

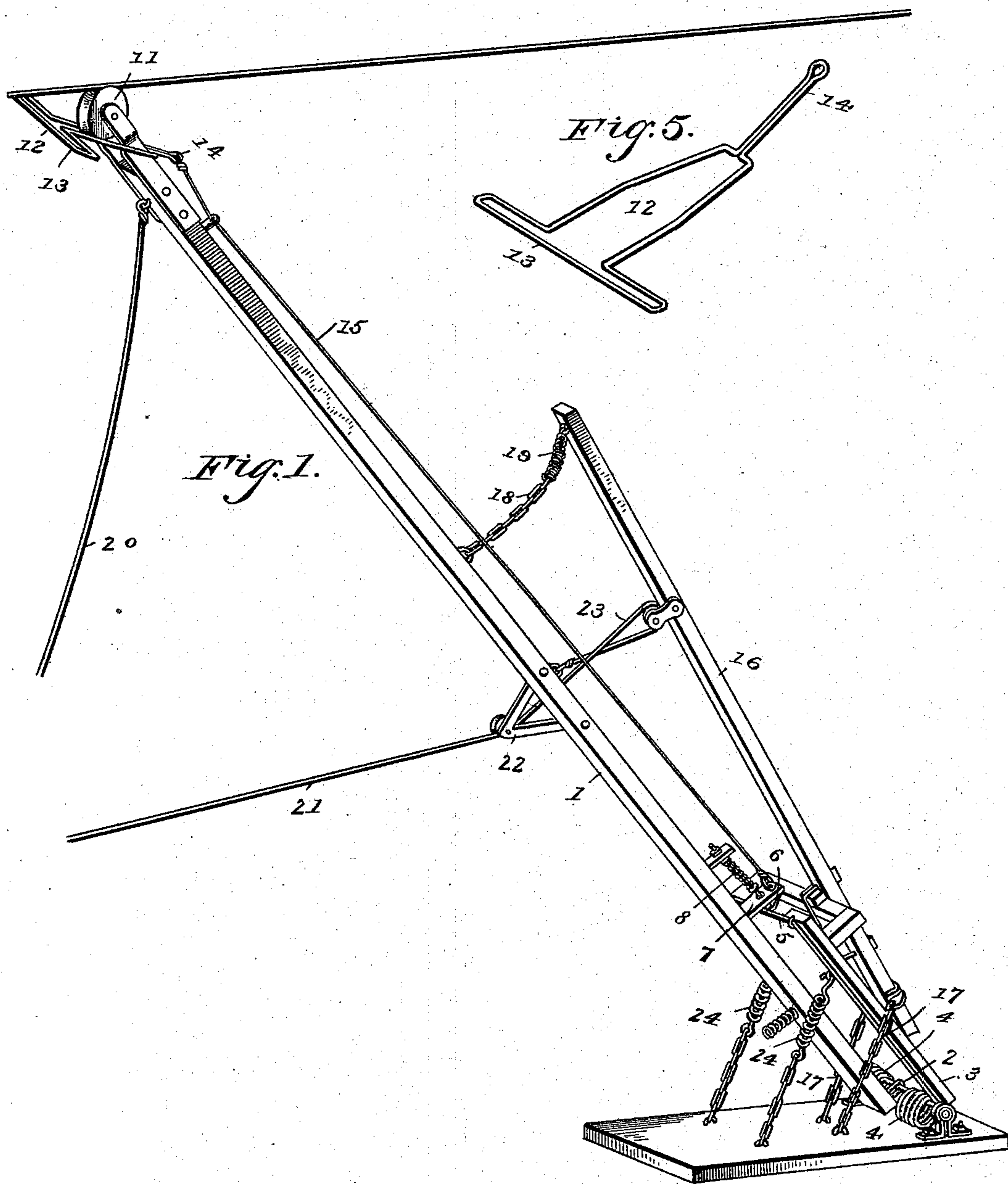
(No Model.)

2 Sheets—Sheet 1.

W. D. COBB.  
TROLLEY CATCHER.

No. 528,149.

Patented Oct. 30, 1894.



Inventor

Woodson D. Cobb,

Witnesses

Julius Ulke, Jr.  
D. E. [Signature]

By his Attorneys.

C. A. Snow & Co.

(No Model.)

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Fig. 4.

