

(No Model.)

C. F. HERBST.
RAILROAD TIE.

No. 253,381.

Patented Feb. 7, 1882.

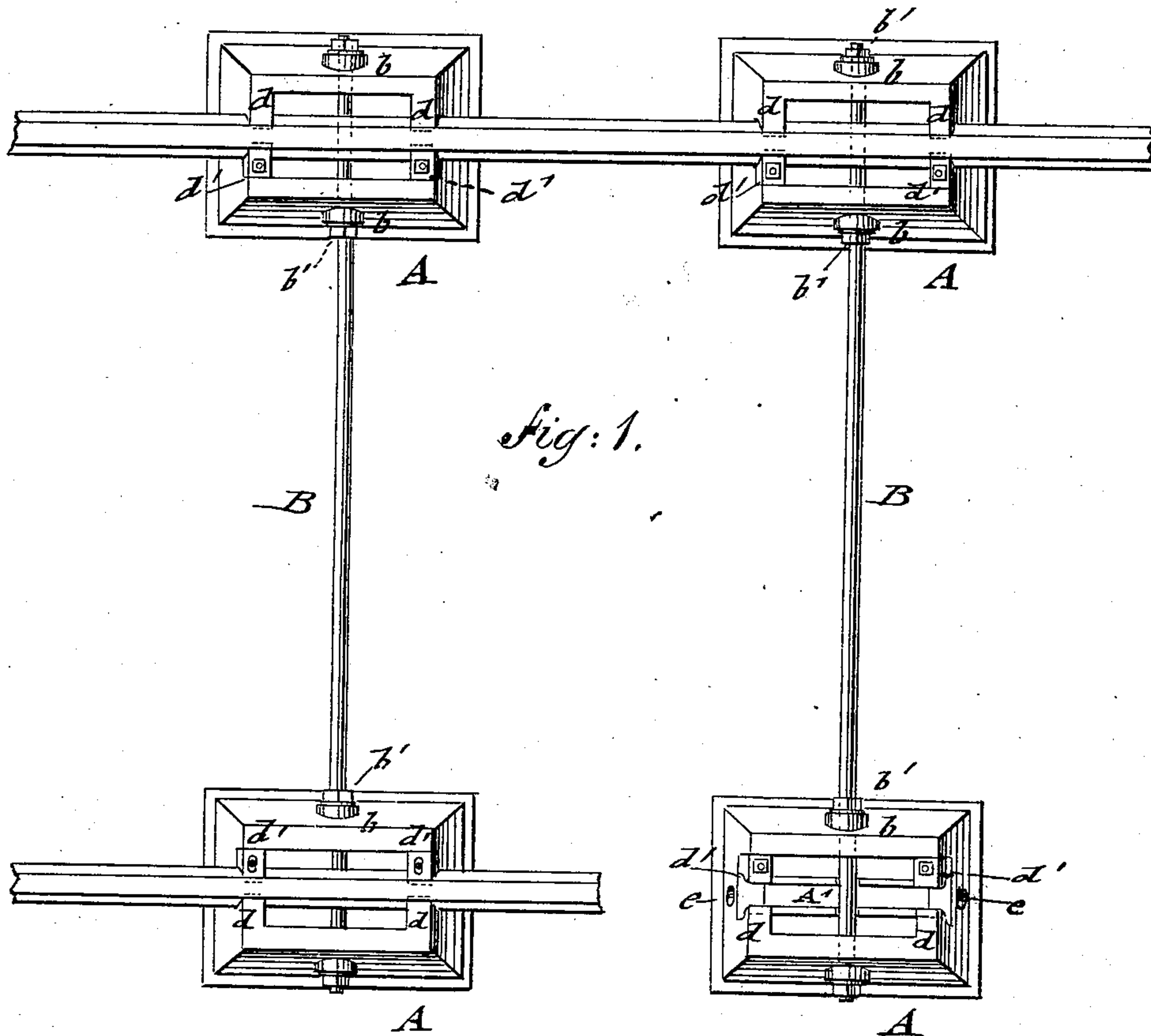


Fig: 1.

