

American Veterinary Review

WITH THE FOUNDING of the *American Veterinary Review* in 1877 a new chapter in the history of veterinary medicine in America was begun. That this was no hastily considered move may be appreciated from the fact that at the fifth semiannual meeting of the USVMA in 1868, a committee consisting of Drs. Liautard, Large, Stickney, Thayer, and C. M. Wood was appointed "to investigate the subject of printing a veterinary journal."

MISSION OF THE REVIEW

At the thirteenth annual meeting in 1876 it was resolved:

That a Journal be printed by the Association, semiannually, January and July 1st, to be called the *American Veterinary Review*, A. Liautard and A. Lockhart, Editors, to cost each member fifty cents per volume, balance of the expense to be paid from the Association funds.

The reception of the first issue of January, 1877, was such that in March it was resolved: "That the American Veterinary Review should be published monthly and that the faculty of the American Veterinary College be added to the editorial staff." The subscription price was made \$5.00 a year, and monthly publication began with the April issue, with Liautard as editor, and Drs. Large, Robertson, and Holcombe as assistants.

As stated by Liautard:

It is our intention not to have our periodical limited to the report of cases or discussion of papers; but to embody in it any subject which is connected with veterinary science, and therefore, we will try to furnish our readers with articles of interest to the Veterinarian, to the Agriculturalist, to the Legist, and to the Sanitarian; leaving our columns open to all who may be interested in the elevation of veterinary medicine in America, and with the hope of receiving their kind support and assistance.

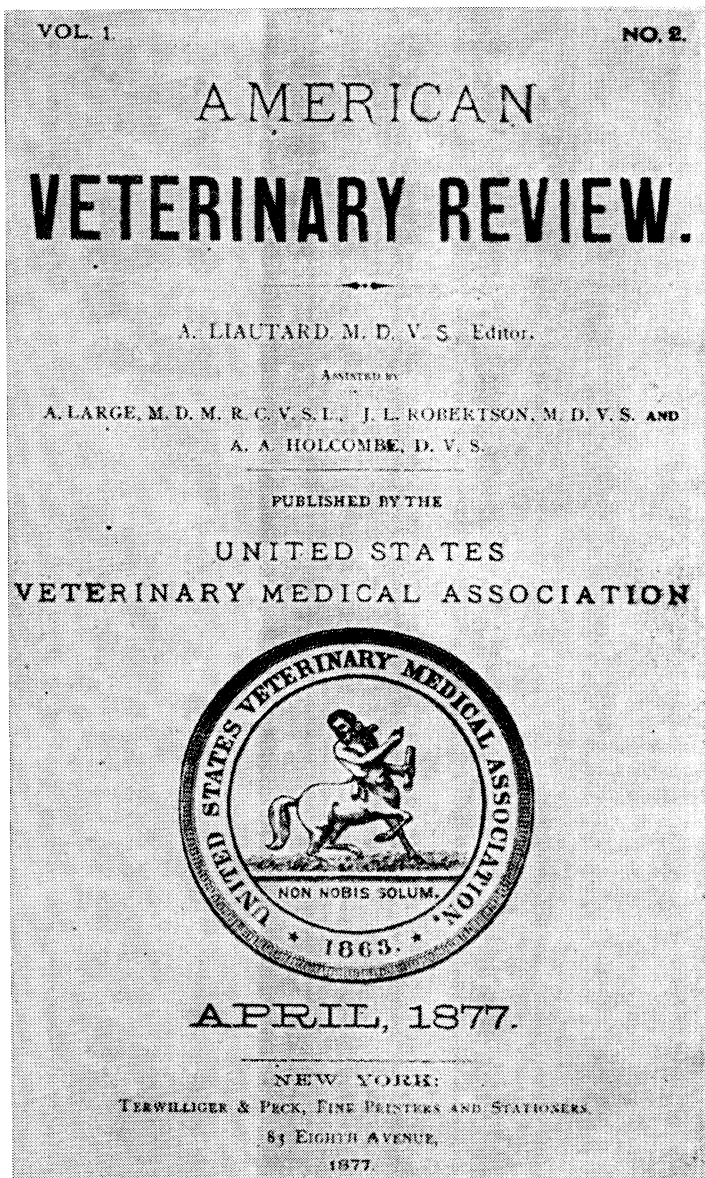
The editors of the British *Veterinary Journal* hailed with "unfeigned pleasure" the advent of the *Review*, and stated:

From the manner in which the two numbers have been presented to the public, and the excellence and interesting character of their contents, we may safely predict a full measure of success to our young contemporary.

Later, at the fourteenth annual meeting of the Association, retiring president Liautard called attention:

to the progress which Veterinary medicine and surgery had made during that time, and said he believed the birth of the *American Veterinary Review* was the most important of them all. . . . It was born to the Association upon the year of the hundredth anniversary of the birth of the nation . . . and is receiving favorable notice at the hands of English, French, and German Veterinarians.

