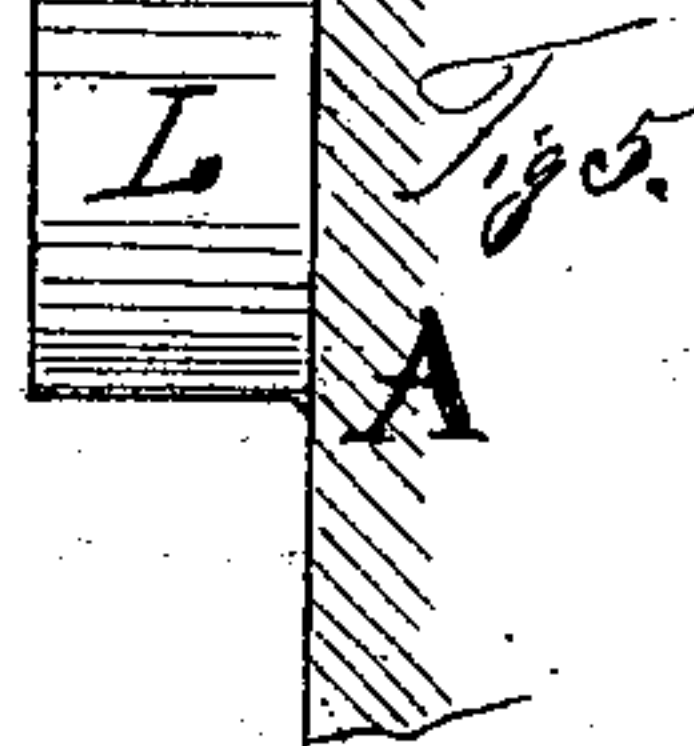
