

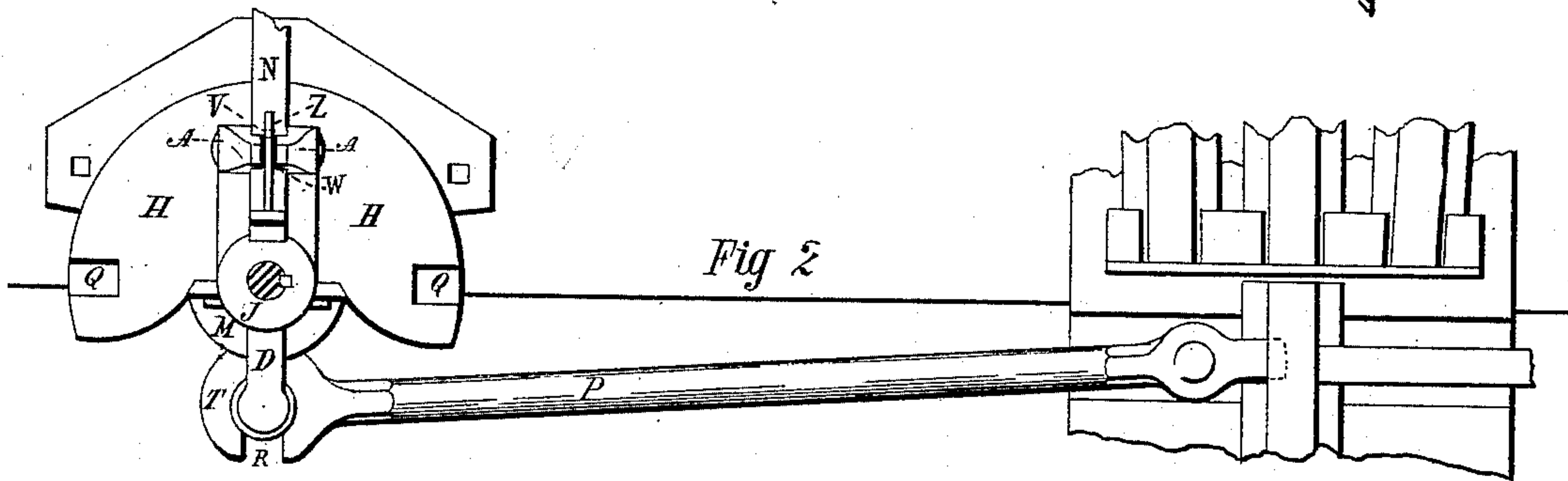
