Sept. 8, 1925. 1,552,611

C. JACKSON

TAMPING OR BALLASTING MACHINE

Filed July 25, 1924 2 Sheets-Sheet 1

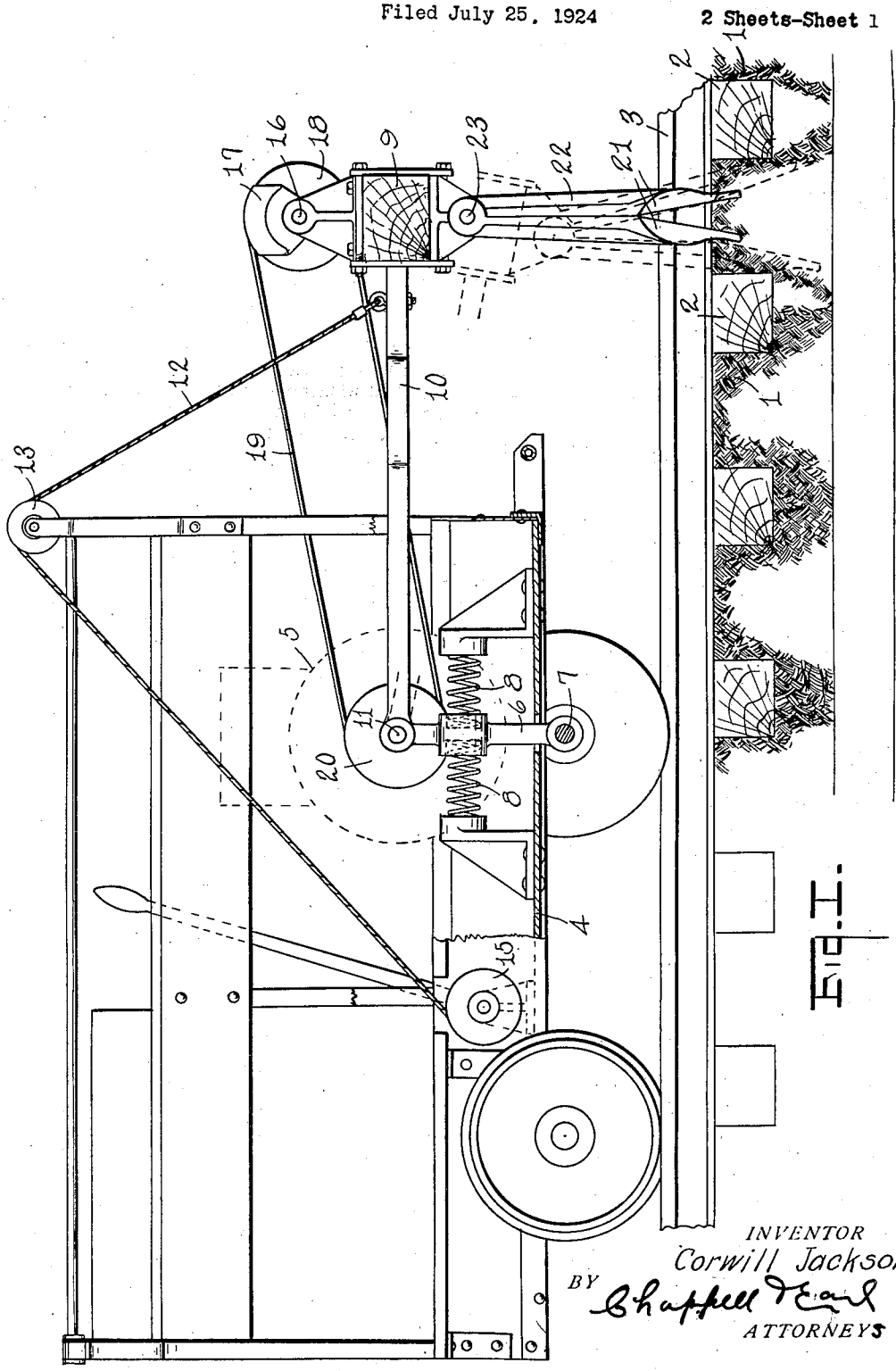


Fig. 1.

