

Of Interest to Farmers

BACTERIA IN MANURE

The number of such organisms will vary considerably, depending on the physical and chemical character of the manure, the method of treatment, etc. In general it may be said that manure may contain from 7,000,000 to 375,000,000 bacteria per gram (1.30 oz.). On the average farm manures probably contain about 80,000,000 organisms per gram. Most of these organisms occur in the solid excreta which has been found to contain 18 to 40 billion bacteria per gram. The urine is practically sterile and the litter usually contains comparatively small numbers.

Some idea of the bacteria matter in manure may be given by the estimate that 9 to 20 per cent of the dry weight of cow manure consists of bacterial substance.

Furthermore, there is a great multiplication of bacteria on standing and in a few weeks the number present will be much larger than at first. After a longer or shorter interval, however, depending on the physical and chemical composition of the manure, this increase in number of bacteria will cease and a decrease will occur. These facts may be easily understood when we recall that the manure at first contains a large amount of available food which causes a great multiplication of bacteria. As this available food decreases there is not enough to support the increased number of organisms and many of these therefore die.

The bacteria present in manure may be divided into two classes; the anaerobes, which require air, and the aerobes, which require absence of air for their growth. Whether there are more bacteria of one or the other of these classes will depend very largely upon the physical condition of the manure which will vary with decomposition.

The fermentations brought about by these two classes of bacteria are quite different, particularly with regard to the final products. Both classes of action may occur together, the anaerobes bacteria working at the surface of the manure pile and the aerobes in the inside. If the manure is loosely stored, then the anaerobes are more active; if it is packed tightly the anaerobes will be most active. In the decomposition or rotting processes brought about by these bacteria, the various constituents of the manure are attacked and changed into more available or simpler forms.

THE MEANING OF ROUGHAGES AND CONCENTRATES

In discussing feeding stuffs it is desirable to differentiate between those which are or coarse, bulky nature and others which are more condensed and more nutritious. Accordingly, the terms "concentrate" and "roughage" employed in the first edition of this book are retained, since they are now widely recognized and used.

Concentrates are feeding stuffs of condensed nature, which are large in fiber and hence furnish a large amount of digestible matter. Examples of this class of feeds are the various grains, as Indian corn, wheat and oats, and milling by-products of high feeding value, as wheat, bran, linseed meal, gluten feed, etc.

Roughages are the coarser feeding stuffs, which are high in fiber and supply a lower percentage of digestible matter. Such feeds as hay, corn fodder, straw and silage belong to this class. Some of the low-grade milling by-products, such as oat hulls, ground corn cobs, and peanut hulls are roughages, rather than concentrates, for they are largely fiber and furnish but little nutriment. Henry and Morrison, "Feeds and Feeding."

To insure rapid and uniform growth of the chicks, provide in addition to a grain feed a dry mash to which the chickens will have access at all times.

Thin, Watery Blood Means Ill Health

RICH, RED BLOOD BRINGS BRIGHT EYES AND ROSY CHEEKS

The girl who returns home from school or from work thoroughly tired out will be fortunate if she escapes a physical breakdown, because this getting tired so easily is probably the first warning symptom of a thinning blood that may not be disregarded if her health is to be preserved.

When the blood becomes thin and impure the patient becomes pale. She not only tires out easily but often suffers from headaches, palpitation of the heart, dizzy spells and a loss of appetite. In this condition Dr. Williams' Pink Pills will be found to have a beneficial action on the blood. Miss Delma Lafreniere, St. Ambrose, Man., has proved this in her own case, and advises others to use these pills. She says: "Before I began the use of Dr. Williams' Pink Pills I felt like a complete wreck of my former self. My blood was poor and thin. I suffered from faint and dizzy spells, and had backaches and headaches almost every day. I decided to give Dr. Williams' Pink Pills a trial, and by the time I had used three boxes I felt much better and I continued taking the pills until I felt as well as I ever did. For what I did in my case I cannot recommend these pills too highly."

Dr. Williams' Pink Pills can be obtained from a dealer in medicine, or by mail at 50 cents a box or six boxes for \$2.50 from The Dr. Williams' Medicine Co., Brockville.