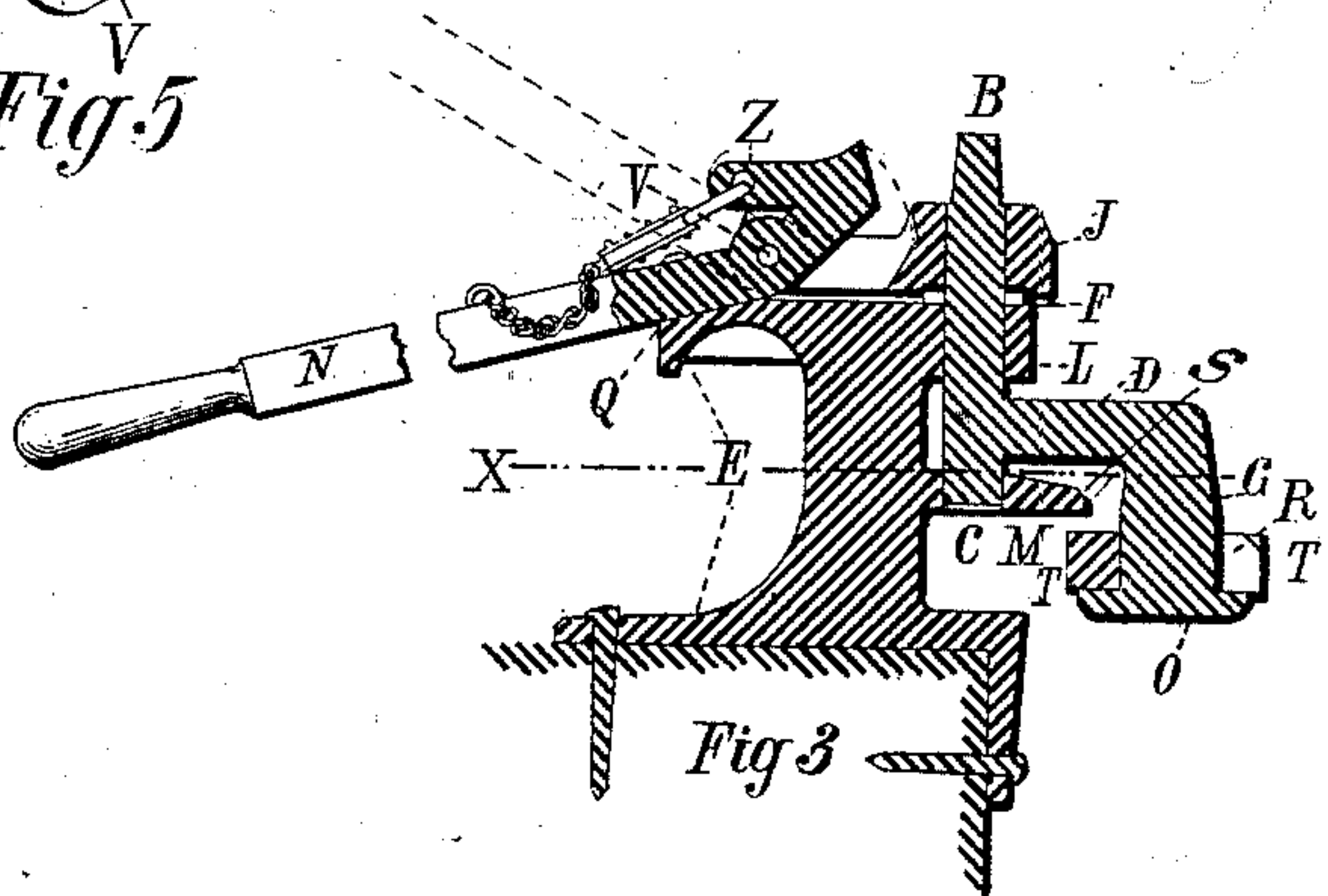
