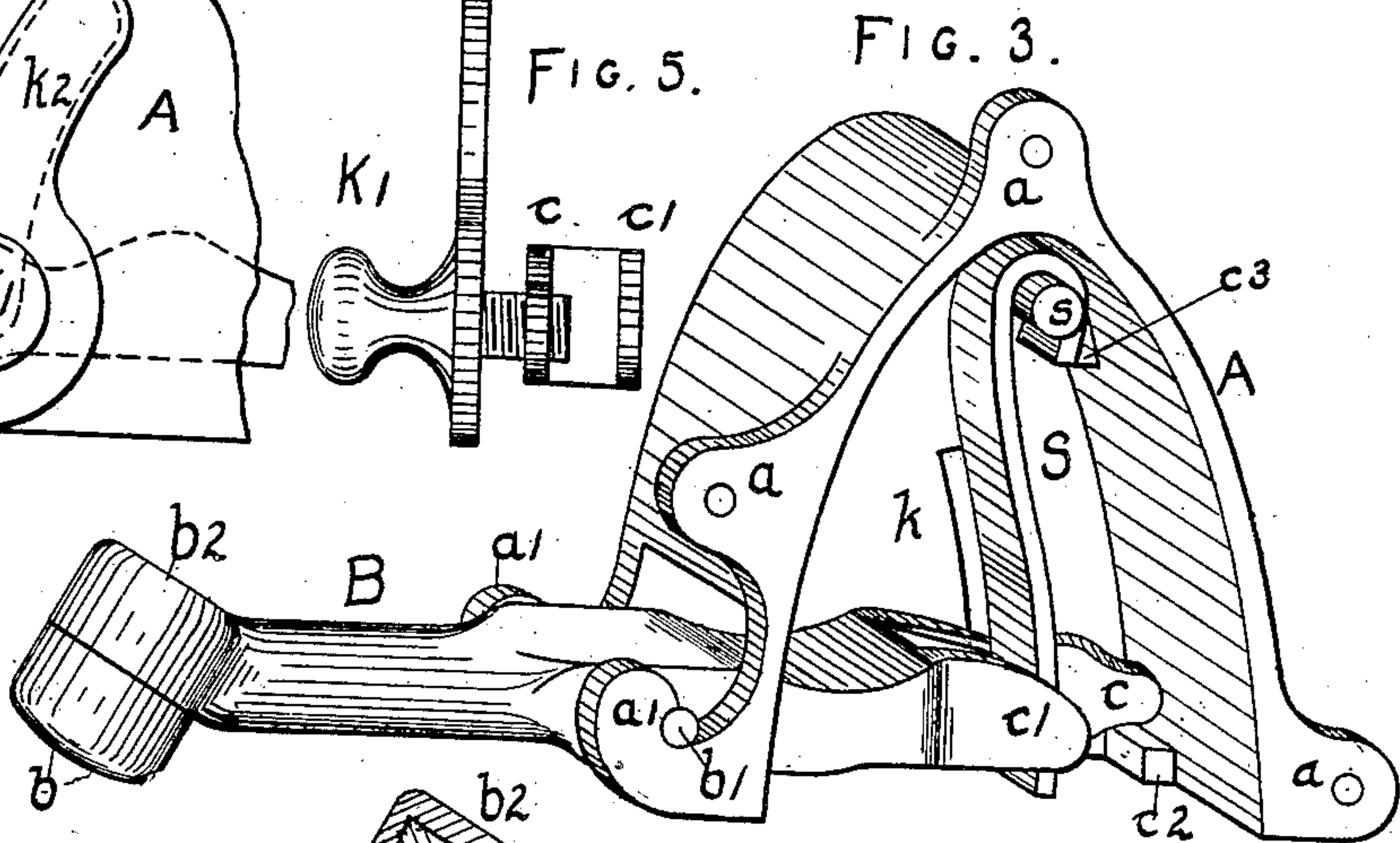
