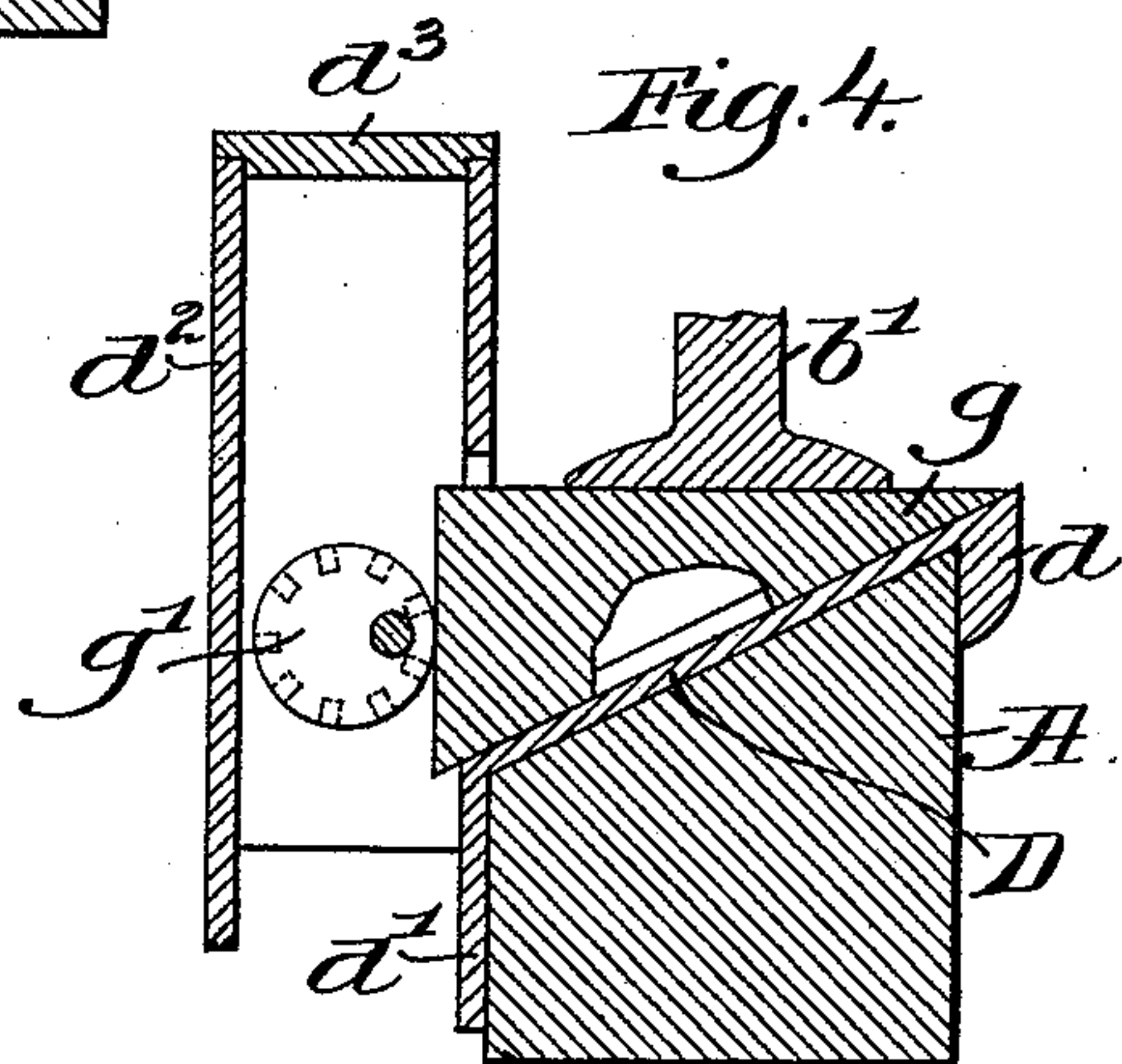
