

# METAL ROOFS REDUCE FIRE HAZARDS ON THE FARM

It is generally accepted that of the five hazards to which farm buildings are exposed, and which may be classified as external in nature, lightning is the most important, with wind-borne burning brands occupying second place. Of less importance are the hazards of fire communication by radiation from adjacent fires, and communication with other fires by connecting links of combustible materials. Causes of fire which may be classified as internal in origin will not be considered here, as they are seldom, if ever, influenced by the materials and construction of roofs.

When a building is roofed with metal sheets in electrical communication with one another, and the roof as a whole is connected by a conductor, adequate in carrying capacity, and with joints of permanently low resistance to a good earth contact, such a roof constitutes an effective electrostatic shield over the entire top of a building, and there is reason to believe that it constitutes the most effective lightning protection now available and economically practicable for buildings of ordinary construction.

With respect to burning brands from other fires, particles of soot from chimneys burning out, etc., it may be said first of all that sheet steel or iron is completely and absolutely incombustible, a distinction shared by no other roofing material of comparable cost. It may be pointed out further that a sheet metal roof properly applied has no cracks or crevices through which sparks may be driven by the wind.

**SHEET METAL FOR ROOFS.**

As regards the capacity of sheet metal roofing in protecting underlying wood from ignition by heat radiated from adjacent fires, it would be easy to get into a theoretical discussion of the relative parts played by reflection, convection, conduction, and reradiation from both inner and outer surfaces. Recent tests of sheet metal clad buildings of the garage type indicate that sheet metal gives unusual protection. In one case a sheet steel wall was placed two feet from the garage being tested. Oil-soaked waste hung on the inside of this sheet steel wall did not even smoulder. This would indicate that sheet metal has a relatively high value in protecting underlying wood from ignition temperatures.

**REDUCE THE HAZARD.**

Another element entering into the sum total of the influence of roofing on farmstead fire hazards is the extent, if any, to which a roof can confine a fire, regardless of its origin, to the building in which it starts and reduce the hazard to adjacent buildings. In this respect sheet steel and iron are in a class by themselves. Not only are they completely incombustible, but they are infusible, non-fragile, and capable of retaining to a considerable degree their mechanical strength at the highest temperatures encountered in an ordinary building fire. As contrasted with the shower of sparks and embers, and the increased intensity of burning which commonly occur when a combustible roof collapses, a sheet metal roof, particularly if of the locked seam type, tends to hold together and act as a blanket, both before and after it falls, a characteristic shared in a similar degree by no other practicable building material.

In conclusion, it may be said that the combination of lightning protection, spark or ember resistance, resistance to radiant heat, and a relatively high ability to resist the spread of fire within should be given due weight, together with other characteristics going to make up the desirability of a roofing material, by agricultural engineers when their advice is sought as to roofing practice.

**Farmers Must Plan Ahead.**

Once again the farmer is mapping out his work for the year, planning his crops, deciding what fields shall go into this crop or that, how many acres of this crop or that he shall plant. As a general proposition, it may be laid down that the better the farming he has been doing, the more nearly all these matters have already been decided for him by his farming of the past year and the years before that. In a word, if he had been doing really careful and systematic farming, the crops that will go on most of his fields, the acreages of most of his crops, are even now pretty well determined for him.

There is something wrong with his farming program if in laying out this year's crops he feels that he need give heed only to the returns from this year's labors. If he does not take into consideration as well the effect of this year's cropping upon the fertility of his farm and its ability to produce next year and the years after, there is something wrong with his method of planning. In such case, he is trying to make a one-year business out of what is essentially a continuing business, trying to divide from each other causes and effects that cannot be separated.

**The Valentine.**

He sent her a box of roses red,  
Pulsing with love for lady fair,  
They would meet that night at the ball, he said!  
If her answer was "Yes", his rose e'd wear.  
He called that day in his automobile,  
His gifts were costly and rich and fine,  
His stocks and bonds were of gold and steel,  
And he offered all to his Valentine.  
And another came in the people's car,  
With a dainty book that was marked with grace,  
Fearlessly seeking his love afar,  
With a love that shone in his lifted face;  
Manly and tender, and honest and true,  
Unafraid in the world of men,  
And what could my sweet Milady do  
But give him his answer there and then?

