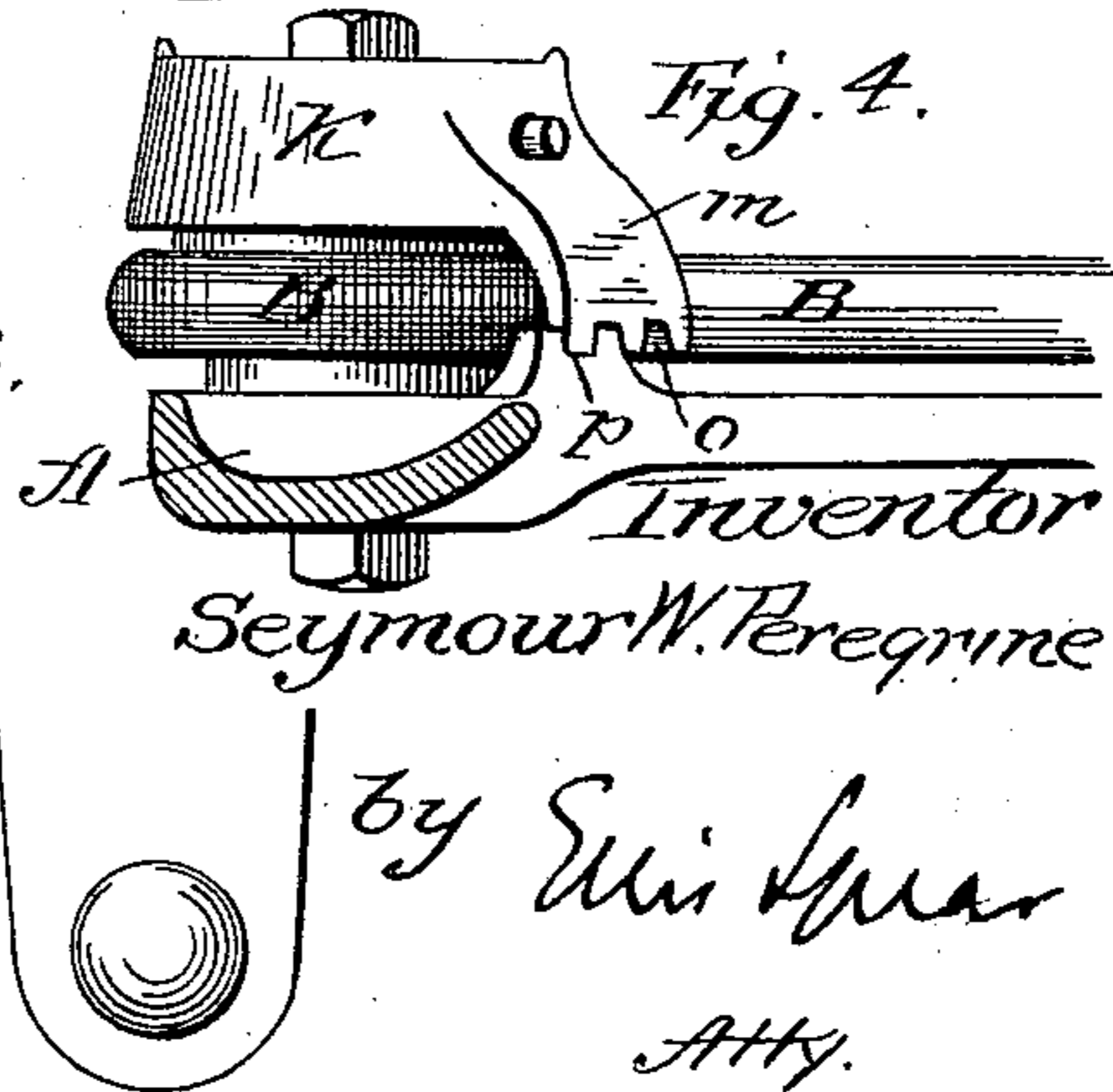
