

(No Model.)

F. LOCKE.
LOADING WINCH.

No. 319,279.

Patented June 2, 1885.

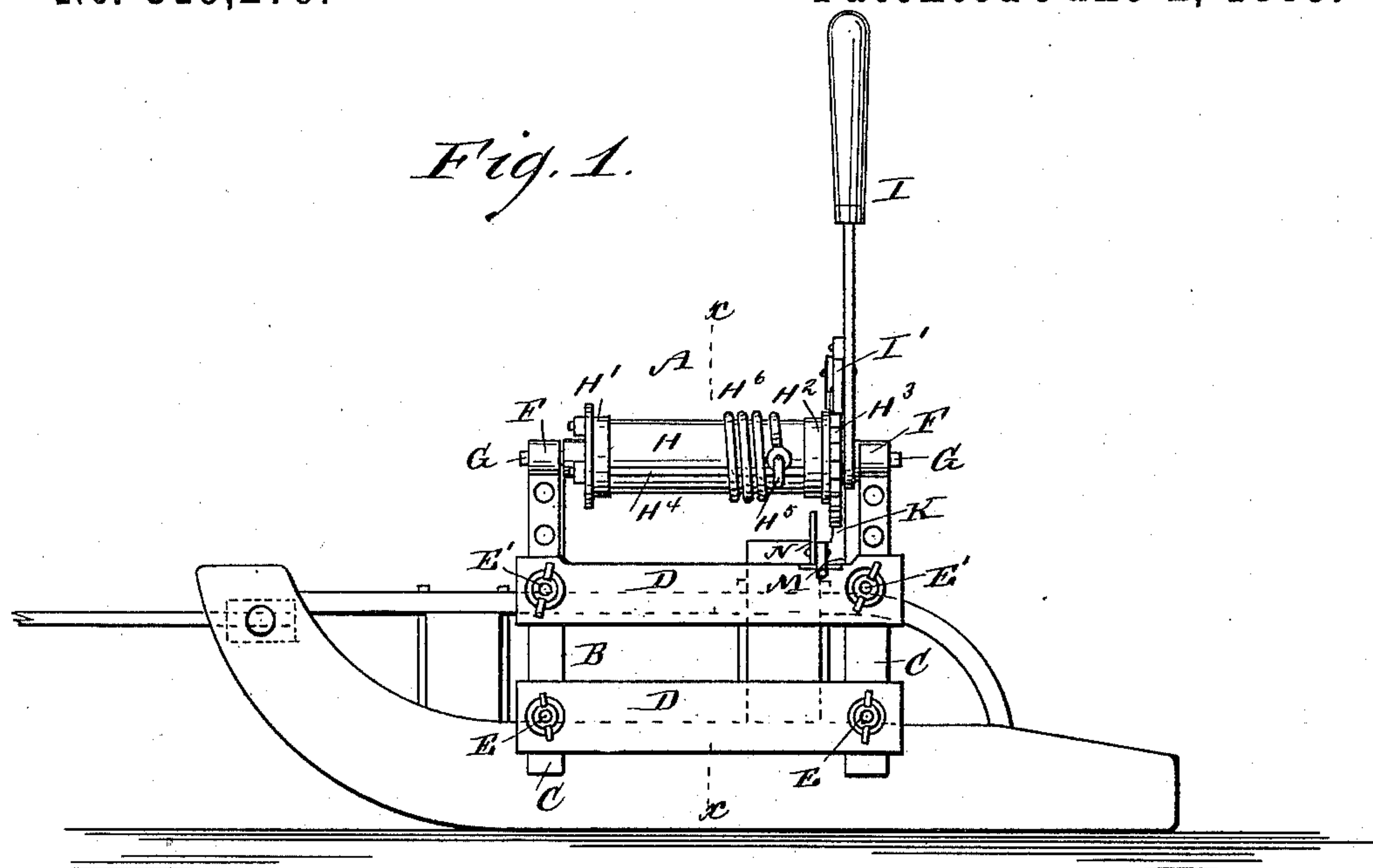


Fig. 3.

