(No Model.)

J. A. BRILL.

BRAKE ROD HANDLE.

No. 351,735. Patented Nov. 2, 1886.

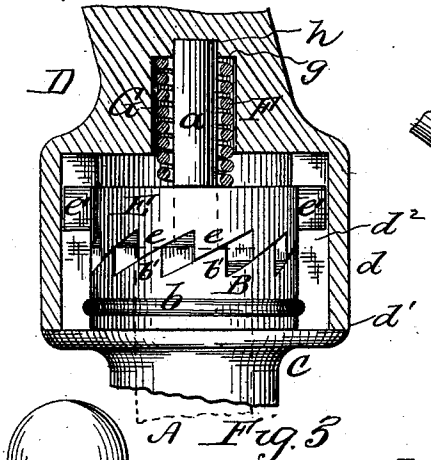


Fig. 3

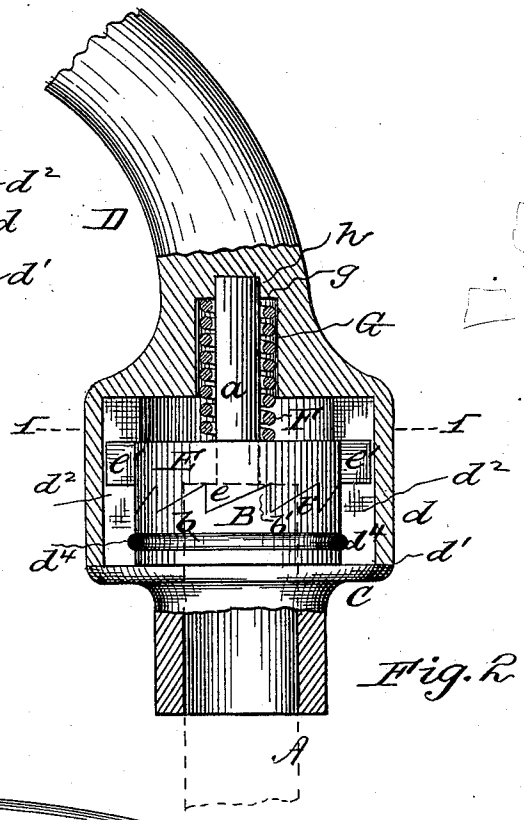


Fig. 2

Fig. 1

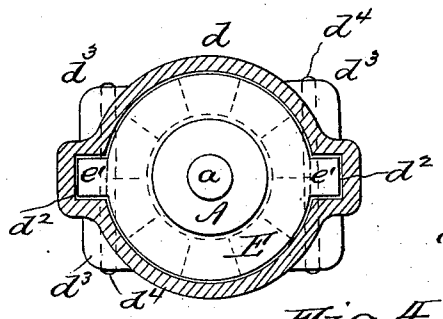
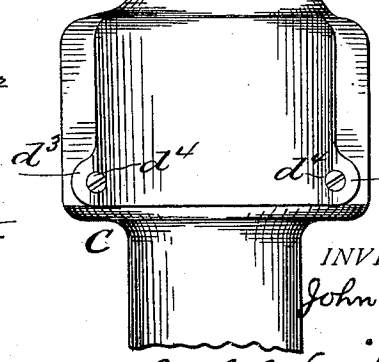


Fig. 4



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UNITED STATES PATENT OFFICE.

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BRAKE-ROD HANDLE.

SPECIFICATION forming part of Letters Patent No. 351,735, dated November 2, 1886.

Application filed September 17, 1886. Serial No. 213,804. (No model.)

To all whom it may concern:

Be it known that I, JOHN A. BRILL, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Brake-Rod Handles, of which the following is a specification, reference being had therein to the accompanying drawings, wherein—

Figure 1 is an elevation of part of the brake-rod and of the handle or wheel therefor embodying my improvements. Fig. 2 is a vertical section, partly in elevation, showing engagement of clutch-wheels when the handle is turned to rotate the brake-rod. Fig. 3 is a like view showing position of loose clutch-wheel when handle is reversely turned or rotated without turning the brake-rod; and Fig. 4 is a section on line 1 1, Fig. 2.

My invention has relation to street-car brake-rod handles or wheels of the form wherein the handle when turned in one direction rotates the brake-rod, and when turned in an opposite direction moves independent of or without turning the brake-rod; and it has for its object to provide a simple, economical, and durable form of clutch-wheel mechanism between or connecting the handle and brake-rod.

