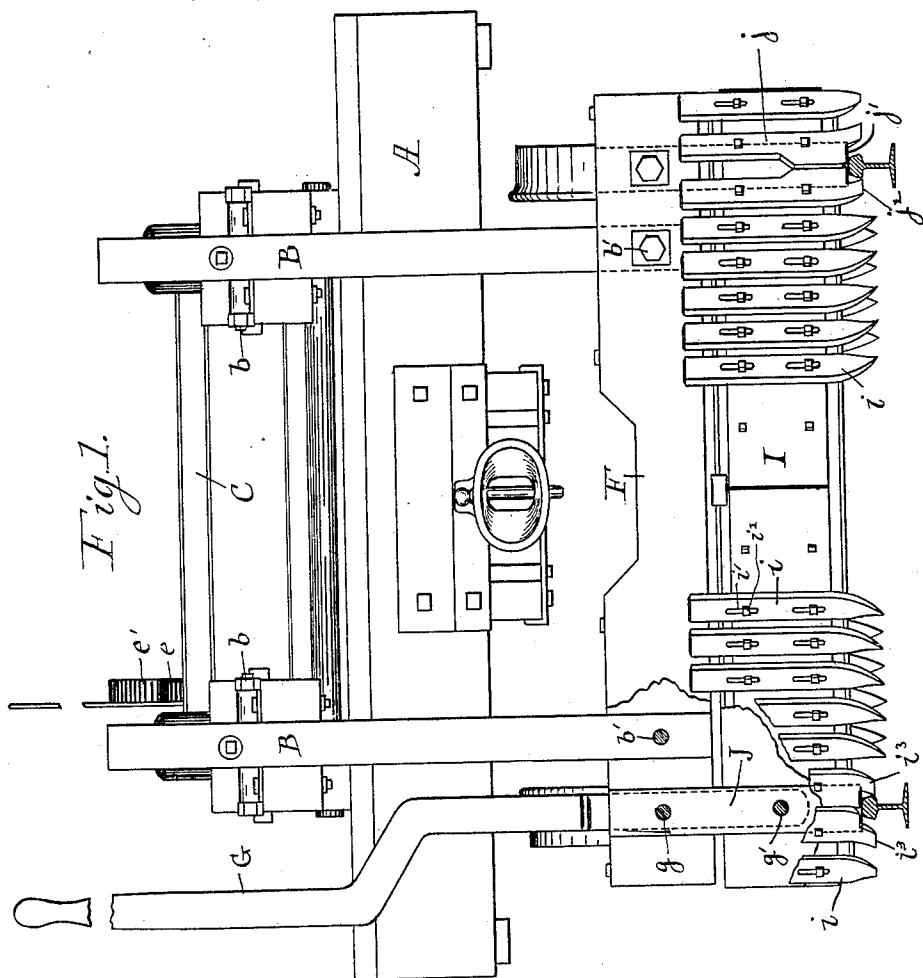


G. NEVENS.
TRACK CLEARER.

Patented Nov. 10, 1891.

No. 462,728.



Witnesses:

Frank E. Corry

Inventor:

George Mervos
by S. W. Bate
his atty.

