

Dissatisfaction With the Status Quo

IN THE YEARS following the demise of Dadd, many individuals wrote propounding their thoughts of veterinary science in the periodicals that existed at the time. And the *Prairie Farmer* continued offering advice and answers to inquiries.

VETERINARY JOURNALISM AFTER DADD

Dadd's successor as veterinary editor of the *Prairie Farmer* was N. H. Paaren, M.D., V.S. His first connection with the paper appears to be as a correspondent in answer to an inquiry in 1866 about a cure for cataract in a horse. He states:

Truth compels me to say that as far as I am aware, there is no medicine that can clear away cataract; consequently, the prospects for poor "Charley" will remain rather dark.

His next communication is a lengthy statement about hog cholera, in which the best advice he can offer is:

Never forget that hog cholera is a contagious disease; therefore keep your animals away from flocks amongst which the disease exists, also from particular ground or locality where the malady is of frequent occurrence. If the disease is discovered in your own flock, separate immediately the apparently sound ones.

Paaren remained anonymous at first, later he used his initials, but it was not until a year later, that the editors state:

We have ample testimony that the Veterinary department of the *Prairie Farmer* has been considered one of the most valuable and interesting features of the paper since conducted by N.H.P. Heretofore his full name has been withheld at his own request. We now take pleasure in introducing the gentleman, Dr. N. H. Paaren, more fully to our readers. Highly educated for his position abroad, and also a student and practitioner in the West, he has for nearly two years past been chief Veterinary Surgeon of the cavalry depot at Washington. . . . His practice in all the diseases to which equine flesh is heir, must have been more extensive than usually falls the lot of any single individual.

Later, the editors state:

We employ Dr. Paaren to answer questions and prepare articles on the subjects of general interest. His prescriptions and advice are given in the paper and no charges made for the insertion. But when subscribers need immediate attention and desire a written reply, often requiring much time and research, from the Doctor, they should accompany such request with a reasonable fee.

And again in 1867:

Dr. N. H. Paaren, our Veterinary Editor, has taken the fine brick stable at 302 South Clark Street, where he will be able to give the best of treatment and care to sick and disabled stock. Those needing the services of a reliable Veterinarian cannot do better than place their stock under his care.

Paaren's department, however, soon lost

the charm of Dadd's writing as veterinary editor. While a number of articles, as promised by the editors, are on topics of general interest, most are the run of the mill "question and answer" type of thing, all too frequently without the question. Thus such a telegraphic item as "J.S.: A seton, properly adjusted and attended to, would probably be the best thing you could apply," smacks of the "free horse-doctor with every subscription." And while Paaren apparently did not advertise proprietary remedies, he was not overly subtle in announcing his professional prowess.

Of his competency there is no question, and he appears to have had a wide and varied experience. In addition to his army duty, he mentions, "a very extensive practice in the Eastern and Western States of this country, in South America, in the West Indies, and in Europe." For the first several months, he apparently conducted the Veterinary Department of the *Prairie Farmer* from the cavalry depot at Washington. Some time before the depot was disbanded in August, 1866, he wrote concerning bighead:

It seems that this disease is far more prevalent in the Western than it is in the Eastern States. According to records there were among thirteen thousand patients treated here in the last year under our supervision, only three cases of "bighead," and they were disposed of as incurable.

Yet he writes most intelligently on the disease for having seen so few cases. The Washington army depot was stated to be "the largest cavalry depot in the United States; has capacity for fifty thousand horses, and a hospital for two thousand five hundred diseased and disabled animals." Thus Paaren's mention of 13,000 patients in one year would seem not to be a gross exaggeration.

A Most Deplorable Lack

The lack of an adequate number of competent veterinarians in the late 1860's was a frequent subject of concern to farmers, editors, and veterinarians themselves.



MANNER OF USING SETON NEEDLE.

Setons, usually of porous materials such as rawhide or cloth, were used since ancient times to promote drainage of wounds—which were almost universally infected. Manning: *Stock Doctor*

Thus to an inquiry about "lung fever" in horses, the veterinary editor of the *Prairie Farmer* replies:

Perhaps the best advice I could give . . . would be, to procure the aid of a good veterinarian . . . the right kind are few and far between. . . . It is better to pay a fee of a few dollars that to trust your animal to a novice or quack or run the risk of losing him. If you delay, even a skillful veterinarian may not be able to do any good. If in consequence of distance or other causes, the doctor is not immediately obtainable, . . . [and] one deems it necessary to do something before the arrival of the doctor, give injections of warm water, which never do any harm.

A correspondent writes warning of a quack operating in Illinois, who pretends

to "remove ringbones, spavins, splints and curbs in from one to three days without breaking the skin." His own horse, suffering from ringbone, was pronounced cured "but in the course of a few days the whole flesh from the hoof to the fetlock joint came off." Paaren adds: "Readers who hear of these men will do well to give them a wide berth. Such villainy should be punished severely."

This was a subject on which Paaren spoke directly to the point. In response to an intended contributor, he states:

As we have some regard for the interests of our readers, you will excuse us for not complying with your desire of inserting your treatise on the various ailments, presumed to be caused from the presence of wolf's teeth in horses. Your correspondence, besides being utterly deficient of reason and sound sense, exposes a most deplorable lack of knowledge in the anatomy of the horse; and you will excuse us if we were mistaken when we regarded your communication as an invitation to put forth some remarks on quack horse doctors generally. . . . This country abounds with men who have taken to themselves the title of Veterinary Surgeons—a kind of fraud for which the law has provided no remedy.

There follows a lengthy diatribe against this clan, most of which had been said by others before him, but perhaps without all the exquisite detail. On the subject of wolf teeth, Paaren says:

Various prejudices prevail regarding their evil effects. It is very commonly asserted, not by veterinary surgeons, but by that positive pest—the common *soidisant* "horse doctor," that unless they be removed the animal will go blind. Now, as most all colts have these teeth, why do not all these go blind? . . . We need only add that those so-called wolf's teeth have no anatomical relation whatever with the organs of vision. The assertion that wolf's teeth will cause blindness is founded only in ignorance.

In reprinting a statement from the *Irish Farmers' Gazette* for 1867: "There are not two score of properly qualified veterinary surgeons in the whole country" (Ireland), the editors of the *Prairie Farmer* add:

We probably, have less than a score of men,

pretending to follow this profession, who are not the most arrant quacks and humbugs. By all means let one of the prominent chairs at the new [Illinois] University be the chair of Veterinary Medicine and Surgery.

On the matter of the indiscriminate use of drugs, Paaren states:

Continual dosing of animals is just as useless and injurious to them, as is constant swallowing drugs and poisonous compounds to the human system. It is all folly to allow your stables to become hospitals, and to smell and appear like an apothecary's shop. It is much more humane to shoot a horse, or knock an animal on the head at once, than to force down its throat doses of drugs whose quality or action you know little about, having the effect to create disease when it did not exist, and prolong suffering much beyond the time in which nature herself would effect a cure.

Glanders, Government Issue

As early as 1861, the editors of the *Prairie Farmer* had commented at length on the sale of diseased government horses:

A large number of contraband horses and mules, and many cavalry and team animals that were unfit for service . . . were sent into this State . . . and placed upon the farm of the Brothers Dole, where a veterinary surgeon had the care of them. Of about 2500 received there, some 500 were condemned as not suitable to put back into the service, and were advertised for sale. . . . The animals were, as a general thing, in the very worst condition we have ever seen horse flesh, and many had the appearance of disease, such as glanders, fevers, &c., &c. . . . It was perfectly surprising to see how anxiously the crowd were to become possessed of horse flesh. . . .

Very many of the animals sold can never be wintered through, and others that may be, will be of little account. However, the government realizes a handsome sum from the sale (\$24 average this sale), which is alright so far as that goes. But there may be some drawbacks to the propriety of introducing this stock upon our prairies. If they, or any considerable number of them, are affected with glanders and are scattered broadcast over our prairie farms, it will be a sorry job for the purchasers and their neighbors. . . . If the government needs the funds, the farmers had better make a liberal donation, than to allow a large lot of diseased stock to be scattered over the State, and paying such liberal prices for it.

The first instance reported in the *Prairie Farmer* of glanders breaking out in animals sold by the government occurred in 1865. An Iowa farmer, who states: "I have been victimized," bought sixteen mules at Chicago; six days later glanders broke out:

I shall kill and bury every mule I bought. I beg you to caution all purchasers at these sales to isolate their animals at once. . . . These mules had access across a fence to my blooded horses, and if I do not lose everyone of them I shall be lucky.

The editors state:

The government . . . should take into consideration whether or not the loss to the country would not be less if a rigid examination of its horses and mules were instituted, and all animals diseased with glanders at once destroyed. All along we have advocated better veterinary surveillance, believing that by the spread of this disease we should pay dearly for the government's parsimonious course in this respect.

In the meantime, they suggest the farmer "let these sales alone."

A correspondent notes that this individual:

is not the only one who has been bitten by buying cheap army mules. A gentleman near here invested in 125, and his neighbors said that his fortune was made, but in a few days the glanders showed itself, and he was obliged to take his drove to some point west of here and sell them for what he could get. Perhaps the transaction was not strictly honest, but it tends to lighten the loss, as it is spread on several individuals instead of one.

This in turn brought a prompt rejoinder from the first correspondent, who asks for the name of this individual who "divided his loss":

He deserves to be held up to universal infamy. No honest man will sell a glandered animal. After I discovered it upon mine, I was offered cost for the apparently sound ones, and I refused it. . . . I have no right to "divide" my loss with my neighbor.

The responsibility of private citizens in this matter had already been tested in

some courts. The *Prairie Farmer* in 1864 reported the upholding of a judgement for \$5,000 against a defendant who had allowed his glandered horses to occupy a field adjoining that of the plaintiff, who had lost many of his horses.

The editor of the *American Agriculturalist* had warned in 1865:

This terrible disease is fearfully prevalent in some of the Government Horse Hospitals. We have feared that it would spread.

And a communication from J. C. Meyer, V.S. of Cincinnati "asserts that it has spread most alarmingly." Meyer writes:

Since the Government has been selling its unserviceable army horses, the glanders have made their appearance in my practice, and are extending to such a degree, that I fear, if the sale of such sick horses is not stopped, not only an immense loss will be sustained by the State, but also, that in a short time we may be unable to obtain the necessary horses for war purposes.

Later under the heading: "Glanders! Too Late," the editor states:

We have heretofore repeatedly warned our readers and the public against the danger of getting glandered horses from the Government. . . . Among the horses sold in this city at the Government sales, those well known to have this most malignant and terrible disease, (affecting men as well as horses) have been repeatedly, and we presume constantly, sold. . . . The Government might better have shot every horse, than to have them spread contagion and death (for the disease is utterly incurable) among the stables of the country, far and near. Besides, we shall very likely hear of men dying in unutterable agonies from this malady.

Shortly afterward an accurate account of the disease and its mode of spread is given to enable farmers to detect its presence and prevent its spread. But "no person should carelessly examine a horse for the glanders. Any handling of the nostril . . . may easily inoculate a person with the virus."

Cures continued to be propagated, but in areas where the disease had been known for some time, slaughter was more com-

monly recognized as the only remedy. Thus, an "old Doctor, whose sands have almost run out," in offering a sure cure for glanders, says:

We have investigated the disease of Glanders in horses and men. And after much experience, we have long since settled down on the grand Panacea. It is one powder and one blue pill. Take one tablespoonful of Dupont's best rifle powder, and put it into the mouth of a good musket, and ram down the paper on the top of it, then take one blue pill of lead of an ounce or less in weight, and ram home on top of that, and then go to the patient, *in the stable*, and go through the military manual of firing; but be sure to kill the horse, and burn him and the stable, bridles and every thing that has come in contact with him.

If the stable is not too contaminated, and is worth saving, he suggests that it might be disinfected.

Dr. Paaren, in 1866, offers the following advice to a correspondent who had bought a glandered mare: "First and foremost we advise you to destroy the mare and bury her deep in the ground at a remote place." After thorough disinfection with chloride of lime:

When the stable is dry, place your horned cattle therein — no fear of catching the glanders — and arrange to keep your horses in the cow barn, if possible, from four to six weeks. . . . Bridle, bit, halter, blanket and harness, that have been used on the glandered mare, should be scrupulously cleaned in boiling hot water, or if of little value burn them.

A Dose of Nothing

A correspondent to the *American Agri-culturalist* in 1861 notes that this paper:

contains very few recipes for the cure of diseased animals, and some of my neighbors think the paper is lacking on that account. One of them takes a journal that gives almost a column every week, telling how to cure every thing from a flea bite to a fistula. . . . In reading them I am reminded of the sweepings of an apothecaries' shop. . . . I have no doubt that a regularly educated veterinary surgeon can often prescribe good remedies, but I don't believe it safe for every body to dose animals according to their own fancy. . . . If I have a sick cow, and can get no reliable medical man

to prescribe, I generally let Nature have her own way. . . . In most cases I find that something else besides the animal needs doctoring. . . . Foot rot in sheep is best treated by digging trenches in the pasture, and putting in drain-tiles. A few "plasters" of clapboards on the old stable will cure a good many diseases in horses.

To this the editor replies:

There are a few epidemical diseases which require a general treatment, and rules for such treatment may well be published; but for nineteen-twentieths of the ailments of man or beast, the best possible medicine is a very large, long continued dose of nothing at all.

The editor, Orange Judd, apparently followed his own advice, for his paper in the 1860's carried very few articles on the specific treatment of animal diseases. While his directions for the use of chloroform by farmers at least made them aware of the potential uses of anesthesia, it may be doubted that in the hands of curious farmers this was much of a blessing to animals. After stating, "this enables the surgeon or veterinarian to perform very difficult and even dangerous operations with comparative ease," and giving the mode of administration in detail, he says:

Besides the use of these agents in effecting insensibility in cases of surgical operations upon injured or diseased animals, by their means a fractious horse may be made manageable while being shod; colts may be gelded, cows spayed, and many other similar operations performed which any ingenious farmer may do himself after a proper investigation.

In quite a different vein is an editorial on pleuropneumonia in 1864, of which: "No doubt we shall hear more. It is acclimated, the seeds are sown from Maine to Minnesota, and they will bear fruit." Noting the extensive system of veterinary sanitary police in Europe, Judd says:

In this country if a man suspects that the disease is in his herd, and knows the danger — nothing hinders him from selling out his entire stock . . . thus the disease is scattered, surely to break out in distant localities. The man who does this is guilty of inflicting upon nu-

merous farming communities the greatest possible scourge — the most insidious and terrible malady which can befall their herds.

