

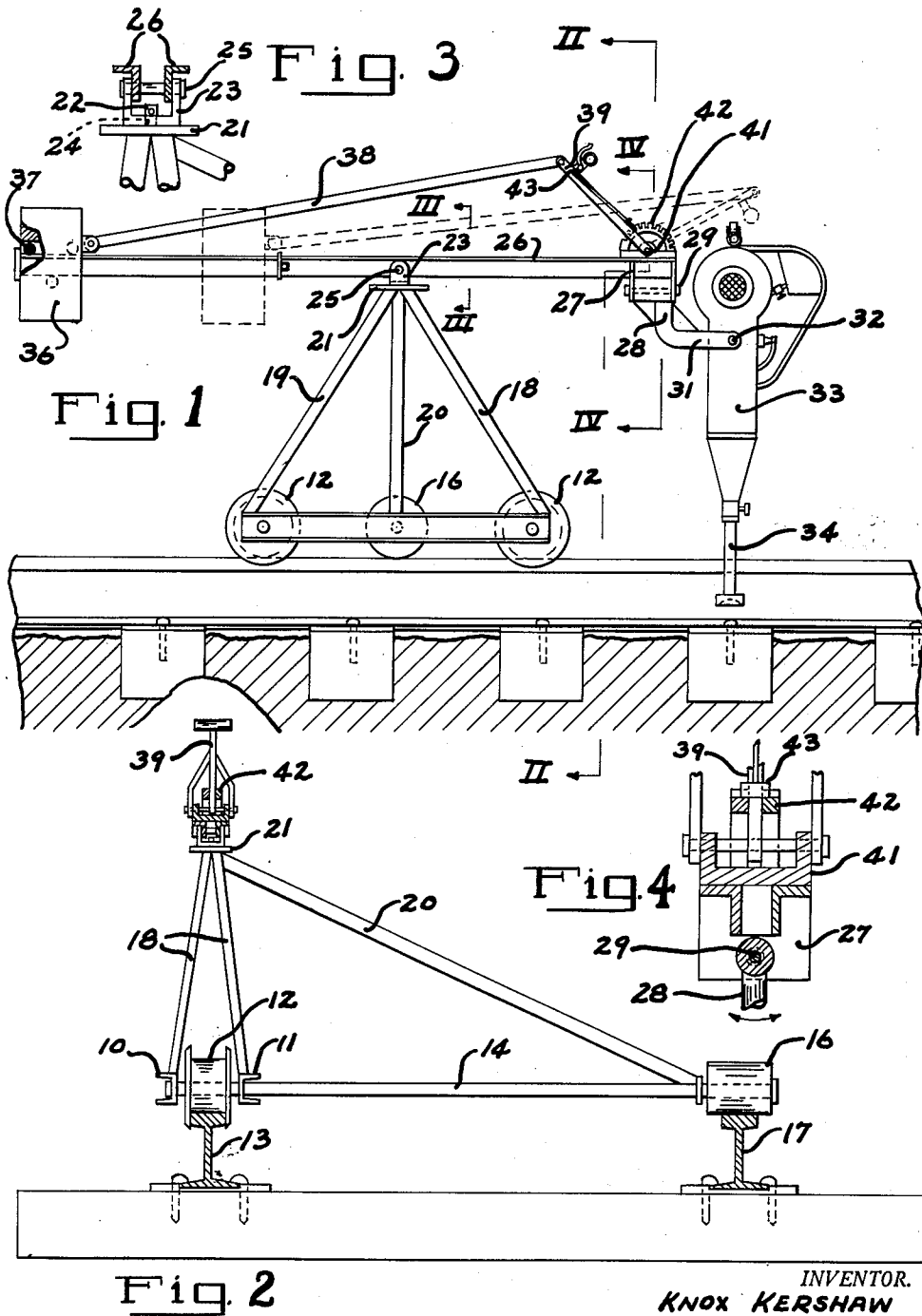
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RAILWAY TRACK TOOL

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RAILWAY TRACK TOOL

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1

This invention relates to a railroad track tool and particularly to a tool for imparting vibratory blows, such as a spike driving, or ballast tamping tool, or paving breaking tool, and has for an object the provision of a wheeled mounting for such a tool whereby the weight of the tool is counterweighted when moving from place to place and in which the counterweight may readily be moved to take advantage of the force of gravity when the tool is in use.

A further object of my invention is to provide a mounting for a tool of the character designated in which the tool is suspended from one end of a beam, pivoted intermediate its ends, with a counterweight for the other side of the pivot point, together with means to shift the position of the counterweight and to permit the tool to be lowered to its work by gravity, thereby controlling the force of the blows imparted by the machine.

In the use of motor driven impact tools, it is very essential that there be sufficient weight on the tool to withstand the recoil of the impact member. This fact has heretofore made it necessary for two men to be assigned to each tool, because they are usually too heavy for one man to handle alone. In accordance with my invention, I have provided an impact tool with a mounting in the form of a beam pivoted intermediate its ends, and also mounted to swing in a horizontal plane, with the impact tool suspended from one end thereof, and with a counterweight movably mounted on the opposite end of the beam. A lever and quadrant are mounted on the beam adjacent the tool, and a link connects the lever to the counterweight, whereby the latter may be moved along the beam to various positions nearer the pivot point thereof, whereby advantage may be taken of the weight of the tool to absorb the recoil of the impact, and the force of impact may be varied by varying the position of the counterweight.

