

(No Model.)

2 Sheets—Sheet 1.

S. R. HAMILTON.
FOLDING CAR STEP.

No. 587,479.

Patented Aug. 3, 1897.

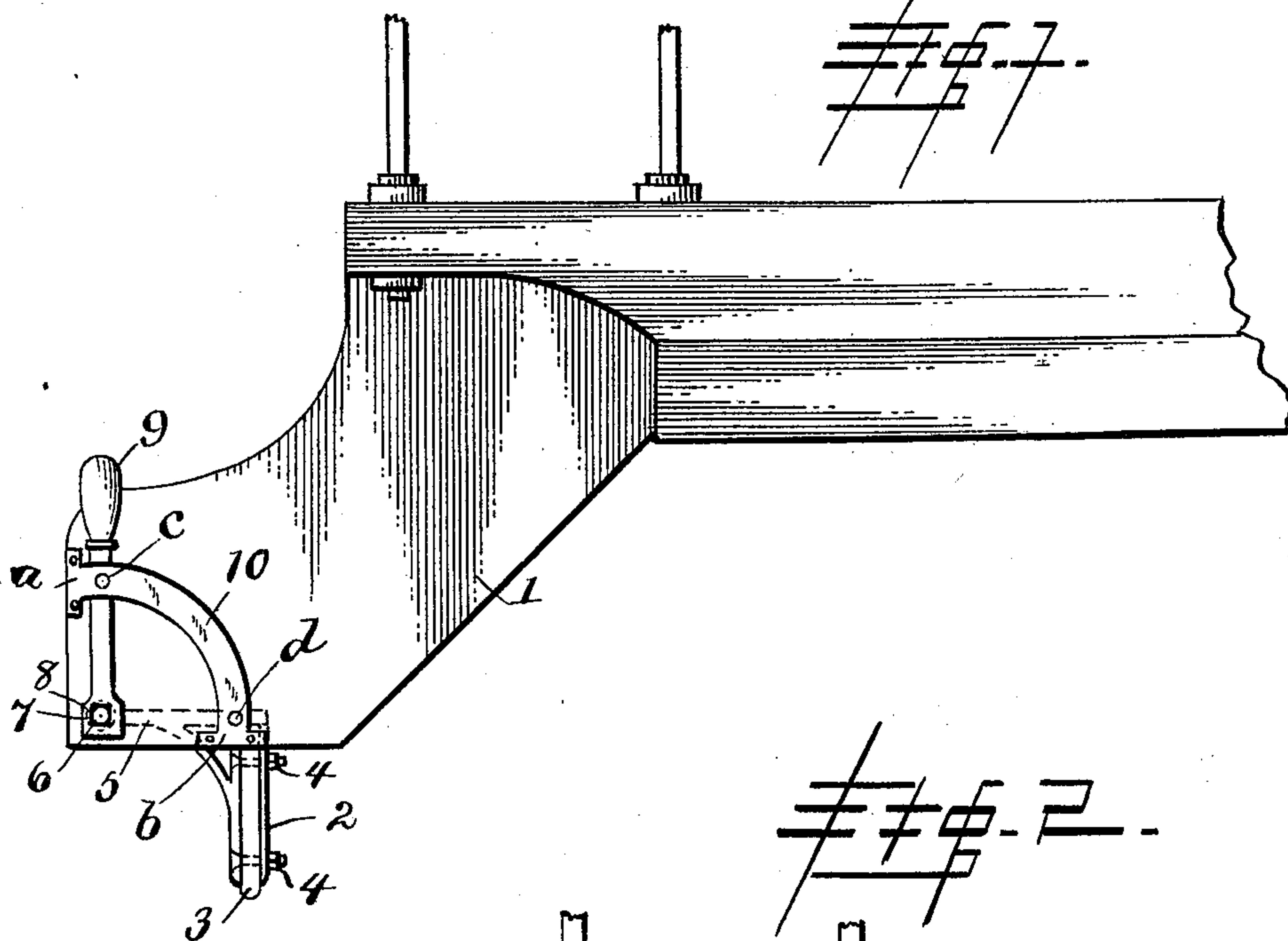
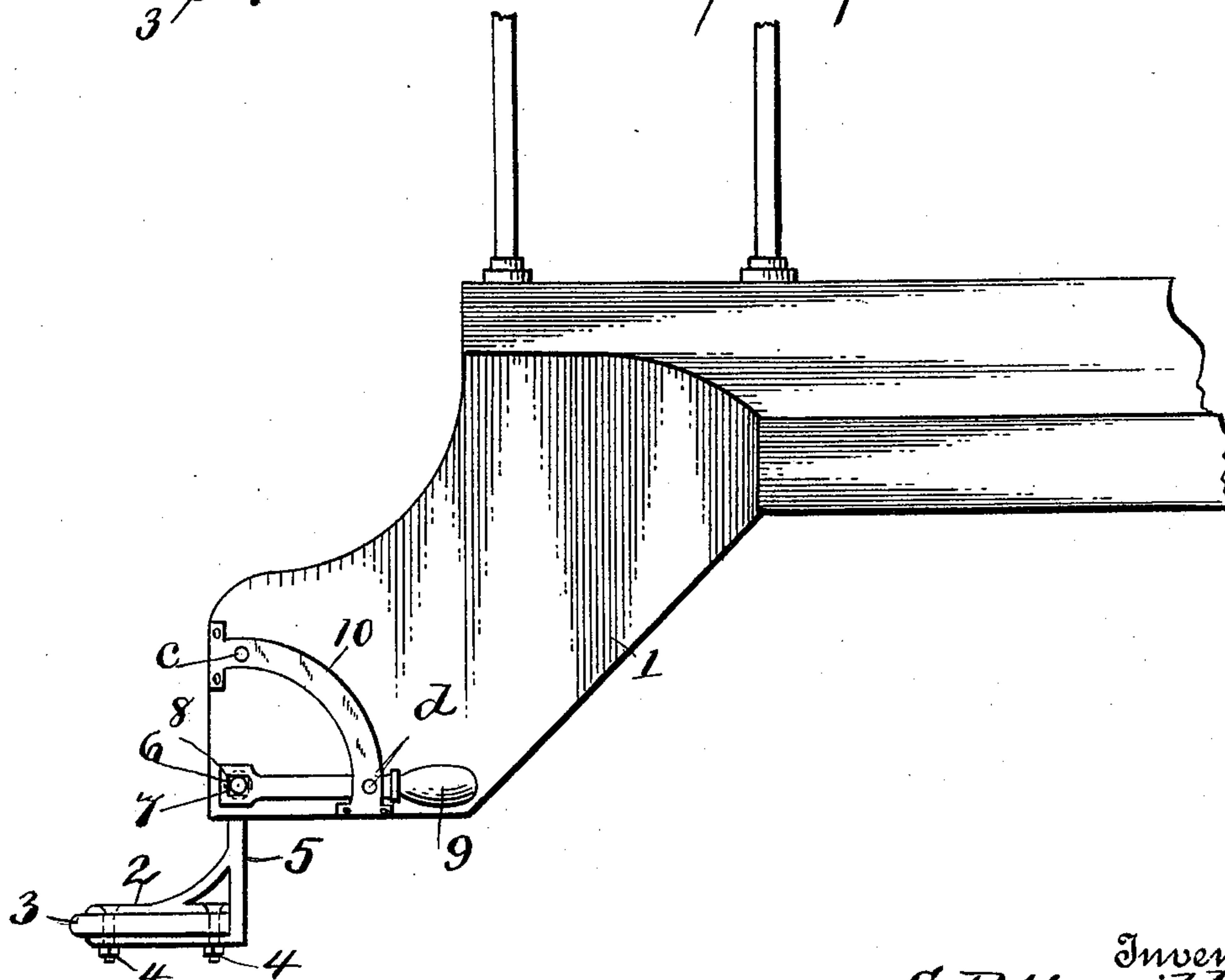