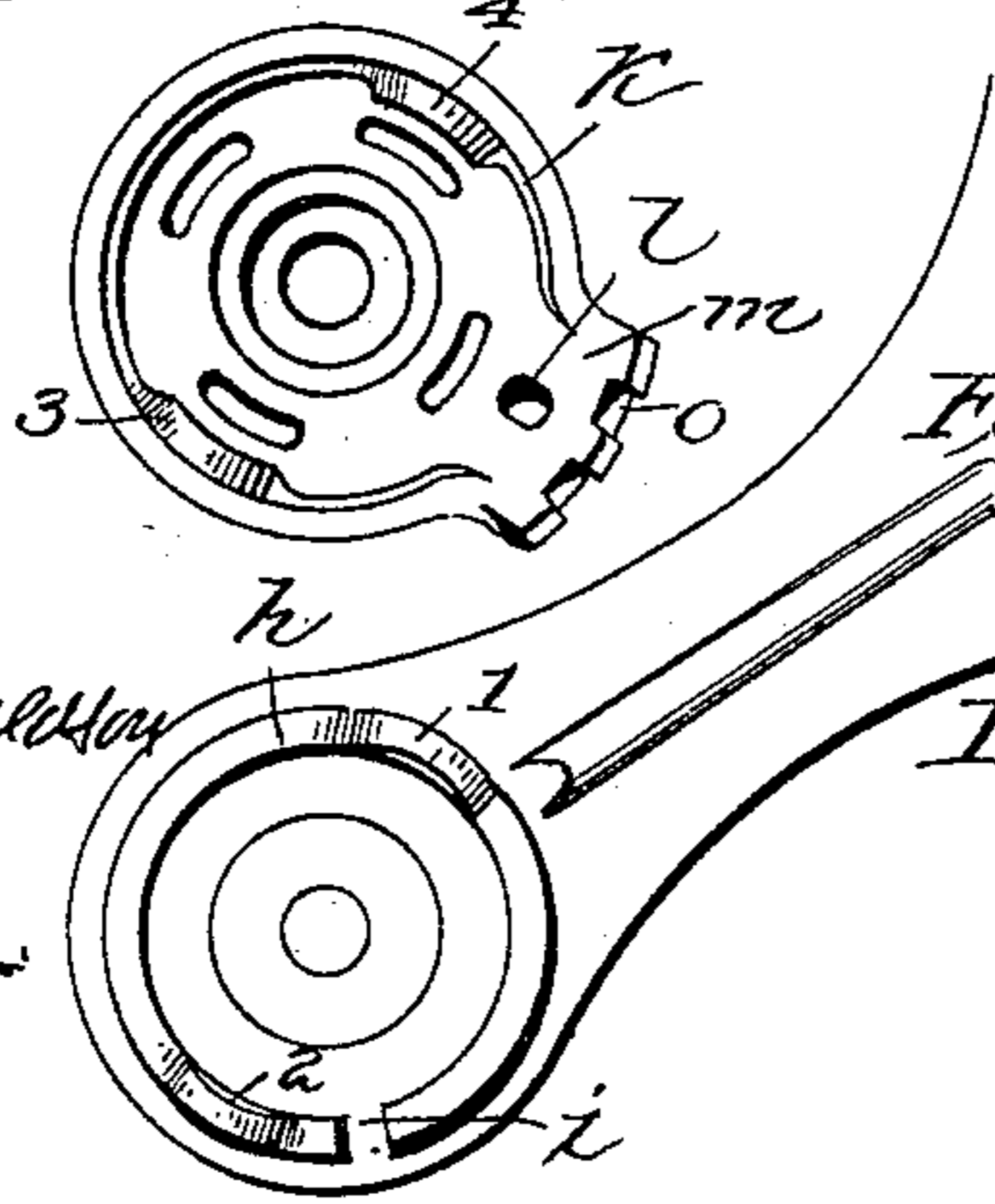
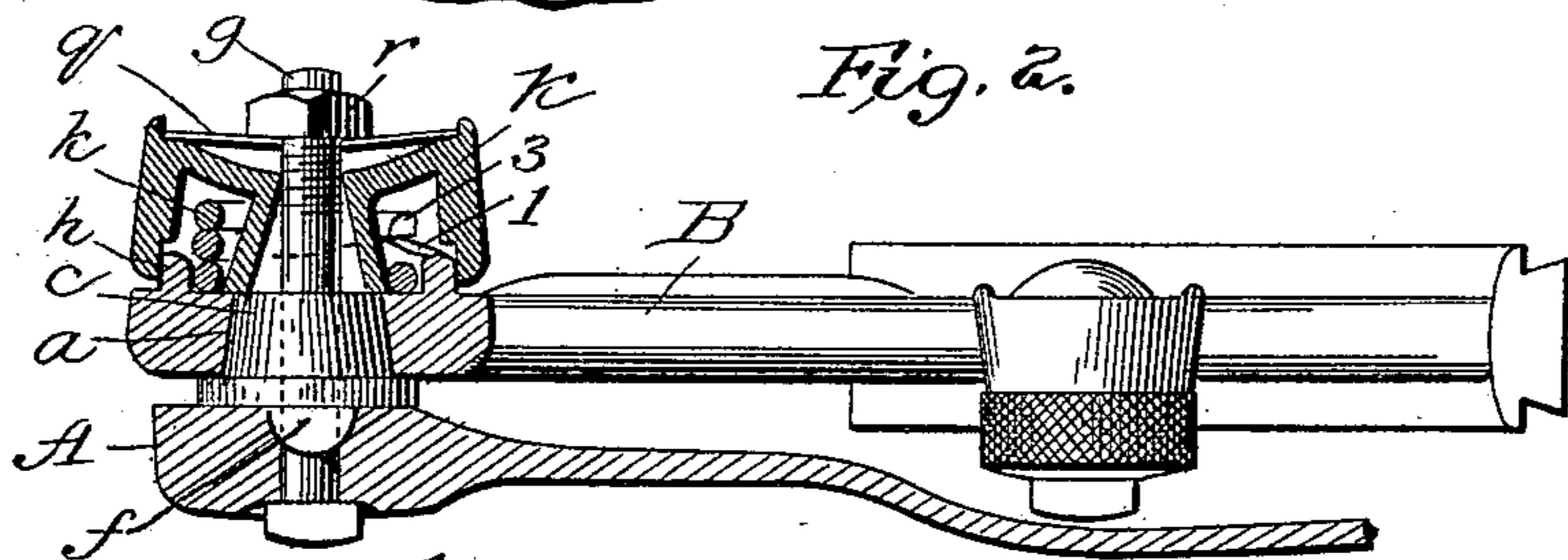
