PROFIT FOR THE STATE OF ILLINOIS

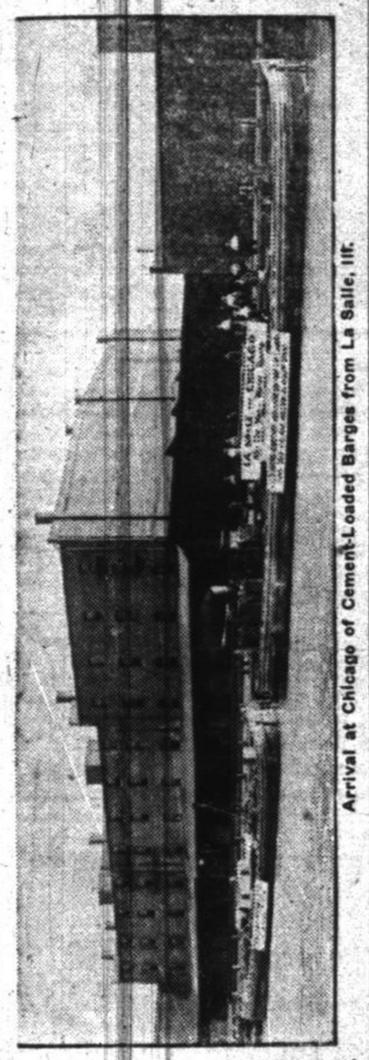
Plan for Defraying Cost of Improving the Illinois and Michigan Canal.

Barges "Peerless" and "Red Wing" Carrying One Thousand Barrels of Cement Make Second Trip from LaSalle to Chicago.

The second shipment of cement from La Salle to Chicago made over the Illinois and Michigan canal by the Chicago Portland Cement company of Chicago and Oglesby, Ill., has brought forth some interesting facts relative to the cost of improving this important waterway which should command favorable action on the bill which will be introduced in the Illinois legislature next January soliciting an appropriation of $1,000,000 for the purpose.

No improvements are suggested for that part of the canal between Chicago and Lockport, a distance of thirty miles. The Drainage canal, completed in the year 1900, runs parallel to it and is used by shippers exclusively, in preference to the older waterway.

Advocates of the project now recommend the filling in of this abandoned part of the Illinois and Michigan canal and thus provide factory sites for the



Arrival at Chicago of Cement-Loaded Barges from La Salle, Ill.

many manufacturers who will naturally desire to participate in the increased shipping facilities and lower rates to points both east and west this waterway will offer once the suggested improvements are made on the remaining sixty-three miles of the canal between Lockport and La Salle.

Norman D. Fraser, president, Chicago Portland Cement company, an ardent supporter of the project, states that the abandoned waterway land will doubtless realize a sum equal to that necessary for the improvement of the canal.

The $1,000,000 which the legislature will be asked to appropriate is an insignificant sum in itself for the state of Illinois to devote to a project of this kind and with every prospect of receiving that sum in return, from one source alone, it is hard to conceive how the legislature can do other than endorse the plan.

Those who are opposed to the improvement of the waterway maintain that its use, as a means of transporting freight, will be limited and that any expenditure by the state for its improvement would, therefore, be unwarranted.

The use of any waterway nine feet deep is of course limited in the sense that it cannot be used by lake or ocean vessels but the advocates of the Illinois and Michigan improvement plan are interested only in the movement of freight by barges and tow boats. "How then would the use of the canal be limited?" asked Mr. Fraser. "In the past it has been popular enough among shippers to return to the state, in tolls, every dollar expended on its construction. An additional expenditure the state may decide to make, will likewise be returned; the canal has been a profitable investment and will continue to be."

Insofar as the Chicago Portland Cement company is concerned, their mills are located on the Vermilion river, about one and one-half miles south of the Illinois and Michigan canal, near La Salle. The company is, nevertheless, willing to make this stream navigable, giving them an outlet to the canal if the main waterway is improved in the manner proposed.

Other manufacturers, similarly located, are also willing to undertake the expense of making a channel to the canal which surely demonstrates the local interest in the project, apart from the benefits which will accrue to both eastern and Mississippi shippers by the establishment of a modern waterway through Illinois.

SMALL CONCRETE ICE-HOUSE

BUILD NOW In Time for Next Winter's Ice Crop, Says Authority.

During the sweltering heat of summer, many a country family longs for the comfort afforded by a home-supply of ice. Too often autumn passes without any preparation having been made for harvesting the winter ice crop.

For family requirements, ice houses of concrete are growing in popularity. This type is recommended by the Editor, Cement User, 1005 Stock Exchange Bldg., Chicago since concrete is heat resisting, is not rotted by the continual dampness from the ice, and is ready for filling every winter without first repairing the building. An ice-house of concrete is likewise fireproof, an advantage especially valuable in the country.

Size of Building and Location.