Fig. 2.



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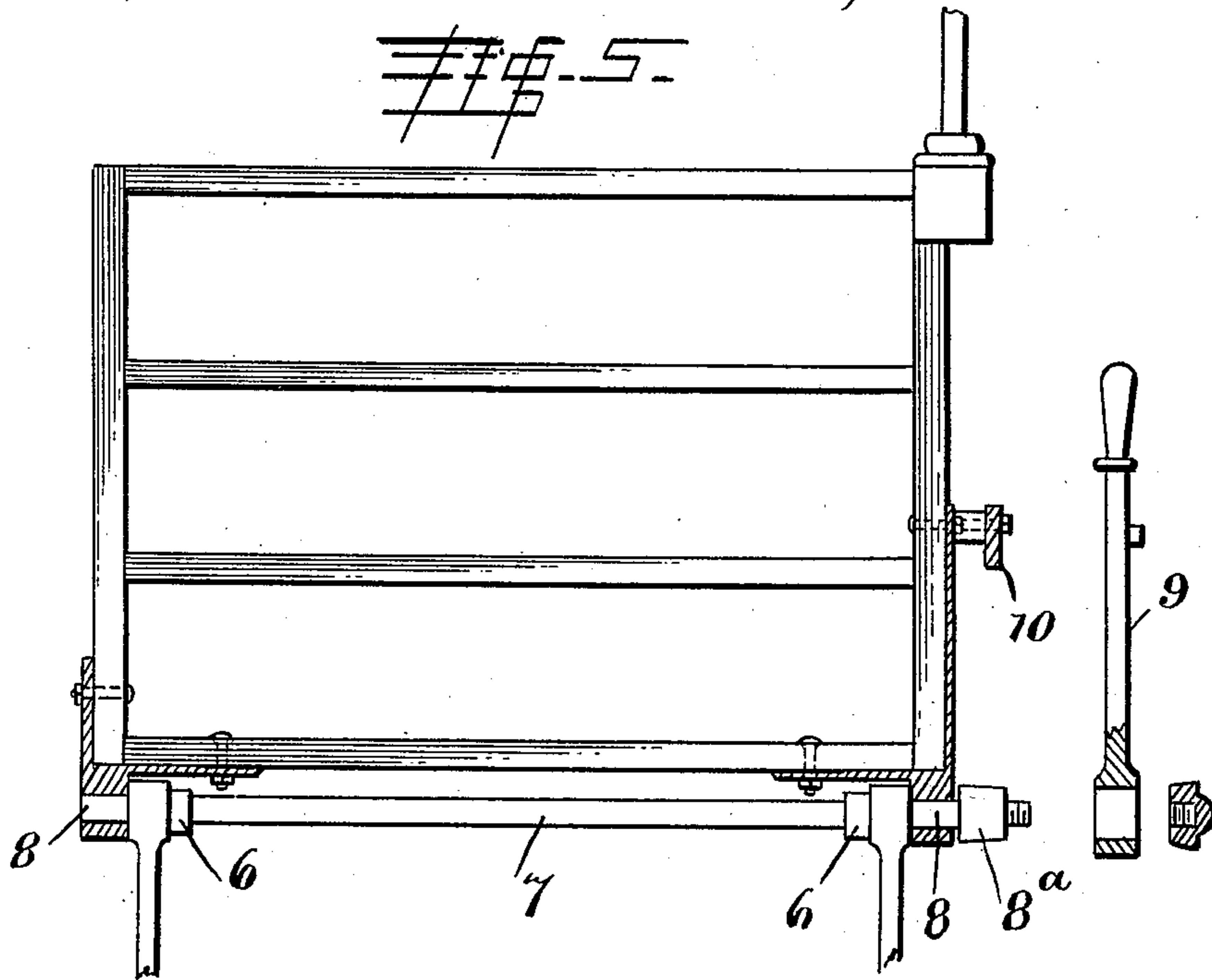
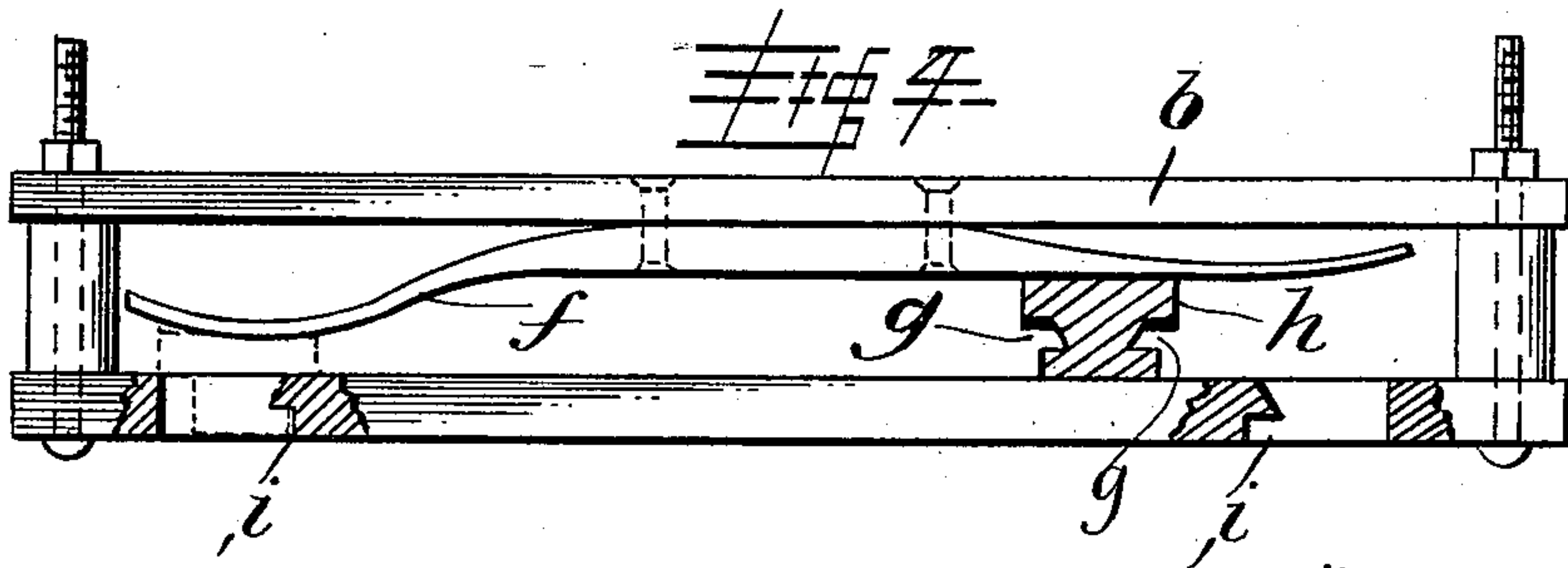
