

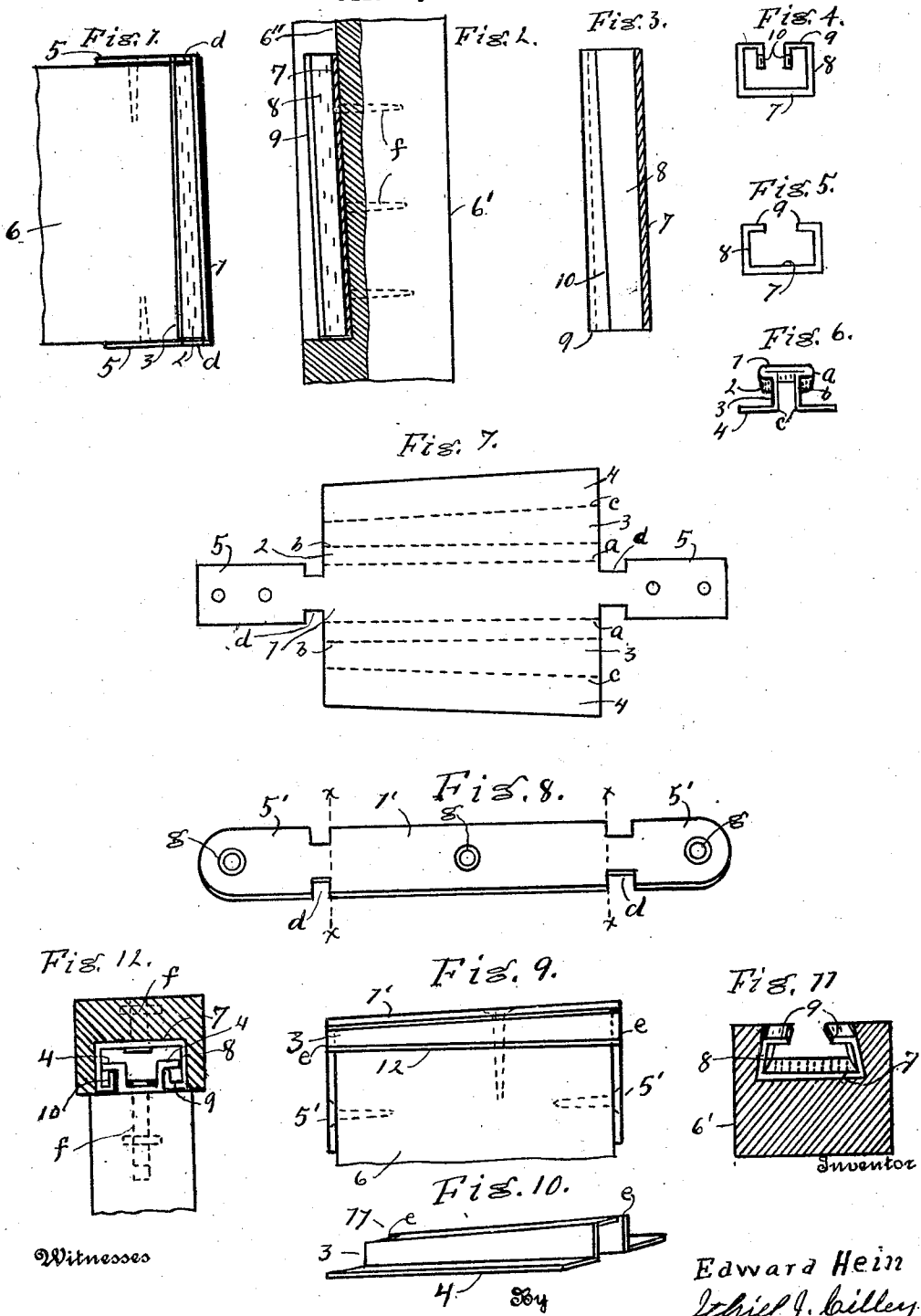
July 20, 1926.

1,593,451

E. HEIN

BED RAIL LOCK

Filed April 7, 1924



UNITED STATES PATENT OFFICE.

EDWARD HEIN, OF GRAND RAPIDS, MICHIGAN, ASSIGNOR TO FOOT REYNOLDS CO.,
OF GRAND RAPIDS, MICHIGAN, A CORPORATION OF MICHIGAN.

BED-RAIL LOCK.

Application filed April 7, 1924. Serial No. 704,643.

My invention relates to improvements in rail locks for use upon bed rails, and its objects are: first, to provide a rail lock that may be made wholly of sheet metal, and as "punch press" work; second, to provide a rail lock of the kind named that may be made of the least possible number of pieces, and, third, to provide a rail lock of the class named that may be securely connected with the rail and with the post of a bedstead.