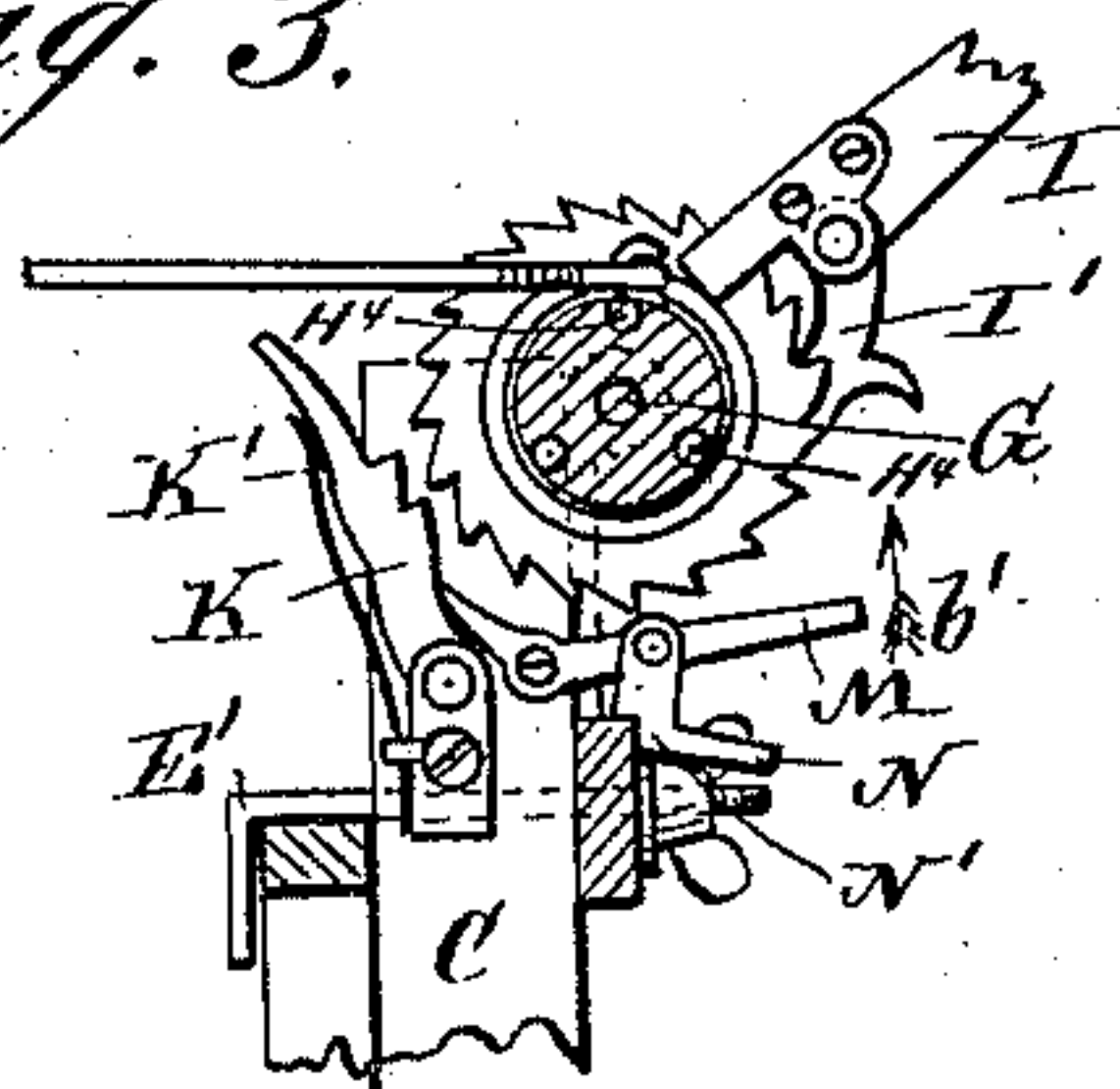
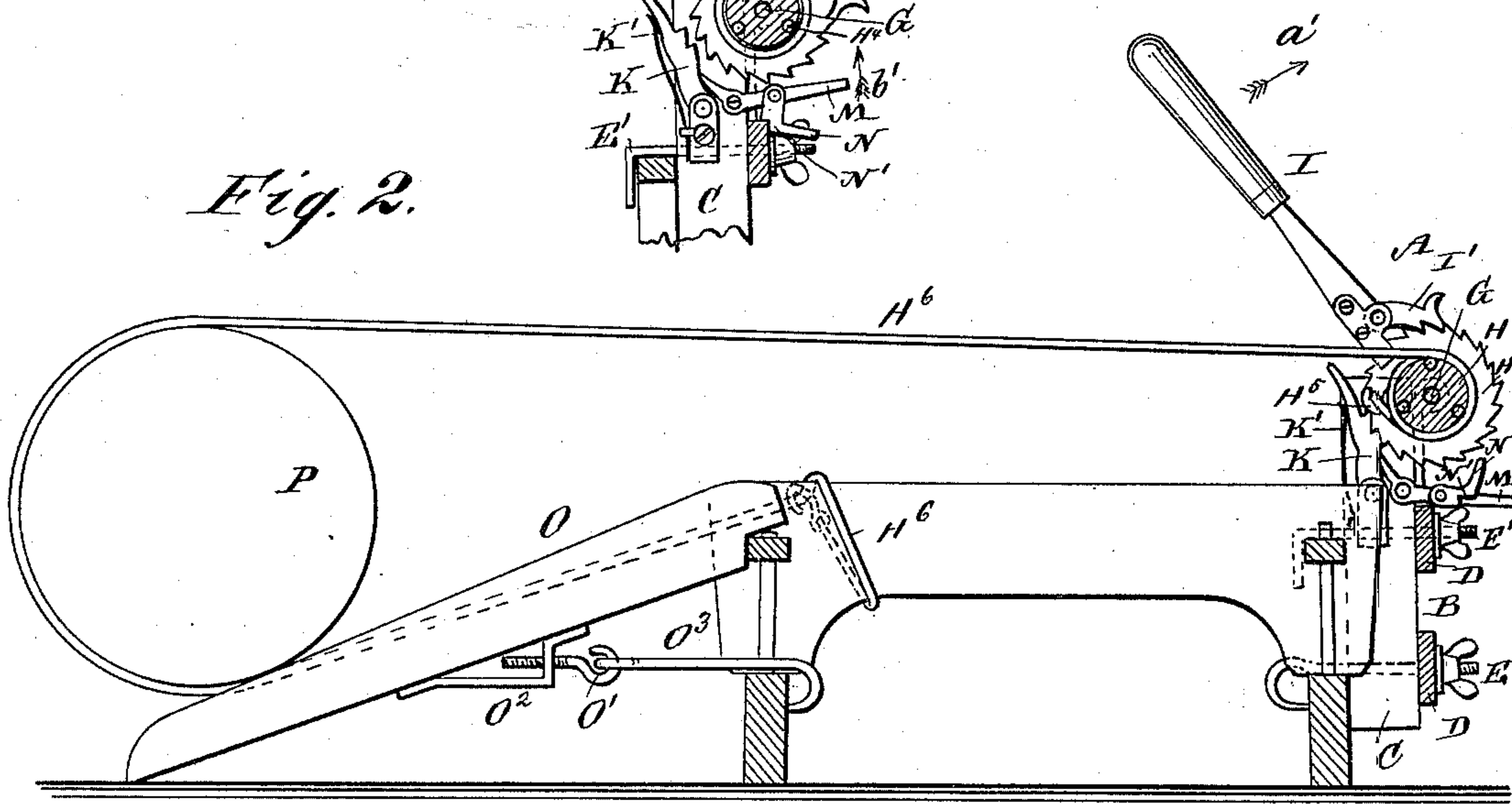


