

(No Model.)

J. CLARK.

METALLIC RAILWAY TIE AND CHAIR.

No. 358,144.

Patented Feb. 22, 1887.

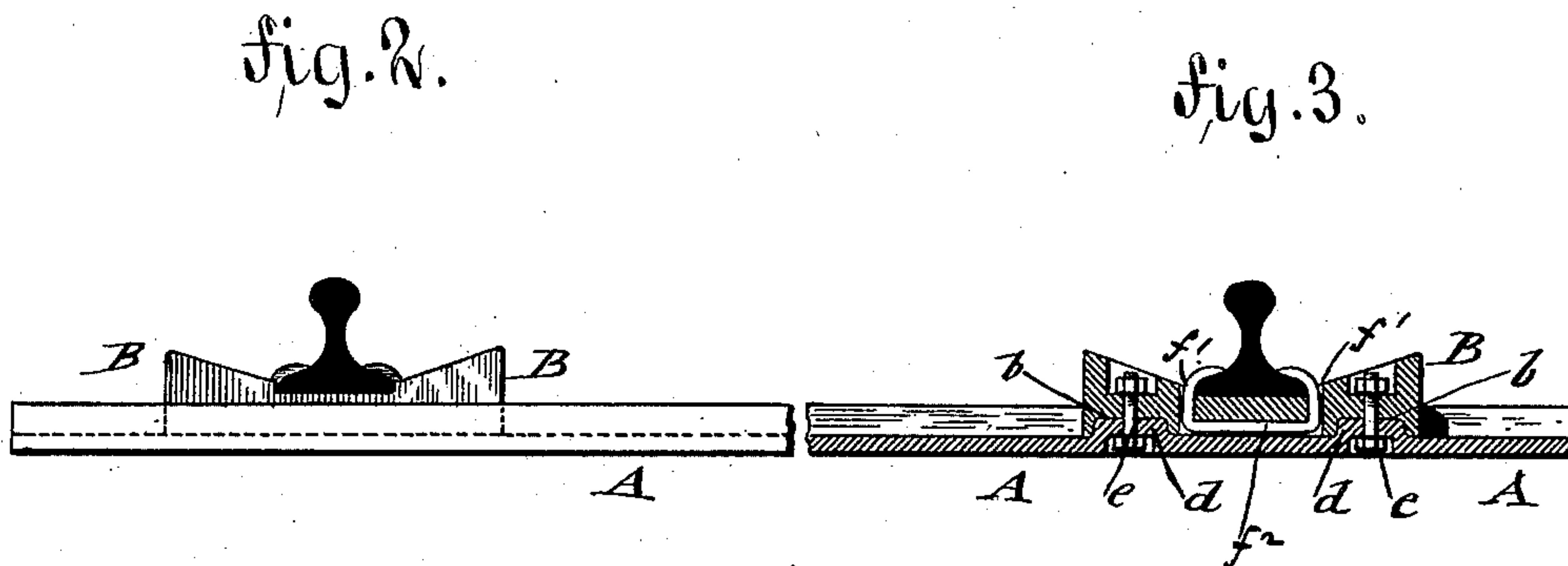
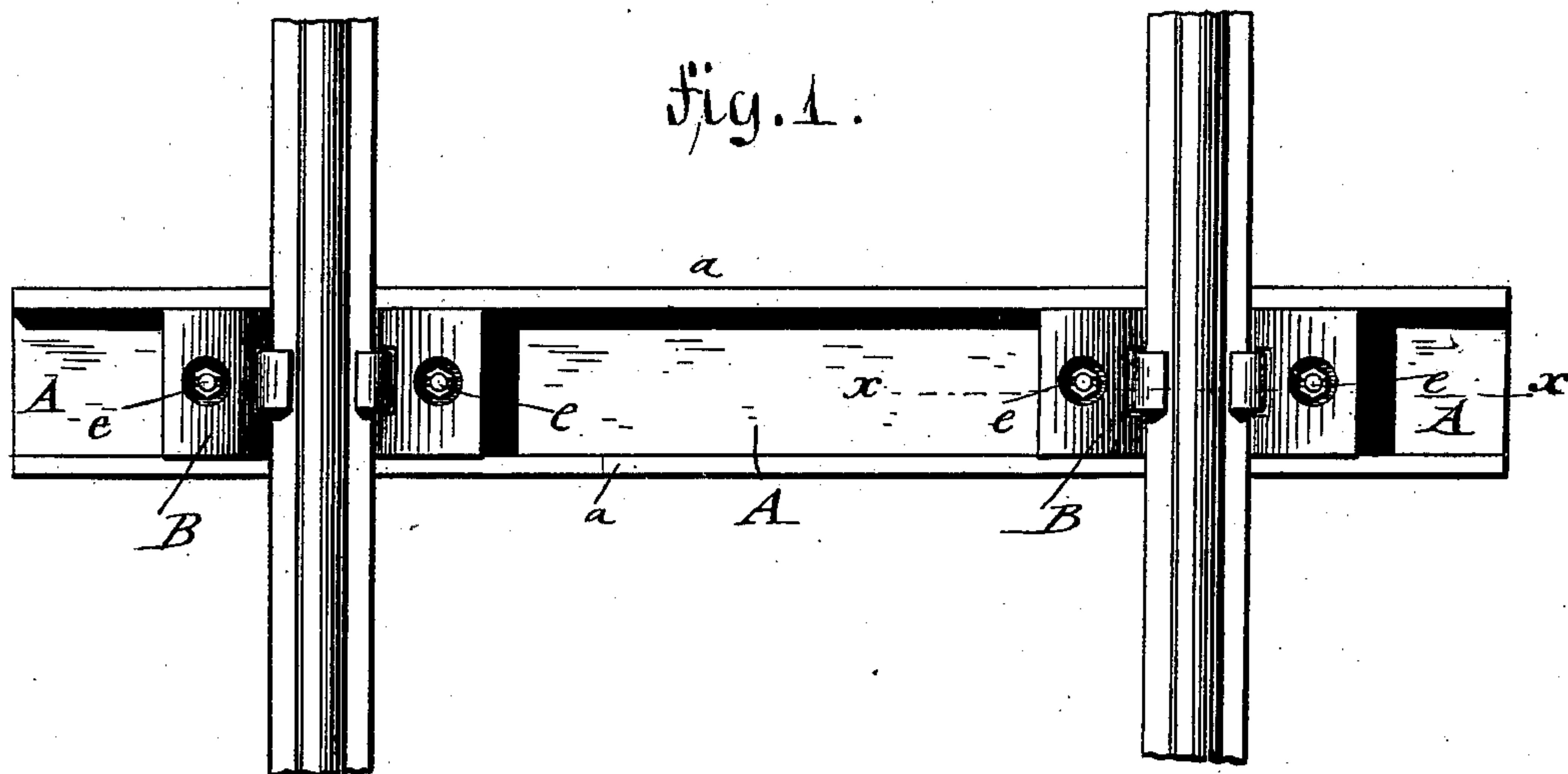
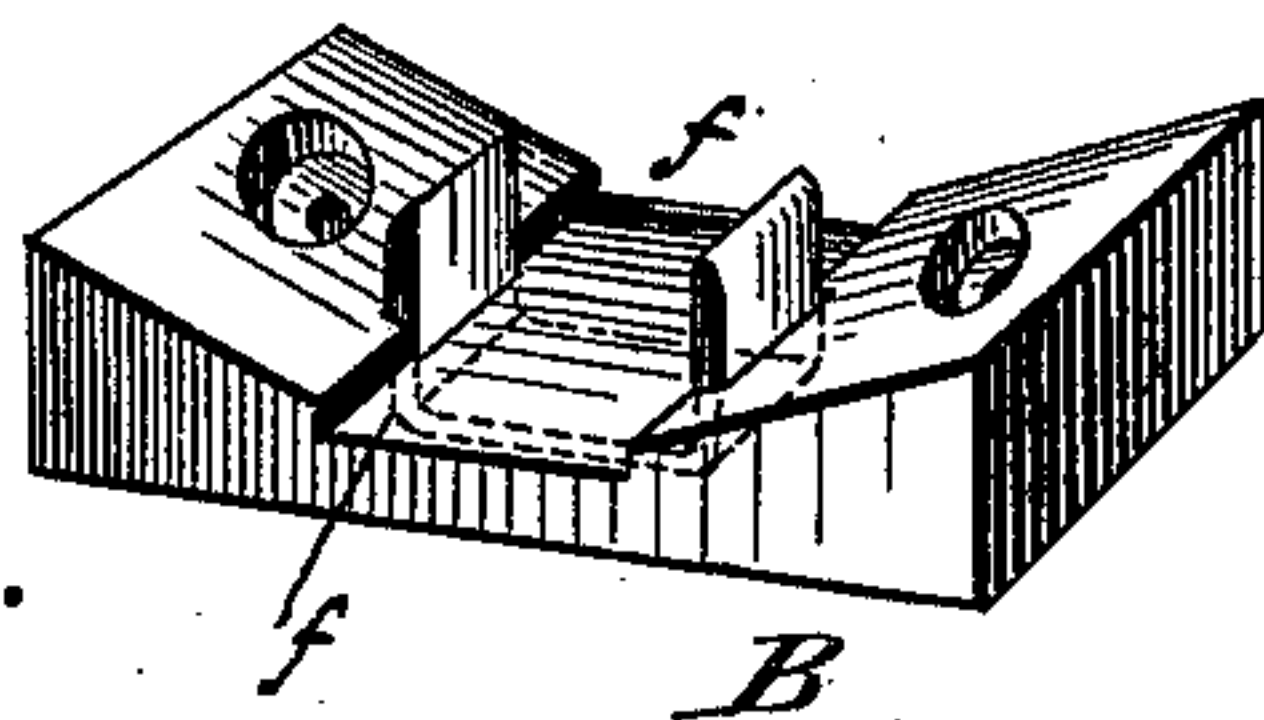


Fig. 4.

