

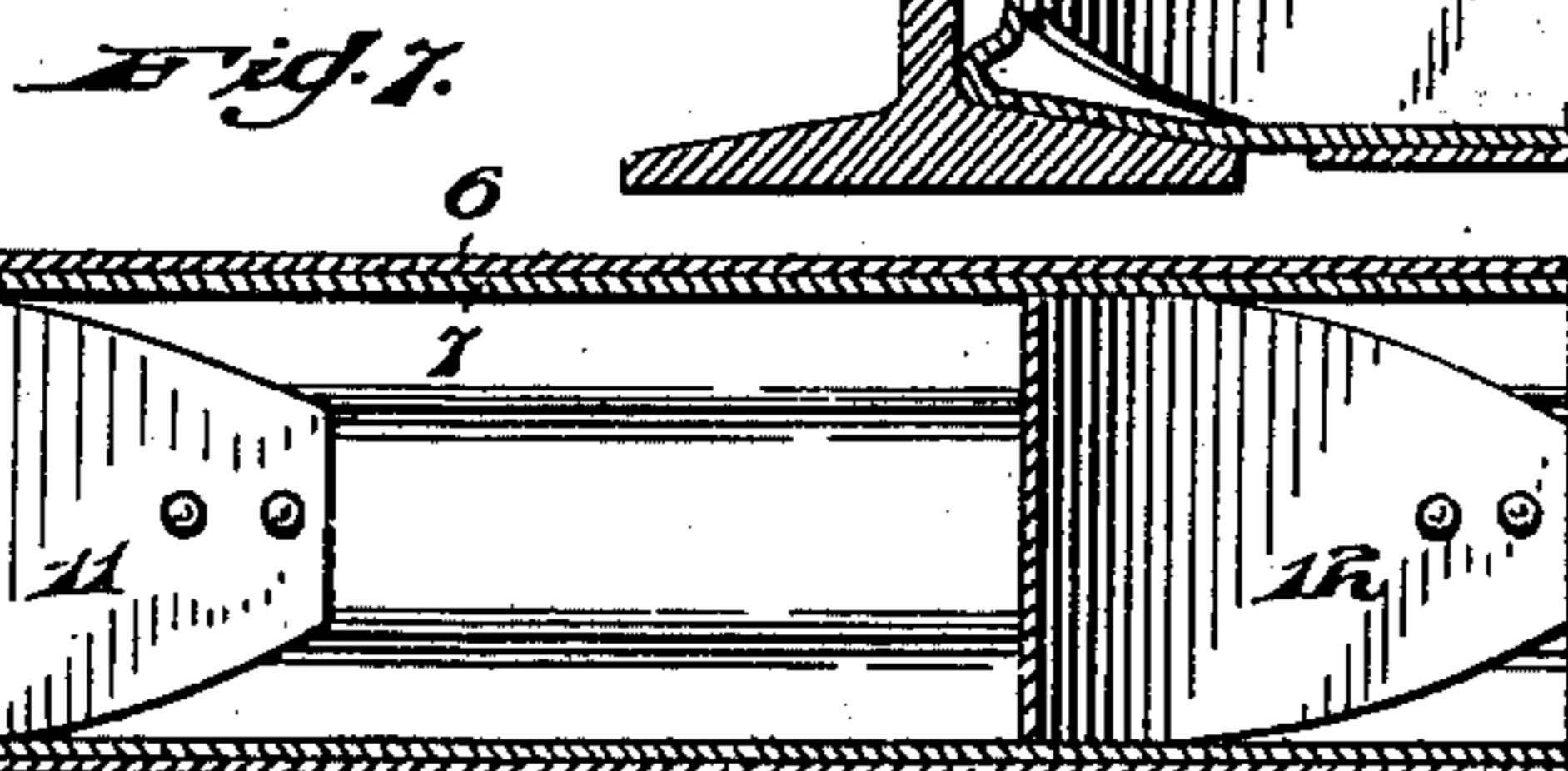
