

Keeps Off Warble as Well as Other Flies.

A mixture of fish oil, sulphur, and oil of tar, which was used by W. Hargrave, Waterloo Co., Ont., on his cows for the flies, proved particularly effective in keeping off warble flies, the larva of which are such a torment to cattle in the spring.

Another correspondent, Ed. A. Turner, Perth Co., Ont., used a mixture of one quart fish oil, one-third pint tar, two or three ounces of a commercial sheep dip, and one-third ounce of carbolic acid, rubbed over the cows every four or five days. This kept them comparatively free from flies, and they also seemed free from warbles.

THE FARM.

The Road Wreckers.

Not long since, near the close of an automobile tour of road inspection, in awarding a series of prizes, the owner of the car said, "It will be a little farther if we go over to the Blank Road, but I am certain, then, of a smooth track clear into the city; I know, because it is but two days since I was over the road."

But, on reaching the Blank Road, we found that the road-boss and his crew had passed that way, and had left the middle soft and the sides rough, compelling us to trundle along at a four-mile-an-hour rate of speed.

Had this been a necessary and merely temporary condition, we might have found a humorous side to the incident, an excuse for poking sly fun at our host. But the entire party realized that a fine road had been destroyed, and that, even with the best of care, twelve months must go by before we could hope to see it again in proper shape.

It is always a mistake to pile eighteen inches of loose dirt in the middle of the road at one operation, as was done here. The efficiency of the best brick street, as a highway, can be destroyed by such treatment, and it seems almost criminal malpractice to heap up a foot and one-half of travel-stopping material on the hard, smooth surface of an excellent earth road. Why, then, is it done?

A careful enumeration and weighing of the various forces which impel road-bosses to commit this unpardonable sin against the welfare of the community will discover the public itself as the first and most important. The public can put an end to the practice in a year. So much for the influence of the public from the negative side. From the positive side, the public, again, is the most important force, because the public wants to see something for its money; it demands of the road-boss that he shall fix the road so that it will know positively that he has been at work; and, when he finishes fixing, they KNOW.

Ignorance of a better way figures as an important force, and this letter would be a mere criticism if it did not show a better way before its close. Other lesser forces are (a) the inertia of the phrase, "We have always done thus"; (b) the natural desire of the road-boss and the poll-tax workers to earn their wages easily; and (c) the commercial instinct which urges men to sell machinery for the profit to be gained. All these impeding forces must be met and overthrown before we can obtain the most perfect roads for our money.

Knowledge must come first, and usually it must come to the public before the actual builders of the roads can be reached. The advocates of the present process of road-wrecking declare such roads as the one which caused our discomfort can be brought back into condition by working them with the King drag after the big machine has been used. But this is a false contention, because no amount of dragging will immediately produce the hard, smooth, travel and weather-resisting shell of packed and puddled earth which is now hidden a foot or more beneath the surface. It takes time, as well as the King drag, to make such a shell, and there is no known substitute for time. But the work can be done in no other way, say the road-wreckers; and, in so saying, they make plain their failure to comprehend the King system.

Taking the piece of road which has been the basis of this communication, let us proceed to show the steps by which it might have remained as good as our host expected to find it, and by which it might have grown continually better, rather than worse, as it did under the road-wreckers' management.

We have a fine piece of road to begin with, so fine that people travelled out of their way to use it. The wrecker, however, would tell us that the ditches needed to be cleaned, and that at certain spots the crown was not a proper height. Holding our peace, we build a King drag, and are careful to build it right. Since the road is in such fine condition, we remain masterfully inactive until a rain has softened and travel has roughened its top surface. Then, when the soil is moist, but not slick, we run the drag over

it, going twice over the spots where the crown seems a little low, as we come to them. When we have finished the round, our road is smooth again—as smooth as a race-track—and is raised a few inches in the center. All of the next rain will leave the road center. We repeat this simple operation after each succeeding rain.

The road-wrecker exclaims that the plan will not work; or, he says, even if it does finally do the work, it is too tediously slow. To these assertions we retort, first, that it has been done and is being done all over the United States; and to the second criticism we say, by this slower method we keep a good road good and constantly improve it, whereas by your method you make a good road hideously bad just as rapidly as your teams and machinery move over it. Moreover, by your own admission you would use our method to repair the damage done by your quicker but destructive action.

By our slower, but surer, plan, the labor which you would use in trying to repair the damage you did with your big machine, we would apply to careful building. You admit that the road must in any case be dragged, then why not drag it at the beginning? D. WARD KING.

(From the Express, Red Oak, Iowa.)

What to Do in Case of Apparent Death from Lightning.