My invention accordingly consists of the combination, construction, and arrangement of parts, as hereinafter described and claimed, having reference particularly to a brake-rod having fixed to it near its upper end a clutch-wheel, to which the handle is swiveled, the upper end of the brake-rod being journaled, or has a bearing in the handle, and has loosely mounted on it, so as to slide up and down, a clutch-wheel having a spring-pressure for causing it to normally engage with the clutch-wheel fixed to the brake-rod, and having also side lugs which fit into vertical recesses in the handle, to engage the loose clutch-wheel with the handle and cause them to turn together as the handle is rotated in either direction.

In the drawings, A represents a brake-rod for street or other cars, having a reduced upper end, *a*. Below the latter is firmly secured to rod A, in any suitable manner, a clutch-wheel, B, and beneath the wheel B is a collar or platform, C. The wheel B and collar C may be separate and correspondingly secured to rod A, or they may be integral. The handle D is provided with a lower or bottom socket or hollow hub, *d*, the edge *d'* of which rests upon the collar C. The handle-socket *d* is formed with inside oppositely-located vertical recesses or slots, d^2, and with preferably outside lugs or fillet-pieces, d^3, through which pass pins or screws d^4, one on each side of the socket *d*. These pins engage with an annular peripheral groove, *b*, formed on clutch-wheel B, to swivel the handle or its socket *d* to said wheel. Two pins, d^4, are provided for swiveling the handle to the clutch-wheel B, to make a strong connection between said parts, and to avoid lateral strain between the handle and its swivel connection when the brakes are applied.

Above the fixed clutch-wheel B, and loosely mounted upon the reduced end *a* of rod A, is a second clutch-wheel, E, the teeth *e* of which normally engage with the teeth *b'* of wheel B. This normal engagement is maintained by the pressure or action of a spiral spring, F, surrounding end *a*, and having one of its ends abutting against wheel E, and the other against a shoulder, *g*, of a socket or recess, G, in the handle D, above socket *d*. The upper extremity of the end *a* of rod A has a bearing, *h*, in the handle D, to give firmness or support to the handle.

The loose clutch-wheel E has oppositely-located side or peripheral lugs, *e'*, which enter the slots or recesses d^2 in socket *d* to engage said wheel with socket *d*, so that the handle D cannot turn in any direction without rotating the loose clutch-wheel E.

The operation is as follows: When the handle is turned from right to left, the loose clutch-wheel E engages with the clutch-wheel B, fixed to rod A, and the latter is rotated to apply the brakes. When the handle is reversely rotated, the wheel E moving therewith, and being loose on shaft or end *a*, its teeth ride up on those of wheel B and raise the wheel E out of engagement with wheel B, as shown in Fig. 3, to admit of turning the handle in said last-named direction without rotating the brake-rod.

The bearing *h* of the end *a* of rod A in handle D may be of any desired length conformable to the shape of the handle, and any suitable form of teeth for the clutch-wheel may be employed.

What I claim is—

1. A brake-rod having near its upper end a collar, a fixed ratchet-wheel of a diameter less than that of the collar, a loose ratchet-wheel of a diameter corresponding with that of the fixed ratchet, a downwardly-acting spring for the loose ratchet-wheel, and a handle or wheel having a socket inclosing said ratchet-wheels and spring, a shoulder for the upper end of the spring to abut or act against, and a swiveled connection with said collar, substantially as set forth.

2. A brake-rod having a clutch-wheel, B, and collar C, a handle having socket *d* resting upon collar C and swiveled to wheel B, and a clutch-wheel, E, loose on the brake-rod and turning with the handle, substantially as set forth.

3. The combination of brake-rod A, having clutch-wheel B, provided with groove *b*, clutch-wheel E, loose on said rod and having spring-pressure devices, handle D, having socket *d*, swiveled to wheel B by means of pins d^4 entering clutch-wheel groove *b*, and devices for loosely connecting wheel E with handle D, substantially as set forth.

4. The handle D, having bearing *h*, recess G, and socket *d*, provided with vertical recesses d^2, in combination with rod A, having clutch-wheel B, swiveled to socket *d*, loose clutch-wheel E, having lugs *e'*, fitting recesses d^2, and spring F, substantially as set forth.

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

JOHN A. BRILL.

Witnesses:
I. B. W. BIDLACK,
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