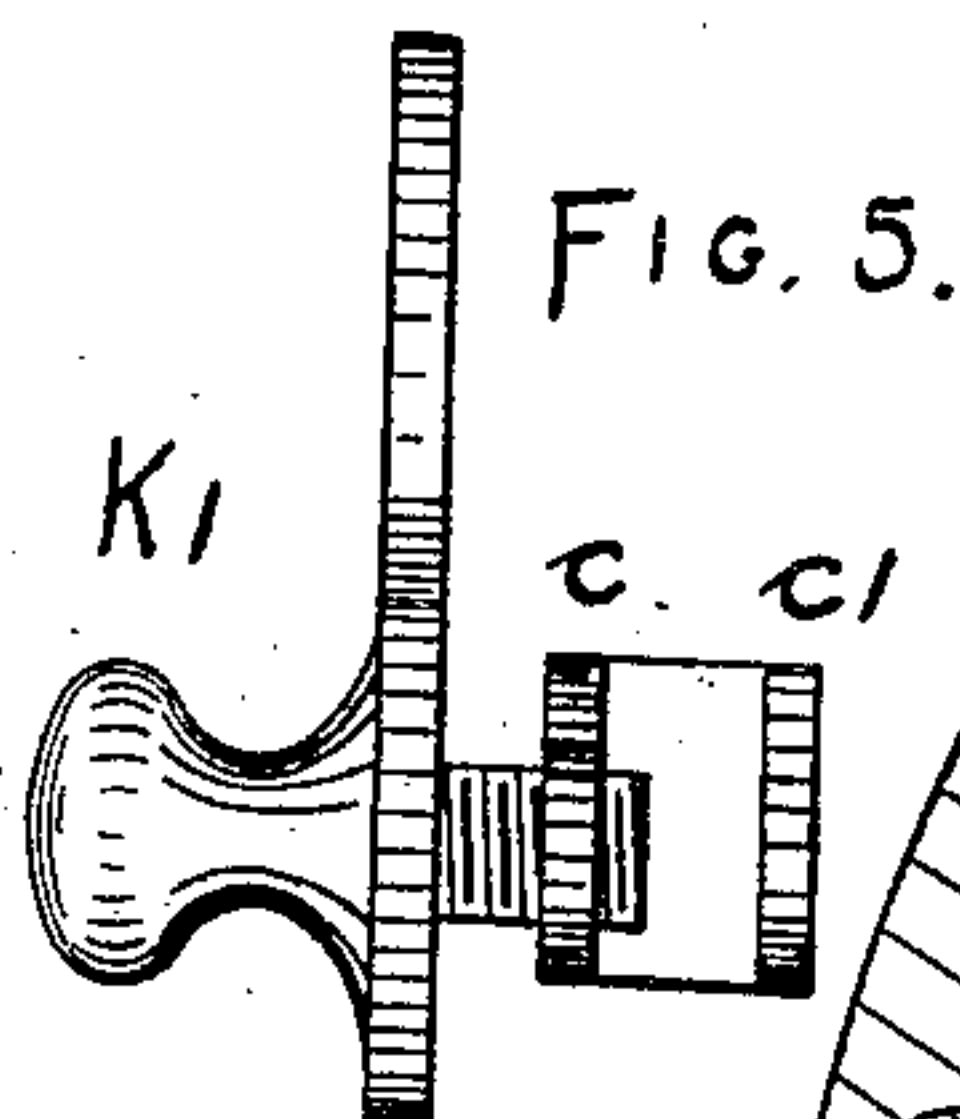
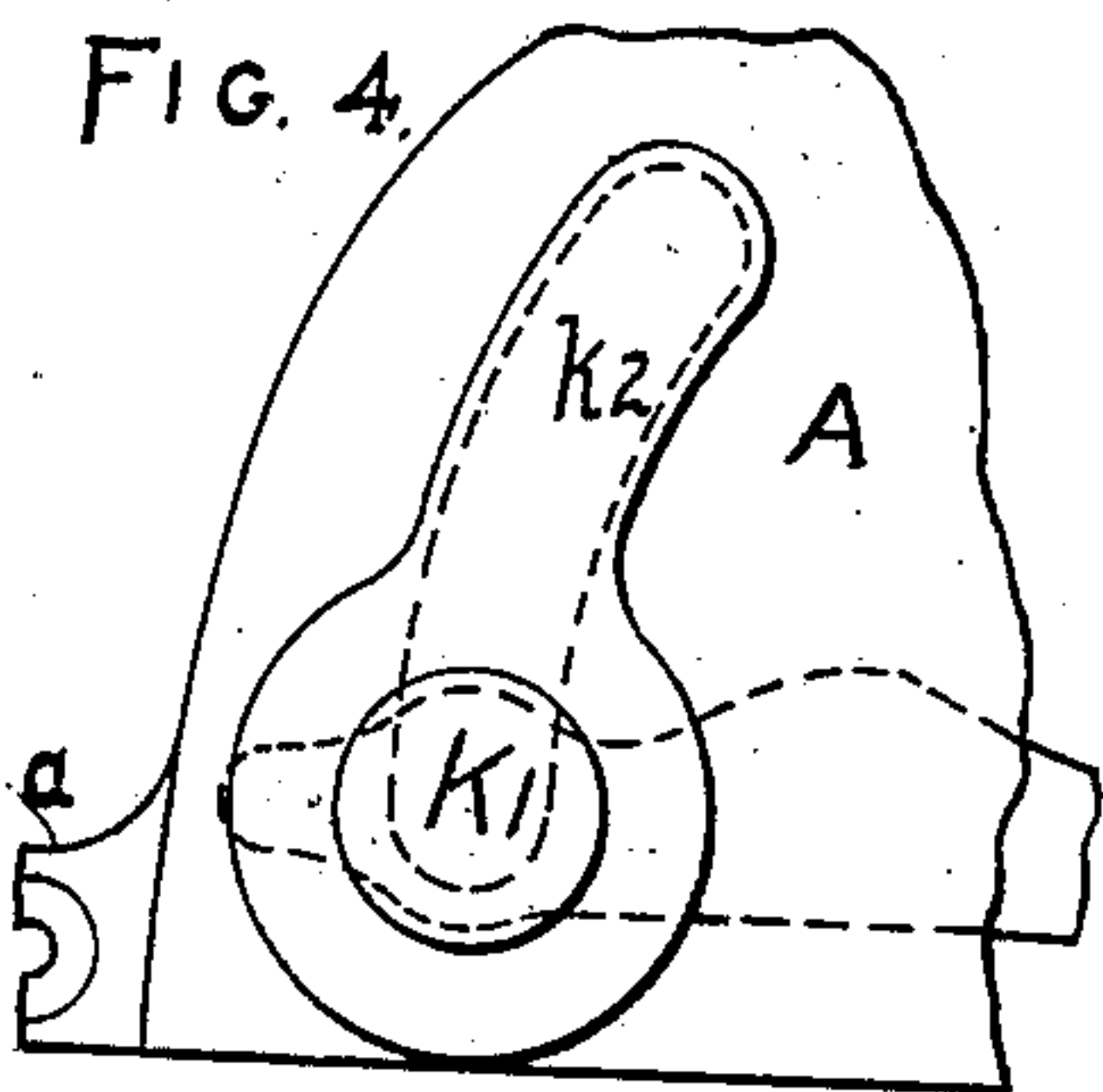
