

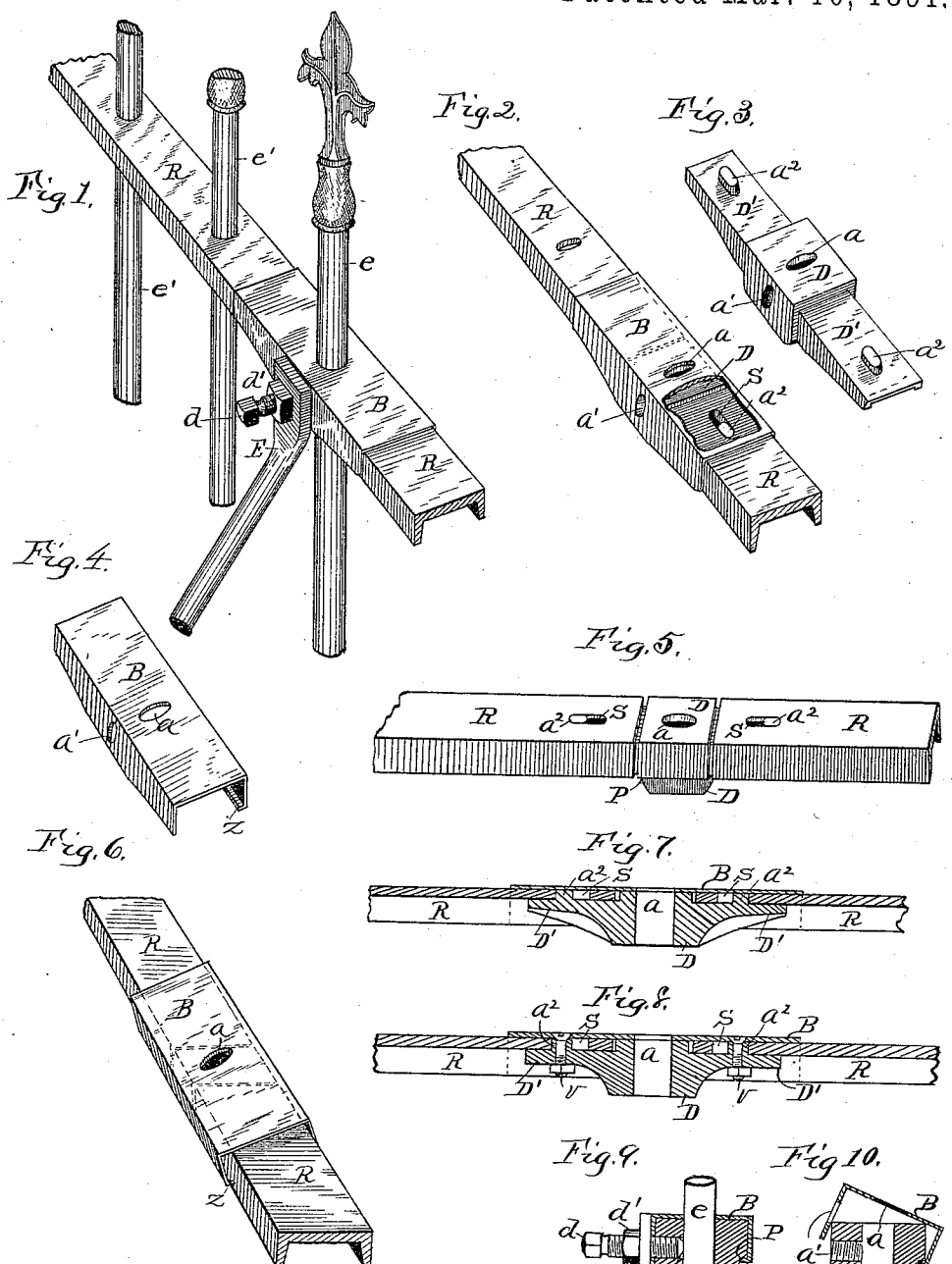
(No Model.)

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RAIL COUPLING FOR IRON FENCES.

No. 448,029.

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RAIL-COUPLING FOR IRON FENCES.

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To all whom it may concern:

Be it known that I, CHRISTIAN HANIKA, a citizen of the United States of America, residing at Wichita, in the county of Sedgwick and State of Kansas, have invented certain new and useful Improvements in Rail-Couplings for Iron Fences, of which the following is a specification, reference being had therein to the accompanying drawings and the letters and figures of reference thereon, forming a part of this specification, in which—

Figure 1 is a perspective view showing a portion of two rails of an iron fence connected by means of my improved connecting device, also showing a portion of the fence-pickets in position in the fence-rail and in the coupling and a brace for assisting in the support of the fence. Fig. 2 is a similar view having the fence-pickets and brace removed and a portion of the coupling cap-plate broken away to show the manner of coupling. Fig. 3 is a detailed perspective view of the head-block of the coupling. Fig. 4 is a similar view of the cap-plate of the coupling. Fig. 5 is a side perspective view of the said head-block and the end of two fence-rails united therewith as they would appear before the cap-plate is seated upon them. Fig. 6 is a perspective view of the coupling, especially showing the manner in which the cap-plate is adjusted into position upon the head-block and the end of the fence-rails united therewith. Figs. 7 and 8 are central vertical longitudinal sectional views of the coupling. Fig. 9 is a central vertical cross-sectional view of the same, showing a side view of a portion of the post, picket, and brace; and Fig. 10 is a similar view having the picket and brace removed, showing the cap-plate partially adjusted to its seat.

