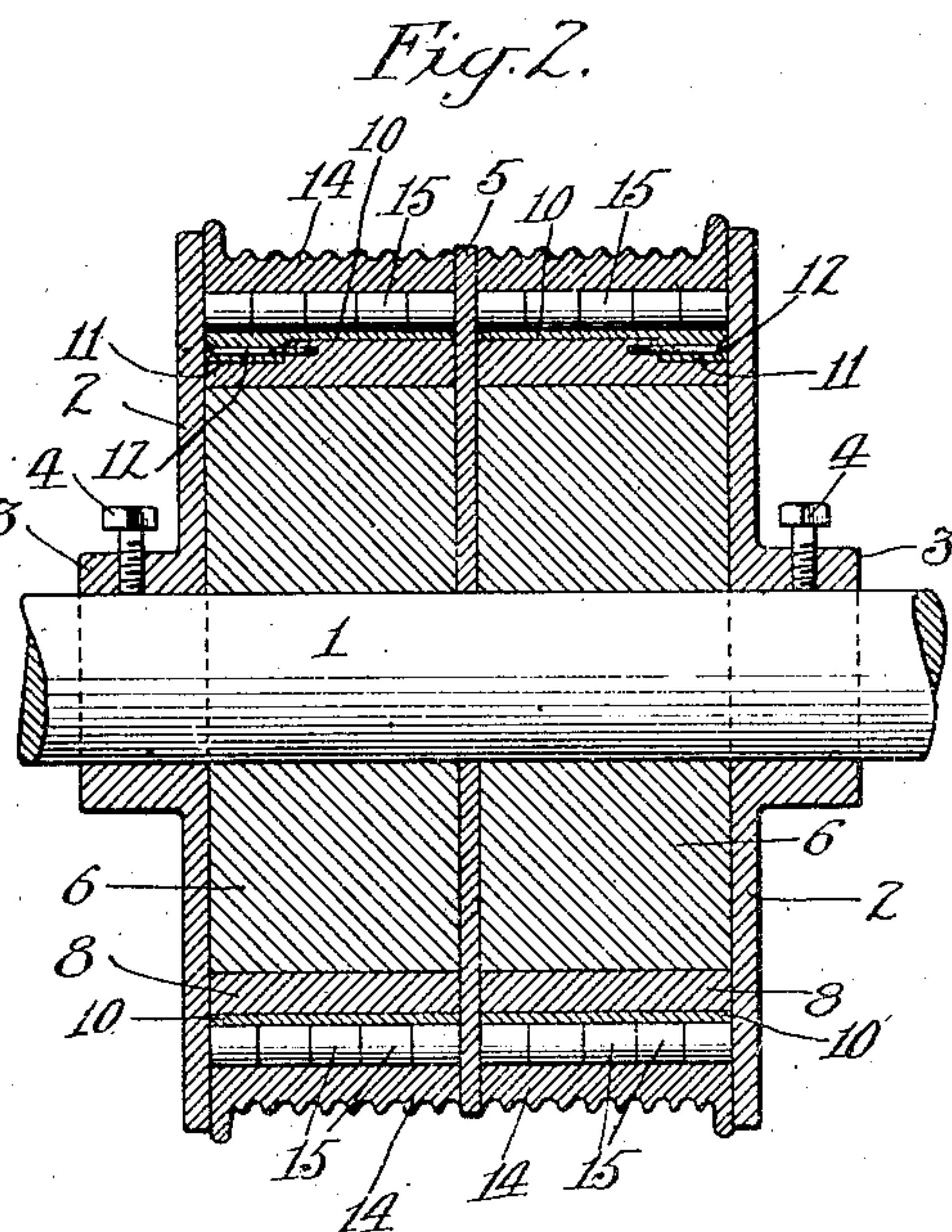