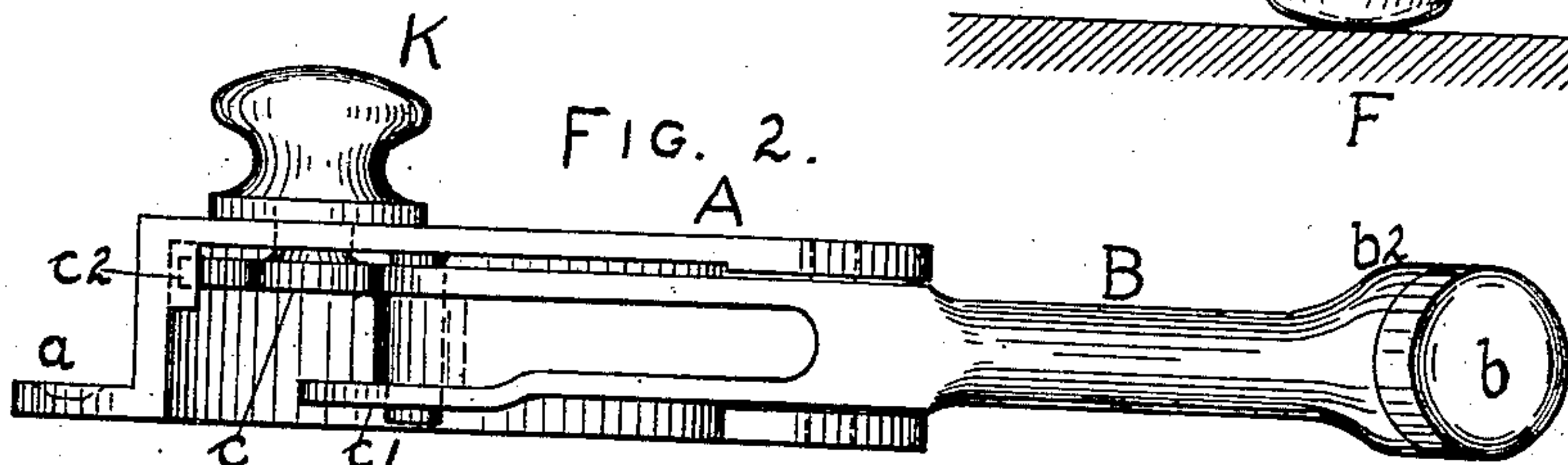
