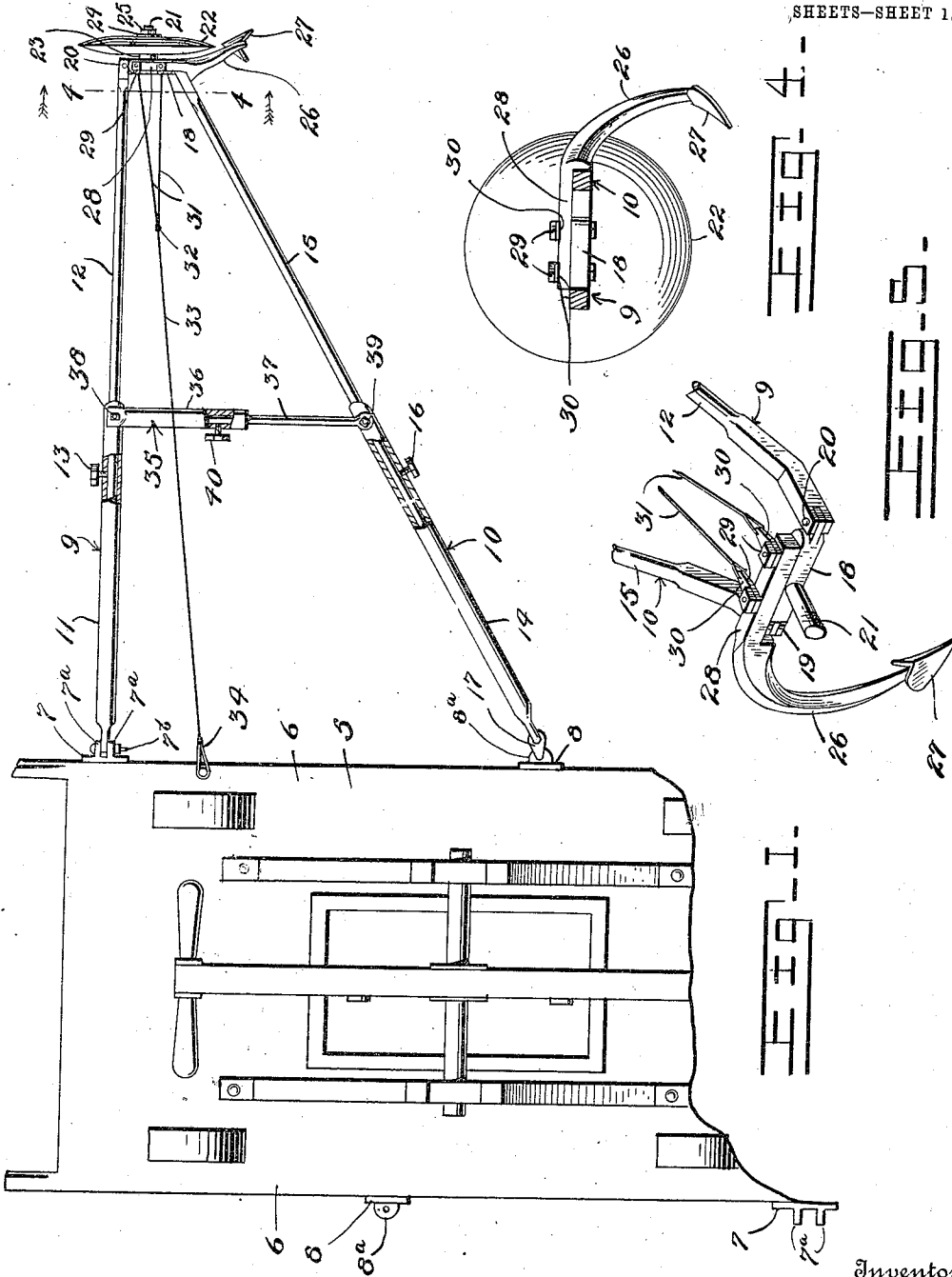


T. E. SUTTON.
LINE MARKER FOR RAILWAYS.
APPLICATION FILED DEC. 2, 1911.

Patented Mar. 5, 1912.

SHEETS—SHEET 1.

1,019,199.



