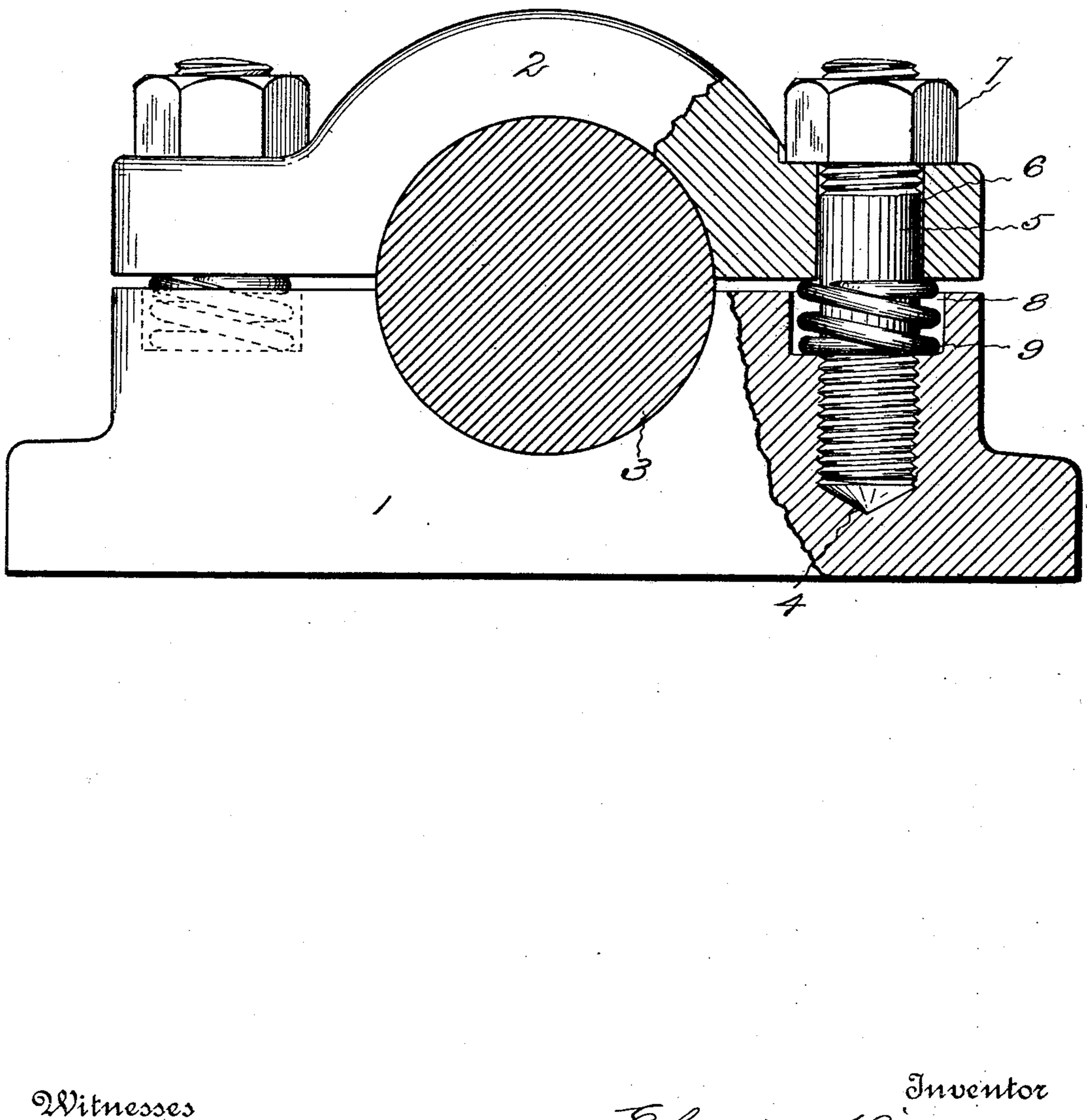
No. 702,947. Patented June 24, 1902.