A retrospective view confirms Liautard's opinion. As put by Merrillat and Campbell:



The *American Veterinary Review*, with Alexandre Liautard as editor, was established in 1877 as the official organ of the USVMA but three years later reverted to the editor as a private venture until it was purchased by the AVMA in 1915. Michigan State University Library

Its influence upon the trend and the development of veterinary medicine in this country for 30 years was not equalled by anything else. . . . In fact, the *Review* very largely influenced the policies of the association and to a considerable extent, those of the schools also. The *American Veterinary Review* constitutes Doctor Liautard's greatest contribution to veterinary medicine in the United States.

Certainly, for the first ten years or more, the *Review* was more representative of the

American veterinary profession than any other institution, and it is undoubtedly true that its influence was in large measure responsible for the increasing leadership exercised by the Association. The *Review* not only was a repository for the history of the American veterinary profession; it created history by bringing to veterinarians in this country a new philosophy and new goals to work toward. Also, it is more than mere conjecture that the lack

of a public voice had been a major factor in the Association failing to become a major power sooner than it did. A profession without an official journal is like a city without a responsible newspaper; its citizens are deprived of a powerful medium for civic improvement.

In March, 1877, Dr. Liautard reported on the first issue of the *Review*, published in January. The first edition of 150 copies had been exhausted, and a second printing of 250 had been made, the total printing cost being \$180. A total of 183 copies had been distributed, of which 105 had been paid for. With \$45 being received for advertising, this left 217 copies and a deficit of about \$90. Undaunted, it was recommended that the *Review* be published monthly. In 1880 the cost of printing the *Review* was \$706, and \$724 was taken in from subscriptions. Considering the fact that the *Review* had been sustained almost entirely by Liautard — without remuneration — it was perhaps fitting that it should have been tendered to him “as a slight recognition and respect of the labor he has done for us, and the profession at large.”

While it is true that, as charged by Merillat and Campbell “Prof. Liautard evinced little interest in veterinary matters west of Philadelphia,” and contrary to Liautard’s denial of the matter, he did permit the *Review* to speak somewhat more plainly for his personal interests than for some others, a charge of egotism cannot be fully justified. It is perhaps logical that activities of the American Veterinary College should be aired more fully than some others; at least when case reports were needed to fill pages, he had a convenient place to turn. Less defensible, of course, was his missionary work on behalf of higher educational standards for others while he failed to push for these at home as actively as he might have. But this came somewhat later; for the first few years the *Review* maintained a surprisingly cosmopolitan attitude toward the veterinary profession as a whole.

The first volume of the *Review* contained more than a hundred pages of origi-

nal feature articles, some of which came from outside the New York City area, from as far away as Montreal, Toronto, Chicago, St. Louis, and Cincinnati. Actually, relatively few feature articles were of local origin. Feature articles and abstracts translated from foreign journals accounted for another hundred or more pages. A dozen or so pages were devoted to several veterinary associations, and some two dozen to various activities at the American Veterinary College. Some 50 pages were devoted to papers read at the 1876 Association meeting. Case reports, news and sundry items, and editorials accounted for most of the balance of the more than 400 pages of professional matter in the first volume. An obvious deficiency is the lack of anything suggesting experimental research being conducted in America; some of the papers show evidence of keen clinical observation, but there was painfully little truly experimental laboratory work to be reported at this time.

Original articles, other than case reports, of American authorship, dealt with cerebrospinal meningitis, veterinary education, effects of cold, osteoporosis, enterotomy, pyogenic cellulitis, periostitis, rinderpest, spavin, Texas fever, formation of the corpus luteum, rabies, and contagious pleuropneumonia. The subjects of papers read at the 1876 meeting of the Association included the history of veterinary medicine in the United States, zymotic diseases, use of stimulants in disease, chronic lameness, erysipelatous cellulitis, and veterinary sanitary measures.

Perhaps as much as a quarter of the material in the first few volumes was contributed by Liautard, mostly in the form of editorials and translations from foreign journals. A substantial amount of material was contributed by men who were, or who were to become, leading men in the veterinary profession. The first volume contains articles by Duncan McEachran, James Law, D. E. Salmon, C. P. Lyman, E. F. Thayer, C. B. Michener, and F. S. Billings, among others. The physician Osler, later Sir William, also was a contributor.

Editorial Urging

Some abstracts from Liautard's editorials in the first volume demonstrate the scope of his interests, as well as the general tenor which he intended to establish for the *Review*. In succession, he wrote:

On Sanitary Veterinary Medicine:

It seems to us that the duty of all veterinarians of the country is to rally together to obtain from our government laws to organize a Sanitary Veterinary Board, for the protection of our livestock.

On Veterinary Surgery:

Amputations of extremities, which occupy such a large place in human surgery, are far from having the same importance in the therapeutics of animals . . . only on few occasions and in animals of great value [will] owners run the risks of a doubtful result. Still it can be recommended . . . [in appropriate cases].

On Preparatory Education:

Let all schools on the continent establish the requirements already adopted in the United States, and ignorant people will soon learn that before attempting to be honored with the trust of caring for our domestic animals they must take advantage of one of the greatest institutions of our country, *viz: free public preliminary education*.