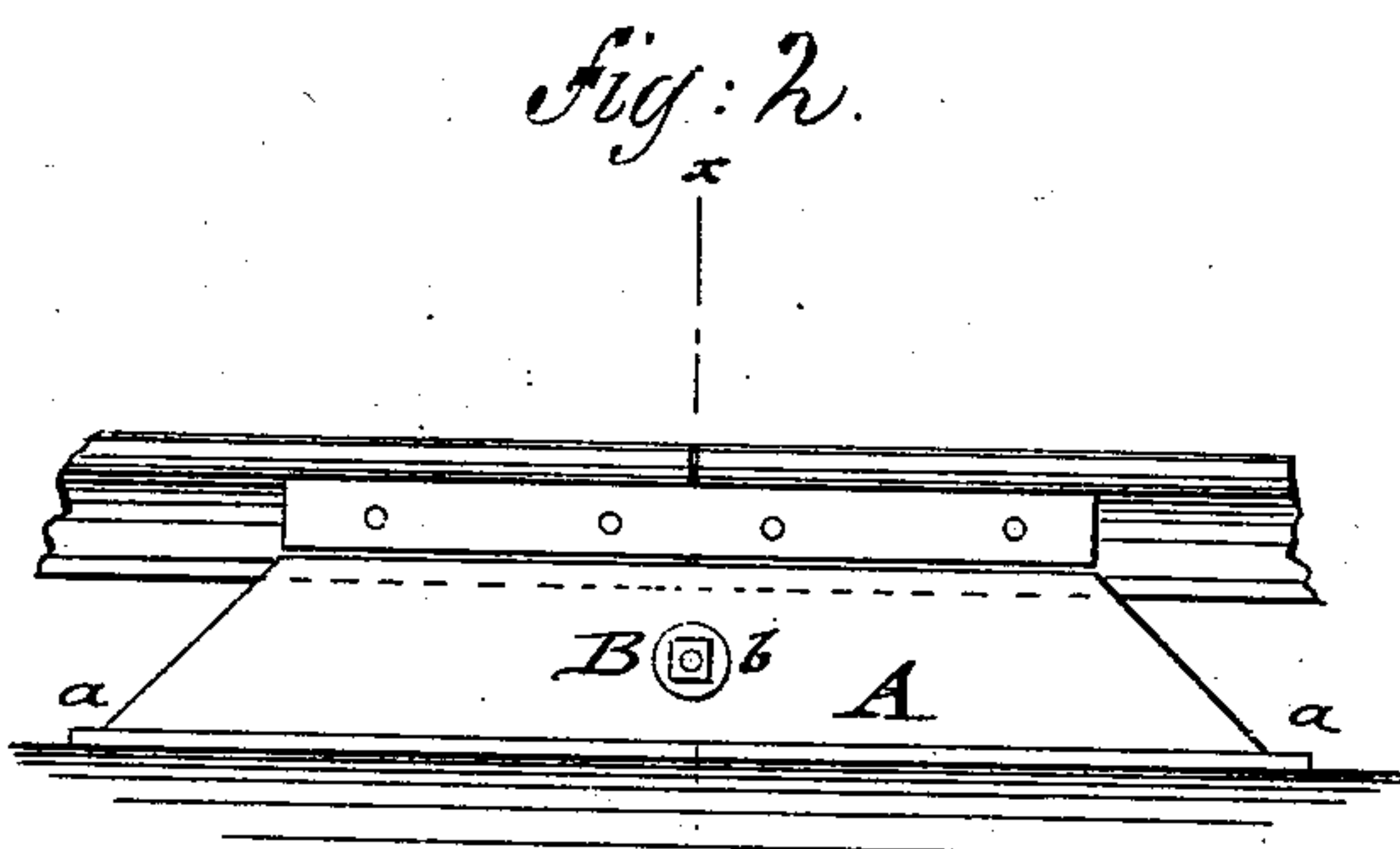


Fig: 2.

