(No Model.)

N. O. GOLDSMITH.

SPRING FROG.

No. 528,474. Patented Oct. 30, 1894.

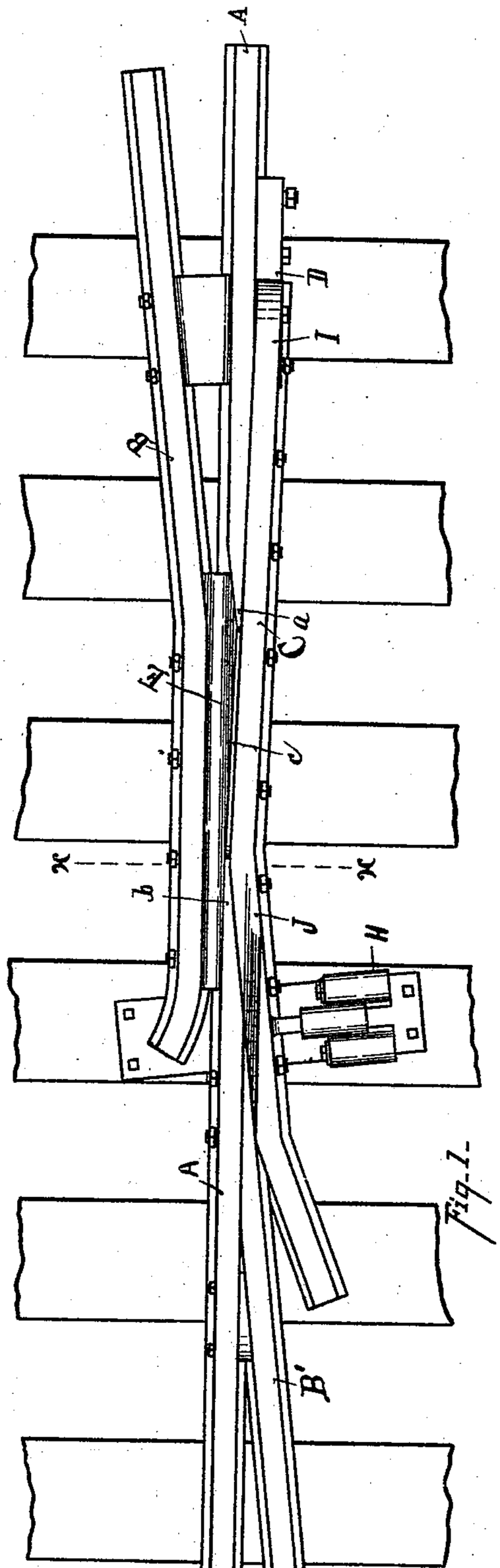

Fig. 1.

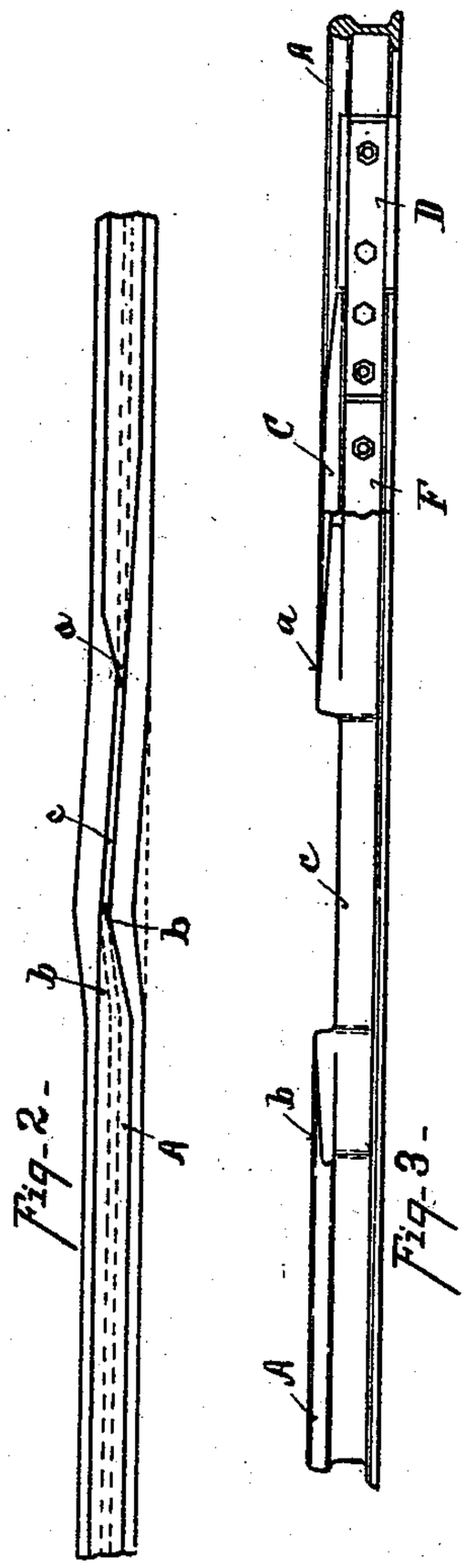

Fig. 2.

