

## Veterinary Medicine in the Agricultural Press

ONE OF THE MOST ACCURATE INDICATIONS of the state of development of a profession is the caliber of the professional journals. The accelerated flow of new developments in recent times makes it all the more apparent that the best interests of the veterinary profession could not be served adequately by books alone, however excellent these might be. This premise was equally valid in times past; in 1835, the medical historian, Bostock, attributed the superiority of Scottish medicine, in large part, to the excellent medical journals of the Scots: "a circumstance which has materially contributed to the improvement of the knowledge of practical medicine." It is a well established fact that major credit for the first real improvement in veterinary education and practice in England belongs to the *Veterinarian*, which began publication in 1828. Blaine, in his *Outlines of the Veterinary Art* (1841), enjoined students and practitioners to read *all* the veterinary journals.

### PERIODICAL LITERATURE AND PROFESSIONAL DEVELOPMENT

The development of the veterinary profession in America to its present high status is closely paralleled by that of the professional journals. The present status of both could be recognized by the most disinterested observer; what is truly remarkable is

that this has come about during the lifetime of a substantial number of still-active veterinarians. Prior to the publication of the *American Veterinary Review* in 1877, there had been only two abortive attempts at professional veterinary journalism. The *Farrier's Magazine* in 1818, published by James Carver, lasted for only two issues; the *American Veterinary Journal*, published sporadically by George H. Dadd in the 1850's, terminated with the fourth volume. Obviously, neither had any appreciable influence upon the development of the veterinary profession. For nearly a century after this nation had asserted its independence, America remained largely dependent upon Britain for its supply of graduate veterinarians and most of its professional literature, both books and periodicals. Of the works published in America to 1860 or later, a large majority were reprints or digests of British works, or were by men whose training and writing was decidedly British. The only truly native works were those of self-educated veterinarians or by medical men who had interested themselves in the disease of animals. A substantial proportion of those published from 1860 to 1900 were also of foreign origin.

In examining the array of veterinary writings prior to the establishment of a professional veterinary periodical literature, it is painfully evident that what was available

did not begin to attack the problems of livestock disease which were peculiar to America. To fill this void, the agricultural press, whose publications mushroomed from one in 1819 to more than 30 by 1840, began printing articles on animal disease, and by 1850 more agricultural journals were published in America than in all other countries of the world together. Many reported on animal disease only incidentally; others conducted regular veterinary departments, some advertising: "a free horse-doctor with each subscription."

An adopted custom soon assumes the proportions of an inherent prerogative, and thus a number of the agricultural journals still are in the veterinary business — diagnosing and prescribing, rather than limiting their scope to the broader aspects of animal disease which are within their proper province. Had there been a thriving veterinary press at the time, the problem might never have developed, but under the circumstances which prevailed, it is doubtful that even a heavily endowed professional journal could have served its intended purpose until there was a substantial number of well-trained graduate veterinarians to make proper use of the information provided. Today the chief endowment of the veterinary press, as regards both association and independent journals alike, is the relatively small group of dedicated men in editorial offices who give continuity to the fundamental philosophies of the veterinary profession.

### THE AMERICAN FARMER

The first agricultural journal, or at least the first to wield any considerable influence by virtue of its circulation and continued publication, was the *American Farmer*, founded in 1819 by John S. Skinner, a prominent agriculturalist in his own right. While it is true that a small number of publications, chiefly those of agricultural societies, containing articles on animal disease and the need for better veterinary information, had appeared before this time, these appear to have had but little influence outside their own limited spheres.

The *Memoirs of the Philadelphia Society for Promoting Agriculture*, first published in 1808, is perhaps the most notable of this group, but only five volumes were published, the last in 1826, and its circulation presumably was chiefly among the members of the society. An examination of the early volumes of the *American Farmer*, therefore, should prove of interest in tracing the evolution of veterinary journalism in the agricultural press.

No veterinary contributions appear in the first five numbers (forty closely printed pages) of volume one. The first mention of any animal disease occurs in a digest of a British article: "On Draining," passing reference being made to the fact that sheep are less liable to "the rot" (liver flukes) on drained land. In the first of a series of unsigned articles "On the Murrain of Horned Cattle," the author says this is a subject: "not unworthy of attention," and that physicians are more capable of dealing with the problem than any other group, since "there is no treatise on brute diseases deserving even that name; nor can there be, in the present state of that art of healing." This science, he says, is a century behind all others.

Later, he expresses doubt that "the murrain" can be the cattle plague (rinderpest) of Italy because of its sporadic nature, and suggests poor food and muddy water as the most probable causes (the symptoms — fever and bloody diarrhea — suggest Texas fever). The correspondent admits he is a novice, but feels qualified to give a number of remedies. These include diuretics; bleeding; purging with salts, calomel, and aloes; and enemas of linseed oil and salts: "taking care in using the pipe not to poke it in the gut." Also recommended was scalding the belly with hot water, and giving hot whisky toddy with juniper berries boiled in it. To advance the study of animal disease he suggests a medical board be attached to each agricultural society; the veterinary schools of England and France, he says, having received "only incidental aid from professional [medical] men . . . are comparatively inefficient."

### The Veterinary Art

The first use of the term “veterinary art” appears in a letter from “A Rough Farmer,” who relates:

I was informed by an old gentleman who practiced the veterinary [*sic*] art in Baltimore for several years before his death, that he believed that most complaints of the cows in Baltimore originated from the feeding on slops.

Under “Notices for a Young Farmer” the initiate is advised to teach himself:

by reading and observation, at least the outlines of VETERINARY KNOWLEDGE, and promote its encouragement. . . . Do not depend on charlatans, or servants, for what a little attention on your part might avoid or remedy. . . . When any of your livestock die of disease, or invisible casualty, have them opened, for discovery of the cause, and future instruction.

In an earlier “Notice,” the young farmer was advised that human urine “is preferred by horses and cattle to salt; and is to them, salutary as medicine, as well as a condiment promotive of health.”

Another feature, continuing irregularly for several volumes, was the reprinting almost *in toto* of *A Compendious Dictionary of the Veterinary Art*, by the Britisher, James White, although the name of the author is not mentioned. Some of the items included in the first volume are: *abortion*, which may result from falls, or the smell of blood or carrion, bleeding being the only remedy; *abscesses*, which should be poulticed and opened; *age*—of the horse by its teeth, and cattle by their horns; *blackleg*, in which the emphysema and great mortality is noted, bleeding and salts being the only recourse; *bloodletting* (In England, White was known as “bleed ’em White.”); and *calving*, in which a good description of normal and abnormal presentations is given. A prominent characteristic of most of the agricultural journals was the reprinting of British works serially, and of articles from British journals. This put a considerable amount of information at the disposal of farmers, although much of it did not pertain to local problems, and

some undoubtedly created local problems.

A number of articles appeared on hydrophobia in man, together with a number of “cures,” which would appear to have been most successful in treating those bitten persons who most likely would not have developed the disease. A good description of the rabid dog is given, but there is no suggestion that rabies might be other than a purely medical problem. That rabies was a serious problem at this time may be adduced from the writings of a number of physicians in the medical press.

### Burnt Tongue

Several issues carry articles on a disease of cattle, horses and hogs which the observers term “burnt tongue” or “sore tongue,” the symptoms of which are practically identical with aphthous stomatitis as described by Udall. One writer reports he saw the disease as early as 1801. Opinion was divided as to whether or not it was contagious; all agreed it was fatal if not treated. Treatment ranged from astringent mouthwashes to purging and the inevitable bleeding. One report states that asafetida tied to the bridle as a preventive was “used with success.”

This disease brought to the *American Farmer* the first contribution by a veterinary surgeon, John Haslam, a graduate of the London school, who had come to America in 1803, and who subsequent to 1819 contributed many articles to the agricultural journals. He reports: “I have had a great number of horses and horned cattle under my notice, labouring under the present epidemical disease,” but later he says the disease is “neither contagious nor infectious.” He claims to have cured all of his cases with a mouthwash of alum, salt-petre, vinegar, and honey, and by administering a pint of linseed oil daily. Bleeding, he says, has no effect, and “the cause of the disease is enveloped in mystery.”

Thus in the space of one year, the *American Farmer*, at first devoid of any information on animal disease, began reporting the observations of amateurs, and finally attracted the attention of one of the more

capable graduate veterinary practitioners of the time. This increasing interest in animal disease problems led the editor in subsequent volumes to call for the establishment of veterinary schools; until these were established, he suggested the addition of regular lectures on the veterinary art to the curriculum of medical schools.

### Me Too

That other agricultural journals should follow the pattern set by Skinner was a logical development; their success in this venture into veterinary journalism undoubtedly was a factor in keeping the circulation of the ill-fated *American Veterinary Journal* below a profitable level. On the other hand, it would seem doubtful that America was ready for a professional veterinary journal as early as 1850. According to the editor, George H. Dadd, there were only 15 graduate veterinarians in America in 1847. Thus the field was wide open for the establishment of full-fledged veterinary departments in the agricultural journals. A number of these were conducted in a professional manner by competent veterinarians; others, like the deluge of the "every-man-his-own-horse-doctor" type of work, probably exerted a powerful delaying action upon the development of a strong veterinary profession.

The first appearance of a "Veterinary" column in the *American Farmer* was in 1830; this, however, was a reprint from Skinner's *American Turf Register*, which had a Veterinary Department from its inception in 1829.

Concerning one function of an agricultural paper, the editor of the *Michigan Farmer* suggested in 1845:

Suppose a disease to appear among . . . domestic animals, and to produce serious damage. All set to work to discover the cause, and devise the most efficient remedy. Their joint efforts will be more likely to be successful, than those of any single individual. At length the investigations of one of their number is crowned with the desired success. He has discovered the cause and the remedy, and straightway communicates his discovery to his neighbors. The

ravages of the disease are immediately stayed, and perhaps thousands of dollars are saved to that single community.

The scheme may have seemed Utopian at the time, but like other well laid schemes of mice and men, this too "gang aft a-gley." Animals — some of them at least — persisted in getting well despite the machinations of man, and thus given sufficient animals for "experimentation," every man, and his little brother, found infallible cures for everything, and willingly communicated these to less fortunate mankind. Most editors, unfortunately, lacked discernment in matters relating to animal disease, and while many worthwhile contributions were published, so were many atrocities.

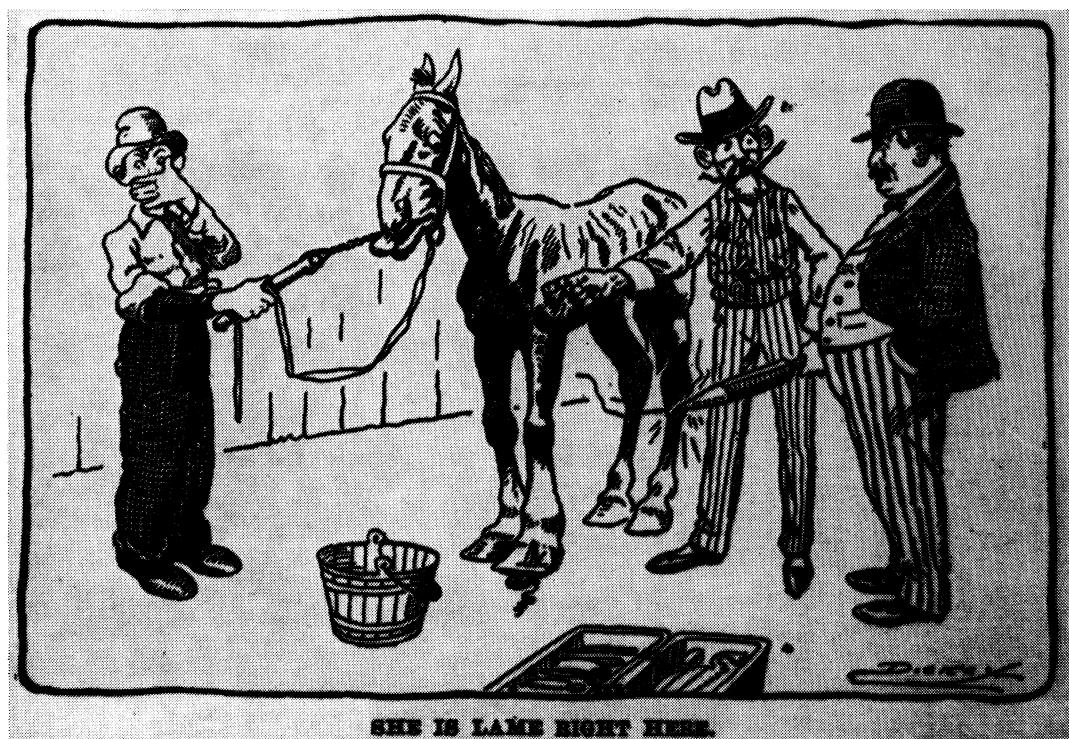
The present high status of veterinary practice is in no small part attributable to the efforts of the professional veterinary journals, both in fighting for proper recognition of the work of the veterinarian, and in seeing to it that the practitioner has the tools essential to waging the good fight. As the bellwether of the profession, the veterinary journals of today serve as the means of giving continuity to the fundamental philosophy that enduring values are built upon service. The agricultural journals, insofar as they call attention to disease problems and the need for adequate professional care, undoubtedly serve to extend the sphere of veterinary service.

### Smooth as Glass

Volume two of the *American Farmer* offers excerpts from a sporting pamphlet which "contains many directions for the cure and management of horses and dogs." The author, a Col. George Hanger, advises:

When a dog looks unkindly in his coat, though he has been physicked, give him three doses of powdered glass, as much as will lie heaped up on a shilling to each dose. This will make his coat very fine, and he will look well in his skin; besides it is a very great cleanser. The powdered glass must not be made of the green glass bottles, but from broken decanters and wine-glasses, powdered and ground in an





Cartoon lampooning the all too common diagnosis of "shoulder lameness" — frequently despite obvious indications to the contrary. Note the outsize firing iron. From a late nineteenth century satire on "horse characters." Howe: *Stable Conversations*

iron mortar, then sifted through a fine muslin sieve.

On the other hand, for lameness in horses:

If the cause of lameness be not very visible to the eye, you may rest assured it lies in the foot or fetlock joint; in this case, send for a veterinary surgeon; for to cure it, great skill and practice is necessary, and a thorough knowledge of the anatomy of the foot, and fetlock joint. Wise John Grooms and the farrier, provided they know not where the lameness really lies, swear the horse is lame in the shoulder, whereas the lameness is in their heads.

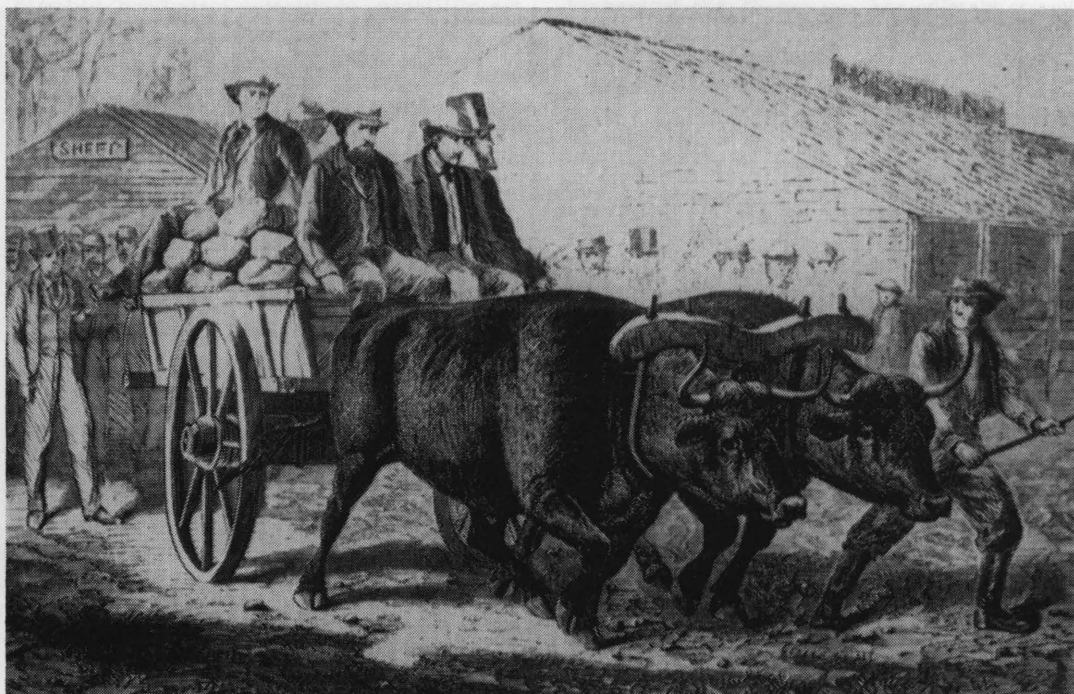
Under the heading: "An old Story and a new Invention," a correspondent suggests:

squeezing to death, between the thumb and forefinger of the right hand, the insect that causes the gapes in young chickens . . . the windpipe, being a soft tube admits of sufficient squeezing to kill the worms without any injury to the chicken.

Another reader had suggested the most common treatment at the time — extracting the worms by means of a feather. Gape-worms of poultry already were a major problem, and editors of the agricultural journals, who apparently at first published every letter sent them (and perhaps wrote a few themselves), eventually had to call a halt on those pertaining to gape-worms.

In response to a correspondent in 1824, who was of the opinion that in gapes "the disease produces the worm," Skinner opined that the reverse was more likely the case, and observed:

among poultry women, it is an axiom, not to let young poultry go abroad very early in the day — it may be that, if the worms are picked from the earth, the sun drives them below the surface. That there is something in old dung-hills, unpropitious to the rearing of barn-door fowls, is well known, for it is invariably found, that they succeed best, where new establishments are made on new ground.



Weight pulling, at first by oxen and later by horses, has been a favorite and hotly contested sport at fairs since colonial times — only recently supplanted by rather less romantic tractor trials. *American Agriculturalist*

It may have taken some time for poultrymen to appreciate the axioms of poultrywomen, but communication between members of the gentler sex appears to have something of the nature of a party line. A "Cousin Tabitha" — had observed that a negro woman of her acquaintance, who raised chickens in the woods and burned over her poultry runs to get rid of leaves, had little trouble with disease. Tabitha relates:

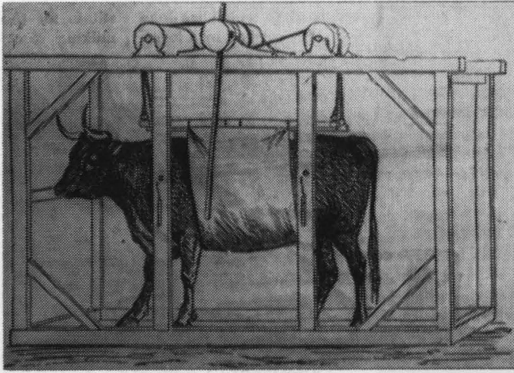
I have found that burning over my fowl yards, with leaves or straw, white washing the chicken house, and ploughing the yard and digging up the floor of the house, usually has the effect of lessening the number of small vermin and insects, and may in other ways have been salutary.

### Horses vs. Oxen vs. Mules

A lively discussion of the relative merits of horses vs. oxen developed in the second volume of the *American Farmer*, occasioned apparently, by a recommendation of

President Madison that the use of oxen should be encouraged in preference to horses. Timothy Pickering, the former quartermaster general of the Continental Armies added his weight to the argument by asserting that without oxen to move heavy ordnance the siege of Yorktown would have been attended with "great delay and difficulty." He had turned to the use of oxen in the winter of 1780 because of "the considerable destruction of horses in the operations of the way, and the great expense of procuring and supporting them." Some farmer-friends of his, he relates, had turned to the use of oxen for ploughing and other draft because their horses frequently were sick when needed, or they became mired too easily on the muddy spring roads. He quotes a letter from one:

This spring all my horses became sick, and I was forced to buy a pair of oxen. I supposed I should be tired of them; but on the contrary, I am tired of horses.



In most areas, oxen were the principal draft animals, and shoeing was essential for road work or work on stony ground. Stocks were necessary for supporting heavier animals which could not maintain their balance on three legs. *American Agriculturalist*

In a letter "On Shoeing Oxen," a correspondent states:

A great objection to the use of Oxen for draft in Virginia is, that during a considerable part of the winter their feet become so lacerated by the ice and frozen ground, that they are rendered unfit for service. The only effectual remedy for this evil is shoeing; — but owing to the supposed difficulty attending the operation, it is seldom resorted to. . . . Shoeing is a very simple operation and may be performed by any smith . . . but the apparatus for confining the ox is unknown here. . . . In Massachusetts, it has been in use from time immemorial, and it is considered a necessary appendage to every smithery.

The same difficulty was observed in western Pennsylvania, where "our blacksmiths do not know how, and will not learn because they think it degrading to shoe an ox." Oxen, unlike horses, usually cannot support their weight on three legs; thus the need for stocks with a broad belly band.

The subject of economical farm power later evoked paeans of praise from proponents of the mule. Thus it was claimed that mules could be worked twice the number of years a horse could, and at half the expense of keep. Also:

The contrast in the mule's freedom from malady or disease, compared with the horse, is not less striking, indeed, it is not improbable, but a farmer may work the same team of mules above twenty years, and never be presented

with a farrier's bill, or find it necessary to exercise the art himself. . . . If by hard fare, or hard work, he is reduced to a skeleton, two or three weeks rest and good keeping will put him in flesh and high condition for labour. I have witnessed several such examples with subjects twenty years old; so much cannot be said of a horse half that age. The expense of shoeing a mule, the year round, does not amount to more than one-third that of a horse.

Another enthusiast, who had been "in the habit of observing mules ever since I was a boy," insists:

I never saw one sick; nor have I ever seen one foundered, nor have I ever seen a dead one. I believe they seldom die but from old age, and we have not been using them long enough for many to have died in that way. I do not believe they are subject to the distemper, glanders, staggers, or any of the common complaints of horses.

Mules may not be made like this any more, much less horses, but one horse with the tenacity of a mule was mentioned by a correspondent in 1825. This remarkable animal was known to be 63 years old at the time:

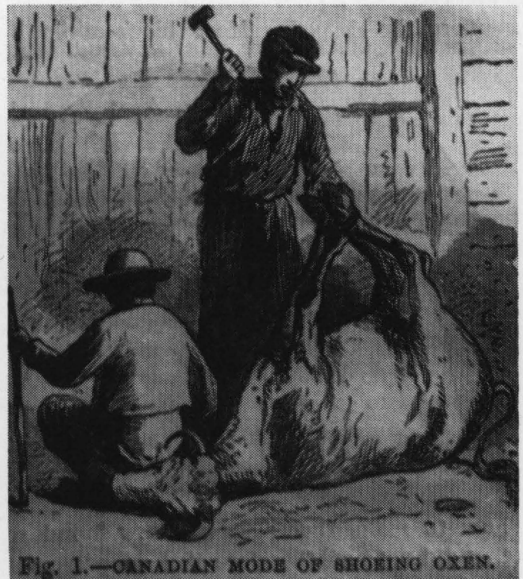
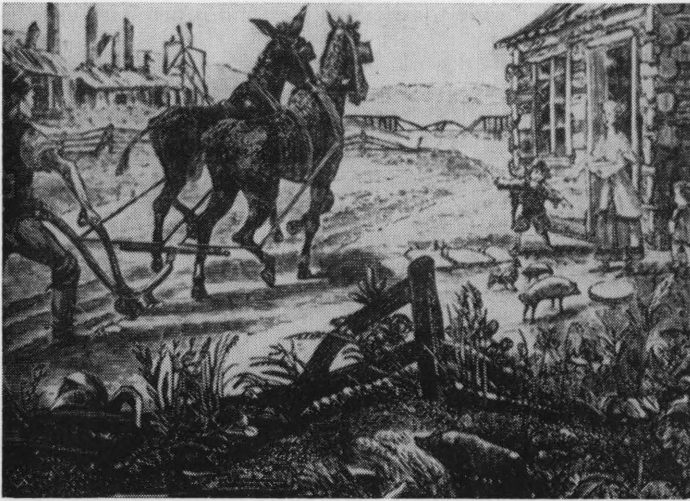


Fig. 1.—CANADIAN MODE OF SHOEING OXEN.

An alternative to using stocks for shoeing oxen was developed by Canadians, but this method was little used in the United States, perhaps because it was believed that cattle would die if placed on their backs. *American Agriculturalist*





"Poor farmers," who took pride in getting the last ounce of energy from their animals with the least input found the mule admirably adapted to their methods. Manning: *Stock Doctor*

When young, and, indeed, till he reached the age of 50, he manifested an extremely vicious disposition. . . . Thirty years of his life, it seems, were spent in a gin, and the remainder . . . in towing boats. . . . This extraordinary animal is healthy, and manifests no symptoms whatever of approaching dissolution.

Some men, however, found the secret of killing mules, for a Florida correspondent to the *American Agriculturalist* in 1846 inquires about "the cause of so many of our mules and horses dying with the colic." He says:

We are the most unfortunate people in the world as regards our stock. I lose three, and sometimes five mules every year by the colic; every day there is a mule brought to me from the field sick with the colic.

His admission: "We plow them hard; [and] give them as much water as they can drink when they are taken out to be fed," caused the editor to remark: "No treatment . . . would be more sure to induce colic." Another correspondent adds to this:

Mules are but little subject to disease, except by inflammation of the intestines, caused by the grossest exposure to cold and wet, and excessive drinking of cold water after severe labor. . . .

No opinion is more erroneous than that mules can thrive on brambles and briars. They may live, but cannot thrive, if treated inhumanely, they will treasure up their revenge for years, until an opportunity offers to gratify it.

They are called obstinate by *mulish drivers*, and by none else.

### Spayed Stock

The matter of the deterioration of dairy stock in America occupied the attention of a number of agriculturalists around 1820. A major problem was:

The young cattle are, with few exceptions, without any kind of shelter during the whole of our severe winters. They are foddered with poor hay, straw and husks, and suffered to browse in the woods, and in the spring become so feeble that they can barely crawl up the hills to crop the honey suckle clover; this luxuriant herbage soon restores them . . . but they are to undergo another pinching winter! . . . Can it be expected, under such a course of treatment of the race, for nearly two centuries, but that the organs for the secretion of milk, will become diminutive?

The writer mentions that a number of heifers which were slaughtered prematurely would afford greater profit if they were spayed, either to fatten for meat or as work animals. Spaying of heifers, which British veterinarians later considered to have been an American innovation, is mentioned as being commonly done in Yorkshire, from whence it was introduced to New York by an English farmer.

A quotation from a French veterinary journal, appearing in the *Michigan Farmer* for 1864, credits:

a land owner in the United States, Mr. Winn . . . [with] the first practice in spaying cows. The object of the operation was to maintain in the cow, without interruption, a supply of the same quantity of milk that she gave at the time of spaying.

The editor states:

Comparatively few stock raisers or farmers in Michigan, fully understand either the art or advantages of spaying cows; still we have among us one of the most successful operators in the country, in the person of Mr. William Wallington, of Ann Arbor, he has practiced this for a number of years . . . operating on full one hundred cows in different parts of the State, and the demand for his services have increased to such a degree that he has continual calls from all points. Every operation without any exception has been successful in securing the object aimed at, and no injury has in any case happened to the animals treated.

The spaying of sows, of course, had been practiced for centuries; the sixteenth century sow-gelder, Jakob Nufer, achieved immortality by (reputedly) successfully performing a cesarean section on his wife. Also, the operation is described in a number of British and colonial American works of farriery. In response to a request for the method of operation, a Maryland correspondent to the *American Farmer* in 1822

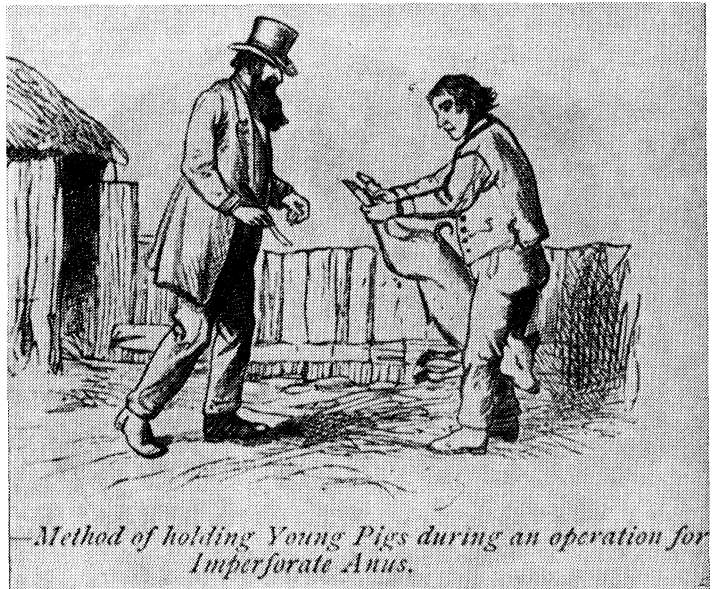
obliges with one "practised by a very expert hand in this part of the country." With the hog strapped to a board, a flank incision was made, through which:

the pride and the bag is to be drawn . . . after cutting the pride off, the greatest care must be taken to return the bag to its former situation . . . more are lost for want of attention in that particular, than any other.

