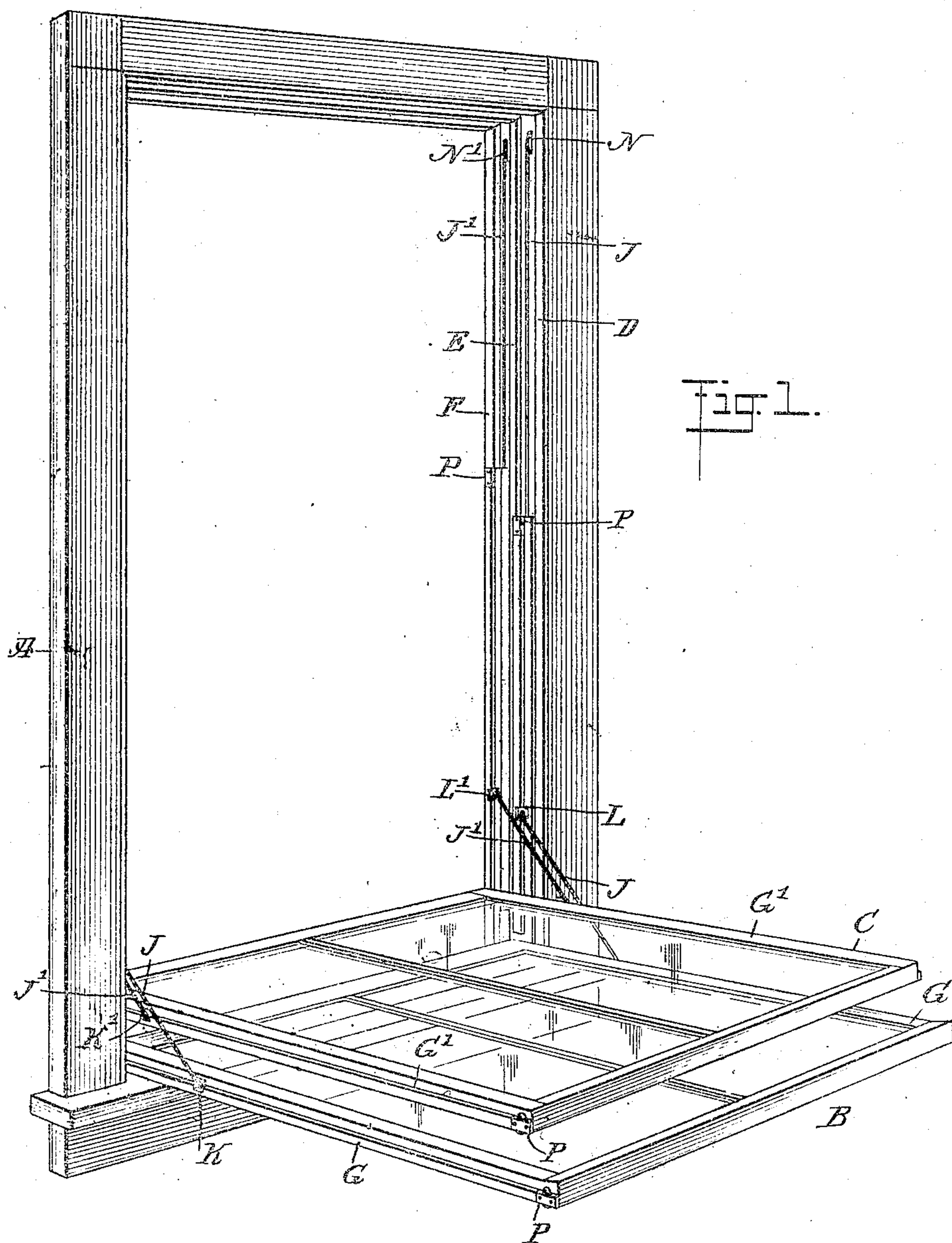


WINDOW.

Patented May 4, 1909.

3 SHEETS—SHEET 1.

920,641.