The need in this country of educated veterinary physicians and surgeons, is very great, and will continue so long as the quackish horse-leeches and cow-doctors are encouraged in their quackery by reading farmers, and until young men of character devote themselves to the study of the diseases of animals.

What the editor is arguing for in the case of pleuropneumonia, however, is professional recognition of inoculation to ameliorate the disease:

Indiscriminate immediate slaughter is not to be recommended. Isolation of the herd and inoculation with the virus from the lungs of a slaughtered animal, in the tails of all will enable the farmers to save most of their animals.

In a note of warning “which farmers and all who eat meat should heed,” the editor comments upon the “reckless traffic in diseased meat” in Great Britain, noting:

Livestock insurance companies have nearly all failed on account of the ravages of this disease . . . [which] has so increased the price of meat that the meat-consuming public is annually paying \$50,000,000 more now for the same amount of meat.

A measure which should be acted upon with dispatch is:

the immediate establishment of Veterinary schools or departments in our colleges, and, perhaps, by the employment on part of the State of the best Veterinary surgeons who can be induced to come to this country from Europe, for we now have few, if any, who understand the disease.

And sounding another warning in 1864, Judd states:

In the neighborhood of this city [New York], deaths are constantly occurring; the disease is perfectly well recognized and known by the milkmen, and by the authorities, for if an animal dies by disease or accident, the owner is obliged under heavy penalties to notify the sanitary police. . . . There is very great danger that cattle bought in this market and taken into the country to feed, will carry the seeds of

disaster which can hardly be estimated. Almost every “cow-leech” is sure he can cure this disease, and farmers who trust them may do so to their cost.

This same year, the editor urged investigation of abortion in cattle:

In Herkimer Co., N.Y., great complaint has been made of the prevalence of this disorder, hundreds of calves having been lost in this manner last year. . . . It appears probable that there is danger in allowing an affected cow to remain with the herd, as other cases are pretty sure to follow apparently from sympathy.

The Pigs Perish

In Illinois, the *Prairie Farmer* for 1862 reports:

The loss of livestock in this state alone is immense, by disease and other causes, and is a matter that deserves and should claim the attention and investigation of those in power. . . . The loss annually, which we believe could be prevented, would nearly, if not quite, pay the Illinois proportion of the National tax. In many counties, we are authentically informed, not more than one-fifth of the increase in swine ever mature for the butcher or packer, and the loss of cattle by murrain and black leg is very large.

Hog cholera, which seems not to have become a major problem in Illinois for some two decades after it was first reported in Ohio in 1833, apparently had driven many swine farmers out of business; a correspondent from Coles County states in 1862:

It remains the same loathsome malady, but not as fatal as when it first appeared, and the farmers here are beginning to raise hogs again. There are swine now running over the farms where the cholera was very bad last summer, that appear healthy now.

Another reports:

A disease new to me and my neighbors, has been prevailing among my hogs, twenty dying out of a lot of sixty. The seat of the disease is in the throat; they appear stupid, and breathe with difficulty . . . till they die . . . in about twenty-four hours. . . . They seem to suffocate to death; turn purple around throat before

death, which extends over the lower part of the body in a few hours.

The editors add: "The disease . . . is much the same as that of many other sections, and that is enveloped in so much mystery."

Some idea of the measures taken by a community of farmers to combat a disease as baffling as hog cholera may be had from the report of a farmer's meeting, "for the purpose of considering the subject of Hog Cholera." Ten farmers reported using the following as remedies or preventives — with varying results: lard, ashes, soft soap ("had to catch them and pour it down"), salt, charcoal, sulfur, assafetida, copperas, bleeding in the mouth, "Thompson's No. 6," tar, lye, and "cut open his scalp, put in salt, and pepper." One states:

I had a large fat one die. I built a fire over it and completely roasted it, and burnt most of the fat off. The hogs ate the remains. . . . The disease at once stopped; eight that were sick got well.

But another states:

I have no faith in burning hogs to prevent the disease as here stated. A neighbor of mine burnt some eight in the manner stated, and they were eaten by the hogs, but with no perceptible benefit.

This happened to be in Iowa, but the story elsewhere was the same.

The vendors of hog cholera cures were censured by a correspondent in 1865, who identifies himself as "Berkshire":

Every few days I see some new specific, recipe or secret advertised as a certain cure for hog cholera. Not satisfied with this alone, the vender usually proclaims that his medicine will make well hogs better, make them fatten faster, &c., thinking this will certainly be bait sufficient to catch a fine lot of greenbacks; and I presume there are greenhorns enough to nibble all these finely baited hooks, as I have lived long enough to learn that men love to be humbugged. It is my opinion that all these cholera cures are *humbugs*.

Trichinosis in hogs began to cause some concern in the 1860's, and in 1866 the editors of the *Prairie Farmer* state:

That it occurs in this country is undoubted, notwithstanding the bold assertions of some to the contrary, for out of many hundred specimens of pork which have been examined by scientific men of this city, one in every fifty has been found more or less infected. Let this however cause no alarm, for it only proves pretty conclusively that with the same thorough investigation they would have been found years ago, and there is no reason to suppose that there are more now than there have ever been. Some of the deaths in the army may have been caused by eating raw pork . . . but in a country where meat is as thoroughly cooked as it is in ours, there is little to be feared from this scourge.

The later report "Great excitement prevails just at present in and around Cedar Rapids, Iowa, from the fact that three persons have recently died there of the *Trichinae* disease," failed to generate any excitement in the editorial offices of the *Prairie Farmer*, except to "exhort everyone to have a care that his pork be well cooked."

In 1866 a correspondent to the *Country Gentleman* states that disclosures of the "horrid devastations" of trichinosis in Germany:

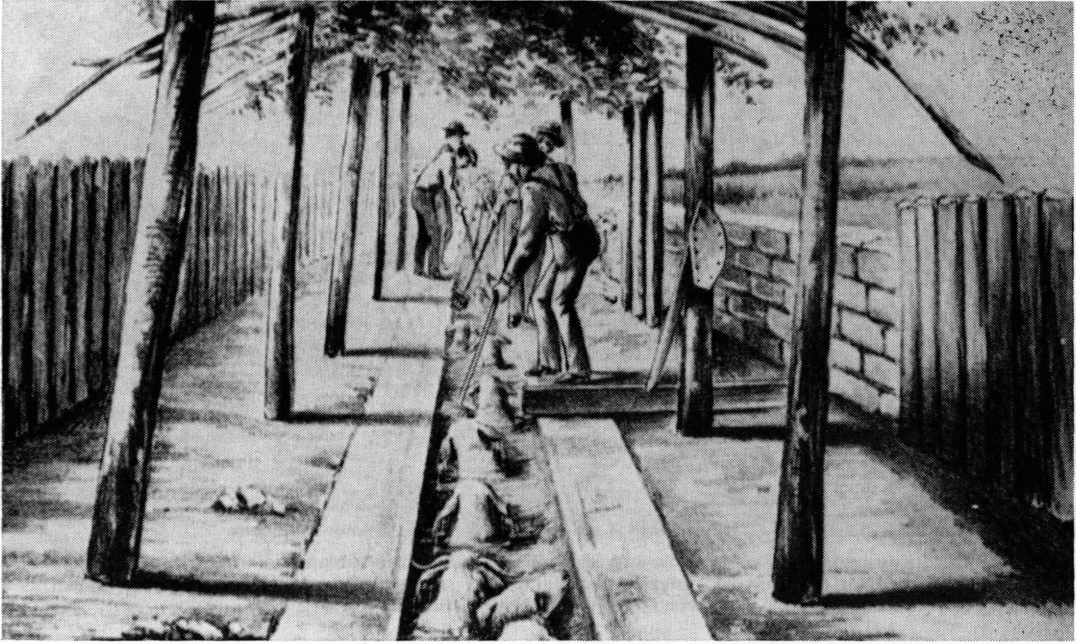
Have struck the community with a panic; and the market quotations in New-York . . . show a falling off in that city of one-half, in the consumption of this oleaginous comestible.

He urges proper cooking of pork, and, "Eat no sausages of unknown genealogy." In particular, he urges people to eat less pork, for:

If it is true, as has been affirmed, that man partakes of the nature of the animal of which he eats, we shall be the gainers in the long run by the substitution of the flesh of the more intelligent beeves and docile sheep for that of the more brutish, uncleanly, voracious, and even grunting swine.

Following a visit with a family near Springfield which owned some 30,000 sheep, the editors state:

Sheep in Central Illinois are subject to few diseases. The foot rot is never known on the prairies. . . . Sheep brought from the east have it very badly, but it entirely disappears the second season. The scab prevails in some flocks. . . . Ticks are not as prevalent as at the



Scabies (mange) of sheep became a major problem which was largely uncontrolled until effective means — dipping in creolin solutions — were developed in the late nineteenth century.

east, yet no flocks are entirely free from them. . . . [With] watchfulness during the herding season, but few sheep are killed by dogs . . . [but] the loss in the small flocks throughout the country when they are left to a free range without a shepherd during the summer, is immense.

With good management, more sheep were lost from rattlesnake bites than from dogs; including some inevitable thievery, on the best farms the annual loss from all causes was estimated at 10 per cent; a flock of 1,000 ewes was expected to produce 800 yearling lambs.

Texans in a Tizzy

The state of Texas appears to have had its share of troubles about this time, despite reports to the contrary. A letter in the *American Veterinary Journal* for 1858 states:

Here, above all places is the field for veterinary surgeons. Many large stock owners could each amply support a surgeon on the profits of the animals saved in the course of a year. But here we are shamefully imposed upon by

quacks, more so than in any place I know of. Even those who have attained any reputation, in the majority of cases, upon examination, prove to be uneducated and sorry apologies of the skilful surgeon. . . . The disease we most fear, in this region, is what is commonly known as *Spanish fever*.

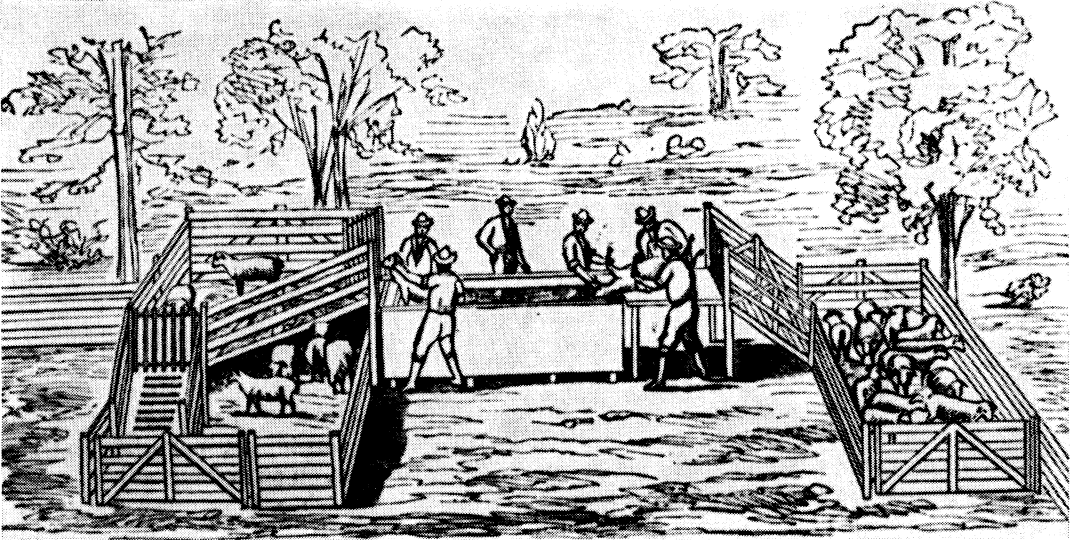
In 1859 a correspondent to the *American Stock Journal*, writing "from the interior of the state," reports:

Many sheep are lost from the ravages of a disease called "fatty liver," which attacks the healthiest and most thrifty looking animals, and proves rapidly fatal. In some instances, flocks of several hundred have been almost entirely swept away in the course of two or three months by this terrible disease. It seems to be confined chiefly to the interior portions of the state, and is but little known along the coast.

The *Journal* considers this to be "liver rot," but attributes it to:

The effect of the miasma produced by the decay of vegetable matter in low, wet grounds, although some writers attribute it to the formation of tubercles in the liver, caused by exposure to cold and wet, and to healthy food.

In 1861 another Texan writes:



The European system of dipping in aboveground vats had the advantage of portability, but was little used on the western ranges where land (for sunken vats) was more plentiful than wood. *American Agriculturalist*

We have a disease that is proving very fatal among the horses in our country, which seems to be confined to brood mares and studs . . . which causes some to think it is a venereal disease. . . . The animal stands with his hinder legs wide apart, straddles as he walks, and hinder legs apparently very stiff . . . appetite good, though they appear to lose flesh very fast. They generally live from ten to eighteen months after taking the disease.

Texans appear to have favored the *American Stock Journal*; in 1868 one writes:

Our flocks in Texas are well-nigh ruined with *scab*. Thousands have died and thousands more will die, if not treated properly in the way of cure and preventative. Plenty of Sulphur and of Tobacco will cure it. But, first, the remedy is a severe one; and then, they won't stay cured! The insect, in this climate, is to be found on every tree and post against which the poor sheep rub themselves. Few animals are so liable as sheep to the attack of parasitic insects, not only the scab insect, but lice, ticks, and the grub in the head. . . . Pigs are more infested with insects than casual observers would believe, until they examine the skin under a glass. Indeed all animals, even horses . . . are thus infested, and in summer especially, flies torment cows and horses kept in stables to a degree that is most injurious to them; in some instance ruinous. It is found that a washing

once or twice a week with . . . cryslyc soap prevents flies alighting on the animals at all.

We have in Texas, a terrible pest amongst livestock; known as the *screw-worm*. When from any accident fresh blood is drawn from an animal, even following the mere bite of a mosquito or the crushing of a tick, it is instantly blown with living maggots, by a large grey fly. The maggots eat their way at once into the flesh, and form a large sack. . . . In forty-eight hours a cavity, in an ox for instance, is made large enough to hold a pint, and is one mass of living maggots, tormenting the poor brute beyond conception . . . an infested animal can be smelt at a distance of a hundred yards to windward! . . . These cryslyc compounds . . . destroy the worms, cleanse the wound and effect a cure.

The *American Stock Journal* (Pennsylvania) at this time advertised various cryslyc compounds, including Black Bar Soap, Sheep-dip, Foot-rot Ointment, and "Death to Screw-worm Ointment." By using the latter:

The altering or marking of young stock may be done with safety, even in the extreme South, at any season of the year. . . . To that pest of the Southern Stock-breeder, the *screw-worm*, it is certain death.

