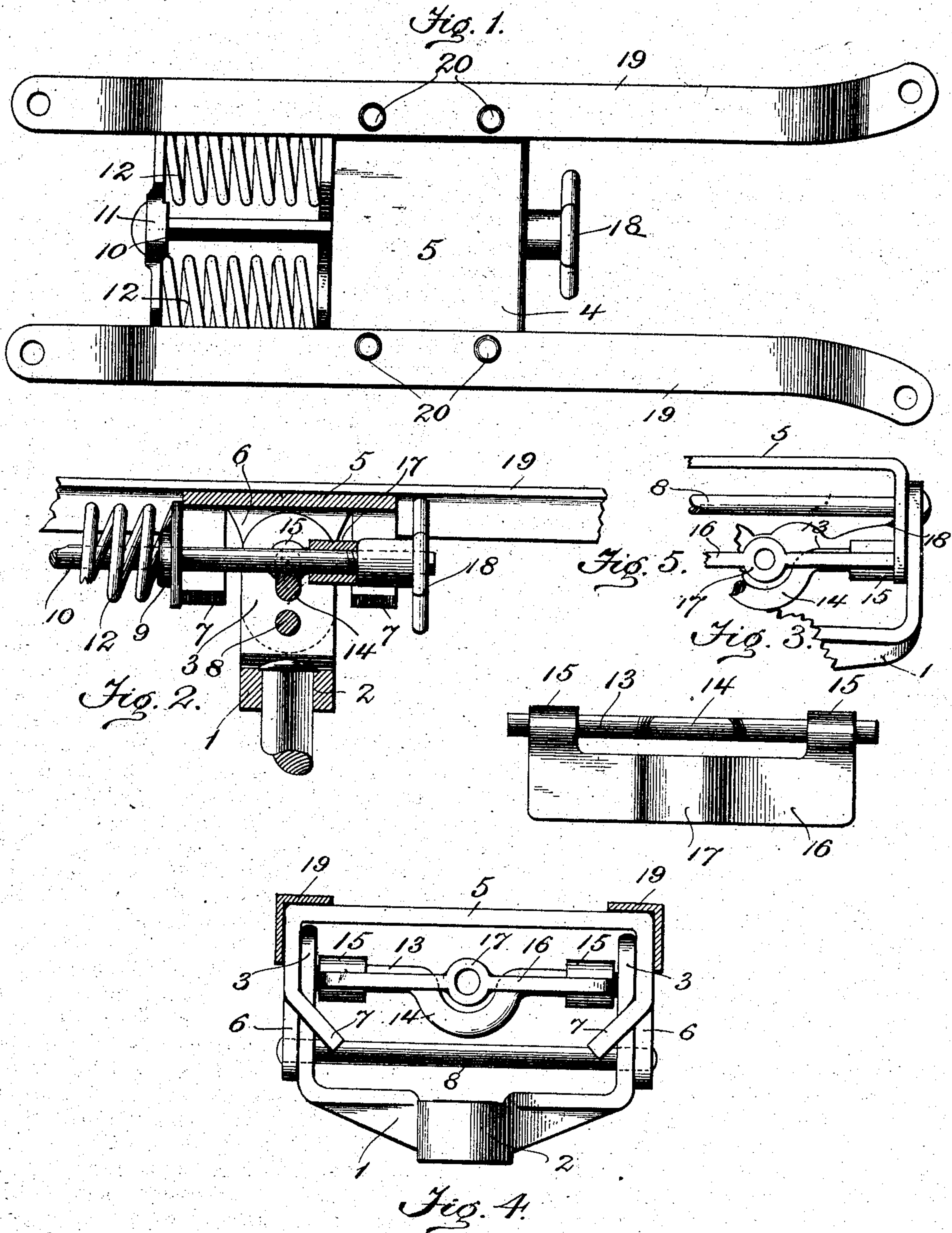


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H. W. BOLENS.
CHAIR IRON.

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Witnesses:
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UNITED STATES PATENT OFFICE.

HARRY W. BOLENS, OF PORT WASHINGTON, WISCONSIN.

CHAIR-IRON.

SPECIFICATION forming part of Letters Patent No. 781,491, dated January 31, 1905.

Application filed September 16, 1903. Serial No. 173,403.

To all whom it may concern:

Be it known that I, HARRY W. BOLENS, a citizen of the United States, residing at Port Washington, in the county of Ozaukee and State of Wisconsin, have invented a Chair-Iron, of which the following is a specification.

This invention relates to improvements in chair-irons, and more particularly to that class made mainly of sheet-steel, though, as will be hereinafter apparent, the invention is not at all limited to the use of this material; but the parts may, if preferred, be cast.

The principal objects of the present invention are simplicity, compactness, strength, durability, as well as economy of manufacture, all of which are fulfilled by the novel features of construction hereinafter described, and particularly pointed out in the claims.

