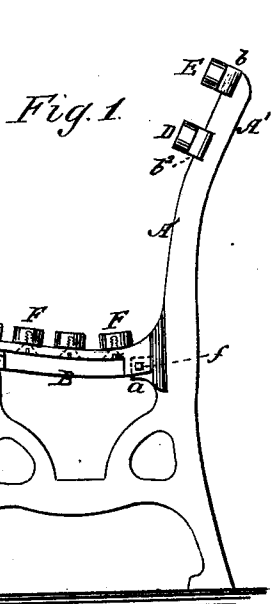
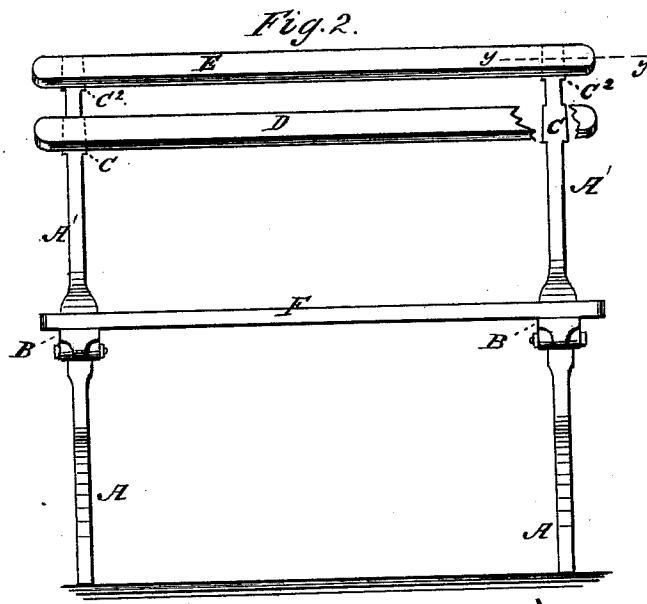
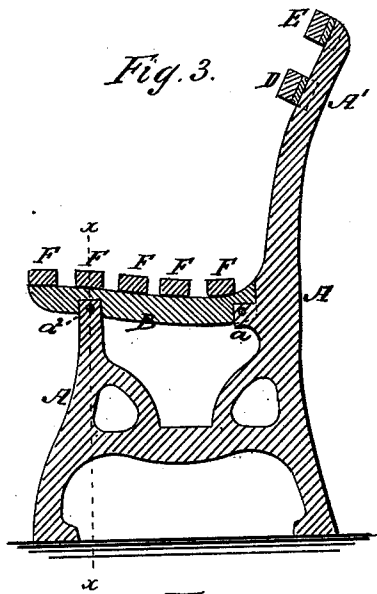
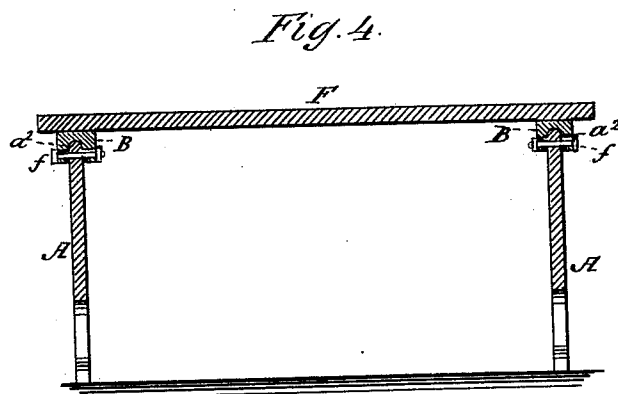
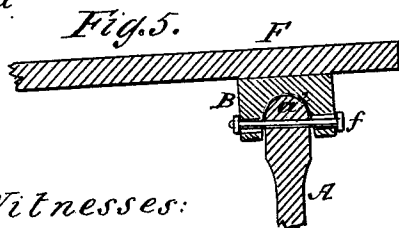


R. W. HOW.
Seat or Bench.

No. 222,403.

Patented Dec. 9, 1879.