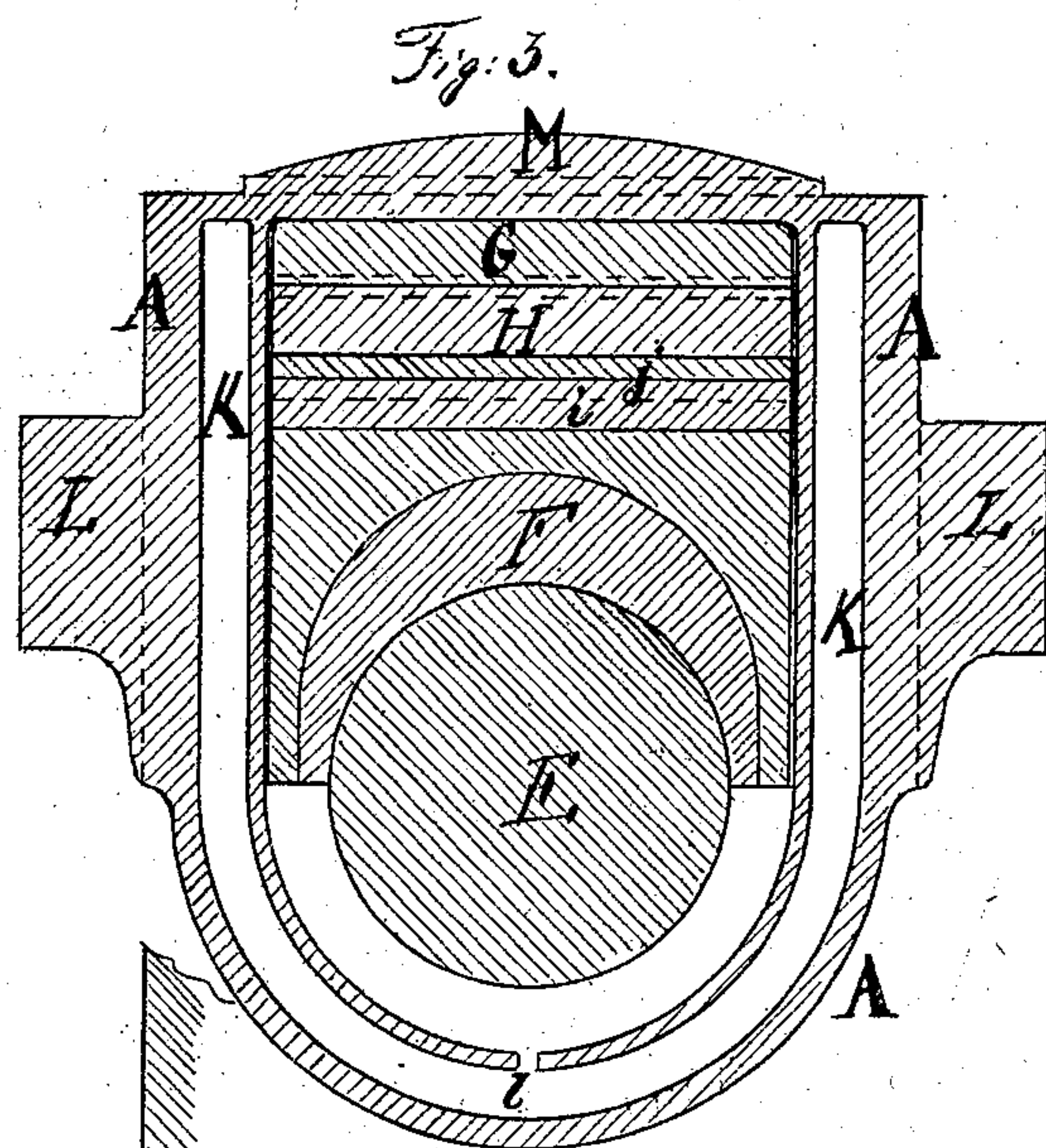
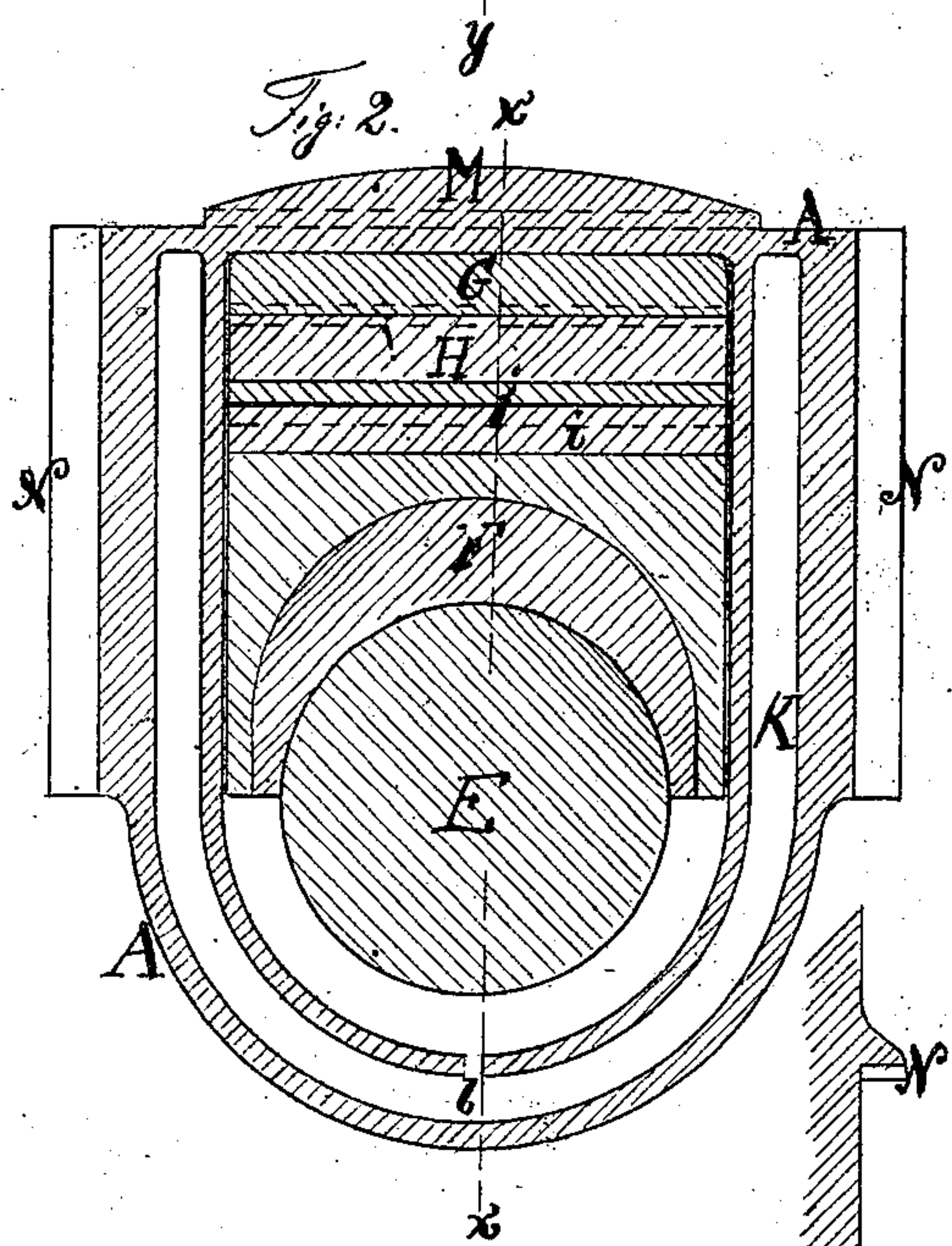