Cattle in California

In 1769 an expedition of less than 100 Franciscans, with horses, mules, and 160 head of cattle, arrived in Santiago, and formed the first mission in California. This is the only lot of cattle recorded as having been brought from Mexico to California for many years. The first overland settlers from the East found many large herds. But in 1871 a Californian states:

Stock owners are becoming disgusted and discouraged. Many cattle are dying for want of food. . . . Cattle and horses are roaming about in the valleys and table-lands with no visible means of support. Their next movement will be their hides brought to market. . . . The number of cattle in Southern California, at this time, is not one-tenth of what it was ten years ago; and this decrease is owing to want of feed in dry seasons, many of the cattle starving to death. . . . At the present time the State does not raise its own meat.

In 1861, a German veterinary surgeon from San Francisco, H. H. Claussen, writes:

An epidemic horse disease in California has been prevalent in different counties in this State, for some months, to a very great extent, whereby horse owners have lost some twenty-five per cent of their stock. The press calls it the "Salinas Horse Disease." In veterinary literature it is known by the name of Influenza. . . . The farmers, and most of their so-called veterinary surgeons—in name only, but not in knowledge of the calling—treat the disease wrong, and use for its cure, useless and often contrary treatment. Some try to cure by bleeding . . . the main cause of such great mortality is wrong treatment and lack of care. In Europe . . . the mortality has never been so great.

Sympathetic Slinking

Abortion in cattle had become a major problem by the 1860's; Paaren notes, "it is of no infrequent occurrence in certain sections of the country," and quotes at length from Robert McClure, "Principal of the Merchants' Veterinary College, of Philadelphia," on the subject. At this time, and until much later, the theory of "sympathy" as a cause of epizootic abor-

tion was widely believed in, largely through the influence of Youatt, who literally states that one cow will "slink" her calf out of sympathy for another who has lost hers. On the basis of good evidence, McClure protests:

The theory of sympathy, which some authors and farmers favor as a cause of abortion, is not to be entertained for a moment by any one having any pretention whatever to a knowledge of physiology and the pathological anatomy of cattle.

The major cause of epizootic and the disease can be prevented "by maintaining a high standard of general good health." On the same page of the *Prairie Farmer*, a correspondent mentions having paid \$10 for "a secret remedy for the disease in cows of abortion," which was simply to feed "for each one about a teaspoonful of bone, pounded or ground to dust."

Earlier, it was stated:

The dairymen of Herkimer, Oneida, and other dairying districts on N.Y., are losing very heavily from this disease or habit. Entire herds of cows have aborted. The scourge increases every year. No one has yet determined the cause of it.

Abortion in cattle caused much concern in upper New York State in the 1860's. In 1863 a committee appointed to investigate the conditions reported in the *Country Gentleman*:

This habit in the cows . . . seems to be spreading rapidly, and is justly the cause of alarm to our dairymen; more especially as no satisfactory reason can as yet be given as to its cause, and as no practical, or at least economical means yet adopted, have operated as a cure or mitigation of the evil.

The first appearance of the disease around Little Falls was in 1852, when one farmer lost 13 calves, and 17 the following spring:

That fall he sold off his entire dairy, and removed from under his stables about 100 loads of manure. . . . In the spring of '54 he again stocked his farm with cows, and had no trouble until the spring of '61.

Among the innumerable theories as to the cause of abortion at this time, including the use of stanchions, and the inevitable "sympathy," few were as prescient as that proposed by D. B. Hinman, President of the Chester County (Pennsylvania) Agricultural Society:

We think that when the first case has occurred, and the disease has spread among the herd . . . it is continued to the next year and perpetuated through the agency of the bull.

As proof he cites a case of several family cows owned separately, but all served by the "town bull," and all of which aborted. In another instance, a man who did not subscribe to the bull theory bought a bull from an infected herd:

The next season nearly every cow served by the bull aborted. No abortion had taken place on this farm previous to this, and nearly every cow from adjoining farms served by this bull also aborted.

In another perceptive article on abortion in cattle in 1866, a Canadian farmer summarizes the best information to date on the mode of infection. For this he gives credit to John Barlow, the brilliant veterinarian at the Edinburgh school. He states that abortion is of rare occurrence in lower Canada, thus it would appear that most of his information was borrowed. The frequent occurrence of abortions in a herd following the first case, he says:

does not absolutely prove that it is contagious. . . . To prove that the disease is contagious, it must be shown . . . that upon the introduction of an infected animal among those that are healthy, the disease is communicated to the healthy animals within a period of time sufficiently short to justify the supposition of contagion. That upon the separation of the diseased from the healthy animals, the spread of the disease is stopped.

The follow-up of these and other premises, however, is disappointing. The odor theory was still too strong to be displaced, especially by those who had a firm conviction on the matter. As treatment, bleeding and laxatives are recommended, but:

When abortion prevails to a great extent for years . . . a thorough change of herd, however great the temporary sacrifice, will be found the best policy. . . . The materia medica of the veterinarian is not richer in specific remedies for deep seated and mysterious diseases than that of the physician. . . . Both, as yet, are working at the rudiments of their respective sciences, and are groping with equal success, I suppose, since they grope alike in darkness.

Henry S. Randall, the writer on sheep husbandry, reported from western New York:

The spring of 1862 was distinguished by a peculiar mortality among lambs. . . . The lambs affected by the epizootic had the appearance of a general want of physical development at the time of their birth. . . . The resemblance to a prematurely born animal was striking. . . . Congenital goitre in some instances accompanied the preceding symptoms. . . . The average loss . . . varying from 10 to 90 per cent . . . was about 50 per cent in the larger infected flocks.

Scientific Surgery

In 1866, N. Cressy, M.D., of Canaan, New York, reported on a "Capital Operation in Veterinary Surgery." This involved a ventral hernia "the size of a four quart measure," in a colt:

I examined the case with Albert Brainard, Esq., a well known and reliable farrier . . . [and] decided, as a last resort, to use the knife. The colt was placed on his right side, and Mr. Brainard administered chloroform from the sponge, using about an ounce and a half, which produced complete anesthesia in about five minutes.

He describes the classic hernia operation in detail, and states: "We got union in the internal wound, by *first intention*, and the skin was now nearly closed up by *granulation*." Cressy was also a veterinarian, but apparently chose to obscure the fact.

Later, G. W. Wetmore, M.D., reports on an operation for scrotal hernia in a colt, in which he assisted Dr. Cressy:

I casually examined the case some time ago, and thought it beyond help, as did Mr. Joseph Marsh, a practical farrier. . . . Dr. Cressy was

called, and after a very careful examination . . . decided that the scalpel offered one chance for the restoration of this otherwise worthless creature. I gave the colt the chloroform, and Dr. Cressy . . . castrated the animal on the left side. . . . These operations have excited much interest in the profession . . . and we regard them as reflecting much honor and credit upon Dr. Cressy as a comparative anatomist and veterinary surgeon.

In response to the inquiry of a correspondent in the *Country Gentleman* for 1866 concerning a lump on the jaw of a horse, Cressy gives a learned discussion of the probable nature of the case, and states, "I believe this tumor can be removed very safely with care, but it requires skill to extirpate it, inasmuch as it is in a delicate situation, involving, no doubt, arteries and nerves." Having noted Cressy's operations, another correspondent inquires, "if there are books to be had so that a farmer's son can learn the art both of [veterinary] medicine and surgery?" The editor replies:

No man can become a good horse doctor from books alone—he must have intelligent and well directed practice as a part of his instruction.

But for the most part the situation remained what it was represented to be by a correspondent to the *Country Gentleman* in 1862 who states:

I cannot for the life of me, perceive the necessity, in pursuing the study of Veterinary Science, of depreciating it to the value it bore in barbarous ages, when the firing-irons and blisters, and other such diabolical resources, were the chief remedies. I cannot see why a member of the veterinary profession should not be, and conduct himself as a gentleman. The act itself has nothing about it that should make people think that because they study and practice it for a livelihood, they must therefore combine it with a low, mean manner of living, or be compelled to associate with blacklegs. This is too much the opinion of the present day, and it is quite time respectable, energetic young men should take hold and lift the business out of the slough into which it has fallen, and make it what it ought to be, a respectable profession.

The establishment of veterinary schools, however, did not immediately make skill-

ful surgeons of all aspirants. Writing on castration of the stallion and cryptorchid in 1884, G. Bailey, D.V.S., states that while castration is one of the safest and simplest of operations: "I know of many instances of graduates of veterinary schools whose 'courage fail them' when called upon for the first time." Regarding the many fatalities resulting from the work of certain types of men, he mentions the all too frequently excessive use of the hot iron, stuffing the sac with alum or other materials, and:

I also know of an old and experienced practitioner, who was habitually complaining of his *bad luck* in castration, who always used a pocket-knife with which he cut his tobacco; and in addition to the blade being always "gummed up" with the "fascinating weed," it was always rusty.

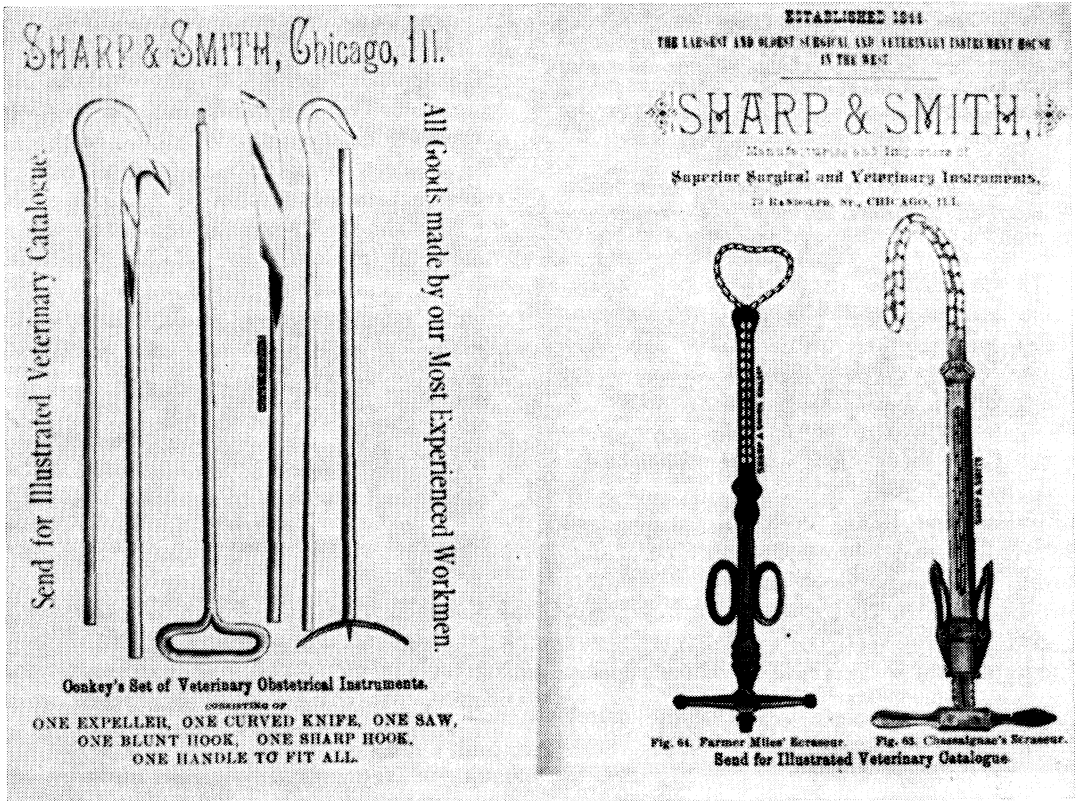
All that is required, he says, is a thorough knowledge of the anatomy of the region, strict cleanliness, and reasonable self-confidence. Most intelligent operators were now using the ecraseur; but:

One of the most ancient modes of operating, and one considerably in vogue at the present day, is that of compression by wooden clams. . . . Cauterization, at the present time is mostly confined to country gelders and others whose knowledge of more scientific methods is extremely limited. . . . There is another method I have seen employed upon horses and other animals, a barbarous one at best, by charlatans and quacks, that of stretching or tearing out the "spermatic cord," until it breaks somewhere, which of course it will do if sufficient "main strength and stupidity" are applied to it.

On castration of cryptorchids, Bailey states:

Now that the noted specialist, Farmer Miles, has discovered a safe and humane method of operating upon ridglings. . . . I believe the veterinary profession cannot do less than to acknowledge their indebtedness to an ingenious and skilful man for a valuable contribution to veterinary surgery.

Miles, of course, was not the first to use the method he employed, but none less than George Fleming had been prompted to write:



The spaying ecraseur was used in the 1860's by Robert Jennings, but did not gain wide acceptance until Farmer Miles' improved model was manufactured two decades later. *American Veterinary Review*

It had remained for an "American farmer" to visit England and publicly demonstrate to British veterinary surgeons, what they had never dreamed of being successfully accomplished.

That veterinarians might have needed additional instruction in the art of castration is evident from R. S. Huidekoper's review of Liautard's book on *Animal Castration* (1884):

This concise and complete little book is a veritable godsend to the veterinary surgeon and to the *rural economist*, in these days of superstition, when animals are still gelded at the wane of the moon, and educated veterinary surgeons buy "secrets" of "difficult operations" from self educated gelders, whose long practice has simply made them expert in performing what any good anatomist should do.

Concerning the "secrets" of cryptorchid castration bought by veterinarians from

Farmer Miles, Thomas Rodgers, D.V.S., writes in 1893:

It has been reserved for a layman ("Farmer Miles") to make a greater reputation, and accumulate more wealth, in the practice of this specialty than any professional man in this country. I have seen him operate and should be unjust to deny him great natural aptitude for his vocation, entire coolness, great manual dexterity acquired by much practice, and an excellent, though rather slow, method of casting and preparing for the operation. It has also been my fortune to have the acquaintance of some veterinarians who have received "sealed instructions" from him; and they one and all throw a cloud of mystery round the operation, as though there was some secret about it not known to our teachers. I believe that I have solved their cipher, and that their mountain of quackery having conceived has brought forth just this little mouse — i.e., Ninety per cent of so-called ridgling horses are nothing but close colts, having the testicle and cord, or some part

of them, somewhere between the upper and lower ring.