Witnesses:

Wm. H. Rose
Frank W. Kent

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per
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UNITED STATES PATENT OFFICE.

RICHARD W. HOW, OF BROOKLYN, NEW YORK.

IMPROVEMENT IN SEATS OR BENCHES.

Specification forming part of Letters Patent No. **222,403**, dated December 9, 1879; application filed July 3, 1879.

To all whom it may concern:

Be it known that I, RICHARD W. HOW, of the city of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Seats or Benches; 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 marked thereon.

In the accompanying drawings, Figure 1 represents an end elevation of my improved seat. Fig. 2 represents a front elevation of the same. Fig. 3 represents a vertical cross-section through the center of one of the cast-iron frames. Fig. 4 represents a longitudinal vertical section on the line $x x$ of Figs. 1 and 3. Fig. 5 represents an enlarged detail longitudinal section, similar to one end of Fig. 4; and Fig. 6 represents a similarly-enlarged sectional view taken on the line $y y$, Fig. 2.

In the several figures the same part will be found designated by the same letter of reference.

A A are the two cast-iron end frames of the seat, made of about the usual contour, but with lug-like portions $a a^2$, to support the metal seat-sustaining bars B B, and with tapering projections C C² on each of the back-posts, for the attachment of the wooden back-bars.

The wooden back-bars D E, two or more in number, have each two metallic shoe-pieces, $b b^2$, that fit onto the projections C C² in a dovetailing manner, as clearly illustrated, (see Figs. 2 and 6,) so that when the parts are put together the shoe-pieces $b b^2$ interlock with or drive onto the projections C C², and couple the wooden bars D E to the back posts or portions A' of the end frames with sufficient security and permanency for use, while at the same time these parts may be separated, when desired, for storage, &c., by simply driving apart the said shoe-pieces and the projections on which they fit.

Each of the wooden seat-bars F is permanently fastened, near its ends, to each of the removable metal bars B B by screws in about the usual manner of fastening such seat-bars

to the irremovable metal-bar portion of the old-fashioned seats, and each of these bars B B, which are both thus permanently fastened to all the wooden seat-bars, is formed with two cavities or seats at the under side, near each end, into which fit the lug-like portions $a a^2$ of the cast-iron end frames of the bench.

The bars B B are secured to these lug-like portions $a a^2$ by small bolts f , but in such a manner that the parts, though securely coupled together, are not rigidly attached, but permit of a slight rocking motion of each of the bars B upon its supporting-lugs $a a^2$.

The mode adopted for carrying out this part or feature of the structure and invention is most clearly illustrated at Fig. 5, where it will be observed that the cavity in the under side of the arm B and the upper surface of the portion a , fitting-into said cavity or seat, are curved, so as to permit these parts to oscillate slightly upon each other at their surfaces of contact, the bolts f fitting so loosely in the holes made for their accommodation in the bar B as not to prevent this slight movement of the parts.

As illustrated at Fig. 5, when the seat-bars F may be sprung or depressed in the middle, they, together with the metal bars B, will be thrown out of level, as seen, while the end frames A remain fixed, and no disruptive strain is brought upon the screws or other means of attachment of the bars F to the metal portions B B.

It will be understood that by simply removing the four bolts f the set of seat-bars F, with their attached metal bars B B, may be removed from the cast-iron end frames, and that by the removal then from said end frames of the back-bars D E the several parts of the structure may be packed flat and require comparatively little room for transportation or storage.

Having so fully explained now my improved out-of-door seat or bench that any skilled person can make and use it, what I claim therein as new, and desire to secure by Letters Patent, is—

The combination of bottom slats F and bars

B, having curved socket and slotted lugs on their under side, with legs A, having their upper ends, a^2 , rounded to fit said sockets, and bolts f , which pass horizontally through said upper ends, a^2 , and said slots, said bolts and slots being of such relative size and shape as to allow the motion of slats F and bars B under downward pressure.

In witness whereof I have hereunto set my hand this 21st day of August, 1878.

RICHARD W. HOW.

In presence of—

WM. G. HOSEA,

FRANK W. KENT.