

(No Model.)

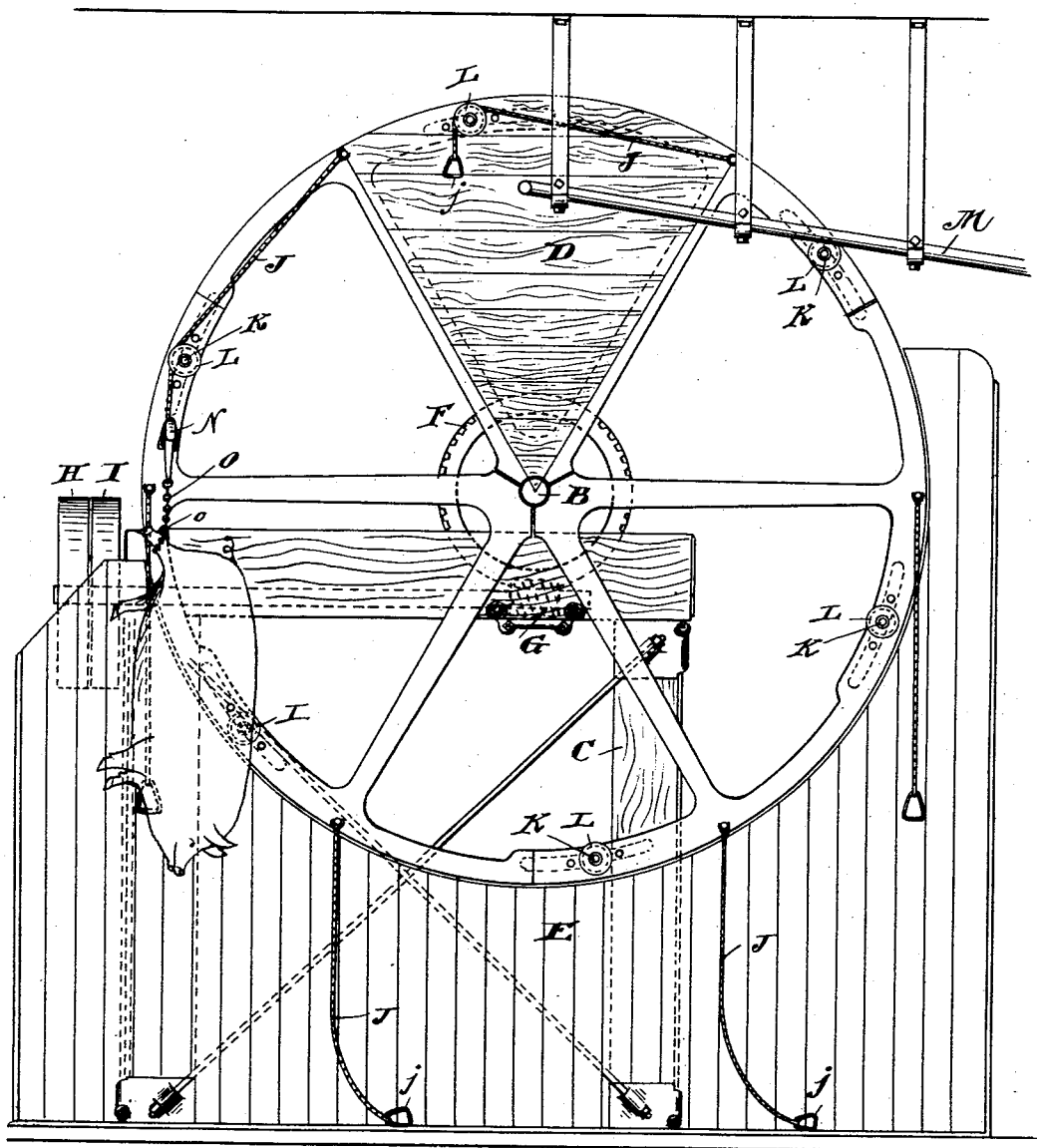
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O. P. HURFORD.
HOG HOIST.

No. 541,278.

Patented June 18, 1895.

Fig. 1.