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INVENTOR
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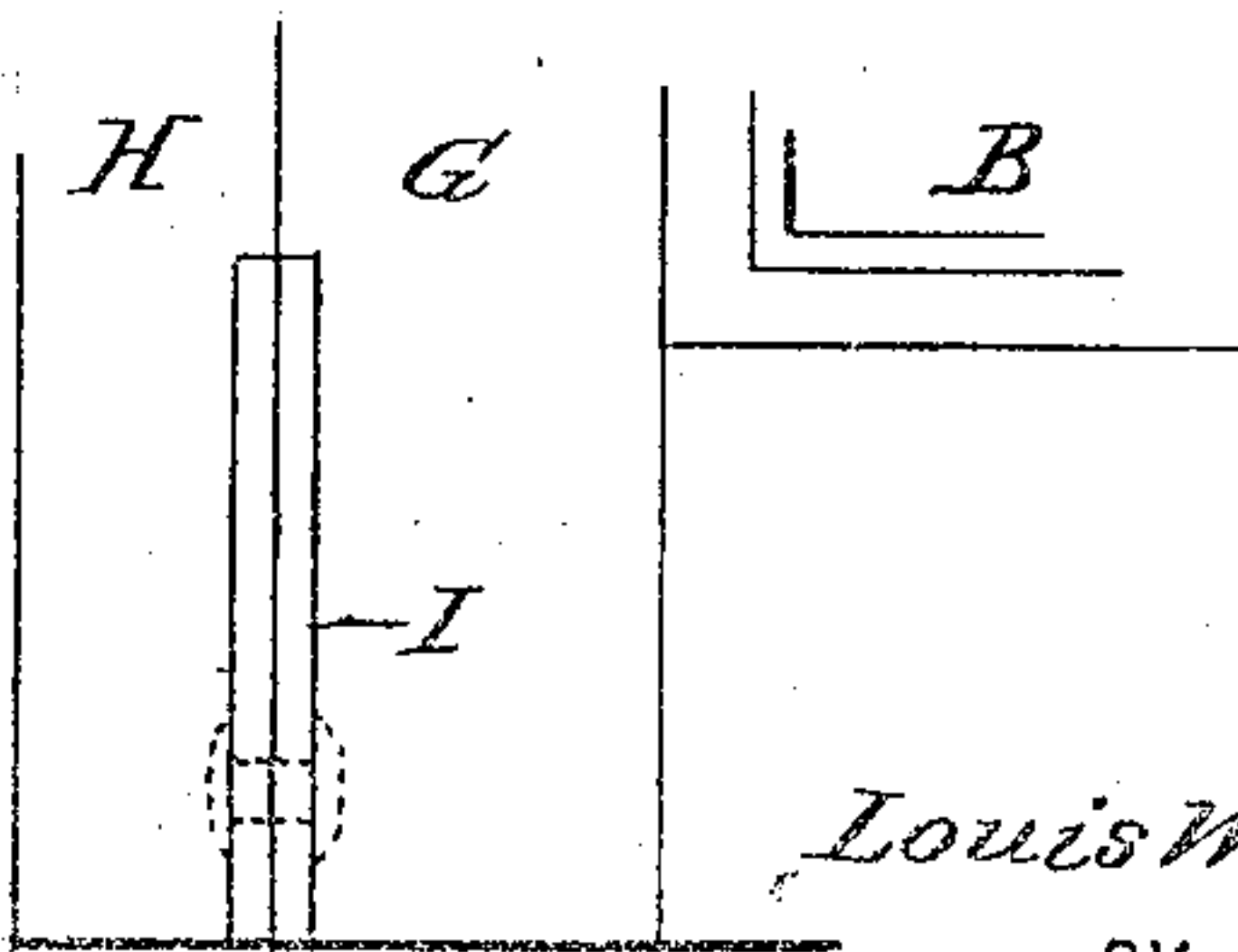
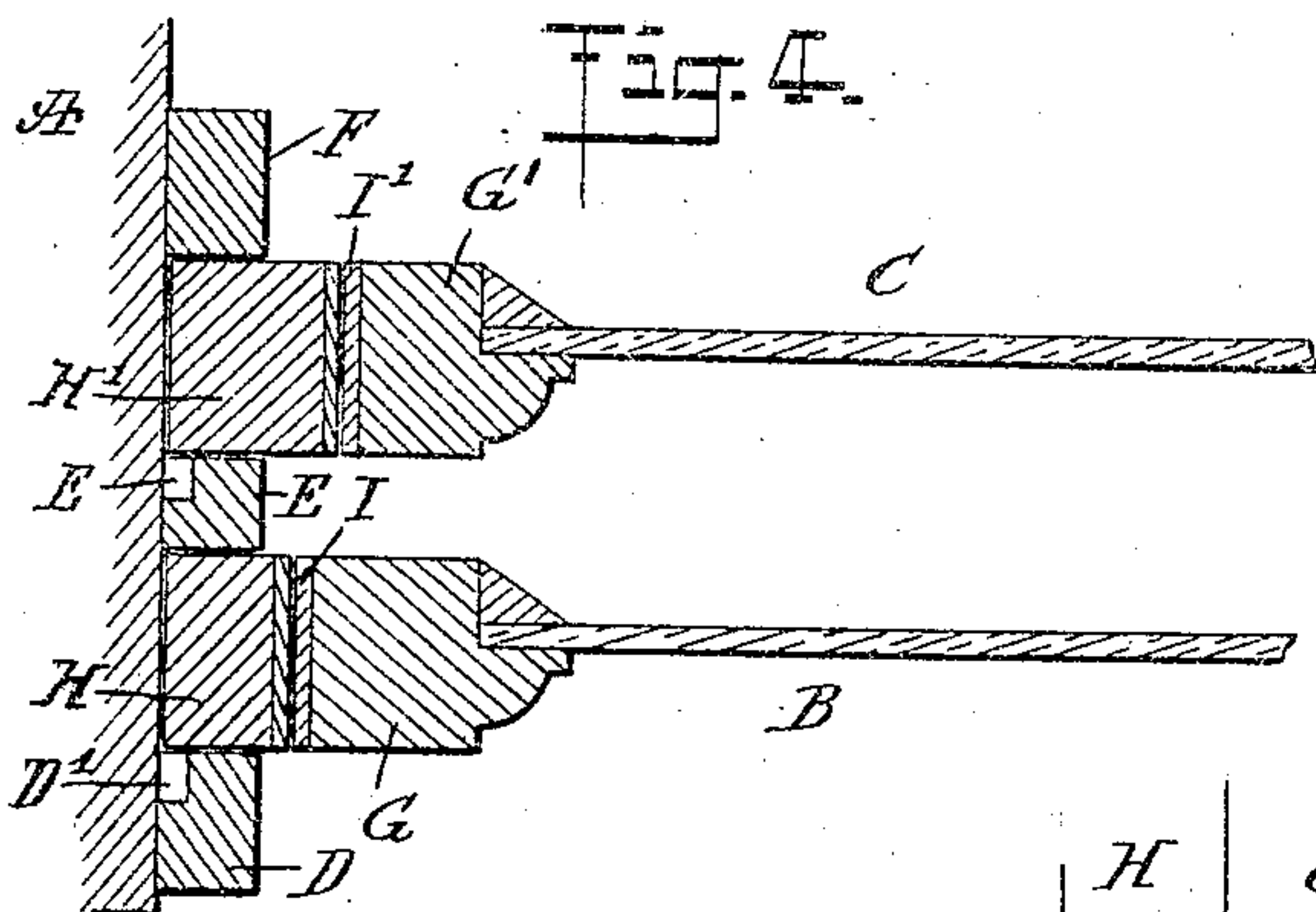
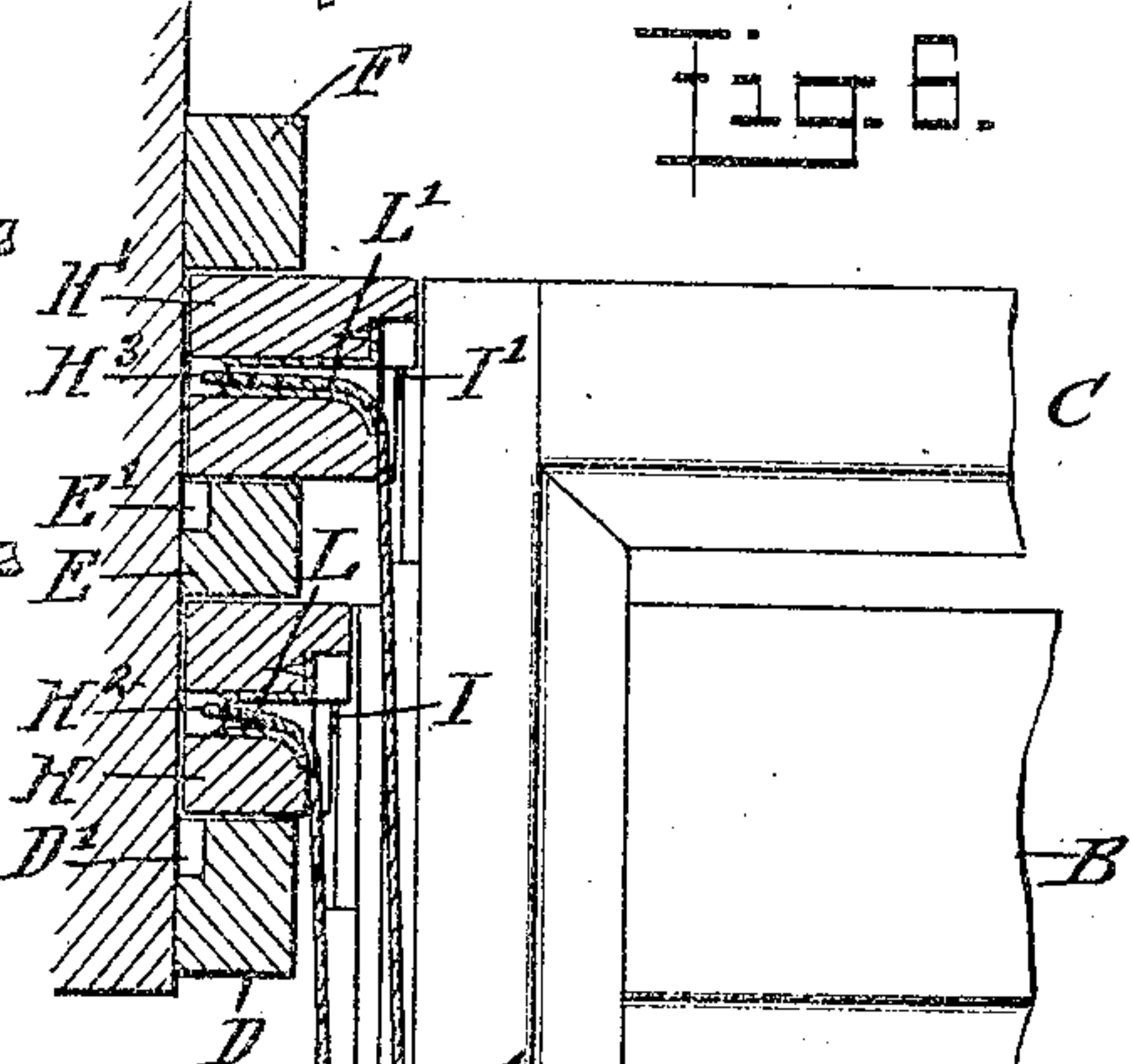
