No. 819,359. PATENTED MAY 1, 1906.

W. H. MARKLAND.

TONGS.

APPLICATION FILED SEPT. 30, 1905.

2 SHEETS—SHEET 1.

FIG. 3.

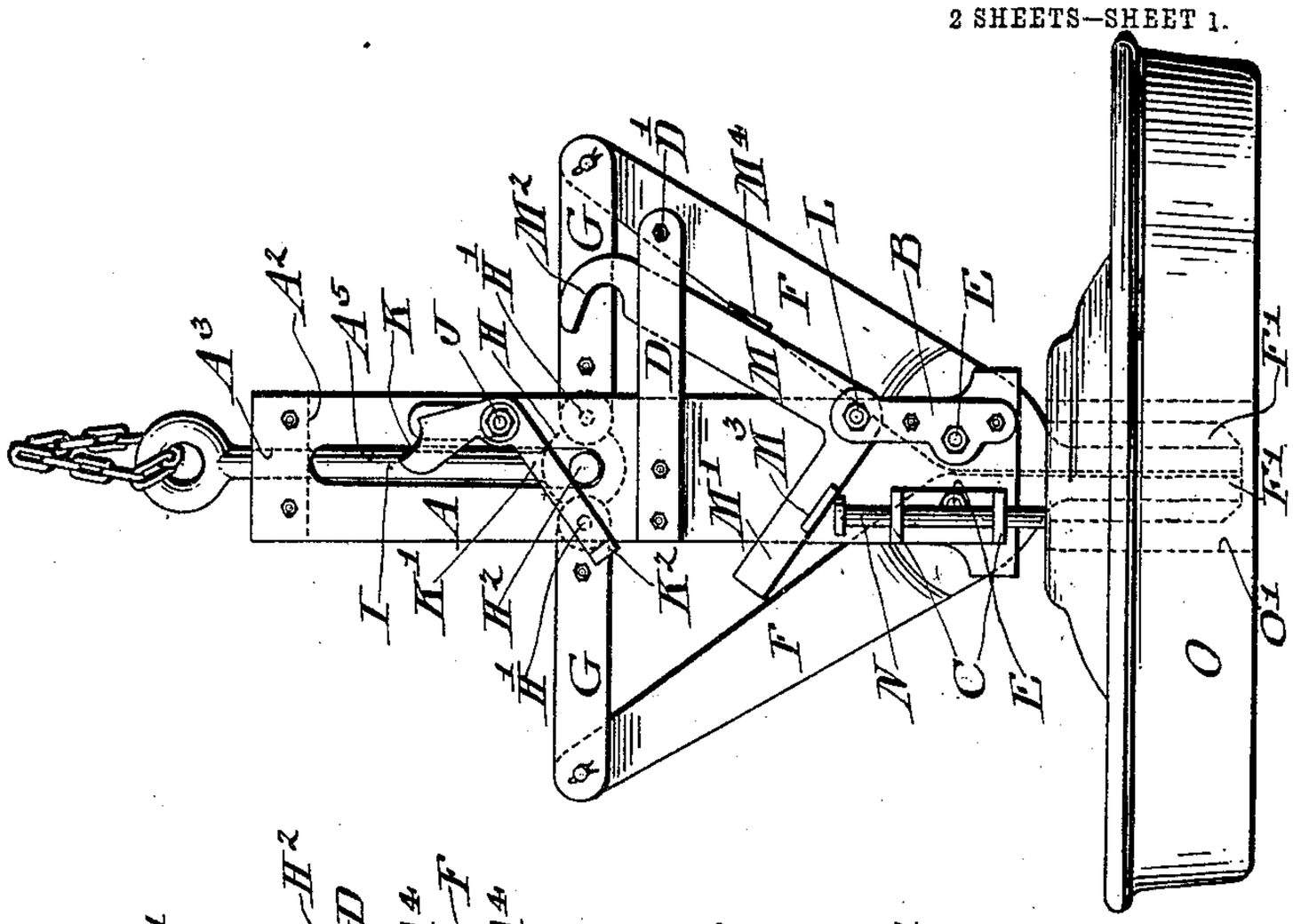


FIG. 2.