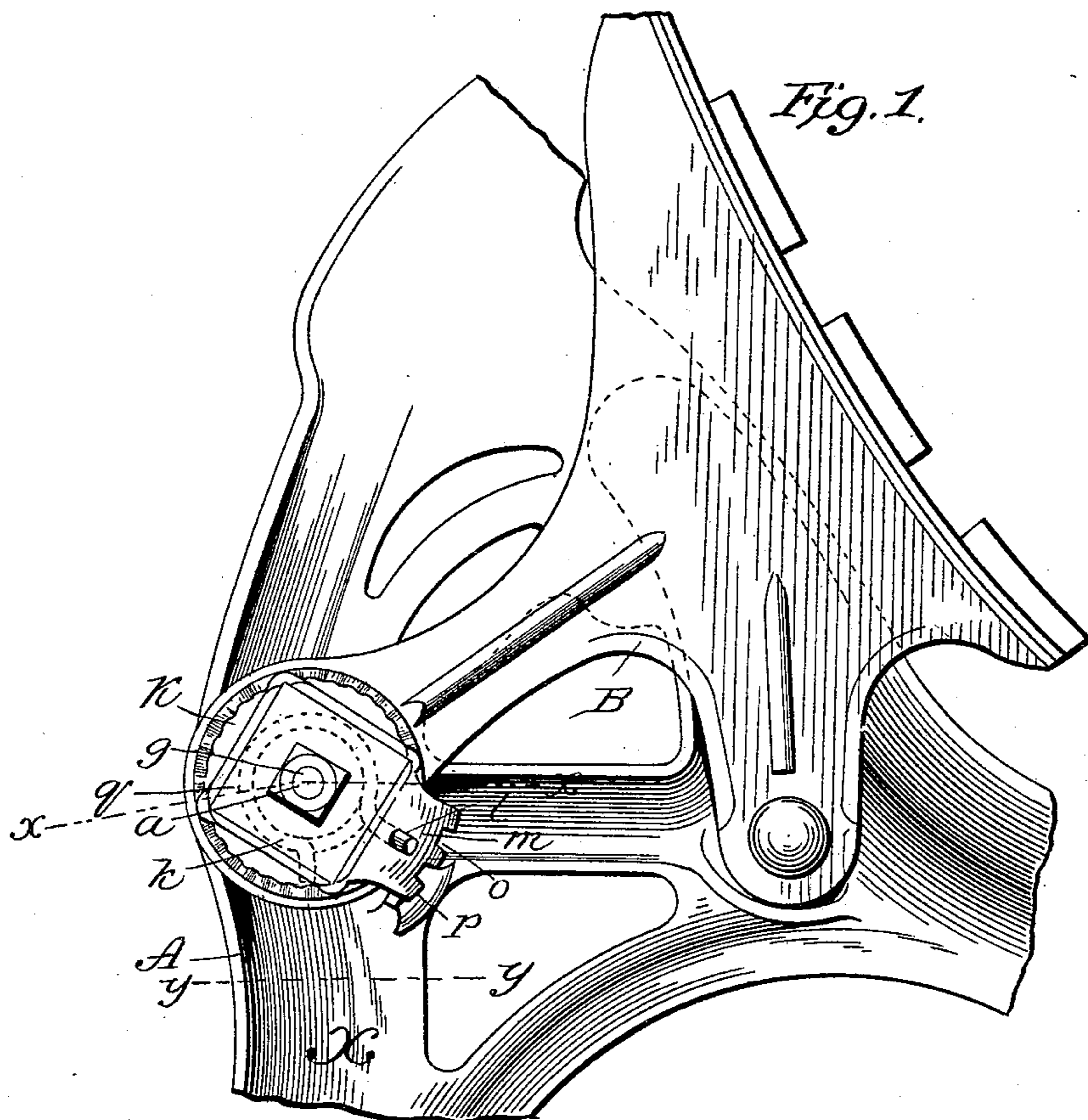


