-Thomas Doubleday.



banquet, at least so far as time was concerned. The chief topic of conversation was, of course, the weather, and the

ready, did you say, Fannie? Well, I'll go right in. And you must come,

The invitation was accepted, and the simple 12 o'clock dinner finally

assumed quite the proportions of a

Mr. Dole, and have a bite with

local prophet listened, at first with tolerance, and finally with keen interest, while his guest expounded the methods of the Weather Bureau. So absorbed did the little company become in the talk that no one no-

ticed the lapse of time until darkness began to steal upon them. Then Grandmother Lufkin, mindful of hopsehold duties, peered anxiously through her spectacles at the face of the tall clock in the corner, while her husband sprang up from the table and hastened to the window.

"There's a shower coming, true as I live!" he declared, in a voice pitched to its highest key.

As a matter of fact, the shower, when it arrived, proved to be a rather small affair, but it served to justify Mr. Lufkin's frequent "I told you so," and to establish more completely than ever his confidence in his forecasting ability.

In that confidence he still abides. "I've got a grandson," he is wont to say, "or grandson-in-law, I suppose you'd call him, that's connected with the Govr'ment. He works in the Weather Bureau, helping get up those predictions. Well, it's quite a science; and taking the country, by and large, it's amazing how well they hit it. But when it comes to predicting for just Hardhack Corner and vicinity, my grandson has to own up that the Gover'ment can't hold a candle to me. "-Youth's Companion

#### cattle, for they are apt to annoy the cattle, but a few horses put in the

### Three Times as Much Used Each Year as the Forest Grows.

OUR DISAPPEARING TIMBER.

Every person in the United States s using over six times as much wood as he would use if he were in Europe. The country, as a whole, consumes every year between three and four times more wood than all of the forests of the United States grow in the mean time. The average acre of forest lays up a store of only ten cubic feet annually, whereas it ought to be laying up at least thirty cubic feet in order to furnish the products taken out of it. Since 1880 more than 700,000,000,000 feet of timber have been cut for lumber alone, including 80,000,000,000 feet of coniferous timber in excess of the total coniferous stumpage estimate of the census of 1880.

These are some of the remarkable statements made in Circular 97 of the Forest Service, which deals with the timber supply of the United States and reviews the stumpage estimates made by all the important authorities. A study of the circular must lead directly to the conclusion that the rate at which forest products in the United States have been and are being consumed is far too lavish, and that only one result can follow unless steps are promptly taken to prevent waste in use and to increase the growth rate of every acre of forest in doubt, although the young people, in the United States. This result is who were especially interested in the a timber famine. This couptry is picnic, were inclined to believe that to-day in the same position with re-"Uncle Lufkin was a little off that gard to forest resources as was Ger-This opinion was strength- many one hundred and fifty years ened the next morning, for never did ago. During this period of one hundawning day give fairer promise of dred and fifty years such German States as Saxony and Prussia, partic-"Do you really believe, Grandpa, ularly the latter, have applied a policy that there is any danger of showers?" of Government control and regulation am an assistant observer of the asked Fannie, pausing irresolutely in which has immensely increased the long. The lumber is two inches thick productivity of their forests. broke in her same policy will achieve even better grandmother, impatiently, "don't you results in the United States, because we have the advantage of all the lessons Europe has learned and paid one board two inches by ten inches daft about the weather. It's going for in the course of & century of the-

Lest it might be assumed that the rapid and gaining depletion of American forest resources is sufficiently accounted for by the increase of population, it is pointed out in the circular that the increase in population the increase in lumber cut in the same period. Two areas supplying the Northeastern States in 1870 and the Lake States in 1890. To-day the Southern States, which cut yeilow pine amounting to one-third the total are undoubtedly near their maximum. The Pacific States will soon take the ascendency. The State of Washingthe front, and now ranks first of all

At present but one-fifth of the total forest area of the United States is embraced in National forests. The remaining four-fifths have already passed or are most likely to past into private hands. The average age of the trees felled for lumber this year is not less than one hundred and fifty years. In other words, if he is to secure a second crop of trees of the same size, the lumberman or private forest owner must wait, say, at least one hundred years for the second crop to grow. As a rule, such long time investments as this waiting would involve do not commend themselves to business men who are accustomed to quick returns. But the States and the Nation can look much further ahead. The larger, then, the area of National and State control over woodlands, the greater is the likelihood that the forests of the country will be kept permanently

acre.

land at one, two or three feet in depth than that of the late, the great-Professor George C. Humphrey, of est difference in its favor being found Wisconsin Experiment Station, says in the surface root. that next to corn sorghum is very

When the moisture contents of this particular soil falls below twelve per cent, the leaves of many plants curl early in the day, and the plant turns a yellowish color and is more or less checked in its growth.

unquestioned. It can be cut and Nitrification takes place with gradually decreasing intensity, at allowed to get too coarse, and will one, two or three feet in depth. serve as very good hay, the leaves

The seasonal average amount of available nitrogen found for the early plowed land in the surface foot is twice that found for the late at the same depth.

