

# CONSTRUCTION OF DAIRY HOUSE

H. A. RUEHE

Most dairymen realize that in order to produce milk or cream of the best quality it is desirable to have a dairy house so constructed and equipped that the products may be cared for in the most convenient and satisfactory manner



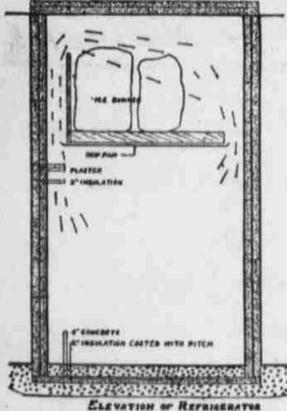
It is impossible to draw a plan of a dairy house that will meet the requirements of every individual case. In order to design a plan properly, it is necessary to know the size of the herd, how the product is to be disposed of (whether as whole milk, cream, or butter), the location of the barn, well, etc. However, there are a few general principles that should be followed in the building of any dairy house.

**Location.**—Although the dairy house should be near enough to the barn to be convenient, it should not be directly connected with the barn because it is then likely to be filled with stable odors which are absorbed by the milk or cream. It is well to leave an open air space of six to ten feet between the barn and the dairy house. Placing the dairy house on the side of the barn opposite the barnyard also lessens the chance of stable odors being absorbed by the milk. Proper drainage from the dairy house is important and must be considered when selecting the location.

**Construction.**—The building material may be drop siding, brick, or concrete, depending upon the investment the builder desires to make. The inside walls should be smooth. Plastered walls are preferable since board walls have a tendency to rot, especially close to the floor. Rotting can be obviated to a certain extent by plastering the walls up to a height of about three feet.

The building should be so partitioned that the milk room, wash room, and boiler room are separate. The rooms should be well lighted by windows, and ventilation should be supplied by an opening placed in the ceiling of each room. Each ventilator should be fitted with some sort of damper to regulate its action.

A solid and impervious floor is essential. A cement floor meets these

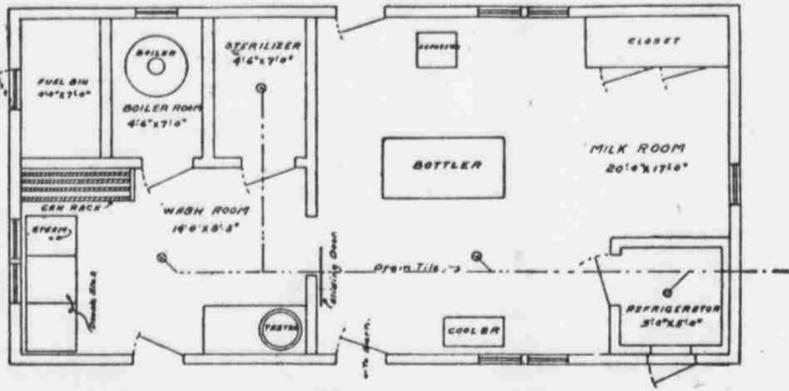


requirements very well. A wooden floor is very unsatisfactory because it is not durable, does not dry quickly, collects filth, and when wet is slippery and hard to work on. The floors should have a good slope leading to drains fitted with proper traps.

**Water Supply.**—An abundance of clean, cold, running water is necessary. If the location is such that water from a municipal water system cannot be supplied, it may be obtained from an elevated tank or by means of a compressed air system.

**Equipment.**—The dairy house equipment depends largely upon the purpose for which the house is to be used. A boiler is the most convenient means of furnishing steam and hot water for washing and sterilizing cans and utensils. An upright boiler of two to four horse power will serve the purpose.

The washroom should contain a sink having a drain board. The drain board may be fitted with steam and water connections so that the cans and pails can be rinsed and steamed after they are washed. It is desirable to have draining racks for cans and pails, and a closet in which to keep utensils. Every dairy house should have a Babcock milk testing outfit, which may be either hand or steam driven. Further equipment will depend upon which of



DAIRY HOUSE FOR BOTTLING MILK

the following purposes the dairy house is to serve, namely: (1) selling whole milk in bulk; (2) making butter or selling cream; and (3) bottling milk on the farm.

The illustrations shown are designed for dairies with as many as twenty-five cows in the herd. For larger herds it may be necessary to build a dairy house having larger dimensions than those submitted. If it is not intended to have the dairy house fitted with a boiler room and a washroom, it may be made smaller than suggested by eliminating that part of the building devoted to such rooms.

