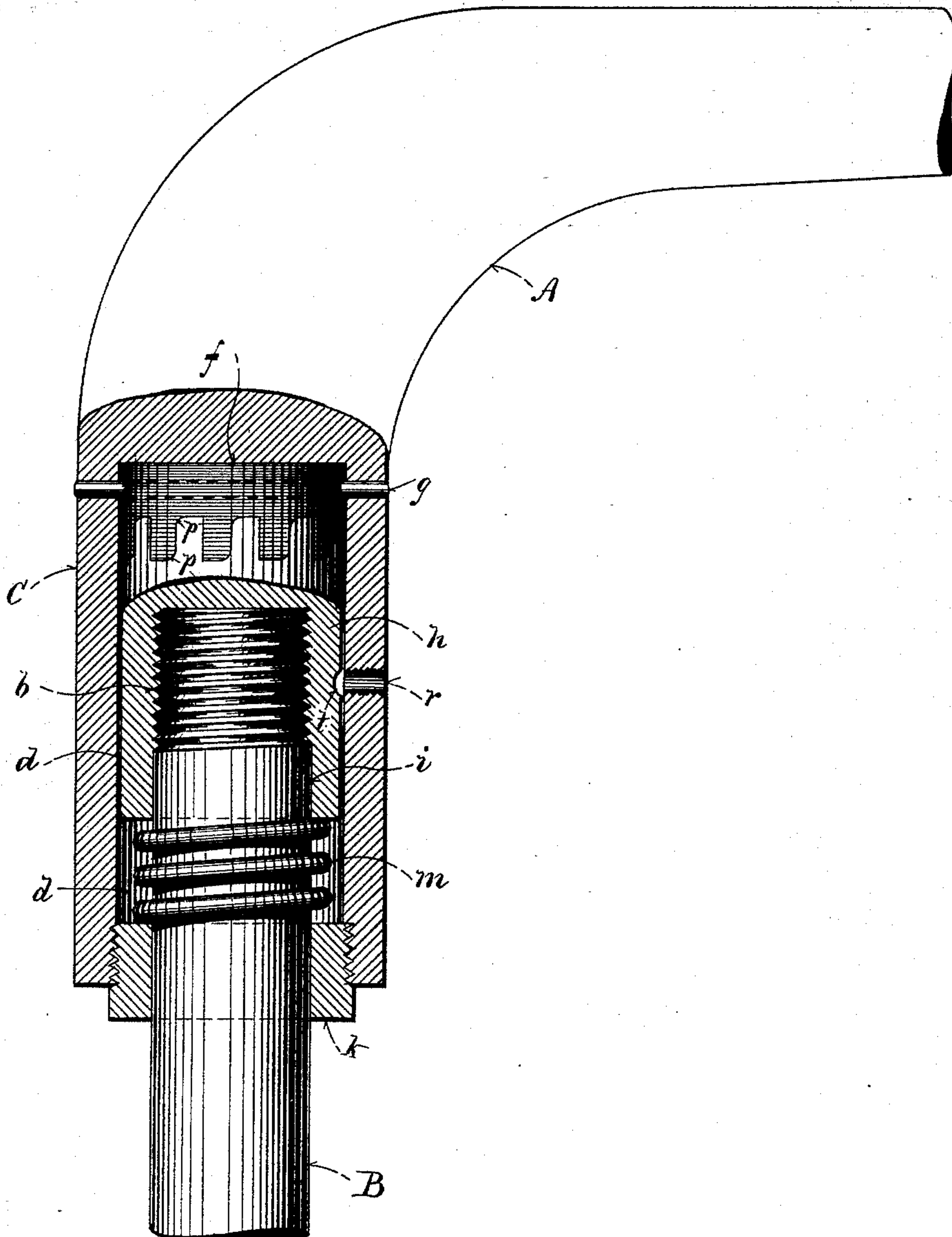


(No Model.)

A. B. COLLETT.
CAR BRAKE HANDLE.

No. 483,779.

Patented Oct. 4, 1892.



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CAR-BRAKE HANDLE.

SPECIFICATION forming part of Letters Patent No. 483,779, dated October 4, 1892.

Application filed March 24, 1892. Serial No. 426,217. (No model.)

To all whom it may concern:

Be it known that I, AUSTIN B. COLLETT, of Lynn, in the county of Essex, State of Massachusetts, have invented certain new and useful Improvements in Car-Brakes, of which the following is a description sufficiently full, clear, and exact to enable any person skilled in the art or science to which said invention appertains to make and use the same, reference being had to the accompanying drawing, forming part of this specification, in which the figure is an elevation partly in section, showing my improved brake-handle in position, the handle and brake-rod being represented as broken off.

Like letters of reference indicate corresponding parts in the drawing.