Spaying of ewes never became common, but one spayed ewe mentioned by this correspondent was "the fattest he ever beheld." The spaying of sows, however, apparently was a novelty in some circles, for a Massachusetts pig farmer in 1824 wrote, "I never spay sows, because we have no one who knows the mode, which is to be regretted." It would seem likely, however, that he would have regretted it all the more had he had the services of a character who in 1850 reported on spaying sows by a "new process," which according to this innovator:

I tried with success, and with less pain to the animal, than when done with the knife. It is, to inject with a small syringe, up the uterus, about a wine-glassful of sulphuric acid. This destroys, on the part of the sow, all desire to take the boar.

Some pig problems have changed little—and the method of handling them less than the attire of the practitioner. Clater-Armatage: *Cattle Doctor*



—Method of holding Young Pigs during an operation for Imperforate Anus.

Offhand, it would seem more likely that it would have been more accurate to have said simply, "This destroys part of the sow."

Equally curious is the "Substitute for Spaying" offered by a correspondent to the *Cultivator* in 1838 who says:

The old method of gelding sows is not only very cruel, but quite disagreeable to the operator, as well as dangerous to fat animals . . . the *modus operandi* in this neighborhood, as practised by myself lately, but much longer by others, is simply this: . . . pass the small end of a common goose quill down the vagina two inches or more . . . through which drop six or seven shot, and your work is complete.

A reader who later inquired about the efficacy of "bulleting" was told by the editor, "the practice . . . has been a failure . . . spaying is to be preferred."

If "elastration" should be thought a recent innovation, the editor of the *American Farmer* in 1823 notes: "Many farmers emasculate their lambs by a ligature made on the spermatic chord, which soon occasions the testicles to rot off."

### Horn Distemper

The ever-present "horn distemper" is mentioned as an inevitable accompaniment of the system of cattle keeping—an early recognition of this relationship:

My experience tells me the cattle poorly fed become feeble, and when severely pinched with the cold, their blood being weak, is driven from the extremities, which, becoming thus defenseless are of course frozen, and I believe it is here proper to state also that the horns become hollow in proportion to the poverty of the creature that wears them.

Another correspondent, however, through "accurate observation," finds that any softness in the tail:

is proof of tendency to hollow horn. . . . In New England, they all cut off the tails. . . . I have seen an animal on her side, which, within half an hour, was led to rise and after eat, merely by cutting off three inches of the tail.

In 1824 an "agriculturalist" disputes the idea that it is only animals in poor condi-

tion that are subject to hollow horn, and while the disease is to be diagnosed with the gimlet, "cattle without horns are quite as subject to it." Some, he says, rely on the feel of the horn, but this is uncertain, as it may be either hot or cold:

A very small gimlet will, however, remove all doubts . . . if the disease does exist . . . little or no blood will follow the boring; whereas if the disease does not exist, you will find blood immediately upon entering the horn. The gimlet used for boring, should be well washed and greased after using; for if it is not, and should be used to try the horn of an animal not actually affected with the disease, it will most generally give it to them.

Comment upon the latter would seem superfluous.

The subject of horn-ail attracted the attention of Joseph Fiehrer, Veterinary Surgeon, lately of France and a resident of Harrisburg in 1841. He notes that the disease "is so very prevalent in America," and that the common treatment: "is entirely wrong in principle. . . . Boring the horns is at most curing symptoms and not the disease." Bleeding and purgatives were his mainstay. The "disease" apparently was better understood by at least one Ohioan, who gives the following preventive for "Winter-kill" of cattle and other stock:

R. Good shelter-um, q.s.  
 Corn-meal-um q.s.  
 Clear water-um q.s.

The "corn-meal-um" is to be made into a poultice, and kept constantly applied to the mucous membrane of the stomach. For the benefit of strictly professional men, he suggests the above may be given as follows:

R. Refug. opt. q.s.  
 Zea pulv. q.s.  
 Aq. font. q.s.

One adequate explanation of the deterioration of livestock may be found in the experiences of a farmer of upper New York State who apparently had caught the Merino fever in 1814, and

had all the disadvantage of inexperience to encounter—which proved almost fatal. I win-

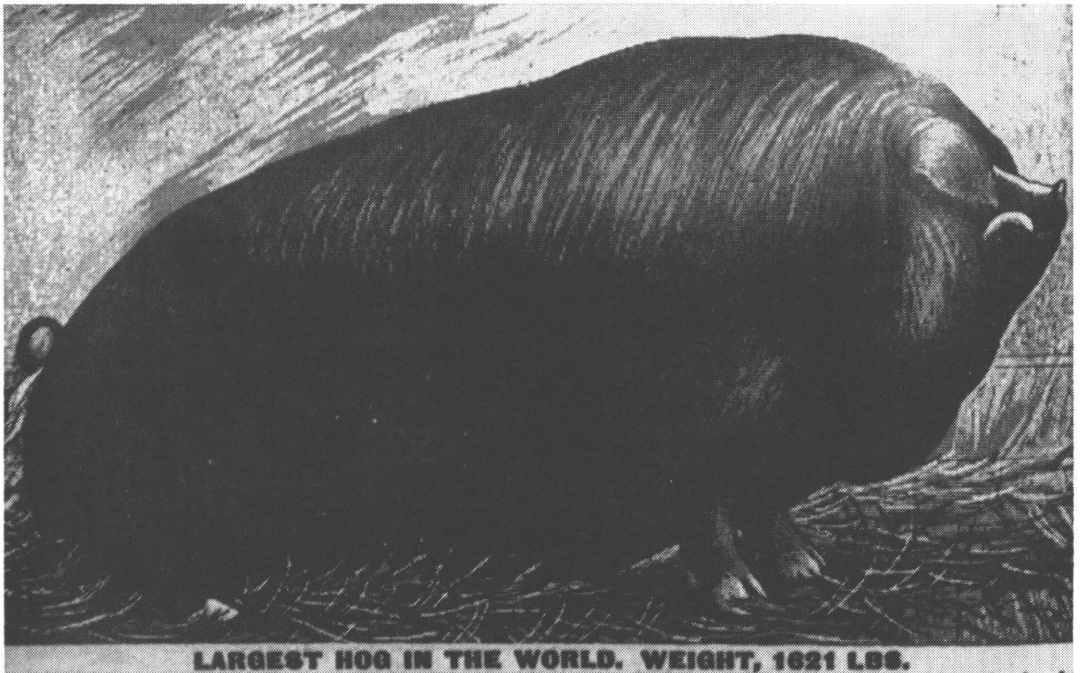
tered my sheep in the open air, without sheds; my lambs came in February, and mostly all died; and those that survived were poor little nurlly things, and mostly all died the next winter. I also lost about one-fifth part of my old sheep, which I think was mostly owing to their being constantly exposed to the cold rains and snow; for they were well fed.

One solution, although an expensive one, was to import new foundation stock from England. An invoice for 12 head of cattle shipped to Kentucky in 1817 shows the cost on board ship in England to be (in round figures) \$1,500; freight and expenses to Baltimore, \$1,500; insurance to Baltimore, \$1,100; freight \$500, and insurance \$1,650 from Baltimore to Kentucky. Together with incidental expenses, and the fact that one animal had died, and another left lame in Maryland, this meant that animals costing about \$125 in England were worth about \$700 delivered in Kentucky. The accepted wage for farm labor at the time was seventy-five cents per day.

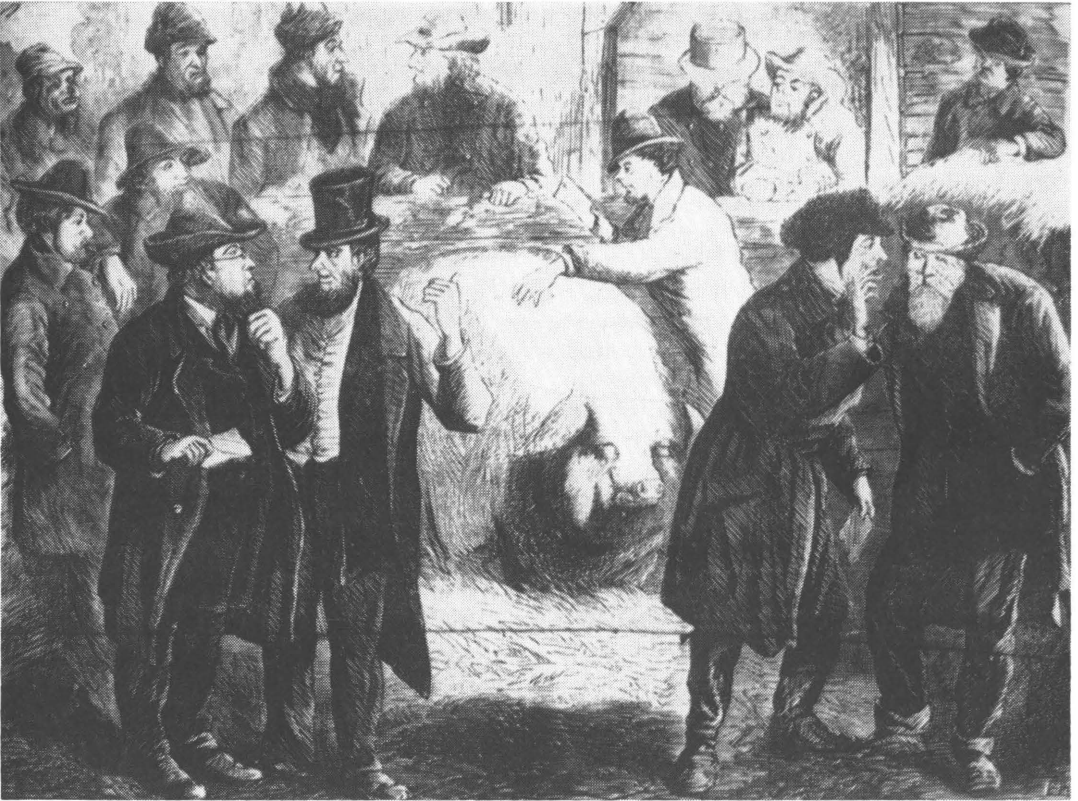
### Prodigious Porkers

In the same issue of the *American Farmer* there is a lengthy article by James Mease: "On the Principles of Improving the Breed of Domestic Animals." To refute the idea that all American stock was of inferior size, he gives the weights of a number which were on record — this was early in the craze for huge stock. Several oxen mentioned exceeded 2,500 pounds, two in excess of 3,000. One weighing 2,800 pounds at seven years brought \$1,000 for slaughter. Most of these animals were worked for several years, then fattened for meat. Numbers of pigs ranging from 700 to 1,000 pounds are also mentioned; one in Virginia reached 1,200 pounds, and one in New Jersey, 1,350 pounds while yet under three years of age. In the 1840's several weighing 1,400 pounds are mentioned.

In 1827 "the great ox Columbus, weighing 4,000 pounds, probably the largest in the world," was placed on exhibition, and



Stock food companies used pictures such as this to suggest what their wares would do. This beast — if depicted with any degree of accuracy — suggests those of ancient Roman times which, reputedly, had to be wheeled to pasture. Contemporary advertisement



The mania for huge animals had a natural concomitant in the pastime of guessing their weight at fairs. Agricultural editors lampooned both the mania and the methods for determining weight — said by some to consist of balancing the hog against a number of rocks and then guessing the weight of the rocks. *American Agriculturalist*

was viewed by more than 40,000 persons in Boston, New York, and Philadelphia. Although seven years old, "he has not arrived at his full size, but may be made to weight 1,000 pounds more . . . all pronounce him the most noble and extraordinary animal ever exhibited." The following year he had been "exhibited in all the principal cities from Maine to Virginia, and has been viewed by more than 60,000 persons." In quite another category: "There is also the extraordinary Small Cow, that measures only two feet ten inches in length. She is nine years old and well proportioned." Admission to see Mutt and Jeff was 12 cents — children half price.

In the former category was an Ohio hog weighing 1,260 pounds, on which the owner had realized some eight or nine hundred dollars in exhibiting it at 6¼ cents a view,

and for which he was offered \$2,500 delivered in New York: "The purchaser, it is expected, will undertake its transportation to the eastern cities, to show the Yankees what kind of hogs we raise in Ohio." Yankees, of course, would not likely ignore such a challenge, and with the turning of the wheels of progress we find in 1840:

an account of a very extraordinary hog raised in Wallingford, Vt. and sold for two hundred dollars to a gentleman who designs to transport him over the country as a show. He weighs, it is said, 1600 pounds and is three or four years old!

The accuracy of some of these weights, however, might be open to suspicion if a device of certain westerners about this time was in widespread use:

In Iowa they weigh pork by putting a plank across a rail with the hog on one end and then



piling stones on the other end to balance. They guess at the weight of the stones, and thus come to the weight of the pork.

Probably more accurate is the record of a 138 pound kidney from a cow weighing 600 pounds: "The beef was very poor, almost the whole nutriment seeming to have tended to this enormous kidney." Since there seems to have been no aversion to at least trying the beef, think of the prodigious kidney pie that might have been made!

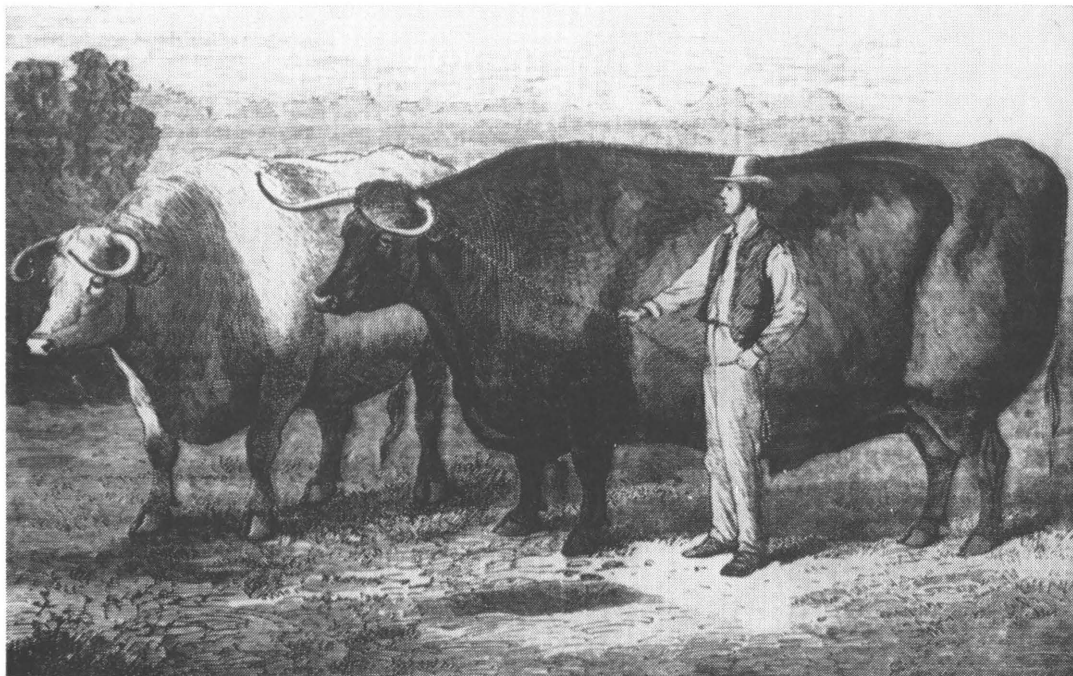
More or less in the same category as this craze for mammoth animals was the "hen fever," which reached its height about the mid-century. The editor of the *American Agriculturalist* in 1850 noted:

Few are aware of the extent to which the hen fever is now raging among our amateur farmers . . . \$3 and even \$4 per dozen is by no means an uncommon price for eggs of a choice kind. . . . The yellow fever and cholera may be more fatal . . . but the "hen fever" is making the most fools. . . . Breeders who live upon the gullibility of the public keep this fever alive, by means of publications, in such

papers as will lend themselves to the *henhusseys* . . . to assist them to sell their great, overgrown, longlegged, crane-necked, big-headed abortions. . . . We understand that from \$20 to \$100 a pair is the asking price of these "great poultry breeders." . . . Respectable agricultural papers . . . could be much better occupied than in such humbugging and *foul* foolery.

Later in the century there developed a passion for small animals (beyond that of small animal practice by a few veterinarians), and reports of the "smallest horse in the world" continued to be printed. By 1906 this honor had been bestowed on "Speck," a miniature mustang of Delaware, standing 6.2 hands high and weighing 62 pounds at six years of age.

Mease, however, in another of his frequent contributions to the *American Farmer* is obviously displeased with the popular clamor for excessively large animals. Commenting on an exhibition of fat stock in Philadelphia in 1821, entitled: "Pennsylvania against the World," the alleged object of which was "the improvement of the breed," Mease asks:



Although of seemingly dubious proportions, some apparently honest observers of the mid-nineteenth century reported cattle more than ten feet long and standing over six feet high. There is one apparently authentic report of an ox weighing 4,500 pounds. *American Agriculturalist*

Did any of these crammed beasts leave their progeny behind them? . . . Where, moreover, is the utility of such overfeeding? . . . The difficulty is to find lean enough in the cattle and sheep to eat: as to the hogs, nineteen-twentieths of their weight will be consigned to the manufacturers of soap.

British oxen generally topped most that America could produce at this time, however; at least five animals from 3,900 to 5,000 pounds were recorded from 1810 to 1821.

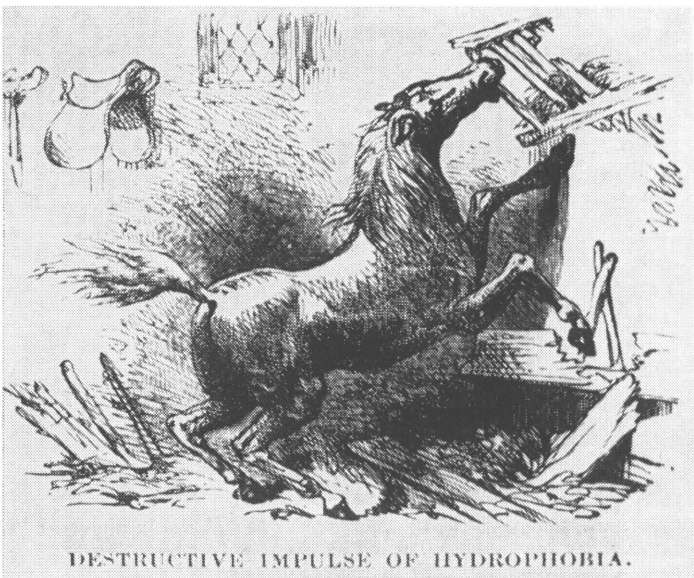
### Hydrophobia and Hysteria

Numerous articles on hydrophobia in man and various domestic animals appear in the early volumes of the *American Farmer*; the accuracy of diagnosis in some of these, however, is open to suspicion. Such is likely in a lengthy case report in 1820, in which it is purported that the herb scullcap, or scutellaria "was successfully employed in the cure of said disease." A girl, bitten by a dog which later was shot as mad, ten months later developed symptoms of hysteria in which she simulated the actions of a rabid dog including trotting in a circle about the room. A witness stated that he "once had eight sheep bit by a mad dog, and that they were every one affected in precisely a similar manner."

The editor reports a novel mode of curing hydrophobia in 1824, which he thinks may supersede the use of scullcap. The case concerned a Frenchman "who manifested the utmost horror for liquids," and upon whom:

The surgeons of the hospital determined to try . . . an experiment which had been found successful when applied to animals. The operation consisted in the introduction of water into the veins, by means of an incision above the wrist. The experiment fully succeeded, as the patient now takes liquids without aversion.

A correspondent relates in 1822 that he knew of a dog supposed to be mad, and which a servant had been instructed to take to the woods and shoot. The servant, however, observing that the dog seemed "to have something in his throat," investigated and found a tumor under the tongue, lancing of which effected an immediate cure. This led the writer to suggest that someone in each village should be capable of using the lancet "as there are many parts in this extensive country where medical aid cannot be procured." He also recalls that as a boy in England he had "learnt to worm dogs, which *it was said* did not prevent their going mad . . . but disabled them from biting anything. . . . I afterwards wormed a number of dogs." He could not



DESTRUCTIVE IMPULSE OF HYDROPHOBIA.

That rabies was incurable was long obscured by the fact that not all victims of bites, even by known rabid animals, developed the disease, and many persons subjected themselves to danger in useless treatment of frankly rabid livestock. Manning: *Stock Doctor*

recall whether this had the supposed effect "but as the custom was general, there must have been something in it." This practice of removing the fibrous lyssa from the tongue stems from ancient times, and continued in vogue until late in the nineteenth century—long after its efficacy should have been a matter of common knowledge. Fleming, in 1872, states that the practice was still common in England, and:

The operators justly deserve the punishment which will be awarded them, should they come within the cognizance of the Royal Society for the Prevention of Cruelty to Animals.

In an article on "Hydrophobia in Sheep," the writer states that in 1810 a dog had bitten 15 or 20 sheep with only trifling injury, but had attacked two cows with such ferocity that he was shot as being mad. Several of the sheep lambed soon after, and their wounds had healed in two weeks, but about this time they demonstrated "incessant libidinous actions," and all died of rabies within six weeks. All were skinned:

without inconvenience—a proof that the blood of the infected animal cannot be injurious . . . the skins were taken from several hogs, which died of hydrophobia, the same time, and the bodies eaten by the others, with entire impunity.

Another correspondent in 1824 relates an attack of a dog which bit a cow, a horse, his dog, and several pigs. After the latter died with symptoms of rabies in about ten days, the dog was "put out of harm's way; and the cow developed rabies two months later." The horse, however, was bitten only on the nose; recalling an "experiment," the owner "by careful amputation removed all the wounded part, and he never was affected."

In 1828, by direction of the Secretary of War, agents in the Indian country were to "ascertain the Indian's remedy against the effects of bites of mad-dogs and snakes . . . for it is most certain they possess them." One agent was:

often amused at their statements of the charms

they used . . . and I saw some white men who believed in all this, as if it had been part of the holy Gospel. . . . I am of the opinion that bandaging and suction, are their great resorts, together with some application, but of what, they were too superstitious to tell me. They think a disclosure of a secret of this kind breaks the power of its enchantment.

Another agent, however, was more successful, for:

The offer of pay was an inducement to them to disclose the secret. . . . The cure for hydrophobia is a plant resembling the tobacco plant, which is made use of by the Indians as a substitute for tobacco. . . . When a dog is afflicted, it is moistened and tied round his neck, and the dry tobacco put in a pipe and smoked by a person into his nostrils. . . . They never knew persons to be mad, though they have been frequently bitten by mad-dogs, because they apply the remedy immediately . . . [and] a mad-dog was never known to die when they applied the above remedy.

### The Experienced Sportsmen

In a series of articles: "On the Management of Horses and Dogs" in volume five of the *American Farmer*, an "experienced sportsman" divulges, "the most useful medicine for horses," consisting of a pound of nitre, and a half pound of sulfur, made into a mass with molasses. This medicine "is perfectly innocent, and so mild and gentle in its operation, that it acts insensibly on him, and is not to be perceived, but by the cure"—for practically everything in the book. On the other hand: "With spavins and ring-bones I will have nothing to do. Send for a skilful veterinary surgeon." On the subject of worms, he says:

I have often read, in farrier's works, and in those of veterinary surgeons, of worms in a horse's stomach—for my own part, I cannot credit it; for the peristaltic motion of the stomach is so powerful . . . that worms may as well live between two millstones, or in a hot baker's oven, as in a horse's stomach.

Dogs, he avers, "in the distemper, absolutely die for want of nourishment. . . . I have saved the lives of several, by drenching them, three or four times a day, with

strong beef or horse broth." While he had never had a dog go mad, he says:

Provided a dog went mad in my kennel, I would discharge the person who looks after them; for no dog goes mad without first rejecting his food. The moment a dog refuses his food, or feeds very sparingly, he should be taken from the others, and chained up in some safe place.

### Benevolent Bots

A number of articles on bots of horses, some suggesting they did considerable harm, led John Haslam, in 1823

to lay before the public, some facts, which I have noticed, in the course of twenty-four years experience. . . . People imagine bots kill more horses than any other disease. If we reverse this opinion, we shall perhaps come nearer to the fact; for in all probability there is no disease that destroys so few. . . . That bots never kill I will not assert, though there are eminent veterinarians in England who say they never do. It is a common opinion, that a few bots are essential to the health of the horse. . . . But in the many hundreds that I have opened, there have been some in which not a bot was to be seen; and not one of these may be supposed to have died for the want of bots.

Haslam, a graduate of the London Veterinary College, and the first graduate veterinarian in America, obviously alludes to the opinion of his preceptor, Edward Coleman, who taught that a few bots were essential to proper nutrition by acting as gravel in triturating the horse's food. The English veterinarian, Bracy Clark, even proposed feeding bot larvae to young horses for this purpose. For the benefit of "such persons as would rather give something to facilitate their discharge," Haslam recommends an ounce of powdered savin daily for three days; they will be "very much astonished at the quantity of bots brought off by it." In 1828 a "subscriber" states: "In our southern country more than half the horses die of botts or cholick; yet you seldom find two men agree in the mode of treatment of either."

In response to a request by a correspondent for information on glanders in 1823,

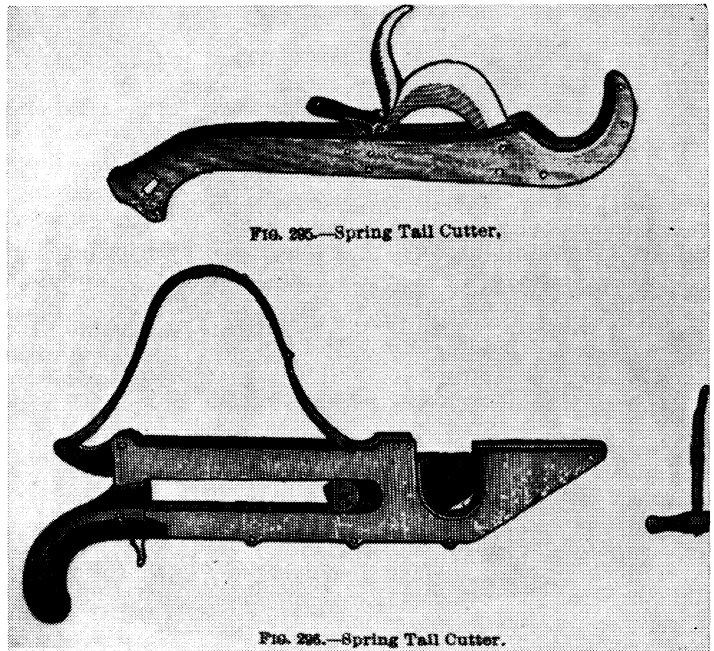
the editor inserts a lengthy article on the subject, taken from British sources. It is unfortunate that the tenets of Coleman — that the disease was spontaneously generated — continued to be propagated by his graduates, rather than the enlightened views of this writer. In addition to giving a good description of the disease and its natural and experimental transmission, he says:

I have not been so fortunate as to discover a remedy for glanders; nor has it ever come to my knowledge that any other practitioner has been more successful. . . . The most effectual mode of prevention consists in separating a suspected horse from others.

This communication, however, led a subscriber from Pennsylvania to write, "I consider the glanders to be a neglected or violent case of the distemper." Glanders, he says, is incurable, "But take the distemper, or strangles, in time, cure it effectually and you prevent the glanders." In offering his cure for strangles — bleeding, salts, and sassafras tea — he concludes, "If thee thinks this prevention better than a cure, thee may give it a place in thy paper."

Glanders, however, is mentioned but seldom during the first half of the nineteenth century, and it may be supposed that some of the cases reported were more likely strangles. In 1844 an Alabama correspondent to the *Cultivator* states: "More than 30 years since the glanders of the most virulent kind, was amongst the horses of the neighborhood in which my father lived. Great numbers died off." A strong decoction of tobacco juice, given internally, he says, was effective in curing one animal. A considerably more cogent note appears in 1846 in response to the request of a correspondent for information on glanders. The editor states, "We would refer you to Dr. George Wright, of this city [Albany], veterinary surgeon, for the information you want."

In a notice of *A Compendium of Cattle Medicine*, by James White (Philadelphia, 1824), the editor of the *American Farmer* says:



The fashion for “bobtails” resulted in tail docking being widely practiced by horse fanciers, farriers, and veterinary surgeons alike, although those who professed to the title of “V.S.” preferred the more professional-appearing tail cutters to the cleaver. Liautard: *Surgery*



The book in question, would necessarily make part of every farmer's library. At all events, there is on every farm, such frequent occasion to treat cattle, sheep and hogs for various diseases and accidents, which if not soon removed, are sure to destroy — that every one should have this volume within his reach, at a moment's warning.

The price of the work was 87½ cents.

### To Lessen the Miseries

Under “Advice to Young Farmers” in 1824, an anonymous writer, in speaking of docking horses, states:

The English have been ridiculed by foreigners, for “making curtains”, both upon their kings and their horses. As to those made upon the latter, I think there can be no doubt of the

utility. Long tails, for which some people are such warm advocates, setting aside the incommodity to the rider, of being fanned by them, dirty or clean, do not in their appearance convey that idea of expedition upon which our affections are so bent in this country. . . .

It has ever been my favourite study . . . to lessen the miseries of animals. . . . I had heard of many accidents, some of them fatal, from horses being docked at too late a period, and by bungling blacksmiths; and indeed I had seen several operations of the kind which made me sick. It occurred to me, that colts ought to be docked early, whilst the tail is tender and gristley; which operation I ever afterwards performed, upon my own, myself, with a good sharp kitchen knife, with all possible success, and which I wish to recommend as a general custom. . . . The stroke . . . curtailed them in an instant; and with so little pain, that they scarcely left their carrots. . . . If a flux of blood be not desired, a ligature may be made, previously to the operation: but in case of plethora, dulness, or heaviness about the head and eyes, it may be presumed that bleeding will benefit the colt, and the wound may be entirely neglected. . . . No twitching, trammelling, searing with hot irons, nor any of the barbarous Vulcanian apparatus is required; and what will weigh more than all the rest, with certain of my readers — no farrier's bill.