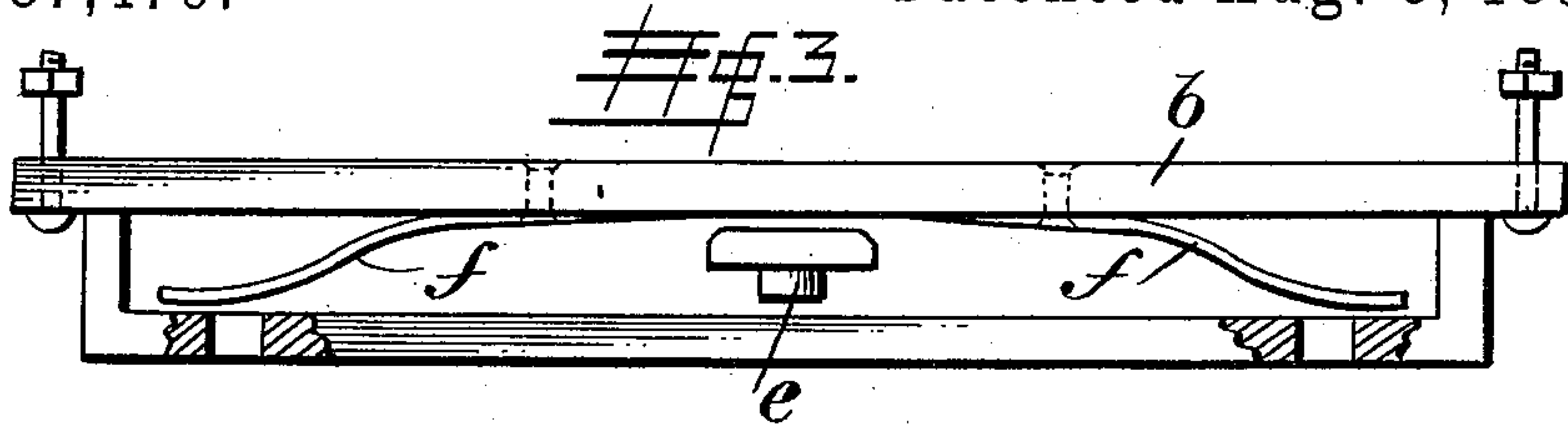
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UNITED STATES PATENT OFFICE.