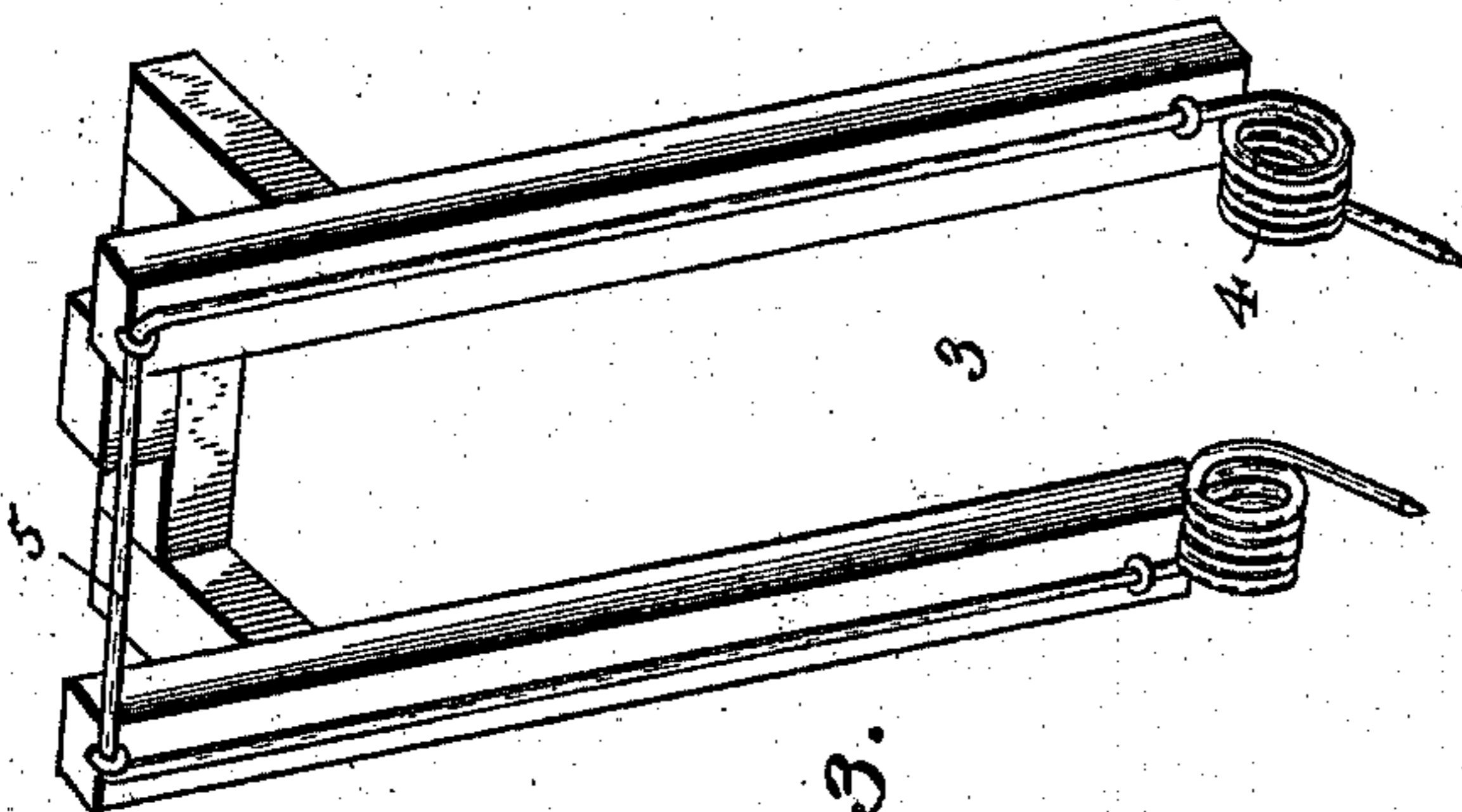
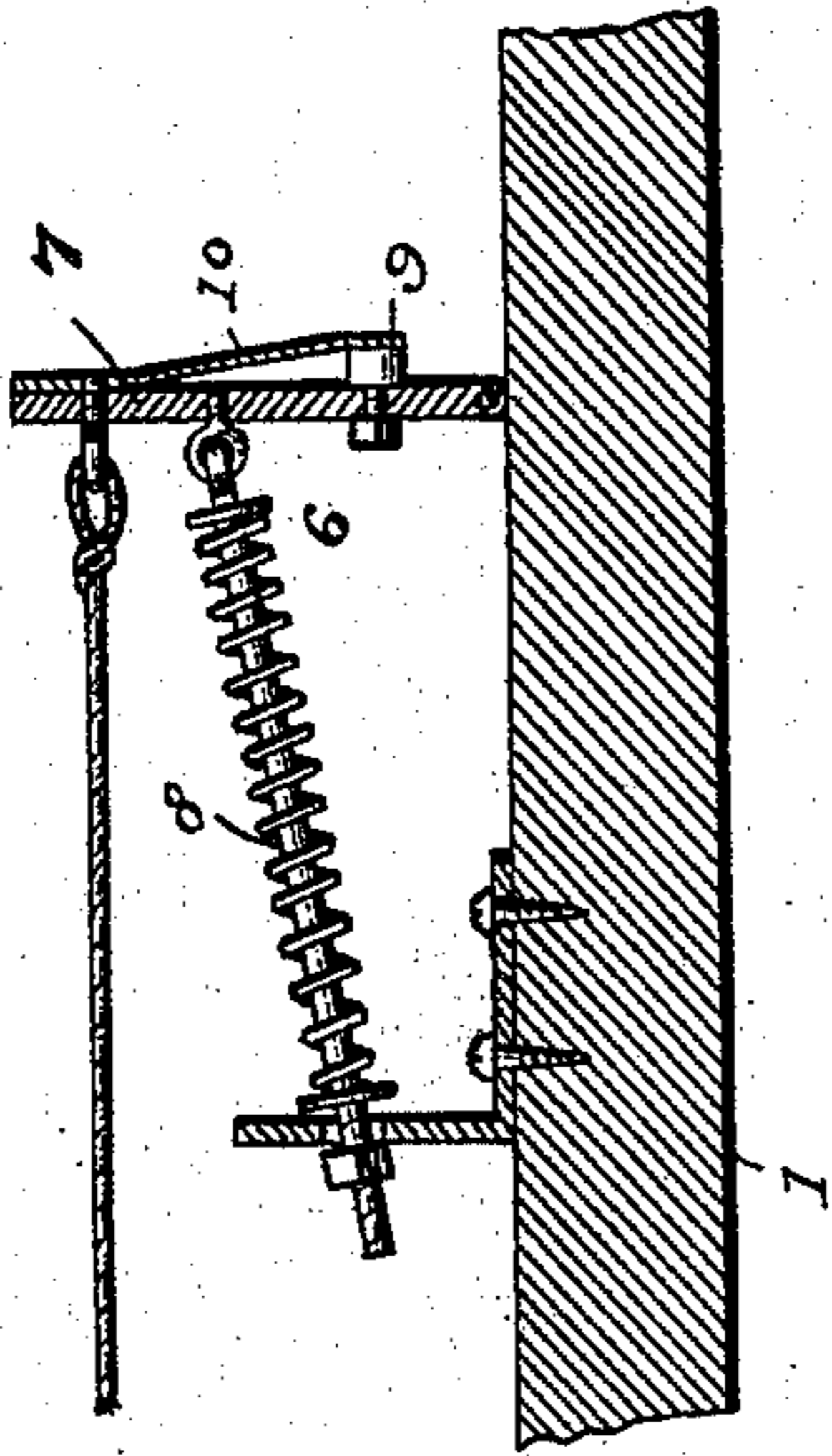