THE LIVESTOCK JOURNALS

The stock journals, by comparison with the more general agricultural papers, quite naturally carried considerably more information on animal disease, and thus are valuable sources in this respect. The *American Stock Journal*, published beginning in 1859 in New York has been noted in connection with George Dadd. Another *American Stock Journal* began publication in Pennsylvania in 1866, and in 1870 the *National Live-Stock Journal*, a first-class publication, began in Chicago. Later (1881) the *Breeders' Gazette* was added to the list, and immediately entered the fight for a national agency to control animal disease. The short-lived (1882–1884) *U.S. Veterinary and Livestock Journal* can be considered in this class. There can be no doubt, despite several of their shortcomings from a veterinary viewpoint, that these journals served an important function in creating an awareness of the increasingly dangerous animal disease situation, and in calling for adequate measures for control.

The *National Live-Stock Journal* carried many articles on animal disease. At first these were mostly in the form of reprints from other papers, but in March, 1871, H. J. Detmers, V.S., was installed as editor of the Veterinary Department. During his short tenure Detmers provided a number of lengthy and excellent articles on a variety of diseases, but he apparently severed his connections with the *Journal* the same year. Following this the Veterinary Department as such was dropped, but inquiries of a veterinary nature were answered, apparently by a veterinarian, and the *Journal* continued to keep its readers informed on the animal disease situation. In 1874 a correspondent asks: "Why is The Journal without a regular Veterinary Department, in which the diseases of stock are treated?" The editors state that these have been considered in the other columns, and:

The inquiries of correspondents in relation to the diseases of animals are referred to Dr. N. H. Paaren, whom we regard as one of the most competent veterinary surgeons in the United States.

The following year Paaren's contributions were identified; later James Law was added as an associate editor, but Paaren continued to answer veterinary inquiries.

The *Journal* carried a report of an outbreak of anthrax in Massachusetts in 1869, and again in 1870, saying:

The disease which is destroying so many valuable animals in Berkshire county, is the same as that described to the students of Amherst College as *Charbon*, by Prof. Law, in his recent course of lectures upon Veterinary Science.

A good description of its epizootiology, especially in relation to flooding, is given, and the danger to man is stressed. The same issue (January, 1871) carried an extensive notice of the outbreak of foot-and-mouth disease in New York in 1870; the editors state:

Our readers feel a natural desire to ascertain as much as possible of this disease . . . but at this distance from the scene of operations, we are compelled to rely greatly upon our exchanges for a description of its manifestations, and the modes of preventing and curing it.

In February: "We have heard of no well-authenticated case of this disease in the West, as yet, but it is not unreasonable to expect its appearance on the great prairies at any time." And in reprinting a lengthy article on the disease by James Law, the editors state:

It will repay careful perusal; and while at present of immediate interest to Eastern breeders and dairymen, those farther West may need to refer to it an early day.

To Contribute My Mite

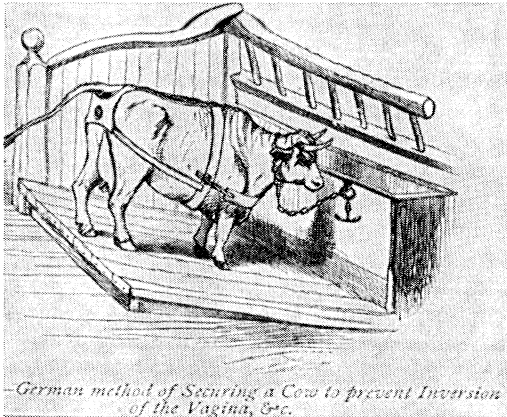
At the time Detmers was made Veterinary Editor of the *National Live-Stock Journal* he was Professor of Veterinary

Surgery at the Illinois Industrial University at Champaign. Apparently he sought the connection with the *Journal*, considering it:

My duty to contribute my mite. . . . If you look through your agricultural exchanges, you will find that, with rare exceptions, the veterinary department is the poorest one of all; that it contains a good deal of nonsense, and is frequently made up entirely of quack prescriptions. . . . As veterinary science is so closely allied to animal husbandry, or rather a constituent part of the same, I think The *Journal* should have, also, a veterinary department in keeping with its other departments. Then the friends and readers of The National Live-Stock *Journal* may learn to appreciate the value of true veterinary science, and may be induced to promote its cultivation.

The several columns provided by Detmers during his short tenure as Veterinary Editor represent a new high in veterinary journalism in the agricultural press. On periodic ophthalmia:

At the present day . . . its true causes are better known, the moon's innocence has been established, and that old dame, charged with so many sins, has been honorably acquitted . . . [and] Accusing so-called "wolf's teeth," or "blind teeth," of producing moonblindness, or, indeed, of affecting the eyes at all, is simply old-fogeyism.



The inclined platform for prolapse of the uterus or vagina has been used for a century or more, but the elaborate harness has been largely superseded by suturing technics. Clater-Armatage: *Cattle Doctor*

Except for "a good bleeding," his handling of the condition is quite acceptable.

Spaying of cows, he says, has not been widely practiced because of the frequency of peritonitis as a sequel to the common operation through the flank or belly. He advocates spaying through the vagina, a method which: "as far as I am aware, has never been practiced in this country," as a means of obviating the dangers of an abdominal operation. It also results in "less suffering to the animal, and is easily performed." In succeeding issues he discusses dysentery, articular lameness, sheep scab, milk fever, and strangles. On the latter, he mentions its contagious nature, but strangely enough fails to stipulate segregation of the diseased animal. He says, "We will treat of the complications of distemper in a future number," but this is his last column. Evidently he had anticipated continuing his editorship, and no explanation is offered for dropping it. It would seem likely that his articles were too erudite for his audience; Paaren later returned the *Journal* to the more commonly accepted practice of "answers to inquiries."

It would appear that despite the avowed intentions of the agricultural journals of espousing veterinary science in its broadest sense, it was difficult to strike a balance with demands of readers for free veterinary service on individual problems. At one extreme, in an address to the Ohio Agricultural Convention, Dr. N. S. Townshend stressed:

the necessity of a thorough course of veterinary instruction in the Agricultural and Mechanical College of the State. . . . The end of veterinary knowledge is not the cure of disease, but the maintenance of stock in the highest conditions of health and profit. . . . The treatment of disease is only incident to this.

At the opposite extreme the *Journal* invited subscribers to send inquiries on disease for Dr. Paaren to answer, and Paaren also advertised his services as:

A Qualified Surgeon, of nearly 20 years practical experience, known as the Veterinary Edi-

tor of the National Live-Stock Journal, and of *The Prairie Farmer*, will go any distance to perform Surgical Operations, or examine into epidemic or other Diseases of Domestic Animals. Veterinary Advice given by return mail on receipt of \$1. Will also contract with breeders by the year, to visit once every month or two, at a reasonable rate . . .

An advertisement which caused much interest was that of a Jas. McKeighan of Illinois, who claimed:

Barren Cows made Fertile. . . . [Having] discovered the means of restoring barren cows to fertility, persons having such animals as they desire to have operated upon, will please communicate . . .

The editors state:

We depart from our usual custom to direct attention to the advertisement to Mr. James McKeighan . . . who claims to have discovered a means of restoring barren cows to fertility. . . . We learned that he relies upon the efficacy of a surgical operation, which, if it does no good, can certainly do no harm, and is not attended by any danger. . . . We advise those who have barren cows to confer with him at least, and submit this matter to a test.

One correspondent writes of one apparently successful case of a four-year-old cow that had never bred. In October: "She is in calf since last May—at least has not bulled since then." Later, however, in response to an inquiry for a cure for barrenness, the editors state: "Have never heard of a permanent cure, or a certain cure." In the meantime, apparently, another quack had bit the dust, for McKeighan had stopped advertising.

Farmer Miles

The *Journal* also carried the business card of T. C. "Farmer" Miles, V.S.: "Ridgling Horses Successfully Castrated by the right method. No cutting, only through the skin at the bottom of the scrotum." One of the more remarkable phenomena of the veterinary scene during the latter part of the nineteenth century, Miles, by his own admission was: "The best castrator in the world." This, and his

penchant for other superlatives in his voluminous advertising of his prowess, undoubtedly was the cause for many veterinarians labelling him a quack—particularly if they did not know the man. During the 1870's and '80's, however, it was not uncommon for prominent practitioners to announce their abilities in no uncertain terms. And while the USVMA made an effort to lay a restraining hand upon such activities by its members, relatively few veterinarians were members of the Association.

Miles, whose methods savored of the then rampant quackery, however, was no quack. By definition, a quack is "an ignorant or fraudulent pretender to medical skill." Miles, on the other hand, was an unusually talented individual who could back up his most extravagant claims. It is perhaps significant that his standing offer of \$500 to anyone who could best him in the cryptorchid operation on horses was rarely contested, and never claimed. Moreover, despite his flagrant advertising, he practiced a higher standard of ethics than was to be observed in the conduct of perhaps the majority of veterinarians of the time.

During the 1870's Miles conducted a "college of inguinal surgery" at Charleston, Illinois, at which he taught a method of cryptorchid castration that has not since been improved upon. Although others had practiced the same operation earlier, Miles apparently devised his technic independently, and was sincere in his claims of originality. He travelled the length and breadth of the country performing the operation, at the same time demonstrating his now classic method of restraint. He also published an excellent manual on the anatomy of the inguinal region. Thus it is obvious that he had no secrets to hide; in fact, realizing that he could not personally fill the demand for his services, he openly professed to prefer teaching others his methods to merely performing the operation—which he did so rapidly that it is doubtful that many could have learned it merely by observation.

Concerning his ethics, Merillat and Campbell state:

He taught the doctrine of Hippocrates and practiced it. He opened his class work with prayer. He was not a hypocrite. He taught his students to act like gentlemen, dress like gentlemen, be gentlemen and had no use for fakirs and fakes. . . . Had the veterinary quacks of his day and their descendents followed his concepts of what a veterinarian should be and should do in the matter of conduct and skill, the coming graduates would have found it far harder to replace them. The quack's Waterloo was the field of conduct. The ethics of Farmer Miles would have postponed the supplanting of the American non-graduate by the young, inexperienced graduate, just as our ethics now must save the veterinary profession from public censure.

Calumny From Critics

Despite an undoubted first-hand knowledge of Miles's prowess, Alexandre Liautard repeatedly criticized what he termed Miles's charlatanry, and was harsh upon veterinarians who wrote testimonials for Miles, which the latter used in his advertisements. Liautard, whose ethics were above reproach, however, was not backward in announcing the merits of the *American Veterinary Review* and the American Veterinary College, both private institutions in which he had a financial interest.

Miles's story, as related by him in the *U. S. Veterinary Journal* for 1884, reveals him as a more reticent individual than his advertising would suggest. His uniquely straightforward style of writing, to say the least, is refreshing; but more important, it reveals him as an intensely human individual with a genteel humility hardly suggested by his flamboyant advertising.

In recalling "some of the hardships of my wanderings and ups and downs in the world as a castrator," Miles recollects:

I was born May 1, 1825 in Kentucky — "down thar." In 1847 I migrated to Charleston, Ills. Moved to Texas in 1858, and back in 1860. Farmed as a business; but for pastime gelded horses free of charge, and soon got the name of being a good hand at it. When my practice

increased so as to interfere with my farming I gave away my ropes and quit the business — several times, but an increased demand for my services and a fondness for such things seemed to compel me to turn my entire attention to castrating and spaying, and traveling in answer to calls for my services until I had crossed the continent from ocean to ocean and from Texas to Canada. In the mean time I had taken the prize at our Centennial Exhibition as the best castrator there, and was complimented by an article in *The Spirit of the Times*, of New York City, Aug. 22, 1877, which said: "There is no man on the continent of America who is worthy of being compared to Mr. Miles in this respect" — [ridgling castration]; and in the same article nicknamed me "Farmer Miles," which stuck to me all over England, Ireland and Scotland, and of which I am not ashamed for I think a good farmer ought to have more sense than I ever had, and in my rambling I find a great many such farmers and like them, and still like my nickname.

How long he had dabbled with castration as a "pastime" Miles does not state, but he was nearly 50 years of age when he turned to this as a full-time enterprise. His success at the Centennial Exposition led friends of his to advise him to demonstrate his prowess in England, which he did, but not without considerable tribulations at first.

Until Farmer Miles practiced and made public his method for the cryptorchid operation in horses, the few veterinarians who were bold enough to attempt it used the flank approach, but the heavy mortality caused all but a few to eschew the operation. The inguinal approach devised by Miles had been reported independently by several European veterinarians as early as 1840, and had been performed by James Law in this country in 1870, four years before Miles is known to have engaged extensively in his practice. Law stated to a friend that he had conceived of the approach independently; thus it is quite likely that Miles knew nothing of the work of Law or of the European veterinarians. Miles states that his method was original with him, and his other writings mark him as an honest man despite his predilection for superlatives concerning his prowess.

Characteristic of the castigation of Miles by veterinarians is a communication by Ezra Mink — a nongraduate of the highest caliber — to the *American Veterinary Review* for 1877 Mink writes:

The wonder and originality, which is attached and attributed to his operations, indicates a considerable lack of veterinary knowledge, as well as a humiliating concession that the veterinary profession lacks operators of originality and boldness — which in fact is not the case, and is an injustice to the veterinary profession. . . . I have no disposition to withhold from Mr. Miles any credit that may be due him for originality, if he never heard of the method before he commenced the practice of it. I gladly concede, that much credit is due him for putting the system alluded to in extensive practice, and by so doing, contributing his share of proof, that it is not so dangerous to castrate cryptorchids in the manner described, as in other methods.

And referring to the endorsement of Miles's method by veterinarians: "from the principal of a college and from an editor of one of the best veterinary journals known," Mink considers:

One effect of such fulsome praise is to increase the egotism, vanity and conceit, of which he was nearly full to repletion, before he received it. Here is a man so filled with charlatanism, that he sings his own praises wherever he goes. He is loud in proclaiming at all times, on all occasions, and in all places, that he can spay cows, and castrate ridglings better than any other man in America can do it. . . .

Is this the kind of man for regularly educated Veterinarians to indorse and cover with certificates? Is this the kind of man for any one who professes to be guided by a proper code of Veterinary ethics to indorse? . . . Did ever a charlatan before get a greater send-off than this Mr. Miles has received from members of high standing in the Veterinary profession? We think not.