**Dairy House for Selling Whole Milk in Bulk.**

The milkroom should contain a coil cooler for cooling the milk as quickly as possible after it is drawn. The milk may then be put into eight or ten-gallon cans and set in the cooling tank, or the preliminary cooling may be omitted and the cans of warm milk placed in the cooling tank. The cooling tank may be fitted with water connections so that the milk can be kept cold by running water, or the tank may be insulated and fitted with a lid so that ice may be placed in the cooling water. The latter is not necessary if there is a good supply of cold water which will keep the milk at a temperature below 50 degrees Fahrenheit.

A hand-separator may be installed in case of the necessity of skimming surplus milk.

**Dairy House for Selling Cream or Making Butter.**

Selling cream necessitates the use of a centrifugal separator and a cooling tank or refrigerator. Making butter requires the additional equipment of a churn, and a table upon which to print and wrap the butter. The cooling tank may be built of a size depending on the amount of material to be kept cool. The cream should be cooled directly after skimming and kept cool until it is delivered or ripened for churning, as the case may be.

A gasoline engine may be installed in the washroom to furnish power for separating and churning. If such an engine is used, the exhaust should be piped through the roof of the building in order to avoid the possibility of the gasoline vapor being absorbed by the cream.

**Dairy House for Bottling Milk.**

For bottling milk on the farm the dairy house should be larger and contain more equipment than is required for the two above-mentioned purposes. A double-compartment sink is convenient for washing and rinsing bottles. There should be a sterilizer for sterilizing all bottles before they are filled. This may be used also to sterilize the milk pails, cooler and the bottler. The sterilizer may be constructed of hollow tile plastered with cement plaster, or of heavy galvanized sheet iron reinforced with angle iron. A drain should be placed in the floor of the sterilizer and a ventilator with a tight-fitting damper in the ceiling. Shelves may be arranged so that they will hold the bottles in an inverted position, or, if cases of the proper kind are used, the bottles can be put into

the cases and the cases inverted. It is necessary to allow the bottles to cool before filling with the cold milk in order to prevent breakage, as well as to avoid warming the milk. A bottling table or small bottler may be used in bottling the milk. A well-constructed refrigerator is necessary for storing the bottled milk until it is delivered.

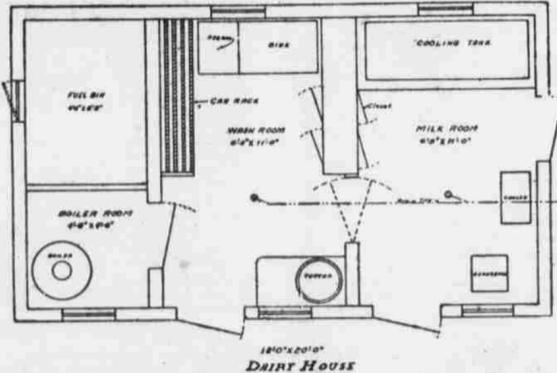
In constructing a refrigerator, proper insulation is extremely important in order to maintain a low temperature and to use ice economically. Either cork board or water-proof lath makes a very efficient insulation. These materials can be obtained in sheets 12 inches wide, 36 inches long and 2 inches thick. These sheets can be applied in the same way as lumber, and hence are very convenient to use.

A refrigerator for storing milk, if built on the ground, should have the floor insulated with two inches of this material and the walls and ceiling with four inches. When putting on this in-

sulation it is best to use two layers and break the joints in each direction. A flush coat of cement plaster should be put in between the two layers and the outside, covered with cement plaster. The doors should be tight-fitting and well-insulated. The ice bunker should be placed in the upper part of the refrigerator and the air shafts should be so constructed as to obtain a good circulation of air. The illustration shows the proper method of insulating a refrigerator and also the construction necessary to give the proper circulation of air.

The milkroom should have some sort of cooler for cooling the milk rapidly to a temperature below 50 degrees Fahrenheit. As the milk is put into the cooler supply can it may be strained through cotton outing flannel or through absorbent cotton held between cheesecloths.

A separator should be installed also for skimming surplus milk or to supply cream for the cream trade.



DAIRY HOUSE

## HOSPITAL ALONG NEW LINES

New York Institution That Will Be Devoted Exclusively to Cases Calling for Diagnosis.