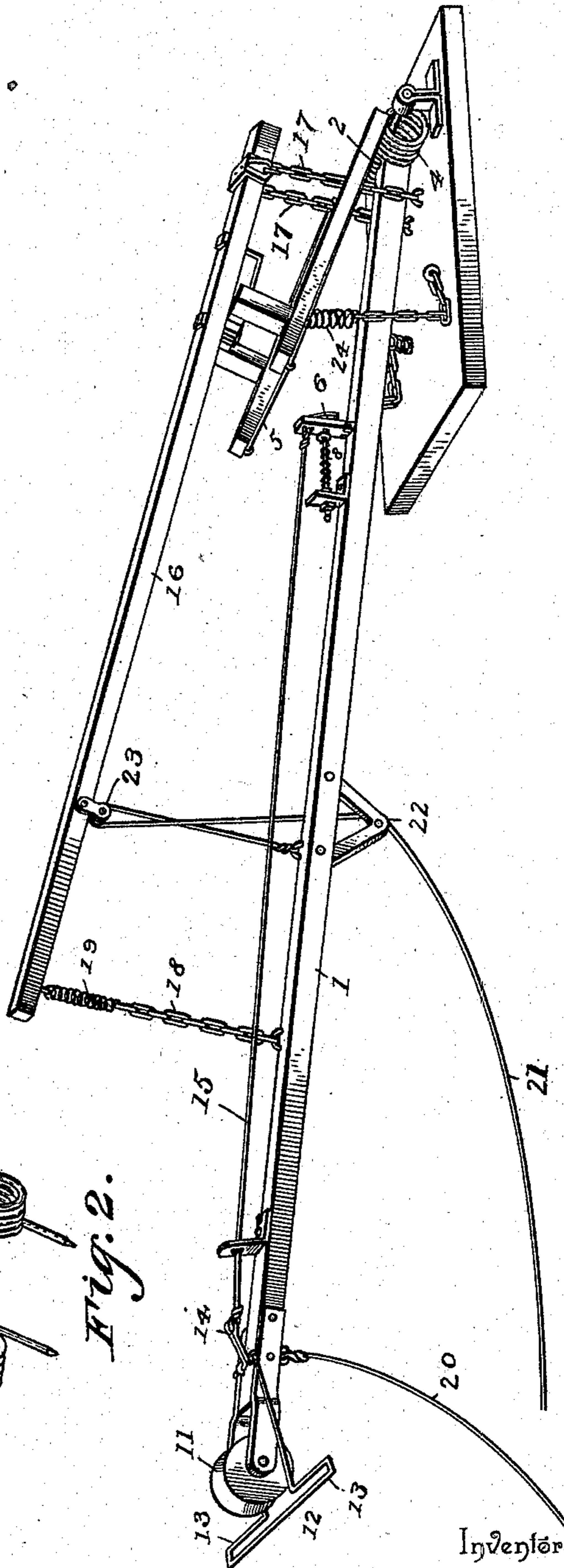