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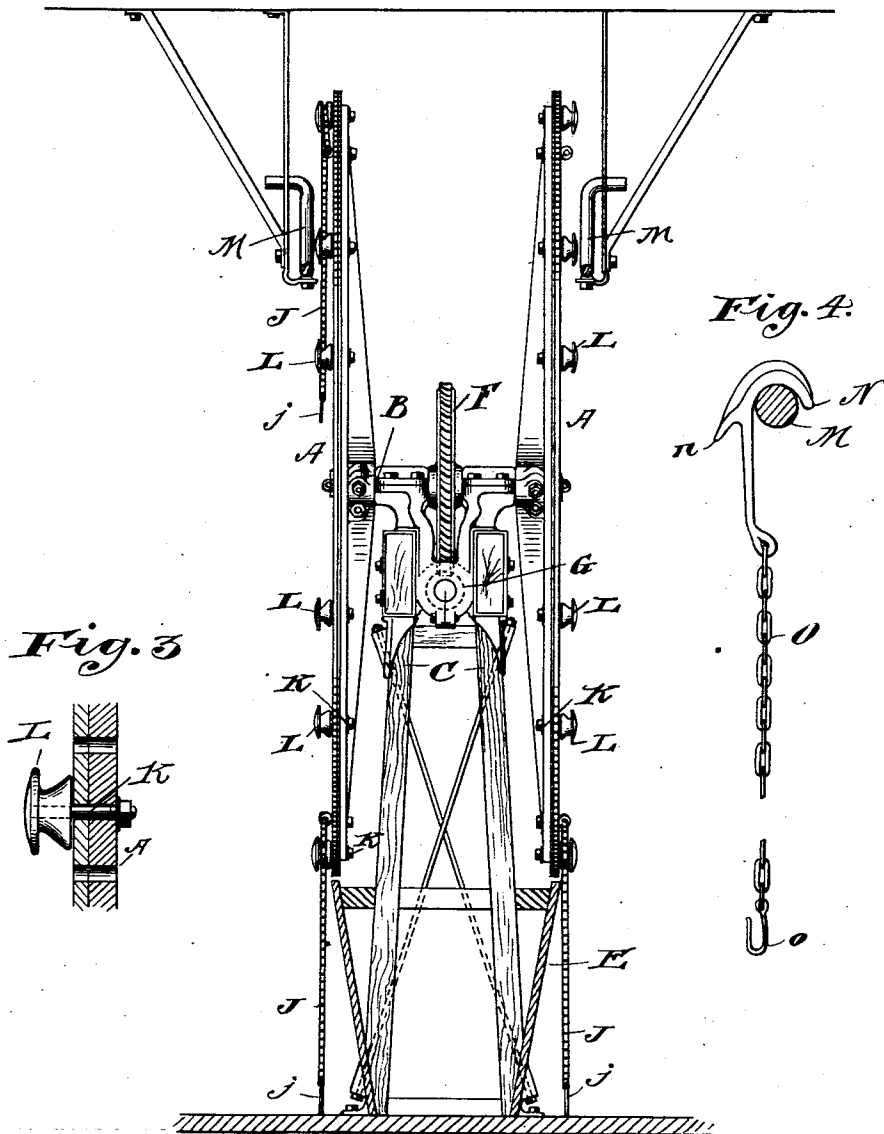
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Fig. 2.



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UNITED STATES PATENT OFFICE.

OLIVER P. HURFORD, OF CHICAGO, ILLINOIS.

HOG-HOIST.

SPECIFICATION forming part of Letters Patent No. 541,272, dated June 18, 1895.

Application filed March 30, 1895. Serial No. 543,901. (No model.)

To all whom it may concern:

Be it known that I, OLIVER P. HURFORD, of Chicago, Illinois, have invented certain new and useful Improvements in Hog-Hoists, of which the following is a specification.

This invention relates to means for lifting live hogs from the floor of the pen in a slaughter house to a track upon which they are conveyed to the scalding tub. Mechanical devices for this purpose are already in use but they have certain defects which are remedied in my improved construction.

In the accompanying drawings, Figure 1 is a side elevation of one form of the apparatus, parts being broken away. Fig. 2 is an edge view, partly in section, showing a double machine. Figs 3 and 4 are details hereinafter explained.

In carrying out my invention I mount a large revolving wheel A upon a suitable journal, as the shaft B, supported on the frame work C. This embodiment of the invention is shown in Fig. 1, but in Fig. 2 I have shown two of the wheels of similar construction. These wheels may be cast and the spaces between the spokes planked up, as shown at D, Fig. 1. The lower side portions of the frame work are preferably inclosed, as seen at E. Upon the journal B is mounted a worm wheel F driven by a worm G carried in suitable bearings on the frame work and having at its ends the tight and loose pulleys H, I. By means of this or equivalent gearing the wheels may be revolved at a uniform rate of speed. To the outer face of the rim of the wheel at suitable intervals are connected by a free joint the hoisting chains J, terminating in a stirrup or open ring j. At points intermediate the chains studs K project from the outer face of the rim of the wheel and on these are mounted the conical flanged sheaves L, as shown in Fig. 3. A suspended track in the form of a round rod M projects alongside the outer face of the wheel in close proximity to the plane of movement of the outer ends of the sheaves. A shackle, shown in Fig. 4, has a hook portion N adapted to slide on this track rod, said shackle being provided with a second hook n adapted to be engaged with the stirrup j of the hoisting chain. A shackle chain O, terminating in a hook o, affords means for connecting the hoisting chain to the hog, the