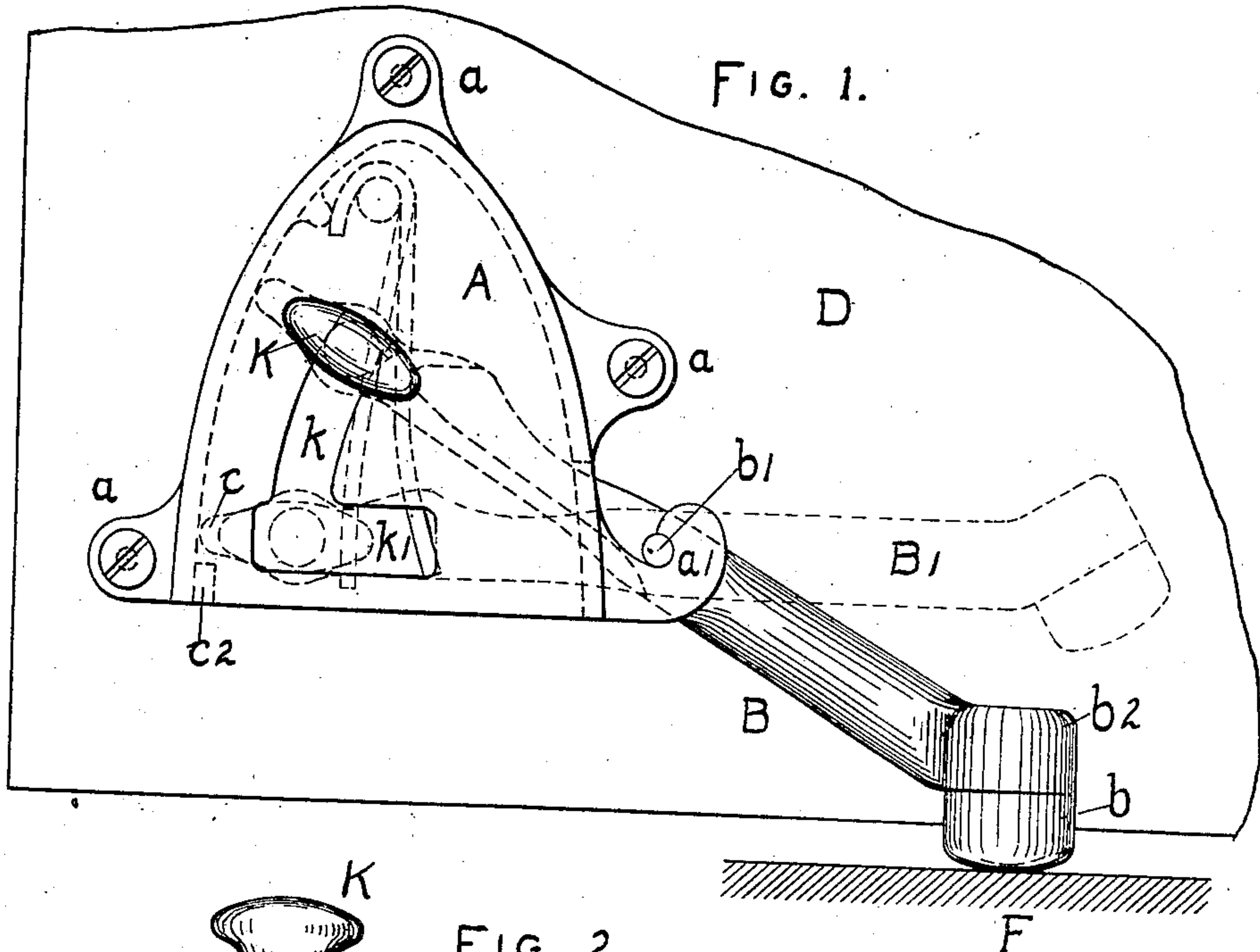


