

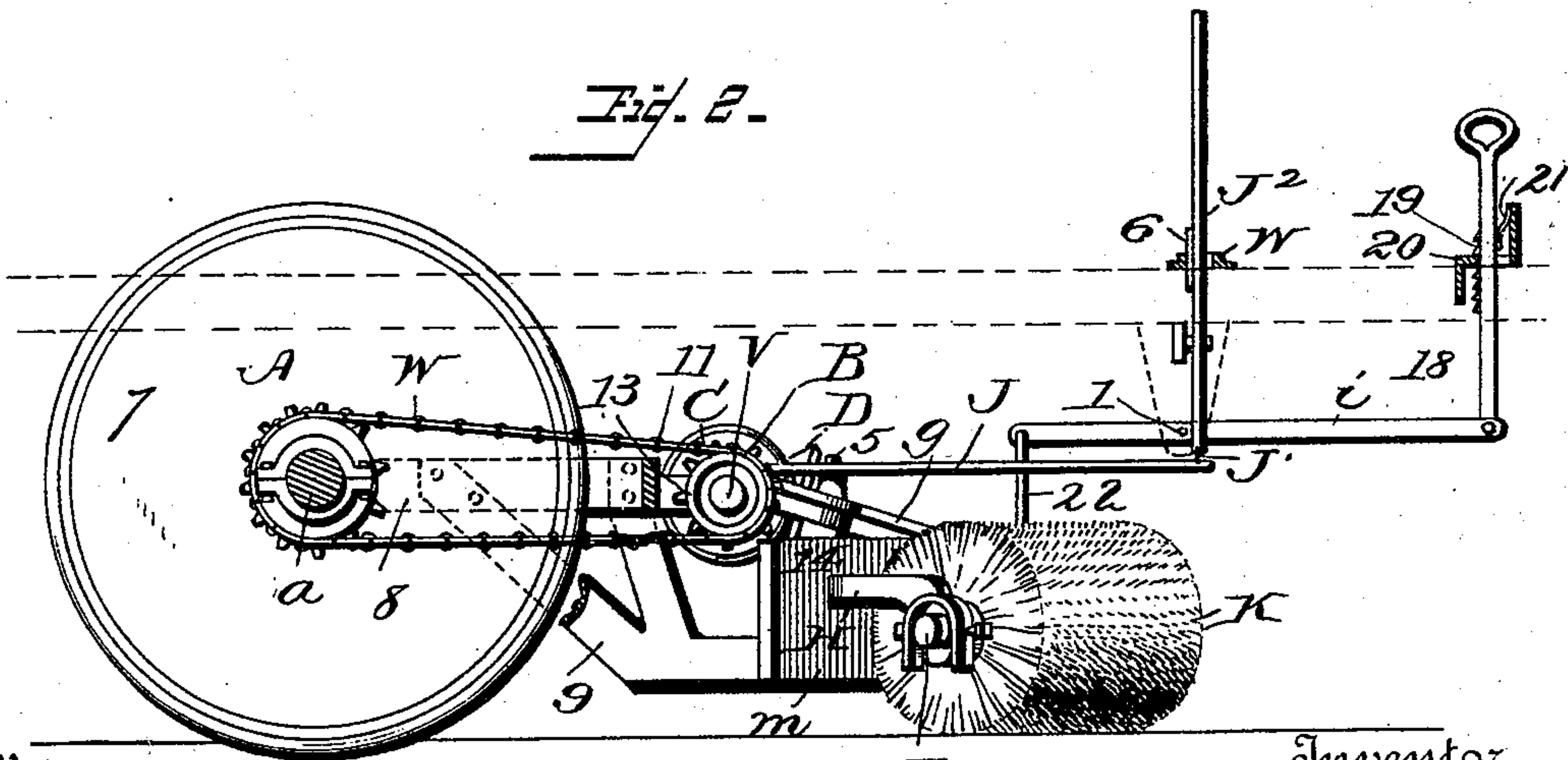
