May 28, 1929. C. JACKSON 1,715,131

TAMPING MACHINE

Filed Feb. 6, 1928

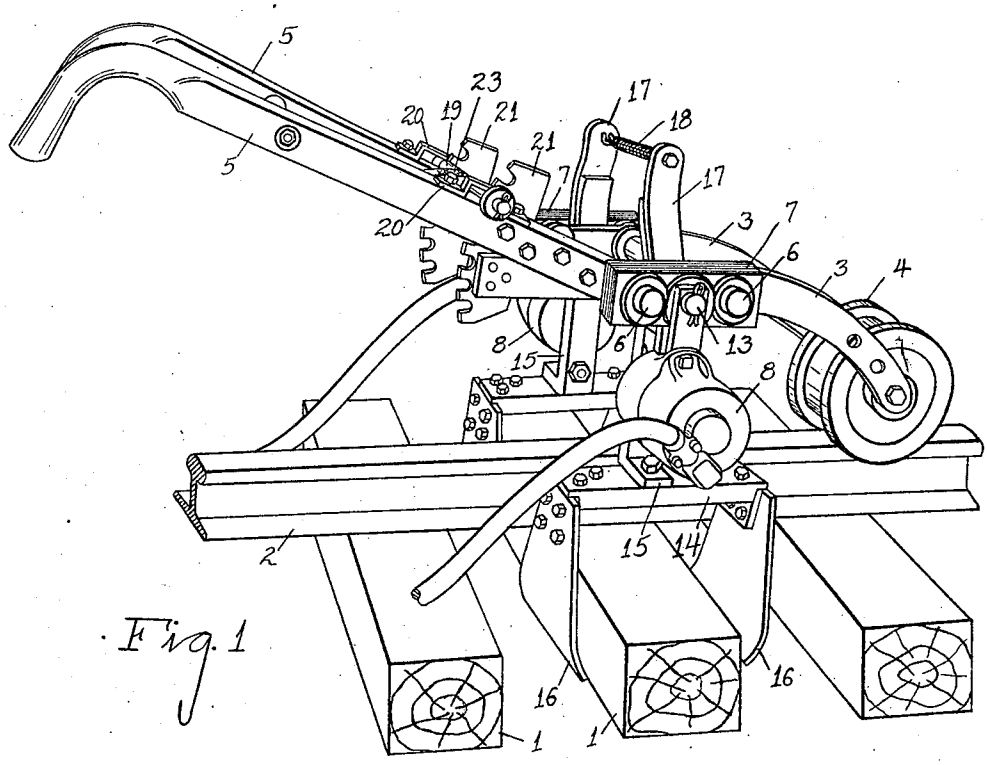


Fig. 1

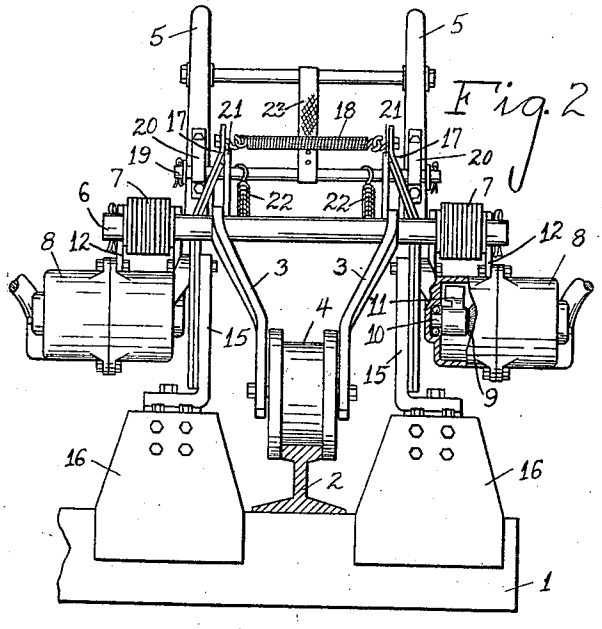


Fig. 2

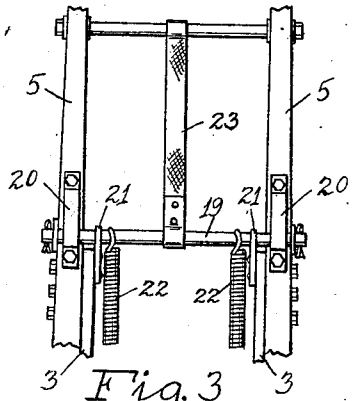


Fig. 3

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UNITED STATES PATENT OFFICE.

CORWILL JACKSON, OF CHICAGO, ILLINOIS.

TAMPING MACHINE.

Application filed February 6, 1928. Serial No. 252,292.