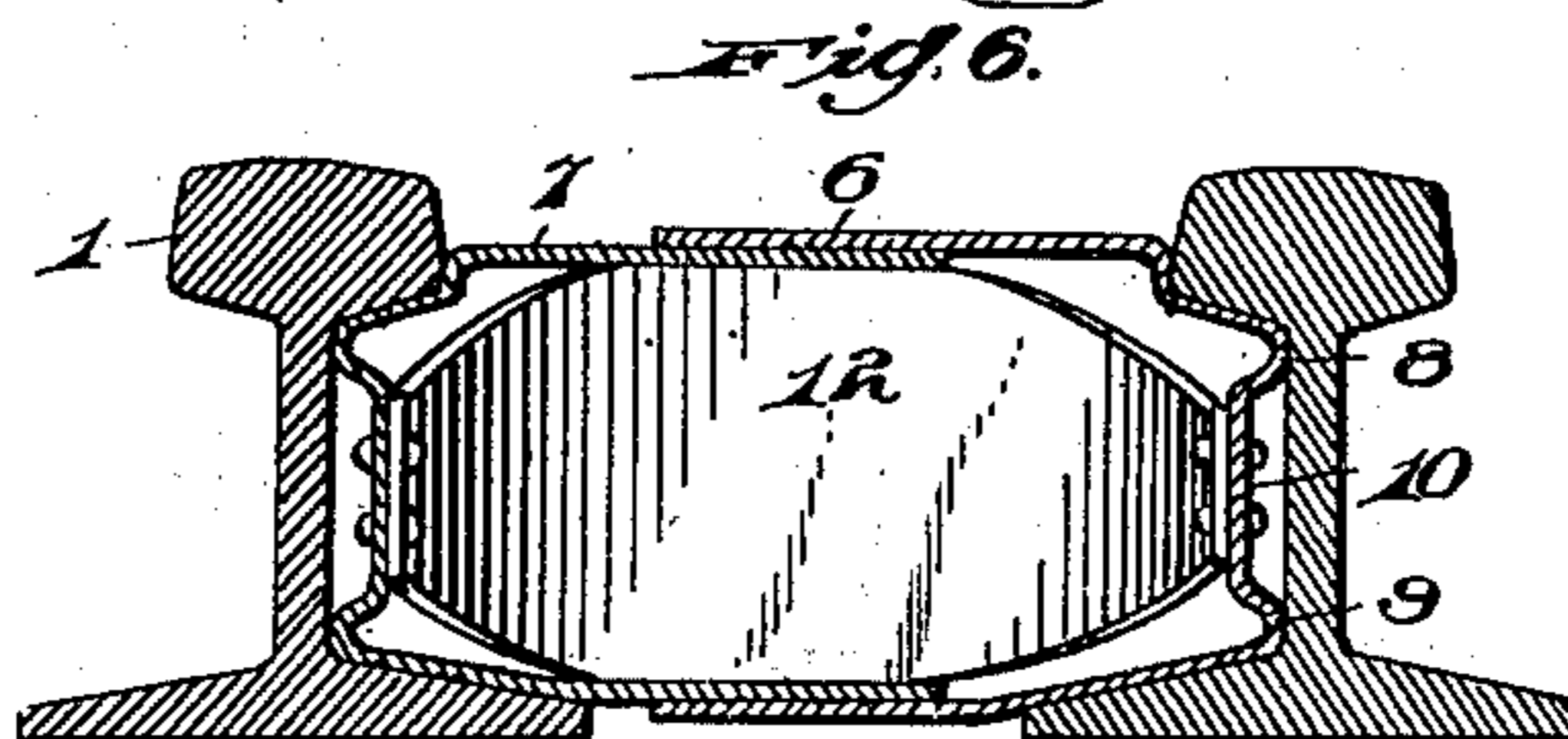
