

(No Model.)

2 Sheets—Sheet 1.

J. W. CARLEY.

TAMPING MACHINE.

No. 347,920.

Patented Aug. 24, 1886.

Fig. 1,

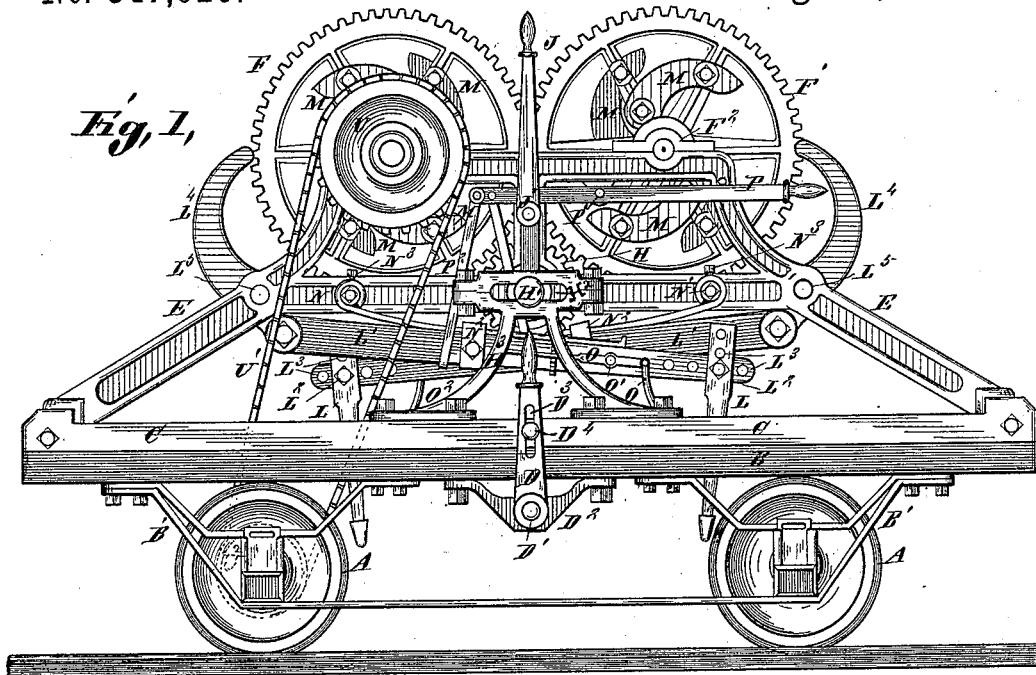
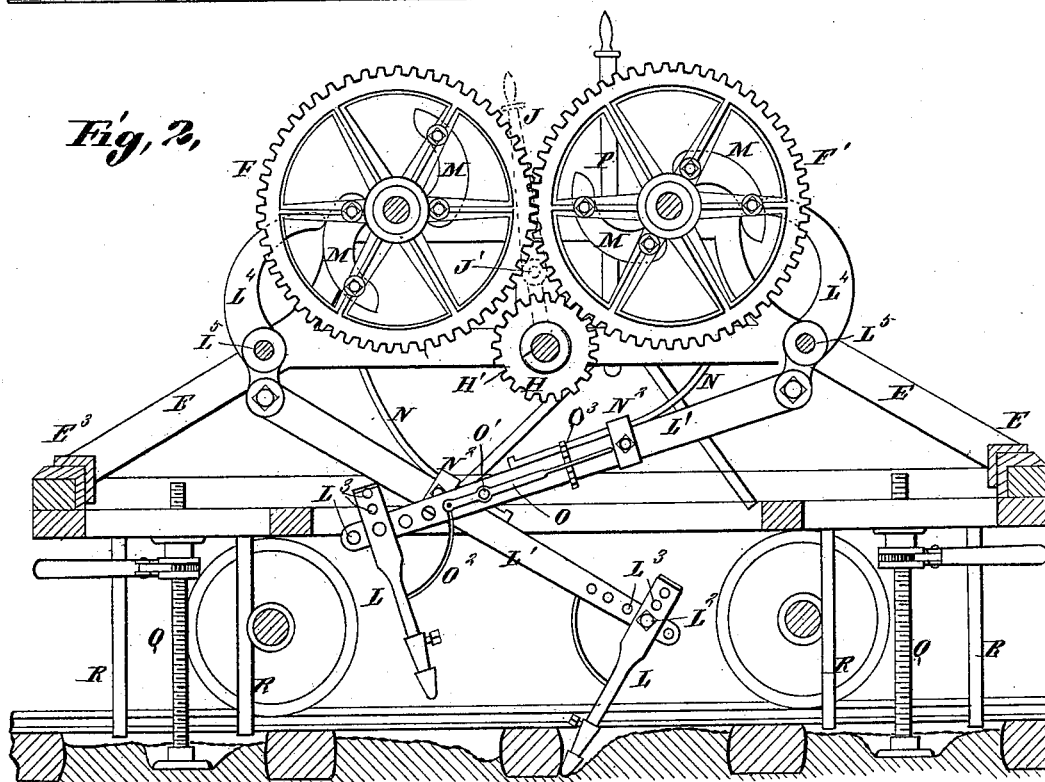


Fig. 2.