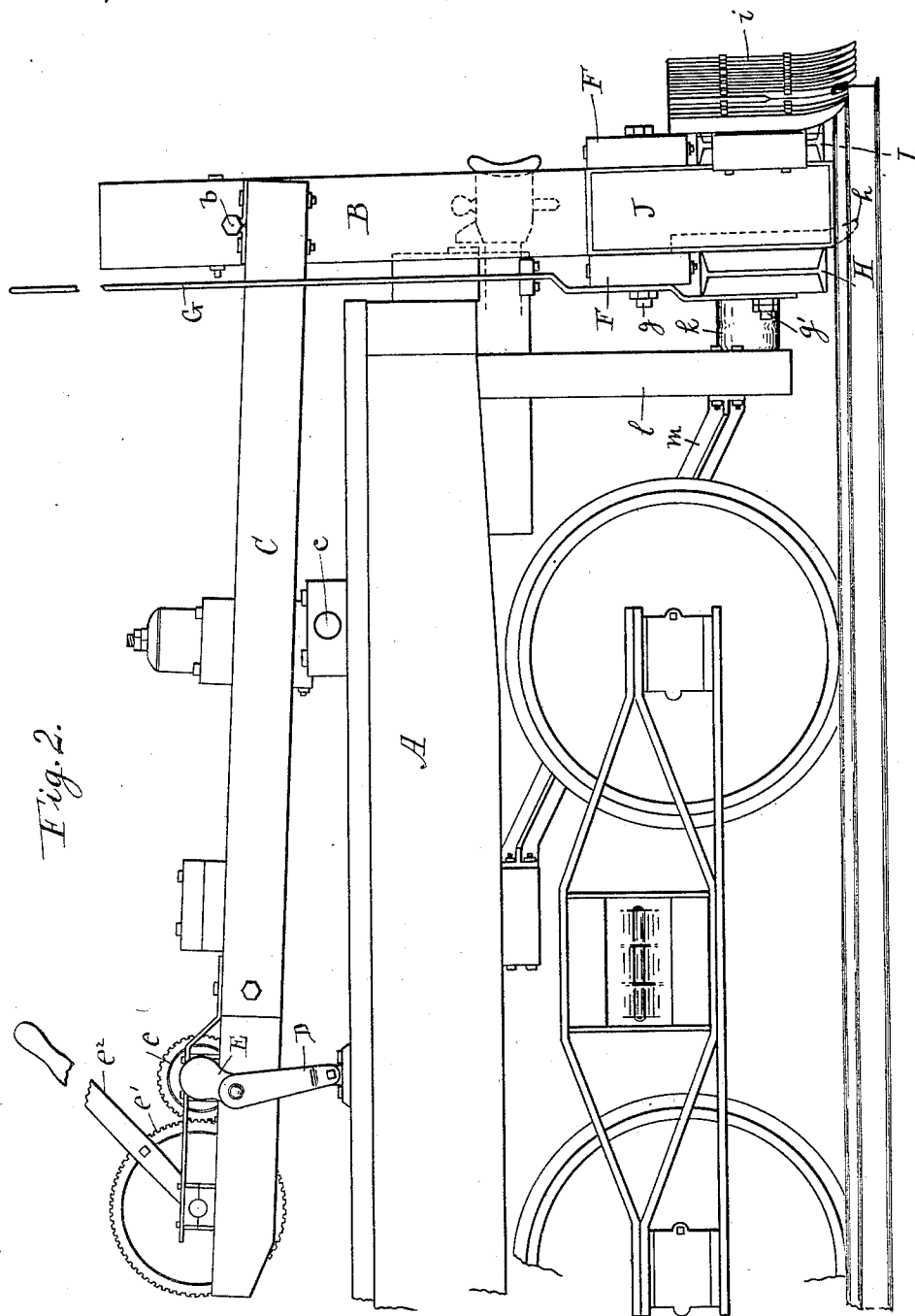
(No Model.)

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3 Sheets—Sheet 2.

No. 462,728.

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Witnesses

Frank E. Perry

Inventor:

George Nevens
by S. W. Bates

(No Model.)