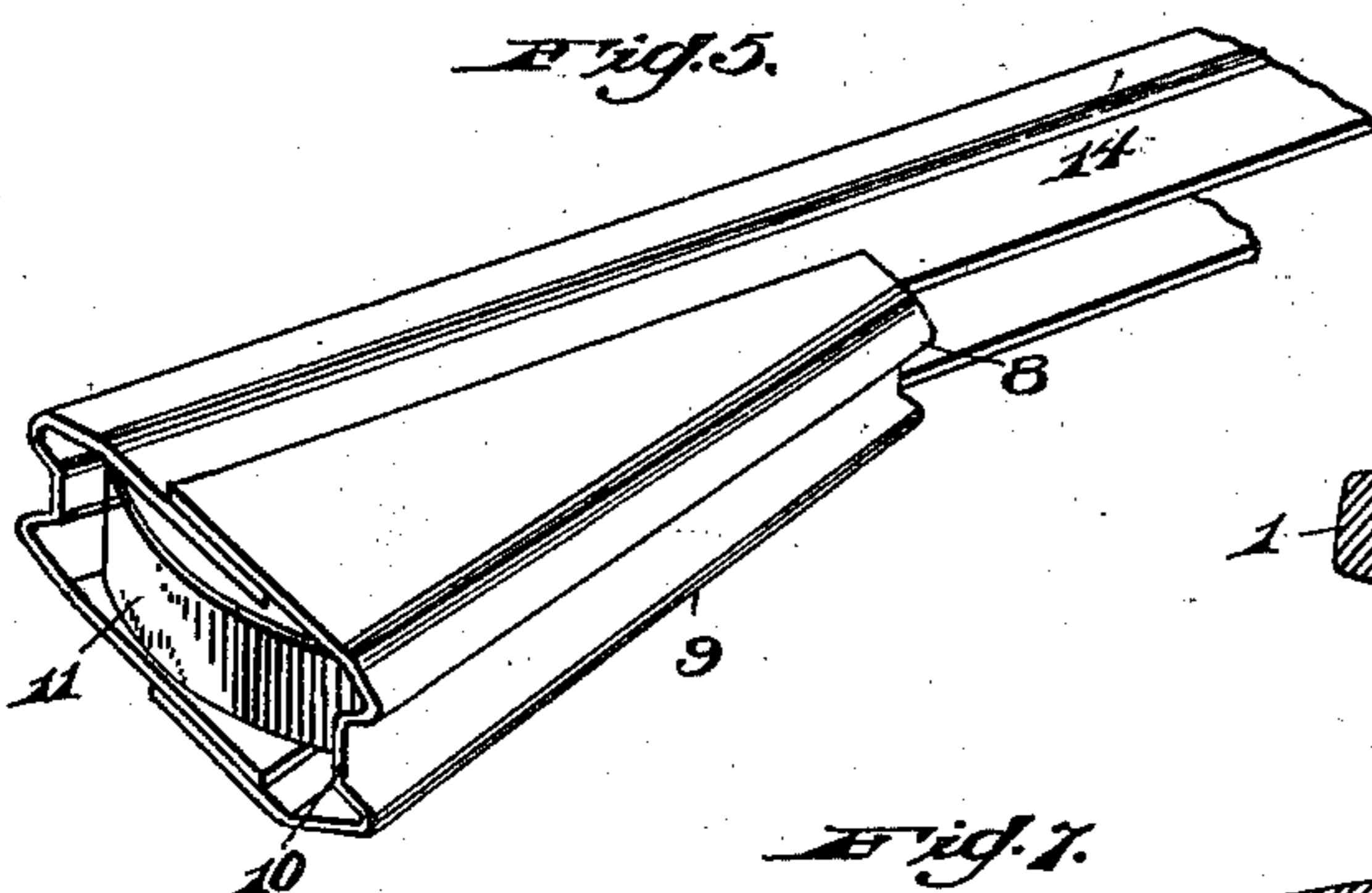