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Fig. 3,

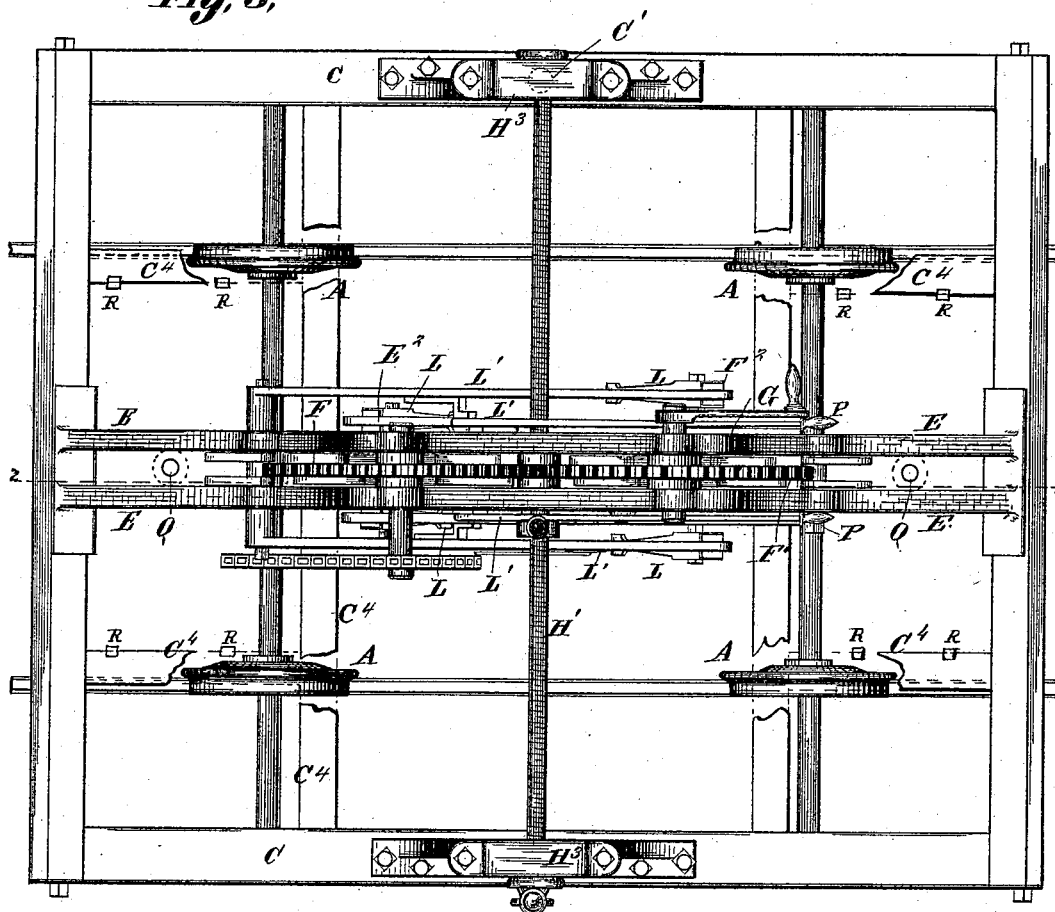
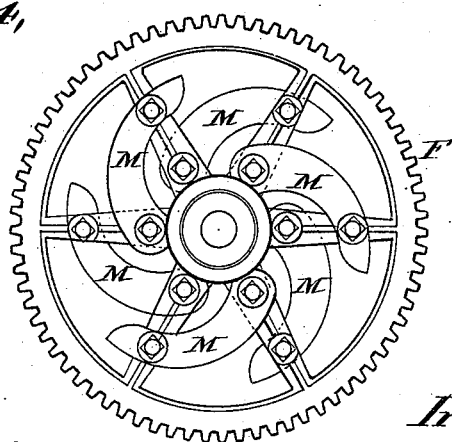


Fig. 4,



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UNITED STATES PATENT OFFICE.