The main object of this invention is to provide an improved tie or ballast tamping machine for railway road beds which is easy to operate and very efficient.

Objects pertaining to details and economies of my invention will definitely appear from the description to follow. The invention is defined in the claims.

A structure embodying the features of my invention is clearly illustrated in the accompanying drawing, in which:

Fig. 1 is a perspective view of my improved tamping machine shown in operative relation to a fragment of railway track.

Fig. 2 is a front elevation of the structure also in operative relation to a fragment of railway track.

Fig. 3 is a fragmentary plan view.

Referring to the drawing, 1 represents the railway ties and 2 a rail of a railway track, the ballast not being shown. My improved tamping machine comprises a carriage designated generally by the numeral 3 and provided with a carrying wheel 4 at its front end adapted to travel upon a rail as 2. At its opposite end the carriage is provided with handles 5 by means of which the carriage may be trundled along upon the rail and may be manipulated thereon with an oscillating movement to position and manipulate the tamper blades as will hereinafter appear.

The carriage is provided with a pair of spaced cross rods 6 on the outer ends of which are mounted resilient supports 7 formed of a plurality of layers of belting or similar material, forming a resilient smooth flexible support, having sufficient rigidity, however, to normally retain its position.

I provide vibrating units which in the embodiment illustrated consist of motor housings 8 for the motors 9 which have shafts 10 provided with unbalancing weights 11. These motor housings are suspended by hangers 12 from pins 13 disposed centrally of the supports 7.

Crossheads 14 are mounted on the housings and have upwardly projecting arms 15. The tamper blades 16 are mounted on the ends of the crossheads in opposed pairs, the blades being spaced to embrace a tie and preferably having inwardly curved lower ends. The arms 17 project upwardly from the motor housings and are connected by a spring 18, the spring acting to yieldingly support the parts in upright position.

The handles 5 are pivoted on one of the cross rods 6 and are adjustably supported on their pivots by means of a rod-like detent 19 adjustably mounted upon the handles by means of the straps 20 to coact with the teeth of the segments 21 on the main or carrying frame. Springs 22 act to yieldingly hold this detent rod into engagement with the teeth. A strap 23 is provided to facilitate the disengagement of the rod. A pull on the strap disengages the detent rod so that the handle may be adjusted, and when released the springs draw the detent into engagement. This permits rapid adjustment of the handles for the particular working condition and for the convenience of the workman.

With the parts thus arranged the carriage is moved along on the track to proper position and lowered to bring the blades into engagement with the ballast, allowing the same to rest thereon. The vibration occasioned by the motor results in a rapid and effective tamping of ballast. The vibrating elements being resiliently and pivotally mounted relieves the operator of undue strain and vibration, and also allows limited independent movement of the units. The pivotal mounting permits the oscillation and manipulation of the carriage along the track to tilt the blades and the presentation of one or the other to the work so that the ballast is effectively worked under the ties.

I have illustrated and described an embodiment which I have found highly satisfactory. I have not attempted to illustrate or describe various modifications and adaptations which I contemplate as I believe the disclosure made will enable those skilled in the art to which my invention relates to embody or adapt the same 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 machine of the class described, the combination of a carriage provided with a carrying wheel at one end adapted to travel upon a railway track and with handles mounted for vertical adjustment oppositely of said wheel, resilient support members connected at their ends to said carriage, motors provided with shafts having unbalancing weights, housings for said motors and their shafts provided with hangers pivotally mounted on said supports intermediate their point of attachment to said carriage, cross-

heads mounted on said motor housings and provided with upwardly projecting arms, tamping blades mounted on said crossheads in opposed pairs, and a counterbalancing spring connecting the upper ends of said arms.

2. In a machine of the class described, the combination of a carriage provided with a carrying wheel at one end adapted to travel upon a railway track and with handles mounted for vertical adjustment oppositely of said wheel, resilient support members mounted on said carriage, motors provided with shafts having unbalancing weights, housings for said motors and their shafts mounted on said supports, cross heads mounted on said motor housings, tamping blades mounted on said crossheads in opposed pairs, and a counterbalancing spring connecting the upper ends of said arms.

3. In a machine of the class described, the combination of a carriage provided with a carrying wheel at one end adapted to travel upon a railway track and with handles mounted for vertical adjustment oppositely of said wheel, resilient support members connected at their ends to said carriage, motors provided with shafts having unbalancing weights, housings for said motors and their shafts provided with hangers pivotally mounted on said supports intermediate their point of attachment to said carriage, crossheads mounted on said motor housings, and tamping blades mounted on said crossheads in opposed pairs.