INVENTOR
Corwill Jackson
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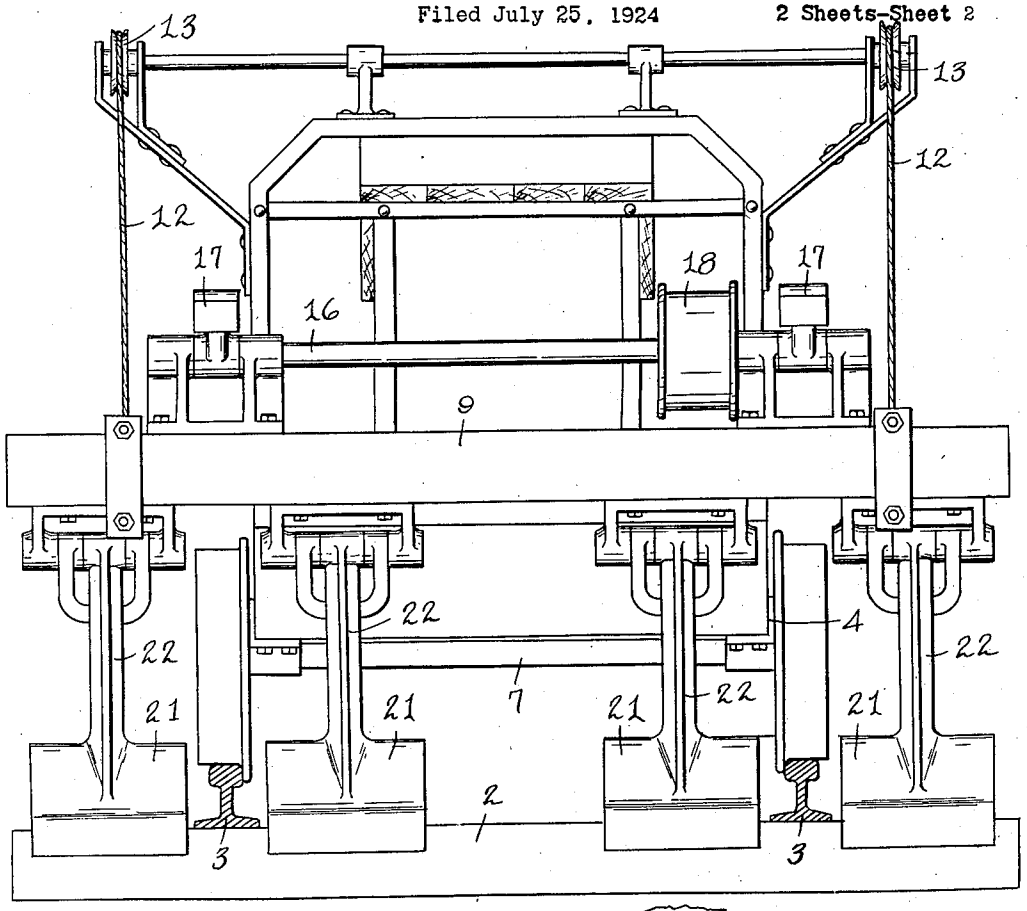


Fig. II.

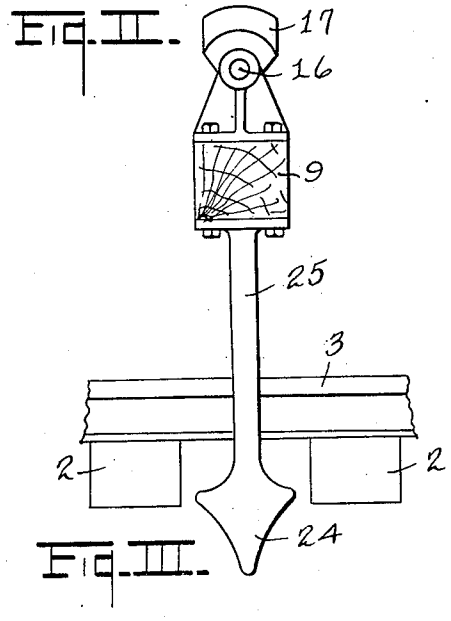


Fig. III.

