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Patented Dec. 11, 1900.

A. O. ZUCK.

HOISTING DEVICE FOR HAY PRESSES.

(Application filed Aug. 27, 1900.)

(No Model.)

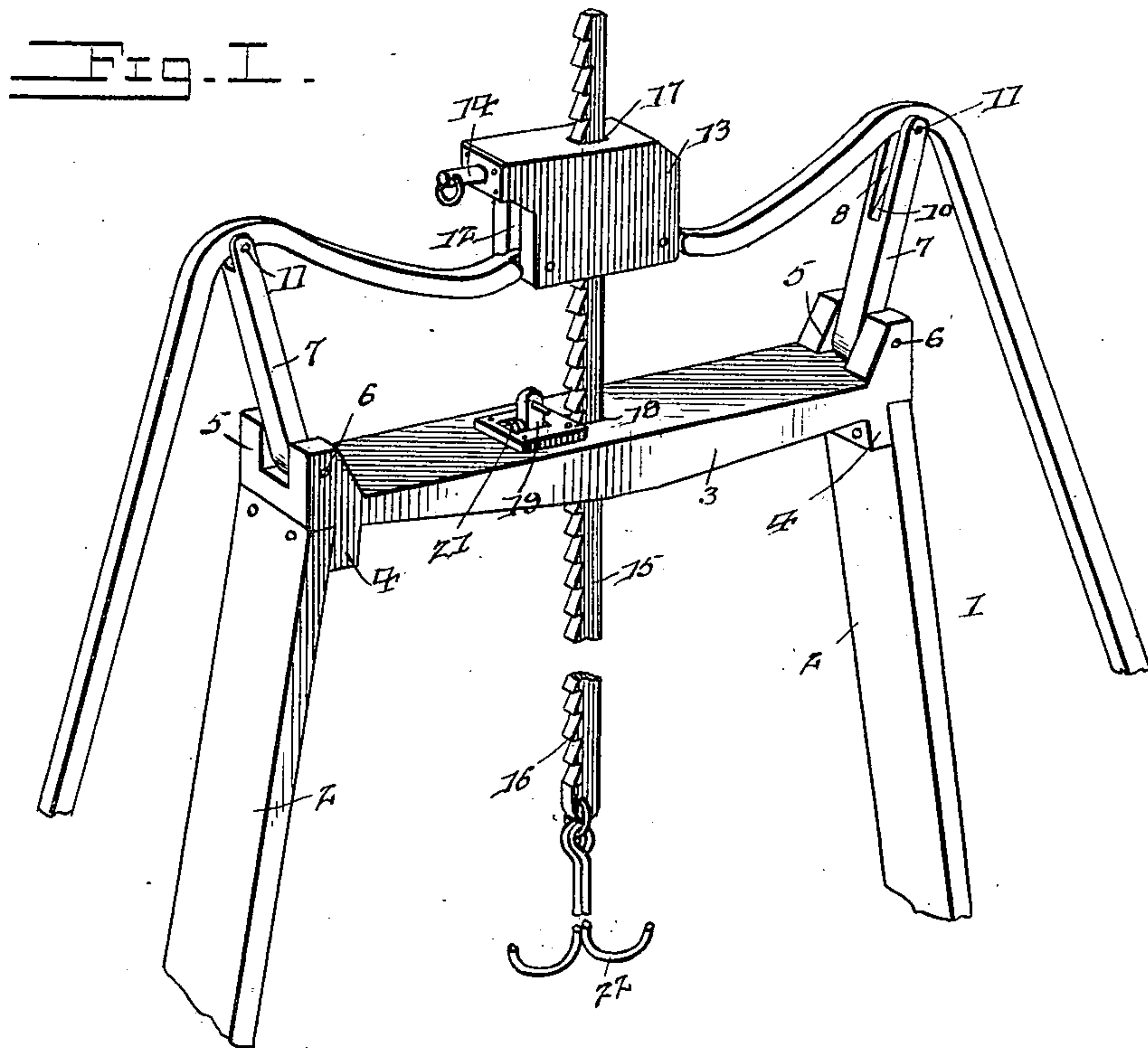
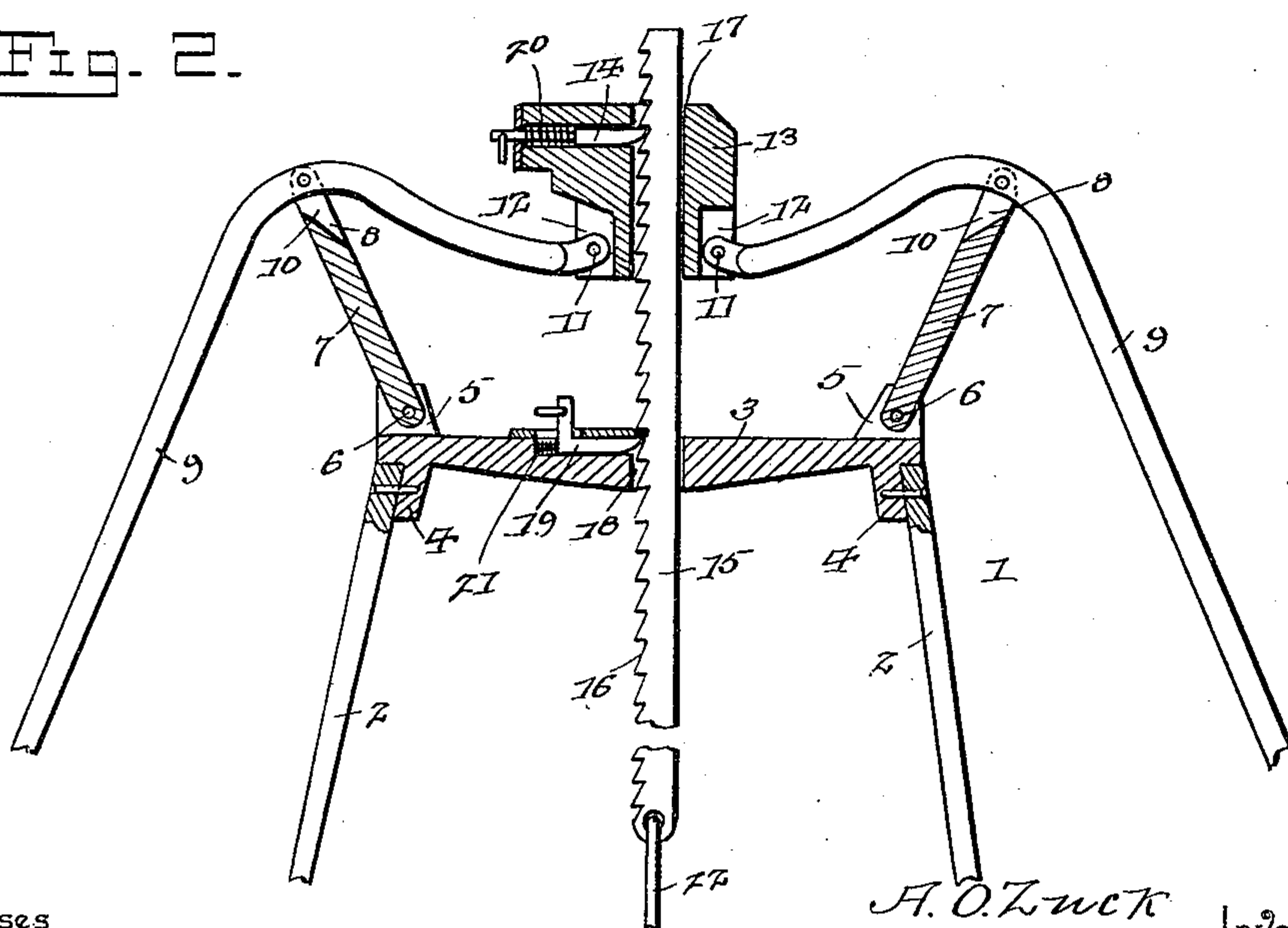