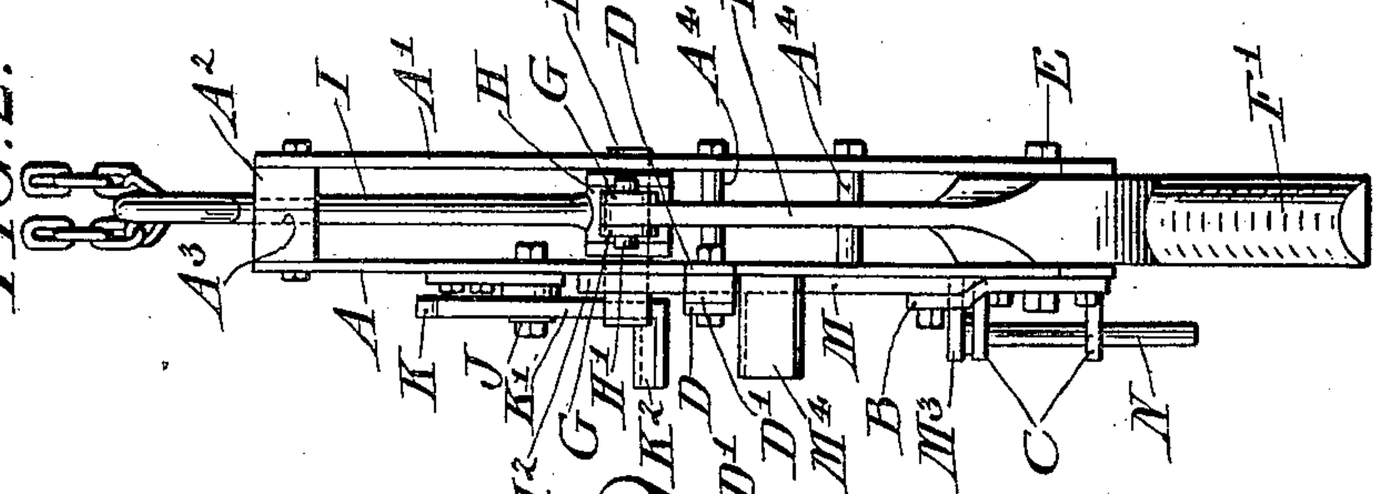
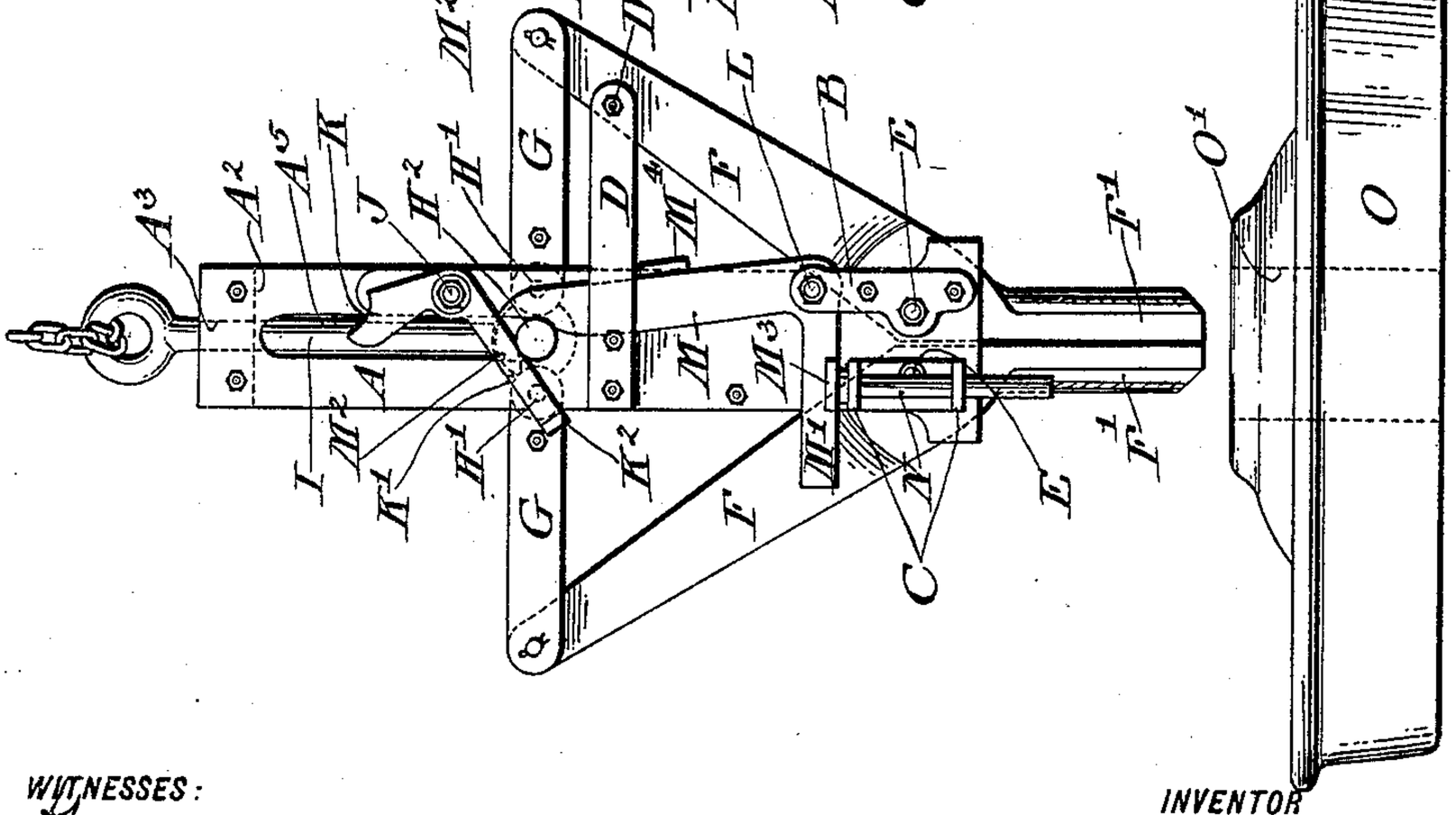