WITNESSES:

B



INVENTOR

Joseph Clark

BY

Goepert Regeuer

ATTORNEYS.

UNITED STATES PATENT OFFICE.

JOSEPH CLARK, OF BROOKLYN, NEW YORK.

METALLIC RAILWAY TIE AND CHAIR.

SPECIFICATION forming part of Letters Patent No. 358,144, dated February 22, 1887.

Application filed November 26, 1886. Serial No. 219,866. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH CLARK, of Brooklyn, in the county of Kings and State of New York, have invented certain new and
5 useful Improvements in Metallic Railway Ties and Chairs, of which the following is a specification.

This invention relates to an improved metallic railway tie and chair of simple and
10 cheap construction; and the invention consists of a railway-tie which is formed of a flanged base-plate having perforated bosses, and of a chair fitted by bottom recesses to said bosses, said chair being provided with vertical slots,
15 and a bottom recess connecting said slots through which a U-shaped band or clasp is passed, the ends of which are bent so as to clasp the base of the rail.

In the accompanying drawings, Figure 1 represents a plan of my improved metallic railway tie and chair. Fig. 2 is a side elevation of the same; Fig. 3, a vertical transverse section on line $x x$, Fig. 1; and Fig. 4 is a perspective
20 view of the chair with the rail-clasping band passed through the same before bending it.

Similar letters of reference indicate corresponding parts.

Referring to the drawings, A represents a railway-tie, which is made of a plate of
30 wrought-iron, that is provided at both edges with longitudinal flanges a . The metallic tie A is provided at each end, at proper distances from each other, with chairs or blocks B, of cast-iron or cast steel, which are fitted by bottom recesses, b , on bosses d of the tie A, said
35 bosses and chairs being perforated in line with each other. The chairs B are rigidly connected to the tie A by screw-bolts e , the heads and nuts of which are countersunk in the recesses formed, respectively, by the bosses at the
40 under side of the tie and in the top surfaces of the chairs, as shown clearly in Figs. 3 and 4.

The middle part of each rail chair or block B is depressed, so as to form a seat for the base
45 of the rail, and provided at both sides of said depression f with parallel vertical slots f' , and with a transverse bottom recess, f'' , connecting said slots. A U-shaped band, C, of wrought or malleable iron, is passed through
50 the slots f' , and the ends of the same bent over the base of the rail, so as to retain the same in place of spikes. The transverse middle portion of the retaining-band C is located in the

bottom recess, f'' , flush with the bottom of the chair B, and is firmly held in position by the
55 tie A, the slots f' , and the recess f'' between the slots.

The rail is quickly applied to the chair by bending the ends of the bands C over the base
60 of the same, after the chairs have been applied to the ties, by means of the connecting-bolts.

The faces of the chair B at both sides of the rail are inclined toward the base of the same, so as to throw the wheels of the car toward
65 the base of the rails in case of derailment.

A simple, strong, and durable railway tie and chair are obtained, which require very little hand-work in manufacturing, as the tie
70 itself is rolled and the bosses and their perforations are produced by hydraulic punching-dies, while the chairs are cast and require no special hand-fitting.

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

1. The combination, with a flanged metallic base plate or tie having perforated bosses,
75 of chairs or blocks having bottom recesses, fastening-bolts for attaching said chairs or blocks to the base-plate, and a rail-clasping band passed through slots of the chairs at both
80 sides of the rail-base and bent over the base of the rail, substantially as set forth.

2. The combination of a flanged metallic tie or base-plate having perforated bosses,
85 bolts for connecting the chairs and tie, the heads and nuts of said bolts being countersunk, respectively, in the base-plate and chair, and a band the bent ends of which clasp the base of the rail, said band being located in vertical
90 slots and a transverse bottom recess of the rail, substantially as set forth.

3. The combination of a base-plate or tie having perforated bosses at both sides of the rail, a chair having bottom recesses on said
95 bosses, and fastening screw-bolts for connecting the base-plate and chair, the heads and screw-nuts of said bolts being countersunk, respectively, into recesses of the base-plate and chair, substantially as set forth.

In testimony that I claim the foregoing as
100 my invention I have signed my name in presence of two subscribing witnesses.

JOSEPH CLARK.

Witnesses:

PAUL GOEPEL,
SIDNEY MANN.