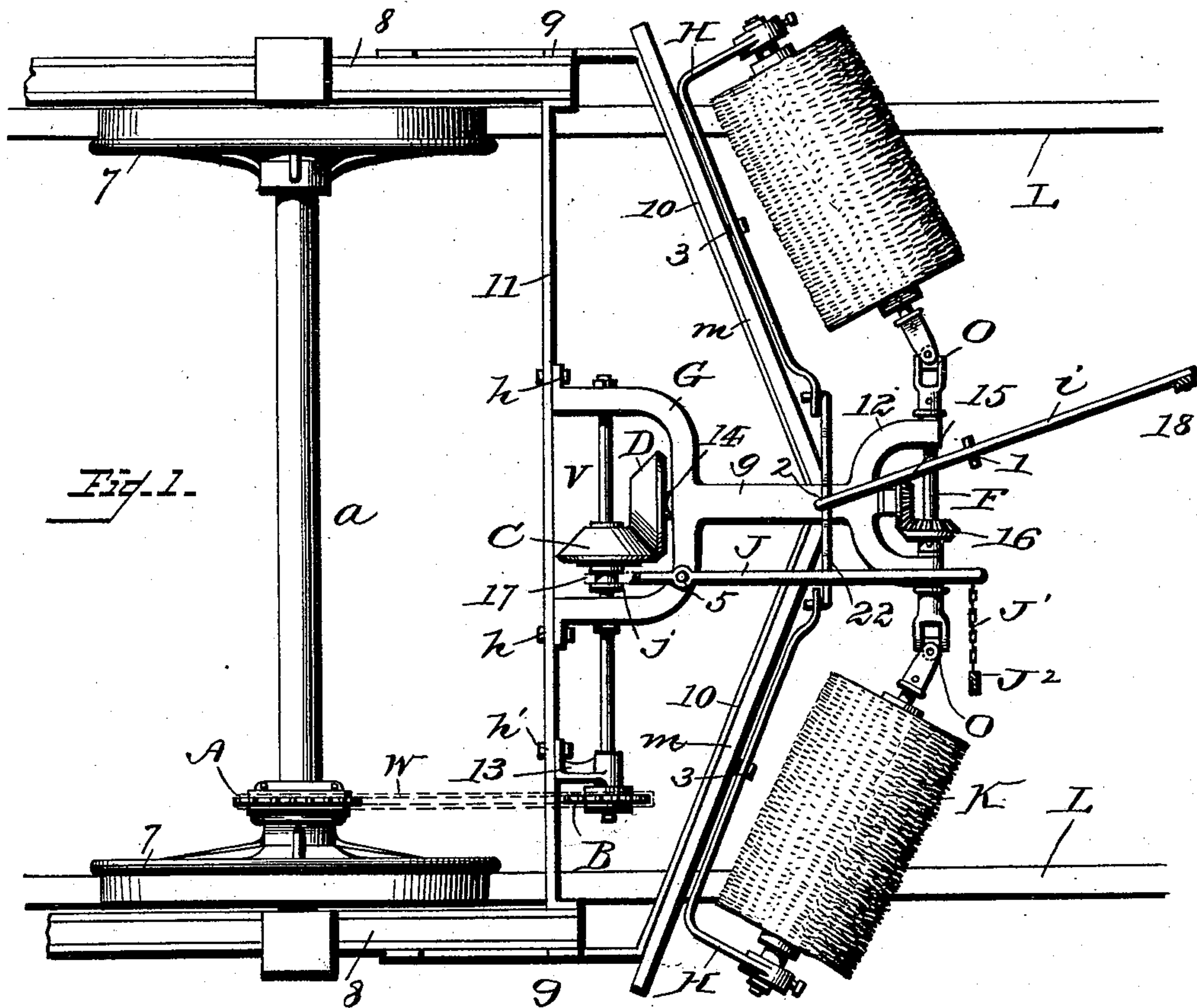
(No Model.)