FIG. 1.



WITNESSES:

S. Stewart

D. S. Williams

INVENTOR

Wyllis H. Markland

BY

Francis D. Chambers

his ATTORNEY.

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2 SHEETS—SHEET 2.

FIG. 3.

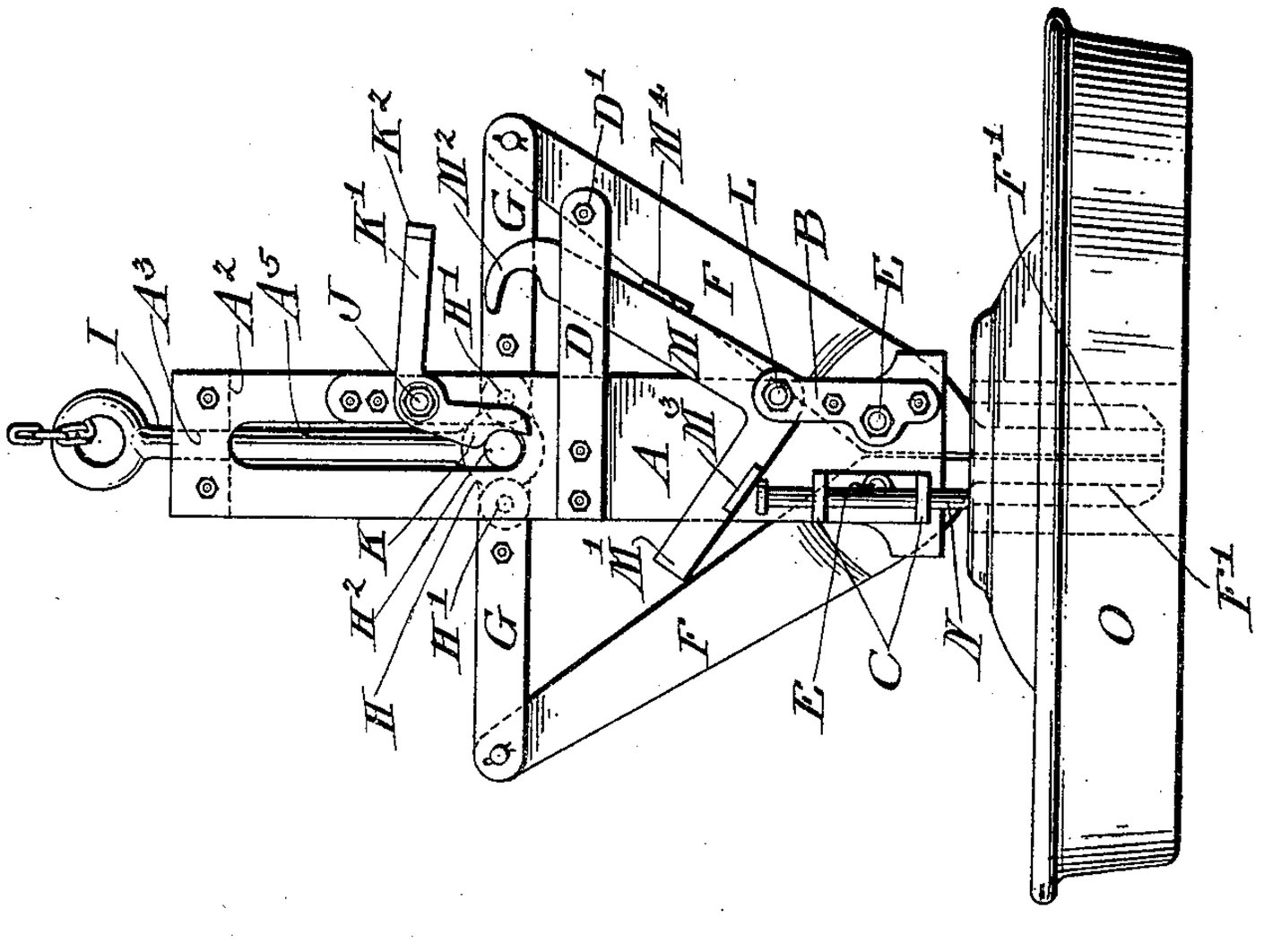
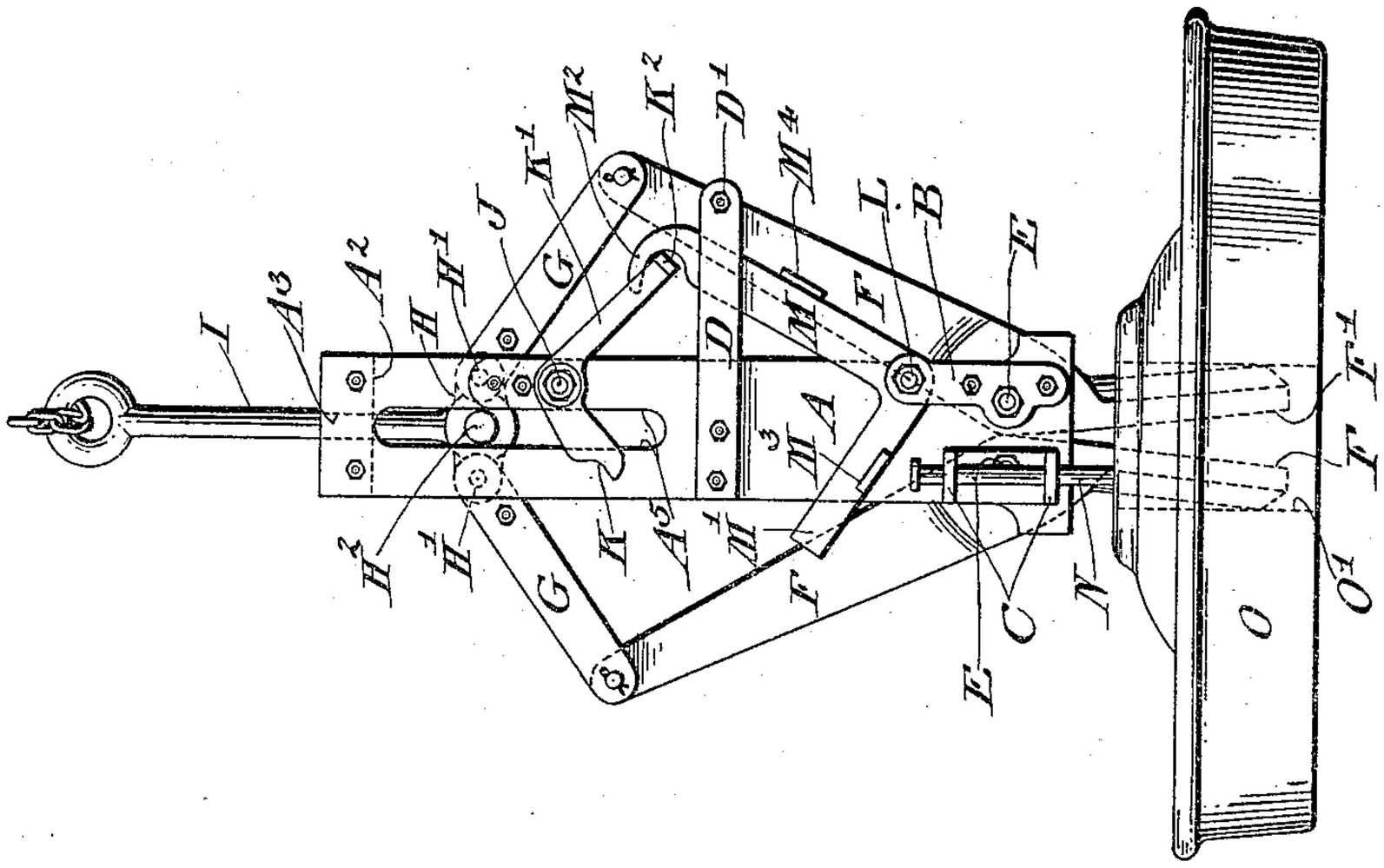