E. HILL.

JOURNAL BEARING.

(Application filed Oct. 9, 1901.)

(No Model.)



Witnesses
V. R. Holcomb.
C. F. Kilgore

Inventor
Ebenezer Hill, by
Harry P. Williams
Attorney

UNITED STATES PATENT OFFICE.

EBENEZER HILL, OF SOUTH NORWALK, CONNECTICUT.

JOURNAL-BEARING.

SPECIFICATION forming part of Letters Patent No. 702,947, dated June 24, 1902.

Application filed October 9, 1901. Serial No. 78,052. (No model.)

To all whom it may concern:

Be it known that I, EBENEZER HILL, a citizen of the United States, residing at South Norwalk, in the county of Fairfield and State of Connecticut, have invented certain new and useful Improvements in Journal-Bearings, of which the following is a specification.

This invention relates to a bearing for the journal of an axle or shaft, which is formed with a pillow-block, a cap, and means for firmly holding the pillow and cap together, yet permitting a slight amount of automatic adjustment between them.

The opening in a bearing must be somewhat larger in diameter than the journal, so as to leave space for lubricant and allow the journal to rotate with a minimum amount of friction. It is difficult to adjust the pillow and cap so that there will be the exact desired amount of looseness between the journal and bearing. In some bearings the cap is left comparatively loose, and the motion of the shaft frequently works such a cap out of adjustment and causes trouble. To obviate this looseness, it is customary to fit a thin piece of metal of the required thickness between the pillow and the cap and bolt the cap down solidly upon such a piece. Sometimes instead of a thin piece of metal wedges are inserted between the pillow and cap, and often screws are used to set the parts right. The manipulation of these expedients is expensive and unsatisfactory, for they require the exercise of great skill in fitting and adjusting and keeping them in condition.

The object of my invention is to provide a very simple, inexpensive, and easily-manipulated bearing which is so constructed that the pillow and cap are firmly and securely held together with just the desired amount of space between the bearing and journal and no looseness between the pillow and cap.

To this end the invention resides in a bearing having a pillow-block, a cap, bolts arranged to force the cap toward the pillow, and stiff springs inserted between the pillow and the cap and tending to force the cap from the pillow in opposition to the bolts.

The figure of the drawing shows a side elevation of a bearing that embodies my invention with a portion broken away to better illustrate the construction.

The pillow-block 1 and the cap 2 may be made of any desired metal to any approved design. The pillow that is shown in the drawing has a semicylindrical recess in one face, that receives approximately one-half of the journal 3, and tapped sockets 4 for receiving the threaded ends of the bolts 5. The bolts extend from the pillow-sockets through perforations 6 in the cap, which has a semicylindrical recess that encircles approximately one-half of the journal. On the threaded outer ends of the bolts shown are nuts 7, that when screwed up force the cap toward the pillow.

In the pillow that is illustrated at the outer ends of the bolt-sockets are recesses 8. In these recesses about the bolts are spiral springs 9. These springs are of such length that they press with great strength between the pillow and the cap and force the latter tightly against the nuts which form the heads of the bolts. This construction allows great freedom of adjustment, and the stiffness of the springs holds the cap tightly against any up-and-down movement on the bolts.

The construction described is very simple to build and assemble. It is easy to adjust so that there will be the exact amount of looseness to give freedom to the shaft, and there is no looseness to the cap, which is forced outwardly against the nuts or bolt-heads with the strong and firm, yet yielding, pressure of the springs.

I claim as my invention—

A bearing consisting of a block with its inner face provided with a bearing-recess, two bolt-openings and two spring-recesses, a cap with its inner face provided with a bearing-recess and two bolt-openings, bolts extending through the bolt-openings in the cap and the spring-recesses and bolt-openings in the block, and a spring located in each of the spring-recesses in the inner face of the block and surrounding a bolt and holding the adjacent faces of the cap and the block away from each other, substantially as specified.

EBENEZER HILL.

Witnesses:
J. E. SLATER,
H. R. WILLIAMS.