F. GIBÁS.

CONTINUOUS ENGINE PLOWING WITH TWO ENGINES.

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**1,003,353.**

Patented Sept. 12, 1911.

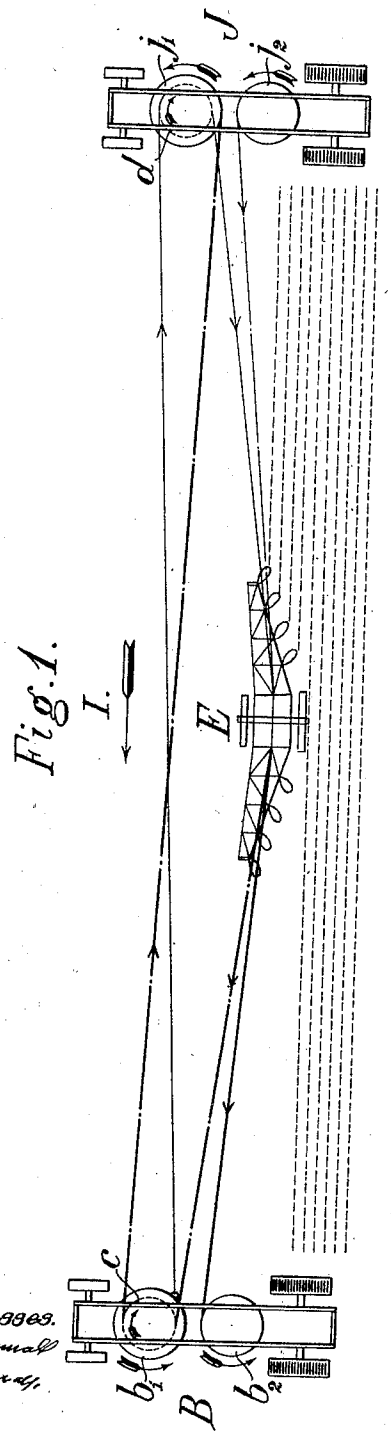


Fig. 1.

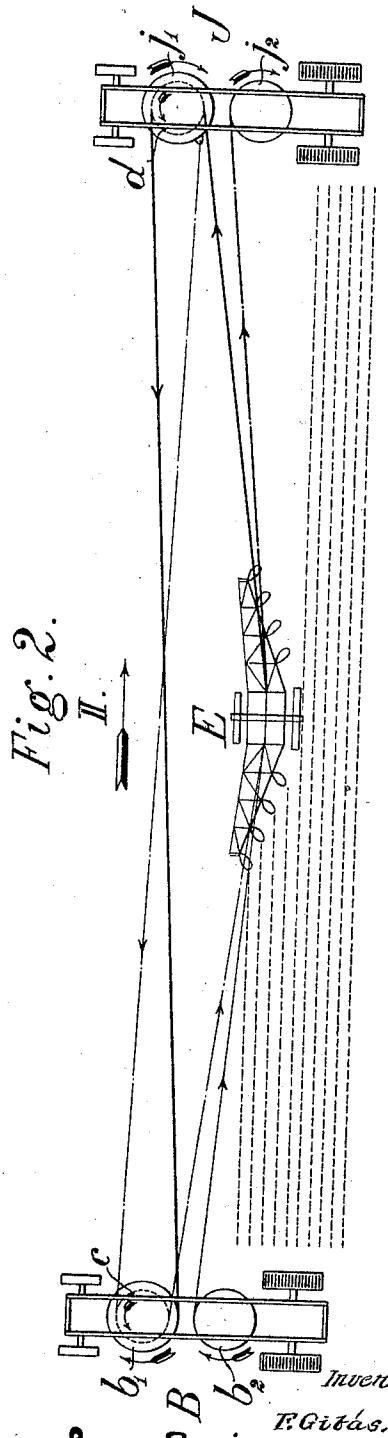


Fig. 2.

Witnesses.

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# UNITED STATES PATENT OFFICE.

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## CONTINUOUS ENGINE-PLOWING WITH TWO ENGINES.

1,003,353. Specification of Letters Patent. Patented Sept. 12, 1911.

Application filed August 4, 1910. Serial No. 575,567.