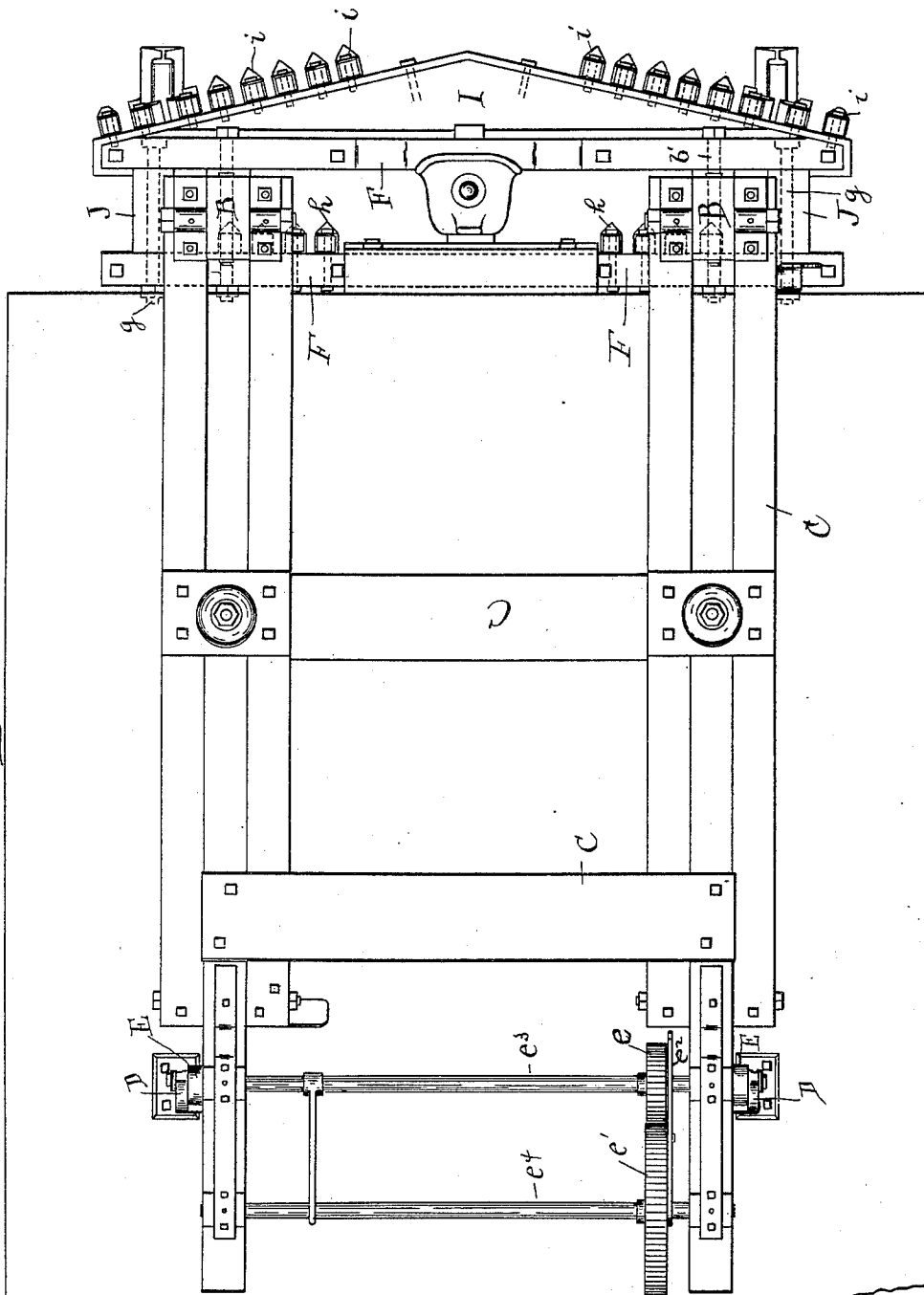
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Fig. 3.



Witnesses:

Frank E. Perry
Frank E. Perry

Inventor:

George Nevens
by S. M. Bates
his atty

UNITED STATES PATENT OFFICE.

GEORGE NEVENS, OF BRUNSWICK, MAINE.

TRACK-CLEARER.

SPECIFICATION forming part of Letters Patent No. 462,728, dated November 10, 1891.

Application filed March 7, 1891. Serial No. 384,125. (No model.)

To all whom it may concern:

Be it known that I, GEORGE NEVENS, a citizen of the United States, residing at Brunswick, in the county of Cumberland and State of Maine, have invented certain new and useful Improvements in Track-Clearers; 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.

My invention relates to track-clearers for removing ice from railroad-tracks. The ice accumulates in a solid mass between the rails and great difficulty has hitherto been experienced in removing it.

In carrying out my invention I attach to the end of a stout car my clearing mechanism, which consists of a cross-piece suspended by two uprights from the car. To the cross-piece is suspended one or more cutter-bars by means of links, which admit of a lateral or swinging motion of the cutter-bar across the track. To the cutter-bar is attached pointed cutters, which extend in a row across the track. That portion of the cutter-bar which comes over the rail is provided with a pair of cutters having straight lower edges which rest on the rails with chisel-edges, which extend down each side of the rail.

In the device which I illustrate herein I have two cutter-bars, one ahead of the other, the forward one being pointed or V-shaped and the rear one straight. The cutters on the rear bar break joints with those on the forward bar.