I attain these objects by the mechanism and construction of parts shown in the accompanying drawing in which Fig. 1 is a side elevation of the end of a bed rail with the corresponding element in my lock attached. Fig. 2 is a like view of a part of a bed post, partly in section, showing a sectional view of this element of my invention. Fig. 3 is a vertical sectional view, and Fig. 4 is an end elevation of a modified form of the post element of my invention. Fig. 5 is an end elevation of the post element of my invention as shown in Fig. 2. Fig. 6 is an end elevation of the rail element of my invention. Fig. 7 is a plan of the blank from which the rail element of my invention is formed when making the same as a one piece element. Fig. 8 is a perspective plan of the cap and securing element of my invention when made as a two piece element. Fig. 9 is a side elevation of my two piece rail element as it appears upon the end of a bed rail. Fig. 10 is a perspective of the second element of my invention when made as a two piece rail lock element. Fig. 11 shows the post element dovetailed into the post to insure greater rigidity, and Fig. 12 is a transverse section of a bed post on the line 12-12 of Fig. 2 showing the manner of interlocking the rail member with the post member of the rail lock.

Similar numerals and letters indicate similar parts throughout the several views in the drawings.

In my simpler form of lock the post element of the lock consists of a single piece of sheet metal formed with a base 7 with sides 8, and intumed wings 9, said intumed wings being parallel, longitudinally, with the base 7, the element being placed in the post upon an incline, as indicated at 6'' in Fig. 2 to produce the draw necessary in the proper action of a dovetailed connection between any two elements. In this construction the post ele-

ment must be set back some distance from the bearing surface of the post, as in Fig. 2, to provide a proper distance for tongue reach on the rail element.

I find it very advantageous to form backwardly inclined edges, 10, upon the wings 9, which edges are formed upon an incline to produce the proper dovetail draw, as indicated in Figs. 3 and 4. By this construction the face of this element, at 9, may be placed flush with the surface of the post 6', thus removing much of the strain upon the screws or bolts *f* that would be necessary with the use of the other form shown in Figs. 2 and 5.

In this construction I make use of two forms of tongues or rail elements. The one is made of a single piece of sheet metal, as shown in Fig. 7, the said metal being blanked out in the form shown and then bent upon the lines *a-a* to form the face of the tongue, and the projecting edges, shown at 1 and 2 in Fig. 6, then bent upon the lines *b-b* to form the neck 3 of the tongue, and again bent upon the lines *c-c* to form the flanges 4 that are to be secured to the ends of the rails, and the ends 5 are bent downwardly to form end bearings upon the edges of the rail as shown in Fig. 1, and provided with grooves or notches *d* for the free passage of the edges 9 or 10 of the post element. In my second form I use two pieces for the formation of the tongue, as follows: The cap or bearing part of the tongue, shown at 1', is made of a thicker sheet metal and bent at *x-x* so the arms 5' will be made to stand at right angles therewith, as shown in Fig. 9, and provided with proper screw, or bolt holes *g* with which to secure it firmly to the end of the rail. The second element in this construction consists of a single piece of sheet metal shown in Fig. 10, formed with the flanges 4, the neck 3, which is, necessarily, much narrower than the cap 1', and the bearing surface 11 upon which the cap 1' rests. The notches *e* in this base are for the reception of the necks *d'* on the cap 1', when the wings 5' are bent backwardly in form to be properly fitted upon and secured to the rail, as indicated in Fig. 9. The cap 1, or 1', is, of course, made to stand upon an incline with the flanges or bases 4, as indicated in Figs. 1, 9 and 10, to form the proper dovetail connection with the post element

shown in Figs. 2 to 5. It will be readily understood that with this construction I am enabled to use this rail lock successfully upon wooden bed construction, as plainly shown in the drawings.

It will be readily understood by those versed in the art that by reversing the position of the bearing shown at 3—4 in Figs. 9 and 10, that is, by placing the element 3 with the surface 11 against the end of the bed rail and the flanges 4 away from the rail these flanges may be made to interlock with the wings 9 on the part of the lock that is secured in the post, the element 3 being properly and securely bolted to the end of the rail, will lock the post and the rail together as securely as with the use of the rail lock shown in the other views, thus enabling me to dispense with the elements 1 or 1' in the construction of the lock. This is particularly applicable with the form of post lock shown in Fig. 4. See Fig. 12 as an illustration of this application of the lock.

Having thus fully described my invention, what I claim as new in the art, is:

1. In a bed rail lock, a sheet metal receptacle anchored in the bed post, the longitudinal edges of said receptacle bent to project inwardly and then backwardly and formed to provide inclined bearings within the post, a broad cap, a wing formed at each end of said cap and bent to form a right angle therewith, a narrow neck formed between each wing and the end of the cap, the cap and the wings securely connected with the end of the bed rail in position so the cap will provide an incline corresponding with the inclined edges of the receptacle in the post.

2. In combination with the elements covered in claim 1, one wing of the cap made shorter than the other wing, and the cap and the wings provided with holes for the passage of screws for securing them to the end of the bed rail in proper inclined position.

EDWARD HEIN.