## Sunday School Lesson

February 12. Making Our Home Christian, Ephesians 5: 25 to 6: 4. Golden Text—Let us love one another; for love is of God.—1 John 4: 7.

**ANALYSIS.**

I. THE DIFFERENCE CHRIST HAS MADE WITH RELATION TO HUSBAND AND WIFE, 5: 25-33.

II. THE DIFFERENCE CHRIST HAS MADE WITH RELATION TO PARENTS AND CHILDREN, 6: 1-4.

**INTRODUCTION.**—One of the first results of the introduction of Christianity into the previously heathen world was to create a new ideal of the home. The relations of husband to wife and of parent to child in Greek heathen society had come to be very loose. There was no doubt a certain amount of natural affection even in the heathen world, but there was no reverence. Husbands often treated their wives as though they were slaves or poor beasts of burden, and children were neglected. If they were weakly, they were often left to die without pity. On the other hand, children were not brought up to honor and respect their fathers and mothers. Only among the few was there anything of the beautiful home life which we know.

But with the coming of the gospel, all this changed. New values came to attach to marriage and to parenthood. The home was lifted on to a new plane through the realization of God as Father and the Lord Jesus Christ as Son. Father discovered a duty to be kind and loving like God; sons to be obedient and reverent like Christ. Wherever St. Paul went, he strove to create a new sense of home duties and relations. We can see this by the present passage in Ephesians, which forms our lesson for to-day.

I. THE DIFFERENCE CHRIST HAS MADE WITH RELATION TO HUSBAND AND WIFE, 5: 25-33.

V. 25. The husband is to love his wife, not to tyrannize over her, as the heathen often did, still less to leave her or to divorce her, since Jesus had forbidden divorce, Mark 10: 9, Matt. 19: 6. Even philosophers among the Greeks doubted sometimes whether women had souls. So there was cruelty and neglect on a great scale. But now Christ's love for his Church creates a new ideal for the husband in relation to his wife. If we think of what a sacrifice Christ loved his redeemed ones when he died on the cross, it will put gentler thoughts into our hearts, and we will not only be kind to our dear ones, but we will reverence them. Men who have been selfish will become chivalrous and noble, and the home will be a different kind of place.

Vs. 26, 27. Christ loved his Church in order to make it holy. The sacrament of baptism, by which we enter into the church, indicates that we should live purified lives. The words spoken at baptism, namely, "In the name of the Father and of the Son and of the Holy Spirit," declare that we belong not to ourselves but to God. Christ wishes his church to be like a beautiful lady, shining in the light of God. He does not look for faults in it; like spots or wrinkles. He sees only the beautiful qualities of his church, and his purpose is that it should always be "holy and without blemish," like the sacrifices which are offered to God in the Old Testament.

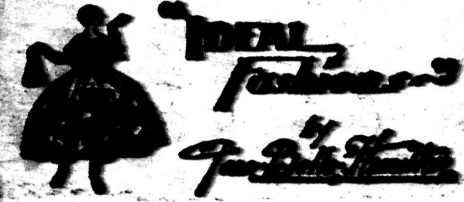
Vs. 28-30. This love of Christ shows how the head of the house should regard the lady who is his companion on life's journey. He, too, should not be fault-finding, but chivalrous and generous. A man is not to make a difference between himself and his partner. Selfishness is a cruel tragedy in the home. But love, following the example of Christ, brings brightness into faded eyes, smooths the cruel traces of care away and transforms the home into a place of genuine happiness.

V. 31. This is the reason why God at the beginning said (Gen. 2: 24) that when a man marries, the obligations of the new home are to take the first place in his affections.

Vs. 32-34. Paul says that the example of Christ's love to his Church is a profound "mystery," that is, indicates a truth which only the Spirit of God reveals to human hearts. None but those whom Christ has awakened to spiritual truths can appreciate the spiritual illustration. Nevertheless, even simple Christians can see that it means that husbands and wives should look on their mutual relations as sacred relations.