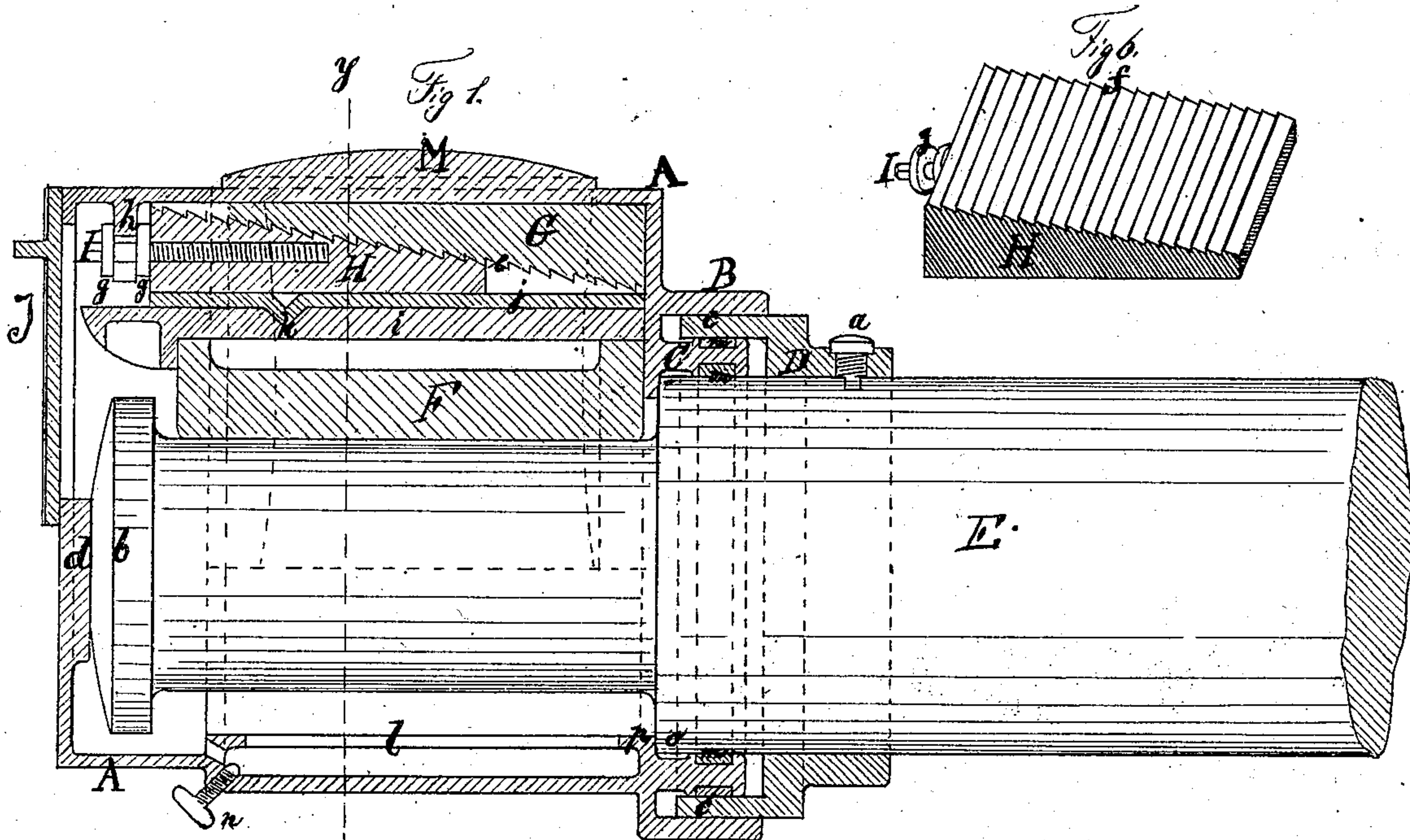


