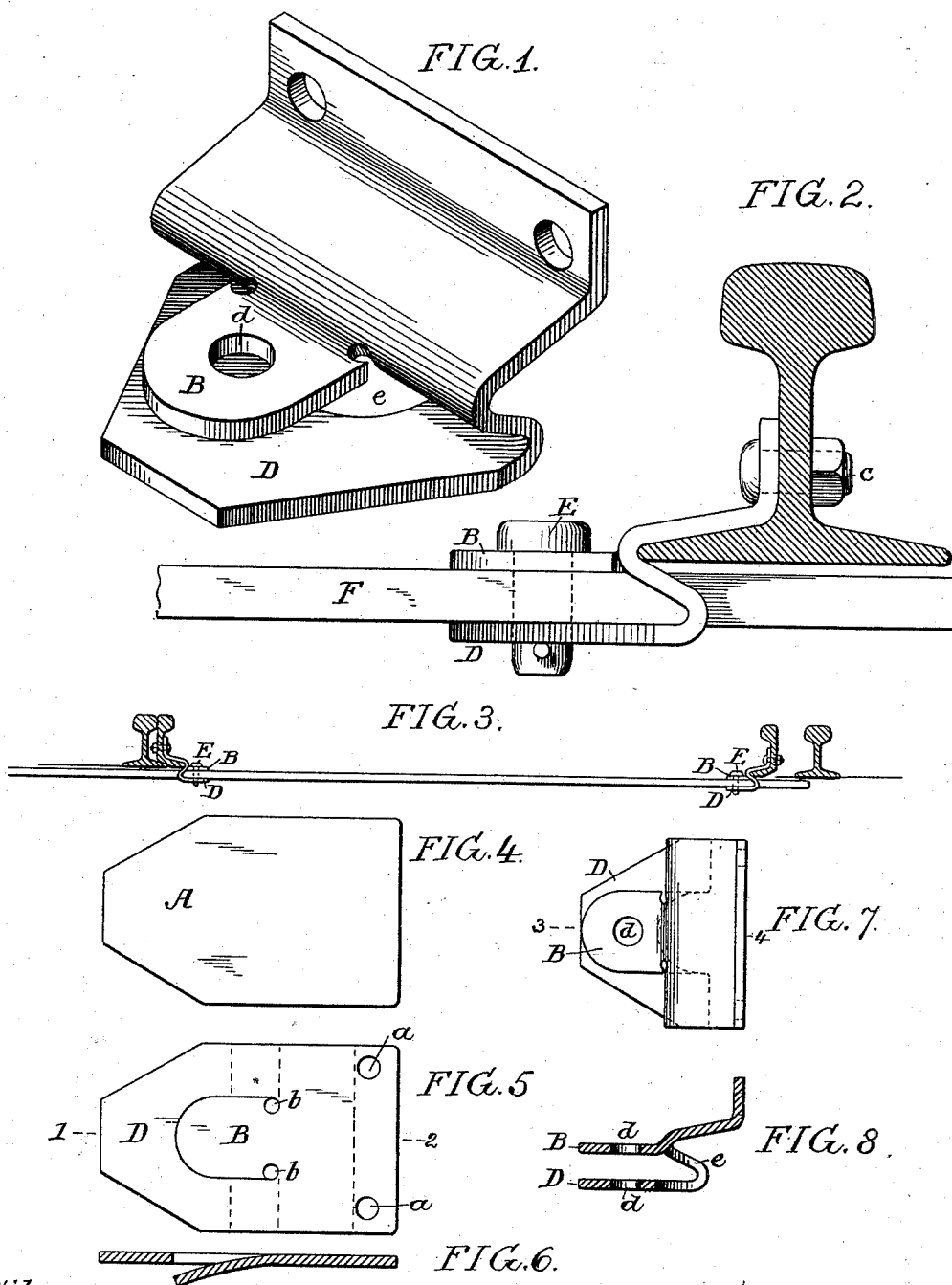


(No Model.)