SUMMER CARE OF ROSES

Keep the surface of the beds continually loose; this retains the moisture and makes watering unnecessary except in the driest part of the summer. When watering roses, lay the hose down on the bed and let it get thoroughly soaked. Water the plants thoroughly once or twice a week, preferably early in the morning or in the evening. This is better than light sprinkling more frequently. Spraying water on the leaves each day in the evening or early morning will help to remove dust and knock off the insects.

For summer fertilizing, manure and bone meal are the two best fertilizers, and manure applied as a mulch in midsummer. Suckers, which may grow from the roots of budding plants, should be removed below the surface of the soil when they appear, as they will exhaust the vitality of the plant and often kill it. They have a different appearance from the normal branches of the rosebush. There are usually more spines on the leaf of the suckers, the thorns will be finer, and the branches will have a different colour.—Ohio State University.

POULTRY NOTES

Scratch feed or whole grain should be scattered in the litter. Hens like to work for their living. Troughs or hoppers should be used for dry mash. They keep the feed always accessible.

Brood coops with runs should be placed on ground where the grass is green and tender, and as fast as it is eaten off, the coop and run should be moved to a place where the grass is plentiful.

Progress in breeding poultry stock will be made most quickly by picking out the best individuals in the flock and using them as breeders, rather than by breeding from the flock as a whole.

It is not considered good practice to breed a heifer until she is about eighteen to twenty months old, as earlier breeding is likely to arrest her growth.

Grow the litters of spring pigs on alfalfa or rape pasture along with some grain, skim-milk or tankage. Pasture produces economical pork and that's what we're after in these days of falling prices; the lessening of the cost of production.

The side-lines on the farm should not be neglected. Make everything count. Put all lines on a paying basis. That's what pays big dividends in the large manufacturing concerns; reducing the cost of production by profitable side-lines.

In addition to raising a cash crop of wheat, potatoes, turnips or some other crop, the orchard should be producing good, saleable apples, the flock of hens should be bred-to-day type, and a good garden should be planted.

A good garden makes it unnecessary to purchase vegetables on the market or at the store and this saves a little at least, as well as providing better fare for the table.

Equal parts of finely ground oats and wheat middlings or shorts allowed to soak between feeds, makes a good ration for the nursing sow. Sweet skim-milk greatly improves it.

There's plenty of feed in most barns this year, so that there is no need of turning the stock out to pasture before the grass gets a good start. Such a practice is not only bad, insofar as the stock are concerned but for the pasture as well.

If you haven't already done so, you should provide a strong, fenced paddock for the bull. Exercise is of paramount importance in the case of all breeding animals.

The sow should not farrow in a pigery where there are many other pigs. The "pigery" odor seems to be poisonous to the little fellows.

During the period a heifer which is to be milked is in calf, she should be handled occasionally in order that she may make as little trouble as possible when beginning to milk.

BAD EFFECTS OF CHILLING CHICKS

The most important factor, for the first few days especially, in keeping little chicks in a comfortable condition, is a proper and even temperature. With artificial brooders the temperature the first week should be about 100 degrees F., about 95 degrees for the second week, 90 degrees for the third week, 85 degrees for the fourth week, and a gradual lowering thereafter. These temperatures are not absolute and may be modified to a certain extent, depending upon weather conditions. First and always the chicks must be comfortable.

The back and lungs of the chick are the best protected portions when the chick is being brooded by a mother hen. When it feels chilly the chick obeys the instinct to get warmed up by rubbing its back against the body of the mother hen. In artificial brooding, if the temperature is too low, the chick tries to crawl under the brooder, which are all similarly inclined, so that there is crowding and loss of life. Moreover, chicks will not do well if an even temperature is not maintained. Conditions in the brooder house must be comfortable at all times.

Chicks should not be coddled, however, but should be given plenty of room and lots of exercise. As soon as weather conditions permit they should be allowed outside. It does not hurt chicks to run out in quite cold weather, provided they can get warm quickly whenever they desire. Maintain a comfortable temperature always.

MARKETING EGGS

Eggs represent one of the few articles of animal food produced in a natural package, and so long as the shell is unbroken the egg cannot be adulterated. Of all foods, eggs are among the most palatable, easily digested and readily assimilated and there is no food which can be substituted for such a unique commodity. Moreover, recent investigations have shown that fresh eggs are second only to milk as a necessary article of diet.

