I. R. Lawrence,

Horse Power,

No. 2,799, Patented Oct. 7, 1842.

Fig. 1.

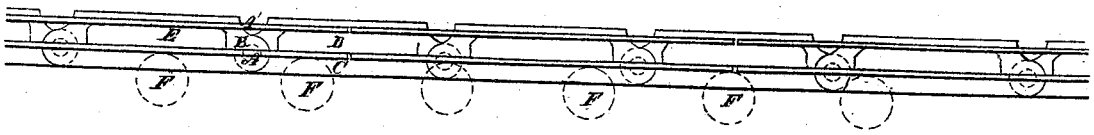


Fig. 2.

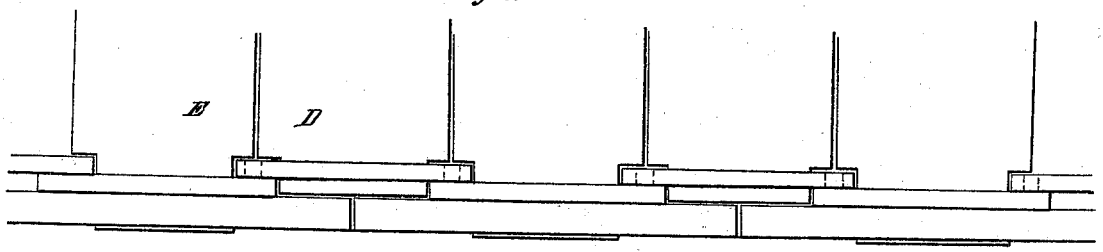


Fig. 3.

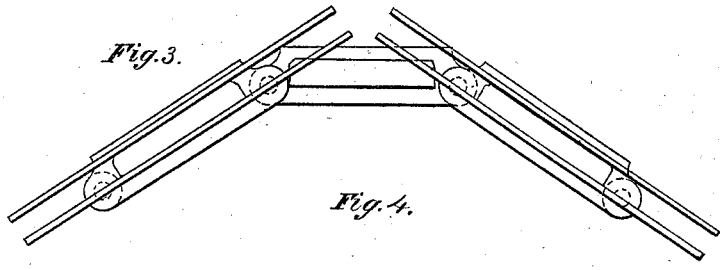
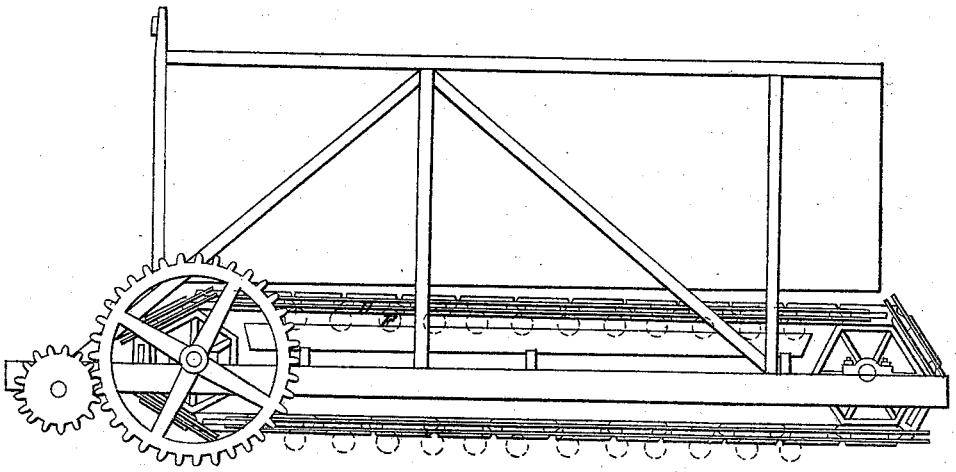


Fig. 4.



UNITED STATES PATENT OFFICE.

ISAAC R. LAWRENCE, OF CHATHAM, NEW YORK.

IMPROVEMENT IN ENDLESS-CHAIN HORSE-POWERS FOR DRIVING MACHINERY.

Specification forming part of Letters Patent No. **2,799**, dated October 7, 1842.

To all whom it may concern:

Be it known that I, ISAAC R. LAWRENCE, of Chatham, in the county of Columbia and State of New York, have invented a new and useful Improvement in the Endless-Chain Horse-Power, which is described as follows, reference being had to the annexed drawings of the same, making part of this specification.

Figure 1 is a side elevation of a section of the endless chain, slats and rails, and upper sustaining-rollers. Fig. 2 is a top view of a section of one side of the chain, slats, and rails. Fig. 3 is an end view of the links in the position of turning the drum, showing the manner the extended ends of the parallel plates pass the intermediate link, whose slat is not extended beyond the face thereof; Fig. 4, a side elevation of the horse-power.

This improvement consists in forming a jointed railway of parallel plates A' A^2, twice the length of the links B, to which said plates are cast, said plates being cast on one-half the links or on every alternate link, and extended beyond the ends of the same half their length, so as to overlap the intermediate link, C, which is cast without parallel plates, so that as the chain passes around the polygonal drum and the links are bent at the joints, as seen in Fig. 3, the said projecting ends of the plates A' A^2, forming the railways, will pass the sides of said intermediate links without obstruction, the ends of the slats D of said intermediate links not extending beyond the outer face thereof, while the slats E of the links having the parallel plates extend through said links and between said plates. These parallel plates thus form a railway, passing over a series of rollers, F, for sustaining the platform and the horse or horses walking thereon. They also form a railway for traveling, on its return over a series of rollers arranged at the lower part of the frame, which prevent the chain and platform from sagging, and the said parallel projecting plates of the links likewise prevent the chains from sagging transversely at the joints by being extended beyond the same, so as to reach from the periphery of one sustaining-roller to the periphery of another, while the joint of the chain is between them, by which arrangement the chain is caused to run horizontally and evenly without any sagging at the joints.

The other parts of the machine may be made in the usual manner, such as the frame, crib, or box in which the horse is confined, drums, and gearing.

What I claim as my invention, and which I desire to secure by Letters Patent, is—

Constructing the endless-chain horse-power with parallel plates nearly twice the length of the links on the sides of one-half of them, thereby producing one-half the number of joints in the railway that there are in the chain, thereby preventing a sagging at the joints by means of the said plates extending from the periphery of one of the upper sustaining-rollers F to the periphery of the next succeeding roller F, while the joint of the chain is passing from one to the other, and also producing a double railway, the inner series of plates producing a railway for traveling over the upper sustaining-rollers F, and the outer series of plates a railway for traveling over the lower sustaining-rollers, for preventing the chains from sagging in revolving from one side of the machine to the other.

ISAAC R. LAWRENCE.

Witnesses:

WM. P. ELLIOT,

E. MAHER.