Inventor,

T. E. Sutton.

By *Franklin Franklin* Attorney

Attorney

Witnesses

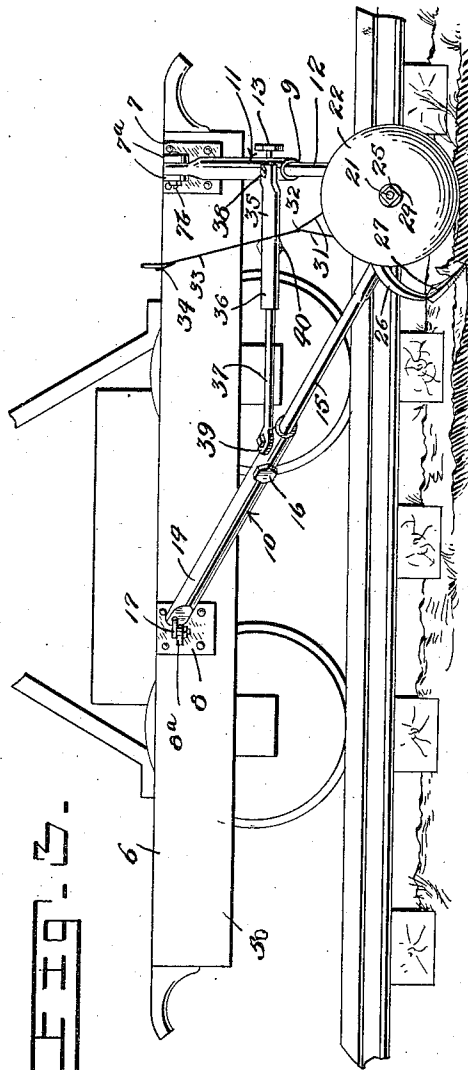
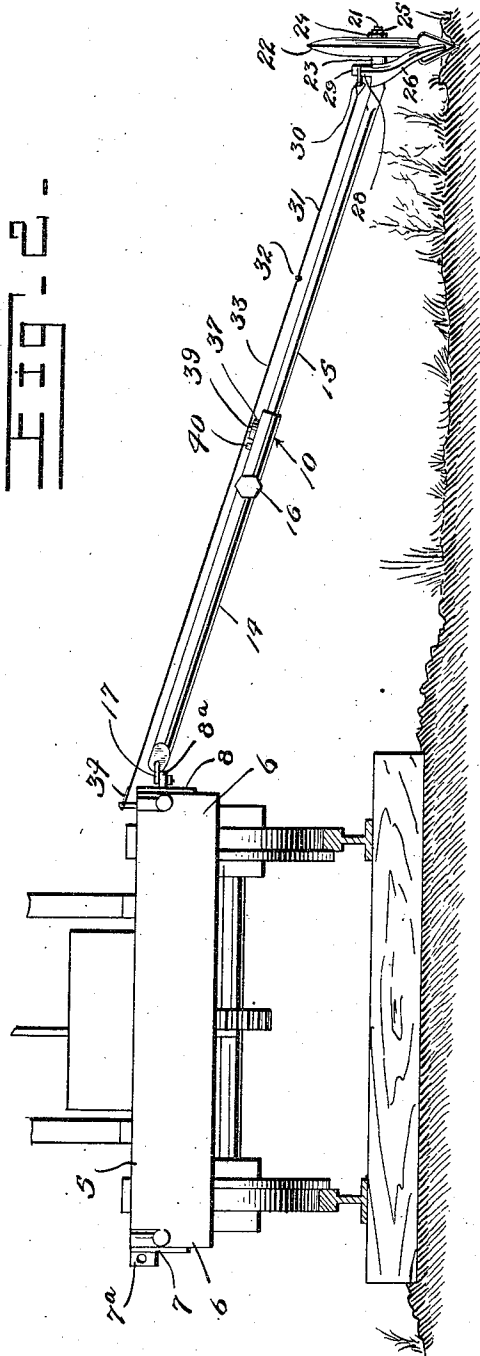
C. J. MacArthur
George S. Salo

T. E. SUTTON.
 LINE MARKER FOR RAILWAYS.
 APPLICATION FILED DEC. 2, 1911.

1,019,199.