Battle of Britain

Laboring under the misconception that he had been invited to Britain by George Fleming, Miles met with a cool reception upon his visit there in 1877. After several misadventures, including an open feud with Fleming, he struck up a friendship

with Professor Wm. Pritchard of the London Veterinary College, and had finally turned his running feud with George Fleming to good account by obtaining a testimonial from the latter under circumstances which gave Fleming little choice. Fleming himself admits that no English veterinarian had attempted the inguinal approach in cryptorchid castration, and he evidently did not wish to subject a horse belonging to the Queen to the risky flank operation — which had been prohibited by law in France since 1717 because of the high mortality. Farmer Miles's operation on this animal, therefore, amounted to something of a "command performance," and may have been the deciding factor in securing for him a coveted opportunity to publicly demonstrate his prowess at the Royal Veterinary College of London. Concerning his entrance into the hallowed walls of the college, Miles relates:

On November 27th, the day set, I went, and met Prof. Pritchard, who asked me, "Have you met Professor Simonds yet?" I answered, "No, sir." "Well, he is the oldest [born 1810] professor here; better come with me to his office, and let me introduce you to him." [But Simonds outlived Miles by two years.] I did so. Professor Simonds seemed to me a very crusty old gentleman. I enjoyed his company so little that I soon took my hat and walked back to Professor Pritchard's office, and asked him if he would furnish me with five young men and a horse so we could practice my methods of casting.

Miles's appraisal of Simonds, although somewhat hastily drawn, coincides with that of General Sir Frederick Smith, who knew Simonds as principal of the College: "He was aloof and distinctly unapproachable; he was slow and possessed several mannerisms . . . which were as lifeless and uninspiring as his manner. He never failed, however, to command respect." Miles continues:

I soon found myself off in a back stable (with an old gray mare) lecturing my pupils. I also discovered that our stable was surrounded with students outside listening to my talk. About this time Professor Simonds came and rapt on the

door, boldly saying, "Open this door." I did so. Then he said, "What are you doing in here?" I explained to him that I was preparing five young men to help me at my public exhibit this afternoon at 2 P.M. He very bluntly said, "This is no place to cast a horse. Come out of here. Come up to the casting shed where there is plenty of room." We went, but I felt rather sulky in being ordered around so dictatorially, even if I was in the veterinary college. Professor Simonds said, "There is a suitable place, now cast your horse."

I then said, "Young gentlemen, go on without me," and they did; they cast that old gray mare, and recast her; tied her, and rolled her around so as to show they were experts in the American methods, until Prof. Simonds kindly stepped to my side and asked, "Would you like to see how I cast a horse?" My sulky mood had vanished. I took my hat off to him, and answered politely: "Professor Simonds, I would be pleased to see any veterinary cast a horse in the Royal College, but much more to see the Old Professor himself." He replied, "You shall," and ordered his ropes and a fresh horse. A fine large bay gelding, that looked a little wildish, was led in and roped according to his orders. In the meantime Prof. Simonds was advising and instructing me how to do when casting a horse so as not to get kicked or hurt while putting on the ropes. I thought it the nearest to mockery that I had ever been guilty of to stand there and thank him for instructions that I would never need. But how else could I do? Finally, with ten helpers, the horse was roped, and orders were given to "pull." That horse flounced and bounced, and got off fifteen feet from where he was standing, and fell against the wall, and kept on struggling until his ropes slipped over his head, and he got up before they tied him, and Prof. Simonds gave his help-

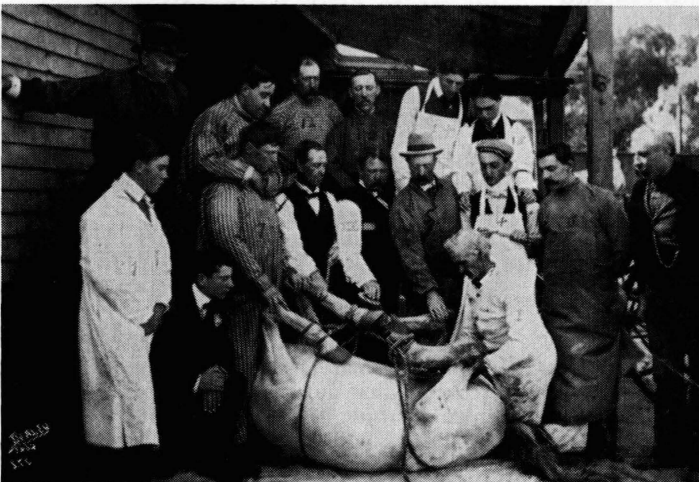
ers a scolding for not putting on the blinkers, and the crupper, and the circling; and the way he scolded, I saw that the students were afraid, and jumped around lively and got what he wanted and put them on again, and again he said "pull." 'Tis true, the horse went down this time, and they held him and tied him, but it was very awkward work, I thought. By this time a large crowd of spectators had collected around us, and up in the galleries. I walked up and thanked Prof. Simonds for the trouble he had put himself to on my account as politely as I knew how.

The crowd, many of them students, apparently sensing Simonds' discomfiture, insisted on Miles repeating his demonstration. Miles, of course, sensed what was afoot, and refused, but the clamor continued, and he finally acceded to their wishes. Miles's five helpers quickly dropped the same horse on the spot, whereupon the crowd cheered, but Miles quickly stopped them, feeling that they were deliberately insulting Simonds. Concerning the two methods of casting, Merillat and Campbell state:

The English hobbles were the popular method of casting horses in the '70's and were regarded as the best means until Farmer Miles demonstrated the "rope method" upon which all casting harness employed at this time are but improvements of dubious merit.

Put to the Test(es)

Having clearly demonstrated the superiority of his method of casting, Farmer



Farmer Miles performing his famous cryptorchid operation on General Shafter's horse before a group of veterinarians at Fort Mason, California about 1900. The man at the far right is General Shafter's coachman. Courtesy Dr. E. G. LeDonne, Sr.

Miles undoubtedly was anxious to get on with the object of his visit. He did not have long to wait, for at this juncture Professor Pritchard entered the arena with a Mr. Case, whose horse Miles was to operate upon. As related by Farmer Miles, Mr. Case warned him:

My horse is the most vicious animal I ever saw; please be careful, and don't let him hurt you, for he will kick, bite or strike, either or all; he is very vicious.

The horse was standing in a large stall, with his head outward. (This writer, as a student, recalls such a horse, which had to be backed into the stall, and of which everyone—at least those who were honest—admitted they were mortally afraid; I soon learned why he was cross-tied in the stall with his head out—needless to say, this was one horse that did not get groomed, by me, at least.)

Concerning his prospective subject, Miles recalls:

He had a strong halter on, and tied to one side; a good bridle on, and it tied to the other side, and a large iron basket on his nose and face. The crowd now amounted to four or five hundred strong, and nearly all veterinary surgeons. Some had come a hundred miles to see this American farmer tackle a rig horse. When they saw this brute of a horse, as they called him, led in, the crowd fell back and gave me plenty of room in the shed. I am sorry now that I cannot express to my own countrymen, properly, my own thoughts and feelings at this point in my trials. . . . I was a stranger there; yes, a foreigner, besides I was not a professional, yet now in "The College." There stood the most vicious horse I had ever met with as my subject. I was alone. I was lame besides. I was surrounded by hundreds of critics too willing to say, "ha! I told you so." I had my own reputation at stake. I had a small part of my country's shame or honor to bear down on me just now. I felt all this, and that many friends, both home and abroad, would feel pained if I failed to do my work right, and should have to leave England in disgrace as a fool farmer.

With feelings of this kind I dared to put on a bold face, and tried to give what they called a lecture on castration. I said: "As an American farmer, and not a veterinarian, gentlemen, please permit me to express my ideas in my own way;" and I did so the best I could. I acknowledged I did not know much on this

subject, but I claimed that the English knew less, for I had seen English veterinarians castrate just as their grandfathers did, but Americans had quit that method for more improved ones.

I tried to direct my remarks mainly to the two hundred and twenty students who expected soon to graduate, and would need to castrate stock. I advised them first to go slow, and never get nervous and tremble as I had seen old vets do about common castration, and never to etherize a horse for such operation; and, furthermore, please never use the English nose twitch as I have seen it used here frequently, almost twisting the upper lip off, and in the meantime saying bad words to the poor horse because he would not stand still, and let it twist off. I here showed them an American nose twitch, a small stick one foot long, with a string at each end, which I claimed, if reasonably applied, was better than ether, chloroform, or the Englishman's ten-foot pole.

I talked about twenty minutes, and then walked up and put my hand on the horse, who seemed surprised at my impudence, and made such peculiar gestures that I felt forced to retire to a place of more safety, and to say to my audience, "We have been wanting a bad subject, but I think this one is worse than we bargained for." They laughed as though it was funny. You might imagine how I felt, or shall I tell you? I felt that I had burned all bridges behind me. It was success or death, now and here. My audience seemed as still as dead people. Two stout men, one on each side at full length of the halter and bridle, stood wide apart holding this vicious horse with an iron muzzle on. My talking stopped to give place to serious thought. I at once decided, and made my attack on the front end, and grasped his left ear in my right hand, and shall always feel that I had supernatural strength to make that horse succumb by my grip, while with my left hand I unbuckled his muzzle and threw it to one side. Just then a number cried out, "Don't do that, he will bite you!" This so frightened the two grooms as to cause them to let go of both the *halter and bridle, and run*. My little twitch was hanging on my left wrist. Slowly and carefully I applied it on the nose, and, one of my five young men assisting me, we twitched him just right, and then he stood as still as a table, while we adjusted every rope, and took our several positions preparatory to casting him.

All danger was now past, for the horse could not kick or move without falling down. I enjoyed the proudest moment of my life when holding that vicious horse by the tail with my left hand, I laid my right arm upon his back, and said, "Now, gentlemen, you see a practical demonstration of the American nose twitch."

All danger forgotten, my mouth got the rattles again, and while thus standing I concluded my first lecture, downed the horse, and successfully operated on my first ridgling in the Royal Veterinary College in London, England; and, after some other operations and some caponing of fowls, I felt well; yes more, I felt happy; yes, I felt that I liked everybody, and that everybody liked me.

Concerning Farmer Miles's introduction of the cryptorchid operation in England, Alexandre Liautard graciously conceded:

The farmer's visit had for results, I believe, that European veterinarians became more daring and by degrees began to perform castration oftener.

So much for Farmer Miles.

The Journal on Colleges

In discussing hog cholera in the *National Live-Stock Journal* in 1875, Paaren states:

Almost all the diseases of swine seem to be popularly resolved into "hog cholera." Of all diseases of domestic animals, those of this genus are evidently less thoroughly understood than those of any other species. . . . Agricultural stock suffers serious neglect. We venture to assert that ninety per cent of the domestic animals of the farm which suffer from disease throughout the United States annually, are never seen by Veterinary Surgeons. It is most singular that the Americans, who have manifested the greatest activity in the promotion of science and the useful arts, have never been able to found a thoroughly efficient Veterinary College. We number among ourselves but few Veterinarians. . . . Is it to be wondered at that our live stock are cut down by disease in a most disastrous manner?

In the same year, the Hon. T. C. Jones, an associate editor of the *Live-Stock Journal*, in writing on "The Need of Better Instruction in Veterinary Science," states:

We . . . have long insisted that full provision should be made for such instruction in our agricultural colleges in all the States. But in reference to the epizootic diseases . . . it is obvious that we cannot wait until we have educated a supply of surgeons to answer the calls of all our breeders. . . . The immediate and pressing need is . . . that qualified men

shall be set at work to investigate and treat these diseases, and that they publish the results, when they have something to communicate; and that their reports be of such moderate length that ordinary people can take time to read them . . . and in such form as to be of practical use to the mass of intelligent farmers.

Where these qualified men were to be obtained is not stated.

In response to the above call for State veterinary schools, a "Stock Breeder" writes:

Other colleges . . . are organized and sustained by private enterprise, and why should not veterinary colleges be left to the same interest? If there is a demand or occasion for them they will be started, and liberally sustained. . . . But our people, as a mass, do not appreciate their importance, and never will . . . until some great calamity overtakes them and the country. Hence the demand for them does not exist. . . . If there were no so-called veterinarians scattered through the country, it would at once be demonstrated that there is a demand for veterinarians. But in almost every neighborhood there are to be found one or more quacks, men destitute of all information and education, who pretend to be veterinarians. The ignorant public fancies that in these they have veterinarians, when they are required; and their practice is so irrational and unsuccessful, that farmers and others have become disgusted with it, and come to believe that veterinary science is a humbug. . . . For myself, I have an utter contempt for the quacks . . . if one of my animals is sick, and I do not know how to treat it, I consult my family physician. . . . I often get but little satisfaction . . . but his advice is much better than that of these quacks.

Under the circumstances he concludes that government schools are the only answer; their products would be the means of teaching the people "to appreciate the importance and necessity of this science."

Some appreciation of the situation of a community without an adequate veterinary service may be gained from the history of "a terrible disease among horses at New York," in 1871. New York City had several dozen practitioners at the time, but only a few were graduate veterinarians; nevertheless this city undoubtedly had a greater veterinary potential than any other in the United States. Within a few weeks

between 700 and 800 horses, most of them belonging to street railway companies, were stricken with a paralysis, and about 10 per cent died. The New York newspapers offer more than adequate testimony on the inadequacy of knowledge concerning the disease. Thus the *New York Sun* for June 14 states:

By some it is pronounced to be that terrible disease known as cerebro-spinal meningitis . . . although many eminent veterinary surgeons say that it differs from that disease in some essential requisites. . . . There is no effectual remedy for the frightful malady yet discovered.

The *Times* of the same date says:

It still baffles the most eminent and experienced veterinary surgical skill of the city. . . . The veterinary surgeons make the very equivocal statement that they do not understand exactly the real nature of the disease, but add, that it is not contagious.

The *Telegram* adds:

There is a diversity of opinion among the leading veterinary surgeons as to the character of the disease. Some contend that it is contagious; others claim that it is merely the result of injudicious feeding.

Extracts of these articles appear in the *Live-Stock Journal* for July, 1871, along with Detmers' comments that these demonstrate:

The want of an institution in which veterinary science is cultivated, and from whence veterinary knowledge may be diffused. If we had in this country a single Veterinary school worthy of the name, the above described dis-



Much of the freight that did get moved in New York City during the 1871 outbreak of horse influenza was drawn by men instead of horses. *American Agriculturalist*

ease . . . would be quietly investigated, and brought to light by competent men. . . . The disease in question is neither new nor uncommon; we have observed cases every year in the State of Illinois.

While he does not name the disease, he leaves little doubt that he considers it to be azoturia. If this were the case, however, it would seem that the New York outbreak was somewhat atypical of the disease. It reached a peak in June rather than early spring; instead of being confined to work horses, a number of trotting horses were reportedly stricken, and the appetite "seems to increase rather than diminish as the disease advances." Whatever the case, the circumstances were such as to give the public a poor impression of the veterinary profession.

