G. T. REISS.

CAR WHEEL PRESS.

APPLICATION FILED JAN. 28, 1910.

959,071. Patented May 24, 1910.

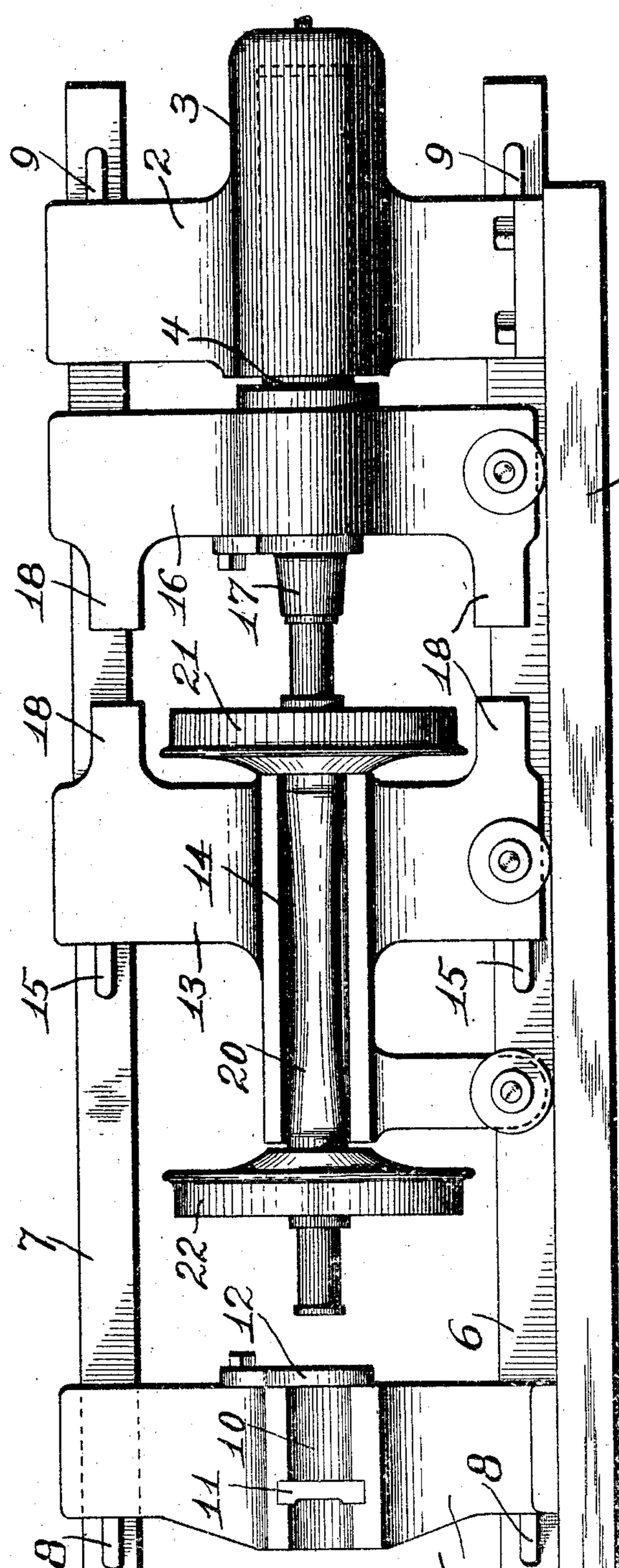

Fig. 1.

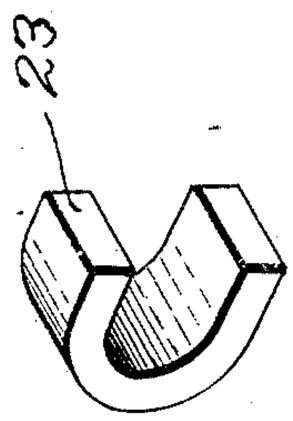

Fig. 3.

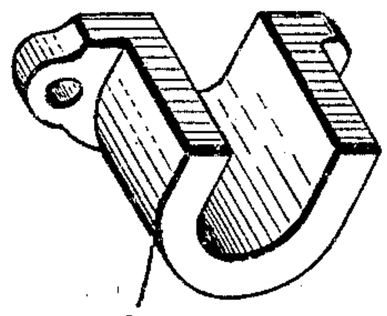

Fig. 2.

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CAR-WHEEL PRESS.