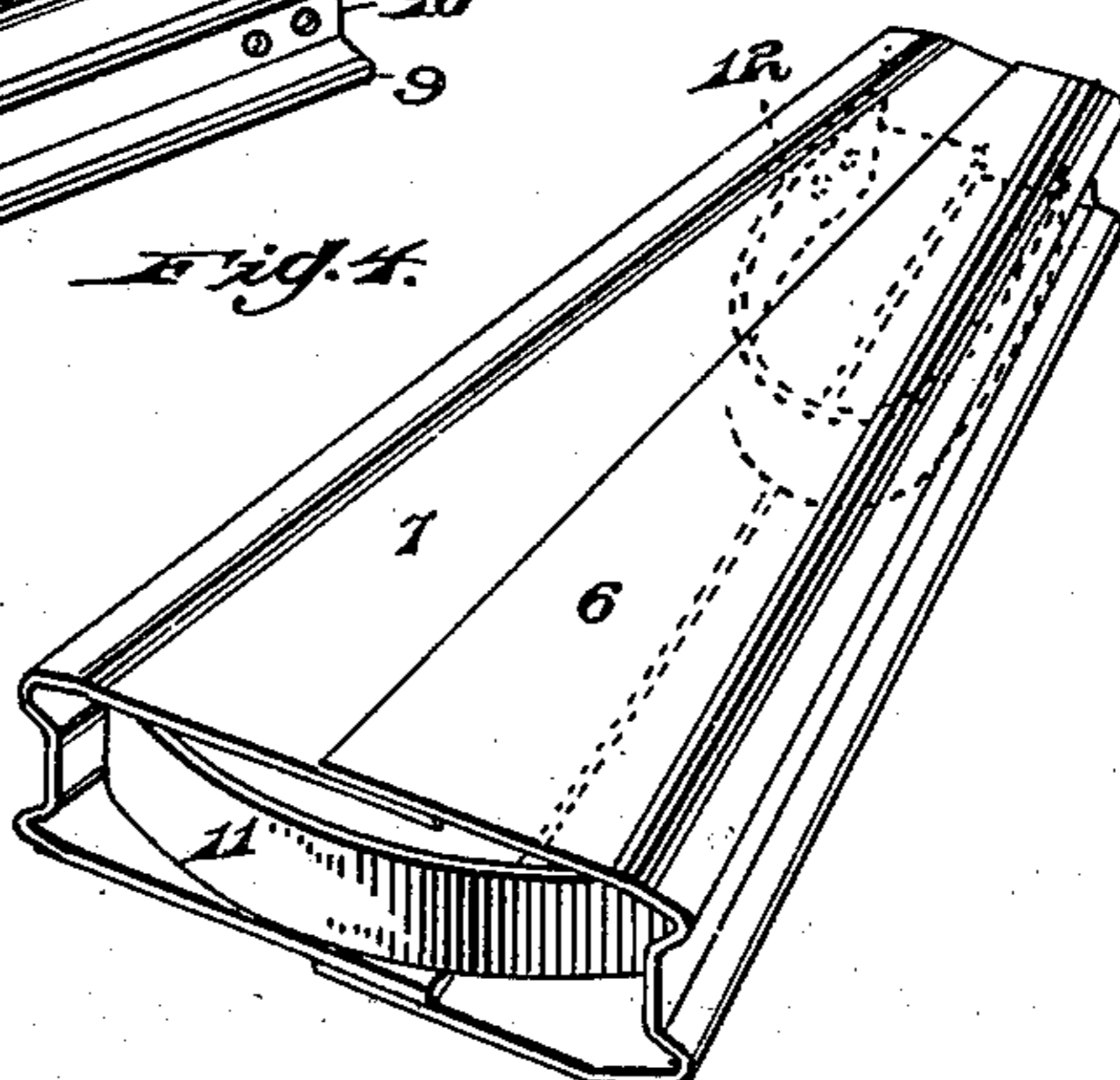