2 Sheets—Sheet 1.

C. E. BOSTWICK.
TRACK CLEANER.

No. 485,528.

Patented Nov. 1, 1892.



Witnesses
Charles E. Bostwick
Van Buren Hillyard

Inventor
Charles E. Bostwick
By his Attorneys
R. H. Lacy

(No Model.)

2 Sheets—Sheet 2.

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Fig. 3.

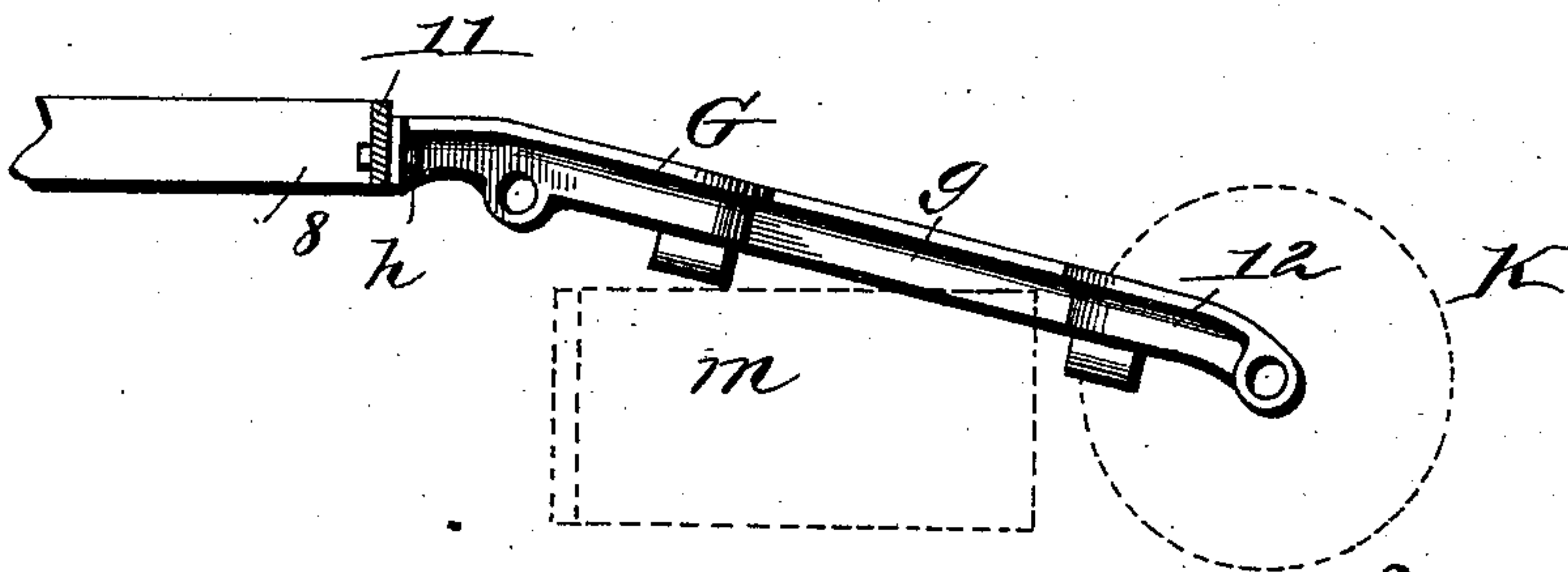


Fig. 4.