FIG. 4.



WITNESSES:
A. Stewart
D. S. Williams

INVENTOR
Wyllis H. Markland
BY
Francis J. Chambers
his ATTORNEY.

ANDREW. B. GRAHAM CO., PHOTO-LITHOGRAPHERS, WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

WYLLIS H. MARKLAND, OF ALTOONA, PENNSYLVANIA.

TONGS.

No. 819,359. Specification of Letters Patent. Patented May 1, 1906.

Application filed September 30, 1905. Serial No. 280,733.

To all whom it may concern:

Be it known that I, WYLLIS H. MARKLAND, a citizen of the United States of America, residing in Altoona, in the county of Blair and State of Pennsylvania, have invented a certain new and useful Improvement in Tongs, of which the following is a true and exact description, reference being had to the accompanying drawings, which form a part thereof.

My invention relates to a tong device especially designed and intended for lifting car-wheels and similar objects, and has for its object to provide a tong device of this character especially designed for the convenient engagement and disengagement of the tongs with the object to be lifted.

The nature of my improvements will be best understood as described in connection with the drawings in which they are illustrated as applied in the best way which I have designed for the purpose, and in which—

Figure 1 is an elevation showing my tong device set ready for engagement with a car-wheel situated below it. Fig. 2 is a side elevation of the tongs as shown in Fig. 1; Fig. 3, a view showing the tongs lowered into the car-wheel and the latch-lever, which in Fig. 1 holds the tongs in non-operative position shifted to release the tongs. Fig. 4 shows the tongs being lifted and in engagement with the car-wheel; and Fig. 5 shows the tongs lowered into the car-wheel, but still locked in non-engaging position by a supplemental locking-lever.

My tong device consists of a frame made up of the plates A and A′, spaced at top by the block A^2, vertically perforated, as indicated at A^3, and also spaced by the stay-bolts, as indicated at A^4 A^4. Guideways (indicated at A^5) are formed in the face-plates of the frame.

B is a bracket secured to the face-plate A and supporting a pivot-pin L.

C C are perforated brackets extending out from the same face-plate.

D D are bars secured to the face-plate A and spaced apart, so as to make a guideway between them, D′ indicating a spacing and stop block at the outer end of these bars.

E E are pivot-pins extending through the face-plates A A′, and on which are pivoted the tong-levers F F′, the upper ends F F of which are connected by rods or links G G with pivot-pins H′ H′ of a sliding head H, which, as shown, is provided with laterally-projecting pins H^2, which extend into the guideways A^5 of the frame.

I is a rod connected with a head H and extended through the perforated spacing-block A^2, the upper end being connected with a lifting-chain, as shown.