No. 863,610.

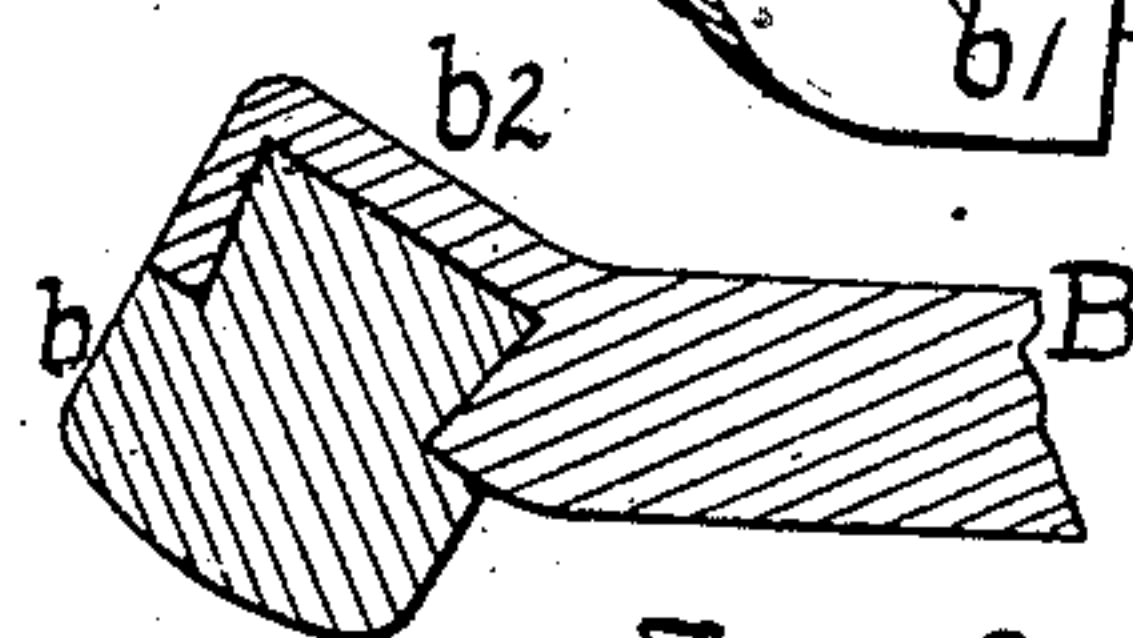
PATENTED AUG. 20, 1907.