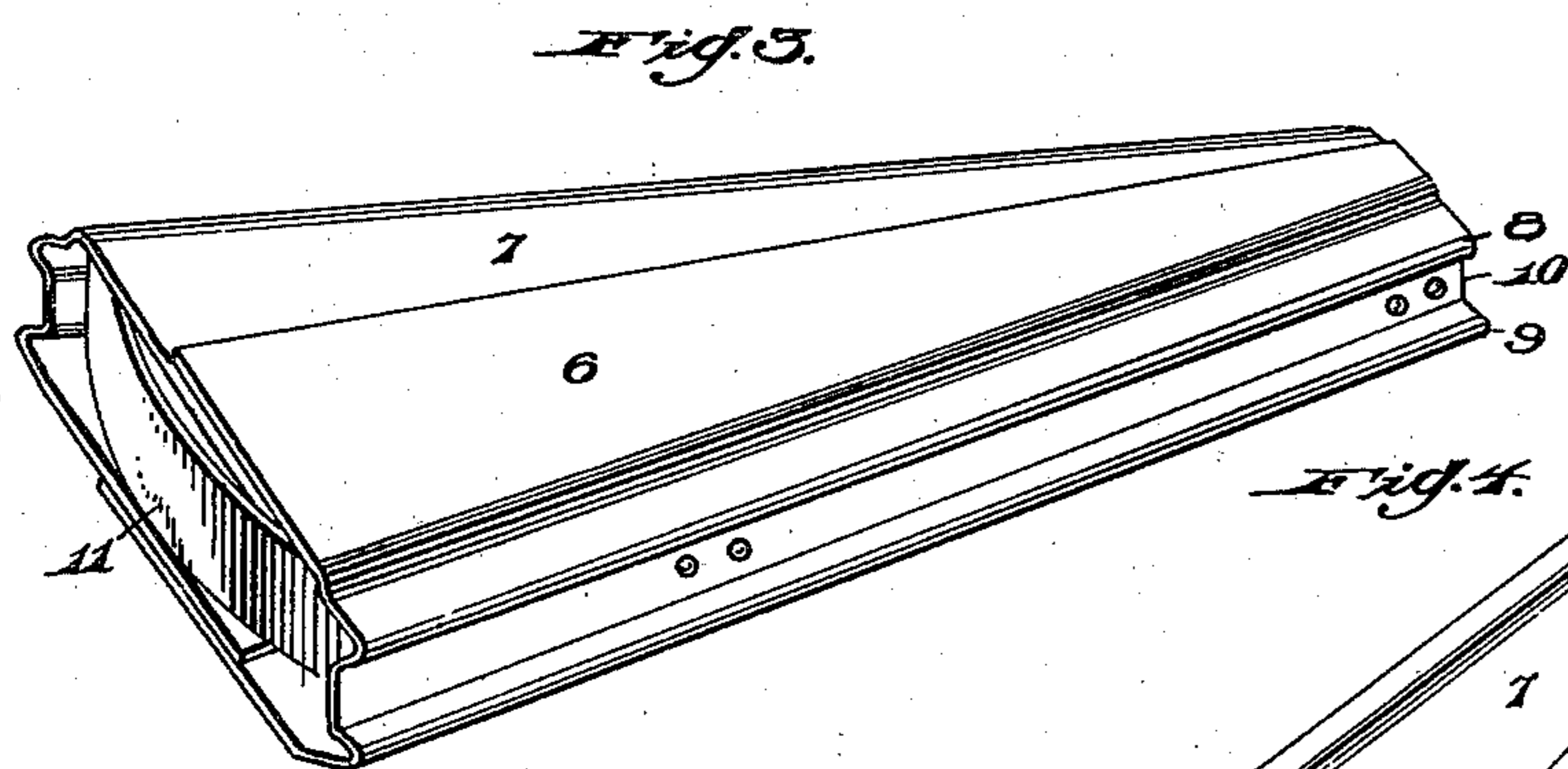