Fresh eggs differ in size, shape, color and quality. They are perishable products and should be transported from the producer to the consumer as quickly as possible. Furthermore, the means of transportation should be such as to ensure the eggs reaching the consumer in as good condition as possible.

The conditions under which eggs are produced should be greatly improved. Such improvement will result in higher average annual price to producers and a higher grade product for the consumers and the elimination of much of the present enormous annual wastage of the egg crop.

Very often the fowls are fed on unwholesome food, which affects the odor and flavor of eggs. Dirty poultry houses and dirty nests are the cause of dirty eggs. Meat spots, blood-spots and bloody eggs cannot be avoided, since they occur in the oviduct, but they should not be sold with the rest of the eggs. Blood rings and rotten eggs are caused by having the males with the females during warm weather, or when broody hens sit upon the eggs. Musty and mouldy eggs result from storing the eggs in bad places. Hair-salts, checks and leakers are caused by rough handling either at home or after the eggs have been sold.

Most of the conditions giving rise to the production and selling of bad eggs can be improved. Every farmer should appreciate the fact that every spoiled egg means a loss of money, and it is possible to grow the best eggs on each farm that totals to thousands of dollars of loss annually.

Farmers can save for themselves most of this loss if they will but take ordinary care. Hens should be kept in sanitary houses and they should be provided with clean nests at all times. The eggs should be gathered twice daily in warm weather and once daily at other times of the year. They should be stored in a cool, dry room at a temperature not higher than 60 degrees F., and every precaution should be taken to keep the eggs out of sunlight as much as possible. All mature male birds should be removed from the flock as soon as the breeding season is over; this alone will save the farmers of Canada thousands and

thousands of dollars of loss annually. Farmers can save for themselves most of this loss if they will but take ordinary care. Hens should be kept in sanitary houses and they should be provided with clean nests at all times. The eggs should be gathered twice daily in warm weather and once daily at other times of the year. They should be stored in a cool, dry room at a temperature not higher than 60 degrees F., and every precaution should be taken to keep the eggs out of sunlight as much as possible. All mature male birds should be removed from the flock as soon as the breeding season is over; this alone will save the farmers of Canada thousands and

Man Gives Wife Glycerine Mixture

She had stomach trouble for years. After giving her simple bark, glycerine, etc., as mixed in Alder-ka, her husband says: "My wife feels fine now and has gained weight. It is wonderful stomach medicine." Alder-ka acts on BOTH upper and lower bowels, removing foul matter which poisoned stomach and which you never thought was in your system. EXCELLENT for gas on the stomach or chronic constipation. Guards against appendicitis. The impurities it brings out will surprise you. (Hughes Drug Co., Ltd., in Georgetown by S. C. Knight, Druggist.)

SHELTER-BELTS FOR PRAIRIE FARMS

Several million seedling trees and cuttings are being sent out from the Dominion Forest Nursery Stations at Indian Head and Sutherland, Saskatchewan, this spring, for planting prairie farmers as shelter-belts about their premises. The trees are sent out free on condition that the farmer prepares the ground for the reception of the little trees and keeps the land cultivated till the trees have grown sufficiently to shade the ground and thus keep down grass and weeds. The species of trees sent out are Manitoba maple, ash, poplar, and willow, and the tree-like shrub caragana. This work has been going on now for about twenty years with the result that thousands of prairie homes are surrounded and sheltered by belts of trees. Except for the war years the work has shown steady increase from year to year, and the plan has proved so successful that it has been adopted by several of the provinces and by the United States Department of Agriculture.

GENERAL PRINCIPLES IN REARING CHICKS

- 1—Practice limited and regular feeding when the chicks are small. Feed early in the morning and late at night. Always feed a little at a time; underfeed rather than overfeed.
- 2—Feed all the cracked grain in the litter and make the chicks take as much exercise as possible.
- 3—Keep the brooding quarters clean at all times.
- 4—Keep the chicks comfortable. A temperature of 95 degrees is about right for the first week; then gradually lower it, depending upon the weather and the condition of the chicks.
- 5—Avoid overcrowding because it is fatal. Do not try to keep too many chicks in the same house. Put groups of birds across the corners of the inside; this will prevent the chicks from crowding into the corners.
- 6—Give plenty of green food and milk.
- 7—Keep chicks of different ages by themselves, because big and little ones are allowed to run together the little ones do not get a fair show.
- 8—As soon as the sexes are distinguishable they should be separated, especially in the case of Leghorns.
- 9—Observe and select the most rapid developing pullets for layers next winter.—M. A. J.