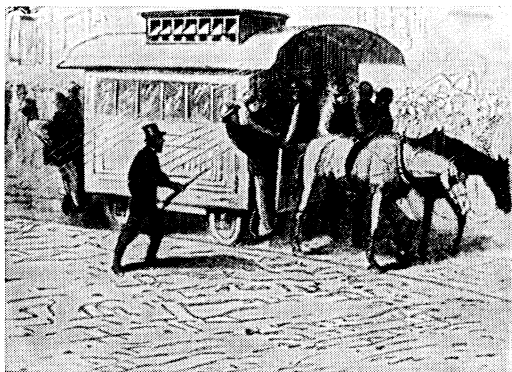
Inroads of Influenza

A similar situation obtained with the outbreak of equine influenza in 1871–1872, concerning which the *Live-Stock Journal* accused:

The "doctors disagree," as usual, concerning its treatment; and the uncertainty concerning it is so great, that we hesitate about giving our readers any positive advice concerning its management. . . . [however] All authorities concur in declaring that clean, well-ventilated stables must be provided, in order to insure the recovery of affected animals, and prevent the spread of the malady. . . . Its serious character may be inferred from the fact that in many places it has proved so general as to cause a suspension of street cars, omnibuses and express wagons, and blocked the wheels of commerce by preventing the transfer of freight from one locality to another. In New York over 30,000 horses were affected; the piers were piled with baggage and merchandise which could not be moved, and the railroad and express depots with freight which could not be delivered. In New York it was not an uncommon sight to see men in the streets drawing loaded wagons; and most of the street-car and omnibus lines have ceased operations. The same condition of affairs prevails elsewhere.

A Dr. J. C. McKenzie, writing in the *Chicago Tribune*, states:

The present horse-epidemic is no new disease. . . . In the United States, it first made



During the great outbreak of horse influenza (1871) in New York, the few horsecars still operating were continuously overloaded, and patrons frequently had to help push the cars up grade. *American Agriculturalist*

its appearance in 1856, and is still seen every spring and fall. . . . The cause of this, as well as all epizootic diseases, is involved in not a little obscurity . . . all belong to the unsolved problems of veterinary science.

The *Tribune* also reported:

The epizootic first made its appearance in Toronto and neighborhood about the 1st of October [1871], and within a few days nearly every horse in the district was attacked, when it created a good deal of alarm, and among a certain class of owners, a general resort to quack treatment and remedies. The disease . . . is evidently the result of some atmospheric influence. Although a very alarming complaint, it is not attended, if rationally treated, with any great fatality. . . . We have it on the authority of Dr. A. Smith, Veterinary Surgeon of the Ontario Veterinary College, whose diagnosis and treatment have been entirely successful, that the disease has nearly disappeared from the city.

Dr. J. J. Withers, veterinarian to the Chicago City Railway Company, stated: "I saw several cases . . . early last fall [1871] . . . very mild in form. In December following, it was of a more malignant form. . . . In all, I have treated 450 cases." This was reported in November, 1872; in December the *Journal* states:

The epidemic among horses is spreading all over the country, and no portion of it can

hope to escape the visitation. Fortunately but few cases prove fatal. . . . A new disease, the dropsy, seems to follow this influenza, attacking chiefly those that have been put to work before fully recovered; and it is said that fully one-half thus attacked have died.

In January, 1873:

The disease seems to have spent its force, but is still working westward and southward, in a mild form. It reached the Pacific coast about the middle of December, dropping down among the saints at Salt Lake on its course.

However, in June:

The epizootic seems to have been remarkably fatal among the mules and asses of the West and South. In many counties thirty to seventy percent have fallen victims to the disease. It is still raging on the Pacific coast, but in a mild form.

Concerning this epizootic, Merillat and Campbell state:

No visitation of record equal in kind, scope, or virulence has ever occurred since in this country. While it has been said often that veterinarians could not have helped much anyway, nothing could be farther from the bounds of sound reasoning. There was no veterinary service in the country districts, nor at the horse markets, where such contagions originate, and only a few competent practitioners in the cities. The present [1935] veterinary service or the veterinary service of any period during the past forty years would have prevented such an epizootic from taking a large toll. Moreover, there were three quacks in Chicago who won great reputations in the treatment of horses during this outbreak . . . had there been more of the capable type of veterinarians available they too might have built up lasting reputations for work well done.

Obviously, the type of practitioner mentioned by Merillat and Campbell was on the order of J. C. Higgins, V.S., who in writing on influenza in 1863, states:

Where bleeding, purging, and sedative remedies are heroically practiced, the mortality is great; but where rational medical treatment and good nursing are pursued, the loss should not exceed one per cent. . . . In cases of prostration when other remedies seemed fruitless, Dr. McClure (one of the professors of the

Veterinary College of Philadelphia) has obtained the best results by transfusing slowly into the jugular vein about three quarts of blood from a healthy horse.

Thus it is that much of the criticism leveled at the veterinary profession during the latter part of the nineteenth century should have been attributed to the lack of an adequate veterinary service. However, it would seem illogical to attribute the situation arising from the lack of adequate numbers of competent veterinarians to the few qualified men that did exist. Unlike quack practitioners, who seemingly arose by spontaneous generation, educated veterinarians, in the face of public apathy, had no adequate means of increasing their numbers. The failure of attempts to establish veterinary schools prior to 1870 must in large part be charged to the willingness of the public to accept something less than what these schools had to offer. Lacking adequate subsidies, such schools could not turn out a sufficient number of better equipped men to dispel the popular notion that anyone with a few inherited receipts could cure animals. And so the vicious circle continued until the ravages of disease made it apparent that these self-appointed practitioners were not adequate, and certainly not representative of the veterinary profession.

Concerning the great outbreak of influenza of 1872, the *American Agriculturalist* notes:

If, two months ago, any one had predicted that the streets of New York, Boston, and other cities were to echo to the cry of the ox-driver, and that horses would be for a time removed from the streets, he would have been received with contempt. But nevertheless, in 1872 the unwonted sound has been heard, and the strange sight has been exhibited of express and other wagons slowly moving behind ox-teams, which were urged along by the usual noisy epithets and maledictions of their drivers. . . . Street-cars have been overloaded until car and horses have both broken down under the excessive loads, and occasionally a poor horse died, not from the disease, but from overwork when feeble and sick. On one occasion a horse-

car has been drawn by men at increased rates of fare, and loaded wagons have also been thus drawn along.

Apparently there is nothing so bad that some good might not be drawn from it, for:

The recently prevalent horse-disease has done at least some good, as it has called the attention of the public to the need of educated veterinary surgeons.

The editor of the *American Agriculturalist*, however, long a staunch proponent of the New York College of Veterinary Surgeons, was surprised to read in the *New York Tribune*:

There ought to be an Academy of Veterinary Science, and all that concerns the treatment of that inestimable animal in sickness and in health should be the subject of study as methodical, as patient, and as accurate as that which is exacted by the College of Surgeons or the medical schools of France and Germany.

In extolling the virtues of the New York College of Veterinary Surgeons, the editor states:

It is not too much to say that the prompt and constant labors of Drs. Liautard, Large, and others of the college did much to abate the fatality attending the recent horse epidemic.

Law and Laws

With the addition of James Law to the editorial staff of the *National Live-Stock Journal*, a "Hygienic and Veterinary" column became a regular feature. In 1877 extensive articles on such subjects as the stomachs and food of the ox, watering of horses, rinderpest, anthrax, the hygiene of parturient animals, regular exercise for work horses, sex determination, Texas fever, and pure air for animals—a total of nearly seventy columns, equal to as many pages of a journal of today.

The *Live-Stock Journal* maintained an attitude toward sheep-killing dogs that was manifested by other agricultural papers. Losses in 1874 for 500 counties in 37 states were reported to be just under

80,000 killed out of $8\frac{1}{2}$ million sheep in these counties. On the matter of dog laws, it was noted: "The per-centage of loss is vastly greater in States where no efficient laws exist . . . annual losses in Florida amount to 11 per cent. . . . Ohio, four-tenths of one per cent." The editors stated in 1873:

A charmed atmosphere seems to surround the kennel, which the average legislator seems fearful to invade . . . "dog laws" are annually smothered beneath piles of special legislation, or killed by the ridicule of men who care little, and know nothing, of what such a policy is costing the country. . . . The National Live-Stock Journal does not ask, nor desire, to have all dogs exterminated; but it does greatly desire to have their numbers considerably reduced, and the survivors required to live and move within the limits of equitable and just police regulations. . . . It seems a trifle ridiculous for the legislature . . . to prohibit sheep from running at large, while imposing no restraint upon dogs.

This, at least, was a more moderate solution to the problem than one proposed by a correspondent to the *Country Gentleman* in 1860. As a good manure, he suggests composting:

Ten loads of muck, five dogs, one barrel of lime, and ten bushels of ashes. . . . Induce the farmers of the country to practice largely on these principles, and there will be a better prospect for profitable Sheep Husbandry among us, as well as for good crops.

Stock Writers

The *American Stock Journal*, published in Pennsylvania beginning in 1866, is notable for the number of medical and veterinary practitioners who wrote for it. H. C. Wheeler, V.S., gives "the whole art of treating poll-evil":

The opening into the tumor must be so contrived that all the matter shall run out, and continue afterwards to run out as quickly as it is formed, and not collect at the bottom of the ulcer, irritating and corroding it.

G. H. Van Doren, V.S., writes:

In performing severe surgical operations on our different domestic animals, we have often wondered why chloroform is not more fre-

quently used. . . . This enables the surgeon or veterinarian to perform very difficult and even dangerous operations with comparative ease.

In writing on shoeing, H. C. Renand, V.S., states, "The methods of shoeing adopted by many blacksmiths to prevent lameness, in the opinion of the writer, only increase the evil." And on the internal disease of horses, Renand writes:

There is no symptom which affords such full and trustworthy an account of the general condition of the animal body as the pulse. It is, however, a symptom for the right understanding and interpretations of which some experience is required.

H. V. Gardner, M.D., V.S., writes:

The symptoms, or indications of phenomena of disease constitute an important branch of medical study. When intelligently read and properly grouped, symptoms form invaluable signs which in various ways guide the practitioner; they usually afford information regarding the seat and nature of the malady, or what is called the diagnosis; they tell the probable result, or the prognosis; they likewise indicate the direction in which appropriate remedies must be looked for. The symptoms of disease require to be even more carefully studied—nature must be even more diligently and accurately interrogated by the veterinary than by the human practitioner . . . the veterinarian must exercise great tact and patience.

Geo. S. Otis, M.D., V.S., in urging better ventilation for stables, states:

Some physiological writers have said that glanders are often produced by bad air. That it is rendered contagious through the medium of the air is certain. Glanders and all diseases are rendered in a measure contagious, by the diseased animal vapors from the lungs and pores of horses affected with them.

Concerning the "Health of Dairy Cows in Winter," C. H. Rutger, M.D., urges:

As comparative misery and discomfort accompany disease, it is humane as well as economical to see that the animals under our care enjoy as far as possible their creature comforts. We keep often too much stock for the quantity of good and nutritious food which we have for it; and the consequence is cows are, in nine cases out of ten, poorly wintered, and come out in the spring weakened, if not, in-

deed, positively diseased. . . . Cows that are kept in poor condition through the winter are more liable to abortion or slinking their calves. Some attribute this disease to eating ergot of rye found in their feed, but we do not think so. . . . Cows having aborted from weakness and general debility of the system can be prevented from aborting again by maintaining a high standard of good general health.

This journal ran a higher proportion of material on animal disease than most agricultural papers, and its veterinary department appears to have been conducted by an experienced professional practitioner. However, he is not identified. In an editorial on "Prevention of Diseases in Animals," it is stated:

Our interests are suffering . . . for want of statistical and geographical knowledge in relation to the diseases of animals. . . . We propose . . . to aid in reducing this enormous loss, by collecting information and statistics concerning the diseases of animals; by affording advice and assistance to stock-owners, whenever general outbreaks of disease occur; by ascertaining periodically the health of stock in the countries from which foreign animals are derived; by stimulating inquiry as to the most advantageous means of disposing of diseased animals . . . and by adopting all possible means to check such a traffic in diseased animals as tends to the spread of plagues, or to the sale of diseased stock to the public. . . .

The knowledge of veterinary science is of great importance to the stock breeders of the United States. The importation of cattle and sheep to the United States is yearly increasing, and already we have had pleuro-pneumonia excitement. . . . If the cattle plague should happen to be introduced into our country it would find us almost totally unprepared, having very few reliable veterinary surgeons. Why cannot many of our young men adopt it as their profession, and go through the course of study requisite to make them skillful reliable surgeons? Veterinary science deserves more consideration than it has heretofore received in this country. A chair in our Universities could be established, filled by a competent Professor and we doubt not, this deserved recognition of the importance of this branch of education would be received with gratification by all intelligent persons. It is only by having a sufficient number of thoroughly instructed surgeons to meet the necessities of our people that we can get rid of the tribe of shallow ignorant pretenders who have no more idea of

the pathology of an animal than they have of the origin of comets.

Whether this was written by the editor, N. P. Boyer, or by the veterinarian on his staff, this journal deserves credit for having made as forthright a statement of the situation as had been made to this time. Few papers had such a comprehensive philosophy regarding animal disease in relation to the role the paper expected to play; here, obviously, was not merely a "free horse doctor with every subscription," as others had blatantly proclaimed. Admittedly, all too few of the contributors to this journal were in a position to advance veterinary science, but as has been noted, it seems to have attracted more than its share of professional men.

It has been noted that the provincial character of many of the reports of losses from disease or accident, as communicated to the agricultural journals, is hardly of more than local interest. Perhaps more than other papers, this journal did give some statistics on a national level:

The value of sheep killed by dogs in the United States for 1866 is estimated by the Commissioner of Agriculture at two millions of dollars. The subsistence of the whole number of dogs in all the States is estimated by him to cost annually fifty millions of dollars. These are startling figures to an overtaxed community. . . . Fifty-two millions per annum lost by dogs, to say nothing of the frightful deaths from hydrophobia which they occasion! . . . Not five in a hundred [dogs] are of any value. The efficiency of the watchdog is rendered of little avail against professional burglars, who use chloroform or strychnine when a regular job presents itself. . . . Five hundred thousand sheep are annually killed . . . and the number annually injured is three hundred thousand.

On another occasion it is estimated:

Our losses by disease in cattle must amount at least to thirty million dollars per annum . . . [and] the aggregate losses of farm animals of all kinds for the past twelve months could not be covered by fifty millions of dollars.