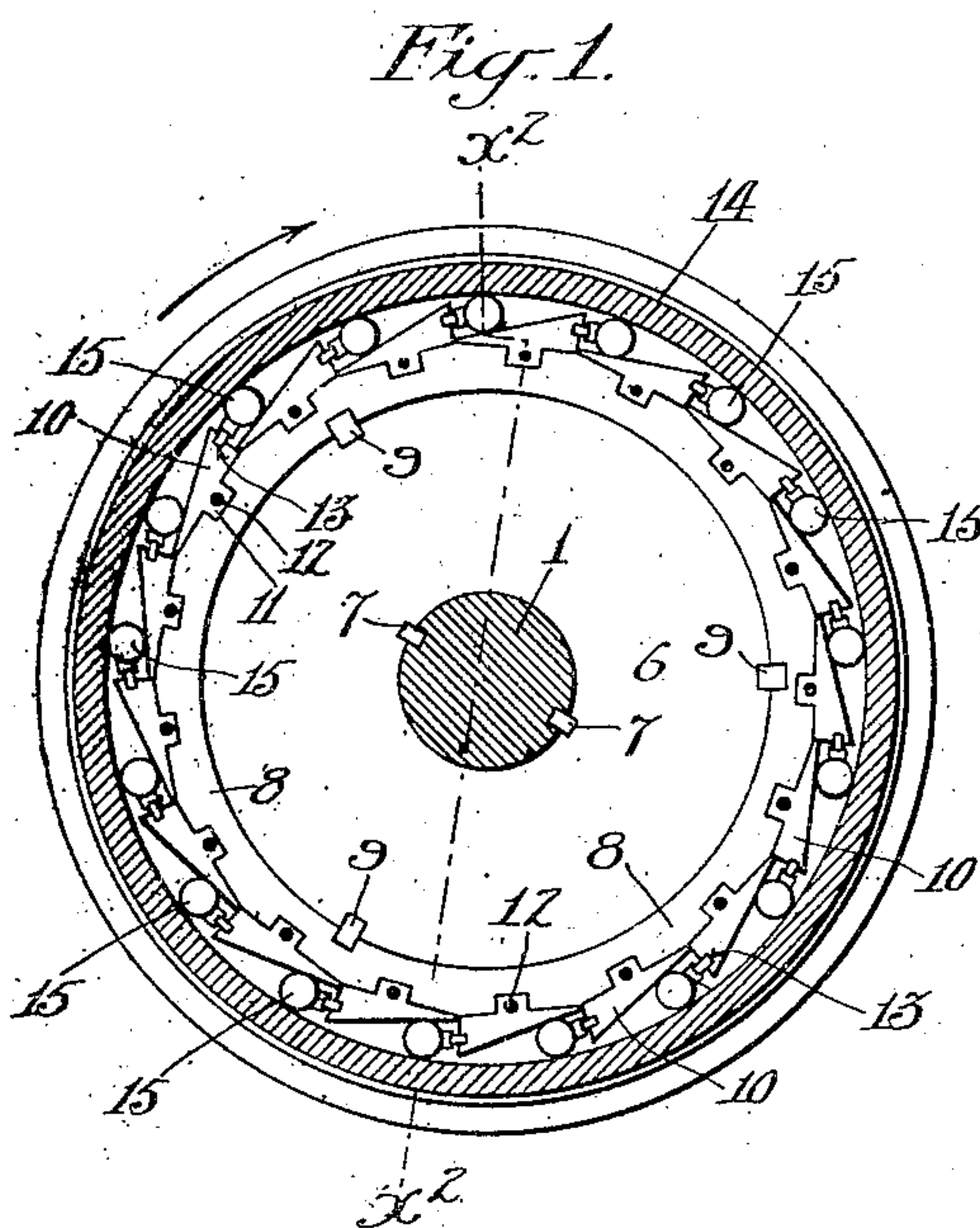