(No Model.)

S. W. PEREGRINE.
TILTING SEAT.

No. 480,961.

Patented Aug. 16, 1892.



Attest
Halterman
Halterman

Inventor
Seymour W. Peregrine

by E. W. Spar
Atty.

UNITED STATES PATENT OFFICE.

SEYMOUR W. PEREGRINE, OF GRAND RAPIDS, MICHIGAN.

TILTING SEAT.

SPECIFICATION forming part of Letters Patent No. 480,961, dated August 16, 1892.

Application filed April 25, 1891. Serial No. 390,459. (No model.)

To all whom it may concern:

Be it known that I, SEYMOUR W. PEREGRINE, a citizen of the United States of America, residing at Grand Rapids, in the county of Kent and State of Michigan, have invented certain new and useful Improvements in Tilting Seats, of which the following is a specification.

The invention referred to in the foregoing petition is an improvement upon that class of chairs in which a tilting seat is mounted upon standards and arranged to be thrown upward and backward, so as to be out of the way when not in use as a seat.

My invention is designed to raise the seat automatically, and I have sought to provide a construction which, in connection with a spring, is capable of automatically raising the seat and at the same time act as a buffer to prevent any shock and to cause easy and noiseless movement of the seat. I have provided, also, for the adjustment of the tension of the spring and the construction, which is simple and occupies but little space, is cheap to manufacture and not liable to get out of order.

The invention is illustrated in the accompanying drawings, in which—

Figure 1 is an elevation of the inner side of a part of the standard with the seat-bracket pivoted thereto, the seat being folded. Fig. 2 is a section on line *x x*, Fig. 1, looking from above, with the upper half turned over. Fig. 3 is a side elevation of the seat-bracket, the inclosing cap being turned over to show its under side, the relative inclination of the parts being maintained. Fig. 4 is a view of the cap, the seat-bracket, and a portion of the standard, the view being taken from point *x*, Fig. 1, looking upward, the standard being in section on line *y y*.

In the drawings, A represents a part of the standard of the chair, the seat-bracket being pivoted thereon at *a*. The seat-bracket is shown at B. The bracket is pivoted upon the stud *c*, which is provided with a lug *f*, fitted into a cavity in the inner face of the standard. At the center of this cavity is a hole for the threaded bolt *g*, and the stud *c* has an axial hole, through which this bolt passes. So far the construction is old.