The available nitrogen in the surface foot of the early plowed field is four times that found in either the second or third foot, early or late whether it is good practice to run

That the mean soil temperature different classes of stock together in for the early plowed land is in all cases during the entire season lower than that found for the late plowed.

The low mean soil temperature found for the early plowed land is cattle pasture will help clean up the accompanied throughout the season by a greater amount of moisture and available nitrogen than is the case with the late plowed, which has the higher temperature.

In many cases a high temperature is followed by a high rate of nitrification, while in others it is not, thus suggesting that the process of nitrification is more or less dependent upon what may be called the rate relation between the water content and the temperature of the soil, provided other factors are favorable.-Richmond Times-Dispatch.

### Pea Vine's Feeding Value.

The feeding value of pea vine hay is becoming more generally recognized. The failure to secure a stand of red clover has materially enhanced its value in the eyes of the farmer, for it is really the best substitute for clover hay that has yet been found. Considering its feeding value alone. it is much richer in digestible protein than clover hay, and for certain purposes on the form is more valuable.

Pea vine hav is splendidly adapted for feeding to sheep and to cattle whether milk or beef production be the object in view. It is not so well adapted to feeding to horses and mules, especially to horses, because it is dusty and is supposed to be one of the principal causes of "heaves."

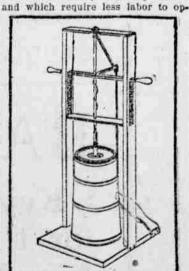
While it is true that clover hay is a fertile cause of heaves, it is not so likely to produce the disease as pea hay. Many have objected to using pea hay for horses because it has been said to be a frequent cause of death.

Investigation has generally shown that death was only followed when moldy pea hay was fed, and as the feeding of timothy or clover hay under the same conditions would as fair to attribute any injurious effects

to properly made and cured pea hay. More or less of a good quality of pea hay has been fed to horses and past three years without injuring ef-Experiment Station.

# Improved Butter Churn.

The old-fashioned hand butter hurn, so long associated with fresh air and country life, seems destined to be overtaken by others up to date



Foot and Hand Power Churn.

erate. The old-fashloned churn was a clumsy affair and not a little "elbow grease" was required to manipulate it. In the illustration is shown one of newer hand churns, which nevertheless contains most of the principles of the older churns. The only change is in the application of the power mechanism. In this machine the power is so placed that little effort is required to operate it. A foot pedal is added, and the hand power is entirely different from the old method. Instead of forcing the pading, June 3, all the plots being cul- dle up from the churn after every descent with the hands, springs are placed beneath the hand grips which do the forcing automatically. It would be possible to operate this would be possible to operate this churn and at the same time read a book or newspaper. A Kentucky treating of appendicitis. All phases were is the inventor. Philodolphia man is the inventor. - Philadelphia of every case he can hear of are

The Common House Fly.

Whence He Comes and Whither He

By HAROLD SOMERS, M. A.

The common house fly (Musca Domestica) is a creature of such secretive habits that although from the very earliest times he has been with us, and the most ancient writers have mentioned and described him, still very little was known of his origin and history.

It remained for the eminent Boston biologist, Dr. A. S. Packard, in 1873, to make known his origin, habits and transformations from the egg through the larva state with its two changes to the puba state, then to the perfect fly.

Near the first of August the female lays about 120 eggs of a dull gray color, selecting fresh horse manure in which to deposit her eggs, and so secretes them that they are rarely seen; it takes only twenty-four hours for them to hatch into the first form of larva a white worm one-quarter of an inch is length and one-tenth in diameter. They feed on the decaying matter of their environment, and two changes or casting of skins occur before they turn into the pupa state; this change comes very suddenly. The entire period from the egg to the pupa state is from three to four days. If moist food is wanting when in this condition they will eat each other and thus decrease their number. Heat and humidity greatly assist their development, as upon careful computation each pound of manure around stables and outhouses develops under favorable conditions over 1000 flies. It is no wonder that where these conditions exist we have such a veritable harvest of the fly pest.

