To all whom it may concern:

Be it known that I, ADOLPH KASSLER, residing at 1544 Bryant Avenue, New York, N. Y., and being a citizen of the United States, have invented certain new and useful Improvements in a Door-Latching Means, of which the following is a full, clear, and exact description, such as will enable others skilled in the art to which it pertains to make and to use the same, reference being had to the accompanying drawings which illustrate the preferred form of the invention, though it is to be understood that the invention is not limited to the exact details of construction shown and described, as it is obvious that various modifications thereof within the scope of the claims will occur to persons skilled in the art.

In said drawings:

Fig. 1 is a fragmentary view in elevation of a car with the invention applied thereto;

Fig. 2 is a view on a larger scale with part in section of one of the latching mechanisms shown in Fig. 1 the latch being shown in engagement with the door;

Fig. 3 is a section taken on line 3—3 of Fig. 2;

Fig. 4 is a view similar to Fig. 2 the latch being shown disengaged from the door;

Fig. 5 is a view similar to Fig. 2 of a modified form of the invention and

Fig. 6 is a section taken on line 6—6 of Fig. 5.

It is an object of this invention to provide a latching means for car doors which shall be simple and economical in construction, comprising few easily replaceable parts, which shall be readily operable to engage and disengage the door and which may be locked in engaging position.

In the drawings the invention is shown applied to the side sheet 1 of a car between the side posts 2 and engaged with the angles 3 which are secured to the car door and which project slightly beyond the car side so as to be engaged by oppositely disposed latches. Each latch mechanism comprises a base plate 4 provided with a plurality of cylindrical projections 5 and 6 and secured to the car side by the rivets 7, 8 and 9, the rivets 7 and 5 passing through openings in the projections 6 and 5 respectively. Pivotedly mounted on the projection 5 and secured thereon by a washer 10 and rivet 8 is a latch or hook 11 provided with a flat surface or seat 12 which is adapted to engage beneath the flange 13 of the angle 3. Pivotally mounted on the projection 6 and secured thereon by a washer 14 and rivet 7 is an operating handle or arm 15 which is provided with a projecting lug 16 having a plurality of angular disposed surfaces 17 and 18, each surface being inclined to the axis of the arm 15, which are adapted to engage corresponding surfaces 19 and 20 formed on the latch 11 when the handle 15 and latch 11 are fully engaged as shown in Fig. 2. In this position it will be noted that the handle 15 is in engagement with a stop 21 formed integral with the base plate 4.

With the seat 12 in engagement with the flange 13, as shown in Fig. 2, the handle 15 must be rotated about its pivot 7 disengaging the lug 16 from the latch 11 in order that the hook may be disengaged from beneath the angle 3 to permit the door to be dropped. With the projection 16 disengaged from the latch 11, as shown in Fig. 4, the hook 11 will assume a vertical position when the door is opened. As the door is brought to the closed position, the inclined surface 21 of the latch 11 will be engaged by the flange 13 of the angle 3 and the latch moved to one side. When the flange 13 passes beyond the inclined surface 21 the latch will fall in back of the flange 13, assuming a position such as is shown in dotted lines in Fig. 4. The handle 15 is then operated bringing the surface 18 of the projection 16 into engagement with the surfaces 19 and 20 on the latch 11. Pressure is then exerted upon the handle 15 and through the engagement of the projection 16 with the surfaces 19 and 20 on the latch 11, causes the latch to be forced in under the flange 13 until the projection 16 is moved to the position shown in Fig. 2, raising the door to the fully closed position. The relation of the surfaces 17, 18, 19 and 20 is such that the pressure exerted upon the projection 16 by the latch 11 cannot cause the projection 16 to become disengaged from the latch 11.

In the modification of the invention shown in Figs. 5 and 6 the latch 111 is pivotally supported from the base plate 4 as in the other modification. The handle 115 is also pivotally supported from the base plate 4. The pivot point, however, in this modi-
cation is adjacent the stop 26 and the projection 116 mounted on the handle 115 engages the side of the latch 111 away from the pivot point. In the first modification pressure exerted upon the handle by the latch 11 will put the handle under compression while in the modification shown in Figs. 5 and 6 pressure exerted upon the handle 115 by the latch 111 will cause the handle to be under tension. The projection 116 is inclined slightly to the axis of the handle 115 and cooperates with the inclined surface 120 of the latch 111 so that when the latch is brought into engagement with the flange of the angle 3 upon the closing of the door, operation of the handle 115 will bring the projection 116 into contact with the surface 120 and will cause the surface 112 to be forced in under the flange 13 of the angle 3 bringing the door to a fully closed position.

What is claimed is:

1. In a car, a door, a latch for said door pivotally mounted on said car and having angularly disposed contact surfaces, an operating handle, a lug on said handle having angularly disposed contact surfaces and a stop for said handle adapted to position said lug with the contact surfaces of the lug in engagement with the contact surfaces of the latch.

2. In a car, a door, a latch having a door engaging surface pivotally mounted on said car and an operating handle having a wedge shaped lug thereon adapted to engage said latch, said latch being moved to fully closed position by engagement with one of the surfaces of said lug and having angularly disposed contact surfaces engaged by said lug when said latch is in the fully closed position.

3. In a car, a door, a base plate having lugs secured to said car, a latch for said door pivotally mounted on one of said lugs, an operating handle having a lug thereon adapted to engage said latch pivotally mounted on another of said lugs and a stop for said handle mounted on said base plate.

4. In a car, a door, a base plate having lugs secured to said car, a latch having an engaging surface for said door pivotally mounted on one of said lugs, and an operating handle having a lug thereon pivotally mounted on another of said lugs, said lug engaging said latch intermediate the pivot and door engaging surface on said latch.

5. In a car, a door, a base plate having lugs secured to said car, a latch for said door pivotally mounted on one of said lugs, an operating handle pivotally mounted on another of said lugs and a locking cam carried by said operating handle adapted to engage said latch.

6. In a car, a door, a base plate having lugs secured to said car, a door engaging latch pivotally mounted on one of said lugs, an operating handle pivotally mounted on another of said lugs, a locking cam mounted on said operating handle and engaging said latch intermediate the pivot and door engaging surface on the latch and a stop for said handle carried by said base plate.

7. In a car, a door, a base plate having lugs secured to said car, a latch for said door pivotally mounted on one of said lugs and having angularly disposed contact surfaces, an operating handle pivotally mounted on another of said lugs, a lug upon said handle having angularly disposed contact surfaces and a stop on said base plate adapted to position the lug on said handle with the contact surfaces on the lug in engagement with the contact surfaces on the latch.

In witness whereof I have hereunto set my hand in the presence of two witnesses.

ADOLPH KASSLER.

Witnesses:

J. B. D. THOMPSON,
DORETTA EDEN.