

(No Model.)

G. NOBES & R. H. JACKSON.  
APPARATUS FOR CLEARING THE RAILS OF RAILWAYS, &c.

No. 442,995.

Patented Dec. 16, 1890.

FIG. 3

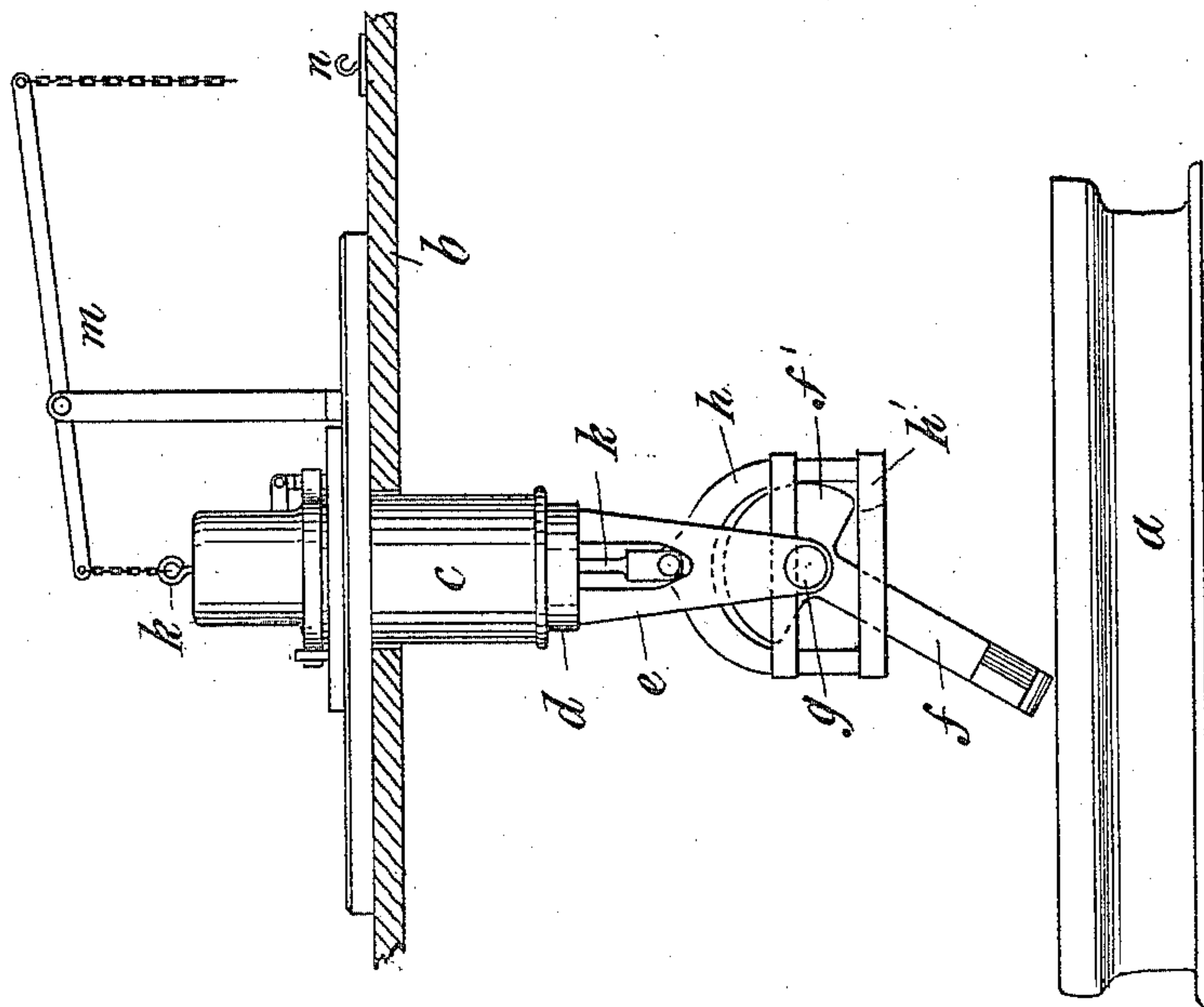