This invention relates to certain improvements in couplings for iron fences for uniting the ends of the fence-rails; and it consists of an adjustable head-block adapted to be coupled with the fence-rails, a cap-plate for retaining the rails in their position relative to the head-block, and a screw or bolt for retaining said cap-plate upon the head-block, the particular construction and arrangement of which I will proceed to explain.

Referring to the drawings, R R represent the fence-rails, each of which is provided near its end with a slot S.

e represents what is termed the "post-picket," and *e'* the intermediate or common pickets, of an iron fence.

D is the head-block of the coupling, and is provided with the central vertical post-picket hole *a*, with the screw-threaded horizontal hole *a'* leading into hole *a*, with the shoulder or offset P opposite the hole *a'*, and with the opposite side arms D' D', which arms are each provided with a stud *a*², equal in height to the upper plane of the said head-block.

The head-block D is of equal width with the rails R R, and the arms D' D' of said head-block are adapted to fit between the side flanges of said rails, and their studs *a*² enter into the slots S of the rails, as shown in Figs. 2, 5, 7, and 8.

B is the cap-plate of the coupling, and is provided with side flanges adapted to inclose the sides of the coupling, one of which terminates with the flange-hook *z*, extending its entire length, and the body and opposite flange have the holes *a* and *a'*, respectively, adapted to register with the holes of the head-block D when the said plate is adjusted into position for use. (See Figs. 2, 7, and 9.) In adjusting the cap-plate it is held parallel alongside the head-block and fence-rails and tilted sidewise, as shown in Figs. 6 and 10, so that its hook-flange *z* will engage under the shoulder P of the head-block and under one side of the flanges of the fence-rails R R, after which its opposite side is forced down so that it will rest closely upon the said head-block and the studs *a*² *a*², when its holes *a* and *a'* will register with the corresponding holes of the head-block. Brace E is then brought to bear against the side flange of the said cap-plate in such manner that its hole will register with the hole *a'* of the plate and head-block. The screw *d* is then passed through the hole in the brace and into said hole *a'*, the post-picket *e* is placed in hole *a*, as shown in Figs. 1 and 9, and the said screw *d* is turned in hard against the post-picket, which firmly holds it in position and also secures the cap-plate to its seat. As a means of securing the brace E the screw *d* is provided with the lock-nut *d'*, which is arranged to be turned hard against the said brace, and thus clamp it firmly against the coupling.

In some instances the coupling is used

separate from the brace E and in places where the screw *d*, extending from the side, would be an obstruction, and in such instances as a means of holding the cap-plate properly seated the studs *a*² on the arms D' and the said cap-plate are perforated, so that the said perforations will register with each other, and a bolt *v*, as shown in Fig. 8, is arranged and secured in each stud and arm, one through each end of the cap-plate. It will be observed that the head-block and its arms D' are on different planes, and that the studs *a*² rise to the same plane as the head-block, as before stated, and it is the intention in this invention that the difference between said planes shall be slightly greater than the thickness of the fence-rails which rest upon said arms, in order that said rails may not be too firmly clamped between the arms D' and plate B, but may be permitted to slide freely upon the said arms to the limit of their slots S. Thus they are allowed to expand and contract lengthwise from the influence of heat and cold independently of the coupling, and further are adapted to be more readily adjusted into position when building a fence.

The essential feature in this invention is the means by which the fence-rails are held and confined to prevent vertical or lateral movement and permit a longitudinal movement for the purposes stated. The head-block being of the same width and height, or nearly so, as the fence-rails, and its arms being confined within the flanges of the said rails, it permits the cap-plate to fit very closely about the coupling, and the whole presents a coupling of but slightly greater dimensions than the fence-rails, and thereby presents a very neat appearance. Further, by means of the cap-plate arranged to fit closely about the top and sides of the head-block and rail ends they are practically protected from the weather, and consequently better preserved and less liable to rust or to prevent free removal for repair and the like.

Having thus described my invention, what I claim as new and useful, and desire to secure by Letters Patent, is as follows:

1. The fence-rail coupling described, consisting of the head-block D, provided with the vertical post-picket hole *a*, the horizontal screw-threaded hole *a'*, the shoulder P, and the arms D' D', respectively provided with the studs *a*² *a*², the cap-plate B, provided with corresponding holes and with the flange-hook *z*, and the screw *d*, substantially as and for the purpose described.

2. The combination, with the fence-rails having the slots S, the post-picket *e*, and the brace E, of the head-block D, provided with the vertical hole *a*, the horizontal screw-threaded hole *a'*, the shoulder P, and the opposite side arms D' D', respectively provided with the studs *a*² *a*², the cap-plate B, provided with corresponding holes and with the flange-hook *z*, the screw *d*, and the lock-nut *d'*, substantially as and for the purpose specified.

3. The fence-rail coupling consisting of the head-block D, provided with the opposite extending studded side arms and secured to the post-picket, and the cap-plate B, seated upon and secured to the head-block in the manner described, whereby the fence-rails are held from vertical or lateral movement and permitted a longitudinal movement the limit of their slot, substantially as and for the purpose specified.

4. The combination, with the slotted fence-rails R R and the flanged cap-plate B, of the head-block D, provided with the studded opposite side arms D' D', less in width and on a lower plane than the upper surface of the head-block, and the means for securing the cap-plate upon the head-block, substantially as and for the purpose set forth.

5. The combination, with the detachable head-block D, provided with the studded arms D' D' and shouldered at the junction of the arms, of the cap-plate B, arranged upon the head-block with its end portions overhanging said arms, and the slotted fence-rails R R, respectively arranged between said arms and cap-plate, substantially as set forth.

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