J. G. KEITH.  
DOOR CHECK.

APPLICATION FILED AUG. 8, 1906.



WITNESSES:  
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ATTY.



# UNITED STATES PATENT OFFICE.

JOHN G. KEITH, OF BROOKLYN, NEW YORK.

## DOOR-CHECK.

No. 863,610.

Specification of Letters Patent.

Patented Aug. 20, 1907.

Application filed August 8, 1906. Serial No. 329,655.

*To all whom it may concern:*

Be it known that I, JOHN G. KEITH, a citizen of the United States, residing at Brooklyn, in the county of Kings and State of New York, have invented a new and Improved Door-Check, of which the following is a specification.

This invention relates to mechanism for holding a door in a fixed position when opened to any desired angle.

10 The object of my invention is an increased efficiency in operation and economy of construction of such a door check, and to these ends my invention consists in providing a supporting plate or casing for my door check within or supported by which there may be contained  
15 a spring operating to retain the check in either its operative or inoperative position.

For reducing the expense of manufacturing and assembling such a door check, I have found it advantageous to form open bearings for the door check lever  
20 proper and to provide, preferably a leaf spring of such a conformation and so supported relatively to the check lever proper as to hold the door check positively in its bearings and at the same time operating to hold the check in its operative and inoperative position. In  
25 such a construction I have found it advantageous to make use of the friction between a practically fixed spring of the character just above described and a moving end of the door check lever adapted to be engaged and held by the spring. I also provide a casing  
30 having a slot through which an operating knob for the door check may project and such operating knob of such a conformation as to permit of the ready assembling of the parts. Although it is not essential, still I prefer that the operating knob be formed integrally  
35 with the check lever. The usual rubber tip for engaging the floor or carpet thereon in such a check I secure in place by means of a dove-tailed arrangement, as will be explained.

40 Similar letters refer to similar parts throughout the several views.

The accompanying drawings illustrating a door check embodying my invention are as follows:

Figure 1 shows a view of the lower portion of a door with my check attached thereto, such check being  
45 shown in full lines in its operative position as engaging the floor beneath the door, while the inoperative position for such check is indicated in dotted lines. Fig. 2 is a view of my check removed from the door and as seen from the under side. Fig. 3 shows my door check  
50 in perspective as seen partly from the rear and removed from the door. Figs. 4 and 5 show a modified detail of my door check, while Fig. 6 shows the arrangement which I use for securing the rubber tip in the check lever.

55 Referring to the drawings,—D represents the lower corner of a door and F a portion of the floor beneath

the door, in engagement with which is seen the rubber tip *b* secured in the lever B, comprising the operative lever of my check. This lever B carries trunnions *b*<sup>1</sup> seated in open bearings formed in the projecting lugs *a*<sup>1</sup> formed on the case A. This case A is wedge shaped in general appearance and has projecting lugs *a* through which holes are formed to receive screws, as indicated, for attaching the same to the door. An opening in the case A is provided near the bottom on one side to receive the lever B. The lever B terminates at its outer end in the usual knob *b*<sup>2</sup> carrying the rubber tip *b* which is dove-tailed into such knob *b*<sup>2</sup>. The lever B extends within the case A and is bifurcated at its inner end and between the projections *c* and *c*<sup>1</sup> thus formed  
60 at the inner end of the lever B there is provided a suitable surface for engaging the spring S.

The spring S is formed of a plate of suitably elastic material and bent over and around and secured upon the pin *s* carried by the face of the case A and is forced  
75 in between the pin *s* and the lug *c*<sup>3</sup> on the inside of the case A. The spring S operates, as indicated, to force the lever B to the right, as seen in Figs. 1 and 2, and to the left as seen in Fig. 3, and serves thus to keep this lever B seated within the bearings formed for the  
80 trunnions *b*<sup>1</sup> carried by such lever B.

On the inner end of the lever B, and preferably formed integrally therewith, I provide a knob K of such a conformation, as indicated, that it may be inserted through the slot *k* in the front side of the case  
85 A when such lever B is moved to a position nearly or quite tangential to the direction of this curved slot, and when the lever B is thereafter turned to a position nearly radial to the slot *k*, the stem of the knob K may be drawn to the right within the slot *k*<sup>1</sup>, permitting the  
90 trunnions *b*<sup>1</sup> on the lever B to pass around the lugs *a*<sup>1</sup> carried by the case A, when the spring S may be inserted in position and then the lever B moved upwardly and forced to the left, as seen in Fig. 1, against the action of the spring S until the trunnions *b*<sup>1</sup> carried by  
95 the lever B are forced into position in the bearings therefor carried by the lugs *a*<sup>1</sup> and in which bearings such trunnions are firmly held seated by the action of the spring S in forcing the lever B to the right.