The "Vulcanian apparatus" referred to is undoubtedly the "docking machine" used on adult horses.

Revulsion against another barbarism impelled the veterinarian, John Haslam, to write a long article "On the Haws or Hooks" in 1824. In so doing, he says:

I am fully aware of the prejudice that may be excited against me, but nevertheless, as it is under full conviction that I have truth on my side, I proceed with courage to state such facts as will, if adhered to, not only produce a more humane treatment of domestic animals, but also advance the interests of their owners.

Opinions that have existed for ages, though the most absurd, commonly pass from father to son, with the sanctity of truth; antiquity giving weight to them; and so much respect is paid to ancient notions by the bulk of mankind, that for a man to contest the truth of them, is to put his character at stake.

Markham, and other English writers, he says, call this a disease. Of this group: "Taplin . . . loses all credit as a veterinary writer, by speaking of the gall bladder of the horse." The haw, or nictating membrane, Haslam contends:

is a useful appendage to the eye, and is as natural to the horse, as it is for him to have two ears. . . . By taking this membrane away, I have known horses to go blind, that before had good eyes.

Haslam apparently had the courage of his convictions, for he relates that to one farmer who insisted on the operation for fear his horse would die of the "disease," he promised:

that my head should be given for a football if he died or went blind, with the existing disease; he recovered perfectly although the reputed tumour was not cut away.

In speaking of Blaine, and other contemporary English veterinary writers, Haslam says:

It is acknowledged that within the last thirty years, greater improvements have been made in the veterinary art than at any former period; and it was about that time in England, that men of learning began to think that branch of the healing art worthy of their notice. It is to characters like these, we are indebted for that investigation which taught the true diseases, to which the horse is subject, and expunged such as were only imaginary.

"Another imputed disease," says Haslam, is the lampas:

All young horses either have this enlargement, or it has been taken away; this being the fact, how is it possible that it can be a disease? We may as well charge the creator with a universal defect in the order of creation.

He admits, however — as numbers of veterinarians have had to since — that on occasions he has had no alternative but to perform the operation of burning or lancing the palate. Haslam continues:

It is many years since I first began to deny the existence of the hollow horn as a disease, and was induced to go to the slaughter house, in order to know the state of the healthy subject.

He had convinced himself that "as in the most healthy state the horn is hollow, it must be absurd to treat it as a disease." And on diagnosis of the condition by feeling the horns and finding them cold, Has-

lam says: "With equal propriety may it be said, a man's leg is hollow because his extremities are cold in sickness."

### NEW DISEASES AND OLD NEEDS

One of the major services performed by the early agricultural journals was the recording of "new" diseases for the information of their readers at the time — and, perhaps unwittingly, for the gratification of later historians. One such report in 1824 concerns "Observations on a Remarkable Disease Among Cattle, and Its Propagation to the Human Species," by J. Kercheval, M.D., of Kentucky. This "singular and fatal disease," he reports, "first made its appearance among the cattle of this neighborhood during the summer of 1819, and its fatality was so great that horses, cows and sheep, were alike the victims of its fury." Death was sudden, the external signs being swellings from the throat to the flanks, which

upon post mortem examination, were found to contain extravasations of grumous blood. . . . The blood in some instances was so dissolved that it transuded through the pores of the skin. . . . Alike novel in its character and unique in fatality, it is viewed here, as a new disease; nor is my knowledge of veterinary pathology sufficient to enable me to assign its appropriate rank among the many maladies of our domestic animals.

Anthrax, of course, had been long known in both animals and man, but perhaps a provincial physician on the fringe of civilization might be forgiven for his failure to recognize it. He continues: "In the human subject this disease, or at least one derived from it, commenced in a small and circumscribed vesicle," and he goes on to describe faithfully the malignant carbuncle, and "wool sorters' disease."

He adds:

No one was affected with it, who had not been previously engaged in flaying or otherwise handling and touching the carcass of an animal that had died of the distemper described.

Nor was the nature of anthrax much better understood in 1840, when a cor-

respondent to the *New England Farmer* reported an "epizooty" in Massachusetts, which "carried off many animals." He gives a good description of the disease, particularly among those who skinned some of the dead animals, after which "the animals were buried without flaying." The disease was quite properly compared to one of the Biblical plagues of Egypt.

Blackleg in cattle likewise was not reported, or more likely, recognized, with any frequency until the 1840's, when numerous references to it may be found in the *Cultivator*. In 1844 a Vermont farmer, however, states:

We have met with some loss every year since my remembrance, in this neighborhood, from this disease, and some years to quite an extent. We have generally practiced bleeding in the fall as a preventive.

This he found effective for several years, but finally some calves which had been properly bled died, whereupon "a strong dose of lobelia" saved one of his best calves, which he had counted "as good as dead." This led a Kentucky Irishman to recall, "my own sufferings, and those of my father, from that dreadful disease for many years" in Ireland, until it was found that inserting a clove of garlic under the skin of the cow's tail was a sure preventive:

The effect is surprising. As quick as the person performing the operation can step from the tail to the mouth of the calf, the smell of garlic is perceptible on the breath of the animal! . . . from that time to the present I never lost one. . . . I never heard as yet of a case of the black leg in calves in this country; but if such a disease ever makes its appearance, you may rest satisfied that the above is a sovereign remedy.

The same remedy appeared in the *Country Gentleman* for 1853, and specified the under side of the tail as the proper site for implanting the garlic. This brought the caustic comment from a physician that it

like many prescriptions for the human species, seems superlatively ridiculous; misleading the credulous and wonderloving, without contributing to science or proving efficacious in the re-



moval of disease. We would like to inquire if the *upper* side of the tail would not answer? . . . Is the rapid traveling of the medicine from the tail headwards a sure indication of its happy remedial action? If so, we trust that if this man should be attacked with mortification of the hand, he will not complain if his surgeon should cleave a toe and introduce a garlic. . . . What is *science* in the one case is so in the other. We have no remedy to suggest, but enter our decided protest against quack prescriptions, and mysterious and wonder-working manipulations, whether designed to be carried out on man or beast.

### The Rubbing Disorder

In this category of reports of “new” diseases is an account of: “The Rubbing Disorder in Cattle,” in the *American Farmer* for 1824. The correspondent, apparently a farmer, notes that an incurable disease which had broken out in Maryland for the first time in 1822 was

very similar, if not the same, which I have occasionally witnessed the ravages of, amongst the cattle of Tennessee, some eight or ten years past. . . . It was usually denominated the rubbing distemper, because cattle when attacked, would rub their heads and necks against the trees and other firm objects, until their horns would sometimes drop off, or their eyes be rubbed out of their heads, before they were carried to such heights by the itching of their skins.

He attributes the disease to sudden overloading of the stomach upon being turned into

fresh cornstalk fields . . . when a great portion of the stalks abound with saccharine juices. . . . Upon dissection, the contents of the paunch are found to be as dry as ashes. . . . The distemper is not contagious [but] . . . I have known eight or ten die of it on one plantation, and all nearly about the same time, and always in the fall of the year.

This is a good description of “mad itch,” or pseudorabies, supposedly first described in 1902.

This communication caused a man in Ohio

to transcribe from my notebook, an account of what appears to me to have been a similar disease amongst the cattle in this county, in the year 1813.

A farmer near Marietta lost several cows during one week in September. The onset was rapid, and “the hair and scarf skin, was in a few hours entirely rubbed off from the side of her neck and head”; death occurred in 12–14 hours. No unusual post-mortem appearance of the viscera was noted, nor was the feeding indicated. One animal was subjected to bleeding two gallons, cutting off the end of the tail, strong purges, burning with a hot iron over the poll—which “appeared to give the cow ease”—and trepanning the cranium—which “did not appear to afford any relief.” A considerable quantity of bloody serum escaped from under the dura mater when it was punctured: “So far as I have heard, the disease has in every instance proved fatal . . . the disease appears to have been in some measure contagious.” A few cases were noted the following year, but none since to the date of writing (1824). Some idea of the baffling nature of the condition can be appreciated from the writer’s concluding remarks:

I have often thought it was a fortunate thing for the illnatured and ugly old women, any where in the neighborhood of this disease, that the belief in witchcraft has been banished from our land, or I fear, that many a harmless old soul would have had this sin laid to her charge.

By the 1840’s, mad itch was attributed to feeding on dry cornstalks. In the *Cultivator* for 1844 it is stated that the cause has been

hitherto considered unknown, and medical treatment almost useless . . . the disease appears, so far as we have learned, only where cattle have been fed on stalks, or where that is almost their only food, as in the west. . . . Separate your cattle from your hogs in cornstalk chewing time, and you will separate your cattle from the mad itch.

For affected cattle: “Open the second stomach and extract the cornstalks.” Later in the same volume, however, the editor states: “We do not know that the cause of what is called mad itch has ever been discovered.” Deaths of stalk-fed cattle in Iowa the following year were attributed to constipation, although:



The death of the animals was so sudden that cows which gave a good mess of milk at night, were dead the next morning; and oxen which worked well as ever in the morning, died in the afternoon.

In 1848 in Michigan:

A great many cattle were dying off in that region, from some terrible malady, and it was observed, that only those which had been turned into cornfields, had been the victims . . . the same fatal effect, from turning cattle into cornfields, had followed, in other parts of the country.

With the statement: "the cause and treatment of the complaint seems to be pretty well understood," purging and bleeding are prescribed.

### What's in a Name?

It would be difficult to determine exactly when any particular "new" disease first became a problem, and even more so when it actually first appeared. In sense, a disease can hardly be said to exist, at least so far as awareness of it as an entity, until there are persons capable of diagnosing it. But not all the diseases diagnosed were actually entities in themselves—or even diseases, as in the case of the so-called hollow horn. In a few instances, descriptions antedating an identification of a condition as a disease entity, but adequate to diagnose it, may be found in the early literature. These generally can be found only accidentally, i.e., it is difficult to make a search for something that has no name. Frequently the earliest date of publication may have little bearing upon the dating of the disease, for many of these early communications to the agricultural journals are in the form of recollections of events that preceded the establishment of the journals.

Some of these descriptions of events of years or decades earlier may be open to suspicion as to their accuracy, but many give unusually lucid details. In most cases it seems logical to presume that the first reporting of a disease is not necessarily coincident with its earliest appearance. Even a positive statement with regard to time

may be suspect—without needing to question the veracity of the writer—for many individuals at this time were born, lived, and died within a radius of a few miles, and there may have been few events that could be used to "date" a disease. Those who would take the trouble to write of their experiences, however, may have been somewhat more cosmopolitan characters. At any rate, it seems likely that most diseases existed in at least a sporadic—and likely unrecognized—form for some considerable time prior to their "discovery."

### Big-head

Osteoporosis, the so-called "big-head" of horses, was first reported from Georgia in the *American Farmer* in 1822. This correspondent infers that the disease was common but, beyond a description of it, knows nothing of its nature. He asks:

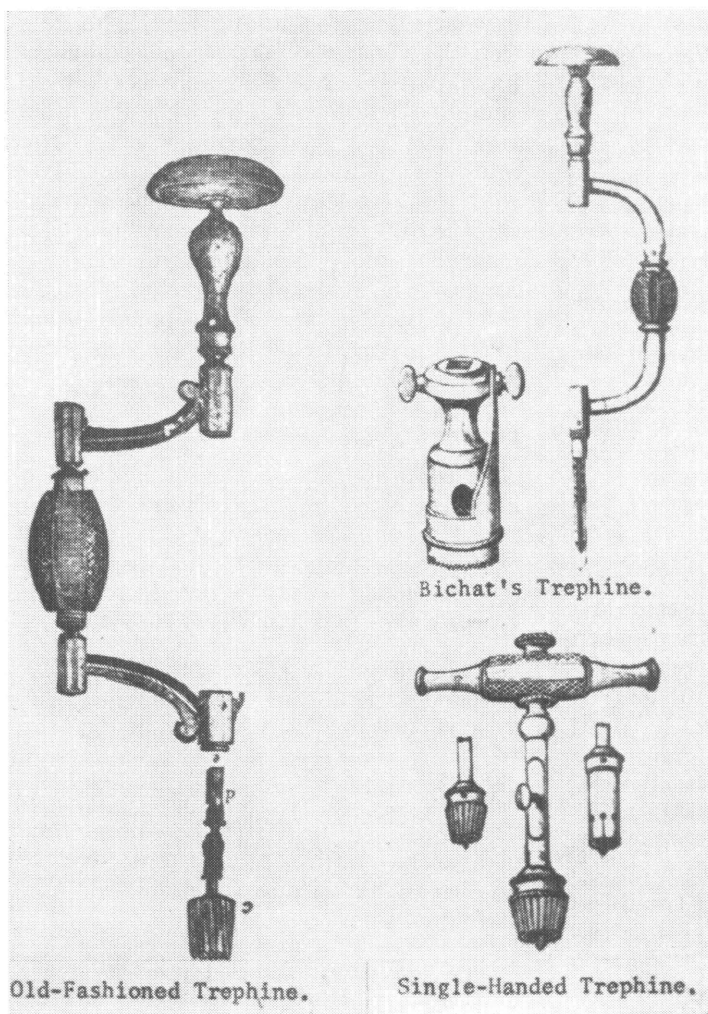
Is this the disease described under the name of Glanders? Is it contagious? Are mules liable to be affected by it? Is it curable, and by what means?

An answer, from one who says, "I am no farrier," was shortly forthcoming. This man from South Carolina had seen "a number of horses that were afflicted," and had cured one:

I had him thrown and tied, then run an hot iron through his head, inserting it into the lump on one side, and carrying it through the lump on the other [!] The horse never after had any symptom of the disease. . . . It differs very much from the glanders. I think it certainly is not contagious. I have never heard of a mule to have it.

A correspondent from North Carolina in 1824, says, however: "About twelve or fourteen years since, it was very prevalent in this part of the country, but is now rarely heard of." He gives an excellent description of the disease, and states:

The disorder does not appear to be contagious, yet when it commences in a large stock of horses many of them are apt to be affected . . . and horses brought from a distance to supply the place of those which die, or be-



Types of nineteenth-century trephines, used primarily in repelling cheek teeth of horses via the maxillary sinus. Liautard: *Surgery*

come useless, are equally subject to the complaint.

Of numerous treatments — trepanning, setons, cautery, tooth extraction, hot fomentations, etc. — tried on his father's horses, "I have known none of them succeed well . . . my father lost many horses." That is — until he tried a remedy suggested "by a traveller." All this required was a hot iron, whereupon:

Search out a gristle or ligament which extends from near the eye of a horse to near his nostril. . . . Apply the edge of the heated (until it is quite red) iron across this ligament, about midway between the eye and nostril, and sever it by burning entirely in two, to the

bone . . . on both sides of the head. . . . Let the wound then do for itself.

This is but a variation of the ancient cure for a stumbling horse, which required cutting "the cords," the conjoined tendon of levator muscles of the upper lip, and is a good example of the traditions against which the veterinarian John Haslam protested.

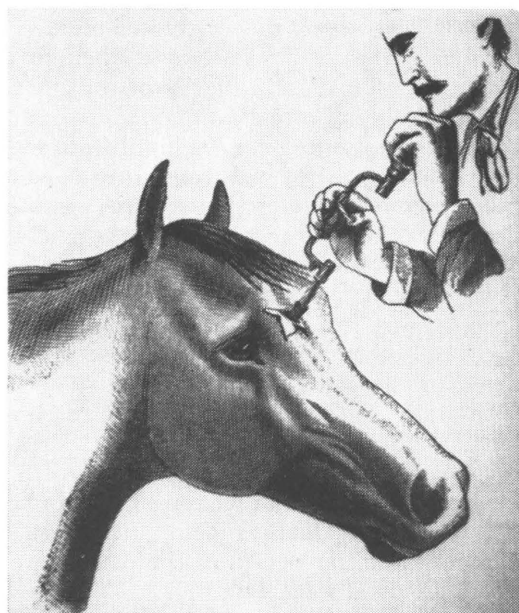
An example of the local nature of some of these outbreaks — or of the local nature of knowledge in a provincial society — is found in the *American Farmer* for 1830. Another North Carolinian, only one county removed from his fellow correspondent in 1824, states that big head was

common "about 12 years ago," i.e., about 1818. His neighbor says it was prevalent about 1808 or 1810, but "is now rarely heard of." If it had been common in his area as late as 1818, it seems likely he would have mentioned it. In this second outbreak, the writer states: "Before a remedy was found out, many losses were sustained. . . . One of my neighbors lost horses to the value of 6 or 7 thousand dollars." Despite all the remedies in the book:

in every case that I saw, or heard of, the disease terminated in the death of the animal. At length white arsenic was recommended. . . . I have known the arsenic exhibited in at least twenty cases, in all of which it effected a cure, and I think I can say, that it is an infallible remedy.

The cure consisted of a piece of arsenic:

the size of a common field pea . . . wrapped in fine paper . . . make an incision in the skin . . . insert the arsenic—or the paper containing it—and with a needle and thread make one suture . . . bleed the horse, and turn him out alone in a good pasture.



Method of trephining, still used—with refinements—in opening the sinuses. Early farriers trephined the skull to insert caustics and other agents for treatment of conditions of the head. Liautard: *Surgery*

## Slobbering Horses

"Salivation" of horses was first reported in 1822 by a correspondent from Pennsylvania who says, "I have for some years been endeavouring to discover the cause of an excessive discharge of saliva, (or what is commonly termed slobbering)." The disease was serious enough for him to conduct some experiments, which led him to suppose the cause was a gastric disturbance from some herb, but he adds: "For the three last summers, the horses have suffered but very little, in this part of the country." The year following, a Virginian expresses the idea that the cause is a mold or fungus, and editor Skinner suggests it is "an evil of comparatively modern date . . . aggravated by wet weather, when vegetation is more luxuriant." The horses in his native Calvert County, Maryland, he notes, "are slobbering at a degree, that one would suppose would exhaust them unto death."

In 1828 this disease attracted the attention of C. S. Rafinesque, Professor of Botany and Natural History at Transylvania University, Kentucky. He writes:

This disorder frequently attacks horses in many parts of the United States. . . . Various conjectures have been formed on the cause of this morbid affection, some of which ascribes it to a spider swallowed by the horses!

No one, he says, has published the real cause—which he is now enabled to point out, it being due to the eating of either *Euphorbia* or *Lobelia* mixed with the forage. This being the case: "It will be easy to prevent the disease . . . by pulling them up, or by burning the pastures."

Rafinesque undoubtedly was honest in his belief that he was the discoverer of the cause of salivation in horses. But a William Young, in a paper: "On the Salivary Defluxions in Horses," published in the *Memoirs of the Philadelphia Society for Promoting Agriculture* for 1811, had incriminated *Euphorbia*, the spotted spurge plant. On the basis of some precise and carefully controlled experiments, he concluded, "I think it extremely probable,

that the plant in question is the general cause of the salivation in horses."

### Distempered Meat

A good example of the type of animal disease reporting which leaves considerable to the imagination is a communication to the *American Farmer* in 1826. A correspondent from Georgia, writing on the *Distemper*, admits:

I am but little acquainted with the symptoms of the disease, but am informed that the animal is obstinately constipated. . . . I presume not one in an hundred recovers. . . . Instances occur of whole stocks being swept off in a week or two; and so convinced are the poor farmers of the incurable nature of the disorder and its aptness to go through a whole stock, that so soon as one is attacked, he gives up the whole lot for lost.

This report, of course, conveys little except the apparent fact that some epizootic of considerable proportions existed. He mentions that northern cattle were particularly susceptible, which might suggest Texas fever. Of more interest is his inference that these cattle "given up for lost" were probably sold for slaughter:

Our lovers of "old Georgia roast beef" have their pleasures considerably marred by the unwelcome intrusion of the idea that they may be feasting on distempered meat, which is not only disgusting to a delicate stomach, but really dangerous, as alarming are the consequences of feasting on such beef.

In commenting on this communication, Skinner suggests:

Our correspondent would render a publick service by getting some respectable physician to write for the *American Farmer*, a memoir on this formidable disease.

The matter also offers an opportunity for him to promote the suggestion:

All the medical schools should give lectures on comparative anatomy, and the outline of the veterinary art, until we can get regular veterinary schools established.

"Sore tongue" of horses, known as early as 1801 and reported in the first volume of the *American Farmer*, continued to cause concern. A correspondent from Maryland in 1826, who feared this "will destroy all our horses," was reassured by a Virginian:

This disease . . . known with us by the name of the sore tongue . . . has for several years been prevalent in this section of the country, and when it first made its appearance, excited much alarm with the farmers, but from experience in its treatment is now considered so simple a disease, that we take little or no care in keeping separate, the diseased horses, from those that are not.

Cattle, he says, frequently contract the disease "from eating about the stable where our horses have the disease." Turpentine as a cure, or tar as a preventive, mopped on the tongue was found to be highly effective in combatting the disease.

### Trembleweed

The first report on "Trembles," or milk sickness, appeared in the *American Farmer* in 1827. However, the celebrated pioneer physician, Daniel Drake, had studied this condition in 1810, and diaries of travellers to the West indicate its presence as early as 1800. Of course, the "reservoir" of the disease, the white snakeroot plant, had been present all along; all that was required was animals to eat it. This "singular disease" was a complete mystery for many years after it first attracted attention; indeed it was not until relatively recently (*ca.* 1920) that its real nature was elucidated to the satisfaction of all.

In 1827 a Kentuckian petitioned his legislature to offer a reward "for the discovery of the cause of the disease, which, for many years, in that section of the country, had been fatal to man and beast." The now-familiar details of the disease are worth giving at some length:

The disease appeared first in cattle early in the spring, and late in the fall. It was supposed to originate from some herb eaten by them in

those seasons. A beast apparently in perfect health, will suddenly be seized with a trembling and sickness, which will carry them off in a few hours.

Dogs, hogs, or any other animals, that eat the flesh, are immediately taken with a puking, after which they fall into a stupor, and die in an hour and a half or two hours. Persons drinking the milk of a cow that is infected, are taken in the same manner, and immediately die . . . within [a radius of] five miles . . . 500 dollars worth of stock die annually, and that part of the country had been almost stripped of cattle . . . as many as thirty to forty persons had lost their lives by this fatal poison.

Mr. Yancey stated, that the same disease prevailed in the neighbourhood of Goose Creek, in Tennessee, where he had been, and it was said, even the buzzards which ate of the carcase of cattle that had died with it, immediately perished.

In 1839 the *New England Farmer* reported:

A gentleman at the west has announced, that he has discovered the cause and cure of this formidable disease, which has been so destructive in some parts of the western states, and has, in some few instances, destroyed or driven the inhabitants from some of the most fertile sections of the country. He is claiming considerable sums from the state legislatures for the promulgation of his specific, and should there be no humbuggery about it, he will certainly be entitled to a handsome reward.

The editor of the *Cultivator*, however, thought differently; in an item headed "Quackery" in 1845, he grudgingly acknowledges:

a long and almost unreadable letter; the purport of which, so far as we can make out, is to inform the public that he thinks he has found a cure for milk-sickness, and is willing to "sell a knowledge of it to all that wish to purchase, who appear in person."

An article in the same issue doubtfully attributes the disease to the eating of poison oak.

The *New England Farmer* goes on to state that the disease is unique to the United States, and confined principally to Tennessee, Kentucky, Ohio, Indiana, and Illinois, and in a few instances has appeared in Wisconsin and west of the Mississippi and:

There is scarcely a poisonous mineral or plant to which it has not in turn been attributed. . . . Whatever the poison may be, it causes cattle to quiver, stagger, and die within a few hours. If cows eat of it, the milk is poisoned, the butter is also poisoned, and those who partake of either, are as surely injured, as if they had partaken of the original cause itself. . . . Dogs and wolves who feed on animals that have died with this disease share the same fate, and to prevent the extending of the evil to dogs and swine, cattle that die with the poison are buried carefully to avoid such results.

In districts where the disease prevails, great care is necessary in killing beef animals, as sometimes the beef will produce vomiting, when the animal is so little affected as to escape notice. To test the presence of the disease, some butchers are in the habit of driving the animal a mile to heat its blood; when if it is poisoned it will exhibit that peculiar trembling so certainly indicative of the presence of the complaint.

### The Puking Complaint

On the formidable nature of the disease, a writer from the West is quoted as saying:

I have seen many farms with comfortable buildings and improvements, entirely abandoned, and their owners fled to other quarters, to avoid this dreadful curse.

Others apparently were more hardy—or foolhardy, as the case may be—for a Col. Hinde of Illinois is quoted as saying:

Calling to see a friend on Darby Creek, Ohio, whom I had not seen for twenty years, he pointed to his wife and remarked—"She is my third wife; I am her third husband; and in yon graveyard lie fifteen members of our families taken off by that dreadful disease, the puking complaint!"

The editor makes further comment unnecessary in stating, "Surely there must be some unusual fascinations in any place that would lead an individual for so many years to encounter so fatal an enemy to life."

In 1856 a North Carolina correspondent to the *Cultivator* inquired about the cause of milk sickness, which was troublesome in that state. With no knowledge of the probable cause, he says:

It is confined here entirely to rich coves with a northern exposure, and does not affect cattle

if kept up till the dew is gone. Its limits are so well defined that it can be pointed out with accuracy, and is often fenced up so as to prevent cattle from running on it. . . . The flesh of cattle is so poisonous when they are affected with it, that I have known hogs and dogs killed by eating it before they were able to leave the place. Another peculiarity of this disease is, that the butter is poisonous, whilst the buttermilk is harmless, and is used with impunity.

Butchers exercised suspicious animals to bring on the typical trembling, which, he says, “causes all conscientious persons to refrain from slaughtering.” In response to this item, a physician from Iowa states concerning:

this distressing malady which so far has proven itself one of the opprobria of the profession . . . to a certainty . . . the agents that cause this disease are Copper and Arsenic.

### Snakeroot in the Grass

An Illinois correspondent to the *Ohio Cultivator* in 1858 asks for information on milk sickness, saying it “troubles us considerably.” The editor replies that it “is generally supposed to be caused by the cattle eating some foul herb, which some suppose to be the plant known as white snake root.” A man brought him specimens of the plant “some years ago, and said that wherever Milk Sickness prevailed, this was found growing in the pastures where the cattle fed. Clean pastures are a great preventive of disease in cattle.” As is often the case, one such item frequently brings on a flurry of letters pro and con; thus a “con” man states that the cause “is a mold that gathers near the roots of grass, and along low, wet places.” He likens it to toadstools, which grow in the same places, and which “I have known children to gather, and eat them, and die in a short time.”

This in turn elicits a positive statement from another, who says:

The alleged cause seems to me to be entirely erroneous. . . . I don't believe that any man can produce a case of Milk Sickness or Trembles without the weed known as white snakeroot. . . . This weed will grow on dry

land as well as wet, but is more abundant on low land. I have seen fields that were partly cleared, so full as to look like a field of rubbish, and get it well seeded down, this weed dies out. I had a field, two years ago, that killed four head of horses, and several cattle. I did nothing but to clean the field of logs and brush, and seed it to grass, and my stock thrives well, and no signs of Trembles, and not a weed of this kind can be found in the fields. I have a field now that would make nice pasture for some of those men that believe mold to be the cause . . . . A female is easier cured of the Trembles than a male . . . as the part of the animal that is affected by the Trembles, is of different form in the male and female.

The “mold man” tangles with the “snakeroot man” with the observation: “I do not say that the gentleman's writing is an absurdity, but I think he is mistaken.” In claiming that it is bad water that is really at fault, being the “cause” of both mold and toadstools, he says:

Let the gentleman rid his pasture of weeds, logs and bad water, and put good tame grass in his fields, then he may make a decoction of snake root for a physic for his horses in the spring season, and I feel confident that he will have better luck with them. As I have used the weed known as white snake root to physic horses and cattle, I cannot believe that this is the cause of trembles. . . . When our stock gets the trembles, we give a gallon of alcohol and four ounces of sulphuric acid . . . it has proved a sure cure in all cases. [!]

The man whose horses died of trembles in January asks, “How could they get the weed in the winter season?” and was disposed to incriminate another type of mold. Another, “living in an infected district, where probably there has been some twenty deaths since the first settlement,” states that there has been only one death this season, but “four out of five of my family have been afflicted,” one for the third time. While

snake root . . . grows very plenty in all our timber lots. . . . I am of the belief that it is a miasma that rises from the river, which is inhaled, causing sickness. This fog, or whatever it is, settling on grass, causes Trembles in horses, cattle and sheep.

Later, the editor states:

We feel that we have already published enough on this subject in its present form of supposition, but justice to Mr. Miller [proponent of snakeroot] requires us to give his final argument.

Thus William Miller, of Clyde, Ohio — his arguments make his name worthy of perpetuation — answers his detractors:

Wherever the disease is known, the weed will always be found. Take some of those weeds, bruise them in your hand and then go to an animal that is down with the trembles, and you will find that the breath of the animal smells exactly like the weeds. . . . In August, 1858, I turned a healthy calf, three and one half months old, into a field of three acres of these weeds, and watered it from an Artesian well, which is as pure water as any in the State, and in three weeks it died with the trembles. I saw him eat the weeds, and no mold or water could be got in the field. . . .

If the gentleman has no better physic than tremble weed, I advise him to get one. I suppose that snake-root can be given the same as arsenic or calomel, that is, in such proportions as not to kill.