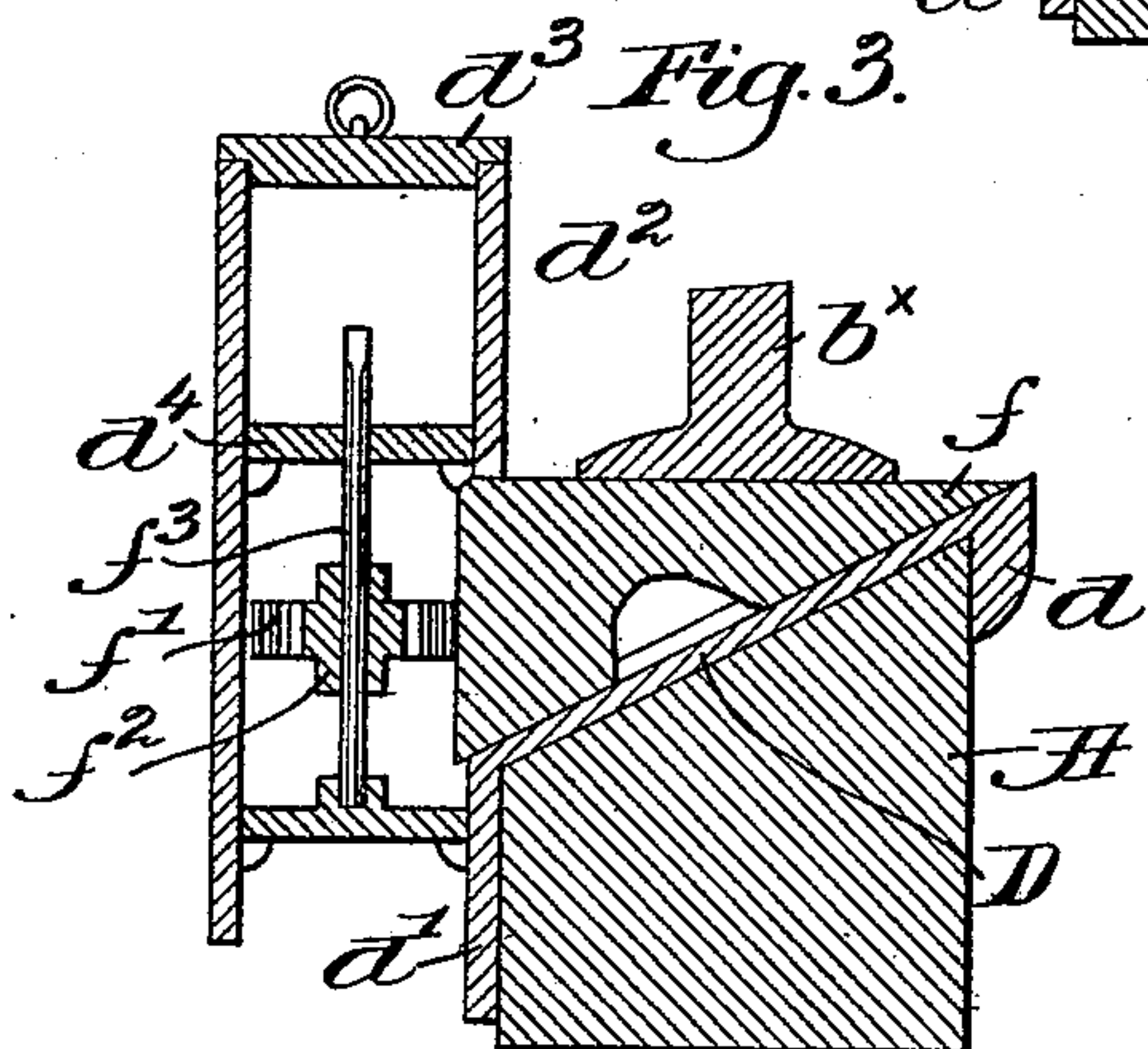
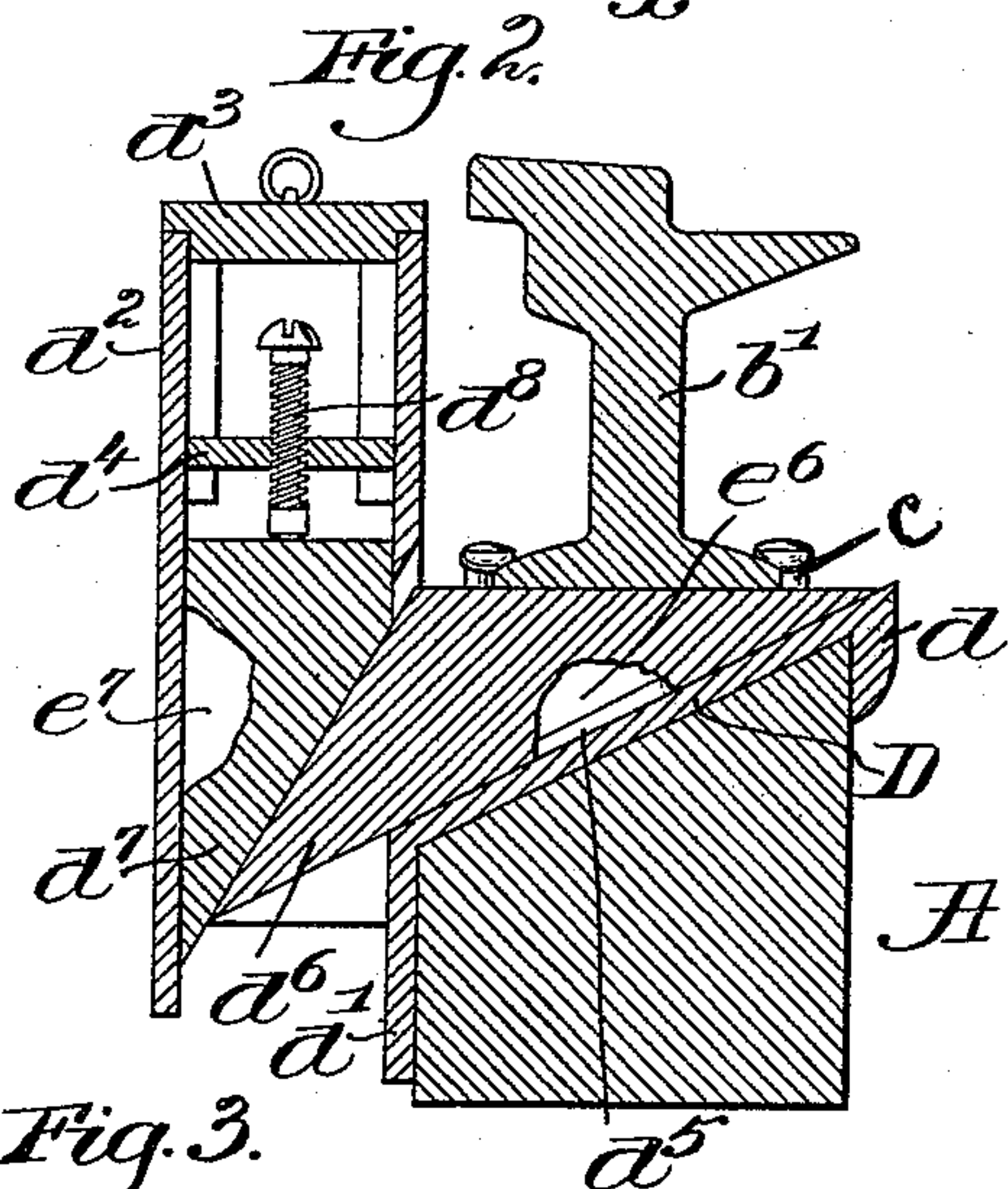