These and other advantages are attained by means of my invention which is illustrated in the accompanying drawings forming a part of this application, in which:

Fig. 1 is a side elevation of the tool;

Fig. 2 is a sectional view taken along the line II—II of Fig. 1;

Fig. 3 is a sectional view taken along the line III—III of Fig. 1; and,

Fig. 4 is a sectional view taken along the line IV—IV of Fig. 1.

Referring now to the drawings for a better understanding of my invention, I show an upstanding support comprising a tripod-like frame

2

with longitudinal frame members 10 and 11, with double flanged wheels 12 mounted therebetween. The double flanged wheels 12 are disposed to run on one rail 13 of the railroad track. A transverse frame member 14 has a flangeless wheel 16 mounted on the outer end thereof and which is disposed to run on the opposite rail 17 of the railroad track. The upstanding portion of the frame is comprised of upwardly inclined members 18 and 19 joined at their lower ends to the longitudinal members 10 and 11 and at their upper ends to a plate 21. A downwardly inclined member 20 is joined at its upper end to the plate 21 and at its lower end to the transverse frame member 14 adjacent the wheel 16.

The plate 21 is provided with an upstanding pin 22 upon which is mounted U-shaped bracket 23, the bracket being provided with a hole 24 through which the pin 22 projects, and may be rotated in a horizontal plane about the pin 22. Pivotaly mounted by means of a pin 25 in the bracket 23 is a beam 26 comprised of angle members, as shown, with their ends joined together. Mounted on one end of the beam 26 is a bracket 27 and pivotaly mounted in the bracket 27 is an L-shaped tool supporting member having a vertical arm 28 pivoted by means of a pin 29 to the bracket 27. The horizontal arms 31 of the tool support extend alongside of and are pivotaly connected at 32 to a motor driven impact type tool 33. The tool 33 is provided with an impact member 34, and as is well understood in the art, the member 34 is reciprocated to impart successive blows such as in driving railroad spikes, in tamping ballast around cross ties, in cutting cement pavement, and various other tasks where it is necessary to depend upon hammer blows to accomplish the work. Inasmuch as this tool forms no part of my invention, no further description thereof is deemed necessary. As is well known, these tools are very heavy and can hardly be handled by one man.

In order to counterweight the weight of the tool and yet have the advantage of weight of the tool in accomplishing the work, I provide, on the opposite ends of the beam 26, from the tool 33, a movable weight 36. The weight 36 has an opening extending through it in which may be mounted roller bearings 37 to provide ease in shifting the weight on the beam. Connected to the weight is a link 38 which is connected at its opposite end to a lever 39, mounted at 41, on the opposite end of the beam and provided with a toothed quadrant 42 and latch mechanism 43 whereby it may be set at various positions.

3

As indicated in Fig. 1 of the drawing, the weight 36 may be shifted by means of the lever 39 from the outer end of the beam 26 to the position indicated by dotted lines, near the pivot point of the beam. By means of the quadrant and lever mechanism it may be secured to any desired intermediate position. By the means shown, the tool may be readily moved along the railroad track on the wheeled support. With the counterweight 36 in the outer position indicated in full lines in Fig. 1 of the drawing, the weight of the tool 33 is counterbalanced and one man may swing it to any desired position. After the tool is swung to the position where the work is to be done, the lever 39 is moved to the dotted position, or to some intermediate position, and the weight of the tool absorbs the impact of the impact member 34. Should it be desired to impart less powerful blows, the counterweight 36 may be placed at any intermediate position from that shown.

From the foregoing it will be apparent that I have devised an improved track tool which is simple of design and operation and in which the weight of the tool is counterweighted for the purpose of moving it from place to place, but that the counterweight is shiftable to take advantage of the force of gravity in using the tool.

While I have shown my invention in but one form, it will be obvious to those skilled in the art that it is not so limited, but is susceptible of various changes and modifications, without departing from the spirit thereof, and I desire, therefore, that only such limitations shall be placed thereupon as are specifically set forth in the appended claims.

What I claim is:

1. In a tool of the character described, a beam pivoted intermediate its ends, an impact tool disposed for reciprocation in a substantially vertical

4

plane and suspended from one end of the beam, a counterweight slidably mounted on the other end of the beam, and means mounted adjacent the tool and operatively connected to the counterweight for shifting the counterweight toward and away from the pivot point of the beam thereby varying the force of the blows imparted by said tool.

2. In a railway track tool, an upstanding support, a beam pivotally mounted intermediate its ends on the support, an impact tool disposed for reciprocation in a substantially vertical plane and suspended from one end of the beam, a counterweight for the tool slidably mounted on the beam on the opposite side of the pivot point from the tool for varying the force of the blows imparted by said tool, a shifting lever on the end of the beam adjacent the tool, and a link connecting the shifting lever to the counterweight.

3. A railway track tool as defined in claim 2 in which the beam is also mounted to swing in a horizontal plane on the support.

4. A railway track tool as defined in claim 2 in which the shifting lever is provided with a quadrant and a latch, whereby the counterweight may be secured in selected positions along the beam.

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