II. THE DIFFERENCE CHRIST HAS MADE WITH RELATION TO PARENTS AND CHILDREN, 6: 1-4.

V. 1. Christ was a perfectly loving



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Son to his Father in heaven, and his example means that sons and daughters in the home should show obedience to their parents. Children are not to be grudging or discontented or peevish, but are to render willingly whatever service is required of them by father or mother.

Vs. 2, 3. Paul reminds the children of the fifth commandment. God says, "Honor thy father and thy mother," and St. Paul notes that this is the first commandment to have a promise attached to it. And the promise is God's blessing. Only those children can ask for God's blessing who are reverent and obedient in spirit. We should not think that we have a right to live happily and long if we do not submit ourselves to the duties required of us.

V. 4. But Paul knows that parents need to show a proper sympathy with their children and not carelessly to provoke them to revolt. He reminds them that they are responsible for the religious upbringing of the young, and insists on the children being taught to rule their lives by the fear of God, and on their being instructed in God's Word. The result will be a truly Christian home.

If your heating plant is hot water or steam, be sure all conducting pipes are well insulated. One home-owner who had a hot-water heating plant wondered why the basement was the warmest part of the house, until he discovered that the pipes were covered only with paper. This was torn off and the regular cellular type of insulation, obtainable in units with bands for attaching, put on instead.

# QUEEN OF HEARTS ST. VALENTINE'S DAY

BY JEAN HATHAWAY.

Valentine parties are the latest of the season! The Queen of Hearts—the hostess at the party—invites her Court and from the moment they are received at the Throne by Her Majesty in gala valentine costume, till the last great night is said, all is fun and frolic. After the Queen has decided upon her list of guests she issues red heart-shaped invitations with the following lettering in white ink:

Will You Please Come To My Valentine Party at ..... o'clock. Date ..... Queen of Hearts. Price of admission: One original Valentine.

The hostess is a very modern queen indeed, wearing a colorful paper slip-over made from crepe paper. This is worn over her dress, is very easy to make and most appropriate for the occasion. And no queen could ask for a more original crown than the large red heart which she wears so jauntily. Red, the color of all true lovers, is the keynote for valentine decorations. A large red valentine, made poster-fashion, is hung on the front door and the house is decorated with red hearts and hands of red crepe paper. Bare branches, hung with crepe paper moss or real out-of-doors stuff if you can get it, and here and there a red cardboard heart, stand in nooks and corners. Lamps are shaded with red crepe paper and red candles are used here and there.

The original valentines are taken up at the door and unwrapped when all the guests have arrived. The one which is voted best draws a small prize. A booby prize creates lots of laughter.

If there is to be dancing at Court, bidding for partners is a source of merriment. Each girl is given an assortment of small articles to use as "money" (candy hearts, buttons, beans and so forth). The auctioneer puts up packages of various sizes and each girl bids for them. The auctioneer decides whose money is of the most value and writes her name on the package. When all the packages have been purchased they are distributed. When opened, each is found to contain two paper caps, on one of them the name of the man who is to wear it and so become the girl's first dance partner. This same idea is adapted to choosing supper partners.

To mix the crowd and break the ice, there are valentine verses. The girls draw hearts and the boys arrows from a decorated basket. On each heart is written a word and on the arrows words that rhyme with those on the hearts. Partners are found by matching rhyming words. Each couple is then given a piece of paper and a pencil and asked to write a valentine verse of two lines using the two words for the last words of the lines. After the verses are collected they are read aloud and suitable prizes awarded to the co-authors of the best verse.

**GAMES FOR THE PARTY.**

A Heart Race is jolly. Each contestant is given two red hearts about twelve inches in diameter, one for each foot. The racer places one heart on the floor and steps on it. At a given signal the other heart is put in position for the other foot. This race proceeds, a heart-step at a time, to a given point and back. The hearts only may be stepped on and each must be lifted at each step and placed again on the floor. Failure to follow these instructions puts a contestant out of the race.

"Two Hearts That Beat As One," is another St. Valentine's game. Fasten a sheet of white paper to the wall and paste a large red heart at the centre. Give each guest a heart of the same size. Let each person be blindfolded and in turn try to pin the heart directly over the one on the paper.