M. McCAMMON.
RAILWAY CAR AXLE BOX.

No. 95,705

Patented Oct. 12, 1869.



Witnesses:
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United States Patent Office.

MARK McCAMMON, OF CHICAGO, ILLINOIS.

Letters Patent No. 95,705, dated October 12, 1869.

IMPROVED RAILWAY-CAR-AXLE BOX.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, MARK McCAMMON, of Chicago, in the county of Cook, and State of Illinois, have invented a new and useful Improved Self-Oiling and Adjusting Car-Axle Box; and I do hereby declare the following to be a full, clear, and exact description thereof, which will enable others skilled in the art to which my invention appertains, to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a longitudinal section of my improved car-axle box, taken in the line *x x*, fig. 2, and applied to a car-axle.

Figure 2 is a transverse vertical section of the same, in the line *y y*, fig. 1.

Figure 3 is a similar section of a modification of the method of attaching the box to the hanger of a railroad-car.

Figures 4 and 5 are detached plan views of figs. 2 and 3, respectively.

Figure 6 is a perspective view of the notched or corrugated wedge by which the position of the journal-box is regulated with relation to the journal of the axle.

Similar letters of reference indicate corresponding parts in the several figures.

This invention relates to car-axle boxes, and has for its object to simplify their construction, and to render them self-oiling, and adjustable with relation to the car and axle.

It consists, first, in the combination of devices for compensating for the wear of the journal-box, so that the latter may be nearly consumed before the necessity arises for its renewal.

It consists, secondly, in adjusting the lateral movement of the axle to regulate the motion of the cars from side to side, as the irregularities of the track may demand, to produce an easy motion of the cars.

It consists, thirdly, in the combination, with the shell of the axle-box and the car-axle, of a flange and gasket, formed concentrically to each other upon the shell, and an adjustable collar placed upon the axle, whereby the oil is retained within the shell, and the dirt prevented from entering the same; the adjustability of the collar serving, also, to regulate the lateral movement of the cars.

It consists, fourthly, in the combination, with the shell, of a convex projection formed upon its upper surface, and guides, having convex proximate surfaces, formed upon two opposite sides of said shell, whereby the box is rendered capable of oscillatory motion within its hanger, for the purpose of accommodating itself to the varying position of the axle in passing over an uneven track, and thereby cause the box and journal of the axle to wear evenly.

It consists, lastly, in the combination, with the shell, of a passage or channel, in which the oily residuum

from the shell is received, and from which it is discharged below the journal of the axle, as will be hereinafter more fully described.

In the accompanying drawings—

A is the shell of a car-axle box, of the form shown, and composed of cast-iron or other suitable material.

Upon the inner side of the shell is a circular flange, B, and gasket C, the latter being arranged concentrically within the former, to leave an annular space between them, for the reception of the flange *c*, of the collar D. This collar is adjustably attached to the car-axle E, by means of the set-screw *a*, or other suitable device:

The end *b*, of the car-axle journal, enters the shell A, and rests in contact with the front side of the same, which is strengthened at *d*, as shown in fig. 1.

F is the journal-box, composed of suitable box-metal, arranged upon the journal, to sustain the weight of the cars in the usual manner.

G is a metal block, attached to or cast upon the under surface of the top plate of the shell, above the journal-box F. This block is inclined upon its under surface, as shown, and provided with transverse notches or corrugations, *e*.

H is a wedge-shaped metallic block, arranged between the box F and block G, and provided, upon its upper surface, with transverse notches *f*, arranged in a reverse position to those upon the block G.