The pivoted or supporting arm of the seat-

bracket (marked B) is provided with a hole, which fits the stud, and the face of the circular end of the arm about the hole is made smooth, as usual, to bear upon a lateral flange at the base of the stud. The other face of this supporting-arm is provided about the hole with a flange *h*, which flange is provided with a notch *i*, adapted to receive one end of a coiled spring K. This spring is fitted to lie within the flange *h* and about the hole in the arm B. A cap K is formed to fit over the spring and the flange *h* on the arm and inclose the whole. The cap is of a cup shape and is provided with a hollow stud placed centrally within it, through which the bolt passes, the stud when the cap is in place resting within the coil and abutting against the stud heretofore described. The cap is provided with a hole *l*, through which the upper end of the coiled spring is passed, the end of the coiled spring being turned out for the attachment described. When therefore the cap is in place, one end of the coiled spring is attached to the arm and the other end to the cap, so that it is necessary only to fix the cap in place in order to put the spring under tension when the seat is moved. The cap for this purpose is provided with a lug *m*, which extends outwardly and downwardly, so as to lie by the side of the circular end of the arm of the seat-bracket. The edge of this lug is curved on the arc of a circle concentric with the cap and is provided with a series of teeth *o*, which are arranged when the cap is in place to engage with a notch *p* on the inner face of the standard. This holds the cap to the standard, prevents it from turning, and thus when the seat-bracket is moved puts the spring under tension. The spring is arranged so as to hold the seat normally in a raised position. The flange *h* on the inner face of the arm of the bracket is provided with two high portions 1 and 2. The cap has within the rim two bearings 3 and 4, adapted, respectively, when the cap is in place to move in line with the high portions of the flange, and the parts are so adjusted that these bearings ride upon the high portions of the flange at or near the limit of the upward movement of the seat. The outer face or bottom of the cap is concave and is provided with a seat having an elastic washer *q*, which

forms a cover over the hollow or concavity of the cap. There is a central hole in the cap, and also a central hole in the spring-plate, through which the bolt passes. When the cap is in place and the bolt passed through, a nut *r* is turned on so as to bring the bearings up against the annular flange when they are off or away from the high portions, the nut being turned down when the parts are in this position, and if the seat is allowed to rise by the action of the spring it causes the bearings to ride upon the high part of the flange as the seat approaches its highest position. This gradually arrests the motion of the seat and stops it without shock. In order to adjust the tension of the spring to any desired point, it is necessary only to set the proper tooth on the flange *m* into the notch in the standard. The riding of the bearings upon the high portions of the flange puts the spring-plate under tension by reason of the spreading of the joints. The coiled spring is wholly inclosed and the joint and spring are compact and strong. The lateral movement of the cap is not sufficient to release the lug *m* from its engagement with the standard.

I claim as my invention—

1. In combination, a standard, a seat-bracket hinged thereto, a coiled spring surrounding the bolt of said hinge, and a cap inclosing the spring and connected to the standard independently of the pivotal bolt, one end of said spring being connected to the seat-bracket and the other end to the cap, substantially as described.

2. In combination, a standard, a seat-bracket hinged thereto, a coiled spring surrounding the bolt of said hinge, and a cap inclosing the spring and adjustably secured to the standard independently of the pivotal bolt, one end of the spring being connected to the seat-bracket and the other to the cap, substantially as described.

3. In combination, a standard, a seat-

bracket hinged thereto, a coiled spring surrounding the pivot, a cap inclosing said spring and having slight lateral movement, and a loose connection between the cap and standard permitting lateral movement of said cap without disengaging its connection with the standard, the spring being connected to the seat-bracket at one end and to the cap at the other, substantially as described.

4. In combination, a standard, a seat-bracket hinged thereto, a coiled spring surrounding the pivot, a cap inclosing said spring, one end of the spring being connected to the seat-bracket and the other to the cap, an extension on the cap having its end toothed, and a notch in the standard adapted to be engaged by said teeth, substantially as described.

5. In combination with the standard, a seat-bracket pivoted upon a stud supported from the standard, a pivotal bolt passing through said standard and stud, a cap inclosing the end of said pivot-bolt, a spring between said cap and the seat-bracket, and means for securing said cap to the bolt, said cap and spring being located between the seat-bracket and the end of the bolt and removable without displacing the connections between the seat-bracket and standard, substantially as described.

6. In combination with the standard and seat-bracket, a pivotal bolt, a cap having a hollow stud, through which the pivot-bolt is passed, a spring at the hinge, inclosed within the cap between its outer wall and its hollow stud, and means for securing the cap, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

SEYMOUR W. PEREGRINE.

Witnesses:

DENNIS L. ROGERS,
GEORGE W. SHOOK.