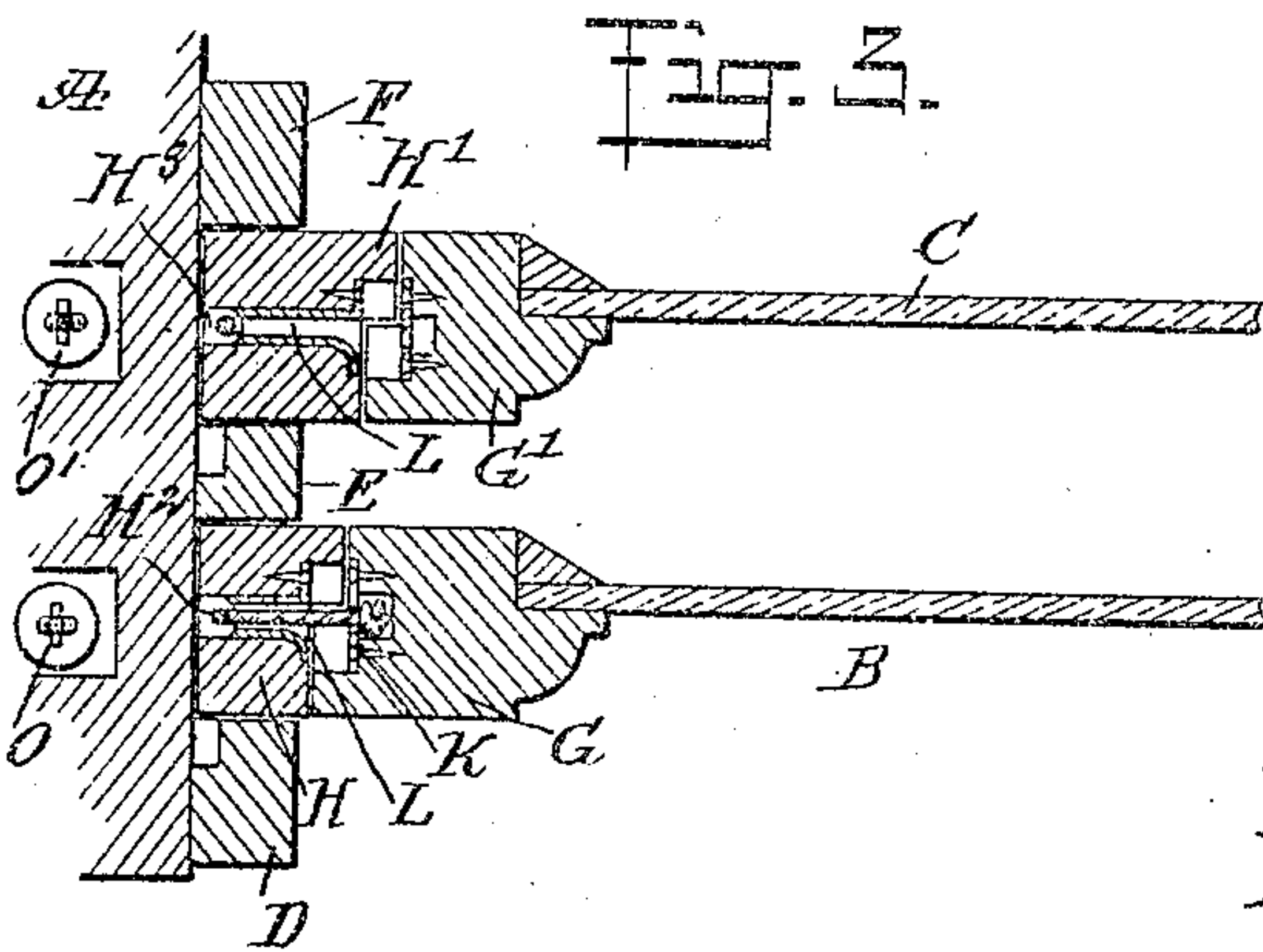
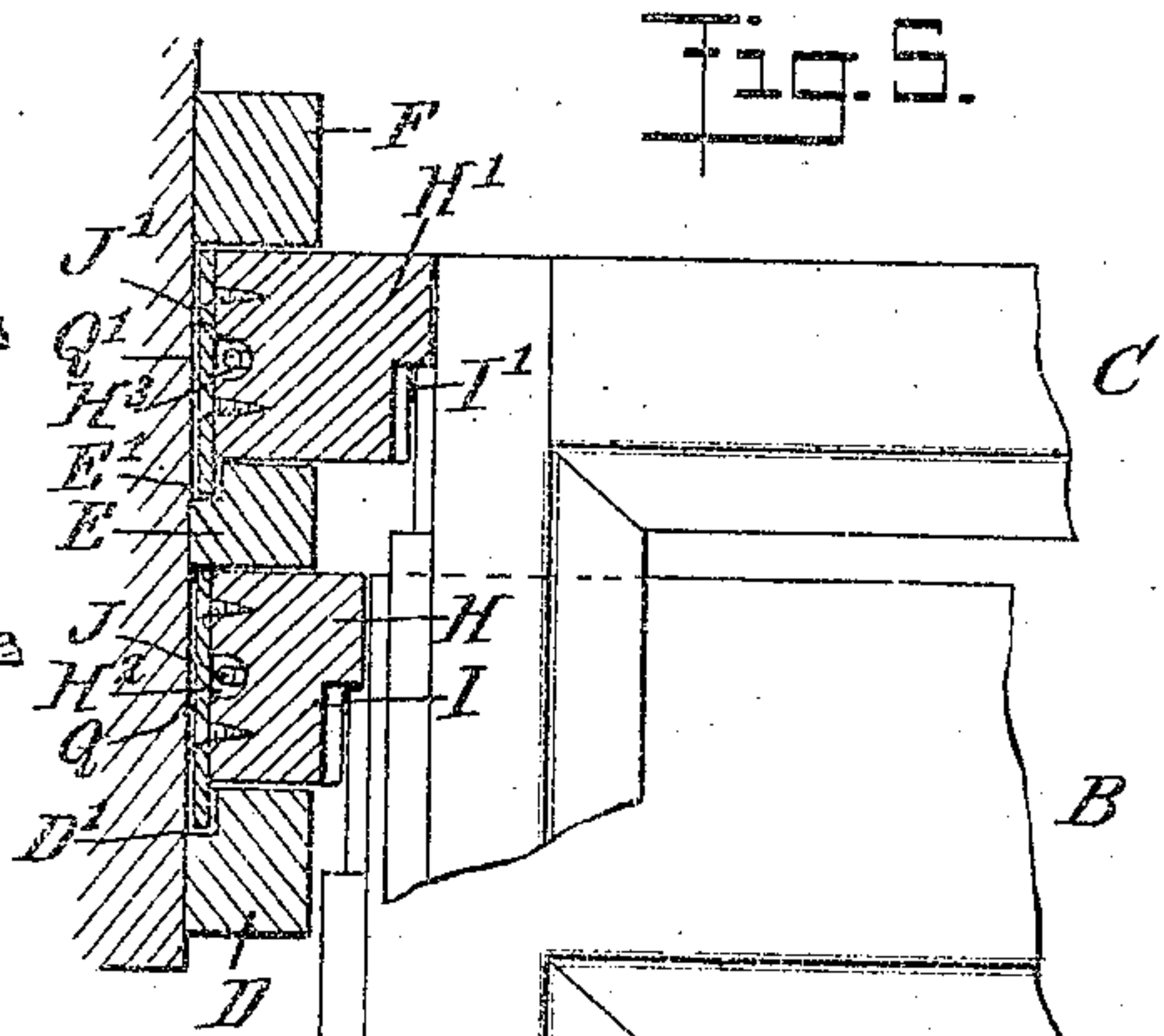
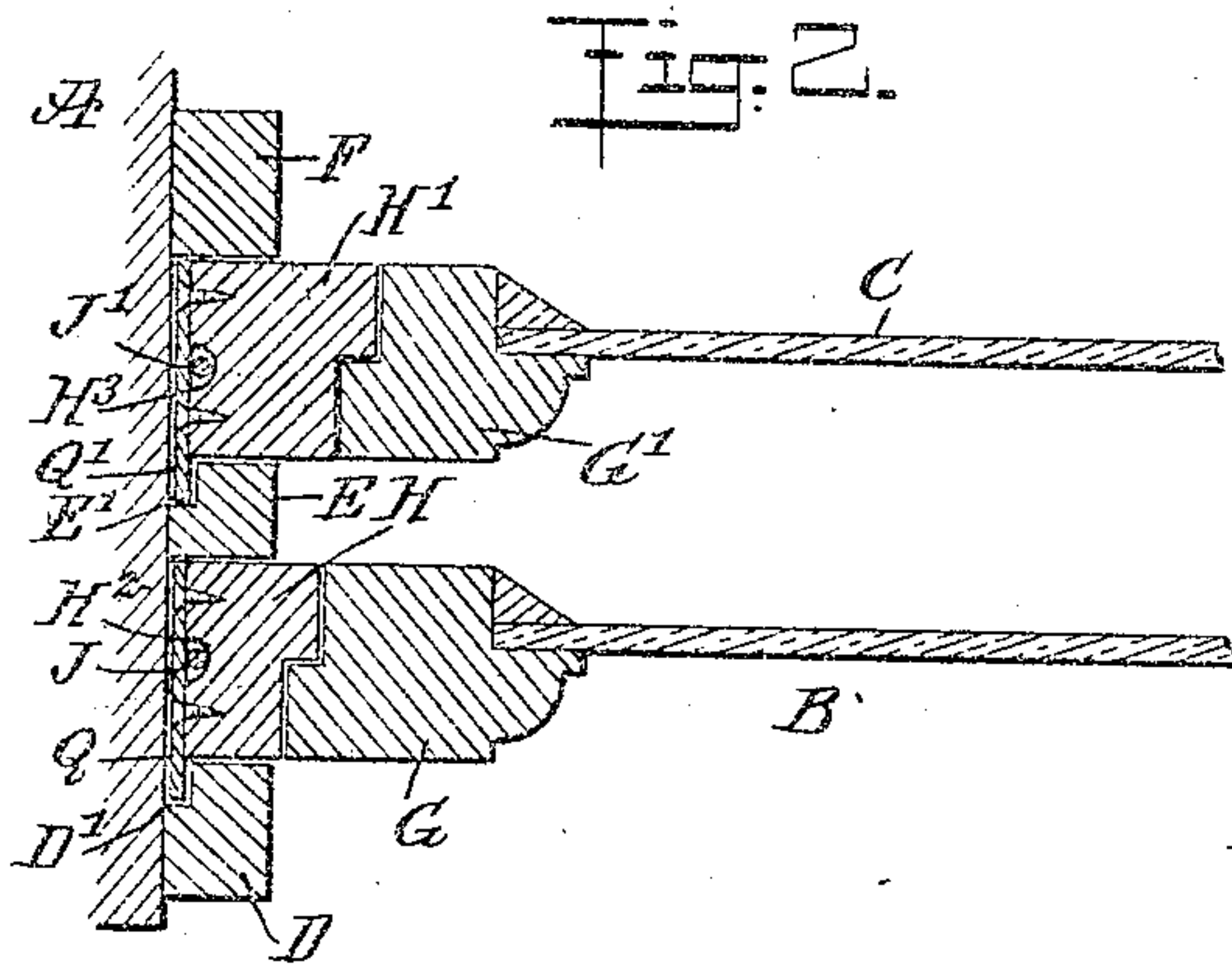
WINDOW.