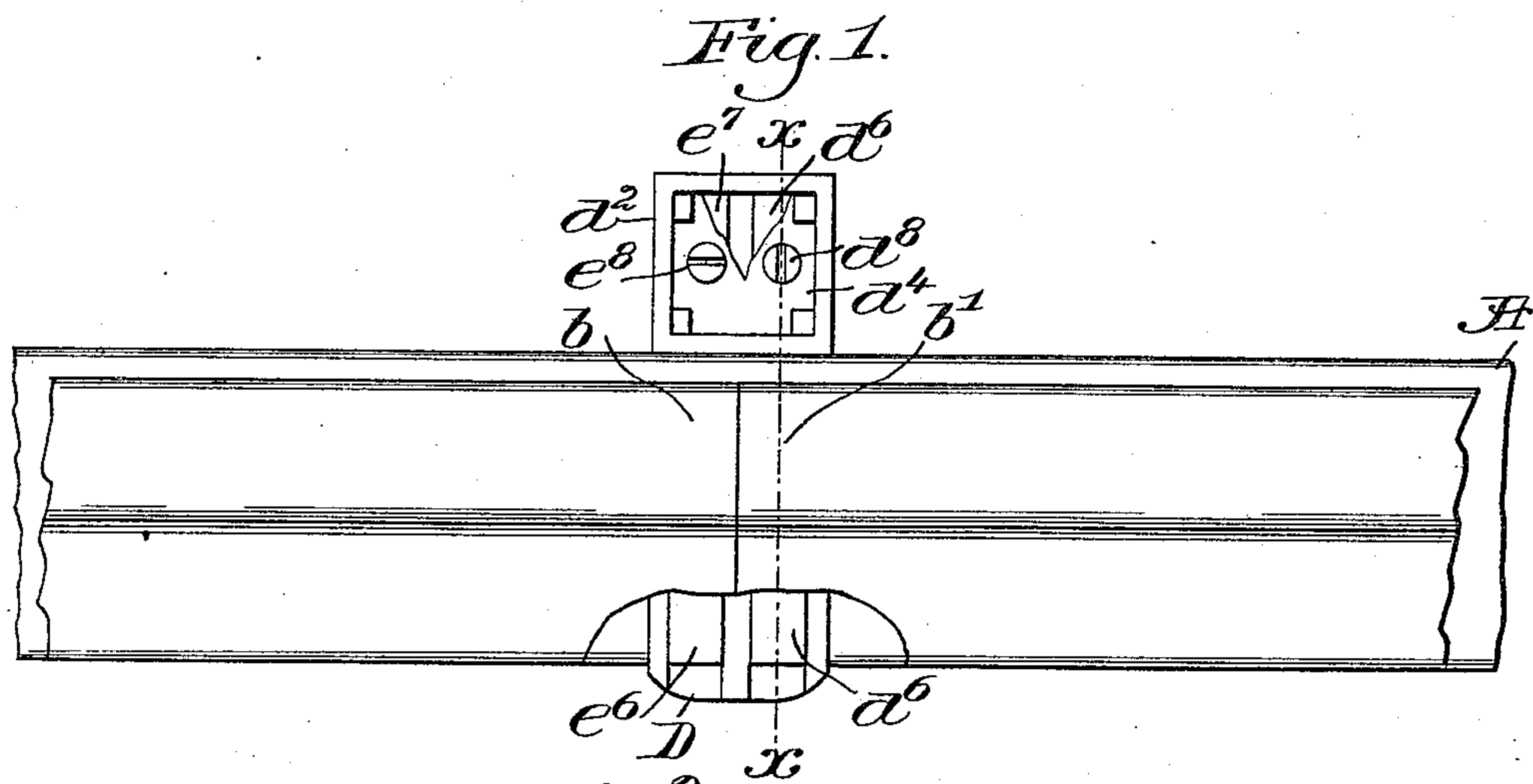


