K. EICKEMEYER.

UNIVERSAL CARRIAGE LOCOMOTIVE.

APPLICATION FILED AUG. 28, 1913.

1,091,125. Patented Mar. 24, 1914.

Fig. 1.

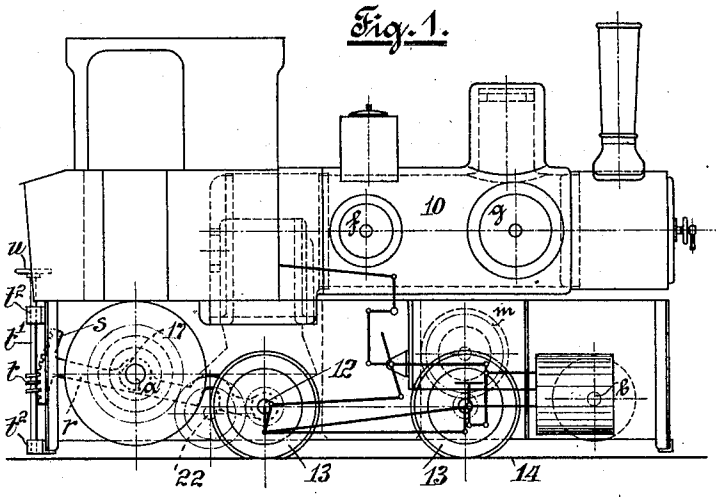


Fig. 2.

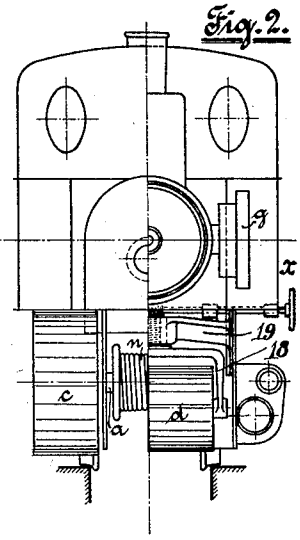


Fig. 3.

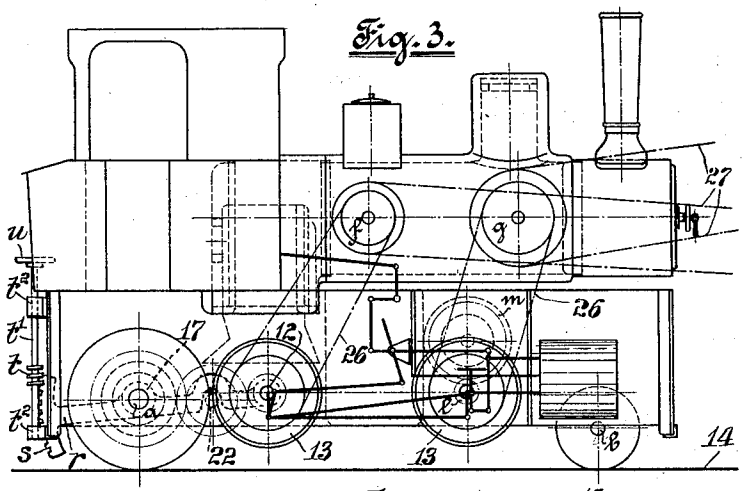
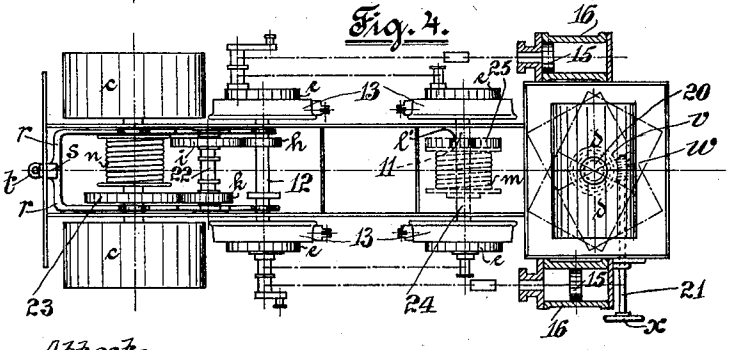


Fig. 4.



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UNITED STATES PATENT OFFICE.

KARL EICKEMEYER, OF MUNICH, GERMANY.

UNIVERSAL CARRIAGE-LOCOMOTIVE.

1,091,125. Specification of Letters Patent. **Patented Mar. 24, 1914.**

Application filed August 28, 1913. Serial No. 787,100.

To all whom it may concern:

Be it known that I, KARL EICKEMEYER, chief engineer, a citizen of Germany, residing at Munich, Bavaria, Germany, have invented certain new and useful Improvements in Universal Carriage-Locomotives; 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 generally to locomotives or engines, and has particular reference to means whereby an engine or locomotive, in addition to serving the ordinary purposes of a traction device which may run either on a fixed or an undefined course or track, may be adapted to supply power for numerous purposes incidental to building roads, canals, laying railway tracks, and the like.

Stated in general terms, the invention consists in providing an engine or locomotive with supplementary shafts capable of being raised and lowered, which shafts are adapted to receive wheels of any desired kind, rollers, or supports for holding the engine raised, so that the device may be used as a traction engine or towing locomotive, as a road roller or as a portable engine.