On Professional Status:

We have in view but one object—the advancement of our profession—and if, by the publication and success of the *Review*, we can reach that object, if we can draw the Veterinary Science in America from the low standing in which it has been for so many years, our labors will have received their full reward.

On Veterinary Colleges:

This Continent is large enough to support several institutions of Veterinary Science; and there ought not to be between them any other sentiment of rivalry than that, to benefit as well and as much as possible the guardians of our live stock.

On Veterinary Practitioners:

If we look upon the number of persons who are engaged in the practice of the treatment of domestic animals, we can divide it into two

large classes:—1st, those who, regularly educated for the profession, and graduated in Veterinary Schools, are . . . the true representatives of the Veterinary profession; and also, those who . . . have by their exertions, by their self studies and observations, brought themselves with honor to the same level as the regular graduates. 2nd. Those who, ignorant and vulgar charlatans and unscrupulous empirics, are by cruel and absurd treatment, by exorbitant charges robbing the people of their money, and the poor beasts of their lives. . . .

It is true, that between the two classes, one might find a third one—a kind of bastard who belongs to both, while he belongs to neither . . . the graduate who covering himself of his garment of regular member of the profession does not hesitate, to satisfy his own purpose, to impose upon a credulous public, by using all the means of the charlatan—but this one we may leave to himself. Give him rope enough, and he will unknowingly use it round his own neck.

On Public Appreciation:

Our people are ignorant of the importance of Veterinary medicine; our science is yet, and will be for years to come, in a low social standing. These are, undoubtedly, the impressions that the ordinary practitioner will put to himself when thinking of the condition of the profession in the United States. That there is much truth in these sad words no one will deny, but we think that they are exaggerated.

No, we do not believe our people entirely ignorant of our usefulness or our importance. No, the science will not for years to come remain at a low social standing . . . though the improvement has been slow, still there is no doubt an elevation in the estimation of the people of the Veterinary schools. We are certain this is due, and to the sending off of *well deserved graduates* we attribute much of the improved condition of the profession. In fact the time is fast coming when the necessity of a diploma or of a lawful credential, will be indispensable to one who intends practicing.

On the USVMA:

Something more than general business of a large society like the United States Veterinary Medical Association ought to be carried on at a yearly or anniversary meeting. . . . In this last meeting [1877] . . . we had nothing . . . and unless the special efforts of the officers of the Association can wake up the spirit of labor amongst the members, we fear the United

States Veterinary Medical Association will never see again a meeting like the one held in 1876, and that, though its members may increase, the good that it might do towards the interests of the profession will be of little use.

On a National Veterinary Bureau:

We need a Sanitary Veterinary Department, with its headquarters at Washington, in the rooms of the Agricultural Department. . . . We are only few in the United States, but each of us working in our own sphere can do an immense amount of good work. Let us offer our services for the good of the country, gratuitous, if necessary, to fulfill the positions of Sanitary Veterinary Inspectors. We say gratuitous, for we may then ask from the department which will gain so much by our work, we may ask it to recognize our services, our indispensable value in the wheels of the agriculture of America by urging the establishment of a National Veterinary Institute on the same plan as those of continental Europe.

On Agricultural Education:

Agricultural students cannot receive in an agricultural school the education that good veterinarians ought to have, and good as the efforts of the teachers may have been, the result cannot but be the same, viz.: the turning out of so many men scarcely better than empirics.

On Veterinary Societies:

Veterinary societies are few in the United States, but we consider the duty of every member of the profession to belong to them—not a duty to himself, but to veterinary medicine, to which he belongs. The question is not whether he cares or not; nor whether or no his professional standing and connection will not suffer from his ignoring respectable bodies composed of the majority of well recognized practitioners; but in the condition where veterinary medicine is as yet in the United States, we hold that every Veterinarian, no matter where his professional position; and where can he better do it than in the centre of a scientific society?

Editorials in succeeding volumes repeated these themes—with variations—and other subjects related to the development of veterinary medicine, the contagious diseases of domestic animals—individually and collectively, veterinary legisla-

tion, state veterinarians, etc., etc. Dr. Liautard spoke forcefully and to the point, leading the way—but not by the nose. Despite the fact that he did not become a citizen during his forty-year stay in the United States, he spoke as an American—as well as a veterinarian. Speaking “with great pride and an uncontrollable joy,” in his greetings from France upon the occasion of the fiftieth anniversary celebration in 1913, he says of the Association, “all of us veterinarians can be proud of her.”

Chronicle of the Profession

The journals of a profession are perhaps the most reliable determinant of the status of the progression at any given time. This is especially true the farther back one attempts to probe into the history of the profession. Great teachers, of course, are revered by their students, and their influence lives on through their disciples who have been attracted by them into the teaching profession. For the most part, however, it is only those who have written texts that have been widely used that will be long remembered by more than their own students. The same is true to an even greater extent of a talented clinician; if he does not record his experiences for the benefit of his colleagues—and for posterity—his talent will die with him. Others will—often all too gladly—chronicle our deficiencies, both large and small, and to a lesser extent our more outstanding accomplishments. But the man who murders his bride gets far more publicity than the man and wife who live happily together for fifty years and contribute several good citizens—rather than a crop of juvenile delinquents—to the community.

