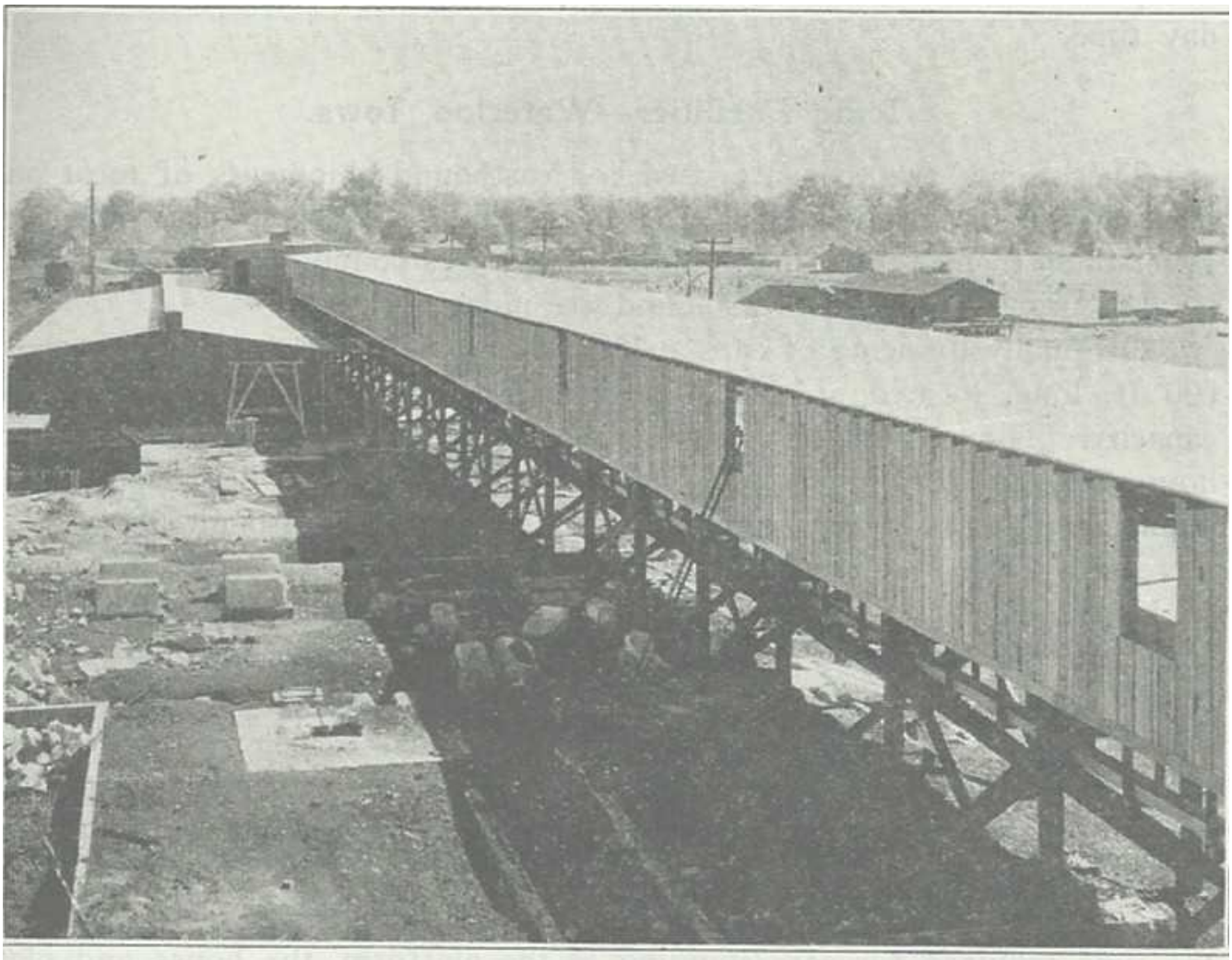
Icing Facilities-Gwin, Mississippi

contributed by Mike Durff



ICING FACILITIES—ILLINOIS CENTRAL RAILROAD—GWIN, MISS.

The icing facilities at Gwin, MS are used for the icing of all cars handling perishable freight north and south bound shipments. Usually switch engines handle the cars to and from the platform, but the yard is so arranged that road engines can take the trains direct to and from the platform. The original plant was owned by outside parties and consisted of a refrigerating plant of 100 tons capacity, two storage rooms of 3,750 tons and 800 tons capacity, and an elevator with operating machinery located in the large storage room. The ice was delivered by incline conveyors, from the storage rooms to the elevated icing plattform, which was 1,080 ft. long, and thence along the platform by conveyor to the cars. This plant was totally destroyed by fire in July, 1919.

In building the facilities described below on the same site, provision was only made for storage rooms and a train icing platform with a crusher to allow for handling crused ice, in addition to the cake ice,as might be required.

Durinig the icing season, manufactured ice is brought daily in cars from plants at near-by towns and is

handled direct to the e1evated platform and into the cars, or to the house for storage, as the case demands. A sufficient amount of ice is retained in the house to provide for emergencies, or to carry over periods of light deliveries to the house.