END OF AN EPOCH: ROBERT JENNINGS

Probably no more suitable character could be found to ring down the curtain

on this epoch in American veterinary history than Robert Jennings, for it is he, perhaps more than any other one individual, who serves as a connecting link between this period and the one to follow. Whether in the long run he deserved this distinction is perhaps a moot point; that he was fairly astride two major epochs in American veterinary history can hardly be doubted.

Robert Jennings was a native of Philadelphia who in 1846 matriculated at the Pennsylvania Medical College (of Philadelphia), but apparently without the intention of qualifying in medicine. In the winter months of 1846 to 1850 he gave a course of lectures on veterinary medicine to classes of medical students from the several medical colleges of the city, and in 1850 — at the age of 26 — began promoting the idea of organizing a veterinary college in Philadelphia. With the help of two medical professors, James Bryan and Wm. Gibson, he secured a subscription of \$40,000 for this purpose from a group of Philadelphians, including a number of prominent medical men.

The state granted the group a charter for "The Veterinary College of Philadelphia" on April 15, 1852, and Jennings was placed at the head of the paper institution. Announcements of a course of lectures to begin in the fall of 1853 were circulated, and numbers of inquiries apparently were received, but no students materialized. It is likely that the rather tenuous semiexistence of Jennings's ill-fated college will never be known in full, but his own account in the *Journal of Comparative Medicine and Surgery* in 1883 appears to agree for the most part with what is known to be the case.

"I Was the First"

In writing on "The Early History of Veterinary Medicine and Surgery in the United States," Jennings does not hesitate to admit in 1883, concerning his ill-fated venture:

I was the first in the country to move in this arduous undertaking, at the time when the practice of veterinary medicine and surgery was in a low and degraded condition, confined mainly to the hands of a very illiterate and intemperate class of men, whose treatment of the sick animal was characterized by ignorance, absurdity, barbarity and superstition. . . . The necessity for a radical change, and the diffusion of correct veterinary knowledge throughout the agricultural districts was the incentive which prompted my efforts in this direction. As there were no veterinary colleges in this country at that time . . . I entered the office of the late T. J. Corbyn, then the leading veterinary surgeon in the City of Philadelphia, as a student, and to assist me further I matriculated at the Pennsylvania Medical College, Philadelphia. During the winter months of 1846 to 1850 I conceived the idea of organizing a veterinary college, to be located in the City of Philadelphia, and for that purpose made known my plans to my medical preceptor, Prof. James Bryan . . . and through him to Prof. Wm. Gibson, of the Pennsylvania Medical University — the oldest Medical College in the United States [University of Pennsylvania]. Through their influence . . . [a number of prominent citizens] readily subscribed to the contemplated veterinary college, and made up a list of \$40,000. An application was now made to the State Legislature, for a charter which was granted on the 15th day of April, 1852.

This, the pioneer Veterinary College of America, was destined to meet with many disappointments, and much opposition from those who should have extended a helping hand. The graduates of European schools, with few exceptions, gave the movement the cold shoulder, regarding the effort as premature, resorting to various, and sometimes disreputable means to discourage those most active in its success. The only recognized members of the profession in the city, who were coworkers in the cause . . . were Thos. J. Corbyn, W. W. Fraley, John Scott, and the writer, who constituted the faculty. An announcement was issued for a regular course of veterinary lectures . . . to commence the first Monday in November, 1853, continuing daily for sixteen consecutive weeks, which announcements freely distributed, bringing letters of inquiry in return, but no students; young men of education and respectability, would not engage in a profession of so low a standing.

American Veterinary Association

Jennings continues:

Failing to secure a class, T. J. Corbyn, W. W. Fraley, and John Scott tendered their resign-

nations as professors of the college, leaving the writer alone to fight its battles. Nothing daunted, young and ambitious, I sought to harmonize the discordant spirits by bringing the members of the profession in friendly counsel, and urging them to unity of action. A meeting of the veterinary surgeons in the city was called and the subject discussed in all its bearings. After several meetings were held a permanent organization was effected the 7th day of May, 1854, under the title of the American Veterinary Association, and the following officers were elected to serve one year. President, T. J. Corbyn, V.S.; Vice-Presidents, James Bryan, M.D.; and W. W. Fraley, V.S.; Secretary, M. Roberts, V.S.; Corresponding Secretary, John Scott, V. S.; Treasurer, R. Jennings, V. S.; Librarian, A. Tegtmeier, V. S.; Counsellor, Marcellus Munday, Esq.; Patrons, James Bryan, M.D., Wm. Gibson, M.D.

As stated in the by-laws, the objects of the Association:

shall be the cultivation of fraternal feelings among veterinary practitioners; the elevation of the veterinary art to an equal rank with other scientific branches of medicine, the mutual improvement of its members . . . the establishment of a Museum of Anatomical and Pathological Specimens; and the formation of a Library . . . and in general, the defence of the rights, and privileges and immunities of the veterinary practitioners in the United States.

Nothing appears to have been stated concerning what undoubtedly remained Jennings' primary concern, the resuscitation of the college. Despite the fact that the American Veterinary Association was — and remained — local in its scope and influence, it is apparent that it did not disclaim national pretensions.

Upon the arrival of George W. Bowler from England in 1854, Jennings continues:

I found in Dr. Bowler an able and energetic co-worker. The Trustees of the college pleased with this new acquisition, at once accepted him as a member of the new faculty, consisting of only Dr. Bowler and myself. . . . We started on a mission in the interest of the new school, making a tour through the states of New York, Pennsylvania, and Ohio, meeting with many sympathizing friends in our travels, but no material encouragement to the new venture. Failing in our mission, Dr. Bowler settled down in Cincinnati, where he still

remains. At the same time I accepted the position of Veterinary Lecturer in the Ohio State Agricultural College; then located on the Heights, Ohio City, now West Cleveland, retaining that position until the suspension of the college in the year 1857. I then returned to Philadelphia, and again renewed my efforts in behalf of the veterinary college.

A faculty consisting of Fraley (Materia Medica and Therapeutics), Corbyn (Pathology and Surgery), Tegtmeier (Chemistry and Pharmacy), and Jennings (Anatomy and Physiology) was approved, and a temporary building was fitted for use. Also: "A dissecting room was built upon the Knackers grounds, where material was always at hand." Plans were approved for a building consisting of:

two lecture rooms, a dissecting room, museum, laboratory, hospital accommodations for thirty patients including twelve box stalls, shoeing forge and operating room, with an operating table so constructed as to secure the patient in a standing position, or by means of a crank to lay him upon the side at a proper elevation.

Dissentions arose, however, and caused the plan to be abandoned: "Had harmony prevailed, Philadelphia today could boast of her Veterinary College."

In reporting a meeting of the American Veterinary Association of Philadelphia, the *American Veterinary Journal* for September, 1858, states that this particular assemblage was "for the purpose of forming a veterinary college." James Bryan, M.D., addressed the group and stated:

at least one-tenth of the horses and livestock of this city die annually A large number of contagious diseases originate from diseased animals. Even chickens generate disease to the human body The Association have already dissecting room, and are in a fair way to have a large museum.

In November, 1858, the *Journal* carried a report from a Philadelphia paper of the annual dinner of the Association:

where gentlemen of science and skill interchanged thoughts on the ultimate purposes of the association, which is the establishment in

this city of a Veterinary College, for which a charter was obtained some years ago, and which the friends of the measure have only awaited a favorable opportunity to bring before the public. Among the guests we noticed several distinguished gentlemen, some of whom were of the medical faculty A representative of the *Inquirer* . . . viewed with deep interest the efforts of the Association to establish a Veterinary College in Philadelphia, which being the natural centre of the United States, would be the best position for such an institution.

In 1859 the *Country Gentleman* noted:

The first annual circular of this institution has just been issued, setting forth the claims of the college upon the people of our country. It was chartered by the State Legislature in 1852, and already contains a large collection for the formation of a museum; and the library embraces some of the most valuable works upon veterinary science to be found in this country and Europe. The faculty consists of four professorships, of which R. Jennings, V.S., is Dean. The regular course of lectures for the season will commence the first Monday in November, and continue daily for sixteen weeks. The lectures embrace all the departments of Veterinary Medical Science, as taught in the regular institutions of Europe.

Because of the expense of maintaining the College quarters — which fell upon the trustees and faculty — an appeal was made to the Philadelphia Society for Promoting Agriculture, which made available its rooms for lectures, where “The College continued to hold its sessions in the Agricultural Hall, until its suspension in 1866.”

Upon Jennings’ appeal, the Philadelphia Society sent a committee to inspect the library and museum of the veterinary college, which was housed in a temporary building. The committee was sufficiently impressed that at the next meeting it was resolved:

That the use of the rooms of the Agricultural Society be granted to the Veterinary College of Philadelphia, for holding their lectures during the winter session.

The Society also agreed to invite the faculty of the College to deliver a series of lectures on hippology, under the auspices

of the Society: Robert Jennings, Jr., quotes Dr. A. L. Elwyn, who “spoke earnestly in favor of inviting the faculty of the college to deliver their course of lectures upon horseology” [sic!]. We have only Jennings’ statement indicating that college sessions were held until 1866; at the time of organization of the USVMA in 1863 his address was given as Bordentown, New Jersey.

Jennings, Jr.

Further light is shed on the matter in 1880 by Robert Jennings, Jr., who gives an extensive narration of his father’s activities on behalf of the Veterinary College of Philadelphia. The account is obviously biased in favor of his father, and inasmuch as some of the events occurred 30 years previously, certain facts may be unintentionally distorted. For the most part, however, the account seems fairly accurate, and while it is mostly a repetition of the story of Jennings, Sr., it gives a few details which would have otherwise remained obscure.

In a paper on the history of veterinary medicine in the United States, presented at the meeting of the United States Veterinary Medical Association in 1876, Alexandre Liautard had stated that the New York College of Veterinary Surgeons was the first “truly organized school.” This was published in the *American Veterinary Review* in 1877, and in 1880 the *Veterinarian* (London) used this material as the basis for a similar article. The latter aroused the ire of Robert Jennings, Jr., who in a letter to the editors of the *Veterinarian*, claimed for his father the honor of founding the first veterinary college in America, the Veterinary College of Philadelphia, in 1852. Moreover, he claimed his father was also the “father” of the USVMA, for which Liautard had given the Philadelphia group credit for the initiative; Jennings, Sr., acting as secretary, did conduct the initial correspondence, but this presumably was on behalf of the Philadelphia association.

Just why Jennings, Jr., (or Jennings, Sr., for that matter) did not attempt a direct refutation of Liautard's earlier article may be surmised. Liautard, however, corrected this omission by reprinting the letter of Jennings, Jr., to the editor of the *Veterinarian*. In this the son states, "My father, Robert Jennings, was the first to publicly advocate the cause of veterinary science in this country," a statement which should cast doubt on the rest of his "impartial" presentation. His story of events relating to the Philadelphia school, however, appears to be substantially correct, but as such, proves little more than the fact that the College was chartered in 1852. While the number of bona fide graduates of the school, if any, seems in doubt, Jennings, Jr., quotes the *Edinburgh Veterinary Review* for 1863 concerning "the faculty and graduates at the commencement of the Philadelphia Veterinary College." At this time, however, the "course of instruction" appears to have been free lectures given in the rooms of the Philadelphia Society for Promoting Agriculture. Jennings, Jr., indicates this, and states in addition, "Free clinics were held at the infirmary every Wednesday and Saturday."

More Professors than Pupils

Jennings, Sr., continues:

Failing to secure a class of students for its proposed sessions, of 1857-'58 and also for 1858-'59 it renewed its efforts for the session of 1859-'60; which efforts were awarded by the application of two students, viz. — Jacob Dilts, of Lambertsville, New Jersey, a graduate of the Boston Veterinary Institute, and W. Wisdom, of Wilmington, Delaware, who had been practicing Veterinary Medicine and Surgery for nearly thirty years. . . . With these two students the first session of the Veterinary College of Philadelphia commenced. Unfortunately for the new institution the course of lectures had scarcely begun, when, from some cause not explained, W. W. Fraley, T. J. Corbyn, and Aug. Tegtmeier tendered their resignation as professors in the College. By direction of the Trustees, I at once wrote for Dr. G. W. Bowler who responded to the call.

Bowler, however, resigned after the 1859–

1860 term, returning to practice in Cincinnati, and Robert McClure was appointed to fill the vacancy.

In 1860 Jennings wrote to the Director of the Alfort School, and received a reply thanking him "for the honor that you are well pleased to do us in proposing us to be members of the Veterinary College of Philadelphia." Thus the College gained several distinguished professors — at a distance, to be sure, but including the director, Renault, together with Bouley, Delafond, and Goubaux.

Jennings, Jr., continues:

The college enjoyed the privileges extended to it by the Philadelphia Agricultural Society until 1866, when it suspended further operations, retiring from active service without a stain upon its character, the graduates of which hold legal diplomas, which are protected by law, as are those legally issued by other medical institutions.

Despite the mention of graduates several times, it may be doubted that the school had but very few that should be characterized as such, although a number of diplomas may have been issued.

The Efforts of My Father

Concerning the commencement exercises of the College in 1863, the *Edinburgh Veterinary Review* states, "Mr. Jennings suggested that this college, with its graduates during the last five years, should establish a national veterinary association, and ultimately establish a veterinary journal." Jennings, Jr., however, takes liberty with fact in stating: "The United States Veterinary Medical Association was also planned and organized through the efforts of my father." The efforts of Jennings, Sr., on behalf of the USVMA are a matter of record, as are those on his own behalf which led to his expulsion from the Association in 1866, the year, also, of the demise of the Veterinary College of Philadelphia.

Whether McClure remained with the Philadelphia college until it closed is not stated, but by this time he appears already to have become *persona non grata*. Jennings, Jr., continues:

Veterinary College of Philadelphia.

This Institution, chartered by the Pennsylvania State Legislature, will be put in operation the present year, (1866,) at Philadelphia, where it will be permanently located.

Philadelphia, the great emporium of medical science on this continent, has been chosen as the most suitable place in which to rear up an Institution for the promulgation of a sister science. The reputation of her Medical Schools extends over the whole civilized world. The facilities for Anatomical Investigations, Clinical Instruction, &c., &c., are at least as great as those of any other city in the Union. The Museum of the College already embraces a collection of Pathological Specimens, in point of excellence far surpassing those of many European Veterinary Colleges of many years standing. The Lecture Room is conveniently and comfortably fitted up. The Dissecting Rooms are sufficiently large, and afford every facility for pursuing Anatomical Investigations. Material in abundance always at hand, without extra charge. The Library contains a number of the most valuable Veterinary works published in this country and in Europe.