Fig. 2.



Witnesses

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UNITED STATES PATENT OFFICE.

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HOISTING DEVICE FOR HAY-PRESSES.

SPECIFICATION forming part of Letters Patent No. 663,620, dated December 11, 1900.

Application filed August 27, 1900. Serial No. 28,220. (No model.)

To all whom it may concern:

Be it known that I, ALBERT O. ZUCK, a citizen of the United States, residing at Faulkner, in the county of Cherokee and State of Kansas, have invented a new and useful Hoisting Device for Hay-Presses, of which the following is a specification.

The invention relates to improvements in hoisting devices for raising and lowering hay-presses.

The object of the present invention is to improve the construction of hoisting devices and to provide a simple and comparatively inexpensive one designed especially for raising and lowering hay-presses and adapted to elevate the same to enable the wheels thereof to be removed and capable of enabling a press to be conveniently lowered to the ground for use after the removal of the carrying-wheels.

The invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended.

In the drawings, Figure 1 is a perspective view of a hoisting device constructed in accordance with this invention. Fig. 2 is a vertical sectional view illustrating the construction of the ratchet mechanism.

Like numerals of reference designate corresponding parts in all the figures of the drawings.

1 designates a supporting-frame comprising a pair of standards 2, converging toward their upper ends and designed to be arranged at opposite sides of a hay-press and connected at their upper ends by a horizontal top piece 3, which is provided with depending flanges 4, and the latter are arranged at the inner faces of the upper ends of the standards 2 and are perforated for the reception of fastening devices for securing them to the said standards. The top piece is also provided at its ends with upwardly-extending perforated ears 5, arranged in pairs and receiving pivots 6, which connect the lower ends of the links 7 with the ends of the top piece. The upper ends 8 of the links are bifurcated for the reception of operating-levers 9, which are fulcrumed between their ends, and the outer faces of the links are also

recessed, the recesses 10 forming continuations of the bifurcation.