(No Model.)

G. NORWOOD.  
APPARATUS FOR LEVELING THE MEETING ENDS OF RAILWAY RAILS.  
No. 527,805.

Patented Oct. 23, 1894.



witnesses

A.C. Harwood

Thomas J. Drummond

Inventor:

George Norwood  
by Crosby & Gregory  
attys.



# UNITED STATES PATENT OFFICE.

GEORGE NORWOOD, OF BOSTON, MASSACHUSETTS, ASSIGNOR OF TWO-THIRDS  
TO GEORGE L. MEAD AND JOHN S. RICHARDSON, OF SAME PLACE.

APPARATUS FOR LEVELING THE MEETING ENDS OF RAILWAY-RAILS.

SPECIFICATION forming part of Letters Patent No. 527,805, dated October 23, 1894.

Application filed December 28, 1893. Serial No. 495,001. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE NORWOOD, of Boston, county of Suffolk, State of Massachusetts, have invented an Improvement in  
5 Apparatus for Leveling the Meeting Ends of Railway-Rails, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

10 In street and other railway construction difficulty is experienced by differences in height or level of the meeting ends of the rails, such differences being manifested in blows of the wheel tread on the end of the  
15 rail, such blows not only wearing the rail but also injuring the wheel. I have devised apparatus whereby the meeting ends of the rails may be easily raised or lowered in order to put them at the same level.