Grow Dandelions for Greens.

A SUGGESTION to grow dandelions in the garden may seem strange to some folks. Everybody knows that the wild dandelion is excellent for greens, but few know how much about the cultivated type. No garden green is more acceptable in the spring, in fact, in early summer as well, as the cultivated dandelion.

Any seedman will supply the seed. I have grown dandelions ready for use in eight weeks from time of sowing. To have quick growth and leaves as tender as possible, sow the seed in the early spring, in deep rich soil and, after the plants appear, hoe frequently. The leaves may be blanched by trying them together or by placing over them a trough in the form of an inverted V. When blanched, they make nice salad, as well as greens.

Locate the patch where the plants will not be disturbed if it is desired to grow them for more than one season. After the leaves have passed the cutting stage, remove all flowers to prevent them producing seed and scattering. Try cultivated dandelions for novelty of the thing, anyway.—A. B. C.

CANADA'S MISSION TO HELP SAVE THE RACE

Dr. Saleeby, Noted British Scientist, Discusses "Alcoholism and Race Culture" Before Large Otta Audience. Alcohol a Poison to the System, He Declares, Paying Tribute to the Children of This Country, and to its Advanced Steps for Prohibition.

The argument that the British Empire was of necessity destined to follow all previous empires into decay received some hard knocks on Saturday night at the temperature rally in Dominion Methodist church. The chief speaker was Dr. C. Saleeby, the eminent scientist, member of the Royal Society of England and chairman of the National Birthrate Commission of Great Britain, who spoke on "Alcoholism and Race Culture."

Dr. Saleeby paid many compliments to Canada, particularly on her fine children, which had considerably impressed him in his tour of the west, and which he regarded not only as a sign of hope, but as a strong argument in support of his contention against the liquor evil. He claimed that Canada's beautiful and sturdy children were the result of better nourishment. His argument was that alcohol was a poison to the human system, and he maintained that those who claimed that because it was a gift of God they were justified in taking it into their systems ought to apply the same argument to gasoline.

Dr. Saleeby's address was filled with information for temperance advocates and was illustrated from science, literature, history, mythology and Scripture. Dr. Saleeby severely scored Professor Stephen Leacock, the Canadian author, for his "pitiable and contemptible folly" in urging that prohibition destroyed the home.

Sir George Foster, acting premier presided.

Dr. Saleeby stated that less than two children for each two adults were being produced in the Old Country, and he asked: "Is this good?" He said there were agencies capable of spoiling good parenthood, in such a way that posterity was damaged. Some agencies were serious to the individual but did not hurt the race. Many of the boys who came home to you from the war were damaged, and he said the doctor, and nothing could be done about it. But, thank heaven, those injuries ended with the persons who suffered them; it did not hurt the race. Many of the boys who came home to you from the war were damaged, and he said the doctor, and nothing could be done about it. But, thank heaven, those injuries ended with the persons who suffered them; it did not hurt the race.

Hands Off People's Food.

Dr. Saleeby who was cordially received by the audience, remarked in opening that it was a tremendous privilege to have a chance to say what he believed on this magnificent theme. He wanted to thank them first of all, in that which they were nearly starving in the Old Country, and he asked: "Is this good?" He said there were agencies capable of spoiling good parenthood, in such a way that posterity was damaged. Some agencies were serious to the individual but did not hurt the race. Many of the boys who came home to you from the war were damaged, and he said the doctor, and nothing could be done about it. But, thank heaven, those injuries ended with the persons who suffered them; it did not hurt the race.