And regarding the horses killed in winter:

When frost comes, the weed trickles down among the grass, but mind you the strength is there yet, and thus you see how your colts could get the weed. It could also be got in hay. . . . I would like to know why this miasma or fog will not settle on good tame feed where cattle have no access to weeds; and why people that never use milk, butter or meat, are never known to have the milk sickness.

A North Carolina correspondent to the *Country Gentleman* in 1856 asks for information on milk sickness, and hopes his inquiry “may interest Dr. Cuming and others who may be willing to benefit mankind.” M. A. Cuming, V.S., of St. John, New Brunswick, had contributed a number of highly intelligent articles to several of the farm journals in the United States, and apparently was looked on as something of an authority on animal disease. Cuming replies to this communication primarily because his name was mentioned, for he had never seen the disease, and asks, “Is the disease so obscure and uncer-

tain that those affected by it cannot be known in order that their products may be avoided as food?” He suggests:

two distinct fields of investigation . . . by those whose studies and experience properly qualifies them for doing so. The effects of the milk and flesh of the sick cattle on the human beings partaking of them, belong appropriately to the medical physiologist and pathologist to examine, and it is only in so far as the cattle themselves suffer, that the science and experience of the veterinarian can be applied.

Except for a few men like Cuming himself, there were all too few veterinarians at the time who would have been capable of conducting an adequate investigation of the veterinary aspects of the problem, and hence the practical logic of his distinction of the two fields of inquiry. Cuming, however, evinces a little too much conservatism on the matter; it is likely that he might have turned in a better performance on the problem than many a medical man of the day. A few farmers had made a correct diagnosis long before medical investigation finally incriminated the white snakeroot as the culprit.

### Lockjaw and Blind Staggers

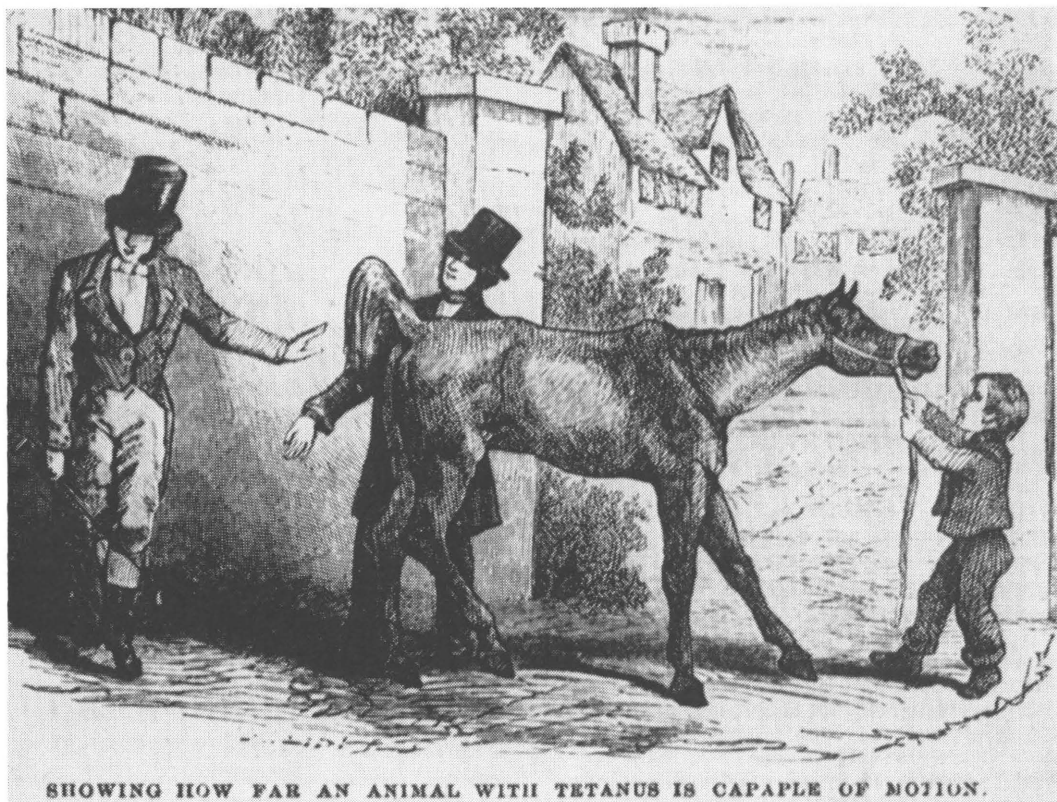
Tetanus undoubtedly had been a problem of some proportions since the early days of the colonies. A physician, writing in 1826, states:

This disease much more frequently occurs in that useful animal [the horse], than farriers, and those who pretend to know something about it, are willing to allow. . . . Ignorance of a disease will ever lead to mischievous and destructive practice.

He states that injuries to the feet, and docking, are the most frequent causes, that protrusion of the third eyelid is merely a symptom — and deplorable its removal — and that he had cured three of five cases with calomel. Of the two that died, one had had the “haws” removed; the other “was one of those desperate cases.”

The *New England Farmer* for 1831 reports:





The “sawhorse” attitude has long been recognized as being diagnostic of tetanus, but early claims of successful medical treatment of this condition would cast suspicion on claims of success in other conditions. Today, tetanus is much easier to prevent than to cure. Mayhew: *Horse Doctor*

In Plymouth county [Massachusetts] a disease called the “blind staggers,” is prevailing to a considerable extent among the horses, and large numbers have died within a short period. In the town of Middleboro the number that have died is estimated from 70 to 100.

The editor requested the eminent physician, James Thatcher, to investigate the outbreak, who in turn secured a lengthy description from a Dr. Thompson. The latter says he is “in no measure qualified to write on the epidemic . . . [and] I shall not make any attempt at veterinary style.” The disease began in August 1831; 50 horses died in the first three weeks, and another 25 to the end of September, with about 25 animals recovering from the disease in this time. The only pathology found was an inflammation of the brain and stomach, except that he notes the ab-

sence of the “natural rugae” over half of the stomach lining (but he begins with the premise, “I am unacquainted with the anatomy of the horse”). Although the disease is commonly called “blind staggers,” a number he examined were not blind, but all exhibited the typical gyrations, pain, and delirium. Treatment by the farmers, he says, “was wholly empirical,” and included “filling the ears with various substances.”

Regarding his recommendations for treatment, the disease being:

a high grade of inflammation. . . . Blood would be drawn, not by quarts, but gallon upon gallon. In the early stages from three to four gallons should be drawn; if it is borne without fainting, the operation should be repeated according to the severity of the case, in 8, 12, or 18 hours.



Another physician, in giving a lengthy analysis of a single case, states he has not had the leisure "to ascertain what is already made public in books on veterinary medicine." His conclusions are essentially the same as Thompson's.

At a time when so little was known about the specific nature of animal disease, it is not surprising that a practice like bleeding should have been so universally depended upon. As stated by a horseman in 1832:

For almost every sudden attack of disease to which horses are liable, bleeding, if immediately effected, is a most excellent remedy and the only one which in all cases can at once be employed. . . . In the course of the last season my grooms bled by my direction from fifty to one hundred different horses, some of them repeatedly at different times until they *fainted*, taking from the jugular vein through a large orifice from 10 to 12 quarts of blood, and in no single instance have I known any accident or injury to arise from the practice.

Regarding a "new" pig disease in 1841, the *Cultivator* reported:

In the West and South . . . great losses have been sustained within a year or two by a dis-

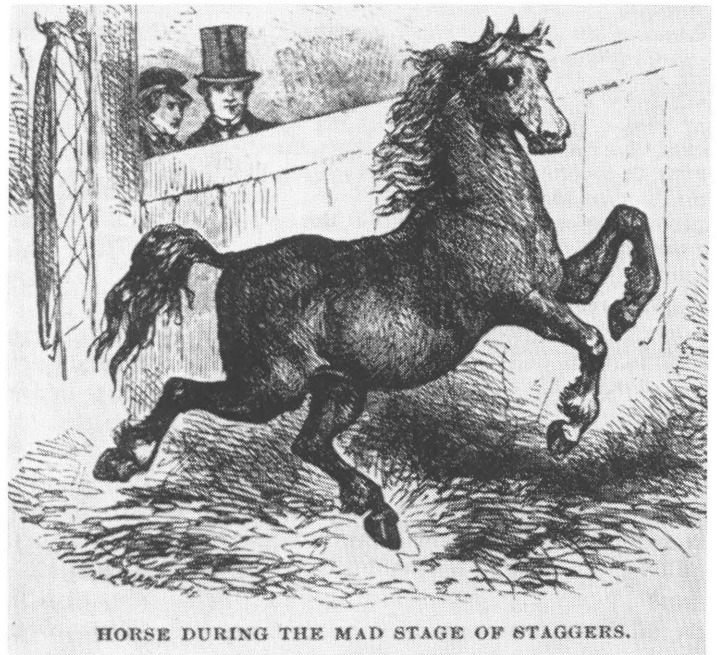
ease which has not, so far as we have learned, yet appeared in the North. It is called *the thumps*, from a violent internal action or beating, which destroys the animal in a few hours or days. It has been hitherto found very difficult, if not impossible to cure.

But a Dr. Shelby of Tennessee had found the use of calomel promising, and a correspondent from Indiana in 1844 thought the disease was an inflammation of the lungs, and suggested bleeding as the proper remedy. In this the editor concurred, but added: "The hog is a bad subject to bleed, (except with a butcher-knife) though cutting off the tail and ears may answer the purpose."

### Rot in Sheep

Diseases of sheep were given considerable attention during this period, but most of the material is taken from British sources. One article by a Massachusetts sheepman in 1824 appears to relate personal experiences with a number of diseases—at least he omits "a great variety of other diseases which I have had no opportunity of attending personally." Those

During the eighteenth and nineteenth centuries, "mad staggers" was a common diagnosis—probably for several conditions with central nervous manifestations. Manning: *Stock Doctor*



HORSE DURING THE MAD STAGE OF STAGGERS.

he mentions are “the rot [liver flukes], the mouth and hoof distemper, the itch or scab, the sheep-pox, the reeling sickness, and swelled paunch.” Reports of other farmers are silent on the matter of “mouth and hoof distemper” and sheep-pox, and more confidence might be placed in this report had the author related it in the first person. The rot, he says, “is unquestionably caused by feeding in swampy grounds . . . [and] is certainly not infectious.” He details the symptoms and post-mortem appearance, but missed finding liver flukes. By the time “a common observer may notice the symptoms, [it] is probably incurable,” but earlier it can be managed by moving the sheep to high ground (away from snails, the intermediate host of the fluke).

The “mouth and hoof distemper . . . is not only contagious but also infectious in the highest degree,” but nothing is said of segregating the diseased. Local treatment of the feet and mouth are advised. The “itch or scab is a disorder more dreaded than any other . . . is certainly contagious . . . [and] often seems to be epidemic.” A decoction of tobacco is used as a remedy. The sheep-pox

is contagious . . . if it appears in a neighbouring flock, care should be taken to mitigate its effects by a general careful inoculation, since it is certain that the disorder is less violent if taken by inoculation than in the natural way . . . the operator introduces the matter, from a pustule five or six days old, in two or three places between the legs or on the tail . . . under the skin about an eighth of an inch.

The “reeling sickness is never infectious, but generally incurable.” Affected animals show weakness of gait, seek seclusion, and carry the head to one side; “the animal then begins to turn round, always in one direction, — stumbles and falls repeatedly, sometimes with the head under the body, then ceases to feed and soon dies.” He says the cause is unknown, but his description of the lesions of the brain, “one or more blisters . . . filled with a watery secretion,” suggests echinococcosis, or tape-

worm hydatids. Trephining, he says, will sometimes effect a cure. “Swelled paunch” may be relieved by driving the sheep rapidly, or with the trocar and cannula. On the matter of trephining for hydatid, the editor of the *New England Farmer* exclaims:

In the name of all that is merciful, we would inquire if there is no other remedy known for this disease in sheep. . . . Sooner than subject the animal to such a surgical operation . . . we would prefer to deprive it of life at once.

An avid sheep breeder, and frequent contributor to the *American Farmer*, was George Washington Parke Custis, step-grandson of George Washington, whom the latter adopted after the death of his stepson (whom he did not adopt). In 1826, G. W. P. Custis relates the contents of a letter he had received in 1808 from James Carver, who at the time was in India. In this, Carver states that after a severe flood, the peasants of India lost many sheep from the rot, and “from the pleasure which I had always taken, in showing humanity to domestic animals,” he (Carver) tried several remedies without effect. Apparently recalling Jenner’s work on the relation of the “grease” of horses (“greasy heel”) to cowpox, he inoculated a cow with virus from a horse’s heel, “and as soon as I was able I inoculated several of the sheep, and thereby effected perfect cure. . . . I was afterwards successful in all the attempts which I made.” Custis merely passes on Carver’s experience for what it might have been worth.

### Canine Killers

Innumerable correspondents lament the depredations of sheep-killing dogs. Some states had enacted dog laws, but how effective these may have been is open to question. In 1825, a correspondent from Tennessee, who says, “This State Legislature has not as yet thought the matter of protecting sheep from dogs worth legislation,” reports that farmers within a two-mile radius of him had lost “about six hundred” sheep in the past two or three years. Most

persons thought that a tax should be levied on all dogs, usually doubled for "sluts," and some an increasing levy for each additional dog. Thus it was recognized that while nearly every man had a dog, poor men usually had two or more. Slaves in particular were singled out as offenders in this regard; most of them, it was alleged, not having more than enough food for their families, forced the dogs to forage for themselves.

Another correspondent in 1825, noting:

with some astonishment . . . the different communications relative to the preservation of sheep . . . would think that the dogs had been depredating more, the last few months, than formerly; or that our sheep are now worth more care.

He states that he had never lost a sheep to dogs because he kept them penned with his cattle, which ". . . will not permit dogs to enter the pen and destroy the sheep." Not only did he think dog laws unnecessary, but:

As to taxing dogs, it is of little use, for man will have his amusement according to his taste; and nothing is more reasonable than for a man to take his dog and gun, and amuse himself about his farm; deprive him of this, he may roam from his wife and family to public places for amusement, where, it is likely, he will not engage in amusements as innocent as he would at home, with his dog and gun.

Sporadic reports of losses of sheep from marauding dogs — even if by the hundreds — do not make for reliable statistics. A "roll call" of counties in Ohio in 1859 gives a total of just under 100,000 sheep killed or injured by dogs that year, the total loss being given as \$146,748. This number is in excess of 2 per cent of the sheep population, but in several apparently sparsely settled counties, the loss was more than 10 per cent.

The depredations of sheep-killing dogs and the transmission of rabies by dogs continued to be a sore point which led to the eventual passage of reasonably strict dog-laws in a number of states. The *American Agriculturist* for 1860 printed recently

enacted statutes of Rhode Island, Massachusetts, and Wisconsin. Noting the death of a prominent farmer from rabies, the editor muses:

We never pass his house or remember his lonely widow and orphan children, or think of his loss to the country, without estimating how much greater the value of that one life, than of all the dogs in the land. We grant that sometimes a life has been saved by a dog, but such instances are so rare, when compared with the deaths by hydrophobia, that they are not worth taking into account. . . . If farmers fully appreciated the actual condition of things — if statistics could be gathered of the loss suffered by dogs during the last dozen years alone, and the public were aware of the fact that the number of sheep in our country could be doubled during the next dozen years, were there perfect security against dogs, we have no doubt there would be such a general excitement that our State Legislatures would be compelled to pass the most stringent laws that could possibly be enforced.

Appended to this article is the Rhode Island law, which provided for registry of all dogs, and the right of any citizen to kill dogs without collars, or any dog molesting a person or animal, together with stipulations as to the liability of owners for damage done by their dogs. Yet the editor, Orange Judd, says: "The law is good so as it goes, but is not half stringent enough." This apparently led a subscriber, "the owner of a big dog we suppose," to ask:

if we "haven't got an attack of the dog-o-phobia." To which it is answered: *we have*, and you would have it too, had your experience been like our own. . . . We yet carry abundant scars of an unmerciful "chewing up" received from a dog that attacked us when a boy. . . . We make frequent sacrifice to these scars by furnishing free doses of strychnine or lead to dogs that wander upon our premises.

He mentions a recent case near Paterson, New Jersey, in which:

A single dog bit a large number of cattle . . . of which twenty one have been attacked with hydrophobia, and twenty of these are already dead. Besides these, a number of others are supposed to have been bitten by the same dog. . . . The positive loss already experienced



From colonial times, packs of wild or semiferous dogs ravaged sheep herds but evoked more acid controversy than overt action over the merits of dog taxes and destruction of unlicensed animals. Agricultural editors suggested that plagued livestock might have wished for more decisive means for protection. *American Agriculturalist*

from this one dog is estimated at not less than sixteen hundred dollars. . . . We *have* got the "dog-o-phobia," and the disease is getting worse.

### **Mastitis and Milking Tubes**

Mastitis, more commonly denominated "garget" at this time, seems to have been mentioned less than perhaps was warranted.

An article in the *New England Farmer* for 1834, however, states:

It is well known that the Garget prevails among cows in this State [Maine] to a very serious degree; and I believe in general the best cows are the most liable to have it, which often renders them as to milk, partially or wholly valueless.

The writer suggests planting *Garget*, the common poke-berry, in the barnyard, for, "In the incipient stages of the disorder the cows will instinctively crop the leaves of the plant, and thus become their own physicians."

No reports of mastitis, or garget, appear in the first ten volumes of the *American Farmer*. Whether the disease was not a problem, or simply was ignored, cannot be determined. Probably all too few cows gave enough milk to make udder diseases particularly common; later the journals are replete with this problem.

A curious item appeared in the *Farmer* in 1824, under the heading of "Important Discovery — A new and expeditious method of Milking Cows," to which the writer, none less than the noted Dr. James Thatcher, was witness:

A rye straw was introduced into the orifice of each teat, through which the milk flowed spontaneously in a full and interrupted stream, until the udder was completely emptied. In exactly five minutes, between 5 and 6 quarts were thus drawn off. . . . The discovery of this novel process was reserved for a simple rustic boy . . . [who] always dreaded the milking as a very laborious and fatiguing task. . . . Whether the habitual employment of the tube will tend to impair the retentive power of the teat or otherwise prove injurious, must be determined by experience; but I am inclined to the opinion, that no injury will be produced.

Thatcher lists the advantages to be derived from this discovery:

The whole business [of milking] may be performed in one third of the time. . . . We may be relieved from the unpleasant apprehension of dirty hands employed in milking. . . . When the udder is in an indurated or diseased state, or the teats tender and excoriated, the animal may be milked without pain.

In a postscript which accompanies the article, Thatcher adds that this cow (which was a hard milker) was still being milked with straws without difficulties: "But in other instances . . . serious difficulties have ensued; such as obstructions in the teat, and diminished quantity of milk."

Two weeks later, the inevitable occurred:

a correspondent, who says this discovery "is going the rounds," had tried it on his cows, and thinks it his duty to report:

I found on the day following, that inflammation had taken place in their udders, the milk was clotted, unfit to use, and the quantity diminished one half; and although it is now ten days since I tried the experiment, they have not yet got over it, or come to their milk.

Such is the power of the press!

The matter of milking tubes came up again in the 1860's. One man used silver tubes made in Mexico, where, he says:

They are in general use, and answer well with the half wild cattle of that country, which give but little milk, and that unwillingly. . . . Whether constant use would work injury, I do not know.

This drew a quick response from another correspondent to the *Country Gentleman*, who says these are

an old thing in a new form. Long years ago. . . . We used a short piece of straw. . . . But if the practice was continued many days, it opened the orifice so that the milk would waste when the udder became distended.

In the late 1870's an "improvement" on the milking tube was introduced in the form of four tubes connected by rubber tubing. The tubes were inserted and the common orifice of the tubing placed over the pail. The editor of the *American Agriculturalist* states that he had some reservations concerning its use, but:

After a personal trial we must admit that we have been forced to modify our previous opinions . . . it acts with apparently much ease and comfort to the cow . . . a large pail, holding 14 quarts, being filled in 7 minutes; the process is perfectly clean, and the milk gathers no impurities. . . . Of the future effect upon the cow we aren't prepared to say . . . but there is evidence that the machine has been used in a noted Scotch dairy for 8 years . . . we shall continue to use it, and take whatever risk there may be.

Later he says: "They cannot be entrusted to the ordinary run of milkmen," and recommends that "careful, skillful owners"

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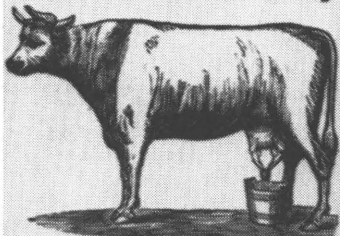
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Will milk one or short teats, or either.  
Practical cows become very gentle by the use of my milker. It is the cheapest, best, and only perfect milker. It never gets out of order—never wears out.  
It will milk any cow very quick.  
Type \$1.50 per set; two sets, \$3.00. Single Tubes, 7 cents.  
Full directions. Agents wanted for every County in each State.  
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Large and Dark Bantams, Buff Orpingtons, and other

keep a set on hand "for temporary use for badly sore, or cracked teats." It is probably safe to surmise that many who tried this innovation were forced to give up its use perhaps by going out of the milk business.

### Veterinary Education and Veterinary Practitioners

The publication of items such as the above, or of brutal or ridiculous remedies for disease, undoubtedly did more to retard veterinary progress than perhaps was

realized. As editor of the *American Farmer*, Skinner might be accused of occasional lapses of judgement in selection of what he printed, but it is likely that he had little from which to choose. There can be no question, however, but that he was sincerely interested in advancing the veterinary art; the columns of his journal carry numerous references to the need for veterinary education—mostly from his own pen.

In 1822, Skinner had reprinted Rush's essay on veterinary medicine in which Rush called for the establishment of a veterinary

school and urged that physicians pay some attention to it until the school became a reality. In 1825, John Haslam prepared an extensive statement of the objects and organization of the London Veterinary College, apparently at the request of Skinner, who adds a long preface to the article. Skinner states:

We are not aware that any attempt has been made to establish a Veterinary College, but projects have been started and some have been executed for founding Agricultural Schools, with which the veterinary science is essentially connected. We should suppose that in our largest cities, a separate college might now be instituted and supported, on a plan somewhat similar to the one in London. At all events the time for it may soon arrive if it be not now at hand; and we therefore embrace the opportunity which now presents, of recording, for reference, and as far they may be found to suit, for precedent, the plan and regulations of the VETERINARY COLLEGE in London.

Skinner does not enlarge upon the means that might be employed toward this end except to say that there are enough comparatively rich men in America "who ought to contribute more freely to publick Institutions which might be founded for publick utility and benevolent purposes." Later the same year, however, in an editorial on "The Value to Farmers of The Veterinary Science," Skinner details a case which responded to the prompt use of "the phleme and stick, which every farmer should have in its proper place." This case, he says:

inculcates the obligation and the advantage upon every one to make himself familiar with the rudiments of comparative anatomy and the veterinary science—that he may be ready to perform to the brute creation those offices of kindness which are dictated equally by the injunctions of religion and the spontaneous suggestions of enlightened humanity.

In mentioning Haslam's son, who was a student at the London school in 1829, Skinner remarks:

It is gratifying to believe that our young men begin to seek honour and prosperity by other roads than the brief and the gallipot.—The bar is so crowded that they are literally treading on each other's toes, and the wonder is how they all exist—and if it were not that they do

not harmonise so well, the disciples of Esculapius would soon be riding double through the country. There are surely other occupations that demand quite as much talent, and which are equally entitled to be honoured by sensible men . . . more useful to the country than studying law as a stepping stone to some precarious and servile public employment—or putting them to study medicine for the honour of being called Doctor Polyglot or what not.

On the matter of agricultural education, the *Farmer* for 1827 printed a letter from Anthony Morris in which he stated his intention of establishing an institution on the farm of his son, "called Bolton Farm . . . distant twenty miles from Philadelphia." The year following he states that his son has "put such parts of it as I may select at my disposition . . . for the first agricultural institute." In 1830, Skinner observed "with pleasure, that Anthony Morris, Esq. is about commencing his long contemplated institution for agricultural education." While nothing was stated about instruction on the diseases of animals, and the farm itself was physically removed from the present Bolton Center of the University of Pennsylvania, the suggestion of familial descent is a matter of some interest.

### Practitioners, Veterinary and Medical

In 1825, the first "business card" of a veterinarian appeared in the pages of the *American Farmer*:

RICHARD WEAVER, VETERINARY SURGEON, respectfully informs his friends and the public in general, that he has commenced practising in the above profession; assuring them that all animals intrusted to him will be attended with all possible attention and care. He flatters himself, with the practice that he has had in London and different parts of Europe, to have a share of public patronage.

R.W. by means of his surgical system, castrates horses in a manner which has been allowed to be the easiest and safest ever acted on horses—in training they may take their regular exercise in three days after the operation has been performed, which is strong proof of the excellence of this method over any other now in practice.

He may be consulted at all hours in the day at No. 9, German-lane [presumably Baltimore].



Whether Weaver was a graduate veterinarian or not is unknown. Certainly there were few graduates in America as early as 1825, nor does Skinner's reference to "professional veterinary surgeons" (below) prove they were graduates—most likely they were not, for there was nothing to prevent anyone from claiming what he wished. Weaver's announcement, however, is the only one of its kind to appear in the *American Farmer* for a number of years.

In reply to an inquiry in 1830 concerning bighead in horses, Skinner regrets:

It is not in our power to say any thing very satisfactory, with regard either to the nature or the treatment of this disease. It appears to be peculiar to our country; as, by reference to the English and French Farriery books we find nothing stated in them analogous to it. Our inquiries from several professional veterinary surgeons in our city [Baltimore] have been equally unsatisfied. In one case only, we learn, from Dr. Haslam, that by checking it in its very incipient stage . . . the animal has been cured by administering . . . stramonium . . . with his feed. . . . A careful anatomical inspection, after death, would no doubt throw some useful light upon the subject, which is important; since we are told, that the disease is very common in the western portions of our country.

The existence of "several professional veterinary surgeons" in one city at this early date is of some interest; Baltimore, New York, and Philadelphia, however, were the only cities so well supplied. John Haslam who qualified at the London Veterinary College in 1801 and came to America in 1803, is the only known graduate in Baltimore as late as 1830. Numbers of non-graduate practitioners were available at this time; some unblushingly proclaimed their abilities; others were as able as the better qualified veterinarians.

Another type of practitioner at this time was the physician who attended his own stock, if not that of clients. One such, who identifies himself as "M.D.," writes in the *American Farmer* for 1830 on a "Caesarean Operation Performed on a Mare." The physician had bought a pregnant mare with a deformed pelvis, hoping to get the foal which had been sired by a famous

horse. He performed a ventral section; the foal was dead, and the mare died. Undaunted, the physician states that he has given the details of the operation:

because it is a case of some novelty, and that other persons meeting with similar cases may be induced to try the same experiment; for from the circumstances, of this case, (although unsuccessful), I am satisfied, had the operation been performed at an earlier period, I would certainly have saved the colt, and perhaps the mare also.

The more common situation in 1830, undoubtedly, was that alluded to by another correspondent, whose contribution was reprinted from the *Virginia Literary Museum* by the *American Farmer*. This writer contends:

The diseases of the horse are too much neglected by scientific inquirers in this country. In Britain and in continental Europe, especially in the latter, there are veterinary colleges where the anatomy, physiology and pathology of that useful animal are regularly taught and investigated, by professors of eminence not only in veterinary but in human medicine. Here there is no instruction of a scientific nature to be obtained and the poor animal is handed over to the illiterate farrier or left to the sole efforts of nature—a more fortunate event, frequently, as he thus escapes the additional mischief which is to be apprehended on the part of the ignorant pretender. The old story of experience is frequently invoked in favor of these practitioners—in forgetfulness, that if their minds be unprepared, either from ignorance or prejudice, to profit by experience—time can only confirm and multiply the erroneous views under which they acted at their first outset in practice.

The writer, however, goes on to offer "some general remarks on the Pathology of internal diseases—the most important which fall under the care of the veterinary surgeon, and which are but little understood by the public in general"—all this for the readers of a literary magazine.

On the matter of the ignorance of many farriers and cow-leeches, and their willingness to follow directions rather than give them, the *American Farmer* for 1829 offers some enlightening testimony. A man whose horse had fallen sick



sent for a neighbor who practised among sick cattle, to whom such business properly belongs. He examined the case, and declared his ignorance of the disease and method of cure, but thought his pulse a little accelerated. I told the man to take blood freely; and this was done, but without any apparent effect.

And finding a cow with the same symptoms the next day:

Again the neighbor was called. He made his examination, and again confessed his ignorance of the cause, disease, and mode of cure. I advised to the same remedy, blood letting; and it was done without any apparent benefit.

I then sent some distance for a farrier, who was highly approved in his profession. He examined both cases with attention, and declared that they were unknown to him. . . . I apprehended a partial stoppage in the intestines . . . therefore I directed him to make use of his laxative medicines, which he did.

A post-mortem examination of the cow proved to the satisfaction of the owner, but not the farrier, that it died of poisoning — a fact which, according to the owner, he later proved by obtaining a confession from the guilty party.