My invention consists of the various combinations of the above parts and which are pointed out in the claims.

I illustrate my invention by means of the accompanying drawings, in which—

Figure 1 is a front view of a car provided with my device. Fig. 2 is a side view of the same, and Fig. 3 is a plan or top view.

A represents the car, and B B are two strong uprights suspended by pivots *b* at the end of the car to a horizontal frame C, which is pivoted to the car at *c*. The tilting of the frame C raises and lowers the uprights B. This tilting is accomplished by means of a crank E, fixed on each end of a shaft *e*³, Fig. 3, and connecting with a link D, pivoted by one end

to the floor of the car. On the shaft *e*³ is a gear *e*, which engages a gear *e'* on a second shaft *e'*⁴. To the gear *e'* is attached a lever *e*². The lever *e*² rotates the gear *e'*, which in turn rotates the gear *e* and the crank E, thereby raising and lowering the back end of the frame. The parts described are old and well known and do not constitute any essential part of my invention. Secured to the lower end of the uprights B are two cross-pieces F F, one in front and another in rear of the cross-pieces. The upper end of a link J is pivoted by bolts *g* between the two cross-pieces F F at each end thereof, and to the lower end of the link are pivoted two cutter-bars, which extend entirely across the track and project some distance beyond the rail on each side. The pivot is formed by the bolt *g'*, which passes entirely through the ends of the cutter-bars and the lower end of the link. The rear cutter-bar H extends, as here shown, straight across at right angles to the track; but the forward bar I is V-shaped, the central portion projecting forward to a point in the middle of the track. To the front side of each cutter-bar are secured pointed cutters *i*, by means of bolts *i*², passing through vertical slots *i'*. The cutters which I prefer to use are those shown in the drawings, and they have points which are turned slightly forward. The cutters on the forward bar break joints with those on the rear bar—that is to say, the path traversed by those in the rear comes between the paths of those on the forward bar, whereby the ice is entirely removed.

Where the bars cross the track I provide a peculiar form of cutter adapted to clear the ice from each side of the rail and to form a guide for the cutter-bar to keep it on the track. This combined cutter and guide consists of a cutter *j*, having on its lower end a straight portion *j'*, adapted to rest on the rail, and a chisel portion *j*² dropping down below the rail. Two of these cutters are placed side by side directly over the rail, so that their straight portions will come together, leaving a chisel-edge on each side, which constitutes a guide to keep the device in place.

A lever G is provided for swinging the cutter-bars laterally in relation to the track, so that the guides *j* may be properly located on

the rail. The lever G extends above the car, where it can be readily manipulated, and its lower end is pivoted to the cross-piece F and to the cutter-bar H by the bolts *g* and *g'*, respectively.

The thrust of the cutters, which is very great, is taken by buffers K, placed between the rear side of the cutter-bar H and the front face of a standard *l* at each end of the cutter-bar. The lower end of the standard L is supported by a brace *m*.

The operation of my track-clearer is evident from its construction. It is lowered into position by means of the frame C, as already pointed out, and as the points of the cutters traverse the space between the tracks they cut out the ice and throw it to one side by the action of the inclined face of the cutter-bar I. As already pointed out, the rear points break joints with those in advance, so that the ridge of ice which is left between the forward cutters is removed by the rear ones.

I claim—

1. In a track-clearer, the combination of a car, a cutter-bar suspended from said car by means of links, cutters secured to said bar,

and a handle or lever for moving said bar laterally.

2. In a track-clearer, the combination, with a car, of uprights suspended from said car, a cross-piece connecting said uprights, a cutter-bar suspended from said cross-piece by means of links, and cutters secured to said cutter-bar.

3. In a track-clearer, in combination with a car, a cutter-bar secured to the car, and pointed cutters secured to said cutter-bar, substantially as shown.

4. In a track-clearer, the combination of a car with a pair of cutter-bars suspended from the car one ahead of the other, the forward bar being V-shaped, said cutter-bars having pointed cutters attached thereto, those in the rear cutter-bar breaking joints with those on the forward cutter-bar, substantially as shown.

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

GEORGE NEVENS.

Witnesses:

S. W. BATES,

L. B. CRABTREE.