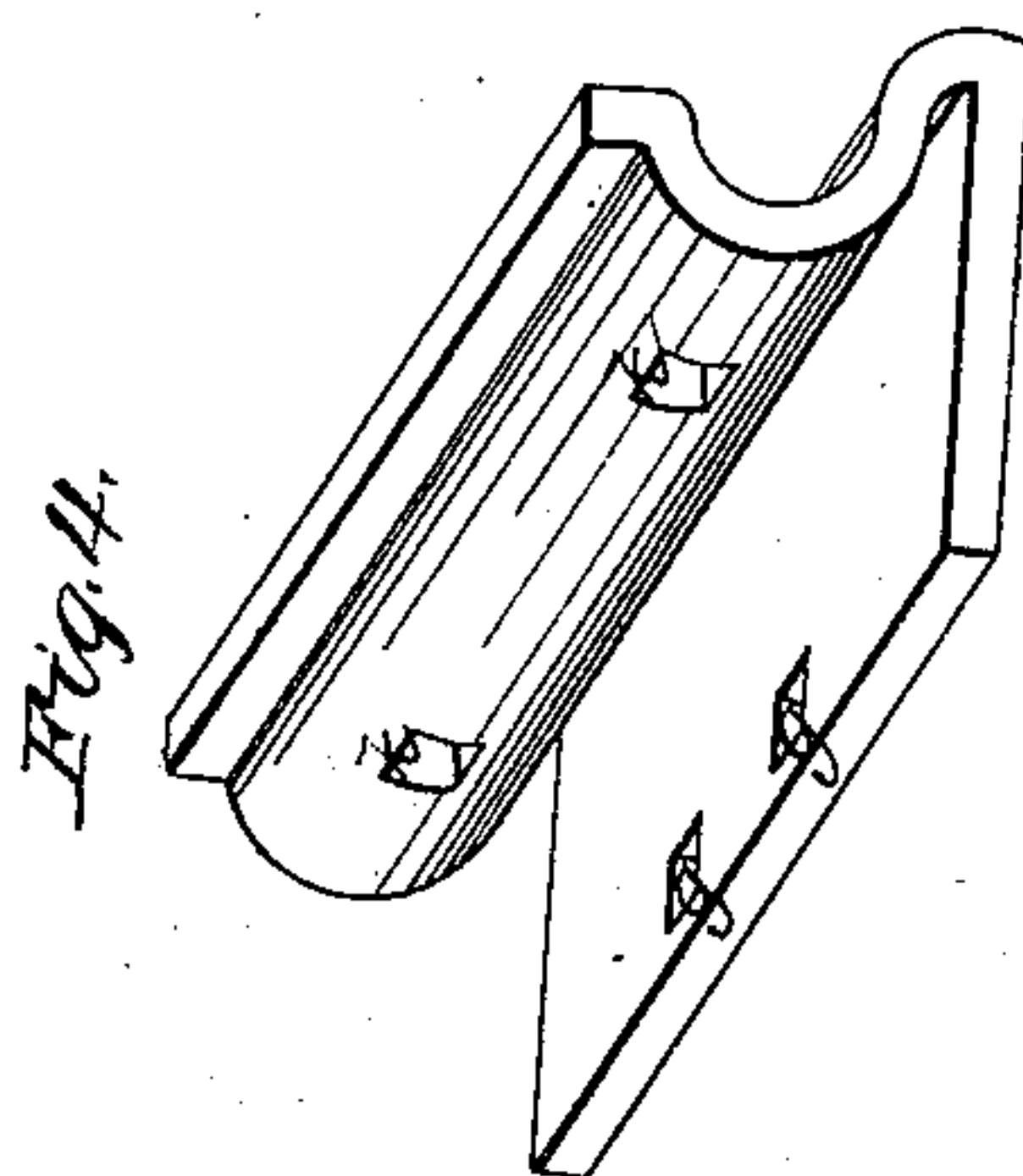
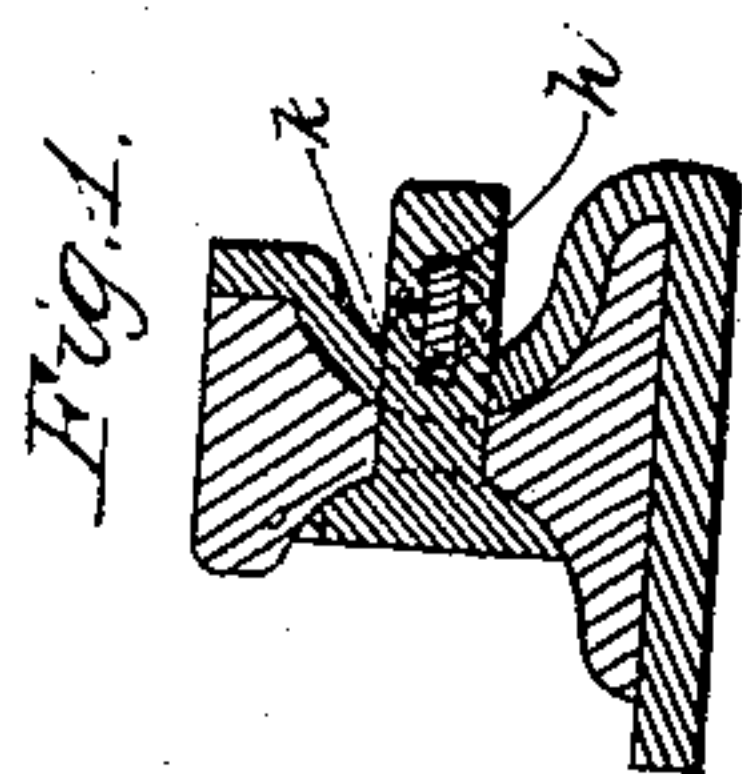