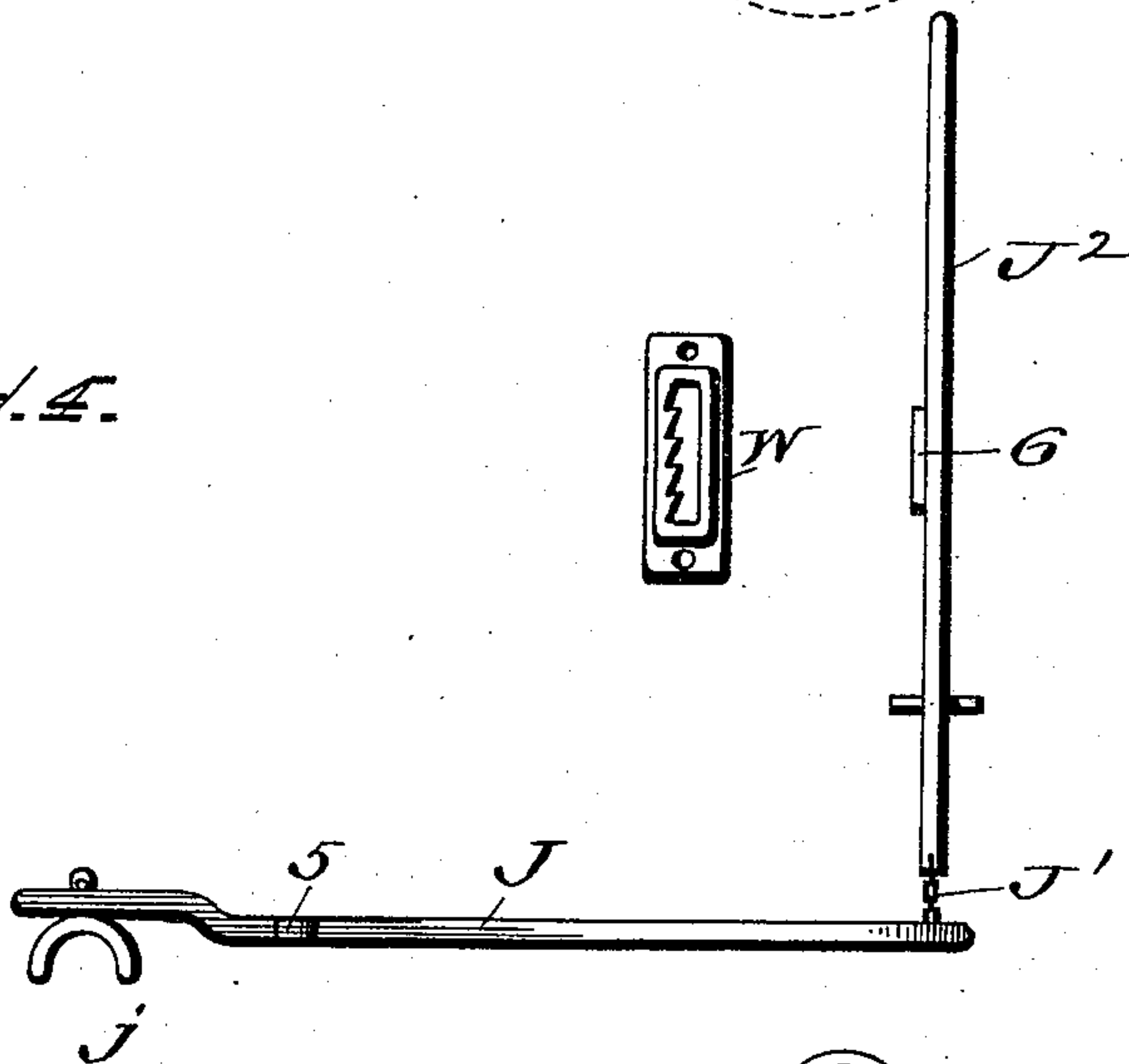
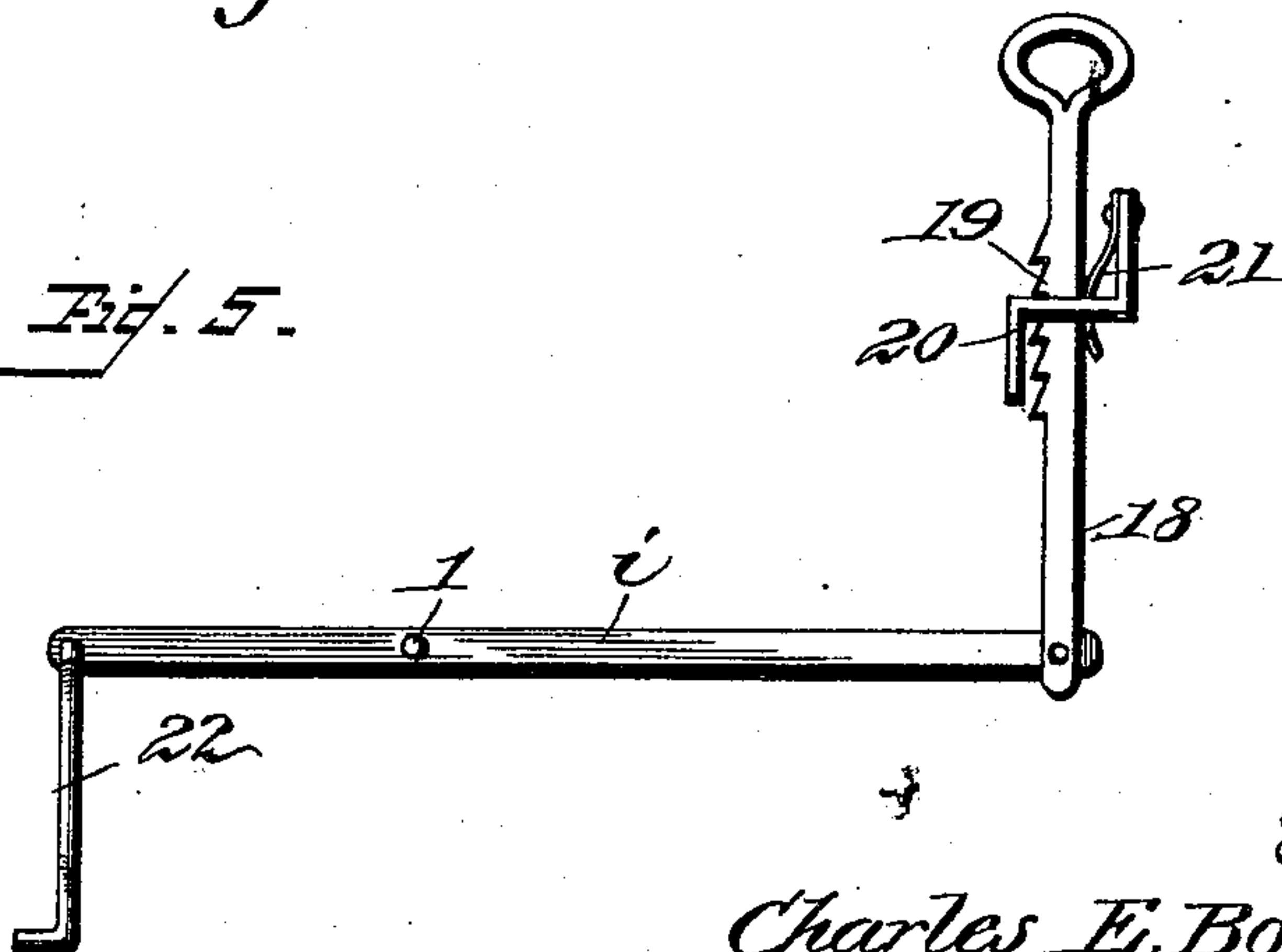