APPLICATION FILED JULY 2, 1908.

920,641.

Patented May 4, 1909.

3 SHEETS—SHEET 2.



WITNESSES

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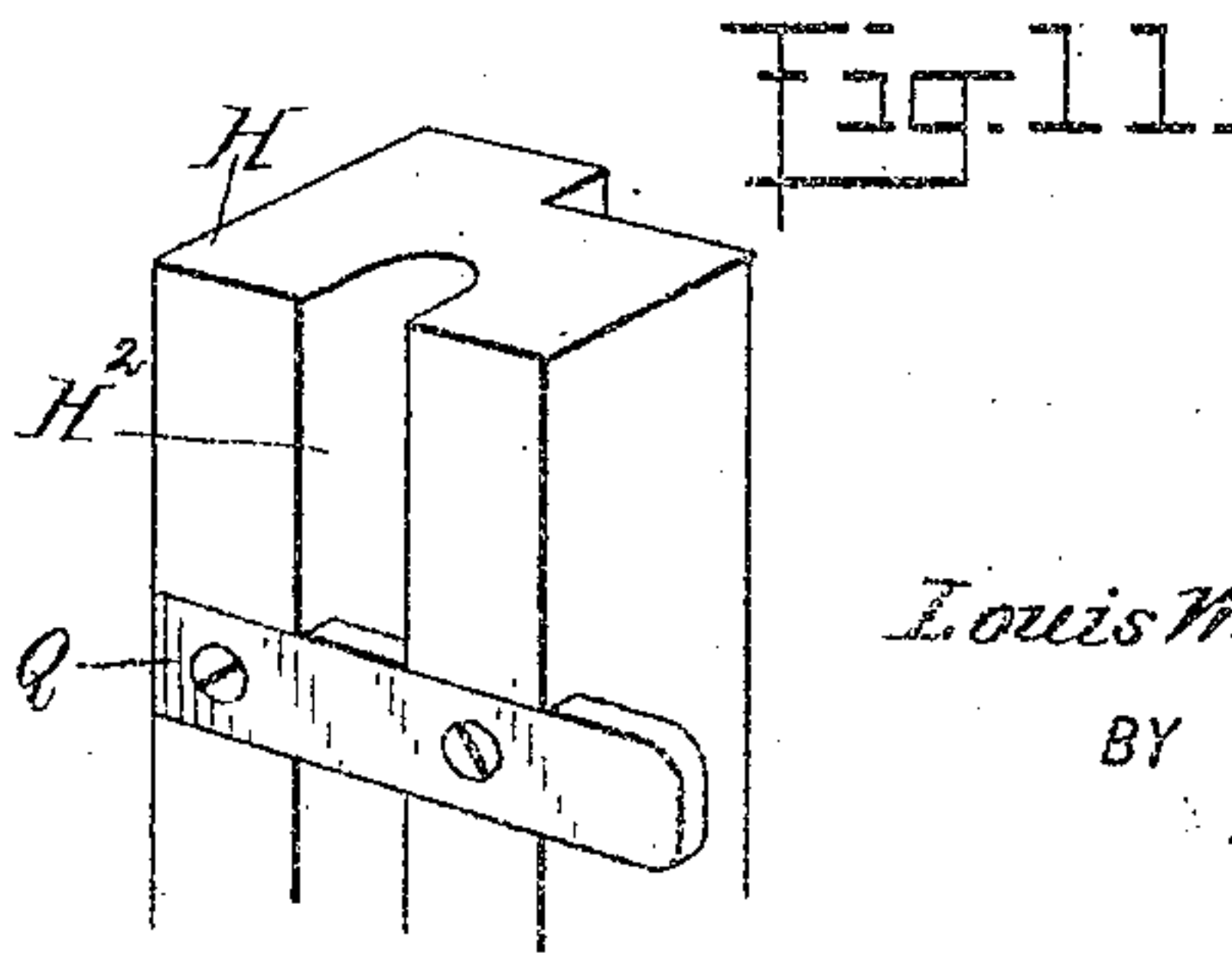
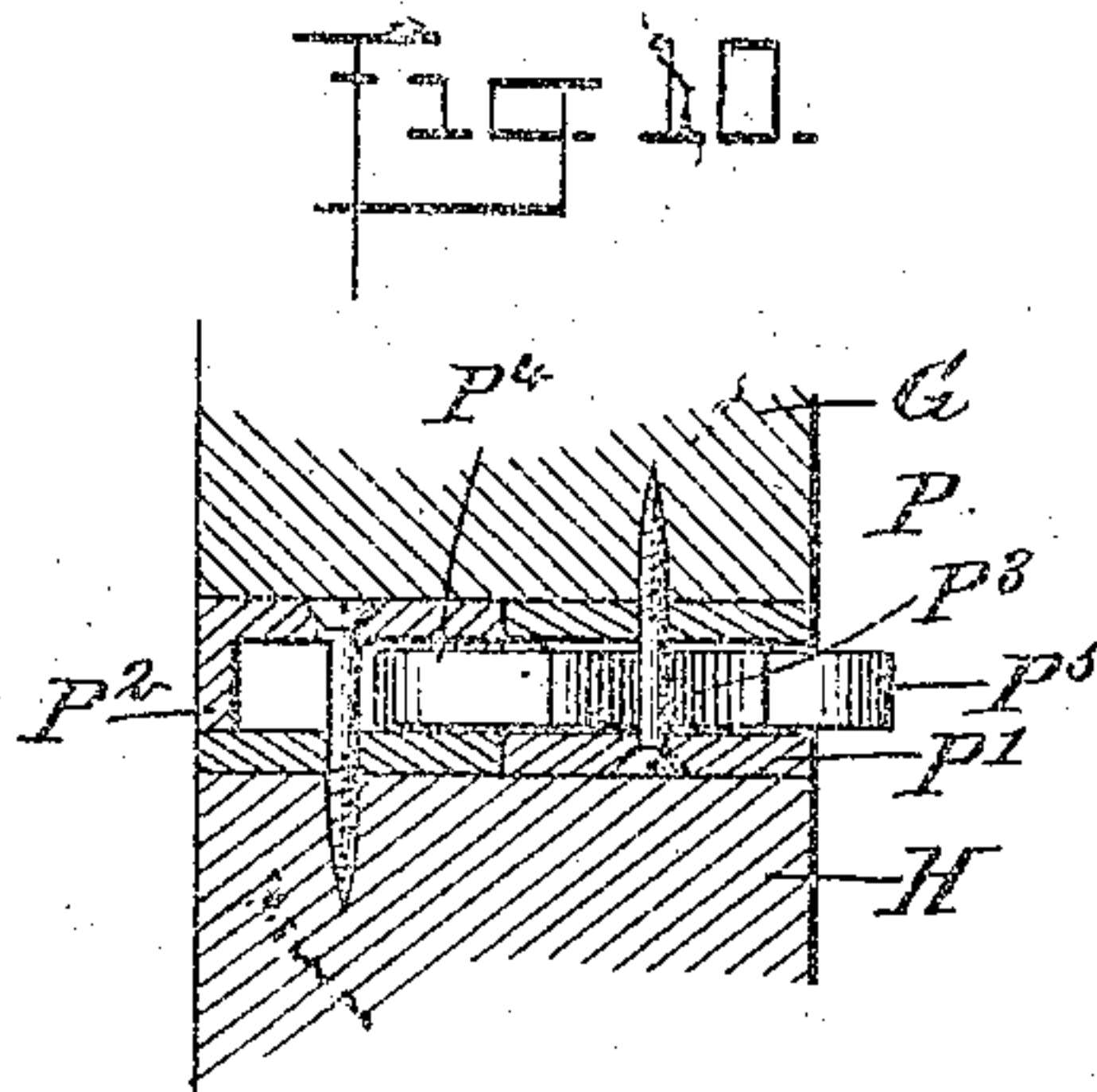
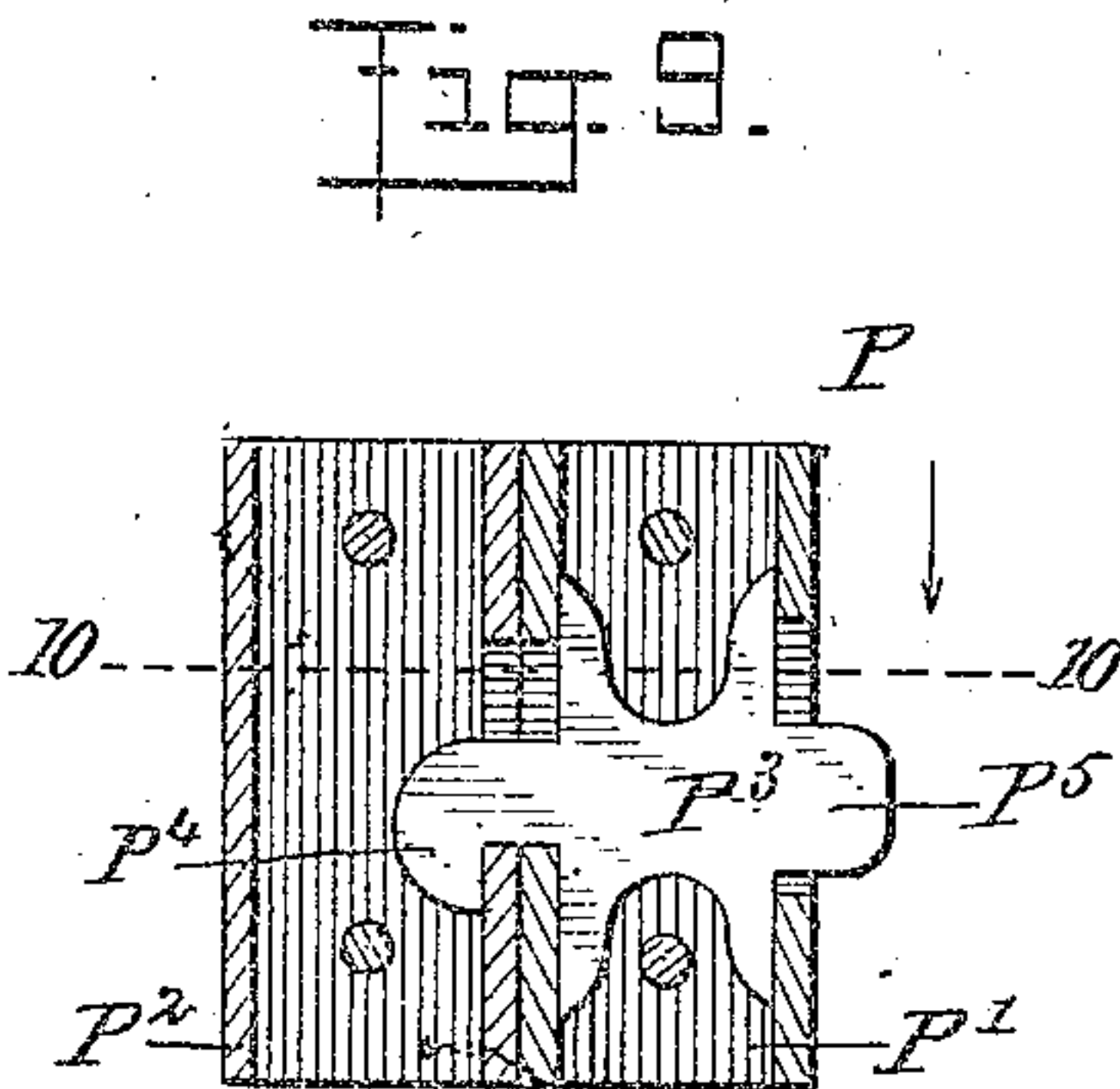
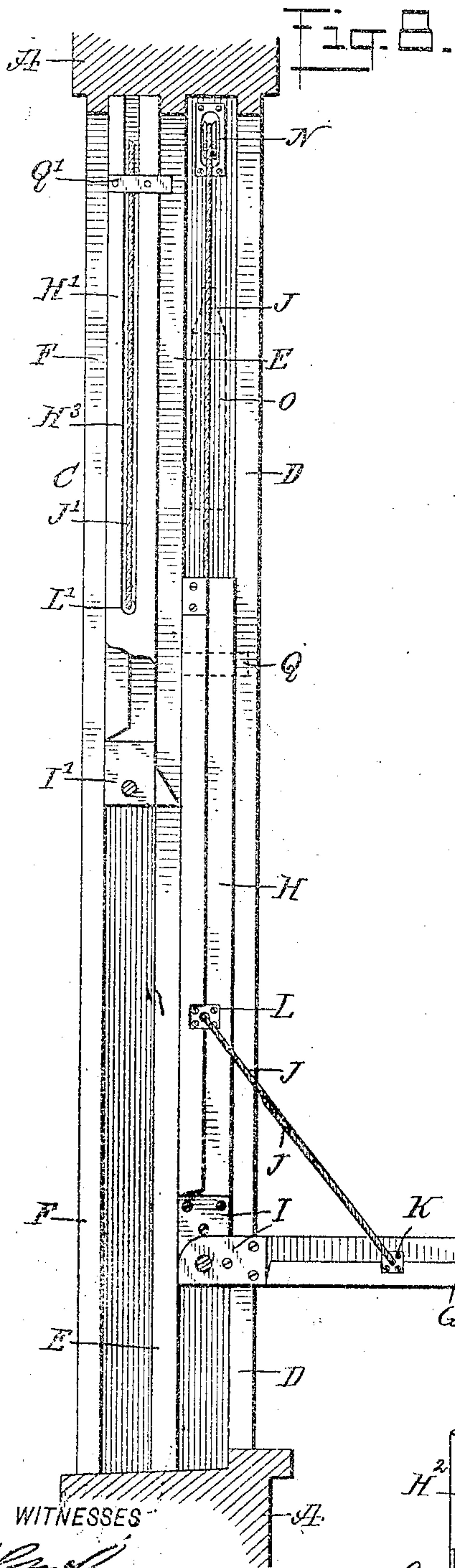
WINDOW.