SAMUEL R. HAMILTON, OF FARMERSVILLE, TEXAS.

FOLDING CAR-STEP.

SPECIFICATION forming part of Letters Patent No. 587,479, dated August 3, 1897.

Application filed May 11, 1897. Serial No. 636,058. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL R. HAMILTON, a citizen of the United States, residing at Farmersville, in the county of Collin and State of Texas, have invented certain new and useful Improvements in Folding Car-Steps; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention has relation to steps for railway-cars; and the object is to provide a supplemental folding step which may be lowered into position for use when passengers are boarding or leaving a car and which may be folded back out of the way when the train is about to leave the station; furthermore, to provide simple and strong means for actuating the step, and, finally, to provide a construction which shall be simple, durable, and inexpensive.

With these objects in view the invention consists of certain features of construction and combination of parts which will be hereinafter fully set forth and claimed.

In the accompanying drawings, Figure 1 is an end view of a portion of a railway-car illustrating the application of my invention, showing the step swung back out of use. Fig. 2 is a similar view showing the step adjusted for use. Fig. 3 is a top plan view of one form of my improved curved bracket, and Fig. 4 is a similar view of another form. Fig. 5 is a front view of the permanent or fixed steps, showing the manner of connecting the folding step thereto and showing at the right the actuating-lever detached.

In said drawings, 1 denotes the fixed or permanent ordinary steps of a railway-coach; 2, the iron frame of the folding step, and 3 the tread of the step, which is secured to the frame by bolts 4. The arms 5 of the frames are fixed to a square portion 6 of a shaft 7, which is supported in bearings 8, secured to the side pieces of the permanent steps. One end of the shaft 7 has a square portion 8^a, to which is secured the end of a lever 9. Two of the opposite sides of this square portion of the shaft are slightly beveled to allow of a lateral movement of the lever for a purpose hereinafter to appear.

10 denotes the curved bracket, which is se-

cured to one of the side pieces of the permanent steps by bolts or any other suitable means, and consists of two parallel portions *a* and *b*, the former of which has near its ends two apertures *c* and *d*.

In the form of bracket shown in Fig. 3 the holes are round and are adapted to receive a round stud *e*, projecting laterally from the lever. Springs *f* are secured to the parallel piece *b* of the bracket, and when this lever is moved either to lower the step into position or to swing it back out of position the lever strikes one or the other of said springs, and as it rides along the same and the stud thereon comes opposite one of the holes in the bracket the spring will force the stud into said hole and hold it therein. This result is accomplished by reason of beveling the square end of the shaft to permit of the rocking sidewise of the lever.

In the construction shown in Fig. 4 I have made the holes in the bracket rectangular in outline, and have formed the stud on the lever with an undercut *g* to form a head *h*, so that when said stud passes through the hole at either end of the bracket it engages a corresponding shoulder *i*. By this construction it will be impossible for the lever to jar and the stud thereon to disengage the hole. The spring shown in this modified form consists of one piece instead of two, as is shown in Fig. 3, and the center or intermediate portion of the spring is enlarged to insure it against breakage.

When the train reaches a station and it is desired to unload or take on passengers, the lever is depressed, which movement throws the supplemental step in position for use. When the train is about to leave on its journey, the lever is raised and locked in position. This movement throws the step under and upward out of the way, so as not to come in contact with any structure or obstacle that may be along the side of the track.

Although I have specifically described the construction and relative arrangement of the several elements of my invention, I do not desire to be confined to the same, as such changes or modifications may be made as clearly fall within the scope of my invention without departing from the spirit thereof.

Having thus described my invention, what

I claim as new, and desire to secure by Letters Patent of the United States, is—

1. The combination with the ordinary steps of a railway-car, of a shaft journaled thereto, 5 said shaft having a square end, two of the opposite sides of which are beveled, a supplemental step fixed to said shaft, a bracket secured to one of the sides of the ordinary steps and provided with holes near its ends, 10 a lever fitted to the square ends of said shaft and having a laterally-rocking movement, said lever being provided with a stud to engage the holes in the bracket and lock the step in desired position, and a spring secured 15 to the bracket for rocking the lever laterally and forcing the stud into the holes, substantially as set forth.

2. The combination with the ordinary steps of a railway-car, of a shaft journaled thereto, 20 said shaft having a square end, two of the

opposite sides of which are beveled, a supplemental step fixed to said shaft, a bracket secured to one of the sides of the ordinary steps and provided with square holes near its ends, said holes having shoulders, a lever fitted to 25 the square ends of said shaft and having a laterally-rocking movement, said lever being provided with a stud to engage the holes in the bracket, said stud being provided with an undercut to form lateral shoulders to en- 30 gage the shoulders of the holes, and a spring secured to said bracket for forcing the lever laterally and the stud into the holes of the bracket, substantially as set forth.

In testimony whereof I hereunto affix my 35 signature in presence of two witnesses.

SAMUEL R. HAMILTON.

Witnesses:

C. C. J. ASTON,

WILLIAM K. BRADFORD.