**VALENTINE FOOD.**

The spirit of St. Valentine's Day is still further carried out when refreshments are served. A basket, decorated with red crepe paper, adorns the centre of the table and a streamer of red leads to each place. When the streamers are pulled at refreshment time, each guest draws an individual heart-shaped cake, iced with white

icing and decorated with tiny red hearts or red cinnamon candies. These cakes contain the prophetic emblems; a ring for the first to be married, tiny horseshoes for good luck, coin for the first millionaire, thimble for single blessedness. Heart-shaped sandwiches, red lemonade, red candies and ice cream topped with a maraschino cherry complete the refreshments "fit to eat before a Queen."

At each end of the table is a Valentine made of paper lace doily with appropriate illustration cut from St. Valentine's crepe paper, finished with a fringe and mounted on wrapped wire. Place cards are heart-shaped wire frames standing on a spiral base and decorated with lovers' heads cut from the same crepe paper.

Nut baskets or ice cream cups are the plain white ones covered with a fringe of paper and trimmed with a small red cardboard heart and gold arrow. On the girls' cups a boy's head is mounted and on the boys', a girl's head.

The Queen of Hearts with deft fingers is supposed to make her own tulle, posters, valentines, favors, and favors from valentine crepe paper.

If one does not care to spend money for a little party like this, ingenuity and a bit of work will do wonders—and what we make ourselves we always enjoy!

**Valentine Party Favors.**

Those who are arranging a valentine party for children or older persons will find the old-fashioned motto candies useful in many ways that add to the party fun.

These may be arranged in a border around a white cake already cut into sections. They should be dipped on one side into warm fondant so that they will "stay put." Any small cakes may be similarly decorated.

Tiny lace-paper doilies may make party place cards when put together double. A very thin ribbon will serve to tie these, run in through holes like lingerie. Place inside these doilies the names of those who are to be partners, writing the names on a slip of paper. Tie the ladies' names in pink and the gentlemen's in blue ribbon. Paste on the outside of each little valentine of lace-paper circle an old-fashioned motto candy. Put these on a plate and pass them around. They look like very charming little valentines.

A motto candy-hunt will add to the sport of the occasion. You will also need to have another valentine game, which may be made with a sheet that is edged with wide kitchen shelf paper and hung at one end of the room. This is to suggest a lace-edged paper valentine. Place behind the sheet that is hung like a motion picture screen, flat, an electric bulb light.

Give out numbered cards and pencils to each guest. First let the ladies guess and have the gentlemen write the numbers on the "stage." One at a time, numbers are announced, let each gentleman's shadow be thrown by the light on the valentine screen. Ladies then write down his name. The one who has made the most correct guesses should receive a large box of candy.

In turn, ladies take their turn behind the screen also and another prize is awarded to the gentlemen. This is a simple, amusing way to get up a valentine party quickly. Children as well as grown-ups will enjoy it.

The pipe entering the furnace for box, for heating water, should be only three or four inches above the grate, and there should be ten or more inches of the pipe exposed to the flames. The water will heat faster if this pipe runs horizontally instead of vertically, inside the furnace.

Many farmers have found that if the storage tank is placed in the hay-mow the danger of freezing in winter is reduced to a minimum. This can only be done, however, when the mow is considerably higher than the barn. Of course the tank should be amply supported by posts underneath, and it should not be too large.

When they mean less static, cold winds are even welcome to the radio fan.

## MUTT AND JEFF—By Bud Fisher.

## Poor-Mutt, the Twins Are Driving Him Cuckoo.



Ma... rich... Pur... nou...  
A del... ideal... desir... the...  
Lv. D... C... Ar. J... M... Ar. S... T... Throu... tion a...  
Lan... Throu... the u...  
Man... partners... sized c... try. A p... man an... g... but... nations... set to s... better far... his fathe... In mos... Rotary, K... tions, s... The s... tion of s...  
S... and...  
T...  
"Les" mu...  
Thoug... Mr. Boo... George... Bro...ville... he has en... that he o... told in li... years my... hips, ach... Mr. Boo... entirely a... that kept... "My ca... the help... tually he... hands we... write my... for I got... agony, w... tremble a... get any b... far below... "Three... T... had help... bevo suc... those Tan... stopped, I... could e... came mo...