Fig. 3.

Fig. 2.



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# UNITED STATES PATENT OFFICE.

WOODSON D. COBB, OF FORT WORTH, TEXAS.

## TROLLEY-CATCHER.

SPECIFICATION forming part of Letters Patent No. 528,149, dated October 30, 1894.

Application filed May 29, 1894. Serial No. 512,921. (No model.)

*To all whom it may concern:*

Be it known that I, WOODSON D. COBB, a citizen of the United States, residing at Fort Worth, in the county of Tarrant and State of Texas, have invented a new and useful Trolley-Pole, of which the following is a specification.

My invention relates to trolley poles, and has for its object to provide means whereby the trolley pole is dropped to a position of safety when the trolley wheel leaves the wire, whereby the pole is prevented from coming in contact with the supports of the trolley wire, the feeders, &c.; and, furthermore, to provide simple and efficient means whereby the pole may be elevated to its normal position by an operative to cause the re-engagement of the trolley-wheel with the wire.

Further objects and advantages of the invention will appear in the following description and the novel features thereof will be particularly pointed out in the appended claims.

Referring to the drawings:—Figure 1 is a perspective view of a trolley-pole and attachments embodying my invention with the parts in their normal or operative positions. Fig. 2 is a similar view showing the pole and connected parts in the positions which they assume when the pole has been dropped or released from its spring actuated supporting devices. Fig. 3 is a detail view of the spring actuated supporting frame. Fig. 4 is a similar view of the spring catch. Fig. 5 is a similar view of the trip.

Similar numerals of reference indicate corresponding parts in all the figures of the drawings.

1 designates the trolley-pole proper, which is fulcrumed at its lower end in the ordinary or any preferred way, by means of a keeper 2, which may be secured to the roof or a stationary part of the framework of a car, and 3 designates a spring actuated supporting frame provided with the coiled actuating springs 4, and having a terminal cross-bar 5, which is engaged normally by a spring catch 6 carried by the trolley-pole. The trolley pole is arranged below the plane of the supporting-frame, and is supported by the latter solely through the engagement with the frame of the said spring-catch, whereby upon the

disengagement of the catch from the frame the trolley-pole drops to the position shown in Fig. 2. The catch may be of any preferred construction, but in the drawings I have shown the same as having a spring actuated tongue 7, to which is connected a guide-rod 8 bearing a coiled expansion spring, whereby the free end of the tongue is normally held pressed downward or toward the spring actuated supporting frame. The tongue is further provided with a shoulder 9 having its upper side beveled, as shown at 10, whereby when the pole is elevated, the pressure of the beveled side of said shoulder against the cross-bar of the supporting-frame, represses the tongue and allows the engagement of the catch with said bar.