Save The Children

Mothers who keep a box of Baby's Own Tablets in the house may feel that the lives of their little ones are reasonably safe during the hot weather. Stomach troubles, cholera infantum and diarrhoea carry off thousands of little ones every summer, in most cases because the mother does not have a safe medicine at hand to give promptly. Baby's Own Tablets relieve these troubles, or if given occasionally to the well child will prevent their coming on. The Tablets are guaranteed by a government analyst to be absolutely harmless even to the newborn babe. They are especially good in the summer because they regulate the bowels and keep the stomach sweet and pure. They are sold by medicine dealers or by mail at 25 cents a box from The Dr. Williams' Medicine Co., Brockville, Ont.

Changing Foundations.

What was the biggest fact in history? That the greatest nations yet, having reached their greatness, have never yet been able to maintain it. They had always gone down from their greatness. This must be due to some failure in the quality of the nation. The children of the giants were not giants, but often dwarfs. They must think of a nation as a visible thing built upon living foundations and those living foundations changed from generation to generation. "If the quality is not maintained for the generation the whole structure comes down with a crash," emphatically exclaimed the doctor.

Could they discover the causes that brought down the greatness of the great human stocks? He claimed that they could, and for the cause he named, brought under the microscope and examined. They could also be demonstrated in the village and towns of their own times.

In studying the history of Rome at the date when that wonderful creation of man began to fall, the date that Gibbon named as the beginning of the decline of Rome, it

was not the name of the emperor, again, Canadian women scarcely but the real history of the nation, drank at all: "I am certain that which was the history of the people, your children I have seen are the finest I have seen in any part of the world," said Dr. Saleeby.

Beginning of Rome's Decline The stream of poison flowing through the national blood had never been more than one-fourth of what had passed through the blood of the people of Great Britain, and it had not been flowing, the British Museum, and they had discovered this fact, that Rome mothers took the stranger, and were content to have their babies nursed by foster-mothers who were often unchaste and intemperate. That was a bad lookout for Rome. Better the she-wolf, who, suckling to the legend, had suckled some children than any human mother with her blood poisoned and tainted and intoxicated, because she was unchaste.

He had found further, in his reading, that the Romans had discovered it was not a good thing to have a poison that went all through the organs. In their mythology they had a story that Vulcan was deformed because his father was drunk when he was conceived. The Spartans, too, had the idea of keeping up the quality of the breed, and their great law-giver had forbidden the use of wine at weddings, because he was thinking of the future of the Lycurgus was patriotic, and he was right, declared the doctor.

Then, too, in the thirteenth chapter of the Book of Judges, they had the story of how the angel of the Lord instructed the mother of Samson that since her son was to be the champion of the Lord in delivering the Philistines he had to be protected, cared for, and nourished right from the beginning. "I pray thee, beware, take neither wine nor strong drink, for the child shall be a Nazirite from the womb."

Dr. Saleeby said that if anyone could give him an earlier stage than that of alcohol as to race poison he would be grateful to them for it. "But you won't find one," he added. The doctor said that recent experiments on guinea pigs who were only subjected to a minute quantity of the vapor of alcohol had shown that in a single generation the race degenerated.

Uses of Alcohol

But he did not want anyone to think he was saying that alcohol was not a gift of God. Some day they would run England with alcohol from the potatoes of Ireland, he said. Alcohol, too, made a splendid liquid soap. "But those who say that because God made alcohol they should swallow it up ought to apply their argument to gasoline," he declared. "We have a great gift from God, in its proper place, but not in the human body. It seemed to select the germ plasm to do its work," said Dr. Saleeby.

In Finland a famous professor had compared the children of moderate drinkers and of abstainers. He had found beyond dispute, and over years of research, that the children of the moderate drinker could not develop, and did not develop, at the right age, as compared with the children of the abstainer. His own long contention for fifteen years, declared Dr. Saleeby, that alcohol was injurious to the human body, was being borne out.

The Children of Canada.

"Your children, the children of Canada, prove my case," maintained the doctor. He had seen them, hundreds of thousands of them. He had been seeing them all through Canada. He had been to health commissioners or provinces and cities, and they had confirmed the impression gained by his looking at the children on the streets. They were the children of a great stock, the greatness of which was being protected.