Patented Mar. 5, 1912.

2 SHEETS—SHEET 2.



Witnesses

E. J. Mac Carthy
George T. Ledy

Inventor
T. E. Sutton.

By *Charles A. Chandler*

Attorney

UNITED STATES PATENT OFFICE.

THOMAS E. SUTTON, OF CLIMAX, GEORGIA.

LINE-MARKER FOR RAILWAYS.

1,019,199.

Specification of Letters Patent.

Patented Mar. 5, 1912.

Application filed December 2, 1911. Serial No. 663,591.

To all whom it may concern:

Be it known that I, THOMAS E. SUTTON, a citizen of the United States, residing at Climax, in the county of Decatur, State of Georgia, have invented certain new and useful Improvements in Line-Markers for Railways; 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 improvements in marking devices adapted for attachment to either side of a hand-car or the like for the purpose of marking a desired line for running a ditch.

The principal object of the invention is to provide an attachment for the purpose described which includes a vertically swinging frame having a root cutter supported at its outer end and a plow point or other suitable earth engaging tool also carried by the outer end of the frame and disposed in rear of the root cutter, whereby the roots will be cut in advance of the earth engaging tool.

Another object of the invention is to provide an extensible frame for the purpose described by means of which the line to be formed can be made at different distances from the track as may be desired.

A further object of the invention is to provide an attachment of the character described which is composed of a minimum number of parts, is therefore simple in construction, is capable of being readily adjusted, and is cheap to manufacture.

With these and other objects in view, the invention consists in the construction and novel combination of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended; it being understood that various changes in the form, proportion, size and minor details of construction within the scope of the claims, may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawings: Figure 1 is a top plan view showing the application of my invention to a hand-car, Fig. 2 is a rear end elevation thereof, Fig. 3 is a side elevation, Fig.

4 is a sectional view taken on the line 4—4 of Fig. 1, looking in the direction indicated by the arrows, and Fig. 5 is a detail perspective view of the outer end of the frame, the root cutter being removed.

Like reference numerals designate corresponding parts in all the figures of the drawings.

Referring to the drawings, 5 designates a hand car, although it will be understood that any other suitable type of car may be employed if so desired. This hand car includes the usual longitudinal sills 6—6, and secured to each sill is a pair of oppositely arranged front and rear brackets 7 and 8 respectively by means of which my improved marking attachment may be readily applied to either side of the car in order to mark both sides of the track. Each front bracket 7 includes a pair of spaced vertical ears 7^a—7^a through which a pivot bolt 7^b projects. The rear bracket 8 includes a lateral ear 8^a having a vertical perforation formed therein.

My invention comprises a detachable frame including a front arm 9 and a rear arm 10. The front arm is disposed in a plane at right angles to the longitudinal sill 6 of the car and the rear arm 10 converges outwardly from said sill to the outer end of the front arm. The front arm 9 includes an inner tubular section 11 and a telescoping rod 12, the latter being held in any longitudinally adjusted position by means of a set screw 13 or the like. The rear end of the tubular section 11 is reduced and perforated for engagement with the pivot bolt 7^b of the front bracket 7. It will thus be observed that the front arm 9 is adapted to swing vertically but not laterally. The rear arm 10 consists of an inner tubular section 14 and a telescoping rod 15, the latter being held in any longitudinally adjusted position by means of a set screw 16 or the like. The inner end of the tubular section 14 is reduced and has universal connection with the lateral ear 8^a of the bracket 8 by means of a link 17. It will thus be observed that the rear arm 10 can be swung either vertically or laterally. The outer ends of the rods 12 and 15 of the arms 9 and 10 are

pivotaly connected by means of a bar 18, as indicated by the reference numerals 19 and 20 respectively. Centrally projecting outwardly from this bar is a stub axle 21 upon which is rotatably mounted a root cutting wheel 22. A washer 23 is disposed between the bar and the wheel, and a washer 24 is disposed around the axle 21 against the outer face of said wheel. A nut 25 is associated with the outer end of the axle and bears against the washer 24 and serves to prevent the wheel from becoming displaced. It will be observed in this connection that the wheel 22 travels in a plane parallel to the car 5. A standard 26 is provided at its lower end with a plow-point 27 or other earth engaging tool, and the upper end of the standard is bent forwardly to form an attaching arm 28, said arm being disposed upon the connecting bar 18 and secured thereto by means of bolts 29 or other suitable fastening means.

