G. SPRINKEL.

Stone-Pullers.

No. 136,941. Patented March 18, 1873.

Fig. 1

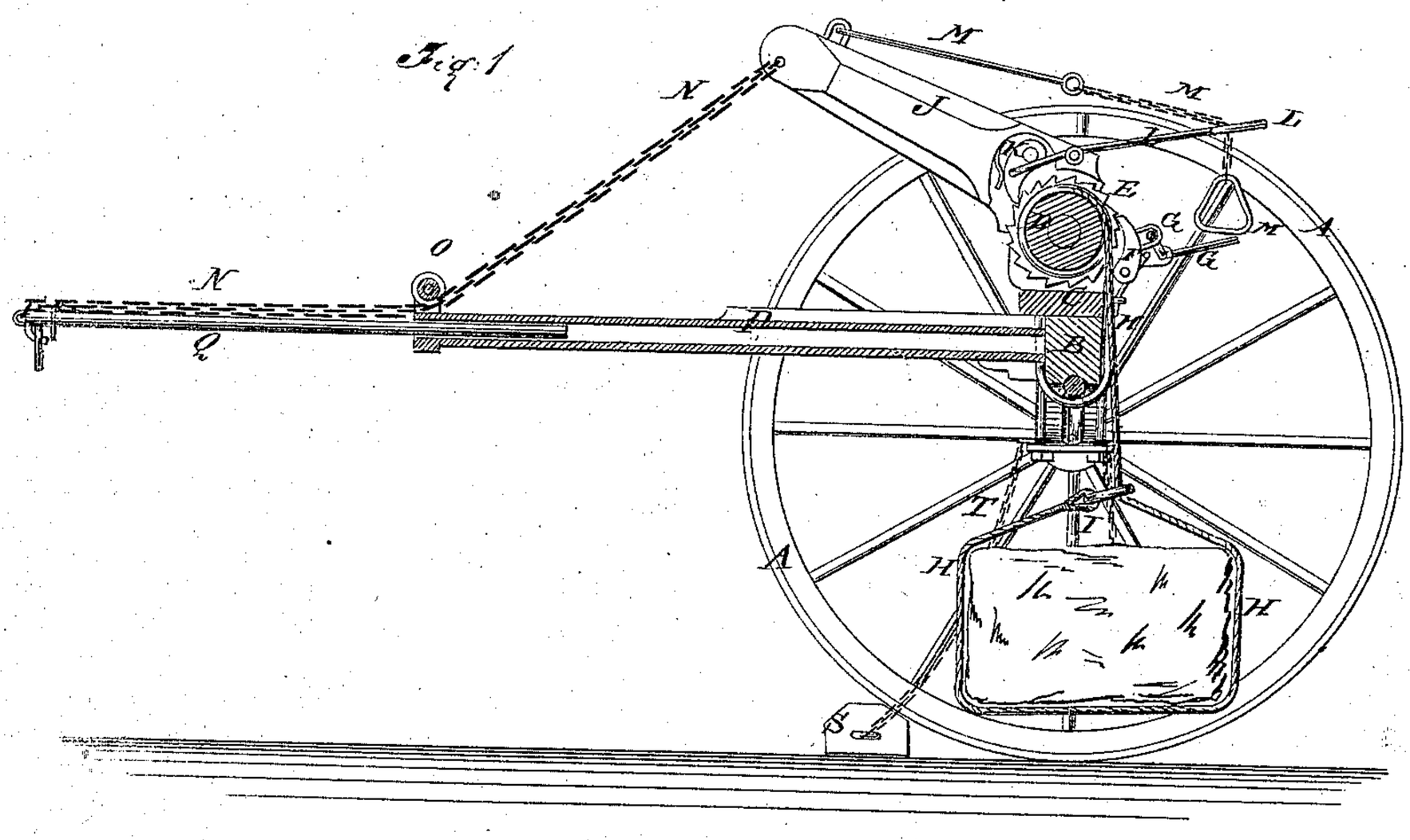
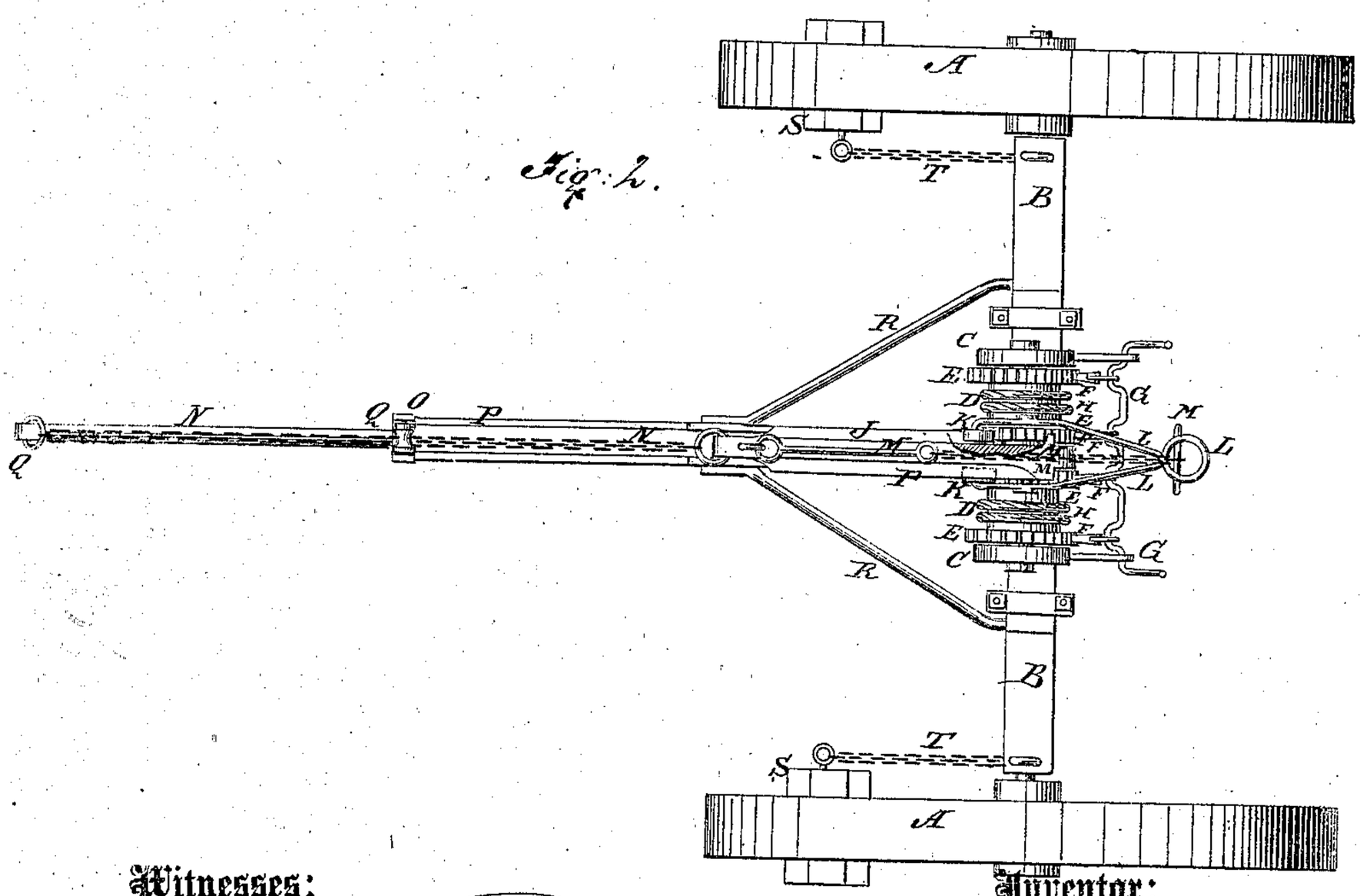