There is soon to be established in New York the first diagnostic hospital in this country, which will perform in the highly specialized medicine of today the function of the old family physician of 50 years ago, says the New York Times. It will look over a patient suffering from an unidentified ailment, find out what is the matter with him and direct him to a specialist if he can afford it. If not, he will be sent back to the general practitioner under whose care he has been, with a complete diagnosis of his disease, a plan for treating it suggested by competent specialists, and references to recent literature on the subject.

The officers of the New York Diagnostic society, which is planning the new institution, are Dr. M. Joseph Mandelbaum, president; Dr. De Witt Stetson, first vice president; Dr. Otto Hensel, second vice president; Dr. Julius Auerbach, treasurer; Dr. Monroe Kunster, secretary. There are about 300 physicians and surgeons among the associate members. About \$100,000 has already been raised by the building fund committee, of which David Frankel is chairman, and only \$50,000 is still required to complete the sum needed for buildings and grounds, which will be in a central part of Manhattan.

It is hoped that the institution will be self-supporting, and Doctor Mandelbaum has worked out a plan of installment payments which he thinks will bring about the result. "I know this will appear startling," he said, "to those who are not in the habit of looking at these matters from the standpoint of dollars and cents. But this is a practical plan and therefore must be considered from the most easily applied financial basis. This method of payment will be especially for those who

are wage earners, whereby if their application for diagnostic services is approved by their employers or others equally responsible, a method of small periodic payments will secure for them the very best diagnostic skill."

The need for such an institution was first pointed out by Dr. Charles H. Mayo in an address before the Catholic Hospital association of Milwaukee. Doctor Mayo expressed the opinion that the one great present day need in the direction of hospital advancement was a hospital devoted exclusively to diagnosis.

### Pattens.

Americans find it more difficult than the English to understand what Dickens means when he says in "David Copperfield": "Women went clicking along the pavement in pattens." Pattens were an abbreviated form of stilts. The word is also used by builders as the name of the base of a column or pillar, and so, architecturally, the pattern is the support used by a woman to keep her out of the water and mud. From this architectural use has come the secondary application of the word, meaning an arrangement attached to the shoe, so that the walker is raised three or four inches above the solid earth. If the mud and water did not exceed that depth, the shoes were thus kept fairly dry. It appears that pattens were not worn solely by the rich, but were luxuries indulged in by the very poor. In speaking of a person who was not especially speedy, Ben Jonson uses the comparison, "You make no more waste now than a beggar upon pattens." In the ballad of "Farmer's Old Wife" occurs this startling expression: "She up with her pattens, and beat out their brains."

### Altogether Different.

There are lots of smart people in the world, but smartness isn't always intelligence. Smartness is something a fellow may have to show. Intelligence is something everybody can see.

# IN THE LIMELIGHT

## AN ACCOMPLISHED EMPRESS

Zita, the new empress of Austria-Hungary, from her early days has been studious and is an accomplished musician and well versed in literature, history and philosophy. She also is fond of society and is a graceful dancer.

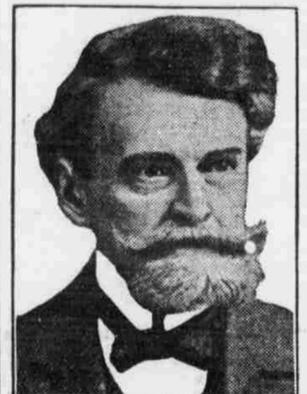
Empress Zita was born in the Villa Reale at Pianore in the Italian province of Lucca, May 9, 1892, the daughter of Duke Robert and Duchess Maria Antoinette of Parma. She is of Bourbon descent. Her early training was in the hands of the Marquise Della Rosa.

Later she entered a convent at Zangbert, where she presided now and then as organist in the chapel.

After her father's death, Princess Zita in 1908 spent some time in the Hyde convent, Isle of Wight, where her sister, Princess Adelaide, is a nun. Here, among the French sisters who had been compelled to leave France owing to the church reform law, she studied music, literature, Latin, history and philosophy. Princess Zita made the acquaintance of Archduke Charles Francis at Franzensbad, Bohemia, in the spring of 1909, while the guest of the Archduchess Marie Annunziata, her cousin.