*To all whom it may concern:*

Be it known that I, FRANCIS GIBÁS, a citizen of the Empire of Austria-Hungary, residing at Polgár, in the county of Szabolcs and Empire of Austria-Hungary, have invented certain new and useful Improvements in Continuous Engine-Plowing with Two 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, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

This invention relates to continuous engine plowing by means of two oppositely disposed engines each provided with two rope drums. It has been proposed in such a system to provide each engine with two rope drums mounted on the same axle and two pairs of loose pulleys each pair having a common axle on either side of the rope drums.

The object of the present invention is to provide a simplified arrangement without incurring the disadvantage of the plow being drawn sidewise and it consists in providing each engine with only one loose pulley in addition to the two rope drums, the two simultaneously operating drums being arranged diagonally opposite one another, so that the side pull on the plow is neutralized.

In carrying the invention into effect, two drums are arranged on each engine, of which however, only one is operative at a time, while when the plowing direction is reversed the previously operating drum is thrown out of operation and the other drum set in motion.

The means by which the invention is carried into effect, are independent of the nature of the traction engine, which can equally well be a steam traction engine, a benzin, alcohol or crude oil motor or the like.

The invention will now be described with reference to the accompanying drawings which illustrate diagrammatically a system according to the present invention.

Figure 1 is a plan when plowing from right to left. Fig. 2 is a similar view when plowing from left to right.

The plow E is hauled to and fro by the engines B and J arranged respectively at opposite ends of the field. These engines are of the usual self-propelling type and each carry two drums $b^1$ and $b^2$ and $j^1$ and $j^2$ respectively. These drums are so driven by a controller or valve gear provided on the engine, that only one drum is made to revolve at a time, while the other drum, from which the plow unwinds the rope, chain or the like, rotates loosely on its shaft. Besides these drums a loose pulley $c$ is arranged on one engine and a loose pulley $d$ on the other, each being adapted to revolve freely on its axle and each serving as a guide for the drag-rope to the other engine. For the sake of clearness, the ropes of the left-hand engine are drawn as full lines while those of the right hand engine J are shown by dotted lines; in each plowing direction the ropes providing an effectual pull are shown by thick lines, while those drawn by the receding plow and unwound from the corresponding drum are indicated by thin lines.

Referring now to the movements of the drums which occur during plowing in either direction, the plow is drawn from the right to the left (arrow I, Fig. 1) partly by the drum $b^2$ of the left hand engine B, and partly by the drum $j^1$ of the right hand engine J; the coöperation of the latter engine in the traction effort being effected in such a manner that the rope of the drum $j^1$ passes over the loose pulley $c$ on the engine B. During plowing in this direction, the drum $j^2$ of the right hand engine J and the drum $b^1$ of the left hand engine B rotate loosely on their spindles. The rope unwound from the drum $b^1$ causes the loose pulley $d$ arranged on the right hand engine to rotate clockwise. In plowing from left to right (arrow II, Fig. 2) the traction is effected partly by the drum $j^2$ of the right hand engine J and partly by the drum $b^1$ on the left hand engine B. The rope winding itself on the last mentioned drum causes the loose pulley $d$ of the right hand engine to revolve anticlockwise. The plow, in moving, unwinds the rope partly from the drum $b^2$ on the left hand engine B and partly from the drum $j^1$ of the right hand engine J. The latter rope passes over the loose pulley $c$ of the left hand engine.

Having now particularly described and ascertained the nature of my said invention

and in what manner the same is to be performed, I declare that what I claim is:—

In combination, an engine comprising front and rear drums, a loose pulley mounted adjacent the rear drum, a second engine spaced from the first mentioned engine and comprising front and rear drums, a loose pulley mounted adjacent the rear drum on the second mentioned engine, the latter mentioned loose pulley and the loose pulley on the first mentioned engine being in alinement, a plow in alinement with the two front drums on the engines, a rope secured to the left of the plow and passing around the loose pulley adjacent the rear drum on the first mentioned engine and around the rear drum on the second mentioned engine, a second rope secured to the left of the plow and passing around the front drum on the first mentioned engine, a third rope secured to the right of the plow and passing around the loose pulley adjacent the rear drum on the second mentioned engine and around the rear drum on the first mentioned engine, a fourth rope secured to the right of the plow and passing around the front drum on the second mentioned engine, whereby the rear drum on the second mentioned engine and the front drum on the first mentioned engine will operate to draw the plow toward the left, and the rear drum on the first mentioned engine, and the front drum on the second mentioned engine will draw said plow toward the right.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

FRANCIS GIBÁS.

Witnesses:
BÉLA GUSHÁRY,
HUGH KEMENY.

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