Referring to the drawings, Figure 1 is a top plan view of a chair-iron embodying my improvements. Fig. 2 is a vertical longitudinal sectional view of the same. Fig. 3 is a detail in plan of the adjusting-bolt-receiving bridge-piece. Fig. 4 is a front elevation of the chair-iron, the tension device removed and the spider-arms shown in transverse section. Fig. 5 is an elevation of a chair-iron of the "high-fulcrum" type and embodying my invention.

Similar numerals indicate similar parts in all the figures of the drawings.

The chair-iron comprises the usual and preferably cast-metal yoke 1, having the central post-receiving socket 2 and vertically-disposed end bearing terminals or ears 3.

The spreader or stretcher 4 is preferably struck up from a blank of sheet-steel and comprises the upper rectangular main portion or base 5, the opposite and usual depending pivoting-ears 6, and at each side of the latter inwardly-disposed stop flanges or lugs 7, the base, ears, and stop-lugs all being integral. By skiving out or removing portions of the blank between the ears and lugs it will be apparent that narrow spaces are formed between the ears and lugs, the same being utilized, as will be hereinafter apparent, to permit of the necessary oscillating or pivotal movement of the stretcher on the yoke. The ears 6 embrace the terminals 3 of the yoke, (the design shown being of that class of chair-

irons commonly known to the trade as the "low-fulcrum" variety,) and at their lower ends said ears 6 are pivoted to the terminals 3 by the usual cross-pin 8, whereby the stretcher 4 is free to oscillate laterally in either direction until the stop-lugs 7 thereof contact with the adjacent edges of the terminals 3 of the yoke.

Seated against and supported in any suitable manner by the two rear stop-lugs 7 is the inner spring-supporting compression-plate 9, and through and beyond the same passes the tension rod or bolt 10, the said bolt at its rear end having the usual head and retaining the outer companion compression-plate 11. Between the two plates 9 and 11 are arranged the single or double coiled springs 12.

Near their upper ends the two yoke-terminals 3 are connected by a transverse shaft 13, the same having its intermediate portion at its center offset or bent, as at 14. (See Figs. 2, 3, and 4.) Suspended upon this shaft in a loose manner, by means of eyes 15 formed at its rear edge and at its ends, is a transverse tension-rod-supporting bridge-piece 16, at the center of which, opposite the offset 14, is formed a transverse bearing-eye 17, through and beyond which extends the front or threaded end of the tension-rod 10. At its outer or front end there is mounted on the rod and bearing against the eye in the bridge-piece the usual adjusting hand nut or wheel 18.

Seated and secured upon the stretcher 4 in any suitable manner are the spider-arms 19, in this instance formed angular in cross-section and fitted over the angles of the stretcher, to which they are securely riveted, as at 20.

It will be obvious that the rear stop-lugs 7 will constitute in addition to their function as stops the further function of supports for the inner compression-plate 9; also, as the stretcher tilts backward the bridge-piece 16 will adjust itself to such position of the tension-rod as it is necessary for the latter to assume, the same being accomplished in a perfectly noiseless manner.

In Fig. 5 it will be observed that I have illustrated my improved bridge-piece in connection with what is generally termed a "high-fulcrum" iron, wherein, as is well known, the

fulcrum of the iron is above the center of the same. In this connection it will be observed that the pintle-pin 8 is above the bridge-piece 16 and its support, the latter being carried by the stretcher or spreader, whereas in the former instance the yoke formed the support therefor. Of course this is a mere reversal of the construction formerly shown.

Any suitable stops—as, for instance, 18—for the purpose of limiting the movement of the stretcher or spreader may be provided, the same being common and not necessary to show.

Having described my invention, what I claim is—

1. In a chair-iron, the combination of a yoke, a stretcher having depending terminals pivoted upon those of the yoke, a tension device supported by the stretcher, and a transverse bridge-piece provided with terminal eyes suspended from the yoke-terminals and having a central eye for the tension-rod of said tension device.

2. In a chair-iron, the combination of a yoke, a stretcher pivotally mounted thereon, a tension device carried by the stretcher, a shaft connecting the terminals of said yoke, and a bridge-piece having eyes loosely hung from the shaft and provided with a central bearing for the tension-rod of said tension device.

3. In a chair-iron, the combination of a yoke, a stretcher pivotally mounted thereon, a tension device carried by the stretcher, a shaft connecting the terminals of said yoke and provided with a central crank or offset, and a bridge-piece provided with eyes loosely receiving the transverse shaft at each side of the crank thereof and having a central eye aligning with said crank and receiving the tension-rod of said tension device.

4. In a chair-iron, the combination of a yoke, a stretcher terminating in bearing-ears pivoted to the yoke and at each side thereof provided with depending inwardly-disposed lugs forming stops adapted to abut against the terminals of the yoke, a transverse shaft connecting the latter terminals and having a central offset, a bridge-piece having a central bearing-eye and terminal eyes loosely hung upon the shaft, and a tension device supported by the rear lugs of the stretcher and having its tension-rod passed through the central eye of the bridge-piece.

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

HARRY W. BOLENS.

Witnesses:

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