## SECOND RICHEST AMERICAN



W. A. Clark, former United States senator from Montana and mine king of the West, is believed to be fast overhauling John D. Rockefeller, oil king, as the richest man in America. War prices on metal have enormously increased Clark's fabulous income. One difference between Clark and Rockefeller is that Clark's holdings are in his own name. His intimates declare he could raise \$100,000,000 in cash in 24 hours and that he probably is the only man in the United States who can.

Clark started his career as a bull team driver in Montana and as a peddler of spices, baking powders and other household supplies in the early days of Butte, Mont. He was in on the first whack at the "billion-dollar hill" in Butte. At seventy-six years of age he owns extensive mining operations in Montana, Arizona, California, Michigan, oil properties in Montana and the Salt Lake railroad line from Butte to Los Angeles. United Verde, the Arizona copper mine for which Clark recently refused an offer of \$75,000,000, is paying \$2,000,000 a month. His Butte properties, though comparatively small, yield enormous wealth. Every day he receives a telegraphic report of what is done on each of his properties and thus he keeps posted on all operations.

Clark is not close with his funds. He owns a \$15,000,000 home in New York city and a \$10,000,000 chateau in Paris, the adopted home of his children.

## BABY OF THE SENATE

"Joe" Wolcott of Delaware, who defeated Col. Henry A. du Pont last fall for the senate, is the "baby" of the upper house.

Rightly his name is not "Joe;" It is Josiah Oliver Wolcott, and he comes of an old family. In his veins flows the spirit of colonial times, the traditions of the plantation, the love of public service.

If there be such a thing as a real American type it is represented in this youngest member of the United States senate. Down in Delaware there is little of what is called "foreign influence," and in the quiet town of Dover, where he was born, affairs have run along in the same channel for years and years, untouched by ideas brought by recent comers. It is the old type of Americanism that he represents.

Josiah Oliver Wolcott was born in Dover in 1877. His father, James L. Wolcott, was chancellor of the state of Delaware. His mother was Mary Mills Goodwin. Wolcott went to the public schools, and in 1896 came out of Wilmington Conference academy and went to Wesleyan university, at Middletown, Conn.

He had to work his way through the university, but got his degree in 1900 and went back to Dover to study law. He became a good trial lawyer and a good talker. He was made a deputy attorney general by Andrew C. Gray in 1909. In 1912 he was elected attorney general of the state, running ahead of the ticket.

It is no small thing to be the youngest senator of those United States. Luke Lee of Tennessee consented not to go back this time, so that his youth will not interfere with Wolcott's claims to the baby seat. And Senator Wadsworth is just a month and a half older than Wolcott.

## SHERMAN LELAND WHIPPLE



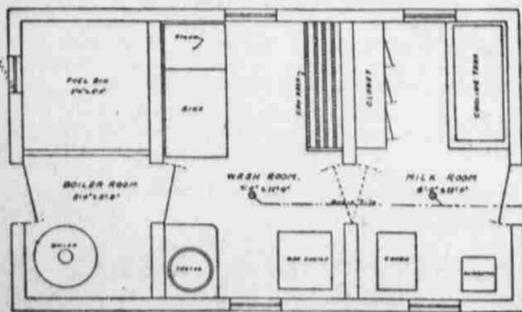
Sherman Leland Whipple, the Boston lawyer who was selected by the house committee on rules to conduct the "leak" investigation regarding President Wilson's peace letter, has long been regarded as one of the ablest and most astute lawyers before the courts of Massachusetts.

For nearly 25 years Mr. Whipple has had the reputation of being one of the shrewdest members of his profession. As a cross-examiner, he is looked upon by bench and bar alike as having few equals and no superiors.

Mr. Whipple is in the prime of life, being fifty-five years old. New Hampshire born and bred, he was educated at Yale, graduating in 1881, before he was twenty years old. After teaching for a year he returned to Yale and graduated from the law school in 1884.

Mr. Whipple has made several speeches and addresses on the subject of reforming the courts before public bodies and bar associations of late. The administration of the criminal laws, Mr. Whipple contends, is a disgrace to the country. He says it is archaic.

He takes the ground that the guilty man should not be shielded and that a lawyer is not justified in so doing. He goes so far as to say that if a man confesses his guilt to a lawyer a lawyer ought to go into court and inform the judge. He predicts that the time will come when trials will be conducted to further justice and not cheat it.



DAIRY HOUSE FOR MAKING BUTTER