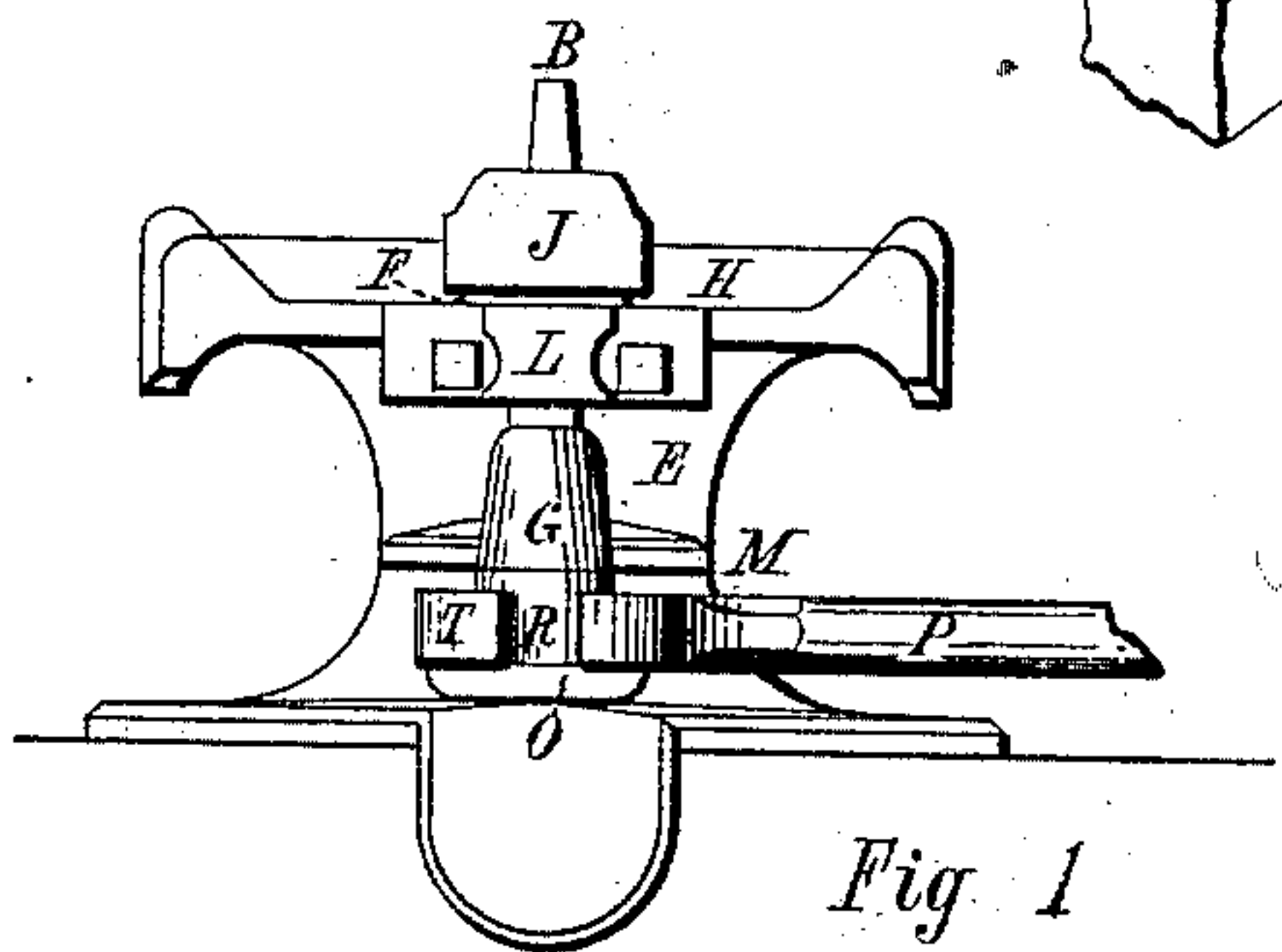
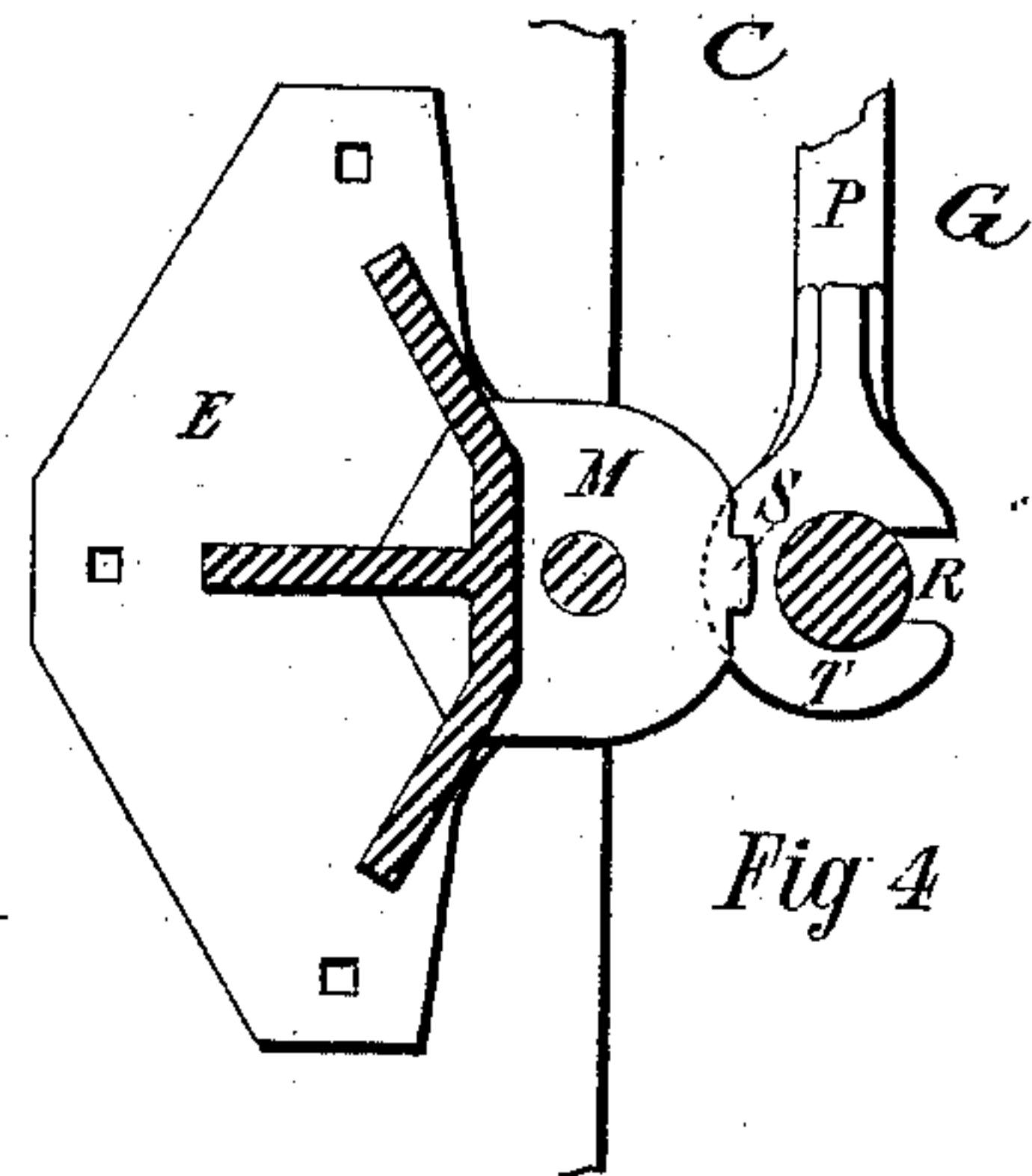