### **Friend of the Farmer**

In considering the status of the *American Farmer* as a medium for dissemination of veterinary information during the first decade of its existence, there are several aspects of the journal worth noting. Although it was antedated by the short-lived *Agricultural Museum* (1810–1812), the *American Farmer* was the first sustained effort in America to inform farmers on matters of primary concern to them. Animal disease, of course, was one of these problems. In this sphere, perhaps, Skinner was somewhat less astute than on matters relating to soil conservation, crop rotation, fertilization, and other matters more closely allied to the land. Stock owners, however, did have a medium for exchange of information on the problems which beset them. While some of the material supplied might better have been consigned to the wastebasket — for some of the practices advocated could only lead to disaster — we at

least are supplied with what is probably a fairly accurate picture of conditions as they actually existed. In this respect, the *Farmer* is more valuable as a source of historical data than if the editor had been more judicious in his selection of material. It is in the reporting of “new” diseases in particular that we get some insight into the web of increasing complexity that began to entrap the stock raiser during the early nineteenth century.

John Stuart Skinner, therefore, as the first leader of what was to become a powerful agricultural press in America, deserves mention as one of the early friends of veterinary medicine. Without the modern appendages to an editorial office — or even with them — it seems incredible that what was essentially a one-man enterprise could have been carried on with such dispatch. From the outset, the *Farmer*, a weekly of eight folio pages in fine print, was the equivalent of more than 1,000 pages a year for one of our present-day journals — and much of the material was written by Skinner himself. In addition to publishing the *Farmer*, however, Skinner was postmaster of Baltimore, he corresponded extensively with leading agriculturalists in Europe and America, was an ardent sportsman, the most active leader of the Maryland Agricultural Society in the 1820's, and the owner of a 200-acre farm near Baltimore, where he experimented with many of the innovations he promoted in his journal.

### **THE TURF REGISTER**

In 1830 Skinner sold the *American Farmer*, possibly to devote more attention to his *American Turf Register and Sporting Magazine*, which he had established in 1829. He also edited the *Farmer's Library and Monthly Journal of Agriculture*, and the *Plough, Loom and the Anvil*, the latter from 1848 until his death in 1851. In addition, he edited a number of British veterinary works which he published.

During Skinner's editorship of the *American Turf Register* — to 1835 — this journal contained perhaps more of veterinary interest than most of the several agricultural

journals which had been established in the wake of the *American Farmer*. The *Register*, also the first publication of its kind in this country, quickly established itself as a magazine for sportsmen—the horse-racing and foxhunting fraternity in particular—and the early volumes had to be reprinted to supply the demand. While Skinner had published a fair amount of material on the diseases of dogs in the *Farmer*, it is evident that farmers were less concerned about dogs—other than those which killed sheep—than were sportsmen. Thus the *Register* was the first publication in America—and the only one for many years—to give sustained attention to the diseases of dogs; these animals, Skinner says, “are worthy objects of veterinary investigation.”

On the matter of equine practice, however, it would appear by comparison of the *Turf Register* with the *American Farmer*, that among the sporting fraternity in particular, there were more horses’ hind ends than there were horses, i.e., the *Register* is full of retrograde practices.

### Dog Diseases in 1830

Except for the depredations of sheep-killing dogs, and the recognition of packs of ownerless curs which roamed the cities and towns as the primary reservoir of rabies, little overt thought appears to have been given to dogs to this time. Nor had much thought been given to the breeding of good dogs; except for the hunting dogs of a few ardent sportsmen, most were a heterogeneous lot. The *Turf Register* published articles on the natural history of various dog breeds, and correspondents provided a lively exchange of ideas on the treatment of the diseases which were taking their toll. Distemper appears to have been the major concern of dog owners, if the numerous contributions on this subject are any criteria.

With the emphasis being placed principally upon cures—especially those for diseases which hindsight shows that no real cure could have been anticipated—one

contribution might be expected to have about the same value as another. A major exception to the general tenor of writing on dog diseases is an editorial feature on “Canine Hygine” in which it is stressed that “Dogs . . . are worthy objects of veterinary investigation. . . . We begin by laying down a few short rules on the means of keeping them in health.” These include frequent cleaning of kennels and supplying fresh straw, and providing clean water and good food. The dog should be washed, or made to swim twice a week, and should not be fed on carrion; items recommended include barley meal and milk, sheep feet, and boiled flesh. On the matter of dogs seeking out a particular species of “dog-grass,” it is claimed:

The efficiency of this herb, in respect to dogs, as a preventive to many disorders, is such, that it should be encouraged to grow in some proper place, where they may be turned to feed freely on it, by which practice they would be kept in health and many dreadful distempers avoided.

Among the many cures offered for distemper during the five year period from 1829–1834 are the following: One lump daily of sulfur and antimony in lard has “saved many valuable dogs,” and antimonial wine “will cure in one day.” A “strong dose” of tartar emetic, followed by a “good dose” of calomel—each repeated in 7–8 hours if results are not obtained—given in nine cases resulted in nine cures. Calomel in 3–4 grain doses will also cure worms—which “often cause distemper.” An army physician states that many dogs are lost with distemper through carelessness or indifference to early symptoms—when a dose of tartar emetic would be effective, and “My observations condemn the general practice of bloodletting and every form of antimony.” The best remedy, he says, is the “turbeth mineral”—sub-oxy-sulphate of mercury.

Commenting on the turbeth mineral treatment, a physician correspondent states that in the absence of specific directions, this will kill more dogs than it will cure.

On the matter of nervous symptoms in the late stages of the disease — in which the army physician has advised knocking the dog on the head — he says, “I believe I have discovered a remedy for this last stage of distemper. It is the Dover Powder.” With its content of opium, this powder might be expected to have some effect — but something short of a cure.

### Doubtful for Distemper

Vaccination for distemper, in the manner essayed by Edward Jenner of smallpox fame, was tried by inoculation with nasal discharges. Sites for inoculation include the inside of the ear — to avoid physical irritation of the vaccinated area — and the inside of the fore leg. By rubbing the virus into a wound in the skin, inoculated dogs will “never take the distemper.” Distemper had appeared, seemingly spontaneously, for the first time in America about 1760 and in Europe in 1761–1764. The disease spread like wildfire, and whole packs of dogs died before some degree of immunity was established. French veterinarians had found as early as 1768 that scrupulous cleanliness was the only dependable prophylaxis. After Jenner had made his epochal disclosures on vaccination for smallpox in 1798, he turned his attention to vaccination for distemper in the dog by inoculation with the virus of cow pox. As might be expected, his results were disappointing — undoubtedly because neither he nor anyone else realized that he was dealing with a complex quite different from smallpox. It seems probable that this abortive effort, coming from one whose fame had been established in another field, did some harm in leading others to believe they were obtaining positive results with distemper discharges when this simply was not the case.

Most correspondents were liberal with their prescriptions. One assures good results by:

following a recipe which no bribe could tempt the vendor to part with; but, by means of some

very clever chemist, I have ascertained it to be simply: Jalap powder [a cathartic] 25 grains, Calomel 5 grains.

Hardly in the same category is another individual who states:

The distemper I can cure at any time, unless the dog is in a dying state. I cannot afford to send you the recipe gratis; but what will you give me for it?

To this the editor replies: “A volume of the *Sporting Magazine* — the thanks of all true and benevolent sportsmen, and of the whole canine family.” Evidently this was not adequate compensation, for the recipe was not forthcoming.

In answer to the same query, another correspondent advises the liberal use of salt, saying: “If my recommending of this remedy shall save the life of one good foxhound, I will be amply repaid for the trouble.” Another states he has “never lost a dog in 15 years” by giving a tablespoonful of salt on three successive mornings at the outset of the disease.

Elsewhere it was noted, however, that these “dog-doctors . . . so frequently experience the inefficacy of their own receipt, as to place its infallibility out of the question.” Despite these, and numerous other recommendations, distemper continued to play havoc with the dog population. Thus a note in 1834: “Distemper is making great ravages amongst the foxhounds in the Northern Neck of Virginia.” Another communication records the unusual death of all but seven of twenty-six hounds with symptoms simulating, but different from, distemper some time after chasing a fox. In 1826, Skinner had editorialized in the *American Farmer*:

To the person who should discover a certain remedy for the *distemper in dogs* — society at large and sportsmen in particular, would be very deeply indebted — to the canine race it is as fatal as ever was the smallpox to the human race, when taken in the natural way. We would award high honours and ample rewards to him who should discover in our day, a *preventive* of the distemper — we would call him a second Jenner, prevention being always better than cure.

Skinner devotes several pages in successive issues of the *American Farmer* (vol. 8) to the diseases of dogs—taken directly from a British work, Johnson's *Shooters' Companion*. Many of the "cures" for distemper given by correspondents to the *Turf Register* appear in this work; of particular interest is his statement on the value of inoculation:

It is very advisable to inoculate for the distemper. If you can meet with a dog already afflicted, take a little mucous from his nose, and insert it up the nostrils of your whelp. . . . By inoculating for the distemper, the disease will be as much less severe, as the inoculated small pox, compared to what is called the natural mode of taking it. . . .

A notion became prevalent a few years back, that by inoculating a dog with the cow-pock, the distemper would be prevented. Dr. Jenner has asserted that, by inoculating dogs for the cow-pock, a disease similar to that which is called the dog's distemper is produced, but in a very slight degree. What is most remarkable, this inoculation renders them afterwards unsusceptible of that infection.

On the basis of personal experimentation, Johnson refutes the idea that immunity will be produced, or that a disease of any sort will be manifested.

Contrary to these findings, a correspondent to the *American Farmer* in 1830 states he was induced six years previously to try vaccination on the recommendation of a physician:

To my great astonishment and delight, the three dogs took the cow-pox effectually, and never had the distemper afterwards, although I carried my experiment so far as to place them in the hospital, where nine young hounds were suffering in that disorder. . . . I have continued ever since to vaccinate the young dogs; and though I must admit that some of them have had the distemper after vaccination, it has attacked them in a very mild degree, and they have in nearly every case recovered.

Perhaps the item of most real interest is his reference to a "hospital" for hounds; this would seem more likely a "sick ward" in his kennel than a hospital in the present sense, but it is evident that the need for isolation was recognized.

An extensive listing of the diseases of dogs and their treatment, such as that taken from the British source mentioned, of course, has little bearing upon the nature of canine problems in America. It is worth noting, however, that certain diseases had been called to the attention of the American public—which was all too ignorant of the diseases of any animal, and the dog in particular. Many of the treatments supposedly devised locally undoubtedly came from such sources. In addition to distemper, the diseases described in the series of articles in the *American Farmer* include: worms, convulsions, cough, scab, canker, sprains, inflammation, sore feet, fleas and lice, foul stomach, red mange, common mange, and an article on bloodletting. Additional diseases mentioned in the *Turf Register* for the period under consideration include: ticks and mange, for which sulfur, turpentine, oil and soap are recommended; worms—treated with calomel, or a mixture of powder of tin, savin, and wormwood in butter and flour; and a fatal case of dropsy, in which "the dog being tapped, she discharged more than a gallon of clear water at a time."

### Horse Diseases in 1830

As editor of the *American Farmer* and later the *American Turf Register*, Skinner was in a position to reach a large segment of the animal-owning population in the eastern United States. As noted above, the *Farmer* in 1819 was at first devoid of articles of veterinary interest, but these soon made an appearance, and later a "Veterinary" column was begun as the prototype of similar columns or "departments" in practically every other agricultural journal in America. The *Turf Register* carried a veterinary column for several years from its inception in 1829. In both journals, Skinner had the advice of John Haslam, one of the few graduate veterinarians in America at the time, to rely upon, and it seems likely that Skinner's advocacy of a higher status for veterinary medicine was prompted in part by Haslam.

In the absence of a professional medium, these journals served to bring various aspects of the problems of animal disease to the public. Some of the information presented undoubtedly was dangerous in untrained hands, and these "veterinary departments" outlived their usefulness; those of this early period, however, are especially valuable in determining what the problems of the time were.

Occasional letters calling for a system of veterinary education were published in the *Register*, and Skinner more than once alludes to the subject himself, but he apparently realized that the time was not ripe for this development. Commenting in 1833 on the untimely death of a famous racehorse, Skinner urges:

Comparative anatomy and the principles of the veterinary art ought to be taught in all our medical schools. A great proportion of those who are instructed in them are destined to be country practitioners, with very numerous opportunities of being useful in saving the life of valuable animals: whilst the inducements held out are not sufficient to insure the presence and service of professional veterinarians.

Considerable numbers of medical men, but probably few of them regularly graduated physicians, did practice veterinary medicine to some extent, and a few turned exclusively to veterinary practice. Whether Skinner's philosophy actually had any influence in this seemingly inevitable aspect of the evolution of veterinary medicine in America may be a moot point. It is doubtful that a strenuous campaign for veterinary schools at this time would have borne fruit. But unlike countless other editors of agricultural journals, who advocated veterinary training as such for farmers, Skinner at least rarely wavered in his urging that this service be performed by those with a professional education.

All too many communications from correspondents whose contributions were lacking in astuteness—or even common horse sense—appear in these columns without comment. The articles chosen by the editor, however, generally can be counted on as having some merit, as have

the professional opinions of John Haslam. Furthermore, it seems likely that many of the numerous articles appearing over various pseudonyms are actually editorial contributions; the private citizen at this time was not yet indoctrinated as a contributor to the still new journals.

### Destined for Death

As examples of barbarisms printed without comment, the following stand in silent witness to the preference of some segments of the public for the ignorance of the past. One correspondent relates a treatment for distemper in colts, for which:

I poured nearly a pint of vinegar . . . in which two eggs had been beaten . . . into his nostrils, which caused a coughing and . . . a discharge from the nostrils.

Several days later the breath had become highly offensive, whereupon he "injected suds of castile soap into each nostril three times a day." The horse died. Another, in giving a cure for fistula, directed that boiling turpentine be poured in the wound every other day. "The operation," he says, "is severe. The horse must be well twitched and held by two or three able hands." In keeping with his rough and ready treatment, the correspondent signs himself "A Yeoman."

The timelessness of certain fantastic remedies may be appreciated from the following "cure" for lockjaw in a horse belonging to a friend of the correspondent, who relates:

After using various remedies, none of which gave any relief, I suggested to him the idea of cutting the cord, which runs between the nostrils, as it seemed to be much swollen, and as he supposed the horse would die, he consented; when, much to his astonishment, the horse experienced immediate relief, and in ten minutes went to eating. I have since tried it two or three times, and always with the same effect.

This is the ancient "cutting of the cords" advocated by de Gray in *The Compleat Horseman* (1639), not for a "sawhorse attitude," but as a cure for stumbling!





shoulder," a long knife blade was inserted between the shoulder and the ribs, and a "candle" of cloth inserted to cause supuration. A "charge" of moistened meal—or, often enough, dung—was held in place by elaborate bandages. The fact that it seemed necessary to mention the practice suggests it was still being used.

The theory of "laudable pus," in this pre-Listerian era, was still very much alive. Thus for "attaint," a sore on the fetlock, we are directed to bring this to supuration, for "there is no such thing as curing wounds in horses by the first intention . . . as in the human subject." (But pus was still "laudable" in medical practice.) On the subject of "lampas," however, the idea that the swelling of the palatal mucosa is a disease "is exploded by all veterinary surgeons." The ages-old practice of cautery of the palate is decried as "barbarous," and of bleeding as "dangerous." We are directed to leave it alone.

### Doctoring Animals

The veterinary practices of medical men are of some interest, although it should be realized that not all those who affixed the "M.D." to their names were graduate physicians—some, undoubtedly, were outright charlatans. In general, however, it may be said that these men possessed considerably more ability than the nongraduate farrier, but less than the better qualified veterinarian—so far as treatment of animals was concerned. One contribution in 1834 relates a successful case of radical surgery for hernia. The horse presented a large ventral hernia which prevented normal locomotion. After an unsuccessful attempt to reduce it by bandaging, the doctor relates:

the horse was thrown, his hind legs pulled back and secured. I proceeded to the operation, by making a longitudinal incision through the external integuments, down to the protruded vis-

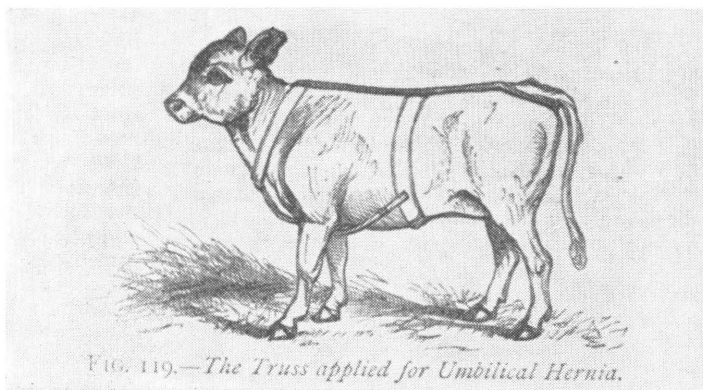


FIG. 119.—The Truss applied for Umbilical Hernia.

The truss probably was not a particularly effective device, but the "clams" were used both for castration and hernia from colonial times (and still are for hernia). Clater-Armatage: *Cattle Doctor*

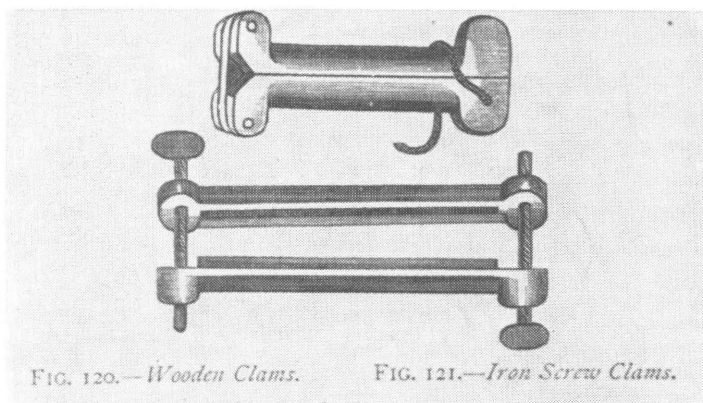


FIG. 120.—Wooden Clams.

FIG. 121.—Iron Screw Clams.

cera, when I discovered that a large portion of the intestines were out, and to my surprise, also the stomach.

He enlarged the hernial ring to facilitate replacement of the viscera, sutured and bandaged it, and "in five or six weeks the horse was as well as it ever was."

Another doctor reports on a radical cure of bone spavin on a horse which was so lame that the owner had given him permission to "experiment." Concerning the method, he says:

The remedy adopted is condemned by some of the highest authorities we have. High authorities are not always infallible, and if we depend upon them too implicitly, knowledge can never advance. . . . I provided myself with a chisel, mallet, and bolt of iron, rounded at the extremity—intending to chisel off the lump, and then to fire it, for the double purpose of stopping the bleeding and establishing a running sore.

The spavin proved to be cartilaginous, so he only fired it; the wound healed in two months, but the lameness returned. Thus:

I determined then to try a second operation, and to combine the chiseling with the firing. I had the horse bound as before, and made two incisions in the same manner. I then took a chisel, an inch wide, and cut off a chip the size of a dollar, and about an eighth of an inch in thickness. I next, with a white hot iron, seared the bone and wound over the whole surface, and turned the horse loose.

According to the good doctor, the horse recovered in three months, and was still drawing a mail coach a year later. He concludes by commenting:

You will perceive that I have scrupulously avoided all the technicalities of the veterinary art, both surgical and anatomical. Comparatively few would understand technical terms.

The latter may not have been entirely amiss, for a year later a "plain farmer" is found asking for "plain words" on the nature of disease and treatment—"language that I may comprehend."

A Delaware physician reports on a pneumonia of horses and mules which was prevalent in 1832:

Many noble animals—horses and mules—died almost without a warning; others lingered with alarming symptoms several days. So great was the general loss, that in consideration for my fellows as well as myself, I concluded to investigate the matter, and resorted to post mortem examinations . . . as the most certain means of success. . . . I accordingly procured the services of several persons, and dissected ten animals. . . . I was fully satisfied that in all the cases the lungs were the seat of the affection, and comparing with different authors, I believe it to be equivalent to the Pneumonia of man.

The disease was not reported until 1860, when a presumed resemblance to the pleuropneumonia of cattle then raging in Massachusetts led him to go back to "notes made at the time."

A nonmedical correspondent on the subject of horse distemper states that a medical friend had assured him that in its early stages it was curable with calomel. He tried this—apparently in liberal doses—whereupon the horse swelled in the legs and became lame:

I tried everything I could hear of, and finally blistered, but without success. I should like to try firing, but have never seen the operation performed, and no person, in this part of the country, knows anything about it. . . . He now passes for a spavined horse . . . and I have regretted listening to the advice of the physician. . . . Five or six months after giving the calomel, I had occasion to bleed this horse; and the operation was followed with a most dreadfully inflamed neck, and the creature would have suffocated, but for the timely application of a blister to the inflamed part.

There were those at this time who still believed that distemper (influenza) in horses was not contagious, although nearly all recognized the disease as inevitable. This same man (above) states, however, "I believe this disease to be contagious, and that the horse will have it more than once." In twenty years he had never raised a colt without its having the disease, and each time the older horses would be mildly affected. He had never lost a colt, and had never bled one for the disease—except for one badly affected, for which a drover assured him if he would "cut off a joint from his long and beautiful tail, and permit it

to bleed half an hour, he would soon be entirely well." It worked — or at least the horse lived.

Despite an occasional voice crying out against the practically universal practice of bloodletting, the fleam and lancet were the first resort in every illness — and remained so another half century. In 1832 the *Register* claimed:

Bleeding . . . is the essential remedy in all the diseases of the horse, depending on inflammation, and in these cases the earlier and more freely it is employed, the more beneficial will it be in its effect.

This was followed by a lengthy article on the indications and technic for phlebotomy.

A request for information on blind staggers from a correspondent in Florida, who says the disease was very destructive there, brought forth two pages of directions from a book on farriery which could have been reduced to two words — bleed and blister:

Should the disease continue and its violence resist this treatment, we may open the two carotid arteries, which operation I have performed myself with success, after every other means have failed.

According to the farrier, sleepy staggers results from a stagnation of blood in the ves-

sels of the brain; mad staggers from an inflammation of the dura and pia mater.

A correspondent in Louisiana who had lost all his blooded stock from staggers (encephalomyelitis?) says that among numerous remedies tried was one which called for letting six quarts of blood, boring the skull, using pokeroot setons in the skin, and giving large doses of salts. Of particular interest is his statement concerning one of the attendants, who "died on the same day, of influenza, which terminated in inflammation of the brain and delerium."

### The Old Turfman

One of the better features of the early volumes of the *Register* is a series of lengthy "Thoughts on Blood Horses," by "An old Turfman," who claims that mismanagement is the cause of 90 per cent of the diseases of horses. On the requisites of the medical attendant, he says: "It is not to be expected that an uneducated man, ignorant of the relative powers and effect of medicines, can be a good farrier." On the proclivity for purging horses, whatever their illness, or semiannually if well, the question is raised:

Why three doses of physic, as is the too general practice, are to be given indiscriminately to every horse, I have yet to learn. . . . The

Blisters were the first resort in digestive disorders until the late nineteenth century; the farrier's favorite was a hot shovel. Manning: *Stock Doctor*



APPLICATION OF AN AMMONIACAL BLISTER.

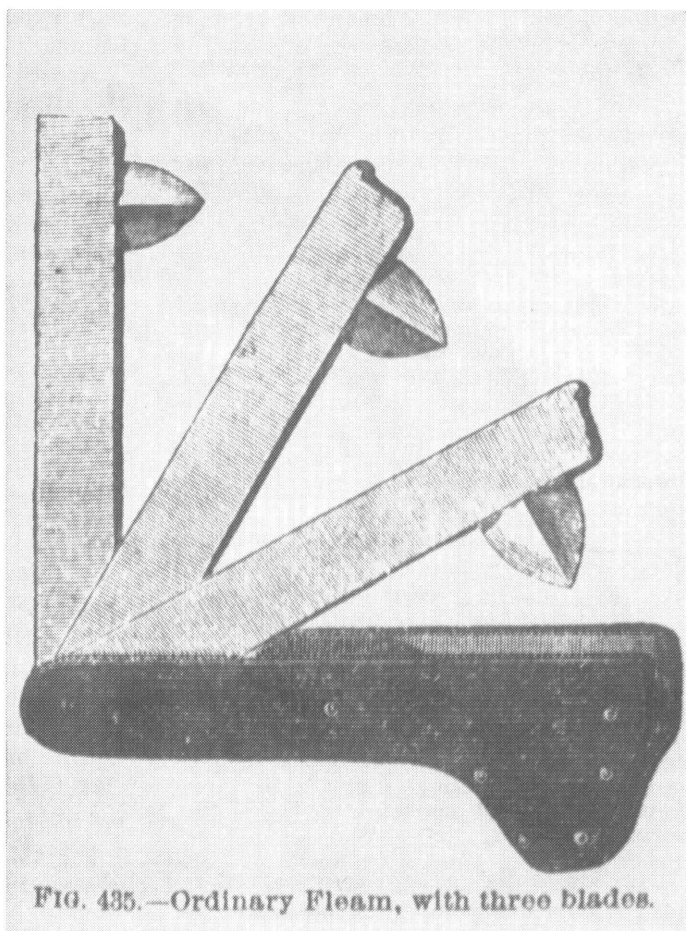
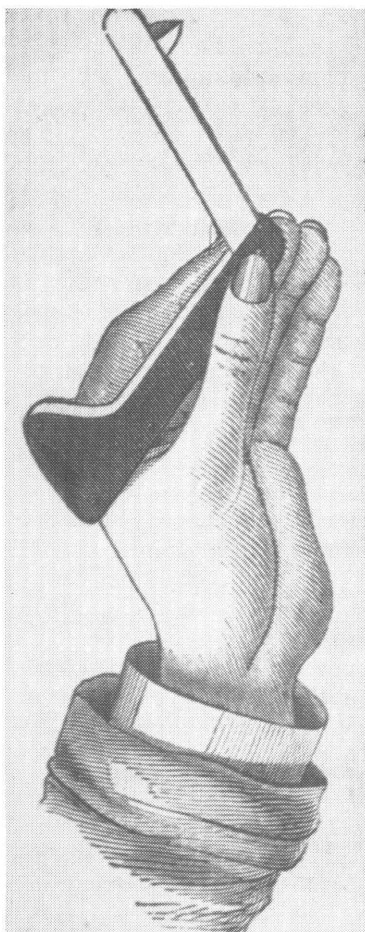


FIG. 435.—Ordinary Fleam, with three blades.

The common three-bladed fleam used for phlebotomy, which was practiced both in human and veterinary medicine for many ailments. The blade was placed against a vein and struck with a "blood stick," akin to blackjack. Liautard: *Surgery*

effect of medicines in horses has only of late years been thoroughly understood, and when we look back into some old writers on farriery, and examine some of the cathartic drenches, we are astonished that more horses were not killed than cured by them. . . .

I am no friend of quackery, in either horses or men, when they are well. I remember the speech of the dying man: "I was well — I would be better — I took physic — and here I am."

He admits, however, that race horses must have mild purgatives or they will suffer from plethora and stocking of the legs.

In another installment we are offered a long dissertation on the evils of indiscriminate blistering and cauterizing, which:

are remedies frequently practised, or at least recommended by grooms . . . the person thinks himself of no small importance in proposing remedies, as he imagines it shews him to be a great adept in his profession. Farriers, frequently as ignorant as the grooms, find an interest in being on good terms with them, and therefore seldom oppose their opinions; so that if a consultation is held between master, groom and farrier, two to one are certain to carry the proposition, and the horse is sometimes needlessly tortured.

Frequent references are made to the incompetency of farriers, and occasionally of veterinarians. On the difficulty of diagnosing curb, one writer makes the accusation: "both the horseman and the veterinary

surgeon have overlooked it." A correspondent in Virginia writes asking about a condition resembling stringhalt: "of which our farriers here seem to know nothing," to which the editor replies, "our respectable veterinary surgeon Haslam . . . pronounces it a case of cramp," but is unable to give a remedy. In a detailed article on nicking and setting the tail, it is stated:

Among farriers and horse dealers, some difference of opinion has existed relative to the propriety of exercising a horse during the use of the pulley, and also as to how long the pulley should be used, but these matters can never puzzle the veterinarian, being easily solved by a knowledge of the animal economy, which alone ought to guide him.