JOHN W. CARLEY, OF THORNTON, TEXAS.

TAMPING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 347,920, dated August 24, 1886.

Application filed April 5, 1886. Serial No. 197,870. (No model.)

To all whom it may concern:

Be it known that I, JOHN W. CARLEY, of Thornton, in the county of Limestone and State of Texas, have invented a certain new and useful Improvement in Tamping-Machines, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, and in which—

10 Figure 1 is a side elevation of my improved machine, showing the tamping-bars in raised position, or the position they occupy when the machine is in traveling position. Fig. 2 is a vertical longitudinal section through the machine, taken on line 2 2, Fig. 3. Fig. 3 is a top or plan view. Fig. 4 is a side view of one of the cog-wheels removed, showing a number of operating-cams.

My invention relates to an improvement in 20 machines for tamping, intended more particularly for tamping dirt under railway-ties; and my invention consists in features of novelty, hereinafter fully described, and pointed out in the claims.

25 Referring to the drawings, A represents the wheels of the truck, to which is supported rigidly in any suitable way a stationary frame, B. I have shown this frame secured to the wheels by means of bars B'. (Shown most 30 plainly in Fig. 1.) Resting upon the frame B is a movable frame, C. This frame C is pivoted to the frame B at one side of the apparatus, the point of pivot being indicated by the letter C', Fig. 3. It will thus be seen that 35 one side of the frame may be moved to throw it at an angle with the stationary frame B. This is done by means of a lever, D, located on the other side of the frame from the pivot-point, and hinged or pivoted at D to a bracket, 40 D², secured to the under side of the stationary frame B. This lever is provided with a handle at its upper end, and has a slot, D³, in which fits a pin or bolt, D⁴, connecting the lever to the movable frame C. By moving this 45 lever in either direction the frame C may be thrown at an angle to the frame B, and the object is that the frame C carries the tamping-bars, hereinafter described, which it is necessary (where the ties are not at a right angle 50 to the rails) to shift, so that they will be in line with the ties. If the ties are in line with the rails of the track, the frame C would be adjusted in line with the frame B, and should the ties be out of a right angle with the rails

the frame C is adjusted in either direction necessary to bring the tamping-bars in line with the ties.

E represents a frame-work extending upward from the frame C. In the upper part of this frame are journaled two cog-wheels, F F', 60 in boxes F², as shown in Figs. 1 and 3. These wheels mesh into each other, and one of them is provided with an operating-crank G, as shown in Fig. 3. Beneath and between these wheels is a pinion or small cog wheel, H. This 65 pinion is supported on a shaft, H', fitting in slots H² of boxes H³, secured to the frame C. The shaft H' may be moved in these slots to bring the pinion H into engagement with either of the wheels F F'. The shaft H' is provided with a thread, as shown in Fig. 3, and 70 the cog-wheel H has a thread in its hub, meshing into the thread in the shaft H'. The object of this pinion H is to give a lateral movement to the tamping-bars by moving the frame 75 E laterally on the frame C. The connection between the frames E and C is shown at E³, Figs. 1 and 2, the frame E having notches in its lower ends fitting against the frame C, so as to permit it to slide back and forth on the frame 80 C. It will thus be seen that when the wheel H is thrown into engagement with one of the wheels F F', the frame E and the tamping-bars which it carries will be moved toward one side of the machine, when the wheel would be 85 thrown into engagement with the other cog-wheel, and then the reverse movement of the frame E and the parts it carries would take place. The wheel H and shaft H' are moved by a lever, J, pivoted at J' to the frame E, it 90 having a handle on its upper end and secured to the shaft H' at its lower end.

L represents the tamping-bars, adjustably secured to the lower ends of arms L' by means of bolts L², fitting in holes L³. To the upper 95 ends of these arms are secured extensions L⁴, pivoted at L⁵ to frame E. The inner ends of these arms or extensions bear against cams M, secured to the cog-wheels FF'. As the wheels turn, the cams come against these arms, and, 100 forcing their upper ends outward, raise the tamping-bars, and as the cams leave the arms, springs N, secured at N' to the frame E, and bearing against the arms L', force the tamping-bars down, and the dirt is thus tamped or 105 forced under the ties. The inclination of the tamping-bars may be changed or adjusted by means of levers O, pivoted at O' to the

arms L', and connected to the tamping-bars by means of rods O². The outer ends of the levers engage in ratchet-bars O³, by which they may be held to any adjustment. The lower ends of the springs N are secured to the bars L by means of adjustable clamps N², and the upper ends of the springs are secured adjustably to their supports by set-screws N³, as shown in Fig. 1.