FIG. 2

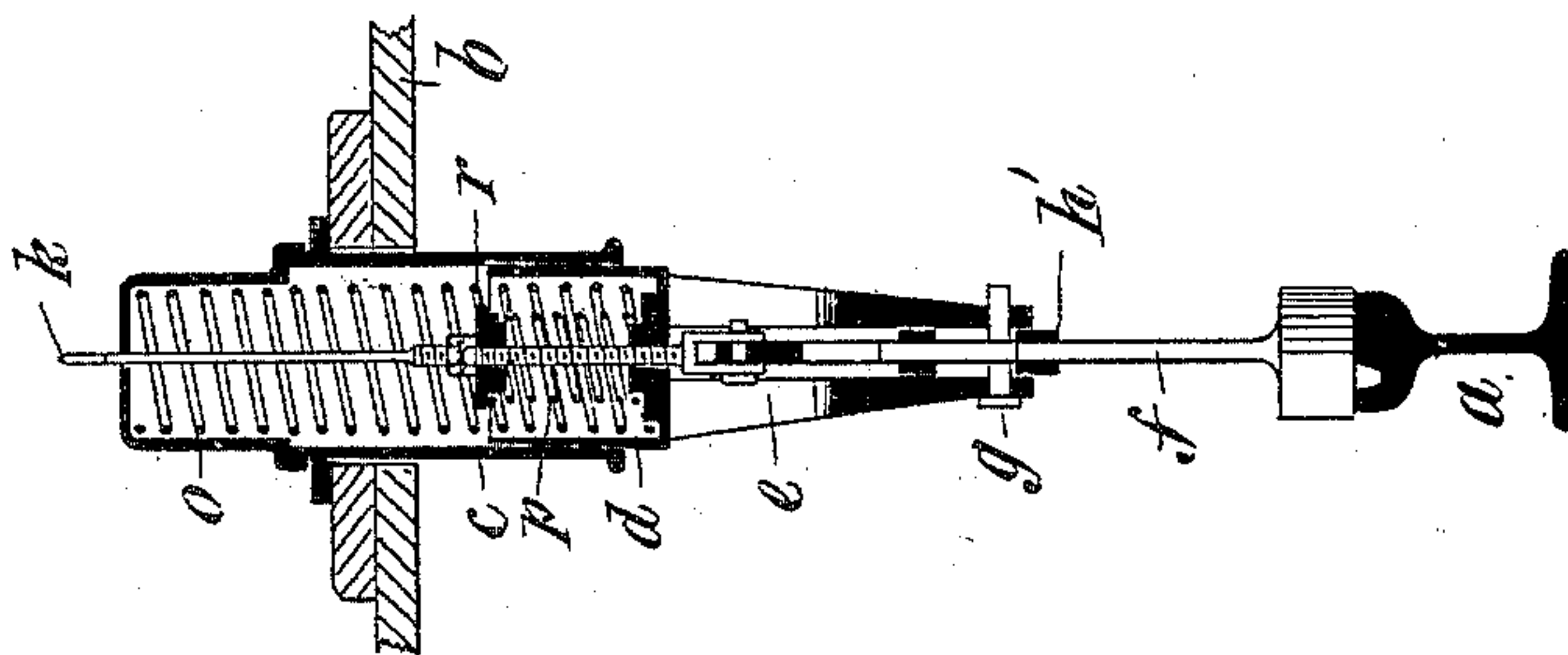
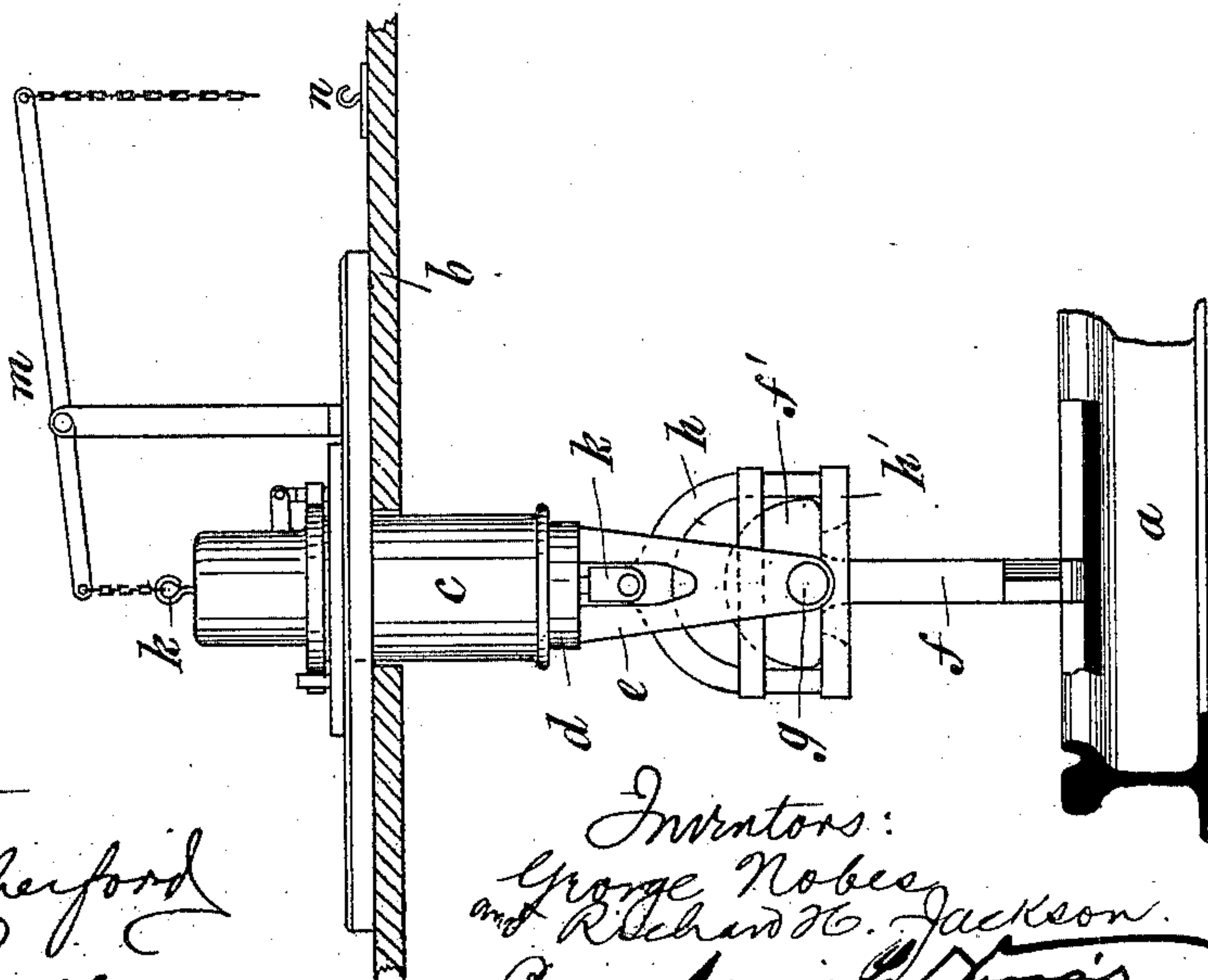