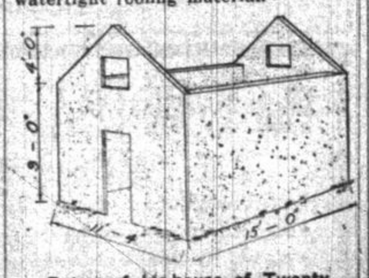
With a concrete house, successful storage of ice depends only upon careful packing, air-trapped drainage at the floor line, and well regulated ventilation beneath the roof. Therefore the icehouse must be located on a well drained site and, if possible, in the shade of other buildings or trees. It should be turned end to the south.

The size of the building is dependent on the needs of the family. Nearly any household will consume one hundred pounds every day, or ten tons for the season. One cubic foot of ice weighs 57 pounds and a ton in the ice-house occupies about 40 cubic feet. If the ice is of a poor quality, meltage frequently amounts to one-third the quantity harvested; therefore it is wise to build a house of a capacity twice the calculated needs. For a farm with a small dairy, a sufficient supply can be stored in a building 10 by 14 feet (inside measurements) by 9 feet to the eaves and 13 feet to the comb of the roof. With an allowance of 1 foot on all sides of the ice for a packing of sawdust, the capacity of this structure is 20 tons.

Method of Construction.

Either concrete blocks or solid concrete may be used for the walls. Dig the foundation trenches 10 inches wide and 2½ feet deep. To remove water from the melting ice, lay a string of 4-inch drain tile from a point outside the building and ending at the service door, so that the top of the last pipe, a sewer "goose neck," will be at floor line 4 inches above natural ground level. Fill the foundation trenches with concrete proportioned 1 to 2½ to 5. Above ground level the walls may be made of blocks (laid in a 1 to 2 cement-sand mortar) or of solid concrete. For the solid wall mix the concrete 1 bag of Portland cement to 2 cubic feet of sand to 4 cubic feet of crushed rock, or 1 part cement to 4 parts bank-run gravel. Use movable forms, 3 feet high and extending around the entire building, to hold the mushy wet concrete until it sets. The day after they are filled, the forms may be loosened, moved up and filled again. During the placing of the concrete, reinforce the walls, 3 inches from the outside, with woven wire fencing or with ⅝-inch rods spaced 18 inches apart and running in both directions. Stagger the rods by placing half of them 3 inches from the inside surface of the walls. Imbed two rods or an old wagon tire in the concrete two inches above all door openings. During the construction set a service door frame (2½ by 6½ feet) between the forms at one end of the building. Likewise while pouring the concrete for the gable ends, make provision for small ventilation doors 2½ feet square.

A wooden roof, while not durable like one of concrete, is more easily built. To hold the plates on the top of the side and gable walls, sink ½-inch bolts 8 inches long, heads down 6 inches into the concrete. Use 8-foot rafters and cover the building with a watertight roofing material.



Rot-proof Ice-house of Twenty Ton Capacity.

Lay a 4-inch concrete floor upon the natural ground and give it a slope of ¼-inch to the foot in the direction of the drain at the service door. Place a trash strainer in the drain opening. The water in the "goose neck" sewer pipe will act as a seal and keep out the warm air of the drain.

Hinge the small doors in the gables to outside and top of the frames, so that they can remain slightly open at the bottom yet shut out rain.

Storing and Removing Ice.

In storing ice use a thickness of 12 inches of sawdust or 18 inches of marsh hay or straw over the floor and around the sides of the house. Set the ice on edge and pack it tightly together without any filler between the cakes. To prevent blocks from slipping, lay them in courses lengthwise in opposite directions in what masons call "headers and stretchers." When the house is full, cover the ice-pack with sawdust or hay weighted down.

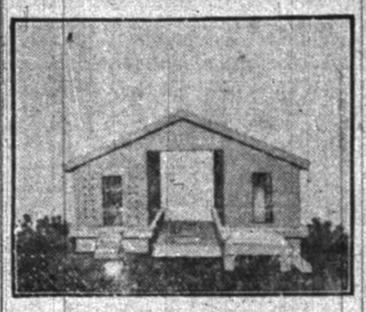
Materials and Cost.

For building this solid wall concrete ice-house, there will be required 27 barrels of Portland cement, 8½ cubic yards of sand, 17 cubic yards of crushed rock and 74 pieces (250 pounds) of ⅝-inch rods 9 feet long. If good pit gravel is at hand, haul 18 cubic yards; no sand will be required other than that in the gravel. The approximate total cost of these materials is $75.00. Such a structure will not rot out and will keep the ice with minimum shrinkage. And by means of ice, not only can more comfort be secured in hot weather, but also fruit, poultry and dairy products can be marketed at a greater profit.

EXTERMINATE THE RAT AND SAVE THE GRAIN

Use of Concrete Recommended.

