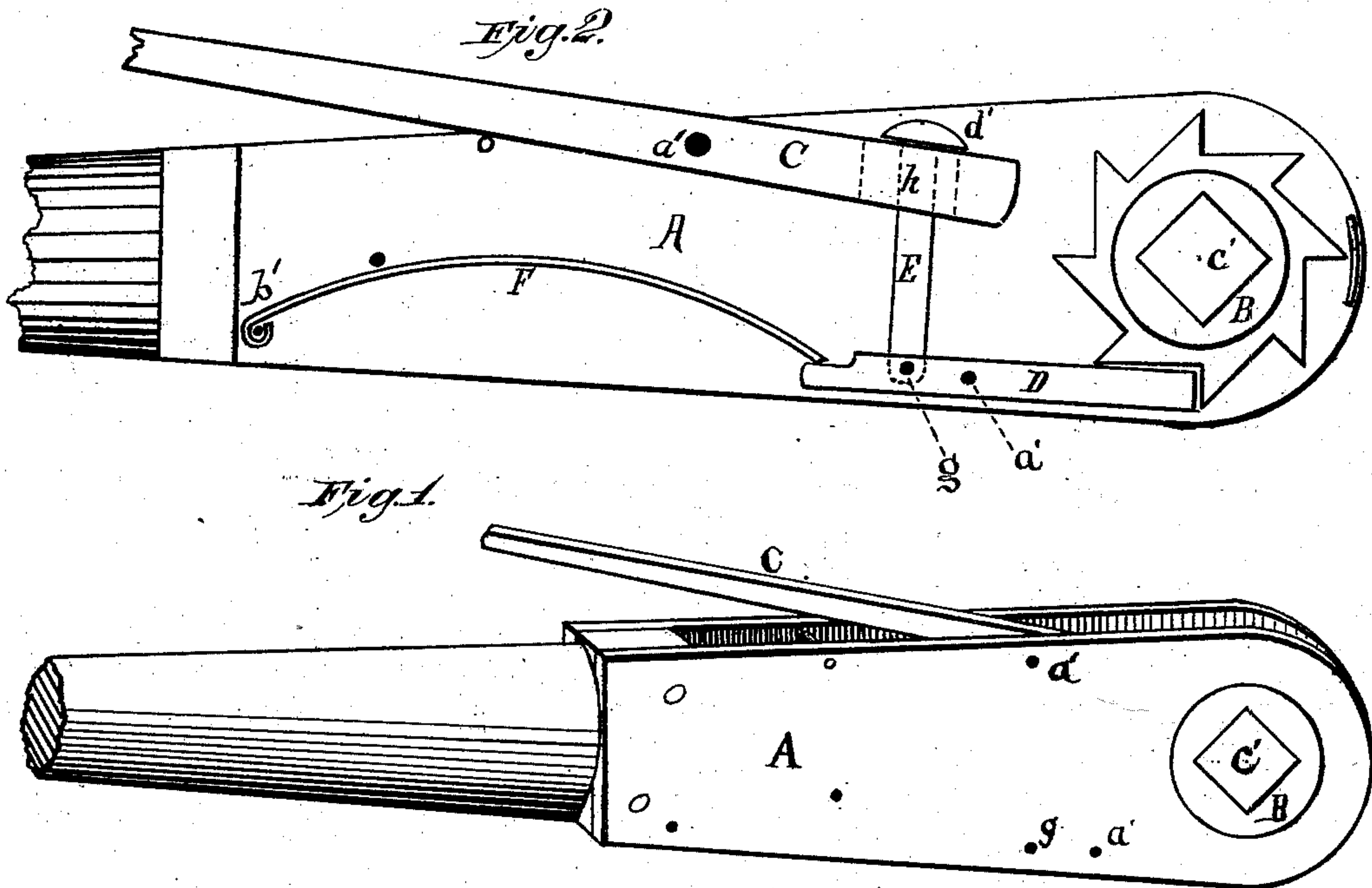


W. D. BEEBE.

RATCHET RELEASES FOR UNLOADING COAL-CARS.

No. 194,760.

Patented Sept. 4, 1877.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

WILLIAM D. BEEBE, OF POTTSVILLE, PENNSYLVANIA.

## IMPROVEMENT IN RATCHET-RELEASERS FOR UNLOADING COAL-CARS.

Specification forming part of Letters Patent No. **194,760**, dated September 4, 1877; application filed June 20, 1877.

*To all whom it may concern:*

Be it known that I, WILLIAM D. BEEBE, of Pottsville, in the county of Schuylkill and State of Pennsylvania, have invented a new and useful Improvement in Ratchet-Releases, which improvement is fully set forth in the following specification, and described in the drawings, to which I refer, and which form part of this specification.

Figure 1 is a perspective view of my invention; and Fig. 2 an open view of the same, showing the parts and their arrangement.

The object of my invention is to provide a ratchet-wrench with an attachment for releasing the ratchet-pin so that the ratchet-wheel may revolve in a free and unrestrained manner, and in any desired direction. This I accomplish by the use of a pivoted lever and connecting-bar pivoted to the ratchet-pin, and working in a slot in one end of the lever.

The drawing represents the working parts of my invention, the top of the apparatus being removed to show it more fully.

A represents the frame or body of the invention, which is a lever of suitable length to give the power required, and having the end containing the ratchet-wheel made in the form of a case, either by slotting out the lever or by fastening suitable pieces onto the lower part of the lever. B is a ratchet-wheel, having a square or other suitable-shaped hole in it at *c'*, and held by the ratchet-pin D. F is a spring, and its use is merely to hold the ratchet-pin in place, so that it engages in the teeth of the ratchet-wheel B. One end of the spring is secured at *b'*. C is a lever, which may be made of any desired length, and is pivoted to the main lever A at *a'*. E is a connecting-bar pivoted to the ratchet-pin D at *g*, and working in a slot in the lever C at *h*, the head *d'* serving to keep it secure, and allowing it to work easily in the slot *h*, and keeping the connecting-bar E from slipping through the slot *h*.

The particular use to which my invention applies is for unloading coal-cars which are

constructed with trap-doors in the bottom, and which are fastened by means of a ratchet and ratchet-pin. Attached to these ratchet-wheels is a square shank; and the usual method of operating them now in use is to take a wrench and tighten up the ratchet slightly, which will loosen the ratchet-pin enough to allow of its being disengaged from the ratchet-wheel; then the whole strain is on the wrench, and the operator must exert considerable strength to allow the wrench to revolve with the shank, or, if he allows it to revolve by removing his hands, the wrench is very likely to fly off, and thus endanger the life of the operator. Besides this use of my invention there are many others just as practical.

In using my invention for unloading coal-cars the shank on the ratchet of the car is inserted in the hole *c'*. The lever A is then worked until the ratchet-pin on the car is released and thrown off, and then the small lever C is pressed down, which disengages the ratchet-pin D from the ratchet-wheel B, and the shank on the car is thereby allowed to revolve, thus unloading the car without any danger to the operator, and in an easy and expeditious manner.

In making my invention I use iron or steel, or I combine them to suit the work to be done. Where they are used for work where the strain is light, they may be made of any metal strong enough, or of wood.

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

The combination, in a ratchet-release, of the lever A, the ratchet-wheel B, the ratchet-pin D, the spring F, the connecting-bar E, and the lever C, constructed and arranged as herein described and shown.

WILLIAM D. BEEBE.

Witnesses:

A. G. HAWLEY,  
MORGAN REED.