In the pupa state when the fly is about to emerge theend of the pupa case splits off, making a hole through which the fly pushes a portion of its head, but here it seems to encounter a difficulty; the pupa case is too stiff and hard to pass through, but nature comes to its assistance, and a sort of bladder like substance forms behind the head, which swells out apparently filled with air; it acts as a means of pushing away the pupa case and releases the fly. When the fly first emerges it runs around with its wings soft, small and baggy; it is pale and the colors are not set; its head rapidly expands and the bladder formation passes away—within a few hours the wings grow and harden; it is now a perfect fly.

The whole time from the depositing of the egg to the perfect fly is not over ten days in duration. Many persons who observe small flies in midsummer suppose they are the young, but such is not the case; they are flies that are imperfectly nourished in the larvae and pupae states, and do not attain full size: in fact. they are the dwarfs of their race. The male fly differs from the female in the front of the head between the eyes, being at least one-third narrower, though in size the female is rath-

er smaller. Adult flies like most other creatures have parasites of minute size that prey upon them; these can often be seen as presenting small red specks over the body of the fly.

Another enemy in the form of a fungus often attacks the fly in the early autumn. This makes its appearance as a white swelling and the white spores of the disease can be seen penetrating the body of the fly. which it finally distends and rup-

The fly hibernates in winter, but with his usual secretive habit it is very difficult to find him in his winter tumn the flies, feeling the cold, seek temporary warmth in houses, and clustering together form bunches in the corners of walls and other places. They are then sluggish and not so active as in the warm weather. However, they do not make a permanent stay indoors, but on the first mild, sunny day seek the windows to get out and find their permanent winter hiding place. Many prefer to make their homes in the roots of grass on lawns, where they hide themselves so effectually that the ice and snow of winter does not destroy them in their hibernating state. If in the first warm days of spring when the snow is gone and the grass on the lawns becomes dry and warm, long before the vellow dandelion shows its head. a close observer may see numbers of files crawling up on the grass to get the welcome sunshine, their wings standing out stiff and useless, but they soon acquire the power of flight in the warm rays of the sun. A great

they appear in the homes of men. in recent years the medical profession have demonstrated that while the fly itself does not propagate disease, it is one of the most industrious carriers of disease germs, which by contact adhere to his feet, hairy legs and body, distributing them to innocent victims.

many days, however, elapse before

If every housekeeper could know all these interesting facts, which have never before been brought to their attention, they would realize the importance of securing the very best fly

# A New Industry.

Australia has started a new industry. Nearly half a gallon of oil possessing lubricating qualities has been obtained at Gligandra, N. S. W., from 73 pounds of rabbit skins with-out lessening the commercial value of the latter.

W. F. Fernald of Old Orchard, Me.,

A CONTEST WITH THE WEATHER BUREAU.

after attending to the slight errand cialist. Every day the rival forecasts that had brought him to Lufkin's store at Hardhack Corner, lingered for a little chat with the proprietor, who looked as if he might be a "char-

acter." As the visitor had approached the store he had seen a letter carrier driving away from it, and this fact suggested a conversational opening that has come to be a favorite with

the summer visitor. This rural free delivery is a great

institution," he began, graciously. But he perceived at once that he had made a mistake. The reply elic-ited was in itself noncommittal. "Mebbe 'tis and mebbe 'tain't." But the scorn that the old storekeeper continued to throw into his tone left no doubt as to his attitude toward this innovation in country life.

For more than thirty years Moses Lufkin had been the postmaster at Hardback Corner. The salary had not been large, but, as he had often been heard to say, the honor was something. Besides, as "trade follows the flag," so does it come to the store in which the Government postoffice is domiciled.

Furthermore, in the little gatherings of farmers who came for mail and remained for conversation, Mr. Lufkin had been something of an

oracle. But now all this was changed. The postoffice had been abolished, trade had fallen off somewhat, and worst of all, the ex-postmaster's authority, even in that special subject which he had made a lifelong study, was no longer unquestioned. No wonder he could not be roused to enthusiasm over the blessing of rural free deliv-

Perceiving this, the young man hastened to change the subject, selecting a topic this time that is supposed to be safe on all occasions. "Ah, I see that we are likely to have another fine day to-morrow," he said, glancing at a thin sheet of paper lying on the counter.

Well, if we do, it won't be because that thing says so," returned the old gentleman, as testily as before. verily believe there's been more hay sp'iled in this vicinity since that rural | ters carrier began to bring those predictions than there had been before, for I don't know how long. Why, if I'd made as many mistakes in twenty years as the Gover'ment has in two.