Pivotally connected to the free or upper end of the trolley-pole adjacent to the grooved trolley wheel 11 is a trip 12, provided with lateral arms 13, which extend beyond the planes of the sides of the trolley-wheel a sufficient distance to contact with the trolley-wire immediately upon the disengagement or dismounting of the wheel from the wire, and the free lower end 14 of this trip is connected by means of a wire 15 with the free end of the tongue of the catch. Therefore when the parts are in the position shown in Fig. 1 the disengagement of the trolley-wheel from the wire brings the upper end of the trip in contact with the wire, draws upon the connecting wire 15, disengages the catch from the supporting frame, and allows the pole to drop to the position shown in Fig. 2.

Fulcrumed to the supporting-frame adjacent to the free or upper end of the latter is an operating arm 16, the lower end of which is flexibly connected by means of chains 17 with a stationary part of the framework of the car, and the upper end of which is flexibly connected by a chain 18 and an intermediate tensile spring 19 with an intermediate point of the trolley-pole. The connection 18 is of such length as to allow the trolley-pole to drop to a position of safety without releasing it sufficiently to come in contact with the roof of the car, and as the operating arm is supported by the spring actuated frame the weight of the trolley-pole is sufficient to depress the free end of said arm. The usual adjusting rope or cord 20 is attached to the

trolley-pole near its free end, and in addition thereto I employ an elevating cord 21, which extends through a guide 22 on the trolley-pole over a pulley 23 on the operating arm, and is attached at its extremity to the trolley-pole adjacent to said guide, whereby after the trolley-pole has been released by the contact of the trip with the trolley-wire, said pole may be returned to its normal position by draft upon the elevating cord, which thus raises the pole until the catch carried thereby is re-engaged with the supporting frame. To limit the upward movement of the free end of the supporting frame when released from the weight of the trolley pole I employ check-springs 24, attached to a fixed portion of the framework at their lower ends and to the supporting frame adjacent to its extremity at their upper ends.

The operation of the mechanism will be readily understood from the above description, and it will be seen, moreover, that various changes in the form, proportion, and the minor details of construction may be resorted to without departing from the spirit of the invention or sacrificing any of the advantages thereof.

Having described my invention, what I claim is—

1. The combination with a pivotal trolley-wheel, of a spring actuated supporting-frame, a catch for connecting the pole to said frame, a trip arranged at the free end of the pole for engagement with a trolley-wire upon the dismounting of the trolley-wheel from said wire, and connections between the trip and said catch, substantially as specified.

2. The combination with a pivotal trolley-pole, of a spring-actuated supporting-frame, a catch carried by the trolley-pole for engagement with said frame, a trip carried by the free end of the trolley-pole for engagement with a trolley-wire and operatively connected

with said catch, an operating arm carried by the supporting-frame, and an elevating cord connected to the trolley-pole and extending around a pulley carried by said arm, substantially as specified.

3. The combination with a pivotal trolley-pole, of a spring-actuated supporting-frame, a catch carried by the pole for engagement with said frame, a trip arranged at the free end of the trolley-pole for engagement with a trolley-wire and operatively connected with the catch, an arm fulcrumed upon the supporting frame, flexible connections for limiting the upward movement of the lower end of said arm, a flexible connection between the other end of the arm and the trolley-pole, and an elevating-cord connected at one end to the trolley-pole and extending over a pulley carried by said arm, substantially as specified.

4. The combination with a pivotal trolley-pole, of a spring-actuated supporting-frame, limiting springs connected to the free ends of said frame, a catch carried by the trolley-pole for engagement with a cross-bar of the supporting frame, a trip carried by the free end of the trolley-pole and operatively connected with the catch, an arm fulcrumed upon the supporting-frame, means for limiting the upward movement of the lower end of said arm, a flexible connection between the other end of the arm and the trolley-pole and having an interposed tensile spring, and an elevating cord secured at one end to the trolley-pole and extending over a pulley on the bar, substantially as specified.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

WOODSON D. COBB.

Witnesses:

J. C. TERRELL, Jr.,  
G. NANCE.