10 It will thus be seen that with my improved machine the tamping may go on continuously, and the tamping-bars may be moved automatically from side to side of the machine.

When it is desired to move the machine from place to place, the tamping-bars are raised into the position shown in Fig. 1, by levers P, hinged at P' to the frame E, and provided at their inner ends with bars or arms P², that engage beneath the bars L', as shown in Fig. 1. When the machine is in this position, the levers P are in the position shown in Fig. 2 of the drawings.

If in case it should be necessary to raise the ties in tamping under them, it may be done by jack-screws Q, located beneath the frame of the truck at Q', Fig. 3, the cross-pieces C', portions of which are broken away and shown in dotted lines in Fig. 3, being connected to the rails by means of simple straps R, as shown in Fig. 2.

In moving the machine from place to place the power may be obtained from the crank G, by which the tampers are operated. In order to do this to one of the shafts upon which the cog-wheels F F' are supported (preferably the one upon which the cog-wheel F is supported) is secured a chain-wheel, U, over which passes a chain, U', which also passes around a chain-wheel, U², on one of the axles of the truck. This wheel U² is shown by dotted lines in Fig. 1. When the machine is used for tamping, the chain U' is of course removed or taken off.

I claim as my invention—

1. In a tamping-machine, the combination of the tamping-bars, arms to which the bars are secured, wheels provided with cams for lifting the tamping-bars, and springs connected to the arms of the tamping-bars by adjustable clamps and to a frame supporting the bars by means of set-screws, as set forth.

2. In a tamping-machine, the combination of the tamping-bars, arms to which the tamping-bars are secured, cog-wheels provided with cams for operating the tamping-bars, frame to which the wheels and arms are secured, transverse screw-threaded shaft secured to a frame, and cog-wheel or pinion on said shaft, which may be brought into engagement with either of the cog-wheels to reverse the feed of the machine, as set forth.

3. In a tamping-machine, the combination of the tamping-bars, arms to which the bars are secured, laterally-movable frame to which the arms are secured, cog-wheels journaled to said frame and provided with cams for operating the tamping-bars, and a swinging pinion for engaging with either of the cog-wheels to

reverse the feed of the machine, substantially as and for the purpose set forth.

4. In a tamping-machine, the combination of the tamping-bars, arms to which the bars are secured, cog-wheels for operating the tamping-bars, and levers connected with the tamping-bars by means of rods, for the purpose of adjusting the inclination of the tamping-bars, for the purpose set forth.

5. In a tamping-machine, the combination of the tamping-bars, arms to which the bars are adjustably secured, levers pivoted to the arms, rods connecting the levers to the tamping-bars, by which the inclination of the latter is adjusted, and means for operating the arms to which the tamping-bars are secured, substantially as set forth.

6. In a tamping-machine, the combination of the truck provided with a fixed frame, swinging frame pivoted to the truck-frame and carrying a tamping mechanism, and means for swinging the frame by which the tampers may be placed in line with the ties, substantially as shown and described.

7. In a tamping-machine, in combination with a truck provided with a fixed frame, a swinging frame carrying a tamping mechanism and pivoted to one side of the fixed frame, substantially as set forth.

8. In a tamping-machine, in combination with a truck provided with a fixed frame, a frame pivoted at one side to the fixed frame, and a sliding frame connected to the pivoted frame, all arranged in such a manner that the pivoted frame may be moved to bring the tamping mechanism in line with the ties, as set forth.

9. In a tamping-machine, the combination of the truck having a fixed frame, swinging frame pivoted to the fixed frame, sliding frame resting upon the said movable frame, tamping mechanism carried by the sliding frame, and means for sliding the frame from side to side of the machine, for the purpose set forth.

10. In a tamping-machine, in combination with the truck, the tamping-bars, means for operating the bars, and levers P and arms P', by which the tamping-bars are held in a raised position for transportation, as set forth.

11. In a tamping-machine, the combination, with the truck-wheel axle having a sprocket-wheel thereon, and the tamping-bars, of a wheel having cams for operating said tamping-bars and a sprocket-wheel, means for throwing said tamping-bars out of position for engagement by said cams, and a sprocket-chain for connecting said sprocket-wheels, substantially as set forth.

12. In a tamping-machine, in combination with the truck having tamping mechanism, the jack-screws Q, and connecting-arms R, substantially as shown and described, for the purpose set forth.

JOHN W. CARLEY.

In presence of—

SAML. KNIGHT,
JOSEPH WAHLE.