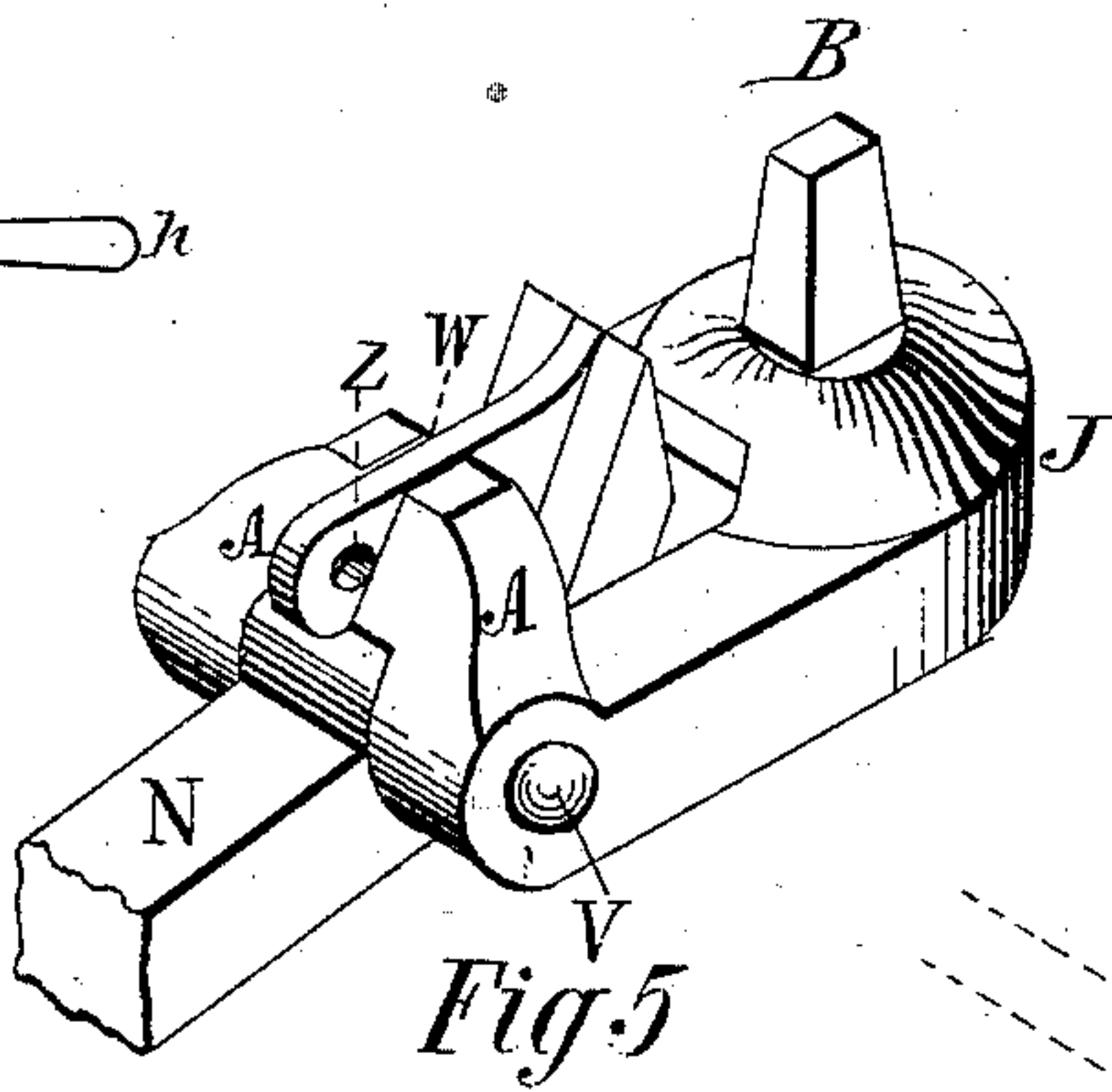