Concerning the early career of the *American Veterinary Review*, Merrillat and Campbell state:

It is the principal repository of the struggles, the hopes, the aspirations, the achievements and in short, the progress of veterinary medicine on this continent during the last quarter of the nineteenth century. In its pages we trace the development of veterinary associations, the

enactment of veterinary practice acts, the rise of veterinary bacteriology, the improvements in surgery, the beginning and extension of anesthesia, the publication of veterinary text books, the establishment and growth of veterinary schools, the refinements of veterinary pharmaceutical products, the introduction of veterinary biological products—in a word, the history of veterinary medicine.

While it is true that the *Journal of Comparative Medicine and Surgery* (under several titles) also spans this period, perhaps its most enduring value was in the stimulus to greater excellence it afforded the *American Veterinary Review*. Although the more cosmopolitan and erudite editorial approach of the *Journal* attracted many noted authors, it was, undoubtedly, ahead of its time, and this fact alone perhaps proved to be its undoing. It never paid its own way, even after becoming a purely veterinary journal under Dr. Huidekoper's brilliant but somewhat erratic editorship in 1890. It was during this time that it became more competitive in content with the *Review*, but with the editors personally able to assume the annual deficit, there was no necessity of competing for survival by truly serving the requirements of the profession. During this time the *Journal* did, however, make notable contributions to the cause of veterinary education and the army veterinary service. Earlier, however regrettable it may be, it may be doubted that veterinarians were much interested in sixty pages on "The Comparative Anatomy of the Pyramid Tract" (1886), or eighty pages on the osteology of hawks and herons (1888). A number of physicians would undoubtedly have been interested in the former title, but even an avid bird watcher might not care to assimilate the latter.

A major problem in establishing a new journal, in particular, one new in concept, is that of securing adequate material to fill the pages—and fulfill the mission of the journal—until it obtains the support of a widening circle of authors. Admittedly, a large portion of the early volumes of the *American Veterinary Review* was essentially an American review of foreign

veterinary medicine. This, however, gave the veterinarian in America access to a broad cross section of developments in veterinary medicine—then, even as now. Among the items from abroad reported in the first volume were diagnosis of pregnancy in domestic animals; continuous irrigation in surgical treatment; colotomy for removal of calculi in the horse (successful); the use of oxygen at high pressure in physiological investigation ("space medicine" *à la* 1877); histology of the mammary gland of the cow; and castration of cows.

What's New

Although the early volumes contain little suggesting reports of veterinary investigations in America, the *Review* is a chronicle of newer developments in clinical veterinary medicine. The concept of general anesthesia in veterinary practice, of course, was not new at this time, but its use was to many practitioners. The use of chloroform and ether in reduction of fractures and in the removal of tumors, as well as the hypodermic use of morphine, is described in the first volume of the *Review*.

Of some interest is the fact that most of the case reports in the early volumes include temperature records, at a time when thermometry apparently was a new departure in both human and veterinary medicine. Concerning this Liautard editorialized in 1878:

Amongst the progress made for the last few years in the appliances for the diagnosis and prognosis of disease, the application of the thermometer must take a first rank. Indeed, it is only a few years since, that the use of this instrument by physicians first, and afterwards by veterinarians was called into extensive and general practice. American veterinarians were not the last to see the benefits to be derived by the use of this little instrument, and though many old practitioners smiled at the idea of the *new toy*, as some called it, it soon became in the hands of the conscientious observer, an excellent means of assistance, and it soon was found, that both the practitioner as well as the student, could scarcely do without their thermometer. . . . Today it is rare to read a report of a case without careful observation of the temperature.

To show that matters have not changed much in at least one respect, Liautard concedes that the thermometer has on occasions been misused:

and many young graduates will remember forgetting it in the cavity where it was placed, and when returning to find it in the bedding or amongst feces broken in many pieces.

The *Review* for 1878 carried a series of articles, translated from the German, on: "Thermometry of the Domesticated Animals, and Its Use in Veterinary Medicine."

For Whom the Bell Wether Toils

Concerning the proper mission of the *American Veterinary Review*, C. B. Michener writes in 1881:

There should appear in the columns of the *Review* some brief notes upon subjects that interest not only the veterinary profession, but also the community at large. Particularly is this true with reference to the relationship existing between veterinary science, agriculture and commerce. Our little journal finds its way into the hands of many agriculturalists, men who would appreciate the value of well chosen remarks upon subjects such as the feeding and care of stock, draining, and its influence in preventing diseases . . . as well as the best means of preventing outbreaks of enzootic or epizootic diseases.

I expect to meet with some opposition to this proposed course, and to be told that this is a veterinary and not an agricultural paper. This, in a limited sense, is true. It is a veterinary journal essentially. But shall we leave no room for the discussion of those questions that affect alike the veterinarian, the farmer, and the stock-raiser? . . . I think not. . . . There is always a danger that a journal like this will become too exclusively "scientific," deal too much with abstract study, and thus, to a certain extent, lose its interest for the busy practitioner.