chain being thrown around the legs of the animal and made fast, the hook n being engaged with the stirrup j. As the wheel revolves the animal is lifted off its feet and swung into a perpendicular position, as indicated at the left of Fig. 1. As the wheel continues to revolve the hoisting chain is caught on the conical sheave L and slides out against the flange of the sheave, being carried free by this means of the next chain. As the wheel continues to revolve the hoisting chain is brought into position at the highest point where but a small portion of the chain depends and the shackle hook N is thus brought into position immediately above the track rod. The shackle with the hog suspended will be automatically transferred to the track rod as the wheel progresses, and the hoisting chain being thus freed will drop down into position for further use.

The studs K are preferably mounted in slots in the rim of the wheel so that the sheaves may be adjusted. The front and rear of the frame work are also preferably inclosed, these precautions being necessary to prevent the struggling animal from thrusting its legs into the machinery or between the spokes of the wheel.

The advantages of this device over older forms are numerous. By the employment of the large wheel and the attachment of the hoisting chains at suitable distances from each other upon its periphery, the hogs will be handled very rapidly. By providing the guides or sheaves to engage and support the hoisting chains, the wheel may be made much lower and the consequent distance through which the animal is moved considerably shorter than if the chains hung free.

I prefer to use the worm gearing shown because it is well adapted to the driving of the wheel at a slow or uniform rate of speed. I have found in practice that the wheel may be driven with good results at three or four revolutions per minute, but it will be understood that other forms of gearing may be employed; as, for example, chain belts or a countershaft and spur gears. The employment of the particular form of sheaves to take up the hoisting chains is recommended in all cases for the reason that the animal in being raised comes in contact with the sheave and is drawn

over it. A movable support is therefore preferable, as the drawing of the animal over a fixed pin or non-rotating take-up device would injure it. I also prefer to make the flange of the sheave large—say six to eight inches in diameter—and to bring the face of it so that the chain with the attached animal is carried away from the face of the wheel. With this construction the animal strikes the sheave and rolls over it without injury.

Without, therefore, limiting my invention to precise details of construction, I claim—

1. A hog hoist, comprising in combination a rotatable wheel having a series of hoisting chains secured to its rim at suitable intervals and a series of supports on the rim of the wheel intermediate of the chains and adapted to engage the chains between their ends as the wheel revolves with its burden, substantially as described.

2. A hog hoist, comprising in combination a revoluble wheel, a series of hoisting chains connected to the outer face of the rim of the wheel, a series of supports intermediate of the points of attachment of the chains, a shackle for fastening the animal to the chains and an elevated track extending alongside the wheel and to which the shackles with the hog suspended are automatically transferred by the revolution of the wheel, substantially as described.

3. A hog hoist, comprising in combination a revoluble wheel, a series of hoisting chains connected by a free joint to the outer face of the rim of the wheel, a series of conical sheaves secured to the same rim at points intermediate of the chains and adapted to engage them during the revolution of the wheel, substantially as described.

4. A hog hoist, comprising in combination

a revoluble wheel, a series of hoisting chains secured by a free joint to the outer face of the rim of the wheel, a series of conical sheaves secured to the same rim at points intermediate of the chains and adapted to engage them during the revolution of the wheel, said sheaves being adjustably mounted, substantially as described.

5. A hog hoist, comprising in combination one or more wheels, a series of hoisting chains affixed thereon, a series of supports carried by the wheels intermediate of the chains and adapted to engage the latter between their ends as the wheel revolves and worm gearing for rotating the wheel at a uniform rate of speed, substantially as described.

6. A hog hoist, comprising in combination a rotatable wheel, a series of hoisting chains terminating in open links, a shackle having oppositely projecting hooks and a flexible section to be fastened to the leg of the animal and a series of supports on the wheel intermediate of the chains and adapted to engage them between their ends and an elevated track rod with which one of the hooks is adapted to engage as the wheel revolves with its burden, substantially as described.

7. A hog hoist, comprising in combination a rotatable wheel, a series of hoisting chains connected to the rim of the wheel, an elevated track extending alongside the wheel and gearing for rotating the wheel whereby an animal made fast to the hoisting chain may be raised and transferred to the track, substantially as described.

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