

(No Model.)

F. BURGROFF.
GEAR FOR PORTABLE ENGINES.

No. 505,814.

Patented Oct. 3, 1893.

Fig. 1.

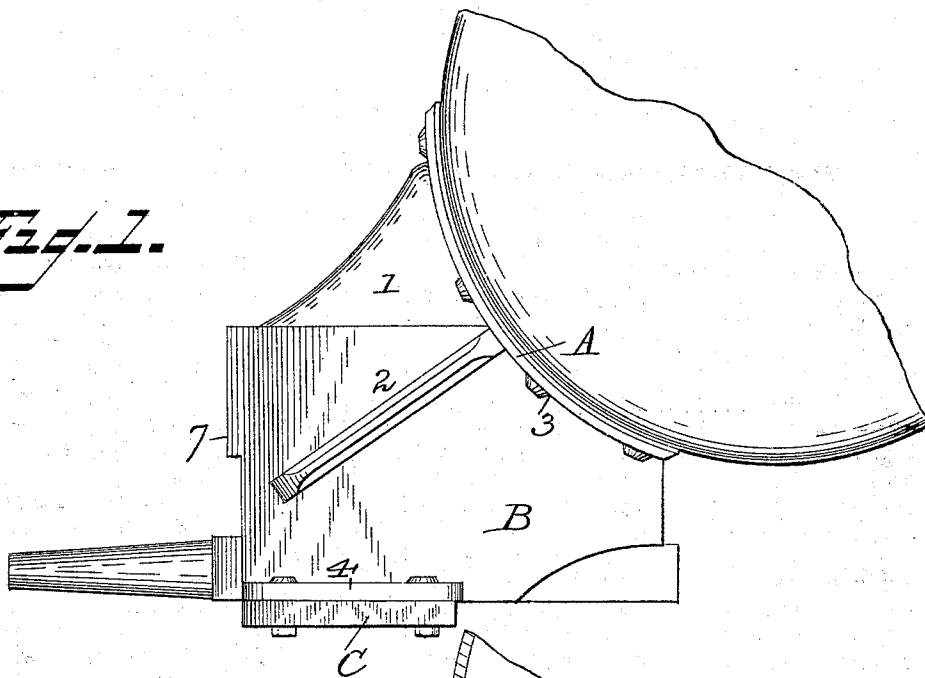
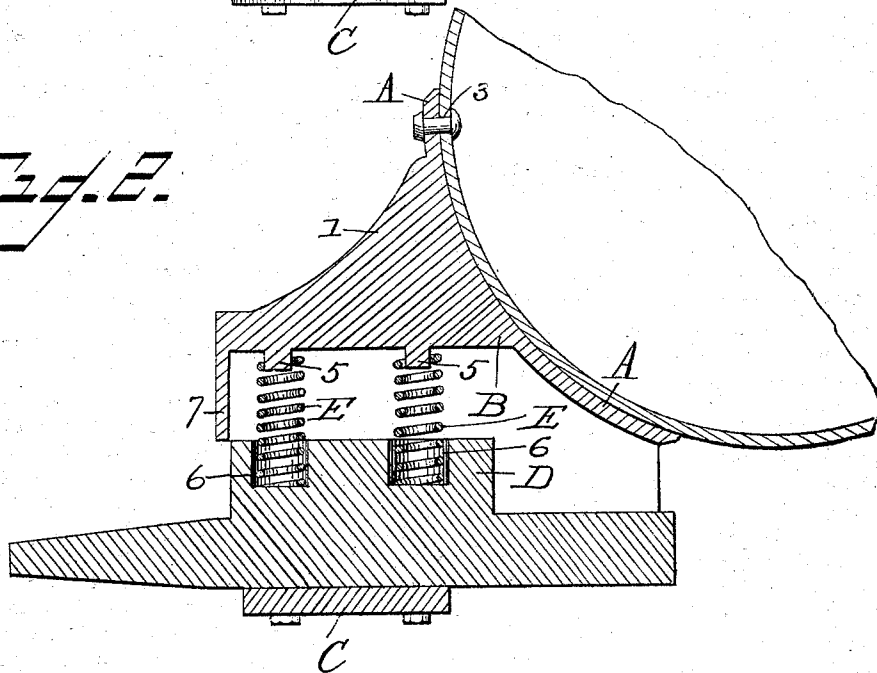


Fig. 2.



WITNESSES

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GEAR FOR PORTABLE ENGINES.

SPECIFICATION forming part of Letters Patent No. 505,814, dated October 3, 1893.

Application filed June 15, 1893. Serial No. 477,656. (No model.)

To all whom it may concern:

Be it known that I, FRANK BURGROFF, a citizen of the United States, residing at Eldorado, in the county of Fond du Lac and State of Wisconsin, have invented certain new and useful Improvements in Running-Gear for Portable Engines; 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 to improvements in vehicles, and particularly to an improvement in the running gear of portable-engines.

The invention will first be described in connection with the accompanying drawings, and then particularly pointed out in the claims.

In the drawings—Figure 1 is a rear view of a boiler hung on an axle, illustrating my improvements. Fig. 2 is a transverse vertical section of one bearing lug and part of an axle.

Referring to the drawings, A is the bearing-lug to which is attached a spring-box B, preferably made integral with the bearing-lug, and strengthened by brackets 1, and 2. The bracket-lug is provided with rivet-holes 3 by means of which the lug may be secured to the side of the boiler in the usual way. The spring-box has its lower edges flanged outward at 4 and provided with bolt-holes through which bolts may be passed to secure a cap-plate, C, in place, the cap-plate resting on the flanges 4. The under surface of the top of the spring-box has a series of downward-extending nipples 5, for a purpose hereinafter described. Two of the complete lugs just described, together with the spring-boxes, are required for one axle, one bearing-lug being secured to each side of the boiler, and the axle passing through both spring-boxes.

To the top of the axle near each end is attached a spring-block, D, having a series of spring sockets, 6, equal in number to the nipples 5. The spring-blocks, together with that portion of the axle to which they are attached,

are free to move vertically in the spring-boxes, and, to support the lugs and all the weight which they carry, a series of helical springs, E, is located between the spring-blocks and the top of the spring-box, the lower end of each spring being inserted in one of the sockets, 6, and held at the upper end by one of the nipples 5 which enters the end of the spring.

For the purpose of strengthening the spring-box, I close the outer end at 7, though it may be left open if desired.

The operation of my device is apparent and needs no description.

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

1. In a portable-engine, a bearing-lug attached to the boiler on each side, a spring-box secured to each lug and provided with downward-extending nipples, and an axle passing through both spring-boxes, a series of spring-blocks provided with spring-sockets, and secured to the top of the axle, one near each end, and a series of helical springs held at their lower ends by the sockets and at their upper ends by the nipples, substantially as described and for the purpose set forth.

2. The combination, with an axle having a spring-block secured to each end, each spring-block having a series of spring sockets, of a casing secured to each side of the boiler, and provided with downward-extending nipples, a series of springs inserted in the spring-sockets and held by the nipples at their upper ends, and a cap-plate secured to the under side of the casing below the axle, whereby the upward movement of the casing and its load is limited, substantially as described.

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

FRANK BURGROFF.

Witnesses:

WILL H. SLOEY,
WINTHROP SCRIBNER.