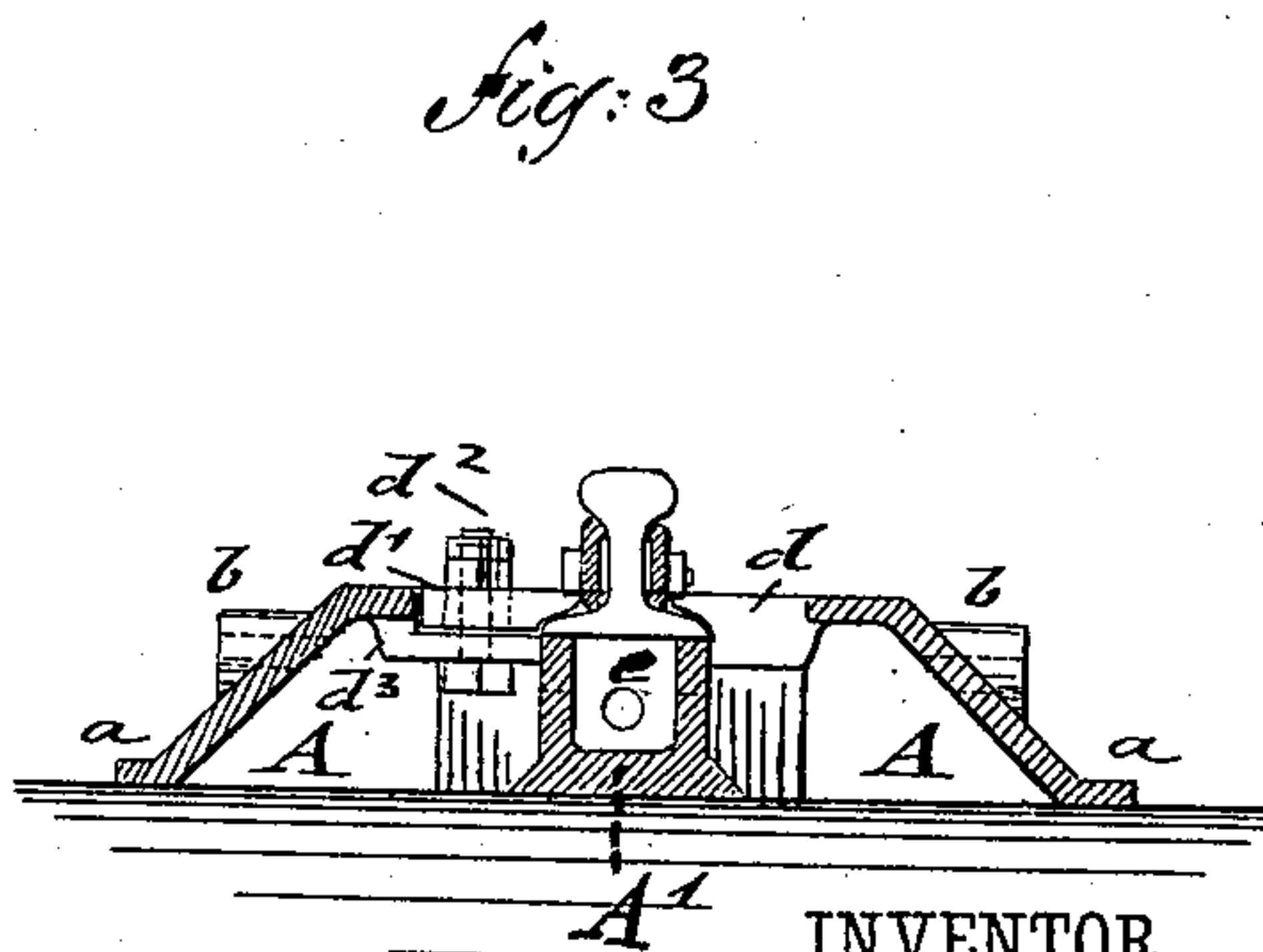


Fig: 3

WITNESSES:

Carl Kay
Joh. H. Rosenbaum

INVENTOR

Charles F. Herbst
BY *Paul Goepel*

ATTORNEY

UNITED STATES PATENT OFFICE.

CHARLES F. HERBST, OF BRENHAM, TEXAS.

RAILROAD-TIE.

SPECIFICATION forming part of Letters Patent No. 253,381, dated February 7, 1882.

Application filed October 1, 1881. (No model.)

To all whom it may concern:

Be it known that I, CHARLES F. HERBST, of Brenham, in the county of Washington and State of Texas, have invented certain new and useful Improvements in Railroad-Ties, of which the following is a specification.

This invention has reference to improvements in railroad-ties of that class in which two metallic pot-sleepers connected transversely by a brace-rod are employed in place of wooden ties for supporting the rails; and the invention consists of two transversely-connected iron pot-sleepers, which are provided with a longitudinal box-shaped center portion, upon which the rail rests, said center portion being made in one piece with the sleeper, and adapted for storing therein signal-telegraph wires. The rail is securely held in position upon the pot-sleeper by fixed jaws made integral with the sleeper, and by detachable jaws which are secured into recesses and to shoulders of the sleeper by bolts with nuts and jam-nuts. The ends of each pot-sleeper are recessed for the rail, and provided with holes below these recesses for the passage of the signal-wires arranged in the center boxes of the sleepers.