The present facilities lie northeast and southwest and consist of an ice storage house, a salt storage house, and ice crusher house, an elevated train icing platform. a gravity incline, electrically operated conveyors, a track on the west side for delivering ice into the house, and a track on the east for icing trains.

The ice storage house has a capacity of 500 tons, it is 41 ft. wide and 181 ft. long, containing six storage rooms, each 41 ft. by 19 ft. with a 7 ft. 2 in. ceiling, and two anterooms 40 ft. by 19 ft. with an 8 ft. 11 in. ceiling height. The foundation and floor are of concrete and each storage room has a floor drain connecting with a gravel basin, and then to a sewer. The concrete floor is covered with removable sections of 2 in. by 8 in. cypress plank, spaced 1 in. apart, on 2 in. by 4 in. battens 24 in. apart.

The superstructure of the house is of wood construction, the exterior walls of the ice storage rooms being made up of 2 in. by 10 in. studding 24 in. apart, the outside faces of which are covered with 1 in. D & M sheeting, and then with one layer of tarred felt paper over which is placed the cypress siding for the finished wall. The interior side of the studding, also both sides of the partition studding and the ceiling joists of the storage room are ceiled with two thicknesses of 1 in. D & M sheeting. A layer of tarred felt paper is placed between the two layers of sheeting on the walls only.

The space between the studding of the exterior walls partitions is filled with burnt granulated cork, while the space between the 2 in. by 12 in. ceiling joists is fllled with shavings and covered with 1 in. D & M sheeting. The exterior walls and interior partitions of the anterooms are made up of·2 in. by 6 in. studding, spaced 24 in. apart, and the ceiling joists are 2 in. by 6 in. spaced 24 in. apart.

The roof rafters are 2 in. by 6 in., spaced 24 in. and are supported by a continuous plate carried on 2 in. by 4 in. struts, 48 in. apart, which are fastened to the 2 in. by 12 in. ceiling joist over the storage room, and 6 in. by 10 in. girders over the ante-rooms. 1 in. D & M sheeting being used for roof boards, covered with ready roofing.

Along the ridge of the roof and extending the full length of the building is mounted a monitor 2 ft. wide and 2 it. 3 in. high, with louvers on the sides, covered with No. 20 galvanized wire of 1/2 in. mesh. The space between the wall plate and the under side of the roof boards is left open, and covered with No. 20 galvanized 1/2 in. mesh wire, for ventilation, and to act as an insulator against sun action.

The entire interior wall surface was given two coats of interior spar varnish. The windows have double sash, and all doors in the house are insulated cold storage doors.

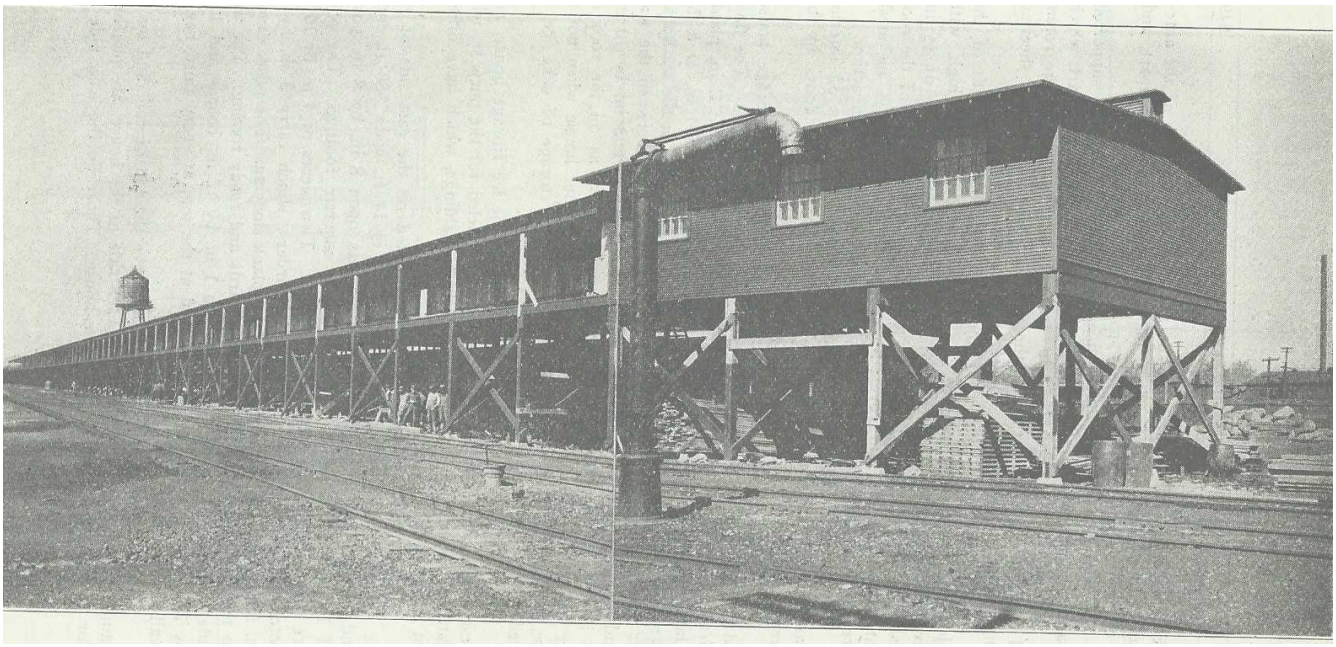
The crusher house is located northeast of the ice storage house, and is supported on 8 in. by 8 in. posts on concrete footings. The floor joists are 3 in. by 10 in., 16 in. apart, with a sub-floor of 2 in. plank. a layer of ready roofing and then the finished floor of 1 in. D & M. The walls are 2 in. by 4 in. with sheeting and siding as in the ice house, but the layer of tarred felt paper and the cork filler between the wall studs were omitted in this case. The roof joists are 2 in. by 10 in., 24 in. apart, with monitor and similar construction as on the roof of the ice house. The carts are stored in the crusher house when not in use, and there is also space for the temporary storage of cake ice, if needed.