I'd have given up trying altogether! "Indeed! I judge then, that you are something of an expert yourself in forecasting the weather."

Well, I ought to be. I've been studying it for going on forty years."
"It is certainly quite a study," said the young man. "At any rate, I have

Then, answering a look of inquiry, he added, "You see, I'm in the weather business myself to some extent. I

Weather Bureau.' "What! You help get up those Gover'ment predictions?

"In a way, yes." The old man stared for a moment at this embodiment of what had been to him hitherto only an impersonal

rival. "What may I call your name?" he asked. "Dole. Clarence Dole, at your service. Here is my card. I am taking a little vacation, and am staying at

Mr. Blake's, on the hill." How long are you going to stay in these parts?" demanded Mr. Lufkin, with interest.

About two weeks, I think." "I want to know! Well, now, I suppose you're laughing in your sleeve at my setting up to be a better weather prophet than the Gover'ment. But I'd like to put the thing to a test clared the next minute, in a tone of with ye, and I'll tell ye what I'll do. I'll write out my predictions every day before the Gover'ment's gets along, and I'll stick 'em up side by

you dare to try it?' Mr. Dole replied good-naturedly that he would be glad to watch the result; and without attempting any new lines of conversation, he quickly

took his leave. "Who is that gentleman going down the road, grandpa?" called a voice a moment later.

The old man's stern face lighted up with pleasure at sight of the oung lady standing in the doorway, but he answered curtly enough: "Oh, it's a young chap that's boarding at Blake's-Dole, he says his name is, Claims to be a weather observer for the Gover'ment."

"Mr. Dole of the Weather Bureau! Why, I know him," said the young ground. "He attends our church in the He is a very pleasant young

"Hels pleasant-spoken enough," admitted her grandfather. "but I know what he thinks. He thinks an old dger like me can't foretell weather, but I'm just going to show him his

For the next two weeks Mr. Lufkin

By F. E. C. ROBBINS. The young man in the linen suit, absorption characteristic of the spewere placed conspicuously on the wall, and every day Mr. Dole, according to his promise, called to compare them, and to discuss the degree of fulfilment of those of the day before, after which it became quite a habit of his to make a social call at the storekeeper's pleasant house near

by. The news of the contest also spread among the neighbors, with the result that visits to the store became almost as much a matter of course as in the

old days of coming for the mail. For a week or so the honors were about even. Indeed, the rival forecasts were quite similar in substance, although worded differently, as Mr. Lufkin scorned to imitate the phrase-

ology of the Weather Bureau. But at last an issue was fairly joined. Wednesday afternoon the narrow slip of paper emanating from the Weather Bureau bore in modest

type this prediction: "Increasing cloudiness Thursday, with light rain in the afternoon or night," while beside it on the wall might be seen the announcement, scrawled in red chalk, "A little hazy to-morrow morning, but it will burn

off, and be a toler'ble warm day ! On Thursday morning the sun rose very clear and then within two hours went into a cloud, which was a bad sign. It sprinkled a little by 9 o'clock—a "drought shower," Mr. Lufkin called it. But an hour later the sun was again shining brightly, and for the rest of the day there was an almost cloudless sky. It was warm, too.

There was no room for controversy. The weather prophet of Hardhack Corner had scored a success, and the

"Gover'ment" was beaten. Mr. Lufkin was not only gratified, but considerably emboldened by his success. A neighborhood picnic to take place on a small island in Long Pond had been planned for Saturday, but on Friday the native prophet

shook his head ominously. "I rather calculate that picnic will have to be put off," he said. And early in the afternoon he seized his red chalk, and wrote in flaming charac-

Look out for thunder showers

and high wind to-morrow. The report from the Weather Bureau, arriving a little later, merely said:

Fair and warmer Saturday. This left the community somewhat time."

good behavior.

her task of filling her lunch-hasket "Now, Fannie," mind a word that your grandpa says. It does seem as if he had gone clean to be as nice a day as heart could ory and practice. wish. Of course you will go to the picnic. All the folks will. I declare, I'd go myself if I wasn't so lame."

The old gentleman, thus discredited in his own nouse, started off in decided ill humor, and shut himself up in his deserted store, out of sight since 1880 is barely more than hall if not out of hearing of the merry party that soon passed by.

"I wish it would rain pitchforks timber have already reached and and blow great guns!" he muttered, passed their maximum production as he went outside late in the forencon and cast a searching look at the sky. "No, I dou't, either!" he derepentance. "I hope they will have a first-rate good day, and I guess they will, fast enough.'