In establishing Veterinary Colleges in this country, a new field is opened to the votary of Veterinary science for extensive investigation, wherein to build up fame and fortune.

A man with but ordinary abilities, with proper energy can distinguish himself in the world by embracing this profession, while in most others he would only arrive at mediocrity; here is an unbeaten path for him to pursue, which if faithfully and honestly followed, will lead to usefulness and honor.

Trustees.

ROBERT JENNINGS,	HENRY B. RAYNER,
JAMES B. RAYNER,	JOHN RAYNER,
MICHAEL W. BIRCH,	WILLIAM L. WRIGHT,
JAMES MCCOART,	JOSEPH PAXSON,
ISAIAH MICHNER,	ROBERT WESTFIELD,
THOMAS B. RAYNER,	MATHEW M'ILROY,
WILLIAM A. WISDOM,	SAMUEL DODD,
JACOB PHILLIPS,	JOHN BERRY, SR.,
ANTHONY PHILLIPS,	JOHN BERRY, JR.,
E. S. PACKER.	

Although the prospectus of the Pennsylvania College of Veterinary Surgeons (nec Veterinary College of Philadelphia) suggests it was an operating institution, it apparently functioned only as an apprentice system with the trustees as preceptors. Michigan State University Library

The Pennsylvania College of Veterinary Surgeons, chartered in 1866 to take the place of the old school, was in the interest of and under the exclusive control of veterinary surgeons. The name of McClure does not appear among the incorporators, neither will it be found associated with the faculty of the college. . . . These facts should prove his unpopularity among the veterinary profession in the City of Philadelphia.

The new institution gave two courses of

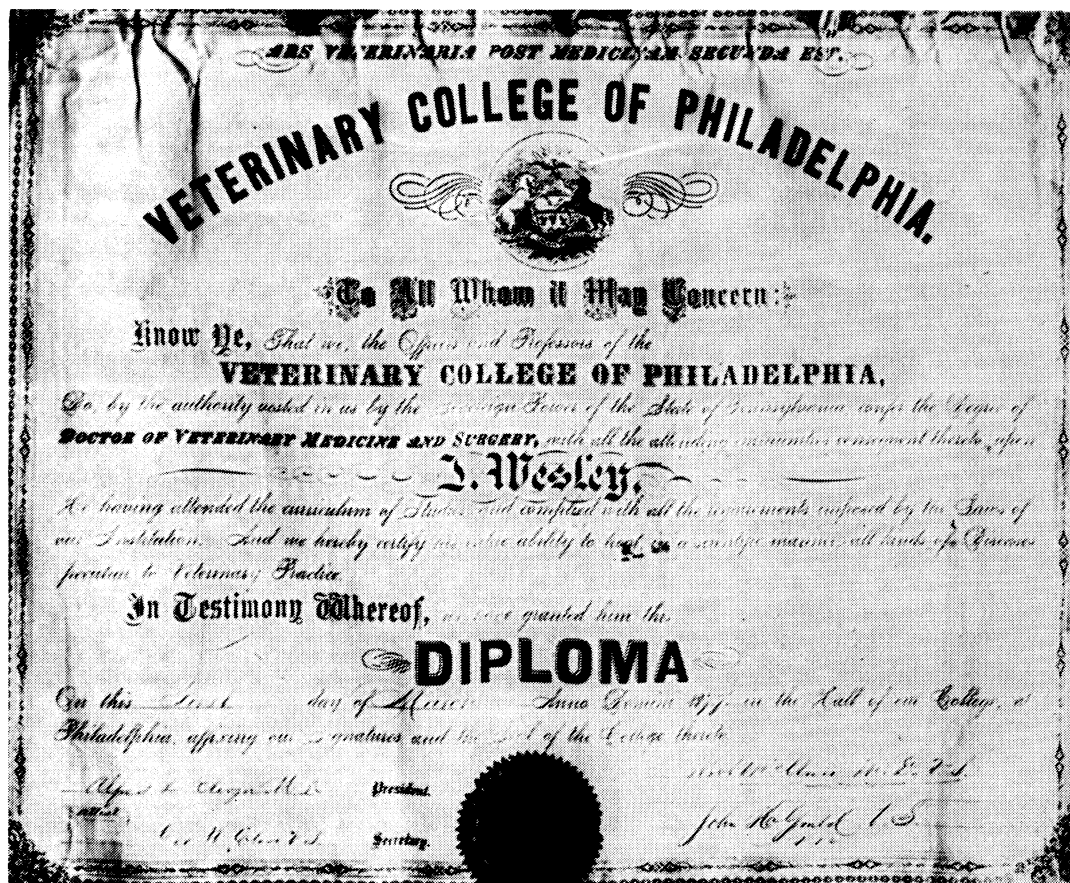
lectures in a rented hall, whereupon it moved to another location, where two more courses of lectures were given. The treasury exhausted: "the doors were closed in 1870, since which time [to 1880?] quarterly meetings have been held in Diligent Hall. No effort as yet has been made to reorganize the college."

The year 1866 was a black one for Jennings; not only was he forced to admit final

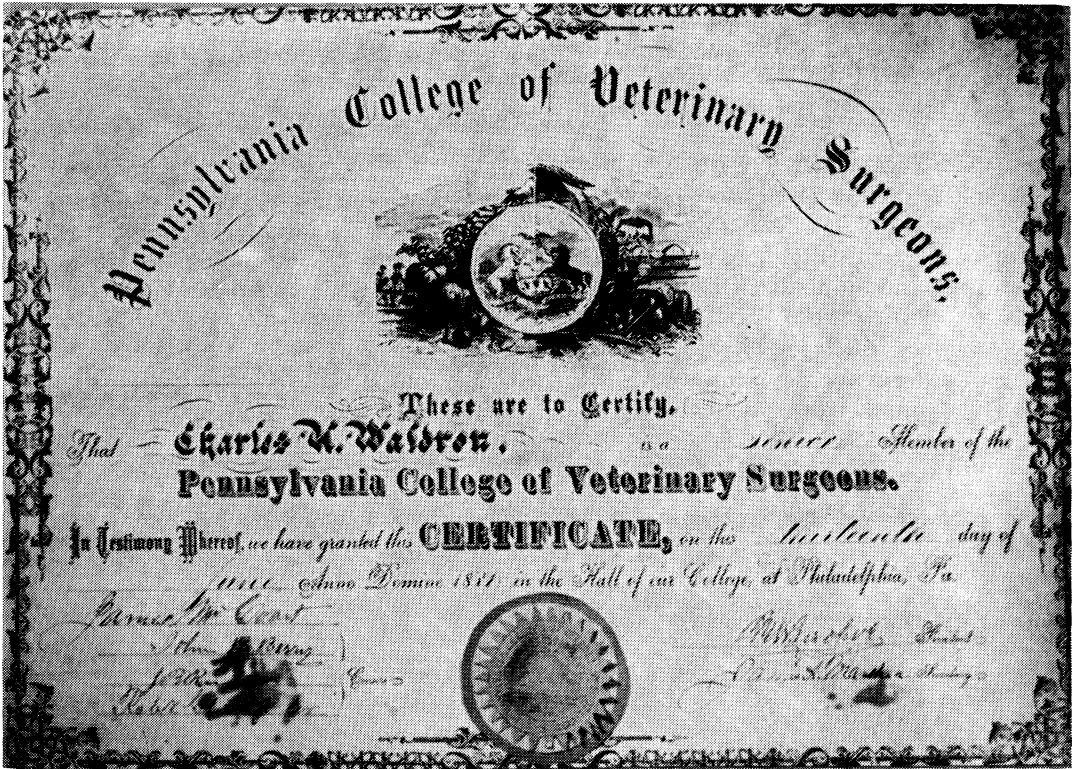
defeat in his perennial attempts to get his school on a firm footing, but in this year he was also expelled from the USVMA. Some time after this he moved to Detroit where he conducted a veterinary practice, sold patent medicines, and wrote on veterinary medicine. He died in Detroit on January 5, 1893, at the age of 78. As is the custom in obituaries, his omits the more stormy parts of his career and emphasizes his role in organization of the USVMA and his part in the Veterinary College of Philadelphia. Concerning the latter the obituary reads as follows: "A number of students were graduated and received diplomas."

Diploma Mill

More or less as a postscript, for Jennings can in no way be associated with the Pennsylvania College of Veterinary Surgeons after its supposed demise in 1870, the activities of Robert McClure form an interesting — if somewhat distressing — bit of American veterinaria. Apparently after the P.C.V.S. officially closed its doors, it was reopened, under surreptitious circumstances, by McClure as the "Merchants' Veterinary College," better known to the profession as the "Philadelphia Diploma Mill." The faculty consisted of McClure, and the course of instruction, if any, a few



Diploma seized as evidence which led to the conviction of Robert McClure for forgery (Dr. Elwyn's signature) and the demise of his diploma mill in 1877. McClure had no connection with the Pennsylvania College of Veterinary Surgeons, diplomas of which were valid. Courtesy B. W. Bierer



Diploma issued in 1881 by the Pennsylvania College of Veterinary Surgeons, successor to the ill-fated Veterinary College of Philadelphia.

weeks of reading a few books, most likely his own *Diseases of the American Horse, Cattle and Sheep* (1870) and others from his own pen. His diplomas conferred the degree of Doctor of Veterinary Medicine and Surgery, and apparently were designed to resemble those of the defunct P.C.V.S., with a superimposed seal of the Merchants' Veterinary College.

Under the heading of "Veterinary Colleges," in his book on *Diseases . . .* (etc.), McClure writes:

These do not seem to flourish in this country; the one at Boston has long ago closed its doors. In Philadelphia, the "Merchants' Veterinary College," bids fair, however, to be quite a success. It is under the guidance of Prof. Robert McClure, to whom all inquiries, in regard to the college, should be addressed. Diplomas are

issued on the first of March, each year, to students, and honorary members.

It is perhaps significant that nothing is said of the course of instruction. McClure's book appeared in various forms as late as 1917, when it was stated, concerning veterinary colleges:

These do not seem to flourish in this country; many have been started, but most of them have closed for a want of patronage; Prof. McClure in his earlier years conducted very successfully in Philadelphia, the "Merchants' Veterinary College."

Just how successful this institution may have been, in terms of numbers of diplomas issued, probably will never be known. The facts concerning its demise, however, are well documented.

Following a bit of detective work involving a subtly "planted" offer to buy a diploma in 1877, McClure was arrested for the illegal sale of diplomas, several of which were found in his office bearing the names of intended recipients. He was convicted of forging signatures of medical men (having had the bad judgement of hiring a penman), and was jailed for nine months and fined \$2,000. While in jail he unsuccessfully attempted to commit suicide. From correspondence seized at the time of his arrest, it is apparent that McClure had conducted a lucrative business, the asking price for a diploma being \$100 or more. At the hearing of the charges against McClure, Alfred L. Elwyn, M.D.:

testified that his signatures to the diplomas was a forgery. He said that about seventeen or eighteen years ago he was President of the Philadelphia Veterinary College, but has had nothing to do with it since 1862, and did not know if it was still in operation. . . . J. H. Warren, professor and teacher of penmanship . . . testified that he had written the signature on the diplomas by McClure's authority.

On April 9, 1877, McClure was sent a letter from a J. Wesley asking:

if I pass a good examination before you in veterinary surgery and medicine, will you give me a diploma if I pay you \$100 at once. I know all about the business, but I want a Philadelphia or Pennsylvania diploma. . . .

To this McClure promptly replied:

if you say that you know all about the business and that you have a copy of my book entitled "Diseases of the American Horse, Cattle and Sheep," by myself, then a diploma will be granted you *without* examination. . . .

And in a letter dated April 18 from Dyersville, Iowa, a Daniel Underwood writes:

I understand . . . that you grant diplomas from a Philadelphia Veterinary College to men who know their business. . . . Will you let me know how much money I am to send you for one, and how many veterinary surgeons' names

will be signed to it; also, if they will be well known men as veterinary surgeons. As Dyersville contains a great many English people, well off, could you get a member of the English Veterinary College to sign it; that would make it worth more money to me.

On April 20, McClure replied:

three well known vets. sign; one, Mr. Gould, is an Englishman; one gentleman, the President, is an M.D. besides myself, who is known all over the world, being the author of 4 vols on the great subjects of veterinary science. Three of these books will be sent to you along with the diploma, by express, in 3 days after receipt of . . . post-office order for \$135, fees for matriculation and graduation for the session of 1876-7, in the Veterinary College of Philadelphia. This entitles you to the degree, Dr. Daniel Underwood, M.P.C.V.S. These letters differ from the English by R., from Edinburg by E., Glasgow by G., from Dublin by a D.

This is one diploma that was not issued, for two days later McClure was in jail on the complaint of a Francis Standen, who, as reported in the Philadelphia papers, had collaborated with police authorities "on the plan of Dr. Buchanan, of the Pine Street Medical College." Alexandre Liautard, however, credits a veterinarian with having done the spadework:

To Mr. Gadsden, of Philadelphia, the profession owes a tribute of thanks for his untiring efforts in bringing the culprit to justice, and it is a high credit to him that his whole work in this matter has been only for love of the profession to which he belongs.

Liautard indicates that both Wesley and Underwood were willing agents in bringing about McClure's apprehension. Wesley's diploma remains as mute testimony to the sordid business.

The Pennsylvania College of Veterinary Surgeons continued for some time as a diploma-granting body. A diploma issued in 1881 certified the holder to be a "Senior Member of the Pennsylvania College of Veterinary Surgeons." This bears the signatures of Drs. Raynor and Gladfelter, both reputable veterinarians. Instruction

at this time apparently was based upon a preceptor system, with a number of veterinarians taking apprentices.

The demise of McClure's diploma mill marks the belated ending of an era in veterinary medicine. True, the line of demarcation between this long period of painfully slow progress and the more satisfying one to follow is not sharp. The United States Veterinary Medical Association had been founded in 1863, but it had barely begun to assert itself as a national institution by 1877, the year in which the *American Veterinary Review* was established as the official organ of the

USVMA. Succeeded by the AVMA and its *Journal*, these institutions have jointly served the veterinary profession continuously since 1877. And while the New York College of Veterinary Surgeons had issued bona fide diplomas a decade earlier, it was not until the American Veterinary College was established in 1875 by secession from the N.Y.C.V.S. that the United States could boast of the beginnings of an adequate system of veterinary education. While it should not be supposed that from this point on the story is one of unremitting success, it is one of continuing progress.