Fig. 5.



Witnesses
"Prof. J. H. Hildner"
Van Buren Hillyard.

Inventor
Charles E. Bostwick.

By my Attorneys
R. H. H. Hacey

UNITED STATES PATENT OFFICE.

CHARLES E. BOSTWICK, OF DU BOIS, PENNSYLVANIA.

TRACK-CLEANER.

SPECIFICATION forming part of Letters Patent No. 485,528, dated November 1, 1892.

Application filed May 4, 1892. Serial No. 431,764. (No model.)

To all whom it may concern:

Be it known that I, CHARLES E. BOSTWICK, a citizen of the United States, residing at Du Bois, in the county of Clearfield, State of Pennsylvania, have invented certain new and useful Improvements in Track-Cleaners; 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.

This invention relates to track-cleaners especially designed for street-railway cars and aims to dispense with a separate machine for this purpose. The brushes and operating mechanism are attached to and carried by the truck-frame and are designed to be actuated by the operator, who sets the mechanism by means of which the car is propelled.

The improvement is designed to be attached to such cars as are propelled by power other than horse-power.

With slight modifications the improvement can be readily adapted to horse-cars and will be described in its general application to street-railway cars without reference to their manner of propulsion.

The improvement consists of the novel features and the peculiar construction and combination of the parts, which will be hereinafter more fully described and claimed, and which are shown in the annexed drawings, in which—

Figure 1 is a plan view of the invention, showing it applied to a truck-frame, one end of the latter being shown. Fig. 2 is a side elevation of the invention, parts being broken away. Fig. 3 is a detail side elevation showing the frame which supports the brush and the brush-actuating mechanism, the pilot-board, and a brush in their relative positions. Fig. 4 is a detail view of the instrumentalities for throwing the sweeper mechanism in and out of gear. Fig. 5 is a detail view of the devices for raising and lowering the brushes.

The reference-letters *a* and *L* indicate, respectively, the axle of a truck and the rails of a railway-track of ordinary construction. The axle *a* is journaled at its ends in the truck-frame 8 in the usual manner and is provided with wheels 7 and has secured thereon near one end a sprocket-wheel A, which is preferably made in halves and bolted to the

said axle. A frame composed of the parallel bars 9 and the oppositely-inclined bars 10 10 is bolted or otherwise secured to the truck-frame 8 and forms a support for the levers H H, which latter support the brushes K K at their outer ends. The frame composed of the parts *g*, G, and 12 is bolted at its inner end at *h h* to a cross-bar 11 of the truck-frame and forms a support for the brush-actuating mechanism. The end portions 12 and G of this frame are bifurcated and are constructed to form bearings, respectively, for the parallel shafts F and V. The latter shaft is further supported at one end by a bracket 13, which is bolted to the cross-bar 11 at *h'* and is provided with sprocket-pinion B, around which and the sprocket-wheel A passes the sprocket-chain W. The shaft 14, arranged between and at right angles to the parallel shafts V and F, obtains bearings near its ends in the intermediate portions *g* of the frame 12 *g* G and is provided at its outer end with a bevel-pinion 15, that meshes with a corresponding bevel-pinion 16 on the shaft F. The bevel-pinion D at one end of shaft 14 is adapted to engage with a corresponding bevel-pinion C on the shaft V. These bevel-pinions C D preferably engage by frictional contact, and the pinion D is preferably made of iron and the pinion C of wood or similar substance. The pinion C is adapted to move on the shaft V to and from the pinion D for the purpose of throwing the machine in and out of gear, as may be required, and is provided with a hub portion 17, having an annular groove, into which extends a crotch *j* on the end of the lever J. This lever J is pivoted at 5 to the inner portion G of the aforesaid frame, and is connected at its outer end with a vertical lever J² by the link J'. The upper end of the vertical lever J² extends in convenient reach of the operator and is held in the desired position by a projection 6 thereon engaging with one of a series of teeth on the ratchet-bar *w*.