20 In accordance with my invention I have combined with the meeting ends of the rails a leveling apparatus or device adapted to raise or lower the end of either rail with relation to the other.

25 Figure 1 in plan view shows portions of the ends of two railway rails, together with a leveling adjusting device embodying my invention. Fig. 2 is a section in the line  $x$ , Fig. 1, looking to the left, one set of wedges being  
30 broken out to show the like wedges beyond. Figs. 3 and 4 are like views of modifications to be referred to.

In the drawings I have chosen to illustrate my invention as applied to a street railway  
35 system, in which A represents the usual stringer or support for the rails  $b, b'$ , of usual shape, which may be secured on the stringer or support by spikes, as  $c$ , or in other usual manner, the particular manner of sustaining  
40 the main body of the rail not being of my invention, and I may sustain the same in any usual way.

My leveling device in the simplest form known to me will contain a system of wedges  
45 mounted in a suitable shoe or stand having a passage whereby the wedges are made readily accessible.

The shoe or stand D shown is composed preferably of a piece of cast metal having  
50 preferably lugs  $d, d'$ , the stand between the

lugs resting on the stringer, the lugs contacting with the sides of the stringer and constituting locking means for the shoe or stand so that it cannot move transversely of the stringer. The stand presents an inclined bottom piece  $d^5$  on which rests a wedge  $d^6$  having a beveled end, said end being acted upon by an actuating device  $d^7$  also shown as a wedge under the control of an adjusting device  $d^8$ , shown in Figs. 1 and 2 as a screw  
55 having preferably a double thread said screw being screwed into a stationary plate or nut  $d^4$  contained in an upright leg  $d^2$  of the stand, the leg being terminated by a suitable cover  $d^3$  which may be fitted water tight to the leg  
60 and be readily removable to enable easy access to the adjusting device by a screw-driver or other suitable device by which to turn it. The wedge  $d^6$  so far described rests, see Fig. 1, under the end of the rail  $b'$ , and there will  
65 be a like wedge  $e^6$  to sustain the end of the rail  $b$ , and wedge  $e^6$  will have combined with it a like actuating device  $e^7$  under control of a like actuating device  $e^8$ .

In Fig. 3 I have shown a modification, in which the wedge  $f$ , under the end of rail  $b^x$ ,  
75 has a connected rack  $f'$  engaged by an actuating device shown as a pinion  $f^2$  on a shaft  $f^3$ .

In the modification Fig. 4 the rail rests on a wedge  $g$  and is adapted to be moved longitudinally by a cam or eccentric  $g'$  having at its periphery suitable pockets in which may be inserted a spanner or key by which to rotate the eccentric.

Prior to my invention I am not aware that  
85 the meeting ends of railway rails have had combined with them devices by which the end of either or both rails may be raised or lowered, as required, with relation to the rail support and without disturbing said support,  
90 and hence this invention is not limited to the exact construction or shape shown for the device on which the base of the rail rests, nor to the exact shape of the actuating or of the adjusting devices, as the same might be vari-  
95 ously modified in shape all within the skill of the mechanic and without the exercise of invention.

I am aware that wedges have been used to bear up and to lift rails.



Having described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination with a stand, and the  
5 meeting ends of two railway rails, of two independent rail leveling devices located side by side and interposed between said rails and stand and accessible for adjustment while the rails remain undisturbed with relation to  
10 their supports, substantially as described.
2. The stand adapted to rest on a stringer and provided with an inclined surface, and having an upwardly extended leg, combined with a wedge, and means to move the same  
15 over said inclined surface, substantially as described.

3. The stand adapted to rest on a stringer

and provided with an inclined surface, and having an upwardly extended leg, and locking device to grasp the stringer, substantially  
20 as described.

4. The stand adapted to rest on a stringer or support and having two inclined ways side by side, combined with two wedges, and independent actuating devices for each of said  
25 wedges, to operate, substantially as described.

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

GEORGE NORWOOD.

Witnesses:

GEO. W. GREGORY,

EMMA J. BENNETT.