4. In a machine of the class described, the combination of a carriage provided with a carrying wheel at one end adapted to travel upon a railway track and with handles mounted for vertical adjustment oppositely of said wheel, resilient support members mounted on said carriage, motors provided with shafts having unbalancing weights, housings for said motors and their shafts mounted on said supports, crossheads mounted on said motor housings, and tamping blades mounted on said crossheads in opposed pairs.

5. In a machine of the class described, the combination of a supporting frame, resilient support members connected at their ends to said frame, motors provided with shafts having unbalancing weights, housings for said motors and their shafts provided with hangers pivotally mounted on said supports intermediate their point of attachment to said carriage, cross heads mounted on said motor housings and provided with upwardly projecting arms, tamping blades mounted on said crossheads in opposed pairs, and a counterbalancing spring connecting the upper ends of said arms.

6. In a machine of the class described, the combination of a supporting frame, resilient support members mounted on said frame, motors provided with shafts having unbalancing weights, housings for said motors and their shafts mounted on said supports, crossheads mounted on said motor housings and provided with upwardly projecting arms, tamping blades mounted on said crossheads in opposed pairs, and a counterbalancing spring connecting the upper ends of said arms.

7. In a machine of the class described, the combination of a supporting frame, resilient support members connected at their ends to said frame, motors provided with shafts having unbalancing weights, housings for said motors and their shafts provided with hangers pivotally mounted on said supports intermediate their point of attachment to said carriage, crossheads mounted on said motor housings, and tamping blades mounted on said crossheads in opposed pairs.

8. In a machine of the class described, the combination of a supporting frame, resilient support members mounted on said frame, motors provided with shafts having unbalancing weights, housings for said motors and their shafts mounted on said supports, crossheads mounted on said motor housings, and tamping blades mounted on said crossheads in opposed pairs.

9. In a machine of the class described, the combination of a carriage provided with a wheel adapted to travel on a rail of a railway track and with handles opposed to said wheel whereby the carriage may be manipulated upon the rail, resilient support members connected at their ends to said carriage, vibrating units pivotally mounted on said support members centrally thereof, tamper blades mounted on said vibrating units in spaced relation, arms projecting upwardly from said vibrating units, and a spring connecting the upper ends of said arms.

10. In a machine of the class described, the combination of a carriage provided with a wheel adapted to travel on a rail of a railway track and with handles opposed to said wheel whereby the carriage may be manipulated upon the rail, vibrating units mounted on said carriage, tamper blades mounted on said vibrating units in spaced relation, arms projecting upwardly from said vibrating units, and a spring connecting the upper ends of said arms.

11. In a machine of the class described, the combination of a carriage provided with a wheel adapted to travel on a rail of a railway track and with handles opposed to said wheel whereby the carriage may be manipulated upon the rail, resilient support members connected at their ends to said carriage, vibrating units pivotally mounted on said support members centrally thereof, and tamper blades mounted on said vibrating units in spaced relation.

12. In a structure of the class described,

the combination of a carriage provided with a wheel at one end and with an opposed handle whereby the carriage may be manipulated on a railway track, a pair of motors provided with housings and with unbalancing elements, and blades mounted in spaced relation to embrace a railway tie so that they are subject to the vibration of said motor housing induced by said unbalancing elements, said motor housing having a pivotal and resilient connection to said carriage.

13. In a structure of the class described, the combination of a carriage provided with a carrying wheel and with a handle whereby the carriage may be manipulated on said wheel, a flexible support mounted at its ends on said carriage, a vibrating element pivotally mounted on said support, and opposed tamper blades mounted on said vibrating element.

14. In a structure of the class described, the combination of a carriage provided with a carrying wheel and with a handle whereby the carriage may be manipulated on said wheel, a vibrating element resiliently mounted on said carriage, and opposed tamper blades mounted on said vibrating element.

15. In a machine of the class described, the combination of a carriage provided with a wheel adapted to travel on a rail of a railway track and with handles opposed to said wheel whereby the carriage may be manipulated upon the rail, said handles being mounted for vertical adjustment, a resilient support member connected at its ends to said carriage, a vibrating unit pivotally mounted on said support member centrally thereof, and a tamper mounted on said vibrating unit.

16. In a machine of the class described, the combination of a carriage provided with a wheel adapted to travel on a rail of a railway track and with handles opposed to said wheel whereby the carriage may be manipulated upon the rail, a resilient support member connected at its ends to said carriage, a vibrating unit pivotally mounted on said support member centrally thereof, and a tamper mounted on said vibrating unit.

17. In a structure of the class described, the combination of a carriage provided with a wheel at one end and with an opposed handle whereby the carriage may be manipulated on a railway track, a motor provided with a housing and with an unbalancing element, and a tamper mounted on said housing, said motor housing having a pivotal and resilient connection to said carriage.

In witness whereof I have hereunto set my hand.

CORWILL JACKSON.