(No Model.)

T. C. RALSTON.

PAWL FOR CAR BRAKES.

No. 248,883. Patented Nov. 1, 1881.

Fig. 1.

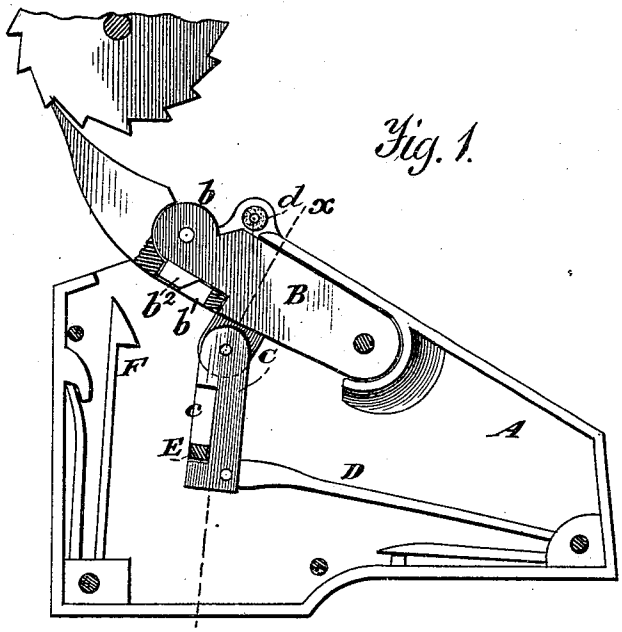


Fig. 2.

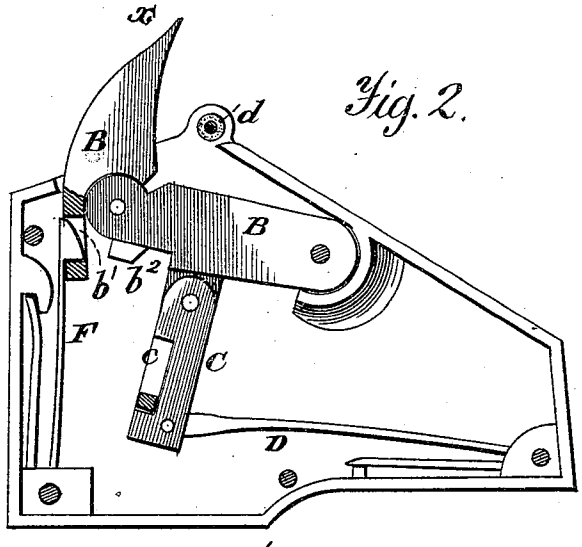
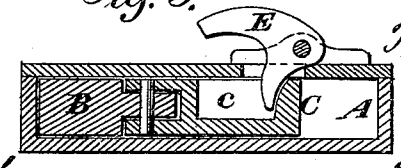


Fig. 3.



Witnesses.
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UNITED STATES PATENT OFFICE.

THOMAS C. RALSTON, OF CULBERTSON, NEBRASKA, ASSIGNOR OF ONE-HALF TO WILLIAM Z. TAYLOR, OF SAME PLACE.

PAWL FOR CAR-BRAKES.

SPECIFICATION forming part of Letters Patent No. 248,883, dated November 1, 1881.

Application filed August 31, 1881. (No model.)

To all whom it may concern:

Be it known that I, THOMAS C. RALSTON, a citizen of the United States, residing at Culbertson, in the county of Hitchcock and State of Nebraska, have invented certain new and useful Improvements in Catches or Pawls for Car-Brakes; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters or figures of reference marked thereon, which form a part of this specification, and in which—

Figure 1 is a plan view, showing my improved brake-staff or shaft-pawl as applied for use. Fig. 2 is a similar view, showing it withdrawn from the ratchet or out of use; and Fig. 3 is a section taken on the line *x x* of Fig. 1.

This invention has relation to improvements in pawls, specially adapted for use in connection with the shaft or staff which operates a car-brake, though applicable for use wherever a ratchet and pawl are employed, having for its object, among other things, the ready application of the pawl to its ratchet without the necessity of holding it by the foot or hand to the ratchet, and its easy and instant retraction from the ratchet; and the nature thereof consists of a pawl combined with mechanism, substantially as hereinafter more fully set forth and claimed.

In carrying out my invention I employ, preferably, a case, A, within which is contained the operative parts of my device. This case is secured upon the usual foot board or stand affixed to the end of a house-car, or upon the usual buffer-ledges of the car, contiguous to the ratchet upon the brake operating staff or shaft.

B is the pawl, which is made in two parts, connected together by a knuckle-joint, *b*, its knuckle resting in a reduced part thereof, and having a mortise or slot, *b'*, which receives a projection, b^2, upon the shank of the pawl, to strengthen it thereat as against the resistance of the ratchet.

C is an arm articulated to the shank of the pawl, and acted upon by a spring, D, to effect the holding of the pawl when in engagement with the ratchet. In the arm C there is a mortise or recess, *c*, within which is adapted to move a tooth or one arm of a foot-lever, E, and press against the outer shoulder of said mortise, and thus permit of the limited movement of the pawl away from the engaging tooth of the ratchet.

F is a second spring, or spring-catch, arranged so that its beak will stand off a short distance from the pawl, as clearly seen in Fig. 1.

An elastic or textile covered stop, *d*, is arranged in the case A so as to break the force of the action of the jointed tooth of the pawl when it flies free of the ratchet, as will be clearly understood by reference to Fig. 2.

The operation is as follows: The pawl being engaged with the ratchet, as seen in Fig. 1, and it being desired to disengage it therefrom, it is only necessary for the operator to press down upon the lever E with his foot, which, it will be observed, will act upon the arm C so as to retract the tooth of the pawl out of the coincident throat of the teeth of the ratchet. At that instant the recoil of the liberated ratchet will strike the back of the released pawl and reverse the direction of the pawl-tooth, and consequently throw its knuckle *b* out toward the spring-catch F. By again applying the foot to the lever E the pawl will be acted upon so as to hook its mortised or slotted knuckle *b* upon the catch F, to hold the tooth thereof out of the way of the ratchet when not in use, and at the same time so as to be readily intercepted when its engagement is desired. This arrangement avoids the use of the feet in applying the brake, they being free to enable the operator to retain his firm standing, and thus not incur the danger of his slipping off the car. It further permits of the ready and instant retraction of the pawl from the ratchet when it is desired to take off the brake. It is also certain and positive in its action and relieved of jar or breakage when let free from the ratchet.

I claim and desire to secure by Letters Patent—

1. The combination, with the pawl B, of the

mortised or slotted arm C and its spring D, acted upon by a lever, E, substantially as and for the purpose set forth.

2. The combination, with the knuckle-jointed pawl B and operating mechanism, of the spring-catch F, adapted for operation as set forth, substantially as and for the purpose specified.

In testimony whereof I affix my signature in presence of two witnesses.

THOMAS C. RALSTON.

Witnesses:
W. Z. TAYLOR,
JAS. SNYDER.