(No Model.) 2 Sheets—Sheet 1.

F. H. A. PETERS.

HOISTING MACHINE.

No. 382,436. Patented May 8, 1888.

Fig. 1.

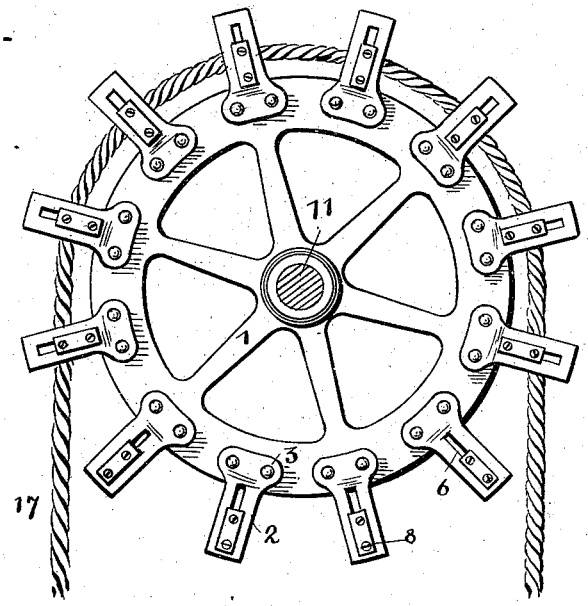


Fig. 3.

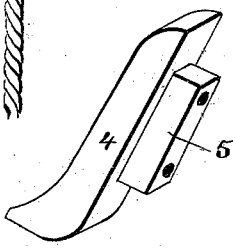
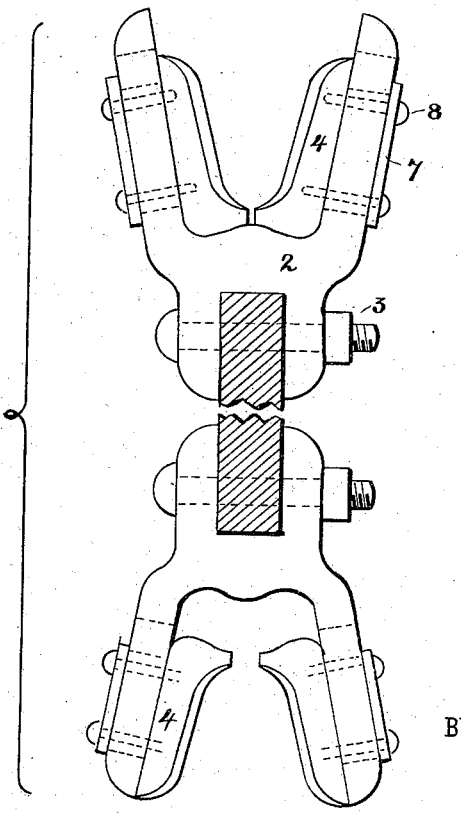


Fig. 2.



WITNESSES:

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C. Sedgwick.

INVENTOR:

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BY Munn & Co

ATTORNEYS.

(No Model.)

2 Sheets—Sheet 2.

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Fig. 4.

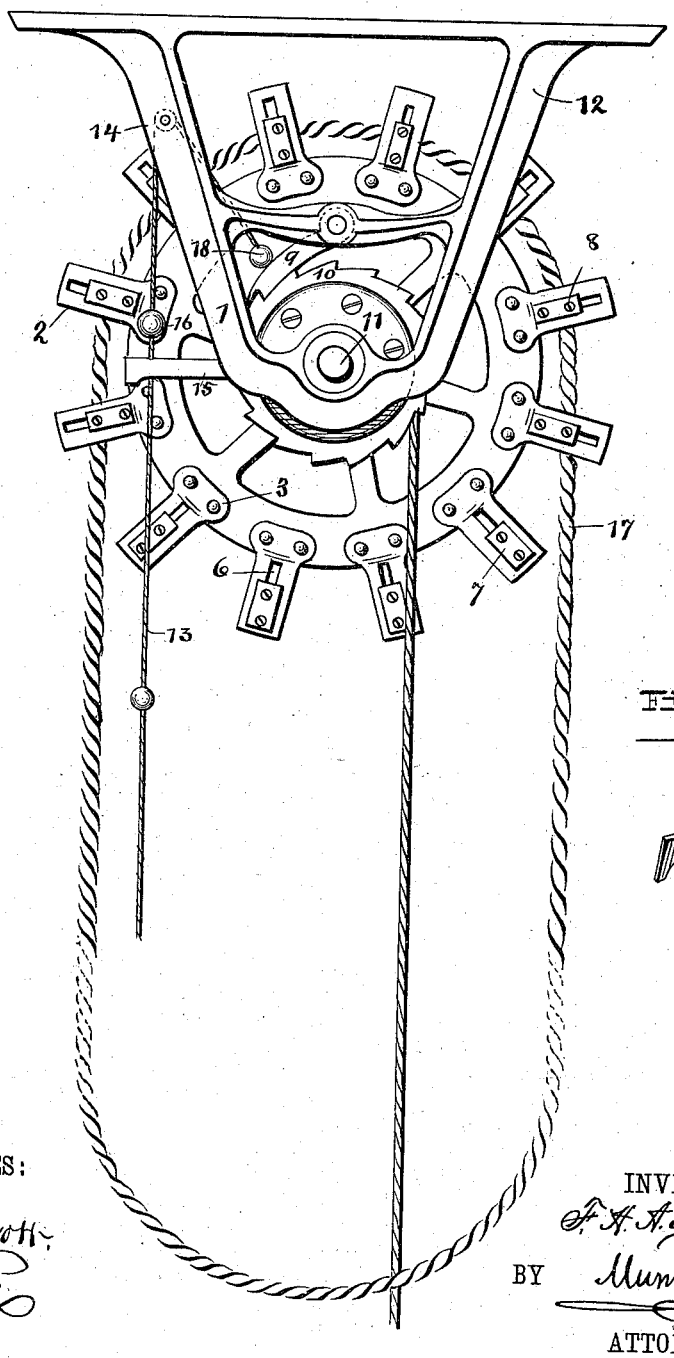
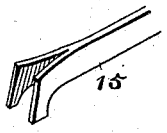