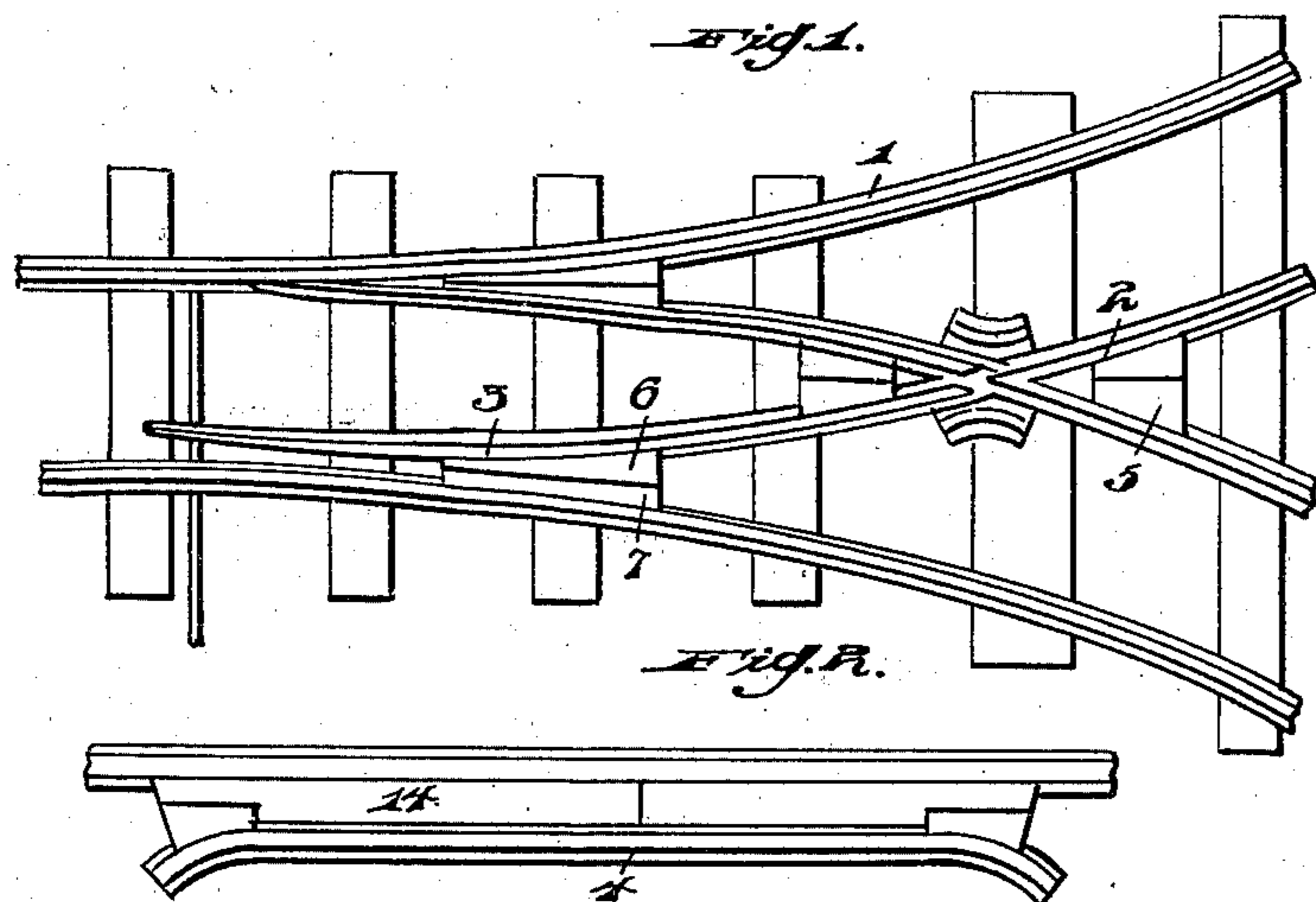
No. 692,169.