The inner ends of the operating-levers are reduced and pivoted by pins 11 or other suitable fastening devices in recesses 12 of a vertically-movable slide or block 13, which is provided with a spring-actuated pawl 14 for engaging a vertically-movable ratchet-bar 15. The vertically-movable ratchet-bar 15, which is provided at one side with teeth 16, extends through openings 17 and 18 in the block 13 and the top piece 3 of the frame, respectively, and the said top piece 3 is also provided with a spring-actuated pawl or dog 19 for engaging the teeth of the ratchet-bar for holding the same while the slide or block is moving downward preparatory to another lifting operation. The slide or block is adapted to move downward freely on the ratchet-bar, and when the outer ends of the operating-levers are swung downward the block or slide is raised, and it carries with it the ratchet-bar. The teeth of the ratchet-bar are adapted to pass the pawl or dog 19 when the said ratchet-bar is lifted by the levers, and at the end of the upward stroke or movement of the slide or block the pawl or dog 19 automatically engages the ratchet-bar and holds the same against backward or downward movement while the slide or block descends preparatory to another lifting operation. The pawl or dog 14 of the slide or block is arranged horizontally at one side of the ratchet-bar, and it is mounted in a suitable opening or bore of the block or slide. The pawl or dog 19 of the top piece 3 is also arranged horizontally at one side of the ratchet-bar, and it is provided with an upwardly-extending arm. These pawls or dogs are held in engagement with the ratchet-bar by coiled springs 20 and 21, arranged as shown in Fig. 2 of the accompanying drawings, the coiled spring 20 being disposed on a reduced portion or shank of the pawl or dog 14 and the other spring 21 being arranged to engage the end of the pawl or dog 19. The pawls or dogs are provided at their outer ends with rings to enable suitable flexible connections to be attached to them for controlling them while lowering the hay-press to the ground. After the hay-press has been elevated and the

wheels thereof removed the pawl or dog 19 is disengaged from the ratchet-bar and the latter is lowered by permitting the outer arms of the operating - levers to swing upward 5 slowly. At the end of this downward movement of the slide or block the pawl or dog 19 is again permitted to engage the ratchet-bar and the other pawl or dog 14 is disengaged therefrom to permit the slide or block to be 10 moved upward independently of the ratchet-bar. The pawl or dog 19 is then disengaged from the ratchet-bar, which is again lowered as before, and this operation is repeated until the hay-press is lowered to the ground or other 15 support.

The lower end of the ratchet-bar is provided with a ring and has suitable hooks 22 connected with it by the said ring to enable it to be engaged with a hay-press; but any 20 other suitable means may be employed for connecting the ratchet-bar with the hay-press, and the hoisting mechanism may be advantageously employed for operating on other things. The links 7, which extend upward 25 from the ends of the top piece of the supporting-frame, are adapted to oscillate, and they swing inward and outward as the levers are operated to permit the latter to change their position with the slide or block.

30 It will be seen that the hoisting mechanism is exceedingly simple and inexpensive in construction, that it is adapted for raising and lowering heavy bodies, and that it is especially designed for use in connection with 35 hay-presses which are mounted upon wheels and which must be raised and lowered to remove the wheels and to arrange them on the ground or other support for operation.

What I claim is—

40 1. A hoisting device comprising a frame provided with standards adapted to be arranged at opposite sides of a hay-press, a vertically-movable ratchet-bar extending through the top of the frame and provided with means 45 for engaging a hay-press, a pair of links extending upward from the top of the frame at opposite sides thereof, operating - levers lo-

cated at opposite sides of the frame and fulcrumed on the links, a slide or block having an opening and arranged on the ratchet-bar 50 and connected with the levers, and the automatically-operating pawls or dogs mounted on the frame and on the block or slide for engaging the ratchet-bar, said pawls or dogs being adapted to be withdrawn by hand to 55 permit the ratchet-bar to be gradually lowered, substantially as described.

2. A hoisting device comprising a frame composed of standards, and a connecting top piece provided with depending flanges and 60 having upwardly-extending ears, links fulcrumed between the ears and located at opposite sides of the frame, the operating-levers also located at opposite sides of the frame and fulcrumed between their ends on the links, the 65 vertically-movable ratchet-bar extending through the top of the frame, the slide or block having an opening receiving the ratchet-bar and connected with the operating-levers, and pawls or dogs mounted on the frame and 70 on the slide or block, substantially as described.

3. A hoisting device comprising a frame provided with standards adapted to be arranged at opposite sides of a hay-press, a pair 75 of links extending upward from the top of the frame at opposite sides thereof, the opposite operating - levers fulcrumed on the links, the vertically-movable block connected with the inner ends of the operating-levers, 80 the ratchet-bar extending through the top of the frame and through the slide or block, and the horizontally-disposed spring-actuated pawls or dogs mounted on the slide or block and on the frame and adapted to be controlled 85 by hand, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

ALBERT O. ZUCK.

Witnesses:

JENNIE JOHNS,
ALBERT JOHNS.