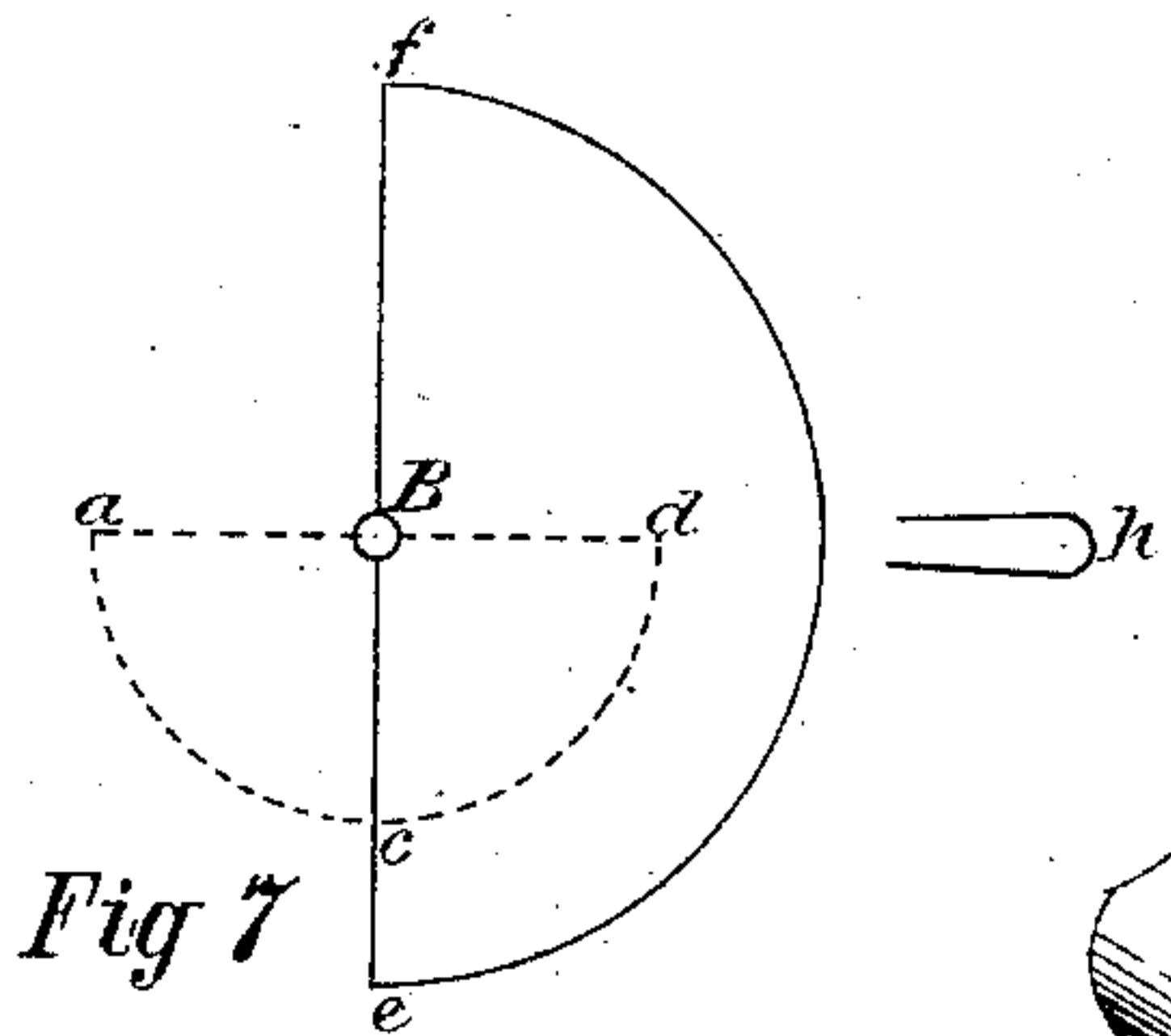