In the accompanying drawings, Figure 1 represents a plan view of my improved railroad-tie. Fig. 2 is a side view of one of the pot-sleepers; and Fig. 3, a vertical transverse section of the same on line *x x*, Fig. 2.

Similar letters of reference indicate corresponding parts.

In the construction of my improved railroad-tie I employ below each rail an inverted cast-iron box, or so-called "pot-sleeper," A, of oblong or other shape, which is provided at the base with a small flange, *a*, all around. The sides of the pot-sleeper A are inclined, so as to give to it the shape of a truncated pyramid. The top of each sleeper A has an oblong opening and recesses in the shorter ends for supporting the base of the rail. Two pot-sleepers A are transversely connected by a wrought-iron rod, B, which passes through socket-holes in the sides of the sleepers. The rod B is secured to exterior collars or sockets, *b*, at both sides of the sleeper by means of screw-nuts *b'*, which are tightly screwed up against the sockets *b*. The sockets *b* are cast integral with

the sides of the sleeper, and are shown clearly in Fig. 3. The base of the rail is set into the recesses in the ends of the sleeper A, and firmly secured thereto at one side by fixed jaws *d*, made integral with the sleeper A, and by detachable jaws *d'* at the other side. The detachable jaws *d'* are set into side recesses of the sleeper, and are slotted for the passage of fastening-bolts *d²*, by which the jaws are attached to interior shoulders, *d³*, of the sleeper A. To the upper ends of the fastening-bolts *d²* are applied screw-nuts and jam-nuts for retaining the jaws upon the rail-base. As these nuts are at the upper ends of the bolts, they can be readily tightened from time to time by a wrench. The fish-plates for the rail-joints extend through the entire length of the sleeper or through a part of the same, as desired. The pot-sleeper A is provided below the rail with a longitudinal box-shaped center portion, A', which is open at the top, closed at the bottom, and enlarged at the base, and which is preferably cast in one piece with the sleeper, so as to serve as a strengthening-brace for the same. The rail-base rests upon the top of the center portion, which latter may be utilized for arranging therein the insulated telegraph-wires used for railroad-signaling and other purposes. The ends of the sleeper A have openings *e* in line with the center of the box A' for the exit of the wires. The pot-sleepers A are set on the road-bed, the weight and pressure of the train forcing them some distance into the ground, so that the earth gets in under the sleeper. By tamping the earth through the longitudinal spaces left alongside the rail a compact and solid foundation is obtained for the sleeper, in which the center box acts as a wedge and prevents the sleeper from being pressed too far into the ground.

As all the parts of the tie are of iron, it is more durable than wood. It is, further, of a very simple construction and quickly laid upon the ground. As the side jaws bind also upon the fish-plate, they give additional stiffness and security to the rail end at the joints. The sleeper, with the center box, furnishes a solid foundation for the rail to rest on, and a space below the rail, which can be utilized for telegraph signal-wires in a cheaper manner and

at a less expense than by running the wires alongside of the railroad-track on poles or otherwise.

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

1. As an improvement in railroad-ties, pot-sleepers provided with a supporting central box adapted for storing signal-telegraph wires, in combination with rails securely held in position upon the sleepers by fixed jaws on one
10 side of the rails and suitable detachable fastening devices on the other side, substantially as described.

2. In a railroad-tie, the combination of a pot-sleeper, A, having recessed ends and a longitudinal center portion, A', with fixed jaws *d*,
15 made integral with the sleeper, and with detachable jaws *d'*, set into recesses and secured to interior shoulders, *d*³, of the sleeper, substantially as specified.
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3. In a railroad-tie, a pot-sleeper of oblong shape provided with a longitudinal box-shaped center portion for laying telegraph-wires, substantially as described.

4. The combination of oblong pot-sleepers
25 provided with top recesses for the rails and a supporting central box under the rails for depositing telegraph-wires, said box having a hole, *e*, for the exit of the wire, the rails, the fixed and detachable jaws for fastening the
30 rails, the fish-plates, the projecting sockets, and connecting-rods, substantially as described.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of two witnesses, this 7th day of September, 1881. 35

CHARLES F. HERBST.

Witnesses:

G. G. BLAKE,
BEN. S. ROGERS.