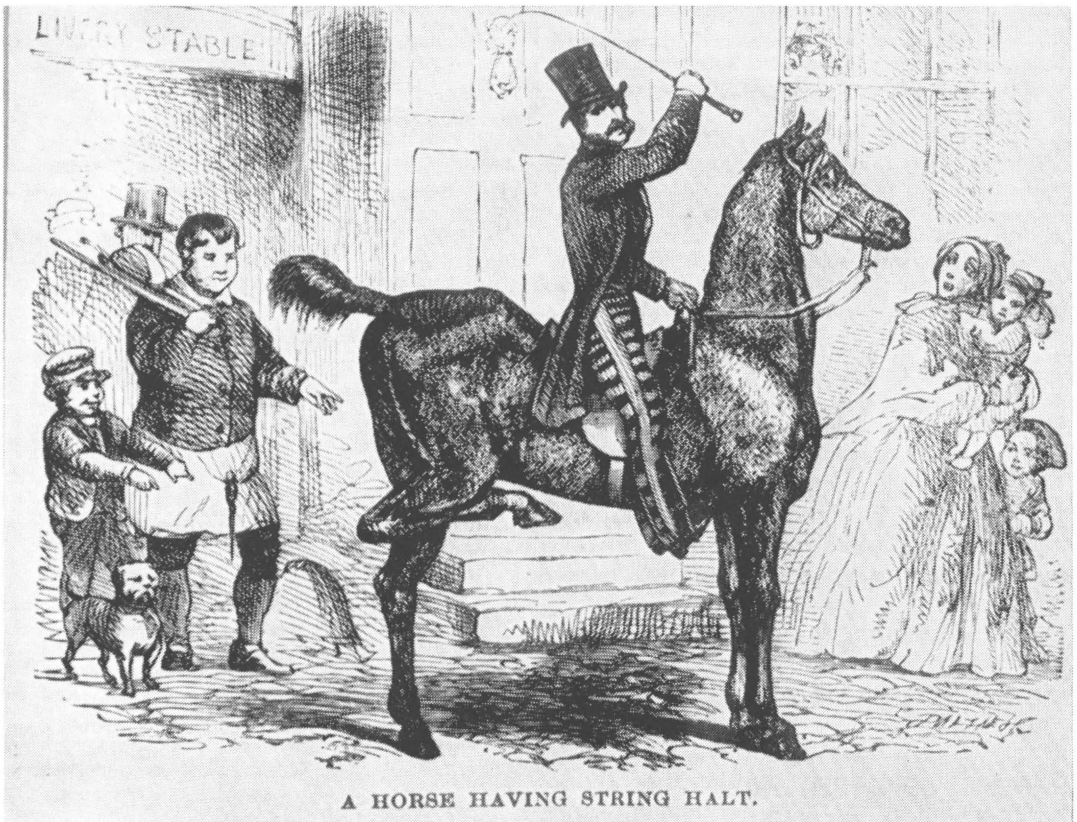
A horseman who had made an experimental study on the horse bot is critical of the opinion of Edward Coleman, head of

the London Veterinary College — and through him held by his graduates — that bots did no harm:

The professor thinks all horses have bots, and that they assist digestion by aiding trituration; he supposed that seldom or never do they kill the horse, but I think the professor goes too far.

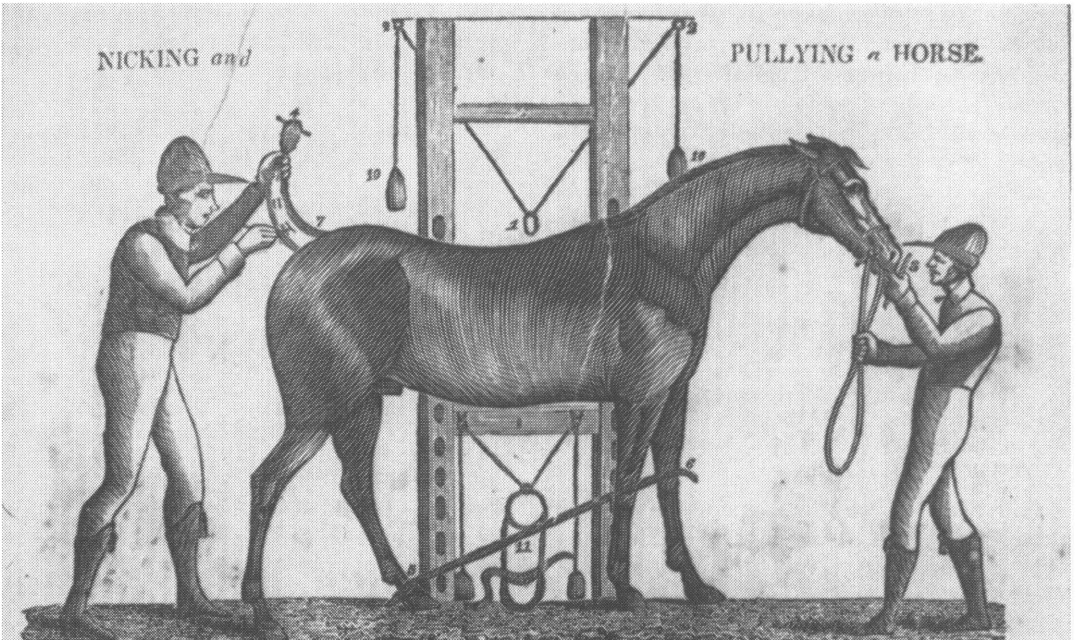
John Haslam, himself a London graduate, also held that bots did not harm the horse, and claimed that in several hundred post-mortem examinations he had found no evidence to the contrary.

The teachings of Coleman on the non-communicability of glanders—which he believed to be spontaneously generated—may in large part be the basis for the accusation of one censor that:



Descriptions of the characteristic attitude in stringhalt have not changed, although treatment today — via tenotomy — is somewhat more successful than methods of a century ago. Mayhew:  
*Horse Doctor*





"Nicking," or caudal myotomy, was practiced since colonial times to produce the fashionable tail carriage popular with horse fanciers. The system of pulleys used to maintain an erect tail carriage during the healing process was superseded by a simpler "tail set," or harness. *Mason's Farrier*, 1820

The glanders is a disorder that may be properly called the reproach of the veterinary art, the moderns as well as the ancients; for the disorder was well known even before the times of Columella, and others of the most ancient veterinary writers; and yet no rational method of cure has been discovered for it, and indeed the number of receipts which are found in their books, afford us a strong proof of their deficiency.

Our critic states that one horse can give the disease to a hundred others, "but 9 in 10 times it arises from the poisonous effluvia of the lungs, dung, or urine, impure air, etc." He convicts himself by giving his own version of an "infallible" treatment.

The blacksmith who applied horseshoes hot came in for his share. One Southern gentleman instructed his groom to tell the smith if he ever dared apply a hot shoe again: "I will apply one to his —!" The smith did apply another hot shoe, whereupon the Southern gentleman, with the aid of two servants, "stamped him *a posteriori* with the insignia of his profes-

sion." And the horse dealer is characterized as claiming: "a nag, proper only for dog meat," is "fit to go to any hounds"; and "roaring," he calls "sound." Also, if his "knees be fractured," he is "well broke."

### Grim Farriery

The editor of the *Register* accords special mention to to review of a work by a John Grimm, Farrier, in a Winchester, Virginia, paper, and asks if witchcraft has reared its ugly head in that part of the country. The items quoted speak for themselves:

To stop blood — take one piece of wood and make three little wedges of the same. Make them a little bloody from the wound, and stick them in a crack of a log on the sunrise side of a house or barn, two or three inches apart, and strike on each wedge three strokes with a hammer or stone.

For ringbone:

Go where some horse has died, and take the bone, if you can find it, from the knee down to



the fetlock. Take this bone on the first Friday after the full moon, and before sunrise rub the ringbone well with the bone, and then rub the ringbone crossways three times. Then return the bone to the same place upside down, and put a stone on the top so that it may not be disturbed.

For the spavin but little can be done:

Take your horse on a meadow of good grass. When standing still, mark out with a stick exactly the size of his foot in the grass, remove the horse and dig up the same and turn the grass upside down in the same spot. This is to be done the first Friday after the full moon.

Such doings, of course, have never been restricted to one place or one time, as the folklore of any region, past or present, will attest.

A correspondent from North Carolina in 1834 reports on:

a new and safe method of castration now practiced in the upper part of this state. . . . A man in Guilford county, is in the habit of castrating all horses standing, confined in no way except held by a bridle . . . on horses from one to ten years old, and in every instance with the most complete success. . . . If a sufficient inducement were held out, he would attend at any place himself to operate, or teach others — the subject of a more free use of the knife. This gentleman's art may be an important acquisition, indeed, I am persuaded that many gentlemen are induced to let their colts remain entire, from the supposed risk in altering.

That a freer use of the knife was indicated, may be adduced from the statement: "If the knife was oftener used, our stock would improve much."

In the same vein is a comment on the tax on stallions in Virginia. The tax — twice the stud fee — says this correspondent:

is not high enough on the low priced stallions. . . . But we are a just people, and besides have always been in favor of free trade in everything, and hence have an abundance of quacks who hardly know the bilious fever from the consumption, and a flood of ricketty spindle shanked stallions that would hardly be thought fit for teasers to third rate horses.

A letter to the editor urging that the amateur "extend his knowledge to every

thing that can possibly alleviate distress," and requesting directions for balling a horse, states that "few have any practical knowledge in the administration of medicines to the animal." In a two page article in reply, John Haslam states that there are three methods: the balling iron, by hand, and the balling probang. The latter, which he describes as being similar to the modern balling gun, is "an instrument I never saw. But my son tells me that at the veterinary college, in London, they have one; yet he is of the opinion it will never come into general use." Haslam obviously prefers administering balls by hand, and gives full details of the procedure. However, he recommends that the amateur not attempt balling a horse, and he is opposed to the use of drenches, as "the remedy is sometimes worse than the disease." In a diplomatic way, it is evident that Haslam was in favor of having veterinarians administer medicines.

### THE AMERICAN AGRICULTURALIST

In 1842 the *American Agriculturalist* was added to the growing list of agricultural journals. Edited by A. B. and R. L. Allen, this publication became one of the most respected and influential in its field. R. L. Allen in particular was interested in livestock, and wrote several books, including the extensively circulated *Farm Animals* (1847), which purported to treat of animal disease as well as animal husbandry in general. Much of the information on disease in this work — like others of its genre — is an ill-considered assortment of material taken from the pages of agricultural journals. In fact, the journals themselves reflect a higher caliber of writing on animal disease inasmuch as they frequently included pleas for more attention to veterinary medicine. This in itself might suggest that the reader should use the remedies recommended with some degree of caution, whereas the books gave their remedies in too authoritative a fashion. Allen, like other writers of the period who appear to have had a sincere interest in the advancement of the veterinary art, might better

have employed a veterinarian to do this part of his book. But not only were there too few veterinarians — Dadd says 15 in 1847 — some of those who later did write books did little to advance the profession.

The early volumes of the *Agriculturalist* contain relatively few references to animal disease, but it is of some interest to note the number that were authored by physicians. While the practice advocated by some of these men is deplorable — even by the standards of the times — most of them did express the need for better information on the treatment of animals. Thus in the first volume there is a communication from Dr. Andrew Campbell of Ohio, who describes his experiences with hog cholera in which the affected animals:

resemble precisely the cases of cholera that I often witnessed here in 1833 and 4. They lose the use of their limbs, become as cold as a mass of ice, the tongue and mouth turn purple, and they die in from six to ten hours.

This is perhaps the most clear-cut evidence we have to prove that hog cholera did originate (or was discovered first) in Ohio in 1833; few references to the disease are to be found prior to 1850, and writers in the 1880's disputed the date of origin. Campbell's treatment — bleeding, plus the administration of linseed oil, pepper, and turpentine — as might be expected, was of little avail. The good doctor apparently had some reservations about the propriety of his attending swine, for he adds:

I hope you will consider it no descent from professional dignity for an M.D., backed by some half dozen diplomas from distinguished Medical Societies, to doctor a pig.

To this Allen replied:

Dr. C. need not fear that the dignity or laurels of his profession will suffer in this or any other quarter, by attending to, and describing the disease of any of the animal creation, however humble.

### The Virtue of Humanity

In a lengthy communication on "Inflamed Eyes of the Horse" the following

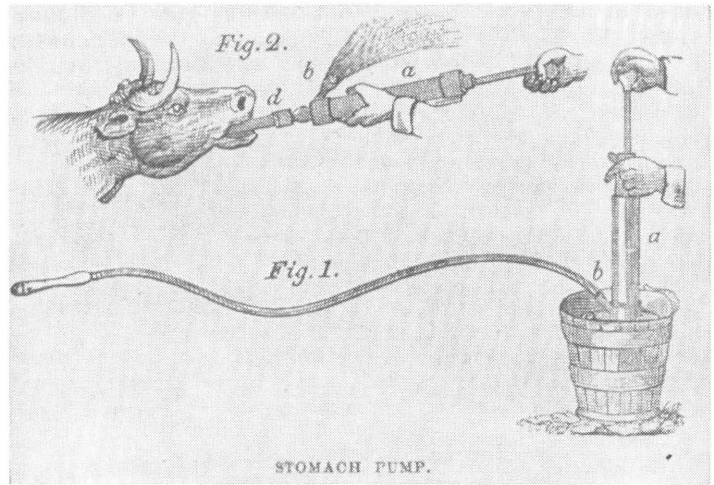
year, Dr. Campbell mentions that while he is overly busy:

attempting to cure or palliate the "ills that flesh is heir to" in the human species, my sympathies have been occasionally enlisted in behalf of that noble animal upon which we are so much dependent for many of the pleasures and comforts, and derive so much important service — the horse, in consequence of the empyric and barbarous treatment frequently practised upon him. If the animal who claims for himself the image of his Maker, is willing to indulge in "Brandreth's Pills, Lobelia Magnetic Ether," . . . [etc.], and write for his epitaph, "I was well, took physic and died," let his curiosity be gratified; but while we assume to ourselves the guardianship of the manner that shall at least entitle us to the virtue of humanity.

Campbell states that the common treatment for spots on the cornea of the horse's eye is to blow powdered glass, burnt alum, or powdered bluestone into the eye, and "by just such treatment many a noble roadster has been prematurely consigned to a cart or the treadmill." Campbell gives his treatment in great detail; essentially it consists of a complicated regimen of bleeding, purging, and keeping the animal in the dark: "Thus," he says, "I have given you, as our Buckeyes term the science, a chapter on 'horse-doctoring.'"

As suggested by Dr. Campbell, the human species had long had the advantages of physicking themselves with any of a number of patent remedies. While occasional advertisements of the vendors of veterinary remedies appear in the early volumes of the agricultural journals, it was not until well toward 1850 that these entrepreneurs became well established. In 1834 and later, the *New England Farmer* carried the advertisement of Thomas Hollis, Druggist and Chemist of Boston, for his "Celebrated Horse Liniment . . . decidedly the best and certainly the most convenient article in use." In 1848, "Seabury's Oleaginous Opodeldoc" was advertised in *American Agriculturalist* as being a suitable liniment for both man and beast. The formula for opodeldoc (camphorated soap liniment) had been given in the *New England Farmer* fifteen years ear-

The stomach pump was advocated by Youatt both for lavage and administration of medicines, but despite the popularity of his works in this country, the stomach tube was little used until well into the twentieth century. Youatt: *Cattle* (1836)



lier: two quarts whiskey, warmed, add all the soft soap it will dissolve, one ounce camphor, and half an ounce of ammonia. And "some gentle physic should be given at the same time. The opodeldoc will scatter the humors if recent, and the physic will clear them out of the system."

When the writers of the minute "medical melodramas" with which we are assailed from every channel today turn their attention from heartburn to heaves, the following script, from the *American Agriculturalist* for 1850, is offered for what it is worth:

Is your horse in the habit of coughing when he leaves the stable in the morning? Is he less inclined than usual to pull alertly? Does the poor wretch heave and pant for that breath which is perfectly indispensable to healthy organization? Is he thus an object of pity and annoyance to his driver? In short, has he that dreadful scourge, the heaves? You can cure him most certainly, in nine cases out of ten, by the Tattersalls Heave Powders.

In 1832, the *New England Farmer* advertised:

Maw's Improved Veterinary Pump, for administering clysters to Horses, Cattle, Dogs, &c . . . the length and flexibility of the Elastic Tubeing affords great facility and security, as the operator may stand at a considerable distance, or even in an adjoining stall.

In 1844 a farmer-correspondent who had trouble with "gravel" (urinary calculi) in

a number of his animals, relates that he had "applied to a regular physician" who instituted a complex system of treatment that apparently had some effect. The farmer concludes: "I think by having a record of all such circumstances to refer to when cases of the kind occur, there would be a great advantage in it." In commenting on the treatment of animals by physicians, the editor notes:

In the absence of well-educated Veterinary Surgeons, physicians may do great good, and save many a poor animal much pain, and severe loss at times to the farmer; and in thus acting, they need not fear either degrading themselves or their profession, for in Europe nearly as accomplished an education is demanded of the Veterinary Surgeon, as those practising among their own species.

### Unqualified Quacks

Some appreciation of why veterinary medicine had made but a poor beginning as late as 1845 may be had from a communication from an Ohioan, apparently a stockman, who explains at length:

There is perhaps no subject less understood by the farmers in this country, than the nature and cure of diseases among their stock. The veterinary art is practised, with very few exceptions, by persons wholly unqualified, either by education or experience, for the vocation; hence, the reluctance that many have to entering it. I had occasion a few days since to call on a man who had studied at a Veterinarian

School in Edinburgh, Scotland, and had practised the art for several years before coming to the United States. He brought with him here a diploma and good recommendations. On asking him why he had given up the practice, he replied, because there are so many quacks in the business in this country, mostly from Europe, it has become very disreputable, and nearly every one who employs me suspects equally my capacity and honesty. Books on this subject are extremely scarce among farmers, and many of them worthless.

There ought and must be a remedy for all this. If every farmer would note down the history of any uncommon occurrence which takes place among cattle, horses, sheep, swine, or fowls; describing, as near as possible, the nature of the disease; its origin and cause; together with the manner and means made use of to effect a cure, and the final result of this practice in so doing, together with his own remarks and observations, as well as those of other men of sense and experience, where a cure has been effected in similar cases, it would throw much light upon subjects where darkness and obscurity now pervade.

There follows a description of a puzzling disease among horses in which the tongue and mouth were blistered, the legs swollen, and the hoof had "a fester at the crown." Three hooves from thirteen horses were lost. This man evidently was not only able to describe the condition with great fidelity, but was something of an experimentalist as well. He relates having tried chloride of lime, corrosive sublimate, arsenic, or copperas, "each of these on different feet, to test their respective virtue," and each apparently being effective. He had no idea of what caused the condition—which apparently was ergotism. The editor states, "Our correspondent has here met a frequent disease. It is caused by poisonous weeds." But what weeds, he does not know.

In a series of articles on "Diseases of Animals," beginning in 1846, Andrew Stone, M.D., of Indiana, states:

There are so many diseases in animals that assimilate to those of the human species, and the treatment of such appears so well adapted to each other, that medical men generally are turning their attention to animal medicine and to agriculture, as sciences intimately connected with their own profession. In fact, the nature

and diseases of animals, especially those of sheep, have been too long neglected, and the remedies that are generally prescribed, are by those who know not the why, not the wherefore—who are entirely unacquainted with the true nature of anatomy, physiology and pathology of animal medicine, and, under such circumstances, are as much liable to do injury as good.

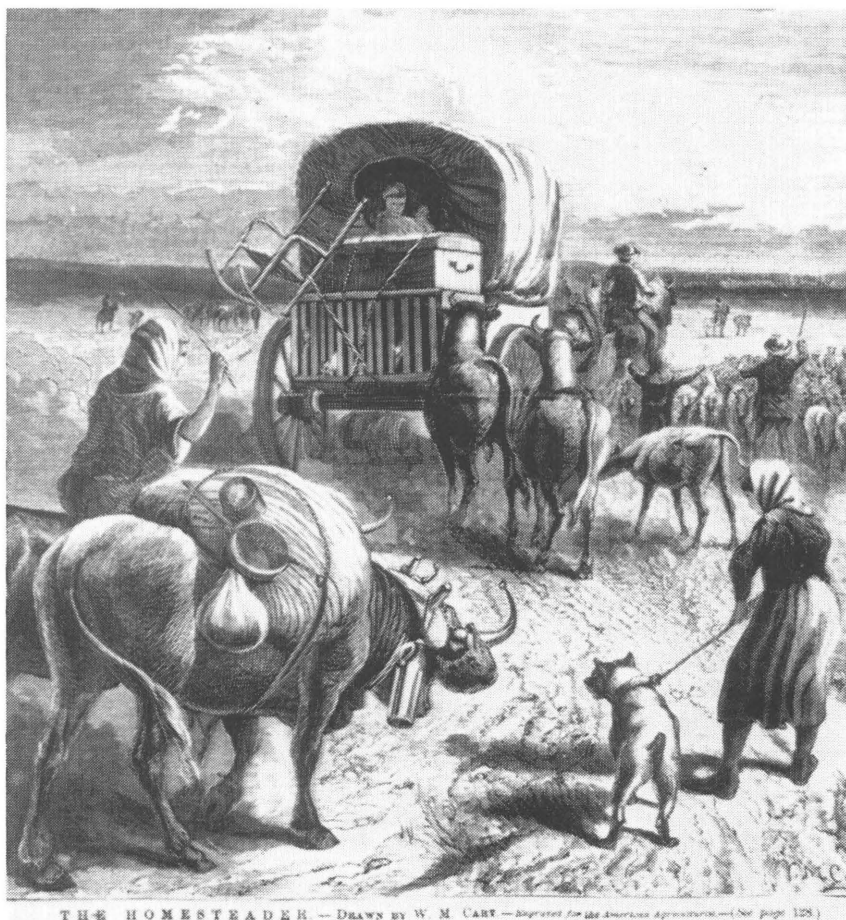
Humanity, therefore, justly prompts a more special attention to animals—to ameliorate their diseases and sufferings, and render more scientific and systematic attention to their history. We may justly consider, that a malpractice in regard to brutes, that shall occasion an undue suffering and sacrifice of life, is attended with a degree of moral responsibility at least proportionate to human life itself. The way, then, must be opened by medical men; they alone, at present, as a general thing, can give system, order, and science to the study, and I am happy to see that animal medicine and agriculture are no longer beneath their notice, and begin to assume a standing and attention that they so justly deserve.

### No Stone Unturned

Stone, obviously, was no ordinary man—and perhaps considerably more than an ordinary physician, and for the good that he may have been able to do, either personally or by influencing others, we have reason to be grateful. In saying that medical men *at present* are the only individuals capable of practicing animal medicine, he was likely correct; by inference, however, he seems to envision the day when men trained in animal medicine as such would be available. Coincidentally, but most appropriately, the article following Stone's concerns unfair competition among stockbreeders in which the writer says, "If another man has what is really better than anything I possess, let my tongue be palsied when it refuses to say it."

In writing on animal disease, Dr. Stone apparently knew whereof he spoke, for he says:

A personal examination . . . is always my practice when any of my stock dies from disease, or any unknown cause, which I hope will give additional worth to the cases I shall report, as every examination has been made by myself.



Few contemporary prints gave an adequate conception of the amount of livestock that accompanied the trek westward. The "Pioneer Handbooks" gave directions for treating sick animals as well as human beings. *American Agriculturist*

His reports, he hopes, will "cause additional attention to be paid to the diseases of animals, and search for causes of death in every animal that dies in any mysterious or uncertain manner."

The good doctor may be forgiven if in the first case he reports, one of a ewe that died in parturition, he demonstrates his ignorance of comparative anatomy. The thorax and abdomen presented such a healthy appearance that:

I imagined I should be baffled to account for the cause of its death; but on opening the womb, I readily discovered extensive disease; the whole internal surface was studded with a

kind of tumor, called in human medicine the cauliflower excrescence.

Possibly later he found that he had discovered the normal uterine cotyledons. We might recall that a number of British farriers — at least one a surgeon — had earlier described the gall bladder of the horse — discovered, undoubtedly, from the confines of a comfortable armchair.

In a later communication, Stone makes a valuable contribution to what might be termed the geography of animal disease, and the effects of constitution upon the incidence of disease. About this time, as the tide of immigration moved westward,

numbers of reports began to appear in the eastern papers to the effect that in "the West" as a whole, or in particular localities, the country was unfit for stockraising. Stone writes in rebuttal to these prophets of doom:

I have noticed since my residence in the *West* [Indiana], at times nearly whole flocks of sheep extensively diseased, and the owner, or shepherd, hardly seemed to have any idea what was the nature of the disease, or what the cause; and so for want of a little proper study and reflection, hundreds of these useful animals die annually. As regards sheep husbandry in this section of the country, an important consideration presents itself. To supply the want and demand occasioned by the immense tide of immigration that is constantly rolling to the west, millions of sheep must be brought in. These, like ourselves, who have been raised and accustomed to a healthy climate and soil previous to our arrival here, but poorly bear the change; hence sheep and other animals become subject to new diseases, the result of new causes and influences. It is in this way that the intelligence has gone forth that sheep will not do well on the western prairies . . . [but] this is a sweeping conclusion drawn from isolated circumstances.

A major predisposing cause of disease, Stone says, is the periodic inundation of the flat prairies, alternating with seasons of drought—something unfamiliar to residents newly from the East. This keeping of sheep on wet pastures, he relates to the finding of extensive liver damage in sheep dying with various symptoms. He adds: "It was long ago noticed by Professor Drake, of Cincinnati, that hardly a hog was slaughtered at that market that had not a diseased liver." Another factor mentioned by Stone is that immigrants, with an eye on price rather than quality and condition, bring mostly old and infirm sheep: "which generally die off the first winter in this country." Many which survive the first winter, the flooded pastures in the spring, and drinking from the stagnant pools left in the wake of the rains, finally die from lack of water in the summer, when at small expense a windmill would supply ample water.

Of some interest is Stone's statement:

A diseased or affected sheep never should be allowed to remain with the healthy . . . [but] should be instantly removed to its proper place—the hospital.

Probably few farmers maintained hospital quarters for diseased animals, but the editor of the *Cultivator* in 1841 advised: "A division or hospital for weak or diseased sheep is indispensable, and not to be overlooked by the sheep farmer." In 1866 the editor of the *American Agriculturalist*, in speaking of "A Horse Hospital," states:

Every one who keeps only two horses should be able to separate them if one is sick, and it is hardly fair to turn the well one into the yard.

Morrell's *American Shepherd* (1846) advises maintaining a "hospital flock" for, despite adequate care:

Disease will make its way to some individuals, which, in that event, require removal from their strong and healthy comrades, and treated accordingly. . . . When a sheep is seen declining in flesh, let it be removed forthwith to the hospital.

That a number of the pessimistic reports concerning the midwest as an area for livestock raising were of a local nature is suggested by the enthusiasm of others. Thus in 1842 a man in Illinois reported he had bought 1,770 sheep in Ohio for a dollar a head, and lost only six the first year, and these from rattlesnakes rather than disease. He says he uses "one barrel of salt per month, and the sheep have ever been perfectly healthy." They were folded at night to protect them from the wolves, but had no protection from the elements. Not to be outdone by his neighbor, an Iowan soon responded with the alleged fact that his own state was "the best region of the United States for sheep," for among other advantages:

Disease is unknown among the flocks here, although the farmers as yet have very imperfect fixings for their sheep. Indeed, as yet all the sheep here are kept during the winter without any shelter.





Before the nutritional value of salt was well recognized, "salting" was a common method for rounding up the flock. The method was also used — then, as even now — by meat hunters posing as sportsmen. *American Agriculturalist*

Patriotic sons of other states soon challenged Iowa, most of them also claiming immunity to disease.

### Dog Physicians and Cow Doctors

On a number of matters, it was suggested that readers who inquired about specific diseases consult with medical men. Thus in 1849, in response to an inquiry on dog distemper, editor Allen replied, "We advise our correspondent to consult his physician, or some reliable work on the diseases of dogs." Doubly unfortunate, however, was the fact that he had no such work to suggest, nor did he have the discrimination to weed out the less valuable offerings from his correspondents. In answer to this request, one reader wrote:

As you politely refer the gentleman to some dog physician, I am only too happy to assume the honor. . . . Take a handful of fine table salt;

hold open the dog's mouth, pour it down his throat, and hold his jaws together until the salt is all dissolved and swallowed.

Another, in offering a prescription of about the same value, says, "if it don't cure the dog, I give him the liberty of sending me the hind leg of the next one he loses." This may have been said with tongue in cheek, but if all who read it complied, it seems likely he would have had ample opportunity to put more than one foot in his mouth.

A correspondent from Mississippi in 1844 states that he has lost all of his cats and dogs over a period of years from convulsive fits. Having been told that bleeding would remedy the situation:

I am now trying it . . . by cutting off a piece of the tail each time they have a fit . . . economizing the tail as much as possible, that it may get a fair trial. . . . Some other cure would be preferable, as a bobtailed cat is rather

an unsightly object. Still, better even a bob-tailed one than none.

The editor thought that overeating of rats might be a cause, and suggests milk and a variety of table foods.

Concerning the lack of professional assistance, a man writes in 1849 regarding a cow with an inflamed udder:

I could not send for a cattle doctor nor for medicine, without much inconvenience. I therefore proceeded to my library to consult several works I had on farriery, but was disappointed in finding that there was not a single course pointed out that I could follow; for all the remedies used were such as no person could easily get in an emergency. I was, therefore, obliged to follow my own feeble judgment in such matters.

He bathed it with water and lard, and the cow recovered. A second case attended by this same individual concerned a sow with a prolapse of the vagina and bladder after parturition. He replaced the mass and sutured the opening but the prolapse recurred:

I, therefore, concluded to let her alone; but she seemed to suffer so much . . . besides, maggots were revelling in the parts, that I concluded to make short work of it. I enclosed the whole mass in a ligature, and then cut it off. I found I had the bladder, ureterus, &c., and of course, expected my patient must die; but she improved, became able to go around, eat well, and the color of her snout and ears were as natural as ever. She was able, too, to nurse her pigs, but I was very sorry to find, one day, that she was injured by a cow, which caused her death, which, for my reputation's sake, as a pig doctor, I hope was the case.[!]

A demonstration of the abilities of certain of the fraternity of cow doctors may be had from the expert testimony of a Dr. [!] Stoddard in a court case to recover damages for loss of a cow:

I am a cow doctor. I have followed the business these forty years. I doctor sheep, hogs, and horned critters. I set broken bones, joints, &c. I never read no books on critters. I took the business up kind o' nat'ral. . . . About the cow . . . I went down to see her the day before she died. . . . I thought if I could start her

idees up a little, and kind o' jog natur, she might get along. . . . I went down agin Sunday mornin' and found her dead as a herrin'. I was mightily struck up. We skun her, and snaked her out upon the snow. I then cut her open, and examined her. She had what I call the overflow of the gall. . . . I took some sperits down with me, Sunday mornin'. The cow having no further use for any, I took a dose myself.