Certainly no one would object to the several subjects he suggests: the implication of earthworms in spread of anthrax; particular plants or soils causing certain diseases; the restrictions on trade imposed by livestock diseases, and the like. Moreover, the *Review* did carry articles of this nature. It seems likely that Michener was

protesting against the amount of space devoted to reports and translations of foreign research workers. At a time when very little work of this nature was being carried on in this country, however, the *Review* undoubtedly performed a worthwhile service, both in making this information available, and in acquainting the practicing veterinarian with the concept of veterinary research.

Later a practitioner, in calling a spade a spade, asks:

Must we not, to have a readable, interesting, and valuable paper, present to our readers other than the writings of the most eminent scientists among us: I do not mean that our pages should be filled with inferior matter. I do think, however, that after reading an article by Pasteur, Colin and many others, we should find reports of interesting cases—reports that embody the history, treatment and the results of the special treatment adopted in each particular instance.

In particular, he urges, a veterinary journal should give "the history of existing diseases, whether 'common' or otherwise."

Presumably there were veterinarians who would have preferred more case reports and the like in the early volumes of the *Review*. The fourth volume, for example, contains but about forty pages of American and half again this number of foreign case reports. Some sixty-five pages are devoted to the work of Pasteur and other French investigators, including several veterinarians, and seventy pages are occupied by an exhaustive report by the English veterinarian, George Fleming, on human and animal variolae. Another twenty-eight pages are given over to the research of Dr. Willems of Holland on the causative agent of contagious pleuropneumonia; this was timely inasmuch as equal space was devoted to outbreaks of the disease in the United States, but Willems was an advocate of inoculation for the disease, and in this respect his work perhaps unduly influenced some veterinarians here. Lengthy consideration is given to the laws of Germany for the suppression of epizootic disease.

Professional Loss, Private Gain

The fact that the *Review* was able to keep on a sound financial basis—if only barely so—is evidence in itself that there was not an overwhelming protest concerning its content. Of its reception, Liautard states in 1880:

Since its birth, the *American Veterinary Review* has met with a success unequaled by any periodicals of its kind, specially if we consider the conditions under which it was issued.

In that year, however: “A letter of resignation from A. Liautard, begging to be relieved of the editorship of the *American Veterinary Review* . . . was presented to the Association.” The result of this was that at the subsequent semiannual meeting of the USVMA in March, 1881:

In view of the increasing demands made upon the time of the editor . . . the society decided to present the journal to Prof. A. Liautard, without any encumbrance, as a slight recognition of the work he has done for the Association and profession at large.

Although it is obvious that the *Review* barely made a profit, the editor in 1879 had “reported the condition of that journal as being at present most flattering, and asked that he be permitted to lower his price of subscription from \$4 to \$3 a year,” which request was denied, except in the case of students.

The real motives of either Liautard or the Association in this matter are, perhaps, too remote to be susceptible to full delineation, and probably little would be gained from such a recital. It is evident that if, as stated by Liautard, it was the demand on his time that prompted his “resignation,” his acceptance of full rights to the journal could not but have increased these demands. However much the *Review* might have been calculated to add to his personal fortunes, he may very likely have given less consideration than the free hand he would obviously have as its proprietor.

At the meeting in 1878, in suggesting that he might resign, Liautard had stated,

“Give your [new] editor *carte blanche* for his management of your interests in the paper, and above all, let him make his own choice of assistants.” It would seem likely, however, that he surmised there would be no scramble for the post. A. A. Holcombe’s report as secretary states:

Dr. Liautard tendered his resignation . . . [but was] unanimously re-elected to the editorship, and given the privilege of selecting his own assistants and of conducting the *Review* in accordance with his own judgement.

The title page of the next volume states that the editor is: “assisted by a number of selected veterinarians.”

That the *Review* apparently was in sound financial condition, as Liautard had repeatedly said it was, is indicated by his request in 1878 to reduce the subscription price from five to four dollars, which was granted; and to three dollars in 1879, which was not granted, except for students. In 1880 Liautard reported, “Its circulation is not only increasing, it is not only free from debt, but has a small amount of funds to its credit.” The Association left the matter of paying an honorarium for original articles, not to exceed \$25, to the discretion of the editor.

Billets-doux for Billings

In 1879, the ever-intemperate Billings had lamented:

We long to see the day when “our *Review*” shall contain contributions worthy of translation and recognition in other countries and among mediciners. Alas, when will the day come? Yet we have no reason to complain, for about all the matter of any scientific value in the *Veterinary Journal*, Britain’s leading review, is like our own, purloined from continental workers. We have had a perfect surfeit of “transverse presentations,” regular and irregular strangles and colics, of tetanus which ran out, and all such nonsense.