959,071. Specification of Letters Patent. **Patented May 24, 1910.**

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To all whom it may concern:

Be it known that I, GEORGE T. REISS, a citizen of the United States, residing at Hamilton, Butler county, Ohio, have invented certain new and useful Improvements in Car-Wheel Presses, of which the following is a specification.

This invention relates to car-wheel presses designed to remove both wheels from an axle at one setting of the work in the machine, or to similarly press two wheels on their axle. The press is preferably of hydraulic type.

The invention will be readily understood from the following description taken in connection with the accompanying drawing in which:—

Figure 1 is a front elevation of a hydraulic wheel press embodying my invention: Fig. 2 a perspective view of a gapped nose-piece which may be employed in the machine when pressing wheels to place: and Fig. 3 a perspective view of a filler-piece.

In the drawing:—1, indicates a sole-plate: 2, a head-block secured thereto: 3, a hydraulic cylinder carried by the head-block: 4, the ram of the hydraulic cylinder and forming the pressure-producing agent: 5, a tail-block supported by the sole-plate at some distance in front of the pressing end of the ram: 6, a lower tie-bar connecting the head-block and tail-block: 7, a similar upper tie-bar: 8, keys in the tie-bars to resist the thrust of the tail-block: 9, keys in the tie-bars to resist the pull of the tie-bars on the head-block: 10, the horizontal gap in the tail-block to admit one of the axle ends: 11, the usual stop-block in the gap, to limit the projection of the axle end into the gap of the tail-block: 12, a removable stop-plate carried by the tail-block and preventing the entry of the axle end thereinto: 13, a main housing movably engaging the tie-bars between the head-block and the tail-block: 14, a gapped central portion of this main housing, this gapped portion having a length to fairly fill between the hubs of the two car-wheels on an axle: 15, keys in the tie-bars to resist the movement of the main housing toward the tail-block: 16, a follower disposed between the head-block and the main housing and adapted to be pushed toward the latter by the thrust of the ram: 17, a removable thrust-piece carried by the follower and projecting toward the main housing: 18, portions of the main housing and follower adapted to come into contact with each other when the follower has moved toward the main housing a suitable distance: 19, a gapped nose-piece which may be substituted for thrust-piece 17: 20, the car-axle: 21, one of the wheels in place thereon: 22, the other wheel in place on the axle: and 23, a filler-piece.

With the parts in the condition shown in Fig. 1 the press is ready to remove the wheels from the axle. Pressure being applied to the ram it moves to the left, thrust-piece 17 forcing the axle to the left while main housing 13 resists the leftward movement of wheel 21, the result being that the wheel 21 becomes displaced from its wheel-seat on the axle and hangs loose on the right-hand journal of the axle. At this time engaging portions 18 are to come into contact with each other. Keys 15 and thrust-piece 17, are now to be removed and pressure on the ram is to be continued. The main housing 13 now becomes pushed to the left by the follower, through the medium of engaging portions 18, and the lefthand end of gapped hub 14 of the main housing now engages the inner face of the hub of left-hand wheel 22, the axle with undisturbed wheel 22 being transported toward the tail-block. The lefthand end of the axle comes in contact with stop-plate 12, whereupon the leftward motion of the axle ceases and, the leftward motion of the main housing continuing, wheel 22 becomes pushed off of its wheel-seat on the axle. This leaves both wheels loose on the axle journals, to be later entirely removed from the axle when removed from the press.

Assume, now, that it be desired to press two wheels upon the axle. The axle will be disposed in the gap of the main housing, with the wheels in position to be started onto the wheel-seats. Keys 15 and stop-plate 12 are to be displaced, and for thrust-piece 17 is to be substituted a hollow thrust-piece, such as nose-piece 19. The action of the ram is now to bring the nose-piece against the hub of the right-hand wheel and push the main housing and the axle and wheels toward the tail-block till the hub of the left-hand wheel comes in contact with the tail-block, the lefthand journal entering the gap in the tail-block. The continued approach of the ram toward the tail-block

now presses both wheels simultaneously upon the wheel-seats, the advance of the lefthand wheel on its wheel-seat ceasing when the lefthand end of the axle comes in contact with stop-plate 11, and the advance of the right-hand wheel on its wheel-seat ceasing when the right-hand end of the axle strikes the follower.

The hydraulically moved ram is preferable in this machine, but it is to be understood that the ram is typical of any suitable pressure-applying agent in the press. Very little analysis of Fig. 1 will show that follower 16 with its engaging portions 18 forms merely an extension of the ram to straddle car-wheel 21 and reach the main housing.