In order to swing the frame upwardly whenever it may be desired, there is associated with the bolts 29, clips 30—30, and to each of these clips is connected one end of a cable 31, said cables being connected to a third cable 33, as indicated by the reference numeral 32. The other end of the cable 33 is provided with a hand-piece 34 by means of which the operator can readily raise the outer end of the frame and consequently the tools carried thereby from the ground. It will be observed in this connection that when it is desired to mark a line at different distances from the track, the extensible arms 12 and 13 are telescoped within the tubular sections 11 and 14 respectively. This may be readily accomplished by reason of the fact that the rear arm 10 is pivotaly connected for lateral movements both to the car and to the connecting bar 18.

In order to more thoroughly brace the front and rear arms, there is provided an extensible brace 35 which consists of a tubular member 36 and a telescopic rod 37, the outer end of the former being pivotaly connected, as at 38, to the outer end of the tubular section 11 and the outer end of the rod 37 being pivotaly connected, as at 39, to the outer end of the tubular section 14. The rod 37 is held in any adjusted position by means of a set screw 40, which is carried by the tubular section 36.

In operation, when the car 5 is propelled along its track, the root cutting wheel 22 is caused to revolve and cut the roots in advance of the earth engaging tool 27, thereby permitting said tool to easily mark a line to be followed in digging a ditch or in cutting grass.

What is claimed is:

1. In a line marker for railways, the com-

bination with a car body, of a frame including front and rear extensible arms connected to the body, a bar connecting the outer ends of the arms and arranged parallel to the car body, an outwardly projecting stub axle centrally secured to said bar, and a root cutting wheel journaled on said axle.

2. In a line marker for railways, the combination with a car body, of a frame including front and rear extensible arms pivotaly connected to the body for vertical swinging movements, a bar pivotaly connected at its ends to the outer ends of the front and rear arms of the frame and arranged parallel to the car body, an outwardly projecting stub axle centrally secured to said bar, a root cutting wheel journaled on said axle, and an earth marking tool connected to the bar and disposed in rear of said wheel.

3. In a line marker for railways, the combination with a car body, of front and rear arms pivotaly connected to the body for vertical swinging movements, a bar connecting the outer ends of said arms, a root cutting wheel rotatably supported by said bar, a standard disposed in rear of the wheel and having its upper end forwardly bent and disposed upon the bar, an earth engaging tool carried by the lower end of the standard, means connecting the forward end of said standard to the bar, bolts connecting the forward end of the standards and the bar, clips carried by the bolts, cables each connected at one end to a respective clip, a third cable connected at one end to the free ends of the first-mentioned cables, and a hand-piece carried by the free end of the third mentioned cable.

4. A line marker attachment for railway cars comprising a frame adapted for attachment to a car body to swing vertically, said frame including front and rear extensible arms, each arm including an inner tubular section and an outer telescopic rod section, means for fixedly securing the sections of each arm against longitudinal movement, an extensible brace connecting the outer ends of the inner sections of the arms, a bar connecting the outer ends of the telescopic rod sections, a root cutter carried by said bar, and an earth marking tool carried by the outer end of the frame and disposed in rear of the cutter.

5. A line marker attachment for railway cars comprising a frame adapted for attachment to a car body to swing vertically, said frame including front and rear extensible arms, each arm including an inner tubular section and an outer telescopic rod section, means for fixedly securing the sections of each arm against longitudinal movement, an extensible brace connecting the outer ends of the inner sections of the arms, a bar piv-

otally connected at its ends to the outer ends
of the telescopic rod sections, an outwardly
projecting stub axle centrally secured to said
bar, a root cutting wheel journaled on said
5 axle, a standard disposed in rear of the
wheel and having its upper end forwardly
bent and disposed upon the bar, an earth
marking tool carried by the lower end of the

standard, and means connecting the forward
end of said standard to the bar.

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

10

THOMAS E. SUTTON.

Witnesses:

J. V. BRINSON,
F. A. MIZE.