This appears in the body of one of many articles translated from the German by Billings, who, therefore, was himself contributing to a continuance of the situation

he so resoundingly condemned. Unfortunately, Liautard offers neither defense nor apology for this particular item; not so George Fleming, editor of the *Veterinary Journal*, however, who says his publication "has no need to purloin, neither has it the intention to act dishonestly." Concerning the *Review* he notes:

At not very infrequent intervals, there have appeared articles in your interesting periodical, in which, in one part or another, indulgence in strong language and undeserved disparagement, either towards myself personally, or the Journal which I edit, is manifested. I have hesitated to notice these attacks hitherto, trusting to the sense of fairness which I know your readers to possess, and also hoping that your editorial influence would be invoked. . . . But as these vituperations and unfounded assertions are continued, and appear to have become a permanent feature in certain communications, I think it is high time to notice them, and to ask for your exercise of the editorial privilege.

Fleming quite correctly directs his strictures primarily at Liautard, and dispatches Billings with the curt note: "In the *Review* for April, just at hand, there is a paper, at page 12, with a heading in German, and which is a kind of a translation from that language."

Others were equally censorious: an "Amused Graduate of the A.V.C." states:

Mr. Billings will never gain . . . stability by trying to lift himself into notoriety by the waist-band of his breeches. . . . Before he commences to run everything pertaining to veterinary science in the United States . . . let him make a reputation as a man and a practitioner, and place himself above the need of informing the public [through numerous articles in *Turf, Field and Farm*] that he is the son of his father and the first American graduate of Berlin in the United States.

Billings, however, continued to needle the American veterinary profession, although not always without cause. Thus upon the transfer of the *Review* to Liautard, he writes:

In a certain way the *Review* has changed hands. It has been the organ of the profession through its Association. It is that no

longer. . . . He alone must shoulder the whole burden. In this there is no change, for he has always carried this burden too much alone. . . . This reflects upon the profession. They are willing to pay for edification, but not willing to mutually contribute to edify and educate one another.

USVMA vs. AVR

This action taken in 1881, however, is not without significance in assessing the status of the USVMA at this time. It is evident that the *Review* had in three years become a more powerful influence than had the Association in 18 years. Rather than being purely a gesture of appreciation for Liautard's work, the gift might be considered a realization of the fact that the Association had but little choice in the matter—who was there to assume the responsibilities of editorship? Under the circumstances, the move undoubtedly was a wise one; the *Review* continued as much as before as the voice of the Association, and perhaps the veterinary profession benefitted more than it realized from the increasing tempo of dissatisfaction with the *status quo* reflected in the writings of Liautard. In accepting his new status:

The editor fully appreciates the importance of the task before him; . . . he will more than ever endeavor to do full justice to his position. . . . The pages of the *Review* will always remain open, and never will be allowed to become the representative of any particular society or association, of this college or of that school. The editor will endeavor to remain strictly what the name of the journal should indicate, above all things, American in character.

Liautard had not been silent in the early volumes of the *Review* concerning the lack of progress made by the Association, and in this he was not alone. In 1881, however, he issued his most outspoken criticism to date:

This association has been in existence for eighteen years, and what work of any advantage to the profession can it boast of? By a recently published register of the veterinarians practicing in the United States, the profession

is said to count about seven or eight hundred members in its ranks, and yet the United States Veterinary Medical Association counts only sixty-eight members. . . . Why is it that the meetings are so deficient in professional discussions, and so lamentably remarkable for the absence of papers of acknowledged importance? . . . We have been giving the subject a great deal of thought, and believe that some important reforms ought to be made in our organization at once.

As an effective comparison, Liautard preceded the above with an editorial on the recent London Veterinary Congress, commenting on:

the large attendance, and the enthusiasm and earnestness of those present . . . as an incentive to original investigation and research in all the branches of veterinary science. . . . We sincerely trust that the examples set by our British friends will serve to infuse new life and vigor into the meetings of the United States Veterinary Medical Association.

The Review vs. the Journal

Liautard's criticism of the USVMA, however, remained constructive, and it may be fairly considered that this was a major factor in bringing about needed reforms. The *Review* certainly remained a faithful representative of the American veterinary profession. As suggested above, however, it is not quite true that the *Review* remained aloof from the politics of the veterinary schools. Not only did the editor's position make it likely that the American Veterinary College would receive a considerable share of attention, with the publication of the *Journal of Comparative Medicine and Surgery* more or less as a voice of the Columbia Veterinary College, the *Review* unobtrusively renewed its championship of the editor's school. Liautard, however, carefully refrained from indulging in the carping criticism occasionally found in the *Journal*, and directed toward his school.

In 1883 the *Journal* stated editorially that while the USVMA:

has some good members—it is officered and worked, however, chiefly by the faculty of a single veterinary college and in no sense repre-

sents the progressive and scientific elements in the profession.

Although it is true that New York and Massachusetts had had a monopoly on Association officerships, it may be doubted that the American Veterinary College had much of an edge, except in that certain members of its faculty were senior members of the profession. At this time the slate of Association officers was completing its second year of tenure, having been re-elected *in toto* in 1882. Williamson Bryden of Massachusetts, a Montreal graduate, was president; Lachlan McLean, M.R.C.V.S., of Brooklyn, vice president; C. B. Michener of Pennsylvania, an A.V.C. graduate, secretary; and Charles Burden, an N.Y.C.V.S.-A.V.C. graduate, treasurer. Like the *Review*, the *Journal* claimed to be:

the advocate of no special school, but will try to keep all the schools up to the best standard it can by kind words of criticism and of praise where they can be given.