In removing wheels, when the axle has been pushed to the left and wheel 21 made free there will be quite a gap between the left end of gapped hub 14 and wheel 22. By inserting filler-piece 23 on the axle in this gap considerable distance of ram-travel may be saved in operating on wheel 22.

I claim:—

1. A car-wheel press comprising, a headblock, a tailblock, tie-bars between the headblock and tailblock, a ram carried by the headblock and adapted to be forced toward the tailblock, a thrust-piece disposed between the ram and the tailblock and adapted to engage the end of a car-axle and be forced toward the tailblock by the ram, a main housing disposed shiftably between the ram and the tailblock and having a gapped hub to engage the inner faces of the hubs of the car wheels on the axle, removable stops supported by the tie-bars to prevent motion of the main housing toward the tailblock, and engaging-parts connected with the main housing and with the ram and adapted to go into contact and limit the approach of the ram to the main housing, whereby the ram may push the axle out of one wheel while the main housing acts as an abutment for that wheel and then cause the housing to push the second wheel from the axle while the tail-block acts as an abutment for the axle, combined substantially as set forth.

2. A car-wheel press comprising, a headblock, a hydraulic cylinder carried by the head-block, a ram in said cylinder, a tailblock, tie-bars between the headblock and tailblock, a thrust-piece disposed between the ram and the tailblock and adapted to engage the end of a car-axle and be forced toward the tailblock by the ram, a main housing disposed shiftably between the ram and the tailblock and having a gapped hub to engage the inner faces of the hubs of the car wheels on the axle, removable stops supported by the tie-bars to prevent motion of the main housing toward the tail-block, a follower disposed between the ram and thrust-piece, and engaging-parts connected with the main housing and with the follower and adapted to go into contact and limit the approach of the ram to the main housing, whereby the ram may push the axle out of one wheel while the main housing acts as an abutment for that wheel and then cause the housing to push the second wheel from the axle while the tail-block acts as an abutment for the axle, combined substantially as set forth.

3. A car-wheel press comprising, a headblock, a gapped tailblock, a removable stop-piece closing the inner end of the gap, a stop-piece within the gap, tie-bars between the headblock and tailblock, a ram carried by the headblock and adapted to be forced toward the tailblock, a thrust-piece disposed between the ram and the tailblock and adapted to engage the end of a car-axle and be forced toward the tailblock by the ram, a main housing disposed shiftably between the ram and the tail-block and having a gapped hub to engage the inner faces of the hubs of the car-wheels on the axle, removable stops supported by the tie-bars to prevent motion of the main housing toward the tailblock, and engaging-parts connected with the main housing and with the ram and adapted to go into contact and limit the approach of the ram to the main housing, whereby the ram may push the axle out of one wheel while the main housing acts as an abutment for that wheel and then cause the housing to push the second wheel from the axle while the tailblock acts an as abutment for the axle, combined substantially as set forth.

4. A wheel-press comprising, a headblock, a hydraulic cylinder carried thereby, a ram in said cylinder, a tailblock, tie-bars connecting the headblock and tailblock, removable means carried by the ram for engaging the end of a car-axle nearest the ram, movable abutting and thrusting means disposed between the car wheels and adapted to alternatively form an abutment for the wheel nearest the ram and to thrust upon the other wheel, removable stops carried by the tie-bars to limit the movement of said abutting and thrusting means toward the tailblock, and engaging-parts connected with the ram and with said thrusting and abutting means, whereby the ram may push the axle while said abutting and thrusting means furnish an abutment for the wheel nearest the ram and later push upon the other wheel while the tail-block furnishes an abutment for the axle, combined substantially as set forth.

5. A car-wheel press comprising, a headblock, a tailblock, tie-bars between the headblock and tailblock, a ram carried by the headblock and adapted to be forced toward the tailblock, a thrust-piece disposed between the ram and the tailblock and adapted to engage the end of a car-axle and be forced

toward the tailblock by the ram, a main housing disposed shiftably between the ram and the tail-block and having a gapped hub to engage the inner faces of the hubs of the car wheels on the axle, a filler-piece disposable at the end of the gapped hub farthest from the thrust-piece, removable stops supported by the tie-bars to prevent motion of the main housing toward the tail-block, and engaging-parts connected with the main housing and with the ram and adapted to go into contact and limit the approach of the ram to the main housing, whereby the ram may push the axle out of one wheel while the main housing acts as an abutment for that wheel and then cause the housing and filler-piece to push the second wheel from the axle while the tailblock acts as an abutment for the axle, combined substantially as set forth.

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