Patented Jan. 28, 1902.

E. TRUXALL.  
FOOT GUARD.

(Application filed June 10, 1901.)

(No Model.)



Witnesses:  
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# UNITED STATES PATENT OFFICE.

EPHRAIM TRUXALL, OF PITTSBURG, PENNSYLVANIA.

## FOOT-GUARD.

SPECIFICATION forming part of Letters Patent No. 692,169, dated January 28, 1902.

Application filed June 10, 1901. Serial No. 63,893. (No model.)

*To all whom it may concern:*

Be it known that I, EPHRAIM TRUXALL, a citizen of the United States of America, residing at Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Foot-Guards, of which the following is a specification, reference being had therein to the accompanying drawings.

10 This invention relates in general to certain new and useful improvements in foot-guards, and relates more particularly to guards for railway construction, and is particularly adapted to be employed at switches, frogs, 15 and points of intersection of the rails.

It is a well-known fact that heretofore many accidents have been caused on railways at switches and at the intersection of the rails, these parts being formed in a manner that 20 will allow the foot to easily wedge itself between the rails and at the approach of a train a serious accident is unavoidable.

It is the object of the present invention to effectually overcome and successfully avoid 25 accidents of this character.

The herein-described invention further aims to construct a guard of the above-described character that will be extremely simple in construction, strong, durable, and comparatively inexpensive to manufacture; furthermore, one that will be highly efficient in its use. 30

A still further object of the invention is to provide a guard that will adjust itself to the desired position and one that will be reversible, the adaptability and advantages of this feature being hereinafter fully explained. 35

The invention still further contemplates to construct a foot-guard that will assure a perfect fit between the rails and that will retain its proper position at all times; furthermore, providing novel means that will allow the proper adjustment of the device between the rails irrespective of the fish-plates and the 45 nuts and bolts extending through the same.

With the above and other objects the invention consists in the novel combination and arrangement of parts to be hereinafter more particularly described, and specifically 50 pointed out in the claims.

In describing the invention in detail reference is had to the accompanying drawings,

forming a part of this specification, and wherein like numerals of reference indicate corresponding parts throughout the several views, 55 in which—

Figure 1 is a top plan view of the rail-sections, showing my improved device secured thereto. Fig. 2 is a similar view of the rail and guard-rail provided with my improvement. Fig. 3 is an enlarged perspective view of my improved foot-guard. Fig. 4 is a similar view showing in dotted lines the position of the spring arranged within the foot-guard. Fig. 5 is a perspective view of my improved 60 foot-guard as constructed when applied to the guard-rail. Fig. 6 is a transverse vertical sectional view of a pair of rails with my improved foot-guard interposed therebetween. Fig. 7 is a longitudinal sectional view 70 of the foot-guard.

In the drawings the reference-numeral 1 indicates the rails, 2 the frogs, and 3 the switch.

The reference-numeral 4 indicates the guard-rail. 75

Referring to the foot-guard, the reference-numeral 5 indicates the wedge-shaped casing formed in two sections 6 and 7, the section 6 overlapping the upper and lower faces of the section 7, so that the latter section lies partially within the section 6. These sections 6 and 7 carry outwardly-extending flanges 8 and 9, formed integral therewith, thus forming a contracted portion 10 between the flanges 8 and 9. The sections 7 and 8 are secured together by means of flat retractile springs 11 and 12, these springs being secured to the inner face of the contracted portion 10 by suitable fastening means, such as rivets or bolts. The spring 11 is secured in the rear 85 end of the wedge-shaped sections 6 and 7, and the spring 12 is secured in the forward end of these sections. 90

The reference-numeral 14 represents the guard-rail extension of one of the sections 6 or 7, which construction is adapted to be particularly applied in the constructions shown in Fig. 2 of the drawings. 95

The springs 11 and 12 are curved and may be bent either inwardly or outwardly of the sections 6 and 7, but are preferably arranged as shown in Fig. 4 of the drawings. These springs are of approximately the same width as the interior of the casing formed by the 100

sections 6 and 7, the spring 11 serving to close the end of the casing, while both springs will form a brace between the upper and lower sections of the casing against any downward pressure that may be brought to bear upon the upper face of the guard.

The guard is preferably constructed of sheet-steel, but may be manufactured of any suitable material.