FIG. 1



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# UNITED STATES PATENT OFFICE.

GEORGE NOBES AND RICHARD H. JACKSON, OF LONDON, ENGLAND.

## APPARATUS FOR CLEARING THE RAILS OF RAILWAYS, &c.

SPECIFICATION forming part of Letters Patent No. 442,995, dated December 16, 1890.

Application filed October 6, 1890. Serial No. 367,261. (No model.) Patented in England March 12, 1890, No. 3,906.

*To all whom it may concern:*

Be it known that we, GEORGE NOBES, sanitary engineer, a subject of the Queen of Great Britain, residing at 226 High Street, Harlesden, Middlesex, England, and RICHARD HENRY JACKSON, wine and spirit merchant and dealer in beer, a subject of the Queen of Great Britain, residing at 128 Elgin Avenue, Paddington, Middlesex, England, have invented an Improved Apparatus for Clearing the Rails of Railways and Tramways, (for which we have obtained a patent in Great Britain, No. 3,906, bearing date March 12, 1890,) of which the following is a specification.

This invention has for its object to provide a novel, simple, efficient, and economical mechanism for clearing railway-tracks of obstructions, such as stones, mud, snow, and the like.

To accomplish this object our invention involves the features of construction, the combination or arrangement of devices, and the principles of operation hereinafter described and claimed, reference being made to the accompanying drawings, in which—

Figure 1 is an elevation, partly in section, showing the invention applied to a tram-car. Fig. 2 is a section of the same at right angles to Fig. 1. Fig. 3 is an elevation showing the position of the pivoted arm when met by a fixed obstruction.

*a* is one of the rails.  
*b* is the bottom frame of the car in section.  
*c* is a fixed cylinder bolted to the car.  
*d* is a sliding cylinder fitting the fixed cylinder telescopically.

*e* is a frame fixed to the cylinder *d*.  
*f* is the pivoted arm, secured to the frame *e* by the pivot *g*.

*f'* is a cam attached to or formed in one with the arm *f*.

*h* is a frame in which the cam *f'* is confined, the lower edge of the cam or some part thereof being always in contact with the lower bar *h'* of the frame *h*. The frame *h* is attached to the lower end of a rod *k*, which extends through both cylinders *c* and *d*. The upper end of

the rod *k* has an eye, to which a chain is attached.

*m* is a lever, and *n* is a hook by which the rod *k*, cylinder *d*, frames *e* *h*, and arm *f* may be raised when not in use or for clearing obstructions.

*o* is a spring traversing the cylinders *c* and *d* and pressing the cylinder *d* downward.

*p* is another spring with smaller coils.

*r* is a screw-nut fitted to the rod *k*, whereby the power of the spring *p* is exerted upon the rod *k* in an upward direction, and whereby the lower bar *h'* of the frame *h* is caused to press the cam *f'* in an upward direction, tending to restore to and retain the arm *f* in a vertical position.

When the rod *k* is raised by the lever *m*, the spring *o* yields and allows the cylinder *d* to rise inside the cylinder *c*, thus raising the arm *f* quite clear of the rails.

The lower end of the pivoted arm *f* is provided with a head shaped to conform to the upper surface of the rails which are to be cleared. For tramways the head on the lower end of the arm is formed with a projection to enter the groove and a horizontal surface to scrape the top of the rail; but for railways the head on the lower end of the arm will be shaped to fit the tread of the rail.

In fitting tramway-cars two scrapers may be used, placed within the wheel-base; but in some cases four may be fitted, just outside the wheel-base, as preferred.

In fitting locomotive-engines and other railway rolling-stock the invention is fixed to any convenient parts of the framing, so as to clear the rails in front of the train.

We claim—

1. The combination, in a track-clearer, of upper and lower telescopic cylinders, a spring acting to move the lower cylinder downward, a frame carried by the lower cylinder, a pendant rail-clearer arm pivoted to the frame, and lever mechanism for raising the arm, frame, and lower cylinder, substantially as described.

2. The combination, in a track-clearer, of



upper and lower telescopic cylinders *c* and *d*,  
fitted with springs *o* and *p*, the frames *e* and  
*h*, suspended from the lower cylinder, the piv-  
oted rail-clearer arm *f*, having a cam *f'* work-  
5 ing in said frames, and means for raising the  
lower cylinder with the frames and clearer-  
arm, substantially as described.

3. The combination, in a track-clearer, of  
the upper and lower telescopic cylinders, a  
10 spring for pressing one of the cylinders down-  
ward, a pendent frame carried by the latter  
cylinder, a pivoted rail-clearer arm having a  
cam working against said pendent frame, and

means for raising the cylinder which carries  
the frame and its clearer-arm, substantially 15  
as described.

Dated this 30th day of July, 1890.

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