The block H is made adjustable longitudinally, by means of the screw I and set-nuts *g*, said screw passing through a lug or projection, *h*, formed upon the under surface of the top plate of the shell, as clearly shown in fig. 1.

When the box F is first applied to the journal, the wedge H will rest upon its upper surface, and, as the box becomes worn, the wedge is forced inward, by means of the screw I, to compensate for such wear, the notches upon the blocks G and H fitting into one another, as previously mentioned, in such a manner as to prevent the wedge from working outward.

When the box F has become worn to such an extent as to render the wedge alone no longer available for its adjustment, a strip of metal, *i*, is inserted between the wedge and box, to which may be added, from time to time, as necessity demands, other and thinner metallic strips, *j*.

These latter strips are held upon the strip *i* by means of the transverse groove *k*, in the latter, and corresponding projections upon the under surface of the strip *j*.

By this arrangement, boxes can be used until nearly consumed, thereby resulting in a great saving of expensive material.

J is a sliding door, through which the lubricating-material is introduced into the box.

K is a passage or channel extending around the

sides and bottom of the shell, and communicating with the interior of the same, by means of the slot *l*, in the bottom.

The shell can be filled with oil to any desired height, or so that the journal shall be partially immersed. It is prevented from escaping at the inner end of the shell by means of the joint formed by the flange B and gasket C, embracing the flange of the collar D.

It is desirable, in order to render this joint perfectly tight, to provide the gasket with interior and exterior packing-strips, *m*, of India rubber, or other suitable material, resting, respectively, in contact with the axle E and flange of the collar D.

The exterior flange serves effectually to exclude all dust and dirt from the journal.

This construction of a journal-box insures the constant and perfect lubrication of the journal, and avoids the use of "waste" and equivalent materials, which are expensive and unreliable.

The oily residuum within the shell settles to the bottom, and is withdrawn from the channel by removing the plug *n*, or by other proper means.

It will be observed that the end *b*, of the journal, and the shoulder *o*, at its inner end, bear evenly upon the strengthened portion *d*, at the outer side of the shell, and the shoulder *p*, at its inner side, but by changing the position of the collar D upon the axle, the distance between *b* and *d*, and *o* and *p* will be increased or diminished to adjust the lateral throw of the axle, and thereby regulate the movement of the cars from side to side, to produce an easy motion.

L are trunnions, affixed to opposite sides of the shell, or cast thereon, by which said shell is suspended within the hanger attached to the platform of the car.

In order to shorten the ordinary hangers, and to partially relieve the trunnions of the weight of the cars, the upper surface of the shell is provided with a convex projection, M, upon which the platform of the car rests.

By means of the trunnions and the convex projection, the shell is adapted to oscillate in the hanger, to preserve the parallelism of the box F and journal of

the axle, and, as a consequence, prevents the unequal wear of each.

Instead of employing the trunnions for suspending the shell in the hanger, the parallel guides N N, shown in dotted lines, fig. 1, may be formed upon opposite sides of the shell, with their proximate edges made convex.

When applied to the hanger whose sides are parallel, it will be apparent that the shell is susceptible of oscillatory motion.

My improved box is applicable to ordinary shafting, as well as to car-axles. It is simple in construction, and much economy of material is derived from its use.

Having thus described my invention,

What I claim as new, and desire to secure by Letters Patent, is—

1. The combination of the inclined notched block G and the adjustable notched wedge H, either with or without the strips *i j*, with the shell A and journal-box F, substantially as herein shown and described, for the purpose specified.

2. Adjusting the lateral movement of the axle to regulate the motion of the cars from side to side, substantially as herein shown and described, for the purpose specified.

3. In combination with the shell A and axle E, the collar B, gasket C, and adjustable flanged collar D, substantially as herein shown and described, for the purpose specified.

4. In combination with the shell A, the convex projection M and convex guides N, substantially as herein shown and described, for the purpose specified.

5. In combination with the shell A, the passage or channel K, in which the oily residuum from the shell is received, and from which it is discharged, substantially as herein shown and described.

The above specification of my invention signed by me, this 6th day of August, 1869.

MARK McCAMMON.

Witnesses:

A. BERNSTEIN,
JOHN A. SILENCE.