Fig. 2.



WITNESSES:

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FAVOUR LOCKE, OF BRISTOL, NEW HAMPSHIRE.

LOADING-WINCH.

SPECIFICATION forming part of Letters Patent No. 319,279, dated June 2, 1885.

Application filed April 3, 1885. (No model.)

To all whom it may concern:

Be it known that I, FAVOUR LOCKE, of Bristol, in the county of Grafton and State of New Hampshire, have invented a new and Improved Loading-Winch, of which the following is a full, clear, and exact description.

The object of my invention is to provide a new and improved machine to facilitate the loading of logs, stones, &c., and which is so constructed as to be easily attached to a sleigh or wagon, and also to provide a skid for hauling the logs on such sleigh or wagon.

The invention consists in a suitably-constructed frame with hooks by which the same is attached to a sleigh or wagon, of a drum mounted on said frame and provided with a rope, ratchet-lever, and pawls for winding the rope around said drum, and of a device for fastening a skid to the sleigh or wagon.

The invention also consists in various parts and details hereinafter more fully set forth.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a side elevation showing the improved winch attached to one side of a sleigh. Fig. 2 is a cross-sectional elevation on the lines *xx* of Fig. 1; and Fig. 3 is a sectional detail elevation of the drum, showing the working of ratchet pawls and levers.