Fig. 3.

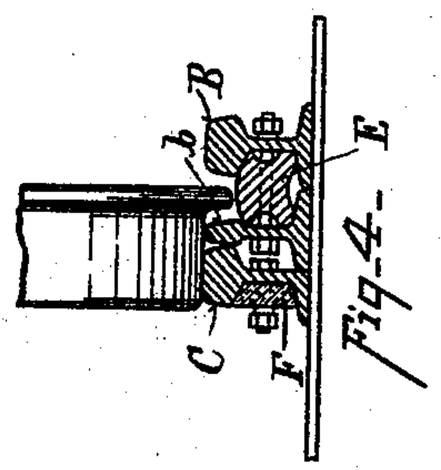

Fig. 4.

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UNITED STATES PATENT OFFICE.

NATHANIEL O. GOLDSMITH, OF CINCINNATI, OHIO, ASSIGNOR TO THE WEIR FROG COMPANY, OF SAME PLACE.

SPRING-FROG.

SPECIFICATION forming part of Letters Patent No. 528,474, dated October 30, 1894.

Application filed March 20, 1894. Serial No. 504,432. (No model.)

To all whom it may concern:

Be it known that I, NATHANIEL O. GOLDSMITH, a citizen of the United States, residing at Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Spring-Frogs, of which the following is a specification.

The object of my invention is to make a more reliable and durable spring frog. This is accomplished by employing a continuous rail for the main track and a section of the head being cut out at the point of cross over, the head beveled at each end of the notch and the web of the rail bent so as to bring the same centrally under the beveled points.

The various features of my invention are set forth in the description of the accompanying drawings making a part of this specification, in which—

Figure 1, is a top plan view of my improvement in position for use. Fig. 2, is a top plan view of the continuous rail. Fig. 3, is a side elevation of the main rail and a section attached to the wing rail. Fig. 4, is a section on line *x*, *x*, Fig. 1.

A represents the main track rail. A section of the head at the central portion is cut away and beveled at the ends to form points *a*, *b*.

B′ represents the point of the rail frog forming a continuation of the side track rail B. *c*, represents the web of the rail at this central point of the cross way, which is bent so as to bring it centrally under the extreme points *a*, *b*.

B represents the stationary crossing wing rail.

C, represents the spring wing rail.

E, represents a solid filling block for uniting the main rail A, to the side rail B.

The spring rail C is connected to the main rail A, by a fish bar joint D.

F, represents a strengthening bar bolted to the outside of the web spring rail C, in front of the fish bar joint D.

H, represents the ordinary springs attached to the friction plate and frog in the usual manner.

Attempts have been made to use a continuous main rail and a section of the head cut out to form points *a*, *b*, but the points in such cases are at one side and not vertically over the web of the rail, and have quickly broken down and become dangerous.

I construct my device as follows: I bend the web C, in the position shown in Fig. 2, then cut away a section of the head on the beveled lines leaving the central portion of the head to form the points, and thus obtain the requisite strength and durability. The head of the wing rail C, is inclined at the points I, J, so as to allow the over-lapping section of the wheel tread riding on the rail C, to go on and off the same without blow or jar.

Having described my invention, I claim—

1. In a spring frog a continuous main rail A, having a section of the head cut away and the web *c*, bent to come centrally under the points *a*, *b*, formed by cutting away the head of the main rail substantially as specified.

2. In a spring frog the continuous main rail A, having a section of the head cut away with the web *c*, bent to form a vertical support for the points *a*, *b*, in combination with the stationary wing rail B, and the spring wing rail C, substantially as specified.

3. The combination with the continuous main rail A, having bent web *c*, forming the vertical supports for the points *a*, *b*, of the stationary rail D, a solid filling E, said parts being secured together by through bolts substantially as specified.

4. In a spring frog, a main track rail having its continuous web bent to lie directly under two points formed by beveling its head at an angle substantially as specified.

In testimony whereof I have hereunto set my hand.

NATHANIEL O. GOLDSMITH.

Witnesses:

T. SIMMONS,

W. K. WOOD.