J is a pivot-pin secured on the face-plate A, and on which is pivoted a locking-lever K K′, the arm K of which is formed with a clutch adapted to engage the pin H^2, as shown in Fig. 5, while the other arm K′ is, as shown, provided with a laterally-projecting arm K^2 for convenient manipulation. The shape of this lever and its pivotal attachment alongside of the slideway is such that when in the position shown in Fig. 4 the latching-arm K will lie across the guideway A^5, so that when pressed down by the pin of the sliding head it will engage such pin, as shown in Fig. 5, and also that when thrown over to the position shown in Fig. 1 or Fig. 3, the upward movement of the sliding head will turn it back to the position shown in Fig. 4. M M′ is also a latch-lever pivoted on the pin L of the bracket B, the arm M having a hooked end M^2, which when the lever is thrust to the position shown in Fig. 1 will engage the pin H^2 of the head H when in lowermost position. This arm M of the lever moves between the bars D D, which with the spacing-block at their end restrict and confine its movements. The arm M is provided with a laterally-projecting arm M^4 for convenient manipulation, and the arm M′ is provided with a laterally-extending arm M^3, which lies immediately above the latch-releasing pin N, which moves vertically in the perforated lugs C C.

O indicates a car-wheel having the usual central perforation O′.

For many uses—such, for instance, as permit of an operative standing immediately adjacent to the wheel to be engaged and lifted—the latch-lever M M′ may remain in retracted position, as shown in Fig. 5, the closed tongs, as shown in said figure, being lowered into the hole of the wheel and the latch-lever K being then thrown back to the position shown in Fig. 3, so that when the tongs are lifted their gripping ends F′ F′ will be forced apart to engage the car-wheel, as shown in Fig. 4, the upward movement of the head throwing the latch-lever K′ to the position shown in Fig. 4, so that when the car-wheel is lowered the weight of the head and

attached parts will close the tongs and push the latch-lever K K′ aside until it engages the head, as shown in Fig. 5. Where, however, the car-wheel is to be lifted from a soaking-pit or other inaccessible position, my tongs are adjusted for use as shown in Fig. 1, the latch-lever M M′ engaging the head and the latch-lever K K′ being thrust to non-operative position. The tongs are then lowered into the car-wheel, the pin N striking on the edge of the wheel and shifting the latch-lever M M′ out of engaging position, as shown in Fig. 3. The lifting of the tongs then engages the car-wheel and shifts the latch-lever K K′ to position as shown in Fig. 4, the lowering of the wheel resulting in the closing and locking of the tongs, as shown in Fig. 5.

It will be obvious that my invention is capable of application in various modified forms, as well as in the exact arrangement shown in the drawings, and I therefore do not wish to be understood as limiting my claims to this illustrated construction except in so far as it is called for by the language of said claims.

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

1. A tong device having in combination a frame formed with a vertical guideway, tong-levers pivoted on said frame, a sliding head guided on said frame, rods connecting said head and the ends of the tong-levers and a latch-lever K, K′, pivoted on said frame adjacent to the guideway and adapted, as described, to engage and lock the sliding head as it moves down in the frame and to be shifted to engaging position by the head as it moves upward.

2. A tong device having in combination a frame, tong-levers pivoted on said frame, a sliding head guided on said frame, rods connecting said head and the ends of the tong-levers, a latch secured to the frame and adapted to engage the head in its lowermost position, and an automatic latch-releasing device adapted to act on said latch and to be set in operation by contact with the object to be gripped by the tongs.

3. A tong device having in combination a frame, tong-levers pivoted on said frame, a sliding head guided on said frame, rods connecting said head and the ends of the tong-levers, a latch secured to the frame and adapted to engage the head in its lowermost position, an automatic latch-releasing device adapted to act on said latch and to be set in operation by contact with the object to be gripped by the tongs and a separate latch adapted to engage and hold the head in lower position and to automatically engage said head when lowered.

4. A tong device having in combination a frame, tong-levers pivoted on said frame, a sliding head guided on said frame, rods connecting said head and the ends of the tong-levers, a latch-lever M, M′, pivoted on the lower part of the frame and having a jaw M^2, adapted to engage the head in lowermost position, a latch-releasing pin N, adapted to shift said lever to non-engaging position when pushed up and a second latch-lever K, K′, pivoted on the frame alongside the slideway for the head and adapted as described to engage said head when it is lowered.

WYLLIS H. MARKLAND.

Witnesses:
DAVID KINCH,
PHILIP B. DILLEN.