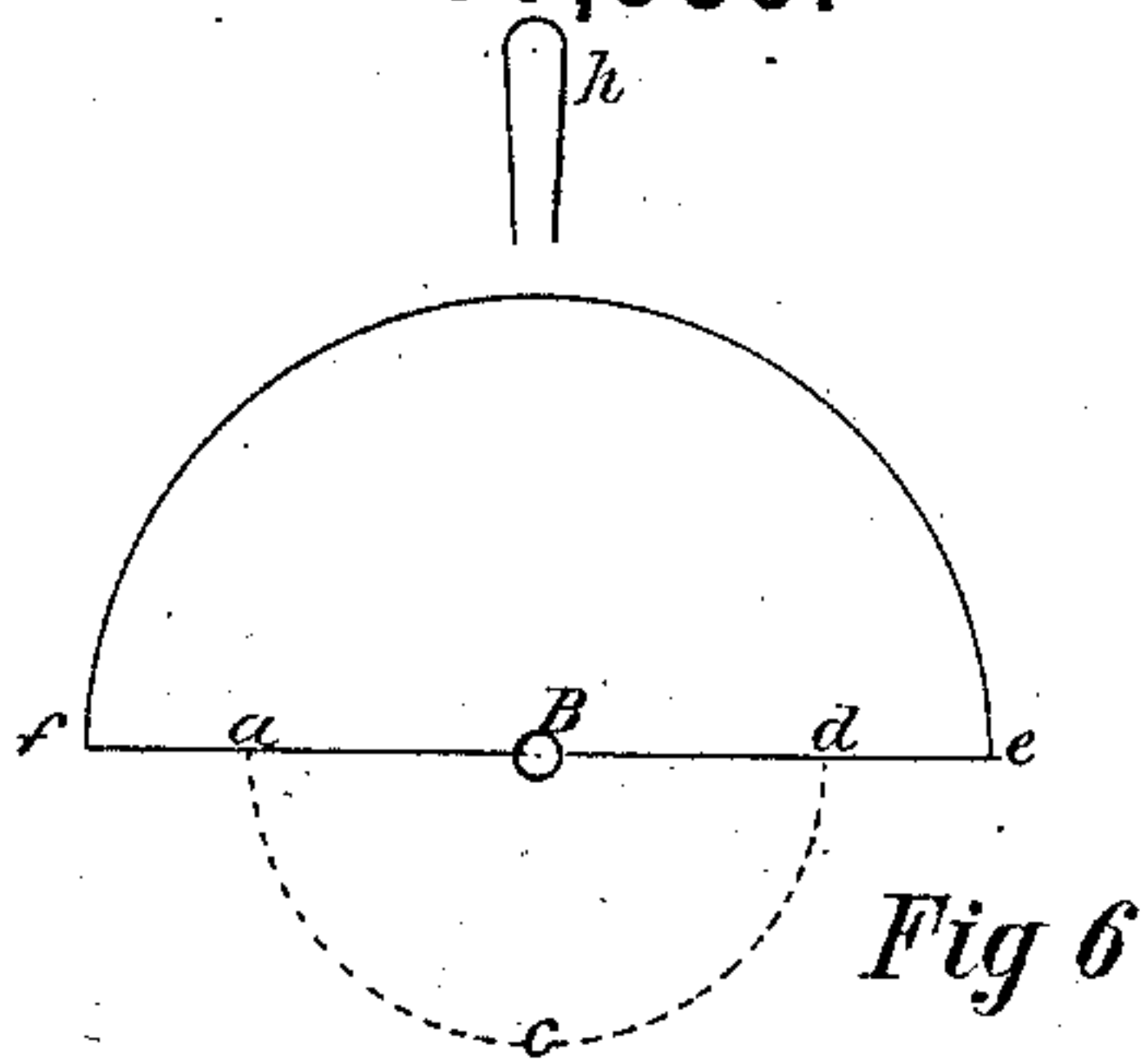
(No Model.)