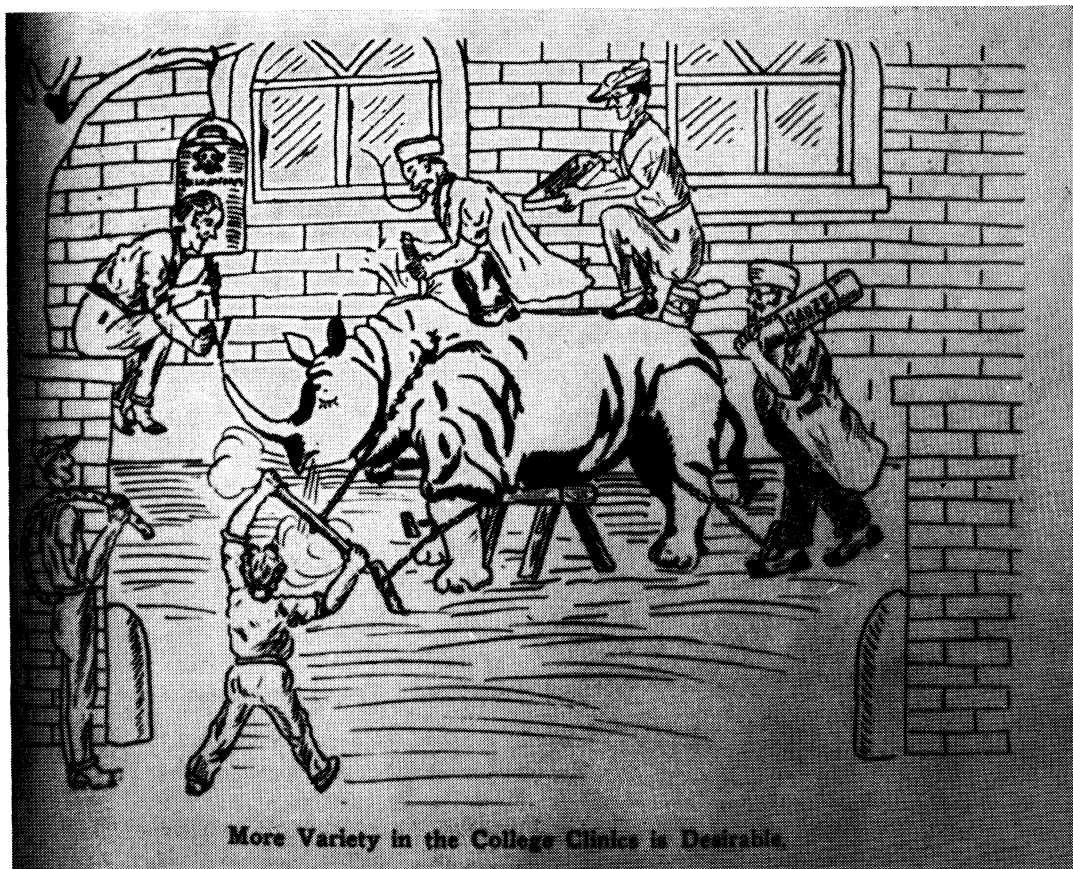
Later the *Journal* stated that the USVMA:

has, through unfortunate and undesired circumstances, become, in reality, almost entirely an association composed of the graduates of the American Veterinary College.

With the sudden demise of the Columbia Veterinary College in 1884, and the absorption of its student body by the American Veterinary College, however, the *Journal* noted that however unfortunate this might be:

the result in this case cannot be considered as other than a source of satisfaction to the veterinary profession in this country, assuring it, as it does, the possession of a school which bids fair to rival the best establishment of its kind in Europe.

And later, the American Veterinary College was styled as "a school which has been for so many years a great blessing to this country." Advocates of the Columbia Veterinary College could lay a claim to supremacy as the only three-year school in America; under the circumstances, this re-



Complaints by practitioners that the colleges were "impractical" are as old as the colleges. Dr. Liautard published this cartoon in the 1880's, apparently as a satire on criticism of his own American Veterinary College. *American Veterinary Review*

quirement may well have been one reason for its short-lived supremacy.

THE QUEST FOR STATUS

A major mission of the *American Veterinary Review* was the establishment of a higher status for veterinary medicine as a science, and of the practitioner as an individual and a member of the veterinary profession. This takes on some semblance of "operation bootstrap," but there can be no doubt of the sincerity of Liautard and others in attempting to frame a new philosophy.

In writing on "Veterinary Education" in 1877, Duncan McEachran, Principal of the Montreal Veterinary College, urged:

We have now reached an era in the history of Veterinary Science in America, which demands that each member of the profession will do his duty to himself, his country, and his profession, by insisting henceforth that this noble science, valuable as noble, for by its proper utilization, millions of dollars which under present circumstances are lost annually, may be saved — must and will be wrenched out of the hands of the imposter, and be practiced only by those qualified by education of a standard, arranged and acknowledged by some recognized authority.