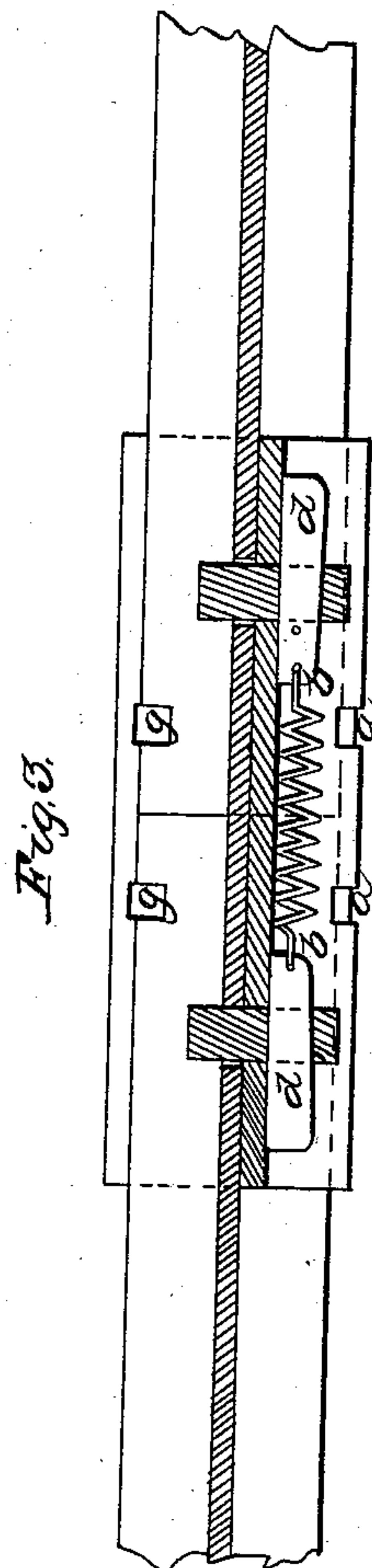
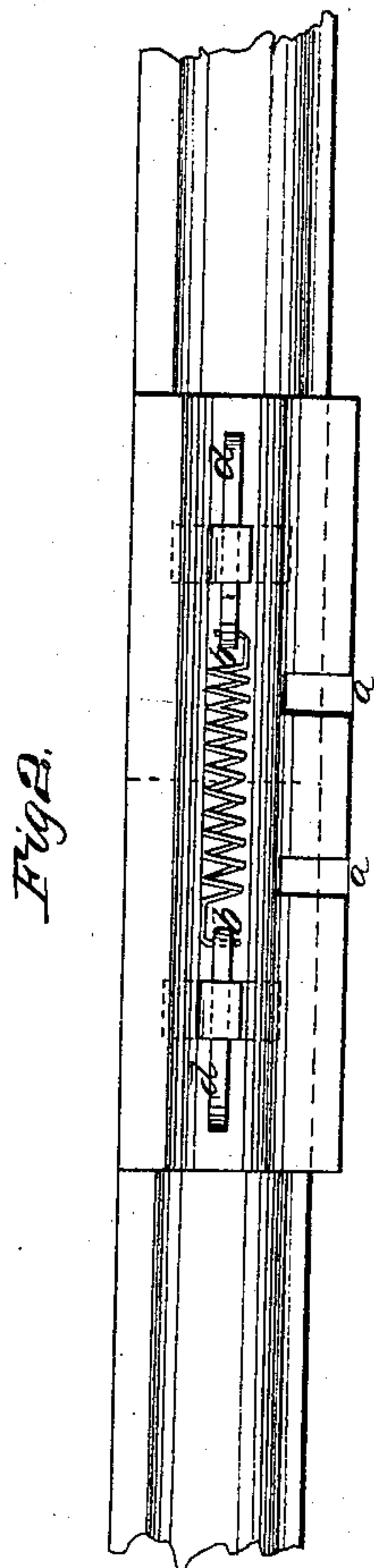