The salt storage house, located north of the ice storage house, and west of the crusher house, is a car body remodeled for the purpose, with platforms and steps connecting these three buildings, which have different floor levels.

The elevated train icing platform, located on the east side of the ice house and paralleling the icing tracks, is 14 ft. wide, 980 ft. long, and 13 ft. 3 in. above top of rail. It sets upon 8 in. by 8 in. posts, of 14 ft. centers, which in turn rest on concrete footings. The posts are cross braced with 3 in. by 8 in. plank. Two pieces of 4 in. by 16 in. notched into the posts, make up the girders, which carry 3 in. by 10 in. floor joists, 16 in. apart, with 2 in. plank flooring. The posts extend to the roof, which is 1 in. D & M boards and ready roofing. The west side of the platform is closed in with 1 in. by 12 in. boards and 1 in. by 2 in. battens, with windows hinged at the top, at every third bay of wall construction.

The ice house floor is 1 ft. 6 in. above the top of rail, and on the same level, at the ante-room doors each side of the house, are platforms for handling ice in and out of the house. Those on the west side are used in unloading blocks of ice from cars into the storage rooms, and the platforms on east side of house, next to the high platform, are used for moving the ice either into the storage rooms or from the house to the conveyor.

Electrically operated conveyors along east side of the building at first floor level, move the ice from the receiving gravity incline at south end of the house, to the ante-room doors, or to the incline elevating Conveyor at the crusher room. The operating machinery for this low level conveyor is in a house under the high platform, and that for the



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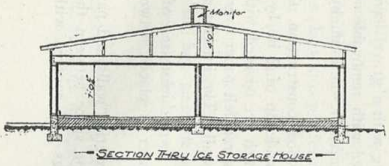
incline elevating conveyor is in the crusher house. 0n the elevated train icing platform is a conveyor 980 feet long, with the operating machinery located in a house at south end of the platform.

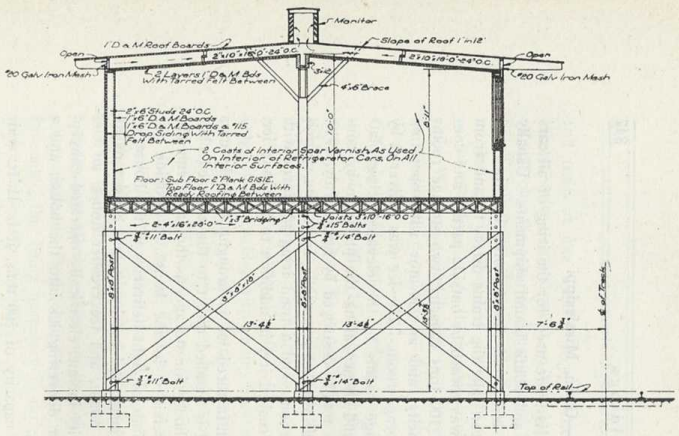
Manufacturcd ice is delivered in cars to either ante-room, on west side of the house, where the blocks are taken from the cars and stored in the house by hand. The cars can also be unloaded on the platform at the south end of the building. and ice sent by a gravity incline to the low level conveyor. which delivers the ice either to the ante-room or the crusher room.

After the block ice arrives at the crusher house, it can either be crushed and delivered to the car of a train in carts from the elevated train icing platform, or the cake ice can be delivered by conveyor on the high platform, alongside of a train to be iced, when the ice is taken from the conveyor by men and placed in the compartments of refrigerator cars. A deflector is located on the north side of the operating machinery house, to prevent cakes of ice from going into the machinery, if left on the conveyor, and this ice is stored temporarily on the platform and later returned by conveyor for storage in the house, or delivery to the cars. The ice runs and guides for the gravity inclines, and conveyors, are made of oak, and in some cases are metal covered.

The electric lighting system of the facilities is so arranged that the plant can be operated with the same efficiency at night as in the day time.



SECTION THRU ICE STORAGE HOUSE



CROSS SECTION THRU CRUSHER HOUSE