### Life Assured

Practitioners such as this may have been a compelling reason for the short life of such organizations as "The American Live-stock Insurance Company," of Vincennes, Indiana, chartered in 1850: "For the Insurance of Horses, Mules, Prize Bulls, Sheep, and Cattle, of every description, against the combined risks of Fire, Water, Accidents, and Disease." Being capitalized at a mere \$50,000 would have been practically a guarantee of its early demise. The company went out of business, or at least stopped advertising the following year. The month following its demise, Easterners enjoyed the short-lived benefits of "The New England Live-stock Company."

Apparently undismayed by the experience of its predecessors, the Northern New York Live Stock Insurance Company was incorporated at Plattsburgh in 1851 in the belief:

owners of valuable animals will avail themselves of the advantages offered by this mode of protection. If fire, life and marine insurances are proper and expedient, so is livestock insurance. . . . The company have adopted such rates as, they believe, will furnish the means of paying ordinary losses, without resort to an assessment. But to guard against extraordinary losses, which may arise from contagious diseases or epidemics, it becomes necessary to require premium notes.

The company appears to have existed for something over one year, and in response to an inquiry in 1857, the editor of the *Country Gentleman* notes: "Several companies have been incorporated in this country for this purpose, but we are not aware that any of them are now doing business.

## Life Not Assured

The better farmers, of course, were well aware of the inroads made upon live-stock by quacks and empirics who pretended to a knowledge of animal disease, and many would prefer letting nature take its course to allowing these charlatans to speed the demise of their stock. Such a farmer was one Sanford Howard of Ohio, writing in the *Cultivator* in 1843:

There is no subject connected with husbandry, on which light is more needed, than on the treatment of diseases of domestic animals. Many die annually from neglect and inattention, and many more from improper management of their diseases. If an animal is sick, and it is thought advisable to make an attempt to cure him, the course frequently taken is to give him all the nostrums of all the bystanders, each prescription being a "perfect cure," though in its nature and composition as opposite to all the rest as are the poles to each other, and though, perhaps, not one of the advisers has any correct idea of the disorder. I have often been amused at the various specimens of quackery which farmers will suffer to be played off upon them by ignorant cow leeches.

Another correspondent denounces a custom of common swine castrators:

As to the practice of applying salt and ashes to the fresh wound, it is not only useless, but injurious and outrageous, and the man who is guilty of such conduct, deserves the like treatment.[!]

That the few skilled veterinarians available were appreciated is evident from the remarks of a farmer who reported "a terrible distemper or epidemic" among the cattle at Troy, New York. From his description, this appears to have been at outbreak of dysentery confined to two adjacent herds, but:

On post mortem examinations no traces of the disease has been discovered, but they were not made by competent and experienced persons . . . should any more cases occur I would advise the owner to call on Dr. Wright, a veterinary surgeon of great skill . . . in Albany.

Few other references to veterinarians by name appear in the first ten volumes of

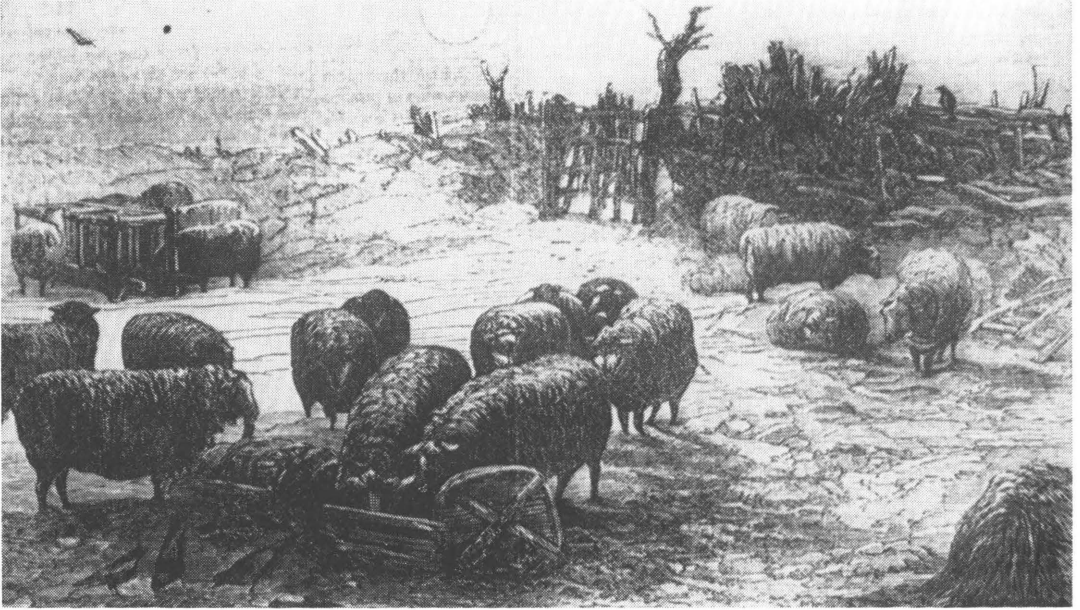
the *Cultivator* (to 1843). One appears in a letter to a farmer "from Prof. Grice, veterinary surgeon, of New-York," in which the opinion was given that abortions occurring in the farmer's herd were caused by ergot poisoning. Another is a mention of Wm. H. Smith, a London graduate, who advocated homeopathic treatment of animals. In 1844 Dr. Wright, who identifies himself as M.R.V.C. — and thus perhaps incriminates himself as having appropriated the British title (M.R.C.V.S.) — responds to a request for information on splints in a horse.

Asking: "Wherein is a man better than a horse, if he does not know more than a horse?" a correspondent relates an anecdote of a man in his community, who:

with great self-confidence and pride, told how he could cure a horse of the bots. . . . He took a tea-kettle full of boiling water to pour down his throat. His father interrupted him, so that he succeeded in pouring down the horse's throat only half the tea-kettle of boiling water. In truth, the horse was immediately dead — he opened him, and found *just half* the bots were scalded to death, when he exulted, by saying, that if his father had not interrupted him, he should have succeeded in destroying all the bots, and proved the usefulness of his discovery. We remarked to him, that it was an unprofitable mode to kill his horse in order to destroy the bots. Oh, he said, he could easily have saved the horse, by pouring down his throat and equal quantity of oil, to heal the injury of the scald, if he had not been interrupted.

## THE ENLARGING SPHERE OF REPORTING ANIMAL DISEASE

The animal disease situation in Michigan is fairly well documented in the pages of the *Michigan Farmer*, beginning in 1843. As mentioned earlier, one object of the editor was to secure from farmers the modes of treatment which they had found successful but, as may be surmised, it is more often the identification of the problem, rather than the treatment, which is of most value — at least to the historian of today. More or less in this category is the remedy for calf scours "never known to fail . . . in thirty years' use." This



Agricultural editors who urged better care for livestock had to contend with the majority opinion that sheep in particular would thrive better if not sheltered during the winter. There are reports of sheep being buried under twenty feet of snow, with some surviving after being found a month later. *American Agriculturalist*

required putting half a pint of good cider into a bottle:

Then open a vein in the neck of the calf, and let into the bottle about the same quantity of blood. Shake it well together quickly, and before it has time to coagulate, put it down the calf's throat.

It might be remarked that this undoubtedly salubrious draught would have been all the more effective if another blood donor had been used.

In 1845 a correspondent states that ticks on lambs is "so common" a problem that he gives a formula for a tobacco dip based on 100 animals. The expense of the 12 pounds of tobacco required "is merely nominal . . . if the farmer raises his own tobacco as economy dictates . . . compared with the loss of life and fodder inevitably incurred by neglecting to attend to it." For scab: "a contagious disease among sheep, now raging in some of the large flocks in the western part of the state, double the quantity of tobacco will be required," and the sheep should receive

sulfur in their salt "to drive out the disease." From the numerous entries concerning sheep scab, it is evident that this was a common problem over a long period.

Another correspondent perhaps anticipating the advent of systemic pesticides, concludes:

Nothing is effectual as a cure, except it work through the whole system in the blood. There are many things which, if they can be so applied as to reach the insect which causes the disease, will effect a cure. But the difficulty is in thus thoroughly applying it.

He mentions the length of the wool, or the crust formed, as interfering with local treatment.

Throughout the 1840's a running controversy raged over the merits of sheltering versus not sheltering sheep in the winter. A correspondent who states he had wintered 120 yearling lambs "in a field without water or shelter" argues:

Experience teaches us that disease and distempers are far more frequent in warm than in cold weather; and reason teaches that the

natural fire of life and their abundant supply of clothing are sufficient to protect the sheep in extremes of cold in a temperate climate. . . . In Michigan, we are not subject to sudden and heavy snows, as in New England, where hundreds of sheep have been smothered in a night.

Proponents of shelter were equally persuasive, and the editor sees "little prospect that their views will be reconciled":

In most matters in which men differ widely in opinion, it commonly happens that truth lies between. . . . If we had sheep to keep, we should neither adopt the continued close confinement . . . nor the absence of protection. . . . Snow, we should deem inadequate to supply the natural demands of thirst. . . . The fact that they will do well without water, is not proof that they will not do better and be more comfortable with it. . . . To leave any domestic animal exposed to the storms, and abrupt vicissitudes of our climate, without shelter is, we must think, to say the least, not good husbandry.

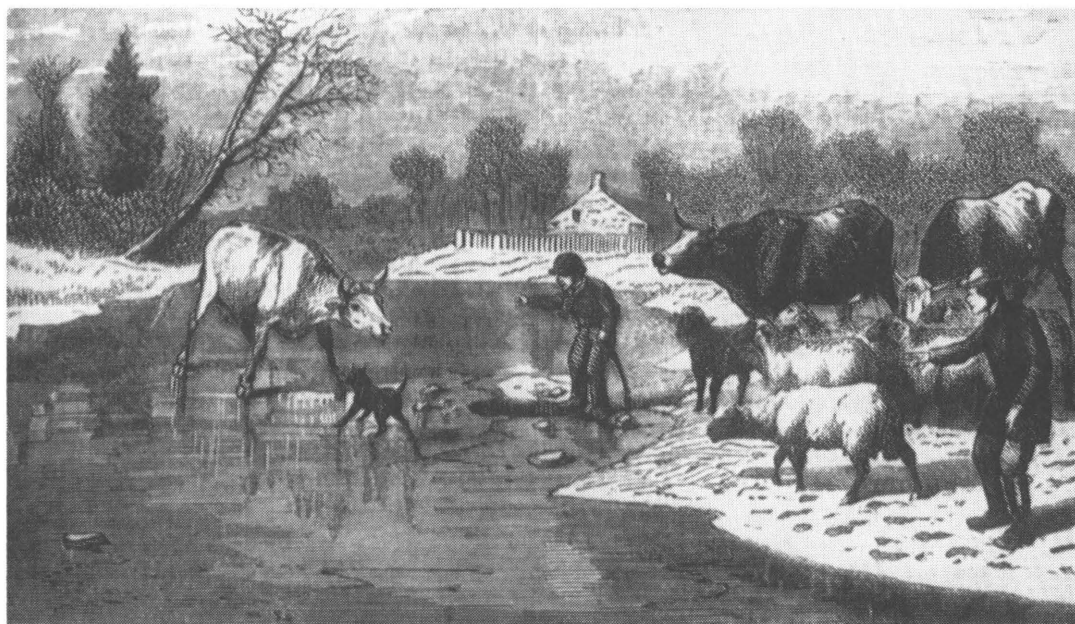
In reply to a request in 1846 for a remedy for the "dry murrain," presumably cornstalk disease, or mad itch, the editor responds with a recipe obtained "by consulting with an old cattle doctor." This was to

give a bottle of oil and to keep the cow moving. He also mentions that the *Emigrant's Hand Book* recommends two ounces of gamboge: "This is a powerful physic; and it is very necessary to get something to pass the animal." It is of some interest to note how thoroughly the emigrant was prepared for the exigencies of frontier existence. Cornstalk disease was mentioned elsewhere as killing "a great many" cattle in Michigan during this period.

### Dog Days

In 1849 it was reported that in Detroit: "Mad dogs have been at large in our streets for some days, and many dogs have been bitten, and, it is said, one man." The problem apparently extended beyond the metropolitan area, for a correspondent this same year in urging a law to protect sheep from the depredations of dogs, adds:

I have said nothing of the horrible deaths resulting from the bite of the rabid animal, as such deaths are comparatively of rare occurrence. Some of your subscribers in Oakland county, might tell you something however, re-



The agricultural papers waged a long campaign on behalf of better care for animals in winter, but tradition died hard — along with countless animals. *American Agriculturalist*

specting the cows and hogs they have been compelled to put to death, on account of bites by mad dogs.

On the subject of sheep-killing dogs, he says that Michigan has a "dead letter statute" which makes owners liable for damages, but that it was inoperable. A number of sheep owners, he says, have been driven out of business by these dogs. Instead of farmers having to pen their sheep for protection, he urges a state-wide licensing law to replace the current one which leaves the matter up to townships. And "Let every man who conceives he has *dog work* to be done, be compelled to keep his dog at home, or do it himself." Then, if any dog, peaceable or otherwise, be found loose, "let him be shot; or, what would perhaps be better, add infamy to his punishment, and let him be hanged."

Some farmers were reported to have lost half their sheep from "stretches" or colic in 1849, and "great losses" were attributed to "the grub in the head." One man tarred the muzzles of his sheep as a preventive of the sheep bot: "but they would not learn, and still went on losing their sheep 'in the good old way.'"

### Cow Leeches and Bloody Murrain

The so-called "bloody murrain," apparently due to flukes, was present in Michigan from the time of the early settlements of the nineteenth century, having been imported with cattle brought by the settlers. However, because the state was at one side of the stream of migration westward, and off the beaten track of the cattle drives to the large markets, the disease did not reach the proportions it did in other parts of the midwest. The following account is quoted at length more or less as a vignette of frontier conditions in Michigan:

In the early settlement of Washtenaw county [southeast Michigan], as long ago as the year 1828, I lost two or three good working oxen, with a disease at that time new and unfamiliar, but which has since become known as the Bloody Murrain. Drove of working oxen and cows were brought from the state of Ohio in

those early times, and the farmer beginning on a new farm was compelled to let his cattle run in the woods during most of the summer season. . . . This disease was more common and fatal in those early days than at the present. . . . After having lost two or three of my cattle, I opened them, and upon examination found leeches in their stomachs. The leeches were much distended by the blood they had evidently extracted. . . . A large marsh at which my cattle were accustomed to drink . . . was found to contain leeches in abundance. I immediately put my cattle into a good enclosure supplied with pure water, and have never since been troubled with any loss by leeches. This seems to show very conclusively that leeches are the sole cause of this disease. Yet, being a common man, I confine myself to practical facts and leave this subject to be investigated by educated and scientific men.

This communication elicited a response from a farmer who doubted that leeches could be the cause of bloody murrain, because:

In Vermont, where I lived most of my life till the fall of 1830, I never saw or heard of a case of bloody murrain, though leeches are much more plenty there than here.

He mentions having seen many cattle in Michigan die of the disease, and few being cured.

More often than not, perhaps, these "leeches" were flukes, as attested to by a series of articles in the *Ohio Cultivator*. In 1859, the editor states:

The return of the grazing season is sure to bring us reports of the fatal effects of the disease known as Bloody Murrain. . . . This disease is most common and fatal in wet and woody regions, and though we believe it is not in any sense epidemic, yet, like the mysterious cholera, the cause and cure seem to be involved in a veil of uncertainty.

The most likely cause, he says, is that mentioned in the *Ohio Agricultural Report* for 1856:

It is caused by an animal bearing a tolerable resemblance to a leech in shape, and which is the exact color of the liver. . . . The parasite is known to naturalists as the *Fasciola Hepatica* of Linnaeus, or *Distoma Hepaticum* of modern naturalists. . . . When an animal dies from bloody murrain, as a general thing, it dies for



the same cause as if its throat had been cut; that is, it bleeds to death.

The most common "cures" included salt, alum, ashes, saltpetre, and sulfur. One correspondent states he paid \$20 for a recipe, which consisted of "1½ oz. pearlash, dissolved in two quarts of iron-water from the blacksmith's trough," and which he had never known to fail.

Others were less optimistic: one says, "Nineteen in twenty at least, die that are attacked." A physician writes:

As to a cure for the disease, it may be said to be uncertain, but if they will keep their stock from the places where they get their leeches, they will have no more trouble with Murrain.

And a butcher states:

Often cattle have Murrain slightly, and recover; the owner gives them something, and is confident he has a remedy for Murrain. There is no cure, but there is a preventive. If your cattle have good running water always, they will not get Murrain.

He states that eight of ten cattle bought in the hills have healthy livers, but the reverse is true of cattle from the lowlands. Also noted is the fact that young cattle are rarely affected. A farmer found that "salt has a tendency to produce Murrain," and that spring watered cattle were affected. A man recently from New York states he had not seen the disease there in thirty-six years, and asks:

If the liver only is affected, and that by leeches, how is it that the urine becomes affected, which is the first symptom that the animal gives to detect the disease, and from which, I presume, the disease has its name? [It was also called "red water."]

An "old cattle king," perhaps with tongue in cheek, claims priority for discovery of the cause of murrain:

More than twenty years ago . . . we decided to give the disease a thorough investigation. We first discovered it was caused by leeches in the liver, and afterwards found we were mis-

taken. We then found the disease commenced in the kidney, and afterwards discovered it was not always the case; and after a long and patient investigation, we came to the conclusion the more we examined into the disease the less we were sure about it.

As to a cure, he says, "If the animal is not dead when you discover it, give calomel 2 oz., arsenic 2 grs. . . . and then when the animal dies, you can say you have done all that could be done to save it."

A doubter in the "case of Murrain vs. Leeches," wishing to appear "in behalf of the leech, who has been charged with willful and premeditated murder," asks a number of pointed questions, including:

Why the red blood in the urine and feces? Why are the kidneys pulpy? Why the offensive smell of animals that die? Why are the hides worth less than those of normal animals?

### The Veterinary Art for Farmers

Interest in veterinary education was shown in Michigan in the early 1850's, as in other states, as an adjunct to agricultural education. In 1849 the Michigan State Agricultural Society had expressed the need for an agricultural department in connection with the University of Michigan at Ann Arbor, and recommended that instruction be given on the "anatomy and diseases of animals," among other subjects. In 1853 the University announced a free course of lectures on "agricultural science," three or four daily for eight weeks in the spring, to include: "A description of the different varieties of domestic animals, their diseases, modes of breeding, improving, &c., &c.," by the Rev. Charles Fox, who was also a prominent agriculturalist; and "comparative anatomy and physiology of animals," by Professor A. Sager.

Via an advertisement in the *Michigan Farmer*, it was announced that the agricultural department of the university would open on December 1 of that year with a course of lectures on chemistry and on "Practical Agriculture and Veterinary Surgery." Students would have the option of attending one other class in the Scien-

tific School, and: "The agricultural students will have access to the books in Agriculture which may be found in the University Library." The latter course was given by Fox, but upon his sudden death the following summer, this instruction appears to have been discontinued.

Instruction in "the veterinary art" was included in the first prospectus of the Michigan Agricultural College, established in 1855 (now Michigan State University), but a number of years elapsed before any such instruction was given.

As noted above, the Michigan State Agricultural Society had expressed a need for instruction in the veterinary art as early as 1849, and in 1855, J. C. Holmes, secretary of the Society, spoke at length on the subject:

Every farmer is more or less interested in the raising, or use of domestic animals, consequently he should be somewhat conversant with their anatomy, structure, diseases, and the best methods of treatment. Some years since, the farriers, or shoers of horses, and they only, were expected to understand all the ailments the horse is subject to, whether occasioned by unskillful shoeing, hard driving, neglect, or any thing else.

To shoe horses and cattle properly it requires not only mechanical skill, but some knowledge of the anatomy of the feet and legs, for it is often the case that lameness is caused by the animal being carelessly shod. . . . The farrier having made the foot, its diseases, and the remedies his study, he is supposed to understand fully all the diseases of animals, and is called upon for advice and treatment. But as a general thing his knowledge of the diseases of animals is very limited. However the subject has been taken up systematically. Veterinary schools and colleges have been established where the anatomy and physiology of animals, the diseases to which they are subject, and the remedies to be applied, are taught; and if the farmer will study the veterinary art he may in a short time understand the diseases of quadrupeds far better than the farrier ever pretended to.

What appears to be the first reference to a veterinary surgeon in Michigan — hardly likely a graduate veterinarian, however — is found in a letter to Professor Copeman of the Boston Veterinary Institute in 1857. The writer states that his horse:

has been troubled with *cracked heels* more or less for the last year, and has what is usually termed *scratches*. I bought him in Detroit in April, and before I had brought him home . . . I had him bled twice by a veterinary surgeon. . . . I presume his system yet wants cleansing.

To his request for help, Copeman responds:

You have fallen into a very common error. The extent and evil of this absurd "humoral theory" is plainly seen in the folly of the Detroit veterinary surgeon. He must have studied the veterinary art as it was practiced during the "dark ages." . . . What would any sensible man think of the genius of an M.D., who, in such a simple case [as chapped hands], should gravely inform him that "his blood was corrupt and bad," and he must be put through a thorough course of bleeding, physick, &c. We know the "simple public" never ask any questions when giving or taking physic. Still we think any sensible man would at least make an odd face, and either laugh at the doctor's stupidity or sneer at his impudence.

### Rural Practice

An interesting commentary on the nature of veterinary practice about 1850 may be had from the account books of E. A. Washburn, a practitioner from Adrian, Michigan. His charge for a visit was usually 50 cents; at night, 75 cents; and for keep of a horse, \$2.00 per week. For numerous clients it appears that he carried considerable amounts on the books for long periods and frequently took in such items as "71 lbs of Beef" for a bill of \$8.00; wood at a dollar a cord, and pork at 8¢ or butter at 11¢ a pound. Representative charges for services include:

alter colt \$1.00, stud \$5.00  
 dress rupture on white hoss, \$3.00  
 treat colt for distemper & medicine, \$1.00  
 treat cow for garget, \$1.00, \$2.00; milk fever, \$1.00  
 treat horse for splints, \$3.00; for spavin, \$1.50–5.00  
 put seaton in tumor, 50¢; take out seaton, 50¢  
 pull wolf teeth, \$1.00; cut lampers, \$1.00  
 drench, physic or blister horse, \$1.00  
 bleed and physic mare, \$1.00 [paid for by 2 bu. corn]  
 treat heffer for bull hurt, \$1.00  
 treat cow for cast withers, \$2.00

to dres poleval [poll evil], \$1.00  
 treat grey H. for sweld rectum, \$5.00  
 for stop in water, \$1.00

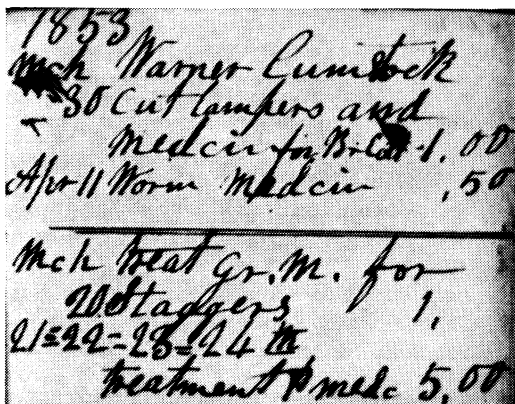
founder, ringbone, quittor, 75¢-\$1.50  
 visit grey hoss that died, 50¢  
 medicine for heaves, 50¢  
 to clean cow, \$1.00; cow in labor, \$1.00  
 treat cow for horn ail, 50¢

treat cow for murrain, \$1.00; same for Widow  
 Mills' cow, 50¢  
 operate on mares sholder for lameness, \$5.00  
 treat ox for stub complaint, \$1.00  
 proscribe for farcy, \$1.00; treat farcy, \$2.00  
 treat broken pastern, \$4.00 [2 later visits @  
 \$2.00; 3 bottles liniment @ \$1.00]  
 visit & medicine for a dog that was blind, \$1.00

Apparently only charges are entered in his account books, which are in the form of more or less alphabetized ledgers, and thus there is no way of knowing what proportion of his business was for cash. A compilation of the charges for April, 1851, however, will perhaps give an idea of the general run of cases.

April [1851]

1 medcin for 2 Horses	\$ 1.00
4 ½ pt. Linament	.25
5 treat Barny for founder	.75
6 visit Barny	.25
6 visit gr H for cold	.50
7 dres Head (poleval) 2nd time	1.00
7 treat Charly for Spr Hoc	1.00



1853  
 Mch Warner Lumbeth  
 30 Cut lampers and  
 medcin for Blat 1.00  
 Apr 11 Worm Medcin .50  
 Mch treat Gr. M. for  
 20 Stagers 1.  
 21-22-23-24 th  
 treatment & medc 5.00

Extract from the ledger of a rural Michigan practitioner for 1852-1853. "Lampers" is a variant of "lampas," or the tumified palatal mucosa of horses, which most farmers and farriers insisted on treating as a disease.

8 care of Charly & Bl. m	.50
8 treat S. M Sweld leg, drench	1.25
9 cough medcin for BH	.50
9 2 wks care & medcin for farcy	10.00
10 foment Charly	1.00
10 care of Charly	.50
11 linament	.50
12 care of Charly	.50
12 treat Br. H for Distemper, bleed and physic	1.00
12 dres Head 3rd time	.50
12 medc for 2 H with Distemper	1.00
13 visit	.50
17 visit	1.50
17 visit cow & medcin	.75
18 visit cow & medcin	.50
19 [sold?] 1 dog puppy	5.00
20 visit cow & medcin	.25
23 blistered pony	1.00
23 attend Charly, colic	2.00
26 dres leg	.50
27 discharge old Charly, 14 days attendance	7.00
28 H with greas hell brot in	
28 blister spavin	1.00
29 dres spavin	.50
29 oprate on poleval	1.00
30 visit H & linament	.50
	<hr/> 44.00

Some of the items reflect bits of unintentional humor or pathos; in one category is "alter 1 bore, 25¢." Another involves a horse that was staked and which died 4 days later, the account reading, "4 days care & keep, \$4.00; for burying, \$1.00." But on another occasion for a staked horse, "I warant a cure for \$5.00." A bill for services from July, 1852 to February, 1853 for \$20.50 appears to have been settled finally in July, 1865 — with \$21.60 interest. A bill incurred in 1851 was settled in 1854 by credit for 10 bushels of corn and "28 bus. rutebagy." On another occasion he appears to have sold a client's horse in lieu of 8 weeks' keep. While his books give no indication of how often he performed post-mortem examinations, for one case he had been attending (and had given a pint of castor oil and turpentine the day before) he enters the notation, "Open m died of Bowels. Caus by ulcerated rectum. Parcker [the owner] gave croton oil."

### To Your Good Health

About this time more attention was being paid to matters that we would today identify as belonging within the sphere of veterinary public health. In 1845 a member of the American Agricultural Association proposed:

There should be enacted sanatory regulations by our public authorities, with a view to prevent the slaughter of unhealthy animals for beef, and the sale of the beef of unhealthy animals. . . . Large numbers of the cattle of the West . . . [have] diseased livers, [and] vast numbers of these diseased cattle are slaughtered annually. . . . Many cattle are scrofulous. The health of all, and of those in large cities, especially, demands that none but the meat of healthy animals should be eaten. But those who purchase have no knowledge by which to be guided. Therefore, persons should be appointed by our public authorities to view all animals before sale to the butchers; and after sale; and the carcass and especially the intestines and viscera after death; with power to prohibit the exposure to sale, and sale of cattle or other animals that show disease before death; and the exposure to sale and the sale of carcasses of diseased cattle after slaughter.

In 1849 the editor of the *American Agriculturalist* took up the cudgel with some suggestions for "The Improvement of Slaughterhouses":

Under the present system of uncontrolled licensure, as is generally practised here, not only is our sight shocked and our olfactory organs offended by the too frequent occurrence of private slaughtering establishments, but, moreover, a mightier consideration is neglected—the purity of the article vended can with no certainty be determined.

It was noted that in Paris, each animal entering the slaughterhouse was inspected by a veterinarian; if diseased, it was either condemned or sent to a hospital on the premises. Carcasses were inspected by "a good practical physician." The editor of the *American Agriculturalist* argues:

If a similar system were adopted in this country, not only would these buildings be made a source of revenue to the cities or towns themselves, but, in addition, it would even tend to cleanliness and consequent healthiness, and what is of equal moment, the purity and whol-

someness of the articles consumed by the inhabitants.

On the acceptance of the system in France, it is stated:

The butchers of Paris, at first, violently opposed the establishment of the abattoirs; but now they are so convinced of their utility and commodity, that they would almost as vigorously oppose any return to the former system. Indeed, it must evidently be to the interest of the butcher that his meat be killed in the most perfect condition, to ensure its preservation, and to satisfy the public that every precaution is taken to ensure a supply of wholesome meat.

In another particularly vitriolic attack on "the Butcheries of New York," the editor contends:

It is quite time our city fathers proceeded efficiently for the removal of these intolerable nuisances. The stench from these yards is perfectly unsupportable, and has its full share in bringing, augmenting, and continuing the plague of cholera within our city. . . . During the afternoon and evenings, our streets absolutely run with blood, and yet there is enough left, with other offal, to create a pestilence in every neighborhood where they [these pestilent butcheries] exist.