England's Drinking

"Even when you were drinking most you never drank more than one-fourth the quantity of alcohol per head that we drink in Great Britain," said the speaker. Canada's drinking was mostly convivial, he said, and he drew a distinction between industrial drinking. There were ideas over in the old nation between that and what he said that they could not bring in the harvest without beer, and the beer was drunk regularly. They could not make steel ingots without beer, and so on, it was argued. Most people over there drank it regularly. As it took 36 hours for alcohol to get out of the system, the moderate drinker even was never free from alcohol. They

Other Racial Poisons.

Dr. Saleeby proceeded to intimate two other racial poisons generally known, he said, as venereal diseases. He had suggested a ministry of health in Britain as a war measure in order to prepare against the spread of these diseases during the war. "We have not given ourselves a chance," declared the doctor, "we have allowed the alcohol factor an increasing place since three days after the armistice."

The first thing that alcohol did was to destroy the power of self control. He had learned from Canada's war provinces that when the alcohol factor was got out of the way, while they did not solve the venereal problem, they at least rendered it solvable. Dr. Saleeby gave figures showing that this problem was being solved south of the line, and claimed that his figures showed that such a system was possible. It protected the homes were nations were made, and it pre-

MUTT AND JEFF

At Deduction, Sherlock Holmes had Nothing on Jeff.

YES, JEFF, THE PROHIBITION MOVEMENT PLUGGED ALONG PATIENTLY FOR YEARS BEFORE IT WAS REWARDED! RUSSIA WAS THE FIRST NATION TO GO DRY!

At Deduction, Sherlock Holmes had Nothing on Jeff.

Then this country fell into line. Some say it's a good thing and some say it isn't! Of course, it's not for me to judge!

At Deduction, Sherlock Holmes had Nothing on Jeff.

AS LONG AS PEOPLE CAN GET IT THEY'LL DRINK!

At Deduction, Sherlock Holmes had Nothing on Jeff.

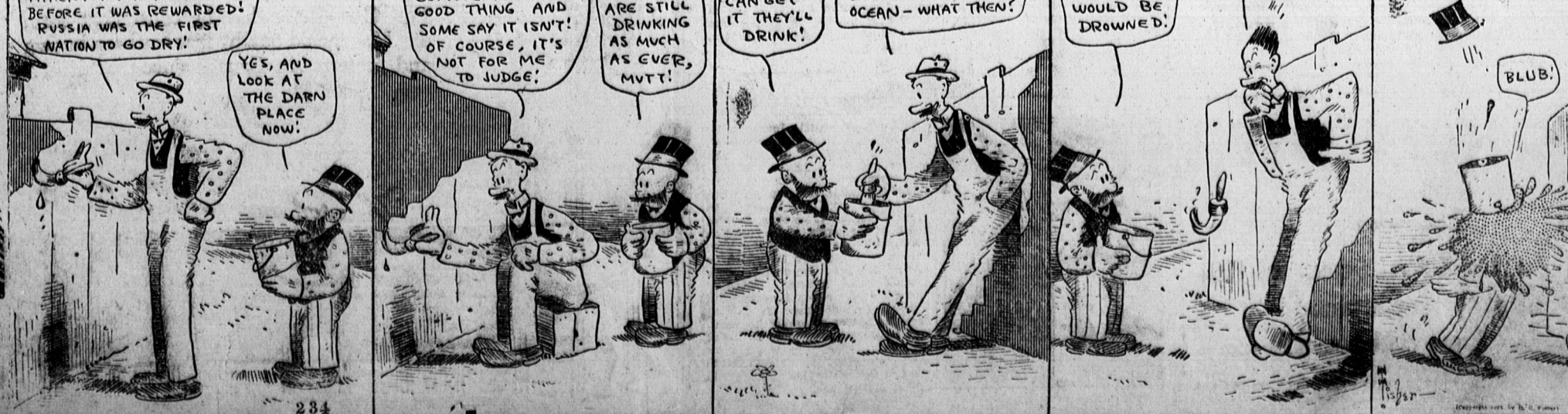
YES, BUT IF ALL THE BOOZE WAS AT THE BOTTOM OF THE OCEAN—WHAT THEN?

At Deduction, Sherlock Holmes had Nothing on Jeff.

WHY, A LOT OF PEOPLE WOULD BE DROWNED!

At Deduction, Sherlock Holmes had Nothing on Jeff.

BLUB.



—By Bud Fisher