Fig. 5.



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UNITED STATES PATENT OFFICE.

FRIDRICH HERMAN AUGUST PETERS, OF DETROIT, MICHIGAN.

HOISTING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 382,436, dated May 8, 1888.

Application filed November 7, 1887. Serial No. 254,519. (No model.)

To all whom it may concern:

Be it known that I, FRIDRICH HERMAN AUGUST PETERS, of Detroit, in the county of Wayne and State of Michigan, have invented a new and Improved Hoisting-Machine, of which the following is a full, clear, and exact description.

This invention relates to hoisting-machines, in which an endless rope is employed for operating the hoisting-wheel.

The invention consists in the construction of a hoisting-wheel whereby the hoisting-rope will be prevented from slipping, and will also take a hold upon the wheel to assist in hoisting.

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

Figure 1 is a side view of the hoisting-wheel, with the hoisting-rope broken away. Fig. 2 is a front view of two of the forks which are mounted on the periphery of the wheel, showing the connection in section and broken away. Fig. 3 is a detail view of one of the sliding jaws of the forks of the wheel. Fig. 4 is a side view of the hoisting-machine, and Fig. 5 is a detail view of the clutch used in connection with the stop or pawl engaging the hoisting-wheel.

In the construction of this device the hoisting-wheel 1 is provided on its periphery with forked arms 2, cast on or secured to the rim of the wheel by nuts and bolts 3, or in any other suitable way. The forks 2 are provided with sliding blocks or jaws 4, shaped as shown in the drawings, and having a projection, 5, adapted to slide in a slot, 6, in the arm of the fork 2, and secured in place by a plate, 7, overlapping the slot 6, and held by screws 8. The length of the slot 6 is such as to permit the blocks or jaws 4 to slide from the base of the forks 2 to their extremities. The hoisting-wheel 1 may be held by a pawl, 9, engaging a ratchet, 10, mounted on the shaft 11 of the wheel 1, which has its bearing in a suitable hanger, 12. The pawl 9 is provided with a cord, 13, which passes over a pulley, 14, and is suspended in a forked arm, 15, projecting from the hanger 12. A ball, 16, or other shaped protuberance on the cord 13, when moved below the fork 15, serves to keep the pawl 9 out of engagement with the ratchet 10. 17 represents an endless hoisting-rope passing through the forks 2, and resting on the sliding blocks or jaws 4. 18 is a weight on the cord 13, resting upon the pawl 9.

In the operation of this machine the blocks or jaws 4 in the forks 2 at the top of the wheel rest at the bottom of the forks, and the blocks or jaws 4 in the forks 2 at the bottom of the wheel are located at the outer ends of the arms of the forks 2, these two positions being represented in Fig. 2. The hoisting-rope 17 will be wedged in the blocks or jaws 4 at the top of the wheel, and gradually wedged in the blocks in the forks on the left-hand side of the wheel, Fig. 4, and gradually released therefrom on the right-hand side of the wheel. It will thus be seen that by the movement of the wheel 1 the blocks or jaws 4 automatically clutch and release the hoisting-rope 17 as it passes over the top of the wheel, and prevent its slipping, and the greater the strain on the rope 17 the more it will be wedged in the blocks or jaws 4. When it is desired to release the hand-hold on the hoisting-rope 17 in the midst of raising a heavy weight, the wheel 1 may be held by permitting the pawl 9 to drop into engagement with the ratchet 10 by releasing the check or ball 16 on cord 13 from the clutch 15. To renew the hoisting operation it is only necessary to pull on the cord 13 and move the check 16 under the clutch 15, when the pawl 9 will be held out of engagement with the ratchet 10. By means of a hoisting-wheel constructed as herein described the hoisting rope will not only take a firm hold on the hoisting wheel and be prevented from slipping but will easily be automatically engaged and released from the holding-clutches.

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

1. A hoisting-wheel having its periphery provided with forked arms having longitudinal slots in the branches of the forks and containing slidable blocks or jaws mounted in the slots, substantially as shown and described.

2. A hoisting-wheel, 1, having the forked arms 2, with the slots 6 in the branches of the arms, and slidable blocks or jaws 4, with projection 5, mounted in the slots 6, and secured in place by plate 7 and screws 8, substantially as shown and described.

FRIDRICH HERMAN AUGUST PETERS.

Witnesses:
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ANTON GIPPERIECH.