APPLICATION FILED JULY 2, 1908.

920,641.

Patented May 4, 1909.

3 SHEETS—SHEET 3.



WITNESSES
[Signature]
[Signature]

INVENTOR
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ATTORNEYS

UNITED STATES PATENT OFFICE.

LOUIS WILLIAM PENZER, OF RICHMOND, VIRGINIA, ASSIGNOR OF ONE-HALF TO JANSSENS
AUGUSTUS KAIN, OF RICHMOND, VIRGINIA.

WINDOW.

No. 920,641.

Specification of Letters Patent.

Patented May 4, 1909.

Application filed July 2, 1903. Serial No. 441,563.

To all whom it may concern:

Be it known that I, LOUIS WILLIAM PENZER, a citizen of the United States, and a resident of Richmond, in the county of Henrico and State of Virginia, have invented a new and Improved Window, of which the following is a full, clear, and exact description.

The object of the invention is to provide a new and improved window, having hinged sashes arranged to permit an operator to conveniently open and close the same, or to swing the sashes inward into the room into an approximately horizontal position for cleaning or repairing purposes.

The invention consists of novel features and parts and combinations of the same, which will be more fully described hereinafter and then pointed out in the claims.

A practical embodiment of the invention is represented in the accompanying drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a perspective view of the improvement and showing both sashes swung inward into an approximately horizontal position; Figs. 2, 3 and 4 are sectional plan views of the left-hand side of the window at different levels and showing both upper and lower sashes in the usual vertical position; Figs. 5 and 6 are similar views of the same showing both upper and lower sashes in a horizontal position; Fig. 7 is a front elevation of one of the hinges for connecting the fixed sash stile with the sliding sash stile; Fig. 8 is a cross section of the improvement showing the lower sash swung inward into a horizontal position, and showing the upper sash in a vertical position; Fig. 9 is an enlarged cross section of the locking device for locking the fixed and sliding stiles together; Fig. 10 is a sectional plan view of the same on the line 10—10 of Fig. 9; and Fig. 11 is a perspective view of the upper end of one of the sliding stiles and showing more particularly the guide arm for the same.

The window frame A for the lower and upper sashes B and C, is provided at its sides with the usual stop D, a parting strip E and a shutter stop F, as plainly indicated in the drawings, the said parts D, E and F forming the usual guideways for the sashes B and C to slide in, in an up and down direction.

The sashes B and C are provided at each side with the fixed stiles G, G' forming an in-

tegral part of the sash, and sliding stiles H, H' complementary to the fixed stiles G, G', and hinged or pivoted together at their lower ends by suitable hinges I and I', so as to permit of swinging the sashes B and C on the lower ends of their corresponding sliding stiles H and H'. The sashes B and C are hung on sash cords J, J', of which the sash cords J are secured by suitable fastening devices K to the fixed stiles G a distance above the hinges or pivots I, and then the sash cords J pass through gromets L attached to the sliding stiles H, the sash cords then passing into vertically-extending grooves H² formed in the side edges of the sliding stiles H, and then the sash cords J pass over the usual pulleys N journaled in the sides of the window frame A. The ends of the sash cords J carry the usual weights O for counterbalancing the sash B. The sash cords J' for the upper sash C are similarly arranged, that is, are attached by fastening means K' to the fixed stiles G', and then the sash cords pass through gromets L', up grooves H³, and over pulleys N', and carry sash weights O' for counterbalancing the upper sash C.