E. J. BEARD & H. V. HINCKLEY.

SWITCH STAND FOR RAILWAYS.

No. 277,539.

Patented May 15, 1883.



Witnessess

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# UNITED STATES PATENT OFFICE.

EDWARD J. BEARD AND HOWARD V. HINCKLEY, OF TOPEKA, KANSAS.

## SWITCH-STAND FOR RAILWAYS.

SPECIFICATION forming part of Letters Patent No. 277,539, dated May 15, 1883.

Application filed January 31, 1883. (No model.)

*To all whom it may concern:*

Be it known that we, EDWARD J. BEARD and HOWARD V. HINCKLEY, both citizens of the United States, and residing in the city of Topeka, county of Shawnee, and State of Kansas, have invented a new and useful Improvement in Switch-Stands for Railroads, of which the following is a specification.

Our invention relates to improvements in switch-stands, whereby we simplify their construction, and therefore increase the facility for manipulation and the safety of passing trains, and whereby we also economize room when it is needed in a direction perpendicular to the main track. We attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is an elevation of our stand in working position, looking in a line parallel to main track. Fig. 2 is a plan of stand, showing its connection with the switch-rail. Fig. 3 is a vertical section of stand. Fig. 4 is a section on the line X of Fig. 3. Fig. 5 is an isometric view of our locking device. Figs. 6 and 7 illustrate different positions of the top of stand, the lines *a d* being perpendicular to the line of the main track.

The same letter refers to the same part throughout. The points which are peculiar to our switch are set forth in the following description.