The front of the case A each side of the slot *k* coöper-  
100 ates with the knob K and the projection *c* on the lever B to form a guide for the inner end of the lever B, while the horizontally disposed slot *k*<sup>1</sup> permits the drawing of the lever B to the right so that the trunnions may be carried around and over the lugs *a*<sup>1</sup> and forced  
105 into the bearings carried thereby. The slot *k* is in the form of an arc of a circle having its center at the trunnions *b*<sup>1</sup>. For limiting the downward movement of the inner end of the lever B, I provide a stop *c*<sup>2</sup> on the lower corner of the case A and arranged to be engaged by the  
110 projection *c* carried by the lever B. I have sometimes found it desirable to provide a detachable knob K<sup>1</sup>,



as seen in Figs. 4 and 5, threaded into the projection *c* carried by the lever *B* and having formed integrally therewith the vane *k*<sup>2</sup> adapted to close the slot *k*<sup>1</sup> when the lever *B* is in its inoperative position. This is seen more clearly in Fig. 4, where a part of the lower left hand corner of the case *A* is shown only in outline.

The operation of my check is as follows: the parts having been assembled in the manner above described and the case *A* attached to the door *D* at the proper height from the floor *F* thereunder, the outer or left hand end of the lever *B* is forced downwardly by the foot of the operator against the action of the spring *S*. The conformation and arrangement of the parts is such, as will at once be seen, that little effort is required to force the right hand end of the lever *B* downwardly, the spring *S* serving to hold it in its inoperative position, indicated in dotted lines at *B*<sup>1</sup> in Fig. 1, by the friction thereof against the left hand and inner end of the lever *B*. It will be observed that the conformation of the parts is such also that when the outer end of the lever *B* is held down in a position to check and hold the door, the spring *S* operates quite strongly to hold it in this position as well by the direct action of the spring as also by the friction between the spring and the left hand end of the lever *B* and that some little effort is required to force the knob *K* downwardly to move the checking lever *B* to its inoperative position, free from the floor.

I desire to call attention to the fact that the lever *B* carries an operating knob projecting through a slot in the case *A*, through which it may be inserted for assembling the parts of my check only by moving the lever *B* to a position considerably without the normal range of its operative positions, and on account of this feature, the operating lever of my check is held seated in its bearings by the actuating spring. The side of the case around the slot through which the operating knob *K* projects together with such operating knob

comprise a means for guiding the inner end of the checking lever in its operative movements.

What I claim is:—

1. In a door check, a supporting plate adapted to be attached to the door, a check lever pivoted to such plate in an open bearing or open bearings, a spring adapted to hold such lever seated in such bearing or bearings and also adapted to hold such lever in its operative and inoperative positions.
2. In a door check, a case adapted to be attached to a door, a check lever pivoted to such case in an open bearing or open bearings, a spring adapted to hold such lever seated in such bearing or bearings and also adapted to hold such lever in its operative and inoperative positions, such check lever carrying an operating knob arranged to project through a suitable slot therefor in such case, such knob and the end of such lever to which it is attached cooperating with the side walls of such case about such slot to guide such lever in its movement.
3. In a door check, a case adapted to be attached to a door, a check lever pivoted to such case in an open bearing or open bearings, a spring adapted to hold such lever seated in such bearing or bearings and also adapted to hold such lever in its operative and inoperative positions, a slot in the wall of such case, an operating knob formed integrally with such lever and adapted to be inserted through such slot only when such lever occupies a position angularly without the range of the normal movement of such lever when seated in its bearings.
4. In a door check, a case adapted to be attached to a door, a check lever pivoted to such case in an open bearing or open bearings, a spring adapted to hold such lever seated in such bearing or bearings and also adapted to hold such lever in its operative and inoperative positions, a slot in the wall of such case, an operating knob formed integrally with such lever and adapted to be inserted through such slot only when such lever occupies a position angularly without the range of the normal movement of such lever when seated in its bearings, such knob and lever cooperating with the side wall of such case about such slot to guide such lever in its movement.

JOHN G. KEITH.

Witnesses:

JULIUS LE GRANT KRAUSS, Jr.,  
B. FRANK COOLEY.