C. LAMB.

NIGGER ENGINE.

No. 186,011. Patented Jan. 9, 1877.

Fig. 1.

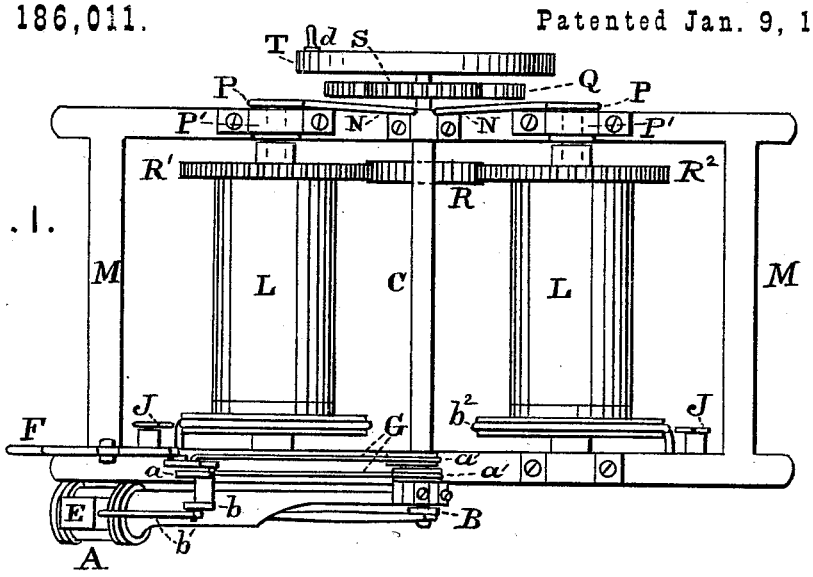


Fig. 2.

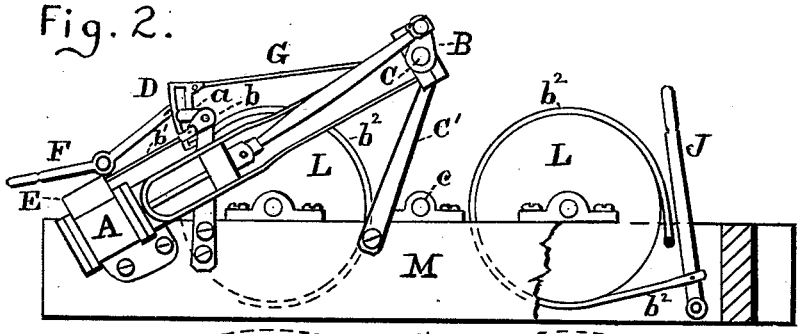


Fig. 3.

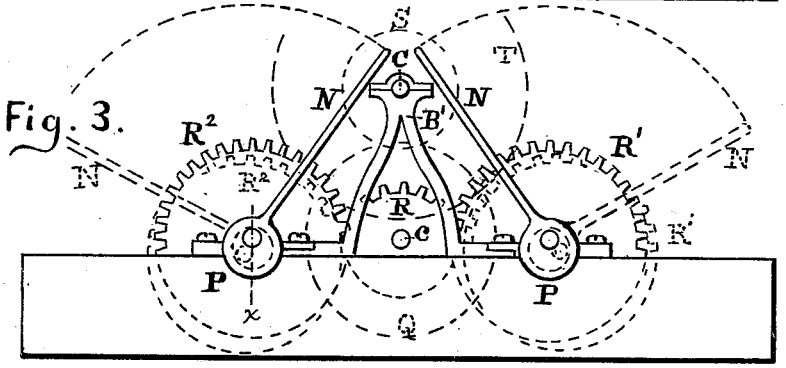
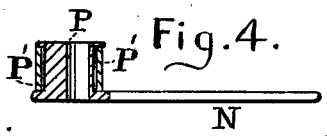


Fig. 4.



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UNITED STATES PATENT OFFICE.

CHANCY LAMB, OF CLINTON, IOWA.

IMPROVEMENT IN NIGGER-ENGINES.

Specification forming part of Letters Patent No. **186,011**, dated January 9, 1877; application filed July 19, 1876.

To all whom it may concern:

Be it known that I, CHANCY LAMB, of Clinton city, in the county of Clinton and State of Iowa, have invented certain new and useful Improvements in "Nigger-Engines;" and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

Figure 1 is a plan view. Fig. 2 is a side elevation of the cylinder and connecting mechanism, and part of the frame broken away to show one of the brakes and the ends of the spools. Fig. 3 is a side elevation, showing the gearing, eccentric boxes, and levers, for throwing the spools in and out of gear. Fig. 4 is a longitudinal section of one of the eccentric boxes, taken on line *x* of Fig. 3.

My invention relates to that class of engines known as "nigger-engines," used for controlling and guiding rafts and tow-boats, constructed and operated as hereinafter more fully described.

A is a steam-cylinder, attached to the frame M. B is the crank attached to the main drive-shaft C, which is adjusted in bearings supported by standards B′ C′, attached to the frame. D is a link connected with the cam-rods G, and adjusted to slide on an arm on the crank *a*, on a short shaft provided with the crank *b*, to which is attached the rod b^1 of the steam-chest E. F is a lever, pivoted to the frame, and provided with a slot near the inner end to receive a pin on the side of the link, to adjust the cut-off and change the steam, so as to give either backward or forward motion to the machine. J J are brake-levers, pivoted to the frame and to one end of the brake-rods b^2, which are adjusted in grooves around the edges of the plates attached to the ends of the spools L, having their bearings on the frame M.

One end of each of the brake-rods is fastened to the frame, so that by pressing the upper ends of the levers J outward the rods are drawn tightly into the grooves around the edges of the end plates of the spools, forming thus easy and thorough brakes to the spools.

N N are levers attached to the eccentric boxes P, which are adjusted to be oscillated in external boxes P′, to place the spools in and out of gear, as shown in Figs. 3 and 4. Q is an intermediate gear-wheel, adjusted on a shaft, *c*, having its bearings on the frame. R is a pinion on the shaft *c*, adjusted to gear with the cog-wheels R^1 R^2 on the ends of the spools. S is a pinion on the main shaft C, gearing with the intermediate wheel Q. T is a fly-wheel, provided with a crank-handle, *d*.

To place the spools out of gear the levers N are moved outward, turning the eccentric boxes P, and carrying the cog-wheels R^1 R^2 outward and downward, and disengaging them from the pinion R, as shown by dotted lines in Fig. 3.

The spools are both adjusted to turn the same way, and one takes up the rope as the other turns it off.

When it is necessary to hold one rope tight to take up slack rope, the spool carrying the rope to be held tight is thrown out of gear by its lever N, and is held from turning by its brake-lever J, and the machine being put in motion, the slack rope is taken up by the other spool.

This engine is located aft the boiler, that being the best position for controlling rafts, boats, and tows.

What I claim as new, and desire to secure by Letters Patent, is—

1. A nigger-engine, provided with two spools, L, adjusted to be turned in the same direction, and to be placed in and out of gear with their driving-pinion by mechanism, substantially as and for the purposes described.

2. The spools L, provided with the gear-wheels R^1 R^2, adjusted to be placed separately in and out of gear with their driving-pinion R, in combination with brakes b^2, levers J, and eccentric boxes P, provided with levers N, substantially as and for the purposes described.

In testimony that I claim the foregoing as my own invention I affix my signature in presence of two witnesses.

CHANCY LAMB.

Witnesses:

GEO. B. YOUNG,

WM. W. SANBORN.