10 The operation of my improved device is as follows: The guard is placed at the intersection of the rails or at a switch or guard-rail in the position as shown in Figs. 1, 2, and 6 of the drawings. The section 7 may be depressed into the section 6 until the proper position or adjustment has been accomplished. 15 The lateral pressure of the springs 11 and 12 will assure a tight and perfect fit adjacent to the rails and will engage and firmly lodge themselves to the inner web and under side of the tread of the rail, as shown in Fig. 6 of the drawings. By means of the contracted portion 10, formed between the flanges 8 and 9 of the sections 6 and 7, the device may be 25 easily attached to the rails and will be allowed to clear the fish-plates and bolts and nuts securing the fish-plates or any other obstructions that might be adjacent to the inner web of the rail. The overlap and underlap of the 30 partially-closed section allows a free and easy movement of the inner section and, furthermore, allows an easy movement of the spring within the casing.

It will be seen that the device as constructed 35 may be applied to right or left hand frogs, as the same may be reversed or applied from either side, if desired.

The many advantages obtained by the use of my improved device will be readily apparent from the foregoing description, taken 40 in connection with the accompanying drawings.

It will be noted that various changes may be made in the details of construction without departing from the general spirit of my 45 invention.

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

50 1. In a foot-guard comprising a wedge-shaped casing formed of two sections, outwardly-extending flanges arranged on said sections, a contracted portion formed between said flanges, and springs arranged in said casing and connected to said contracted portion, 55 substantially as described.

2. In a foot-guard, the combination of a wedge-shaped casing formed of two sections, and a spring arranged in said casing closing 60 the end thereof, substantially as described.

3. In a foot-guard, the combination of two sections forming a wedge-shaped casing, a spring arranged in one end of said casing connecting said sections together and closing 65 the end thereof, and a spring arranged in said sections connecting the other end of said sections together, substantially as described.

4. In a foot-guard, the combination of two movable sections forming a wedge-shaped casing, outwardly-extending flanges formed integral with said sections, and a spring securing said sections together and closing the end thereof, substantially as described. 70

5. In a foot-guard, the combination of two movable sections forming a wedge-shaped casing, one of said sections overlapping and underlapping the other of said sections, and a spring arranged in said casing approximately the same width as the interior of the casing, substantially as described. 75 80

6. In a foot-guard, the combination of two movable sections forming a wedge-shaped casing, one of said sections overlapping and underlapping the other of said sections, and springs arranged in said casing approximately 85 the same width as the interior of the casing, substantially as described.

7. A foot-guard comprising a wedge-shaped casing formed in two equal sections the one of which overlaps and underlaps the other, 90 and flat bow-springs arranged within the casing, one of said springs closing the end of the casing, substantially as described.

8. A foot-guard comprising a substantially wedge-shaped casing, formed in two equal 95 sections the one of which overlaps and underlaps the other, combined with a flat bow-spring arranged within the casing at the larger end thereof, and connected to both sections, said spring closing the casing at the larger end, 100 substantially as described.

9. A foot-guard comprising a substantially wedge-shaped casing formed in two equal sections, one of which slides within the other, combined with a flat bow-spring arranged 105 within the casing and connecting the sections together, said spring acting to spread the sections and to form a brace therefor, substantially as described.

10. In a foot-guard, a casing formed of two 110 similarly-shaped sections, combined with a spring arranged within the casing and connected to each section, said spring closing the casing at one end and serving as a brace to the sections, substantially as described. 115

11. A foot-guard comprising a casing formed in two sections, each section having longitudinally-extending shoulders, and a spring connecting the sections and acting as a brace 120 therefor.

12. A foot-guard comprising a casing formed in two sections, each section having longitudinally-extending shoulders, a contracted web portion on each section, and a spring connected at its ends to the contracted web 125 portions of the casing, said spring engaging the upper and lower walls of the casing, as and for the purpose described.

13. A foot-guard comprising two sections, with a spring connecting the sections together, said spring acting to normally spread the sections and also to brace the same, substantially as described. 130

14. A foot-guard comprising two sections,

with springs connecting the sections together, the springs acting to normally spread the sections and to brace the same, substantially as described.

and acting as a brace to the casing, substantially as described. 10

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

EPHRAIM TRUXALL.

Witnesses:

JOHN NOLAND,

E. E. POTTER.

5 15. In a foot-guard, a casing capable of enlargement or contraction, and means within the casing for normally extending the same, the said means closing the casing at one end