No. 879,993.

PATENTED FEB. 25, 1908.

G. M. WILSON.
ROLLER CLUTCH.

APPLICATION FILED MAY 20, 1907.



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UNITED STATES PATENT OFFICE.

GEORGE M. WILSON, OF LOS ANGELES, CALIFORNIA

ROLLER-CLUTCH.

No. 879,993.

Specification of Letters Patent.

Patented Feb. 25, 1908.

Application filed May 20, 1907. Serial No. 374,793.

To all whom it may concern:

Be it known that I, GEORGE M. WILSON, a citizen of the United States, residing at Los Angeles, in the county of Los Angeles and State of California, have invented a new and useful Roller-Clutch, of which the following is a specification.

This invention relates to intermittent grip devices, and the objects of the invention are to improve the construction of the same.

The accompanying drawings illustrate the invention, and referring thereto:—

Figure 1 is a side elevation of the clutch with part of the drum shown in section. Fig. 2 is a section on line x^2-x^2 Fig. 1. Fig. 3 is an enlarged view, partly in section, illustrating the arrangement of the rollers and their cooperating seats. Fig. 4 is a side elevation in detail of a gang of rollers with their supporting springs. Fig. 5 is a perspective view in detail of a detachable roller seat.

The clutch illustrated is a double clutch, both sections of which are similar in construction and both being on a shaft 1 and inclosed between plates 2, the latter having hubs 3 which are fastened by set screws 4 to the shaft 1. A division plate 5 is arranged between the two sections of the clutch.

The two sections are similar in construction, each section comprising a thick disk 6 fastened by keys 7 to the shaft 1. A sleeve 8 encircles the disk 6 and is fastened thereto by keys 9 as shown in Fig. 1. Arranged on the periphery of each sleeve 8 is a series of roller seat blocks 10. Each seat block is wedge-shaped as shown in Fig. 5, having on its under side a boss 11, the latter being received in a recess formed in the sleeve 8. Machine screws 12 pass through the bosses 11 into the sleeve to detachably hold the seat blocks in place; this permits of easily substituting new seat blocks when the old ones become worn. The thicker edge of each seat block is provided with a groove 13.

Arranged concentrically with each sleeve 8 is a driving drum 14 having a grooved periphery for operation by cable. Resting upon each seat block 10 is a gang of rollers 15, behind which is a sinuous flat spring 16 having several projecting convex portions bearing against the respective rollers as clearly shown in Fig. 4. Behind each spring 16 is a spring plate 17 which in turn is supported by a flat bowed spring 18, the latter being seated

in the groove 13 in the adjacent seat block 10. This spring construction forces each individual roller tightly between the seat block 10 and the inner concave surface of the drum 14 which insures a maximum gripping effect not to be attained by a single long roller.

As the driving drum 14 is operated in the direction of the arrow, Fig. 1, it causes the rollers 15 to grip tightly between the drum and their respective seat blocks 10, which results in causing the inner disk to turn at the same rate of speed as the driving drum, thereby driving the shaft 1. Upon the reverse movement of the driving drum, the grip of the rollers is relaxed and the rollers are idle, but continuous motion is imparted to shaft 1 during the reversal of either clutch section by the driving stroke of the other section.

What I claim is:—

1. In a roller clutch, a disk, a driving drum concentric therewith, a series of wedge-shaped roller seat blocks detachably fastened to the disk, a gang of rollers between each seat block and the driving drum, and means engaging grooves in the respective seat blocks for holding each individual roller of a gang in contact with its seat block and the driving drum.

2. A roller clutch comprising a disk, a concentric driving drum, a series of wedge-shaped roller seat blocks each having a boss fitting in the disk, a screw passing through each boss into the disk, and a gang of rollers between each seat block and the driving drum.

3. A roller clutch comprising a disk, a concentric driving drum, a series of wedge-shaped roller seat blocks each having a boss fitting in the disk, a screw passing through each boss into the disk, and a gang of rollers between each seat block and the driving drum, each of said seat blocks having a groove along its wider edge, a flat spring seated in each groove, a spring plate supported by each flat spring, a sinuous spring supported by each spring plate, each sinuous spring making contact with the individual rollers of the adjacent gang of rollers.

4. In a roller clutch, a shaft, plates attached to the shaft, a spacing plate, disks on opposite sides of the spacing plate, a series of wedge-shaped roller seat blocks detachably fastened to each disk, driving drums concen-

tric with the respective disks, a gang of rollers
between each seat block and the adjacent
driving drum, and spring means for holding
each individual roller of a gang in contact
5 with the adjacent seat block and driving
drum.

In testimony whereof, I have hereunto set

my hand at Los Angeles, California, this 13th
day of May, 1907.

GEORGE M. WILSON.

In presence of—

GEORGE T. HACKLEY,
FRANK L. A. GRAHAM.