The preferred embodiment of the invention is illustratively exemplified in the accompanying drawing, wherein—

Figure 1 is a side elevational view of a locomotive showing the supplementary shafts in elevated position; Fig. 2 is an end elevational view showing one half of each side of the locomotive; Fig. 3 is a view similar to Fig. 1, showing the supplementary shafts lowered; and Fig. 4 is a plan view.

Referring by reference characters to the drawing, 10 denotes generally the body of a locomotive or engine, provided with the front and rear axles 11 and 12, each having mounted thereon a pair of flanged wheels 13 designed to travel on a narrow gage track 14. The wheels 13 are driven in the usual manner from the pistons 15 working in the steam cylinders 16.

Mounted near the rear and front ends, respectively, of the engine 10 are the shafts *a* and *b* which may be raised and lowered by any means suitable for the purpose. In the drawing (Figs. 1 and 3) I have shown separate means for raising and lowering the shafts *a* and *b*. The means by which the rear shaft *a* may be moved embody the following instrumentalities:—Pivotally mounted near opposite ends of the shaft 12 is a fork or yoke *r*, each arm or tine of the fork being formed, intermediate its ends, with an eye 17 embracing the shaft *a*. At their juncture the tines of the fork *r* are provided with a segmental rack *s* in mesh with a worm *t* formed on or carried by an upright rod *t'* revoluble in lugs t^2 stationarily supported by the engine framing. At its upper end the rod *t'* carries a hand wheel *u* by means of which the rod may be revolved. According to the direction in which the hand wheel *u* is turned, the rack *s* will be moved in the arc of a circle, either raising or lowering the shaft *a*.

The raising or lowering of the shaft *b* is effected by the following means:—The shaft *b* is supported in the yoke 18 which, in turn, is connected with the steering frame 19. Passing vertically through the steering frame is the steering rod 20 surrounded by a worm wheel *v*. Meshing with the worm wheel *v* is a worm *w* carried at one end of a rod 21 which is operable by the hand wheel *x*. By suitably revolving the hand wheel *x*, the rod 21 may be turned in the desired direction to either raise or lower the shaft *b* through the medium of the intermeshing worm *w* and worm wheel *v*.

The shafts *a* and *b* are adapted to receive rollers, flanged wheels for standard gage tracks, supports by means of which the engine may be held stationary in raised position, or such other devices as the needs of any particular purpose in view may require. For illustrative purposes, I have shown the shafts *a* and *b* as carrying heavy rollers *c* and *d* so that the engine may be adapted as a road roller.

I prefer to provide upon the rear auxiliary shaft *a* a winding drum *n*, the rollers *c*, or other wheels or devices to be placed on this shaft, being so constructed that, if desired, the shaft may rotate without rotating such rollers or wheels. This arrangement is necessary when the drum *n* is to be rotated while the locomotive is stationary. The means preferably used for revolving the drum *n* consist of a gear wheel *h* on the rear axle 12, adapted to be thrown into and out of mesh with a gear wheel *i*, carried on a shaft 22 mounted in the engine frame intermediate the shafts 12 and *a*. Mounted also on the shaft 22 is a gear wheel

k in mesh with a gear wheel 23 on the shaft a. When the gear wheels h and i are in mesh the drum n may be driven from the rear axle 12 of the engine. I also find it desirable to provide a forward winding drum m, which is carried on a shaft 24 above the shaft l. Fixed to the latter shaft is a small gear wheel or pinion l' meshing with a gear 25 on the drum m, and by means of which gear wheels the drum m may be driven from the shaft l.

The engine wheels 13 preferably have formed integrally therewith or secured thereto pulley wheels e from which the belt or rope pulleys f and g may be driven by the belts 26. Running over the pulleys f and g are the belts 27 which may be used to run pumps, dynamos or any other desired machinery or part thereof. It will be understood of course, that the pulleys f and g are operated from the wheels e only when the latter are raised by the lowering of the shafts a and b.

From the foregoing description of my invention, it will be noted that I provide what may be fairly termed a universal engine for use in a great variety of building work. Not only is the engine adapted for hauling or pulling, and for road rolling, but it is also convertible into a portable engine for delivering power to be applied to driving pumps, hoists, rams, concrete-mixers, grinding machinery, and a great many other purposes too numerous to mention.

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

1. An engine, having a pair of shafts in fixed relation thereto, a pair of driver wheels on each of said shafts, an auxiliary shaft near each end of and below the base of the engine, said auxiliary shafts being adapted to receive means for supporting the engine, and means for moving said auxiliary shafts relatively to said first named shafts.

2. An engine, having a pair of shafts in fixed relation thereto, a pair of driver wheels on each of said shafts, an auxiliary shaft near each end of and below the base of the engine, said auxiliary shafts being adapted to receive means for supporting the engine, means for raising and lowering said auxiliary shafts, and means whereby one set of said shafts may be driven from another set thereof.

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

KARL EICKEMEYER.

Witnesses:
JOHANNA STERN,
RICHARD LEMP.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."