My invention relates to changeable brake-handles for street-cars, it being designed especially as an improvement on the device shown and described in Letters Patent of the United States numbered 460,113, dated September 29, 1891, granted to Herbert E. Collett for an improvement in car-brakes.

It is necessary in operating street-car brakes where the rod is rotated by hand to frequently change the relative position of the handle on the rod to bring it into the proper position for the brakemen to set the brakes, as the load on the car varies. This is ordinarily accomplished by unshipping the handle or by the use of what is known as the "ratchet-handle." When such handles are used and the brake is released, after the rod stops rotating the handle will continue to move backward, the tension of the click on the ratchet not being sufficient to prevent this. The assumed position of the handle is thus lost and it has to be again adjusted or the handle "pumped" or reciprocated in order to obtain the required power on the rod with the least exertion. The click quickly becomes worn or broken by such manipulation. Many of these disadvantages were overcome by the clutch mechanism shown in the Letters Patent above referred to; but in mounting such mechanism it was necessary to reduce the upper end of the brake-rod to form a spindle for the free clutch member. This greatly weakened the rod, which from the constant strain of setting the brake was liable to crystallize and break at this point. Moreover, such device

rendered it essential that each rod be especially fitted to receive the handle. My present improvement overcomes these objections, the handles being interchangeable and all parts of the clutch mechanism being contained therein, it being necessary only to screw-thread the brake-rod to detachably secure one clutch member thereto.

In the drawing, A represents the handle, and B the brake-rod. The upper end of the rod is exteriorly screw-threaded at *b* for a determined distance. The butt of the handle is chambered longitudinally at *d*. In the bottom of the chamber *d* one member *f* of a clutch mechanism C is disposed and secured by a pin *g*. The fixed member *h* of the clutch is elongated and is interiorly tapped and screw-threaded to receive the threaded end *b* of the rod B. The walls of the opening thus formed adjacent its mouth are left smooth at *i* to engage the face of the rod below its threads *b* and center the clutch while mounting the same. The mouth of the handle-chamber *d* is interiorly screw-threaded to receive an exteriorly-threaded nut or screw-plug *k*, which is loose on the rod B. A stiff coiled spring *m* is interposed around the rod between said nut and the lower end of the fixed member *h*. Said spring acts expansively to force the handle downward over the rod and engage the clutch members.

The teeth of the members *f h* are very deep and approximately "square," their rear edges only being chamfered slightly at *p* to enable the handle to ride without entirely disengaging said teeth. This peculiar formation affords an enlarged bearing-surface in the clutch to support the pressure from the handle, and, furthermore, effectually prevents the relative position of the handle being changed from its impetus when the rod has stopped rotating in releasing the brake. The length of the teeth also renders the device operative without the spring *m*, as the weight of the handle will engage the clutch member sufficiently for ordinary purposes; but I prefer to employ the spring, it rendering such engagement quicker and more positive after the members are separated in adjusting the position of the handle.

For setting the brake the handle is manipulated in the ordinary manner, the clutch

locking it to the rod. By reciprocating the handle the member *f* will ride on its companion, elevating the handle and compressing the spring *m*, whereby the relative position of the handle may be quickly adjusted. To remove the handle, a threaded opening *r* is provided in the wall of the handle-chamber *d*. Into this a set-screw may be turned, which will project into an indentation *t* in the fixed member *h*. The handle being turned backward, the screw will cause the member *h* to turn off the threads of the rod, disconnecting the whole mechanism therefrom, or said indentation *t* may be elongated into a peripheral groove on the member *h*, as it might be inconvenient to register the opening *r* and indentation. Such groove, with the screw, would hold the handle from riding and the clutch-teeth from disengaging, the member *h* being turned off by its companion.

Having thus explained my invention, what I claim is—

1. In a car-brake, a brake-rod having its upper end screw-threaded, in combination with a chambered handle, a clutch member secured in said chamber, and a companion member turned onto said rod, substantially as described.

2. In a car-brake, a brake-rod, in combination with a clutch member detachably secured

thereon, a brake-handle chambered to receive said member, a companion member fast in said chamber, a detachable plug closing the mouth of said chamber and loose on said rod, and a push-spring interposed between said plug and detachable member, substantially as set forth.

3. In a car-brake, the threaded brake-rod, in combination with the chambered handle, the clutch member secured therein, and the companion member turned onto said rod, said handle having an opening in the wall of its chamber adapted to register with an indentation in said rod clutch member, substantially as and for the purpose set forth.

4. In a car-brake, the handle *A*, chambered at *d* and interiorly threaded at its mouth, in combination with the clutch member *f*, secured in said chamber, the rod *B*, threaded at *b*, the clutch member *h*, interiorly threaded to receive said rod and having the smooth portion *i*, the screw-plug *k* in the mouth of said chamber, and the spring *m* between said plug and rod clutch member, all being arranged to operate substantially as described.

AUSTIN B. COLLETT.

Witnesses:

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