He who tills the soil is noted for his hospitality the world over, hospitable even toward undesirable visitors. But since the advent of concrete on the farm, the farmer has learned to discriminate among his guests, banishing at least one type of constant and costly boarder—the rat. Practically everywhere on the farm was evidence of this little animal's destructive capabilities, and more particularly in the corn-



Concrete Corn-Crib and Granary.

crib and in the garnary, where it added insult to injury by stealing a subsistence. The type of corn-crib and granary shown, however, is burglar-proof—it protects all the grain. It is built of crete, the solid wall type of construction. Blocks of concrete, writes the Editor, Cement User, 1005 Stock Exchange Bldg., Chicago, are also widely used by farmers for the construction of the corn-crib.

BUILD DAIRY OF CONCRETE

Easy to Keep Clean.

Statistics show that the health of a community may be impaired by impurities in drinking water. The same is true of the milk supply. An unwonted number of lives have already been sacrificed, chiefly among babies by the use of impure milk. Much has been and is being done to improve this condition—to insure purity. Cleanliness in the dairy is therefore of prime importance. If only for its superiority in this one respect, writes the Editor, Cement User, 1005 Stock Exchange Bldg., Chicago, concrete should always be the material chosen,

Concrete Milk House.

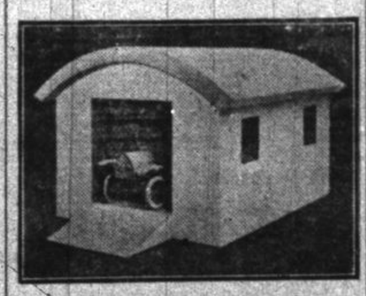
for the construction of the dairy or milk house. Such a building may be kept spotlessly clean and free from all odors to which milk is keenly susceptible.

The accompanying illustration is that of an all concrete dairy, walls, floor, vat and roof, 18 feet long, 16 feet wide, 9¾ feet high, with an additional rise of 5 feet to the peak of the roof.

GARAGE OF CONCRETE

Popular Among Farmers.

There are many buildings on the farm, the purpose and contents of which makes it imperative that their construction be proof against fire and the most recent farm building, the garage, is no exception. It is a small



Concrete Garage.

building, large enough to comfortably accommodate a car—nothing intricate in its construction and concrete is the material best adapted for the purpose. Farmers are consequently building them entirely of concrete.

The type shown, says the Editor Cement User, 1005 Stock Exchange building, Chicago, is of pleasing design, and represents a convenient size for the farmer, 16 feet wide, 20 feet deep. The roof is built curved, with a 12¾ foot radius.

CARNEGIE PENSIONS CRITICIZED.

It is a serious question whether a pension is not an obstruction to the highest teaching efficiency. It is a serious thing to shift the teacher's goal from the making of men and women of great intellectual proficiency to a bungalow and a garden of rose trees. The one class of men who should stand far and away from all such motives, upon whom there can be no possible purchase price, are the teachers in our colleges. The ministers in the pulpits should not surpass them in this. There are not enough of them who starve or suffer for raiment to excite the sympathy of the people. When the rage for money, when the fever for a pension, when the vision of peaceful retirement, enter the veins of our professors, farewell to old time ideals. They are not paid adequately, but a thousand times better poverty and even distress and the passion that burns a living, inextinguishable fire on the altar of every classroom. The poverty of the college professor and the poverty of the student have a helpful, sympathetic relation to each other. If great foundations, instead of attempting to exact degrading conditions for the reward of pensions, would permit colleges and universities to nominate candidates to travel for purposes of study in European libraries, museums and laboratories and to refresh their minds in lecture rooms of the masters of their respective sciences the professors would take care of their old age by being young in their work when they are old. Take the pensions away from before our professors and give them helps to more efficient work. My observation is that they do not ask for pensions. They desire the help to put their sabbatic years into the original foundations of learning.—Chancellor Day of Syracuse University.

TEA AND TOBACCO.

My pipe is food and drink at once, and I know no better example of nature's frugality than the fact that an ounce of tobacco provides me with a meal. Women delight in tea even as men prize tobacco. This difference in taste leads to friction of temper. Drinkers of tea inhale many a disagreeable whiff of tobacco, and lovers of tobacco are driven to accept many an unwelcome cup of tea. I as a sufferer would gladly set on foot a formal league which should compel an armed neutrality and protect the one belligerent from the odor of the delicious pipe and the other from the complaisance of the tyrannous teacup.—Johann Jakob Bodmer.

THE HOSTAGES.

There came three minstrels in the days of old
To the Avaric savage. In their hands
Their own Slavonian citharas they hold.
"And who are ye?" the haughty khan demands.
Frowning from his barbaric throne. "And where—
Say, where your warriors—where your sisters be?"
"We are Slavonians, monarch, and come here
From the far borders of the Baltic sea.
We know no wars. No arms to us belong.
We cannot swell your ranks. 'Tis our employ
Alone to sing the dear domestic song."
And then they touched their harps in doubtful joy.
"Slaves!" said the tyrant. "These to prison lead.
For they are precious hostages indeed!"
—Sir John Bowring.