F. S. GUERBER.
CLIP FOR RAILWAY SWITCH BARS.

No. 477,534.

Patented June 21, 1892.



Witnesses:
Fred H. Goodwin
William D. Bonney

Inventor:
Frederick S. Guerber
by his Attorneys
Hamm & Harman

UNITED STATES PATENT OFFICE.

FREDERICK S. GUERBER, OF ALLENTOWN, PENNSYLVANIA.

CLIP FOR RAILWAY-SWITCH BARS.

SPECIFICATION forming part of Letters Patent No. 477,534, dated June 21, 1892.

Application filed November 17, 1891. Serial No. 412,182. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK S. GUERBER, a citizen of the United States, and a resident of Allentown, Lehigh county, Pennsylvania, have invented certain Improvements in Clips for Railway-Switch Bars, of which the following is a specification.

The object of my invention is to form from a single piece of metal a clip for uniting the movable switch-rails to the operating-bar or tie-bars. This object I attain in the following manner, reference being had to the accompanying drawings, in which—

Figure 1 is a perspective view of my improved clip. Fig. 2 is a section through a rail, showing the clip attached thereto. Fig. 3 is a transverse section through the rails of a switch. Fig. 4 is a plan view of the blank from which the clip is made. Fig. 5 is a plan view showing the punched and cut blank. Fig. 6 is a section on the line 1 2, Fig. 5. Fig. 7 is a plan view showing the blank bent into shape. Fig. 8 is a section on the line 3 4, Fig. 7.

A is the blank, made of suitable wrought metal of the required thickness, width, and length. In this blank I punch two holes *b b*, and in some instances I punch at the same time the holes *a a* at one end of the blank, although I prefer to punch these holes after the clip has been shaped. The holes *a a* receive the securing-bolts *c c*, by which the clip is attached to the rail. The holes *b b* are punched near the center of the blank, as shown in Fig. 5, and from these holes I make a U-shaped cut by punching, the part B being bent down, as shown in Fig. 6, when the blank is bent. The portion cut out forms the upper bearing B of the clip and the portion beyond the cut forms, when the blank is bent, the lower bearing D.

The open space *e* in the clip, from which is bent the upper bearing B, serves as a passage for the operating-bar or the tie-bar, as readily seen in Figs. 2 and 3. When the clip is bent, as shown in Fig. 8, holes *d d* are drilled or punched in the bearings B D for the passage of the pin E, which secures the operating or tie bar F to the clip. The bar is situated between the two bearings, as shown.

By having the opening *e* in the position shown I can punch the pin-hole in the tie or operating bars some distance from the end and allow the end to pass through the opening *e*, thus giving greater strength to the bar and not requiring the neat fit necessary in attachments of the usual construction. The operating-rod, moreover, can pass through one of the clips from the lever or crank directly to the opposite rail and the tie-bars can extend beyond the switch-rails and under the permanent rails, thus holding the switch-rails down.

The above-described clip is economically and readily manufactured, there being practically no waste of material.

I claim as my invention—

1. A clip for uniting switch-rails to the connecting or operating bars, made from a single piece of metal cut to form upper and lower bearings B and D for the connecting-pin, the portion B being cut from the center of the blank and the portion D being formed of the material beyond the cut, said portion D being bent so as to align with the portion B, substantially as specified.

2. The combination, in a clip made from a single piece of metal bent into shape, having a securing-flange, an upper bearing cut from the center of the blank and a lower bearing having an ogee bend to bring it in line with the upper bearing, the open space left by the upper bearing serving as a passage for the operating-bar, substantially as specified.

3. A blank for making clips for uniting switch-rails to their bars, said blank having holes *b b* and having a U-shaped slot extending from one hole to the other, the center portion of the blank forming one bearing and the outer portion the other bearing, substantially as set forth.

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

FREDERICK S. GUERBER.

Witnesses:

HENRY HOWSON,
EUGENE ELTERICH.