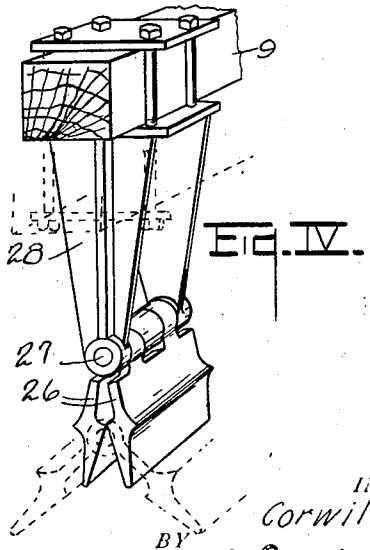


Fig. IV.

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Patented Sept. 8, 1925. 1,552,611

UNITED STATES PATENT OFFICE.

CORWILL JACKSON, OF CHICAGO, ILLINOIS.

TAMPING OR BALLASTING MACHINE.

Application filed July 25, 1924. Serial No. 728,097.

To all whom it may concern:

Be it known that I, CORWILL JACKSON, a citizen of the United States, residing at Chicago, county of Cook, State of Illinois, have invented certain new and useful Improvements in Tamping or Ballasting Machines, of which the following is a specification.

This invention relates to improvements in tamping or ballasting machines.

The main objects of this invention are:

First, to provide an improved tamping or ballasting machine which is very efficient.

Second, to provide an improved tamping or ballasting machine which is of large capacity.

Third, to provide an improved tamping or ballasting machine having these advantages which is easy to operate.

Objects pertaining to details and economies of construction and operation of my improvements will definitely appear from the detailed description to follow.

I accomplish the objects of my invention by the devices and means described in the following specification. The invention is clearly defined and pointed out in the claims.

A structure which is a preferred embodiment of my invention is clearly illustrated in the accompanying drawing forming a part of this application, in which:

Fig. I is a side elevation of a tamping or ballasting machine embodying the features of my invention, the same being shown in operative position upon a railway track.

Fig. II is a front elevation.

Fig. III is a fragmentary side elevation of a modified form of tamper.

Fig. IV is a fragmentary perspective view showing another modification in the tamper.

In the drawing similar reference numerals refer to similar parts in all of the views.

Referring to the drawing, 1 represents the road bed, 2 the ties and 3 the rails. I provide a truck or car designated generally by the numeral 4 adapted to travel upon the track to be ballasted. This car or truck carries a motor indicated by dotted lines 5.

This motor is mounted upon an oscillating supporting frame 6, the frame being pivoted at 7. The frame is balanced or held yieldingly in an upright position by means of the springs 8.

I provide a crosshead 9 which in the structure illustrated in a beam, the crosshead being carried by the arms 10 pivoted at 11 on the frame 6. The crosshead is supported by means of the cable 12 which is passed over the pulley 13 on the frame of the truck to a drum 15.

The crosshead carries the shaft 16 having an unbalancing weight 17 thereon, the shaft being provided with a pulley 18 connected by the belt 19 to the pulley 20 of the motor. As the shaft 16 is rotated the unbalancing weight 17 causes the crosshead to vibrate, thereby imparting a series of blows or impacts to the tampers carried by the crosshead.

In the embodiment shown in Figs. I and II these tampers are in the form of diverging blades 21 having shanks 22 pivoted at 23. As the crosshead is moved downwardly through the lowering of the arm 10, the tampers engage the material to be tamped and owing to their diverging relation they tend to separate and, also, at the same time are subjected to the impacts of the vibrations of the crosshead. This results in the very rapid and effective forcing of the material to be tamped below and around the ties.

In the modification shown in Fig. II the tamper 24 has a shank 25 rigidly bolted to the crosshead. The tamper 24 in this embodiment is downwardly tapered so that as it moves downwardly it forces the ballasting material laterally.