Those portions of the stand represented by the letters H E M S are in one casting, constituting the stand proper. The shaft B C corresponds to the shaft in ordinary revolving switch-stands, its axis being the center of revolution. Its weight rests upon the top H of the stand E, and it is held in position by the journal-box L, which surrounds it, and by the cylindrical recess in the casting M, in which the lower end, C, of the shaft rotates. The horizontal shank D of the shaft is bent to a vertical direction at G, and provided with an upset head, O. To the vertical portion G, and resting upon the head O, is attached the connecting-rod P, through which the motion is imparted to the switch-rail. The breadth of the slot R of the connecting-rod P is less than the diameter of the depending portion G, about which it turns, but is greater than the breadth

of the horizontal shank D, and is also greater than the breadth of the lug S of the casting M of the stand. The size of the casting M is such that the rim T of the connecting-rod P in all its working positions projects under it, preventing the removal of the connecting-rod in a vertical direction, while the track-man, to effect its removal, having disconnected it from the switch-rail by first removing the bridle-bar from the rails in the usual manner and allowing it to fall till it disconnects from the rod, has only to turn it through one hundred and eighty degrees in a horizontal plane till the slot R comes under the lug S, when, by lifting, the rod readily passes the lug S and the horizontal shank D and is free. This combination does away with the nuts, bolts, split keys, and thread, which, in common use at the lower end of the shaft, are often accidentally or maliciously misplaced or disconnected, and affords a safe and simple means of rapidly connecting or disconnecting the rod with the revolving shaft.

The thickness of the casting M being greater than its distance above the rim T of the connecting-rod P, the bottom C of the shaft cannot be removed from its recess in the casting M when the connecting-rod P is in any of its working positions. This, in combination with the fact that the lock and its co-operating parts, as in ordinary revolving stands, hold the shaft against any horizontal motion when locked, makes the shaft unremovable in any direction when the stand is locked, even though the journal-box L be maliciously removed.

Our manipulating-lever J N is jointed on the rivet V, the hand-section N falling into the recess Q, formed in the stand, and corresponding to a required position of the switch-rail whenever that position is reached, automatically carrying the perforated end of the lug Z through the recess W, and in front of the shoulder-section A, to receive the hasp of the lock.

When it is required to economize room in a direction perpendicular to the main track, the top or table of the stand is constructed so that the center position of the lever is toward the main track and the other two positions parallel with main track, (see Fig. 7,) the lever, when horizontal, being at right angles to the shank



D, the room usually taken up by the lever when on the side of the stand opposite main track being saved.

In Fig. 6, *a*, *c*, and *d* are the three positions 5 of the depending portion G of the crank, the semicircle *ef* being the top of the stand, all as shown in position in Fig. 2. With this construction the lever projects, in its different positions, in the directions B *f*, B *h*, and B *e*, 10 the projection of the lever away from main track in the direction B *f* often using space needed for other tracks.

In Fig. 7, *a c d* shows, as before, the three 15 positions of the depending portion G of the crank, the corresponding positions of the lever being, as before, B *f*, B *h*, and B *e*, the top of stand H H in Fig. 2 being turned ninety degrees in a horizontal plane, as in Fig. 7, and the lever being placed upon the shaft at right 20 angles to the shank D. By this change in the top or table of the stand the lever never projects in the direction B *a*, and the room taken

up by the lever in Fig. 6 in that direction beyond the stand proper is saved.

We claim and desire to secure by Letters 25 Patent—

1. In a switch-stand, the combination of the projecting casting M, having lug S, with the rim T of the connecting-rod P, shaft B C, crank D G, and upset head O, all made substantially 30 as specified, for the purposes set forth.

2. In a double-throw switch, the combination, with the lever N J, arranged upon the shaft B at a right angle to the crank D G, of the stand, constructed substantially as de- 35 scribed, and having the top H, with its recesses, arranged in a position quartering to correspond with the position of said lever on the shaft, as set forth.

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