The pilot-boards *m m* are connected with the oppositely-inclined bars 10 10 by the bolts 3 3. The lever *i* is pivoted at 1 and is connected at its outer end with a vertical bar 18, which extends within convenient reach of the operator and is provided with a series of ratchet-teeth 19 to engage with a plate 20,

whereby the said bar 18 is held in the desired position. A spring 21, secured to a vertical extension of the plate 20, exerts a pressure on the bar 18, so as to hold the teeth 19 thereof in engagement with the plate 20, in the manner well understood. The levers H H have their outer ends bent at about right angles and provided with bearings which receive and form supports for the brushes K K.

These levers are mounted about midway of their ends on the bolts 3 3 and have their inner ends pivotally connected with an equalizing-bar 22, as most clearly shown in Fig. 1. This equalizing-bar 22 is preferably arch-shaped and is connected midway of its ends with the inner end of lever *i*, as shown most clearly in Figs. 1 and 5. The brushes K K, which are preferably of steel wire, incline in oppositedirections and are approximately parallel with the pilot-boards *m m* and have connection at their inner ends with the shaft F by means of universal coupling or joints O. As the car is propelled over the track; motion is imparted to the shaft V by means of the sprocket-wheels A, sprocket-chains W, and the sprocket-pinion B and is transmitted from said shaft V to the shaft 14 by means of the pinions C D. It must be understood that the pinion C is mounted on the shaft V, so as to revolve therewith at all times, yet have a longitudinal movement on the said shaft to throw the said machine in and out of gear. When the pinions C and D are in mesh, the brushes K K will be rotated by the mechanism hereinbefore set forth and remove the snow, dirt, and other foreign substance from the rails L L. By a proper adjustment of the lever J² the machine may be thrown in or out of gear, as required, and by a proper manipulation of the bar 18 the brushes may be brought to the proper elevation.

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

1. In a track-cleaner, the combination, with the oppositely-disposed brushes K K and means for supporting them at their inner ends, of levers H, pivotally supported between their ends and having their outer ends constructed to form supports for the said brushes, and an

equalizer-bar connecting the inner ends of the said levers, substantially as set forth.

2. In a track-cleaner, the combination of oppositely-disposed brushes K K, supported and receiving motion at their inner ends, levers H H, pivotally connected between their ends to the pilot-boards and having their outer ends constructed to form supports for the outer ends of the said brushes, and an equalizer-bar 22, connecting the inner ends of the levers H, substantially as set forth.

3. In a track-cleaner, the combination of the shaft F, the oppositely-disposed brushes K K, universal joints connecting the inner ends of the brushes with the ends of the shaft F, the levers H, pivoted between their ends and having their outer ends constructed to support the outer ends of the said brushes K K and having the inner ends of the said levers connected together, and actuating mechanism for rotating the shaft F and adjusting the said levers H, substantially as and for the purpose specified.

4. A track-cleaner comprising the following elements, which are combined and arranged to operate substantially in the manner hereinbefore set forth, consisting of a frame 9 10, which is secured to the truck-frame of a car, a frame G g 12, attached to the cross-bar of the truck-frame and having its inner and outer ends bifurcated, the shafts V and F, journaled in the bifurcated portions of the said frame, the shaft 14, geared at its outer end with the said shaft F, the pinions C and D, adapted to connect the inner end of shaft 14 with the shaft V, means for moving the pinion C on the shaft V, the levers H H, connected with the bars 10 by bolts 3, the brushes K K, supported at their outer ends by the levers H and connected by universal joints to the shaft F, means for adjusting levers H, and means for actuating shaft V from the axle of the truck, substantially as hereinbefore specified.

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

CHAS. E. BOSTWICK.

Witnesses:

W. C. PENTZ,
L. S. HAY.