In the embodiment shown in Fig. IV the tamper blades 26 are pivoted at 27 on a bracket 28 carried by the crosshead. These blades 26 also diverge so that they tend to separate as they work downwardly in the material under the impact of the crosshead vibrations.

My improved tamping machine is very efficient and of large capacity. I have not attempted to illustrate or describe certain other modifications or adaptations as I believe the disclosure made will enable the embodiment or adaptation of my improvements as may be desired.

Having thus described my invention what I claim as new and desire to secure by Letters Patent is:

1. In a ballasting machine, the combination of a truck adapted to travel upon the track to be ballasted, an oscillating supporting frame mounted on said truck, balancing springs for said frame, a motor mounted on said frame, a crosshead, a supporting arm therefor pivotally mounted on said oscillat-

ing frame, means for raising and lowering said crosshead, a shaft rotatably mounted on said crosshead and provided with an unbalancing weight, tamper members pivotally mounted on said crosshead in coacting pairs, and driving connections for said motor to said shaft.

2. In a ballasting machine, the combination of a truck adapted to travel upon the track to be ballasted, an oscillating supporting frame mounted on said truck balancing springs for said frame, a motor mounted on said frame, a crosshead, a supporting arm therefor pivotally mounted on said oscillating frame, means for raising and lowering said crosshead, a shaft rotatably mounted on said crosshead and provided with an unbalancing weight, tamper members mounted on said crosshead, and driving connections for said motor to said shaft.

3. In a ballasting machine, the combination of an oscillating frame, springs for holding said frame in a central position, a motor mounted on said frame, a crosshead provided with an arm pivotally mounted on said frame, a vibrating member rotatably mounted on said crosshead, driving connections therefor to said motor, means for raising and lowering said crosshead, and tamper members pivotally mounted on said crosshead.

4. In a ballasting machine, the combination of an oscillating frame, springs for holding said frame in a central position, a motor mounted on said frame, a crosshead provided with an arm pivotally mounted on said frame, a vibrating member rotatably mounted on said crosshead, driving connections therefor to said motor, means for raising and lowering said crosshead, and tamper members on said crosshead.

5. In a tamping machine, the combination with the main frame, of an oscillating frame pivotally mounted thereon, balancing springs for said frame, a motor mounted on said frame, a head member pivotally mounted on said frame, vibrating means mounted on said head member and having driving connections with said motor, and tampers pivotally mounted on said head member in coacting pairs and having downwardly diverging ends.

6. In a tamping machine, the combination with the main frame, of an oscillating frame mounted thereon, balancing springs for said frame, a motor mounted on said frame, a head member pivotally mounted on said frame, vibrating means mounted on said head member and having driving connections with said motor, and tampers mounted on said head.

7. In a tamping machine, the combination with the main frame, of an oscillating frame mounted thereon, balancing springs for said frame, a head member pivotally mounted on said frame, vibrating means for said head member, and tampers pivotally mounted on said head member in coacting pairs and having downwardly diverging ends.

8. In a tamping machine, the combination with the main frame, of an oscillating frame mounted thereon, balancing springs for said frame, a head member pivotally mounted on said frame, vibrating means for said head member, and a tamper mounted on said head member.

9. In a structure of the class described, the combination of a head member, a supporting frame on which said head member is pivotally mounted, said supporting frame being pivoted and provided with balancing springs, means for vibrating said head member carried thereby, and tampers pivotally mounted on said head member in coacting pairs.

10. In a structure of the class described, the combination of a head member, a supporting frame on which said head member is pivotally mounted, said supporting frame being pivoted and provided with balancing springs, means for vibrating said head member carried thererby, and tampers mounted on said head member.

11. In a structure of the class described, the combination of a head member, a yieldingly supported member on which said head member is pivotally mounted, means for vibrating said head member, and tampers pivotally mounted on said head member in coacting pairs.

12. In a structure of the class described, the combination of a head member, a yieldingly supported member on which said head member is pivotally mounted, means for vibrating said head member, and a tamper mounted on said head member.

In witness whereof I have hereunto set my hand.

CORWILL JACKSON.