In this better mood he seated himside on the wall. Then you and I'll self on a much-whittled bench just keep tally how they come out. Do outside the door, and was soon peacefully engaged in the never-failing occupation of the aged-living over bygone days. He was just on the point of falling into a nap when his grand-

daughter's voice roused him. "Grandpa! Grandpa!" came the pleasant voice again. "Why, Fannie!" he exclaimed, his

eyes blinking in the sunlight. supposed you were at the picnic." "Oh, no, grandpa! I didn't quite like to take the risk against your advice, and so I concluded not to go,"

said the young lady, demurely. "What, you here, too, Mr. Dole!" cried the storekeeper, in fresh wonder, as he became conscious of another figure a little in the back-

"Yes. I thought I'd better not go, either," returned the young man, in a very respectful tone. This handsome recognition of his standing as a weather prophet was

decidedly soothing to the old gentleman's pride. "Well, it's generally safest to follow my advice," he ad-mitted, "but I guess I missed my calculations for once. The fact is, all devoted himself to his task with an signs fail in a dry time. Dinner chaudise to the Philippines.

by four inches mortised for bottom of posts eight inches each side of centre to allow the siles and bottom boards to drop into place. Four posts four inches by four inches and five feet four inches long and two posts four inches by four inches and five feet

ringing hogs.

stock .- Indiana Farmer.

highly recommended as a late sum-

mer feed for cattle, hogs and other

classes of stock. Enormous yields of

it are reported, surpassing that of

any other crop, and its palatability is

cured where sowed thick and is not

being smoother and equally as palata-

ble as those of corn. Cattle and pigs

will eat the grain and chew the stalks

of ripened cane, and in this form it

is considered good feed that need

Horses and Cattle Together.

a pasture. We never like to put vic-

lous or troublesome horses in with

pasture, for the horses will eat the

rich growth around the spots where

the manure of the cattle has dropped.

A few sheep run in with cattle will

not touch. The most important thing

is not to overstock with any one class,

to the detriment of the other. Pas-

tures in which horses, cattle and

sheep are run will be eaten down

close, and one should never over-

Rack For Dehorning.

The illustration shows a rack to be

For sills use three

used either for dehorning cattle or

pieces four feet long and four inches

Mr. L. T., of Fairmont, Neb., asks

not be wasted if not fed as soiling.

Rack For Dehorning.

annual lumber cut of the country ton, within a few years has come to individual States in volume of cut.

productive.

During the calendar year 1906 we exported \$7,000,000 worth of mer-

eight inches long are tenoned to the sills. Three cap pleces two fnches by four inches and four feet two inches long are mortised at the ends to receive tops of posts. The caps are of pak. One oak piece in front of the likely have produced death, it is not cap, which holds the stanchion, is two inches by two inches and four feet two inches long. The lower oak piece in front of the stanchion is two inches by sour inches and two feet mules on the university farm for the Cine board two inches by seventeen inches and seven feet long is used for the bottom. For stanchlons in front use

and seven feet long for sides five feet eight inches long; one board two inches by ten inches, five feet two inches long. For back gate use two pieces two inches by twelve inches, four feet four inches long, cut sloping to fit the frame. It is put on with hinges. The stanchlous in front are bolted at the bottom between a two inch by four inch piece, and the sill, leaving a space up and down in front five inches wide. - Two and a half feet from the bottom of the stanchion slope cut a place for the animal's neck. The two inches by two inch oak piece is bolted to the side of the cap with blocks to allow the top of the stanchions to open and close and work with a lever. The lever, which can be made of wagon tire, is five feet six inches long. A three-eight-inch hole is punched in the top of the lever, a second hole thirteen and a half inches from top hole, and the third eleven inches from second hole. The upper hole is for attachment of two iron straws. one on each side, which are fastened to the left hand stanchion. From the lower hole two pieces of iron fourteen inches long go to the right hand stanchion. When the stanchions are closed bore one or two half-inch holes in post back of lever, in which to use an iron pin to hold the stanch-

ions in place. -- Montreal Star. Ecarly and Late Plowing. Experiments as to early and late plowing are made on bottom land

with these results: The land was divided into six plots, each one of which was plowed alternately late and early, the early plowing, April 7 to 19, and the late plowtivated at the same time and with the same tools.

The crop yield from the early plowed land is more than from the late, at the rate of 6.6 bushels per

The moisture holding power of soils is greater with the early plowed Record.