The upper ends of the corresponding stiles G, H and G', H' are adapted to be fastened together by a locking device P, shown in detail in Figs. 9 and 10, and consisting of a casing P' secured to the fixed stile G or G', a keeper P² fastened to the sliding stile H, and a latch P³ mounted to slide in the casing P', and having a hook P⁴ for engaging the keeper P², as plainly indicated in Figs. 9 and 10. The outer end of the latch P³ is provided with a finger-piece P⁵ adapted to be taken hold of by the operator, for pushing the latch P³ upward, to disengage the hook P⁴ from the keeper P², whenever it is desired to unlock the corresponding sash B or C from its sliding stiles H or H', previous to swinging the sash into a horizontal position. When swinging the sash B or C from a horizontal into a vertical position, the latch P³ automatically engages with its hook P⁴ the keeper P², to lock the stiles G, H or G', H' together. When it is desired to clean the lower sash B or to repair the same without removing it completely from the window frame, then this sash B is preferably pulled down into a lowermost position, and then the latches P³ of the locking devices P are moved upward to disengage the hooks P⁴ from the keepers P², and to permit of swinging the sash B downward and in-

ward into an approximately horizontal position, as indicated in Figs. 1 and 8. Now in swinging the sash B downward and inward, the sash cords J are drawn downward, while the sliding stiles H remain stationary, so that the sash B as well as its stiles H still remain in a counterbalanced condition, and at the same time convenient access is had to both faces of the sash B for cleaning or repairing the same. When it is desired to swing the upper sash C into a horizontal position, then this sash is pulled downward after the sash B has been moved into horizontal position, as described, and then the upper sash C is unlocked and likewise swung into a horizontal position, the same as the lower sash B and as indicated in Fig. 1.

By reference to Figs. 2, 3, 4, 5 and 6, it will be seen that the stiles H are somewhat narrower than the stiles H', to permit the upper sash C to conveniently swing downward and inward, and past the stiles H, as indicated in Figs. 5 and 6. The stiles G, H and G', H' are also preferably rabbeted, to prevent outward swinging of the sashes B and C on their stiles H and H', and at the same time render the sash air and moisture-proof at the joint between the corresponding stiles G, H and G', H'.

In order to hold the sliding stiles H and H' in position in their guideways, and to allow ready up and down movement of the same, each of the stiles H and H' is provided near its upper end with guide plates Q, Q', of which the guide plate Q extends into a recess D' formed in the stop D, and the guide plate Q' extends into a recess E' formed in the parting strip E, as indicated in Figs. 2, 3, 4, 5 and 6.

The window shown and described is very simple and durable in construction, can be cheaply manufactured, and at the same time the sashes B and C can be conveniently and readily swung into the room for cleaning or repairing purposes, without removing the sashes from the window frame. When the sashes are in their usual vertical position, they can be readily moved up and down, for ventilating and other purposes, the same as the ordinary sashes now in use. It will also be noticed that in swinging the sashes B and C inward into the room or back into a vertical position, they do not interfere in the least with outside fly screens or iron guards in windows provided with such screens or guards.

Having thus described my invention, I claim as new and desire to secure by Letters Patent:

1. A window, comprising a window frame, upper and lower sashes mounted to slide in the said window frame and each having at each side a fixed stile and a sliding stile, the stiles at each side being hinged together at the lower ends, and weights and sash cords

connected with the said fixed stiles at points a distance from the hinges and extending through openings in the sliding stiles at corresponding points.

2. A window provided with a sash having each side provided with a fixed stile and a vertically sliding stile, hinges for connecting the said fixed stile and sliding stile with each other at their lower ends to allow of swinging the sash inward into a horizontal position, and sash cords connected with the said stiles to counterbalance the sash and to allow of swinging the sash into a horizontal position.

3. A window provided with a sash having each side provided with a fixed stile and a vertically sliding stile, hinges for connecting the said fixed stile and sliding stile with each other at their lower ends to allow of swinging the sash inward into a horizontal position, and sash cords passing through openings in the sliding stiles and rigidly connected with the fixed stiles.

4. A window provided with a sash having each side provided with a fixed stile and a sliding stile, the stiles on each side being hinged together at their lower ends, and counterbalancing devices for the said sash and having flexible connections with the said stiles, to allow of moving the same up and down together and to allow of swinging the sash into a horizontal position on the said sliding stiles.

5. A window provided with a sash having each side provided with a fixed stile and a vertically sliding stile, hinges for connecting the said fixed stile and sliding stile with each other at their lower ends to allow of swinging the sash inward into a horizontal position, sash cords passing through openings in the sliding stiles and rigidly connected with the fixed stiles, and locking devices for locking the fixed and sliding stiles together.

6. A window provided with a sash having each side provided with a fixed stile and a vertically sliding stile, hinges for connecting the said fixed stile and sliding stile with each other at their lower ends to allow of swinging the sash inward into a horizontal position, sash cords passing through openings in the sliding stiles and rigidly connected with the fixed stiles, latches held on the said fixed stiles, and keepers on the said sliding stiles and adapted to be engaged by the said latches.

7. A window provided with a sash having each side provided with a fixed stile and a vertically sliding stile, hinges for connecting the said fixed stile and sliding stile with each other at their lower ends to allow of swinging the sash inward into a horizontal position, gromets in the said sliding stiles a distance from the hinges, and sash cords extending through the said gromets and attached to the said fixed stiles.

8. A window provided with a sash having

each side provided with a fixed stile and a
vertically sliding stile, hinges for connecting
the said fixed stile and sliding stile with each
other at their lower ends to allow of swinging
5 the sash inward into a horizontal position,
gromets in the said sliding stiles a distance
from the hinges, and sash cords extending
through the said gromets and attached to
the said fixed stiles at points directly oppo-
10 site the said gromets at the time the fixed

sash stile and the sliding stile are in aline-
ment.

In testimony whereof I have signed my
name to this specification in the presence of
two subscribing witnesses.

LOUIS WILLIAM PENZER.

Witnesses:

JANSSENS A. KAIN,

JOHN J. BLAKE.