The winch A is provided with a suitable frame, B, composed of two uprights, C, and cross-bars D, which are securely fastened to the uprights C. Four bolts, E E' E' E', pass through the uprights C and cross-bar D, which bolts are provided on their outer ends with nuts and have hooks on their inner ends. The two lower bolts, E E, pass over the top of the runner and clinch to the inner side of the same, and the two upper bolts, E' E', pass over and overlap a brace of the sleigh. By tightening the nuts on the bolts E E' the frame is thereby securely fastened to one side of the sleigh. The uprights C are provided on the upper ends with journal-boxes F, in which the shaft G rotates, and upon which the drum H is mounted. The drum H is provided with a wrought-iron cap, H', on its left-hand end, and a wrought-iron cap, H², on its other end, which cap H² has its outer rim formed in a ratchet-

wheel, H³. The caps H' and H² are connected with each other by rods or stays H⁴, placed in grooves on the drum H, the latter and the caps H' and H² being securely fastened to the shaft G, to rotate with the same. A hook, H⁵, is driven into the drum H near one end, to which one end of the rope H⁶ is attached. A lever, I, turns loosely on the shaft G next to ratchet-wheel H³, and is provided with a pawl, I', which engages the ratchet-wheel H³. To the inner side of the upright C is pivoted a pawl, K, held against the ratchet H³ by a spring, K', and which pawl K can be disengaged from ratchet H³ by an angular lever, M, pivoted to the upright C. A small lever, N, is pivoted to the lever M, and provided with a shoulder, N', which lever N can be placed with its shoulder N' against the outer edge of cross-bar D, thereby locking the lever M, as plainly seen in Fig. 3. A skid, O, is attached to the sleigh on the opposite side of the winch A, and is held in place by an eyebolt, O', screwed into a suitable piece, O², which is fastened to the skid, and a hooked rod, O³, which passes over and clinches with its hooked end the inside of the runner of the sleigh.

The operation of the machine is as follows: One end of rope H⁶ is fastened to the hook H⁵ on drum H, and the rope H⁶ is then passed down and around the log P to be hauled on the sleigh, and the other end of the rope H⁶ is fastened to a cross-bar of the sleigh in any suitable manner. The lever I now being turned in the direction of the arrow *a'*, a rotary motion is imparted to the ratchet H³, and consequently to the drum H by the pawl I', whereby the rope H⁶ is wound upon the drum H, thereby rolling the log toward the sleigh up the skid O. The lever I, having reached a horizontal position, is moved backward, and the pawl K now engages ratchet-wheel H³ by force of the spring K', thereby preventing a return movement of the ratchet-wheel H³ and the unwinding of the rope H⁶ on the drum H. The forward and backward movement of the lever I is repeated until the rope H⁶ is wound upon the drum H and the log hauled up the skid and rolled on the sleigh. The rope H⁶ is now unwound from the log, and the lever M given a movement in the direction of the arrow *b'*, thereby disengaging the pawl K from the

ratchet-wheel H^3 , and at the same time placing the small lever N , with its shoulder N' , against the edge of cross-bar D , thereby locking the lever M , as shown in Fig. 3. The
5 rope H^6 can now be unwound from the drum H . The rope H^6 being unwound from the drum and the small lever N disengaged from cross-bar D , the spring K' forces the pawl K to engage the ratchet H^3 , and the machine is
10 again ready to haul up another log by repeating the foregoing-described operation.

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

1. In a loading-winch, the frame B , composed of the uprights C , the cross-bars D , and the bolts E and E' , having hooks on their inner ends, substantially as shown and described.

2. In a loading-winch, the frame B , having the journal-boxes F , the drum H , the caps H' and H^2 on the drum H , and the ratchet-wheel H^3 , in combination with the lever I and pawl I' , substantially as shown and described.

3. In a loading-winch, the frame B , drum H , the ratchet-wheel H^3 , the lever I , the pawl I' , and the spring-pawl K , in combination with the lever M , substantially as herein set forth and described. 25

4. In a loading-winch, the frame B , drum H , the lever I , the pawl I' , and the spring-pawl K , in combination with the lever M , and the small lever N , having a shoulder, N' , engaging the edge of cross-bar D , substantially as shown and described. 30

5. In a loading-winch, A , held to a sleigh or wagon, having a drum, H , operating, as shown and described, in combination with the rope H^6 , the skid O , fastened to the sleigh or wagon, substantially as herein set forth and described. 35

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Witnesses:

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