

Bottom door guides to have $1\frac{3}{4}$ in. lip, and to be four in number—one located adjacent to each door post, one in the middle of the doorway, and one between the back door post and the open door stop, located approximately as shown in the illustration, and similar in design, with particular reference to the height of lip, which should be $1\frac{3}{4}$ in. If the design of the door is such that the removal of the door guide next to the open door post would permit the door to be pulled away from the car, then this door guide should be of such design that it cannot be removed when the door is closed.

Metal open door stops are recommended, one or more in number, of design shown

door against outward pressure, either continuously from top to bottom, or by the use of two or more lips projecting at least $1\frac{1}{2}$ in. over the door, approximately as shown in the illustration. If wooden closed door stops are used, they must be strengthened against splitting and must be provided with at least two metal closed door stops provided with lips to project over the door at least $1\frac{1}{2}$ in. to support the door against bulging outward, as shown in the illustration.

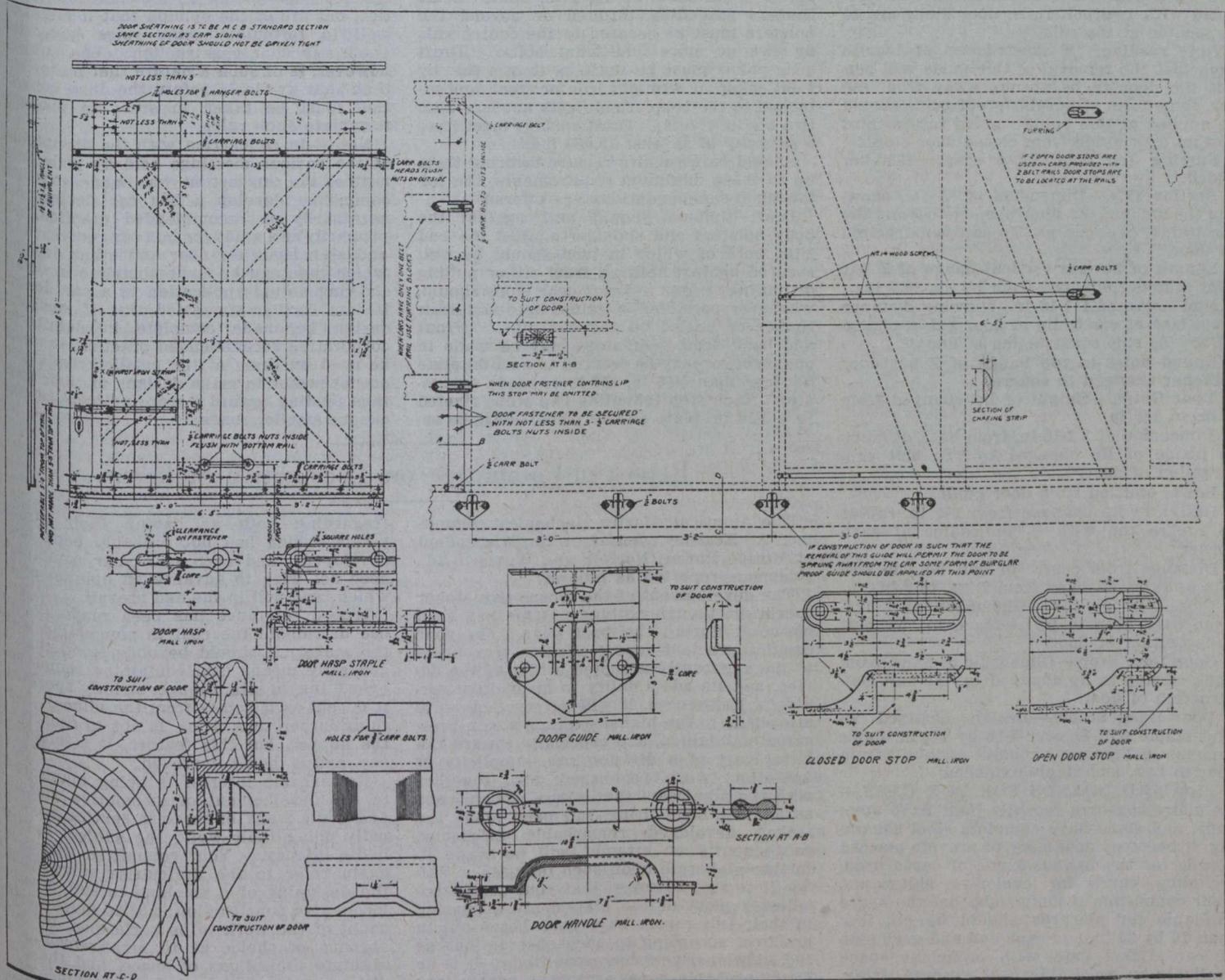
Wood doors should have preferably a metal frame, with a Z bar or its equivalent at the bottom, approximately as shown in the illustration, the Z bar acting as a stiffener and also engaging with the bottom door

Door hanger bolts to be located not closer together than 4 ins. one way, and 5 ins. the other. Four $\frac{3}{8}$ in. bolts are recommended.

It is understood that all of the above recommendations apply particularly to 6 ft. door openings of cars with single, outside hung side doors, and in all cases where a particular construction is described or specific dimensions are given, their equivalents will be acceptable.

The changes of the proposed revision of sheet M. C. B. 30 are all shown in the accompanying illustration, and are as follows:

GENERAL DRAWING OF DOOR.—Construction of door has been changed to show stiles extending full height of door. Four



Car Door Construction, Revised Sheet M.C.B. 30.

in the illustration, securely bolted to the framing of the car with $\frac{1}{2}$ in. bolts. If wood open door stop is used, it should extend the entire height of the door and be strengthened against splitting.

The back edge of the door and the back door post should be so constructed that when the door is closed and fastened it will be continuously supported from top to bottom against outward pressure, and will also be protected against leakage of rain or snow and admission of sparks.

Closed door stop to be preferably of metal, and to provide protection against leakage of rain or snow and admission of sparks. The closed door stop must also support the

guides. This construction or its equivalent permits the use of door guides which project a very short distance from the side of the car, and are, therefore, less subject to injury, particularly the door guide at the middle of the doorway.

Wooden frame doors, if used, should be at least as strong as that shown in the illustration.

The door hasp fastener should be at least 24 ins. long, fastened with not less than five $\frac{3}{8}$ in. bolts, with nuts on the inside of the door. The door hasp fastener should be of such design that the hasp cannot be removed without removing the bolts from the fastener.

holes for door hanger bolts instead of three. 7-16 in. holes for door hanger bolts instead of 9-16 in. Horizontal spacing of door hanger bolts from 6 in. centres to not less than 5 ins. Vertical spacing of door hanger bolts from 4 ins. to not less than 4 ins. Size of door stiffener angle from $1\frac{1}{4}$ by $1\frac{1}{4}$ by 3-16 in. to $1\frac{1}{2}$ by $1\frac{1}{2}$ by 3-16 in. The three no. 14 wood screws in centre of door stiffener angle changed to $\frac{3}{8}$ in. carriage bolts. 3-16 by $1\frac{1}{2}$ in. wrought iron strap added to door hasp fastener. $\frac{1}{2}$ in. carriage bolt added to top and bottom of wooden closed door stop to prevent splitting.

Note reading, "When door fastener contains lip, this stop may be omitted," added