That many persons apparently killed instantly by lightning might have been restored to life if proper measures had been promptly taken, is the somewhat startling assertion in Dr. Augustin H. Goelet's "How to Deal with Apparent Death from Electric Shock," revised and modified for apparent death from lightning, by Dr. W. F. R. Phillips, of the U. S. Weather Bureau, which we reprint from an exchange. In view of the fact that the season for thunderstorms is upon us, it will be found of interest.

"An electric shock may produce death in one of two ways, viz.: (1) By producing destructive tissue changes, when death is absolute, or (2) by producing sudden arrest of the respiratory and heart muscles through excitement of the nerve centres, when death is only apparent; in other words, animation is merely suspended. The subject may be aroused from this syncope if efforts at resuscitation are not too long delayed.

"All things considered, it is rational to attempt the resuscitation of those apparently killed by electricity, and, if not too long delayed, the effort promises fair chances of success, provided proper means are instituted.

"If the body has actually been submitted to a current of sufficient volume to produce destructive tissue changes, all efforts at resuscitation will, of course, be futile.

"If, on the other hand, only respiration and the heart's action have been temporarily arrested, there is a condition of syncope simulating apparent death by drowning, or from anaesthetics, and the physician knows that patients in this condition are frequently revived. Laymen will appreciate the nature of this condition if it is explained as one of exaggerated faint, and would not feel appalled at encountering it if previously instructed how to cope with it. In an ordinary fainting spell, the necessity to stimulate is universally appreciated. In syncope resulting from an electric shock, stimulation is likewise indicated, but more vigorous measures are required. This is the only difference.

"As said above, the direction to treat one shocked by electricity as one drowned may be misleading, as the conception of the layman of the necessities in this case would be to roll the body on a barrel. Let him understand that the con-

dition is one of exaggerated faint; prompt stimulants are necessary. The man must be made to breathe, if this is possible, and the efforts to induce respiration must not be suspended until breathing is fully and normally restored, or until it is absolutely certain that life is extinct. This cannot be assured in less than an hour's persistent energetic, tireless effort.

DIRECTIONS FOR ARTIFICIAL RESPIRATION.

"The body must be placed upon the back. A roll made of a coat or anything else convenient (rolled, not folded) is placed under the shoulders, and must be sufficiently large to so prop the spine up as to drop the head backward. The operator should kneel behind the subject's head, grasp the elbows and draw them well over the head, so as to bring them almost together above it, and hold them there for two or three seconds. Then he carries them down to the sides and front of the chest, firmly compressing it by throwing his weight upon them. After two or three seconds the arms are again carried above the head, and the same maneuver is repeated at the rate of fifteen or sixteen times per minute. At the same time, the tongue must be drawn out to free the throat. This manipulation stimulates respiration in the following manner, viz.: When the arms are extended over the head, the chest walls are expanded, just as in inspiration, and if the throat is clear, the air will rush into the lungs. When the arms are brought down to the sides of the chest, compressing it, the air is expelled, just as in expiration. The operator must, however, appreciate the fact that this manipulation must be executed with methodical deliberation, just as described, and never hurriedly nor half-heartedly. To grasp the arms and move them rapidly up and down, like a pump-handle, is both absurd and absolutely useless.

"In addition to this, if an assistant be at hand, the tongue, held by a cloth or handkerchief to prevent slipping, should be seized and forcibly drawn out during the act of inspiration, or when the arms are extended above the head, and when the chest is compressed it may be allowed to recede. The rythmical traction upon the tongue is in itself an excellent stimulant of respiration. It acts not only by freeing the throat of the tongue, which may fall back and obstruct breathing, but also by reflex irritation, through the frænum or bridle under the tongue being drawn forcibly against the lower teeth.

"The procedure described and recommended by Dr. Goelet is that known as Sylvester's method. An equally efficacious method is that known as Howard's, which also keeps the passage through the windpipe free, without the aid of an assistant, and is recommended for that reason. It is as follows:

"Place the subject on his back, head down and bent backward, arms folded over the head (under no condition raise the head from the ground or floor). Place a hard roll of cloth beneath the chest, with the shoulders declining slightly over it. Open the mouth, pull the tongue forward, and with a cloth wipe out saliva or mucus. Thoroughly loosen the clothing from the neck to the waste (but do not leave the subject's body exposed, for it is essential to keep the body warm). Kneel astride the subject's hips, with your hands well opened upon his chest, thumbs pointing toward each other, and resting on the lower end of the breastbone; little fingers upon the margin of the ribs, and the other fingers dipping into the spaces between the ribs. Place your elbows firmly against your hips, and using your knees as a pivot, press upward and inward toward the heart and lungs, throwing your weight slowly forward for two or three seconds, until your face almost touches that of your patient, ending with a sharp



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