Fig. 2.



Witnesses:

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UNITED STATES PATENT OFFICE.

GEORGE SPRINKEL, OF NORTH LEVERETT, MASSACHUSETTS.

IMPROVEMENT IN STONE-PULLERS.

Specification forming part of Letters Patent No. **136,941**, dated March 18, 1873.

To all whom it may concern:

Be it known that I, GEORGE SPRINKEL, of North Leverett, in the county of Franklin and State of Massachusetts, have invented a new and useful Improvement in Stone-Puller, of which the following is a specification:

Figure 1 is a detail vertical longitudinal section of my improved machine. Fig. 2 is a top view of the same, part being broken away to show the construction.

Similar letters of reference indicate corresponding parts.

My invention has for its object to improve the construction of the stone-puller for which Letters Patent No. 121,820 were granted to me December 12, 1871, so as to make it more convenient in use, and effective in operation, its power being greatly increased; and it consists in the chain-drums, the four pawls and their crank-rod, and the two pawls with their double lever, in combination with the pivoted arm, draft-chain, and extension tongue, as hereinafter more fully described.

A represents the wheels, which revolve upon the journals of the axle B. To the upper side of the axle B, which should be made very strong is secured a strong casting, C, to which is pivoted two chain wheels or drums, D, each of which has a ratchet-wheel, E, formed upon each end. F are four spring-pawls, the engaging ends of which take hold of the ratchet-wheels E, to prevent the chain-drums D from turning back. To the rear side of the casting C is pivoted the rod G, having four cranks or arms formed upon it, which are opposite to and connected with the pawls F. To the ends of the rod G are attached, or upon them are formed, arms or handles, by means of which the said crank-rod is operated to withdraw the pawls F, and allow the chain-drums D to turn back to lower the load or run out the hoisting-chains H, one end of which is attached to said drums D, and their other ends are attached to the stone, or other load to be raised.

The stone, when raised, may be further secured and held from swinging by a chain or chains, I, attached to the end parts of the axle B.

To the shaft of the chain-drums D, and between the adjacent ends of said drums, is pivoted the end of a lever or arm, J. In recesses in the opposite sides of the lower end of the arm J, are pivoted two spring-pawls, K, the engaging ends of which take hold of the teeth of the two inner ratchet-wheels E, so that the arm J, as it moves forward, may turn the chain-drums D, wind up the hoisting-chains H, and raise the stone from the ground. With the pawls K are connected the forward ends of the double lever L, which is pivoted to the opposite sides of the lower end of the arm J, and upon the rear end of which is formed a ring or loop handle, so that, by operating the said double lever L, the pawls K may be raised from the ratchet-wheels E to allow the arm J to be moved forward in unloading without carrying the chain-drums D with it, or to allow the chain-drums D to be turned back to run out the hoisting-chain H. To the rear side of the upper end of the arm J is attached one end of a rod or chain, M, which passes down through the loop-handle of the double lever L, and has a handle formed upon or attached to its lower end for convenience in operating it to draw back the said arm J. To the forward side of the upper end of the arm J is attached the rear end of the draft-chain N, which passes beneath the friction and guide roller O, pivoted to the forward end of the tubular arm P, and its forward end is attached to the forward end of the rod or tongue Q. The tubular arm P is firmly attached to the axle B, and is strengthened by braces R. The rod or tongue Q slides back and forth in the tubular arm P when raising and lowering the stone, and may be locked when moving the stone by a pin or other fastening.

In using the machine, the pawls F and K are raised from the ratchet-wheels E, and the hoisting-chain H is attached to the stone. The arm J is then drawn back, which draws the tongue Q back into the tubular arm P. The draft animals are then attached to the forward end of the tongue Q, and as they move forward the arm J is drawn forward, winding the chains H upon the drums D, and raising the stone from the ground. When the tongue Q has been drawn out to its full extent, the animals are backed, and the arm J is drawn back by the chain M, to be again drawn forward by the advance of the team.

In unloading, the pawls F are drawn back

by operating the crank-rod G, and the team is backed, allowing the weight of the load to revolve the chain-drums D and carry the arm J back. The pawls F are then allowed to take hold of the ratchet-wheels E, the pawls K are thrown out by the double lever L, and the arm J is drawn forward, and so on, until the load is lowered to the ground.

S are blocks for blocking the wheels, to prevent them from moving forward or back, when raising or lowering the load, and which for convenience, may be connected with the frame-work of the machine by chains T.

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

The chain-drums D, ratchet-wheels E, pawls F with their crank-rod G, and pawls K with their double lever L, in combination with the pivoted arm J, draft-chain N, and extension tongue P Q, substantially as herein shown and described, and for the purpose set forth.

GEORGE SPRINKEL.

Witnesses:
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