M. W. Knox.

Railroad Rail Joint.

N^o 40,567.

Patented Nov. 10, 1863.



WITNESSES:
H. S. Shaw
Geo. H. Hays

INVENTOR:
Melom W. Knox

UNITED STATES PATENT OFFICE.

MELVIN W. KNOX, OF SHERIDAN, NEW YORK.

IMPROVEMENT IN SECURING COMBINED RAILROAD CHAIR AND SPLICE-PIECE.

Specification forming part of Letters Patent No. 40,567, dated November 10, 1863.

To all whom it may concern:

Be it known that I, MELVIN W. KNOX, of the town of Sheridan, (Silver Creek P. O.,) in the county of Chautauqua and State of New York, have invented a new and Improved Railroad Chair and Coupling; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference thereon.

The nature of my invention consists in making a railroad chair and coupling combined together, which shall firmly support the ends of the rails, couple them together with the bolts and keys secured by a spring in such a manner that the concussion of trains of cars in passing over the rails will not only not loosen the fastenings by which the chair and rails are held and coupled, but will be constantly tightening them, as is herein more fully described.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

I construct the chair and coupling out of wrought-iron about one-half of an inch thick, about one foot long, and sufficiently wide to form the base of said chair, upon which the ends of the rails rest, and to extend up on the outside to the upper surface of the rails, in the form represented in Figure 4 of the drawings. The base is sufficiently wide to project inside of the rail, in which holes are made, that the same may be spiked to the tie on which it rests, and on the outside notches are made for the same purpose, as shown in Fig. 3, by letters *a a*. Two oblong holes, *k k*, Fig. 4, are made horizontally in the side of each railroad chair, about four inches from each end, in which bolts are fitted on the upper and lower side about three-quarters of an inch square. The holes should be about one inch long longitudinally, to allow for the play of the bolts due to the expansion and contraction of the rails, and holes made in the rails to receive said bolts, to which they should be well fitted. The said bolts have an oblong

slot extending and of sufficient length that a portion of the same shall be inside of the flange of the chair, which is fitted against the side of the rails, to allow the key to hold firmly and press against said chair, and adjust and keep the same closely fitted to the outside of the rails. This slot in the bolt is shown by letter *h*, Fig. 1, as extending inside of the chair. A flat iron key, two or three inches long, is fitted in this slot in the bolt, whose inner edge is straight, so as to form a continuous bearing against the hollow part of the chair, or where the bolts pass through, and the outer edge is made tapering, and small vertical holes are made in the small end to receive the ends of a spring. The keys *d d* of the two bolts are held by a spiral or any other equivalent spring, whose two ends are inserted in the holes in the small end of the keys, which spiral or coiled spring, made of steel or other suitable material, serves not only to hold the keys in place, but is constantly tightening up the keys upon the concussion of the rails by the cars, so that the pressure or jar or concussion of trains of cars in passing over the rails secured by my device will not only not loosen the fastenings, but will constantly strengthen and tighten them.

The tension of the spring may be increased at any time, whenever necessary, by placing the ends thereof in holes in the key nearer to the bolt.

The chair may be double-bolted, if necessary, and have two spiral springs to connect and hold the keys.

Having thus described my invention and its construction and operation, I claim—

A railroad chair and coupling combined, together with the bolts and keys secured by a spring, substantially as described, and for the purposes set forth.

MELVIN W. KNOX.

In presence of—

W. S. SHAW,

GEO. H. HUGHSON.