The logical remedy—to a New Yorker at least—was the removal of the slaughterhouses

to the Jersey shore [although it might be supposed that the good citizens of New Jersey would have thought differently]. . . . Put salt water between these death-dealing, blood-spilling, stench-creating, pestilence-producing establishments and other civil pursuits. . . . Either we proceed with cleansing this Augean stable of ours . . . [or] we must continue to jog on, like beasts of prey ourselves, surrounded by the decaying offal of our own gluttony.

The citizens of some of our cities today would most likely concur with R. L. Allen's prophecy in 1851:

The existence of slaughter houses within or even in the neighborhood of cities will soon be classed among the most intolerable nuisances of a barbarous age . . . all apology for their continuance, since the era of railroads, has been utterly extinguished.

### Kind Killing

While few writers appear to have been concerned with humane slaughter, a statement by the editor of the *Cultivator* in 1843 is a forthright exposition of what undoubtedly was the thinking of many upon the subject. He notes that knocking cattle in the United States and England, and pithing in Italy and Spain are commonly practiced. The latter in particular produced poor quality beef because of poor bleeding, and for the same reason many in this country prefer kosher beef to that killed in the conventional manner. The English practice of bleeding calves daily for some time before slaughter to produce a whiter veal, he reprehends as "a most cruel mode of killing." Also:

Butchers, in killing hogs, frequently perform it in a most barbarous and slovenly manner, mangling the throat. . . . Man has a right to take the life of animals when required for food, but humanity requires it should always be performed in such a way as to give as little pain as possible.

A decade earlier, it was noted in the *New England Farmer* that horses were killed at the Edinburgh Veterinary College by inserting a tube in the jugular vein and causing air embolism:

Three forcible expirations from the mouth are sufficient to cause the animal to die instantly, with apparently no pain. The Association to Promote Rational Humanity should recommend this method for killing cattle, if it should be found expedient.

A similarly inappropriate use of chloroform was suggested in England in 1848 in the thought that the animal would be "not a whit the wiser" for the use of it, and the sweet flavor imparted to the meat might appeal to the taste.

### The Pump: Milkman's Friend

The noted agriculturalist, Henry Colman, in commenting on the milk supply of American cities in 1842, states:

I believe there is no city supplied with better milk, or in a more cleanly condition than Bos-

ton. The milkmen are in general a respectable class of men . . . and the Bostonians are in general equally particular in requiring good milk for their money. . . . In New-York City, it is not so. With the exception of a few milk establishments, where a sacred pledge of pure milk is given, a system of fraud is almost universally practiced. The milk is twice watered; first in the udder of the cow, who is fed upon distiller's swill, of which she has two or three barrels per day, with only enough hay to form a cud for rumination; and next, after it is drawn, it is a very general custom to add one quart of water to every four quarts of milk. . . . Indeed, I have been let into the secret, at New-York, of the actual manufacture of milk at a grocery store . . . and this compound was sold to the poor and the miserable for three cents a quart. The grocer, though he kept no cow, offered to supply the milkman with what he required, whenever his quantity was insufficient to meet the demands of the day.

With the average cow giving only five to seven quarts daily, it is perhaps understandable that the unscrupulous might take steps to increase the supply. It is quite evident that more milk was sold than could be accounted for by the number of cows kept for the purpose. A joke which went the rounds about this time concerns the wag who woke a farmer with the news that his best cow "had the choke." Upon rushing down to investigate he found a turnip stuck in the throat of his water pump.

In reviewing the disclosures by a John Mullaly on "The Milk Trade in New-York and Vicinity," in 1853, the *Country Gentleman* states:

Contrary to the generally received opinion, it would seem that milk is not good for babes, for a physician estimates that a large proportion of the *eight or nine thousand* children, under five years of age, who die annually in New-York, are actually poisoned by the milk which is given them for nourishment. We have never seen so striking an illustration of the dishonest and murderous means which are resorted to in our large cities for purposes of gain, and which have been prosecuted with profit for years, as a legitimate business, without the interference of law.

The number of quarts of pure milk brought into the city daily, on an average, is 91,413. . . . But by an admixture of water, and sometimes

other ingredients, this quantity is made to measure, on delivery, over 100,000 qts. In addition . . . there are 13,000 cows kept in the city and its vicinity, furnishing some 180,000 quarts of milk daily, and fed almost exclusively on distillery slops. These cows are kept at as little expense as possible, no straw being allowed them for bedding, very little dry feed, and from the time they enter these Augean stables, they never breathe fresh air again—never go out till they close their life of wretchedness, the victims of a forced intemperance. . . . We are told that all cleanliness is abjured—that the cans are seldom washed, nor the hands of the man who milks them—that these cows die very rapidly; and when ulcers break out on them, their teeth have rotted out of their jaws and their hoofs have become so sore as to render them unable to stand, they are handed over to butchers, who put them through a course of fattening, and retail the meat. . . .

Though the distillery milk, at the best, has less than one-third as much butter as pure milk, and is otherwise less nutritious, it frequently undergoes another process before it is distributed. Small dealers buy from 50 to 200 quarts, and then add to each quart about a pint of water, with divers ingredients, to give the whole consistency and color. By allowing it to stand till it is decomposed, the chalk, magnesia, molasses and all, can be discovered.

Earlier, some of the cheese vendors of Boston appear to have been less scrupulous than the milkmen of that fair city were reputed to be. In 1831 a flurry of articles in the *New England Farmer* evidenced alarm over the number of cases of food poisoning from eating cheese. Apparently there were few fatalities, but many were made “very sick,” and one correspondent states: “For myself, I never knew such a powerful vomit for some hours, which has made me very weak.” The vendor was accused of having “sold poisonous cheese a number of times.” Two plants eaten by cows were indicted as probable causes:

An eminent physician in Boston, who has frequently, in the course of his practice, taken notice of the effects of this emetic-cheese, attributes them to Lobelia.

Another “learned and skilful physician” was of the opinion, “the poison was caused by the cows eating the Poke weed, instead of the Lobelia . . . cows rarely if ever eat

the Lobelia.” The latter physician had done some field work on the matter, finding an abundance of pokeweed, but little lobelia in the pastures, and the cheese immediately became “healthy” when the cows were removed to a pasture free from poke.

Lobelia, commonly called Indian tobacco, was widely used as an antidote for hydrophobia, and pokeweed, commonly called Garget, was recommended to be fed to cattle to prevent mastitis, or garget, whence the common name for the plant. A frequent practice was to plant poke in one corner of the barnyard so cows, as self-appointed cow doctors, could have free access to it.

The editors of the *Country Gentleman* in 1868, in urging a reform of the milk industry, state:

That city milk and country milk—the milk of kine and the milk of cans—are two not altogether similar articles, has long been matter of general belief. . . . The measure of dilution of milk with water . . . by the Cincinnati milkmen . . . is fully twenty-five percent on the average—some of it more than one-half. . . . The cows are fed mainly on hot distillery slop . . . lying in manure most of the time . . . and during milking, manure frequently dropping into the pails. It is impossible to describe some of their filthy stables. . . . People are negligent as to the quality of what they received, and, in many of our cities, the supply is really short of the demand, so that the buyer is thankful to get even a wretched article at a high price. . . . The agitation of the subject, at least, should go on, and Cincinnati does a good thing in appointing an Inspector to reveal the enormities now too prevalent, even if unable to sweep them away.

### There Ought To Be a Law

Other public health matters also aroused the ire of editors. In 1846, R. L. Allen wrote concerning a problem which had plagued the more genteel folk since the first pig set foot on these shores:

There ought to be a law . . . that not a swine in the Union should be allowed to set his foot on other than his owner's premises.

He adds that unless this should be confined to “the *quadruped* division of the species,”



such restriction of swine "might result in thinning off the population of some of the emporiums of politics . . . and other places of frequent resort." Concerning the shambles produced in the streets, he suggests that those "hoggish individuals [who] allow their brother swine to enjoy a free range" should have the garbage they manufacture consumed by their own hogs at home.

In one of the infrequent contributions by female correspondents, a "Dolly Home-spun" complained:

Nothing is more disagreeable to us women, than the manner in which the milking is done. Many farmers do not bed their cows at all, and the consequence is, they lie down in their filth, and get up in the morning with bags too shocking to look at . . . nine out of ten will not half clean the cow's bag before they commence . . . and by the time they have finished stripping the cow, the milk is a nasty mess indeed!—hardly fit to give a pig. . . . Who would drink it if they knew this. . . . I wish the men who treated cows, so, had their own faces daubed every morning—I won't add in what.

On the matter of washing udders, the *Country Gentleman* reported in 1866 that this:

was not the custom or rule in any of the numerous dairies around St. Louis . . . they soften the teats with milk from the bucket. . . . On one occasion an Irishman was milking a cow, and the liquid manure was running into his milk bucket. On being reproved for being so filthy, his reply was that it was healthy.

A correspondent offered the advice that a brush was adequate to keep the udder clean, but "once a year it may be necessary to wash a cow's bag."

An incomprehensible custom led to the following animadversion by Allen in 1846:

At all seasons of the year dead animals are to be seen hung up on fences and trees; and especially is this the case in the spring. On every farm where sheep are kept, dead lambs are suspended in the beautiful, blooming, and fruit-bearing orchards . . . to annoy the sight and smell. . . . Dogs and cats too are frequently hoisted into view in the same annoy-

ing and disgusting manner. If horses, cattle, sheep, or hogs die, they are drawn out of sight, but not out of smell, and are still sources of disgust.

Allen was primarily concerned with the loss of valuable fertilizer; he does not mention the potential danger to persons or animals inherent in this practice.

Later, a New Jersey farmer explains that the practice of hanging up dead lambs in his area "is to keep the dogs from getting them, as that will learn them to kill sheep. But I think it is a bad sign to have dead lambs, any way." Farmers who tried to get early lambs, he says, frequently lost most of them.

One mode of protecting the public health was commented upon by a correspondent to the *Country Gentleman* in 1859:

I was entertained one morning at the Charleston, S. C. market by the black headed buzzards, who are there by hundreds to feed upon the offal. Being protected by law—five dollars fine for killing a buzzard—they are as tame as pet chickens.

And in the same year an example of the lack of protection of both human and animal health is mentioned. A farmer had removed several layers of wallpaper from his parlor, one "of a beautiful green, and with corresponding verdancy on our part, the entire peeling was thrown into the barnyard." For three of his heifers: "a post mortem revealed . . . the arseniate of copper had performed its legitimate work." During the time that Paris green was used as a paper pigment, numbers of persons were poisoned merely by living in the rooms papered with this poisonous product.

### Purveyors to the Populace

The publishers of the *Agriculturalist*, Saxton and Miles, conducted a "Cheap Cash Book Store," the first advertisement for which appeared in March, 1845. Those of veterinary interest are:

*American Poulterer's Companion*, \$1.25  
Clater and Youatt's *Cattle Doctor*, 50¢



One of the extensively circulated "Horse Doctors" of the latter part of the nineteenth century — no better or worse than innumerable other examples of its genre. Michigan State University Library.

Youatt's *The Horse*, \$2.00

Blacklock's *Treatise on Sheep*, 50¢

The following year saw the addition of:

*The American Shepherd*, \$1.00

*Stock Raiser's Manual*, \$3.00

*Treatise on Cattle*, \$3.00

*Knowlson's Cattle Doctor*, 25¢

*Mason's Farriery*, \$1.00

*Hind's Farriery*, 75¢

*The Horse, its Habits and Management*, 12½¢

*Stewart's Stable Economy*, \$1.00

*Treatise on Milch Cows*, 38¢

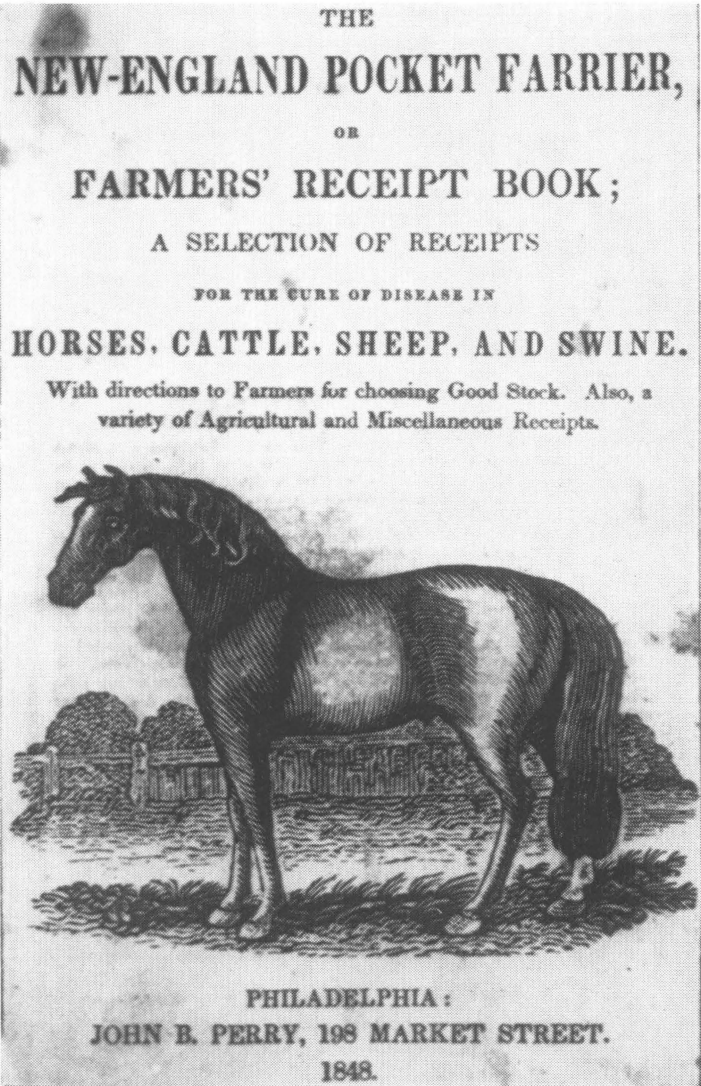
This list is fairly representative of what was easily available at the time. Some were British reprints, which were cheaper than the imported article; a few imported books at this time sold for as little as \$2.00, but

Loudon's *Encyclopedia of Agriculture* sold for \$10.00, and Stephens' *Book of the Farm* (3 volumes) for \$27.00. The market price for bacon in 1845 was 3¢, and butter 15¢ a pound, which would suggest that few farmers were interested in Stephens' *Book of the Farm*. It is also of some interest that the editor of the *Agriculturalist* ran an Agricultural Warehouse; plows sold for as little as \$2.00. The only item of veterinary interest was the fleam, price not stated.

By 1850 the list of works on the husbandry of various animals, which almost invariably included sections on disease, had been extended considerably. And in addition to the perennial *Farriers* of Mason and of Hinds, farmers had their choice of the *Complete Farrier*, 25¢; *American Farrier*, 75¢, and *Every Man His Own Farrier*, 50¢. A relatively unfamiliar entry into the field was Cole's *American Veterinarian*, 50¢. The fact that many of these can still be had for a dollar or two suggests that they had a considerable circulation, or at least considerable numbers were printed. Not so with veterinary items of a decade or so earlier; for example, the *Gentleman's Pocket Farrier*, by F. Tuffnell, Veterinary Surgeon, which sold for 15¢ in 1834, now commands a price a hundred times the original.

#### Yeoman Youatt

To 1850, and for some time later, the best veterinary works to be had were the several by the eminent British veterinarian, William Youatt, on each of the domestic animals, either in the form of reprints of the British editions, or with additions by American editors. The first was a pirated printing of his work on *The Horse*, published in Washington in 1834; 3 years after this, the first of his series of works, had appeared in England. Authorized reprints of his works on *Cattle* (1836), the *Horse* (1843), and the *Pig* (1847) appeared in this order; an edited version of the *Dog* (1846), and numerous edited versions of the *Horse*, *Sheep*, and *Cattle* were produced until late in the century. Although Youatt's books were more advanced than anything that

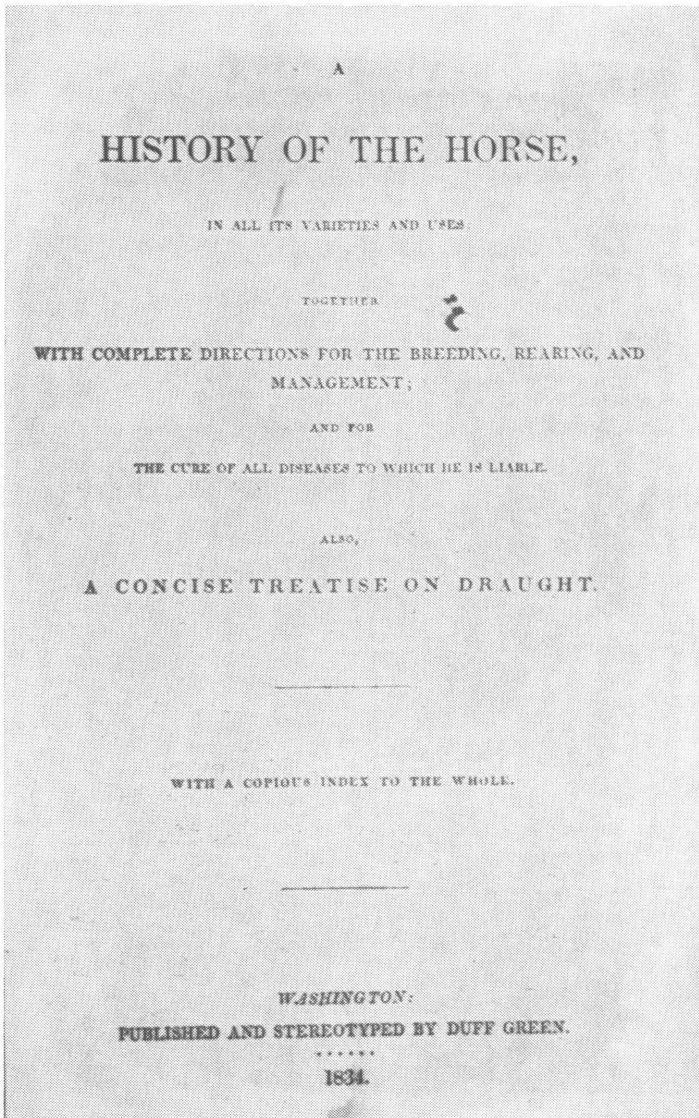


Following several editions of Jewett's *New-England Pocket Farrier*, first published in 1795, this title was appropriated for works by several later authors, usually anonymous.

had been produced by an American author prior to 1850, in many respects his regimen for the treatment of disease was only a moderation of the harsh practices then extant in Britain. Perhaps it was due largely to this fact — that they were not radical departures from accepted practice — that they became the backbone of veterinary medicine in America for half a century or more.

In spite of the fact that Youatt advocated humane treatment of animals, and had written a book on the subject, many of the

modes of treatment he gives can be considered as only somewhat less harsh than those of other practitioners. Moreover, he was fully conversant by experience only with the dog; much of his information on other species was gained by reading or correspondence. His medical acumen was such that he could make a judicious selection of the material available to him, and in several respects his concepts of disease were in advance of the medical profession. Thus he was one of the first to champion the specific nature of the rabies virus at a time



Title page of a pirated edition of Youatt's work on *The Horse* (London, 1831), an authorized American version of which did not appear until 1843. Youatt's books in American editions were perhaps the most authoritative works on the several domestic animals for nearly a half-century.

when medical men preferred to believe in spontaneous generation, atmospheric agencies, and a host of other generalities. A common opinion, as expressed by a Kentuckian in 1855, was that:

Youatt, in this country and in Britain, is esteemed good authority in veterinary medicine. His observations seem to have been carefully made, and his deductions generally correct—consequently his opinions are entitled even upon abstract questions, to the fullest consideration.

While many conditions undoubtedly were the same on both sides of the Atlantic, others were not, and American farmers and practitioners searched in vain for descriptions of a number of diseases that were peculiar to America. It was to remedy this situation, that the edited versions of Youatt's works were produced by Skinner (*Horse*), Stephens (*Cattle*), Randall (*Sheep*), and Lewis (*Dog*), each being something of an authority on that particular species. However as pointed out by the *Cultivator*:

It strikes us as a great objection . . . that there is no rule by which the reader can know what portions belong to the respective English authors, or what alterations or additions have been made by the American editor.

Not infrequently, ideas were introduced, either by Britishers who revised Youatt's

works after his death in 1847 or by American editors, which were in opposition to Youatt's views. Nor could these later additions be considered improvements in every case. There might be some question as to how much of Youatt was left in "*Spooner's Youatt on Sheep*, edited by Randall."



The American edition of Youatt's work on the dog was the first comprehensive book on this species published here, but additions by American editors did not always improve the text.

In many of the American works on animal husbandry, the inevitable section on disease was more often than not taken from Youatt. One such example is Evans' *Dairyman's Manual* (1851), of which a reviewer in the *Cultivator* says:

Eight chapters of the book are devoted to the diseases of cattle, and their cures, taken from Youatt, and just enough of them to make it of very little value to any one who needs a work of the kind. Better to apply to Youatt at once, than to resort to the emasculated text of a competent authority at the hands of one who confessedly does not understand the subject which he is attempting to handle. We confess, in all candor, that the book is little, if any better, with this medical addition to its pages.

In rebuttal, Evans states:

The extracts from Youatt on diseases, our reviewer would prefer to leave in the English book. So would the book-maker [himself], if it were accessible to the American dairymen generally; but as it is not, except at an exorbitant price, it was thought advisable by dairymen and others to devote a little space to diseases.

Evans apparently was more self-righteous than right, for another publisher listed Youatt and Martin on *Cattle* for \$1.25, and Youatt and Clater for 50 cents.

### Mad Medicine

During 1849 and 1850, the *American Agriculturalist* ran an extensive series of well-written articles on the diseases of the cow — by an anonymous author, but identified by the editor as being based “on twenty-five years’ successful practice of one of the most enlightened veterinary surgeons of the age.” In his writing on rabies, for example, this veterinarian demonstrates that he is a notch above most contemporary writers on animal disease. The disease, he says, arises only “from the bite of a dog, or other animal affected by madness, or rabies. Although it is regarded as incurable, it is proper to know its symptoms.” A host of other writers continued to give certain cures for rabies until well into the present century. In commenting on a cure for hydrophobia printed in the *Agriculturalist* in 1850, an apparently cynical reader says:

There is also a plant growing in this country that is said to cure this disease sure. Some person in Ohio once wrote to me about it, and sent me some seed; but when one of my old out-houses burnt, I lost both seed and name of the plant and writer.

In offering “. . . a better remedy for the cure of wounds by goring,” this same cynic suggests:

First, let the gored animal die. Now take off its skin and take it to the tanner and sell it. Take the money and buy as many balls for cattle horns, as you have horns in the herd, and put them on, and bid the said horns to go and sin no more. It is always better to have one cow gored to death first, before putting on the balls, because “a burnt child dreads the fire.”

Again, “a better remedy” for dog distemper is:

Take two grains of strychnine, and give it in a little milk or any food the dog will eat. . . . For nine tenths of the canine race, it is the best medicine in the world.

And on the administration of gunpowder for choked cattle, commonly recommended at the time, another correspondent suggests:

Make a cartridge large enough for a musket and thrust it down the throat . . . if the choking is so bad that this will not relieve it, you may use fire with the powder with the next charge.

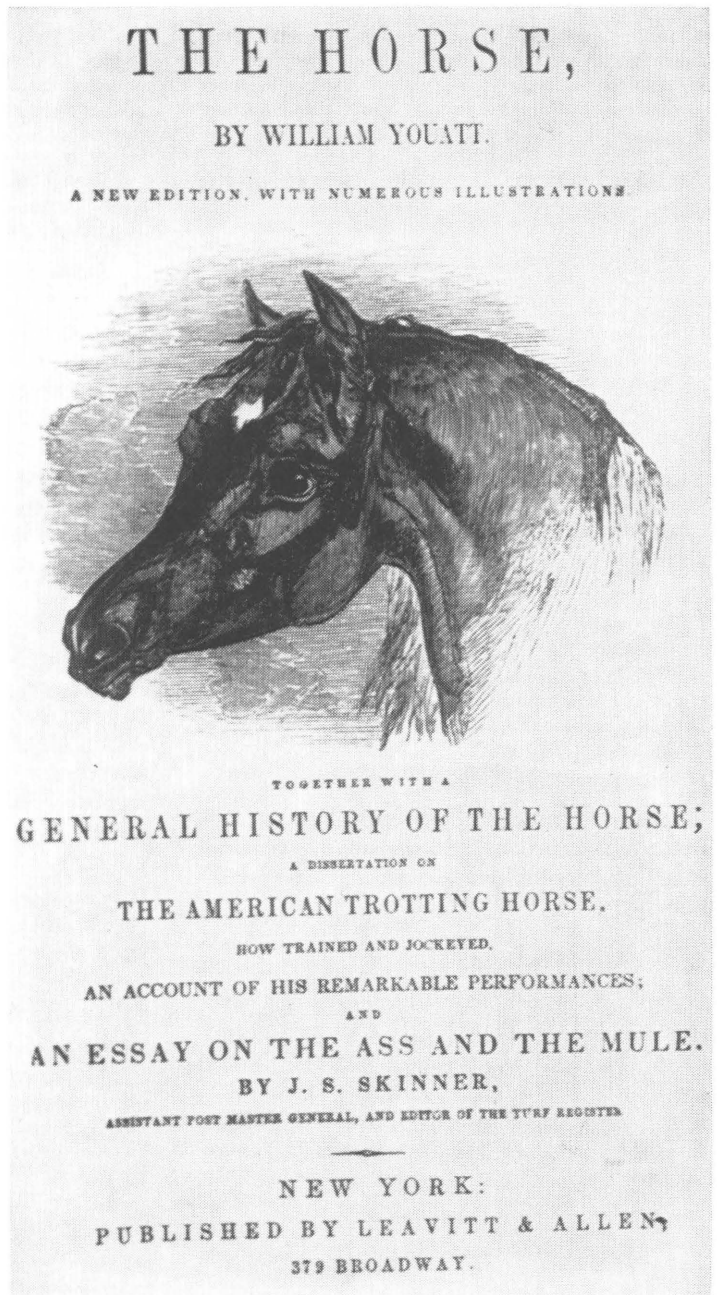
### Education for All

The editor himself frequently used biting satire to put across some points, but on others he reported facts or opinions in a straightforward manner. A frequent topic throughout the 1840's is the need for agricultural education, including training in veterinary medicine. Thus in 1849 he gives in detail the plan of Professor J. P. Norton of Yale for a state agricultural school in New York, which was to include “a Veterinary Department, where the diseases of animals can find proper treatment.”

In the same year he admonishes farmers:

Keep a watchful eye over all your domestic animals, and see that they are not diseased. If





One of numerous editions of Youatt's *The Horse*, with additions by American editors. The book today is a valuable reference on the natural history of the horse, if not for its veterinary aspects.

they have a full and frequent pulse, a loss of appetite, a dejected head, and a languid, or watery eye . . . depend on it, they are ill, and require the immediate attention of the doctor, or veterinarian.

A later correspondent, however, says:

The farmer should have a knowledge of medicine and of the elements of surgery; for though, in this respect, when applied to human ail-

ments, it may prove that "a little knowledge is a dangerous thing," yet many a fine animal is allowed to become dog's meat, because its owner could not distinguish between a fever and an inflammation, set a bone, nor bandage a wound.

And another writer on the diseases of the cow insists:

Every person having the direction of the management of cows should be able to perform the operation of bleeding, as circumstances are liable to occur when the life of the animal may be saved by its timely application, where proper assistance cannot be immediately procured . . . the fleam will be found the best instrument for those who are not acquainted with this process.

From the outset, the agricultural journals took care not to neglect the farmer's wife and daughters. Thus the Ladies' Department in 1847 carries an article on "Treatment of Canary Birds under Disease." Overeating, we are told, is:

The most common cause of disease . . . moulting . . . is frequently fatal. . . . The Canary bird is also subject to epilepsy . . . [for which] the cure is doubtful. . . . In addition to these evils, the Canary is infested by a small insect.

Other diseases described in a later article include rupture, gall in the head, sweating, sneezing, constipation, and overgrown claws or beaks.

### Chloroform Castigated

Among newer developments in 1850, there is a report on "The Use of Chloroform During Castration of Horses," taken from the *Veterinary Record* (*Veterinarian*, London). The author reports that in one of two horses operated upon:

I am of opinion the struggles were more violent than if the chloroform had not been used. I, therefore, am of opinion that there is no certainty in its action, and scarcely any advantage, on the score of humanity, to the patient . . . we cannot rely upon it as calculated to supplant the hobbles and ropes usually employed during the performance of operations to ensure safety to the horse, operator, and attendants.

As later events proved, general anesthesia for animals did not become a reliable technic for another half century or more; even if the few contemporary reports in American papers had proclaimed it an unqualified success, there would have been all too few qualified persons to capitalize on it. George Dadd is known to have used chloroform and ether as early as 1852, and Jackson's account of the experimental use of anesthesia on animals, recorded in the *Report of the Commissioner of Patents* for 1852, is summarized in the *Country Gentleman* in 1855. This the editor considers "a very interesting article," but he does not enlarge upon its possibilities.

One of the potential uses of chloroform, not likely envisioned by its discoverers, is recorded in the *American Agriculturalist* for 1858:

It is reported that in Taunton, Mass., several fat hogs have been stolen by first administering chloroform, and then taking them from the pens, without so much as raising a squeal.

And the *Country Gentleman* for 1856 reports:

The latest educational improvement is to administer chloroform to children, while the parent is obeying Solomon's injunction not to "spare the rod."