McEachran suggested that minimum standards be adopted, to include a matriculation examination and at least three sessions of six months each, with summer practice or a fourth session in addition, and an exami-



Large animal clinic at the University of Pennsylvania in 1885. The man in the white apron appears to be Rush Shippen Huidekoper, dean of the School of Veterinary Medicine. Michigan State University Library

nation conducted by an outside and impartial board. Further:

This profession has too long been left in private hands and to private enterprise. If any department of education is deserving of Government support and Government supervision, this one is.

Much of McEachran's thesis was directed at the Toronto school and the American Veterinary College. While Liautard fully agreed with McEachran in principle, he steadfastly refused to institute higher requirements so long as Andrew Smith at Toronto failed to; this, of course, was as regrettable as it perhaps was understandable.

Veterinarians worthy of the name were then, as always, proud of their profession, and anxious to see the profession gain the

standing it deserved. The disclosures in 1877 resulting in closing the bogus diploma mill that had once been the Philadelphia Veterinary College were hailed by veterinarians as a thorn removed from the side of the profession. Acknowledging this to be a fact, James Law charged, however:

This is healing the wound altogether too slightly; the source of the trouble lies much deeper. All regular graduates of veterinary medicine are not immaculate, and the veterinary profession cannot close its doors effectually against every hypocritical scoundrel who sees in its degree a stepping stone to the acquisition of filthy lucre. Even the regular graduates of the veterinary colleges are found among us laying claim to titles to which they have no right, and acting altogether in the most unprofessional manner.

Law stated that the principal danger of such schools lay in "their private and irre-

sponsible character." Moreover, the danger would persist so long as private individuals could obtain charters to grant degrees without adequate supervision, for there were still "plenty of unscrupulous men who will seek to work such a machine for their own personal aggrandizement." Like others, Law advocated a National Veterinary School.

Agriculture vs. Veterinary Medicine

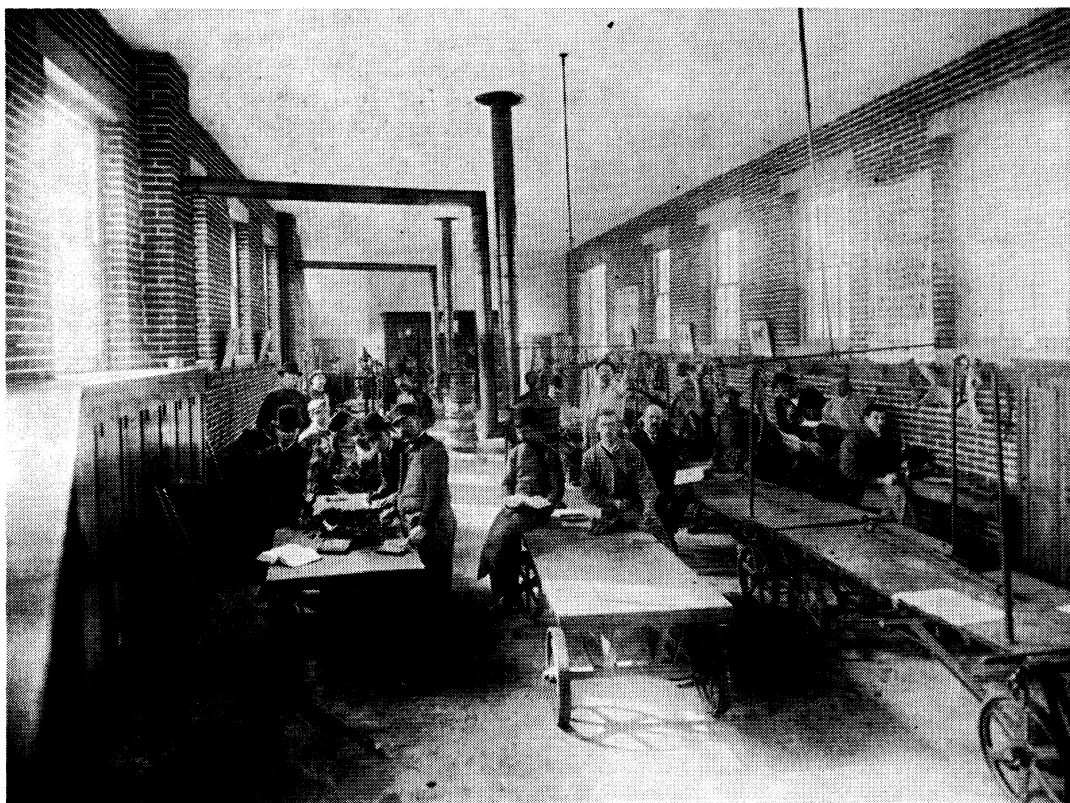
On the basis of Law's remarks, Liautard ineptly stated that Law himself was educating veterinarians in an agricultural school. To this Law responded in most gentlemanly fashion to his colleague's "misapprehension of the facts," saying:

I can confess to no remorse for the sin which I have not committed. . . . Cornell University

does not attempt to make veterinarians of her agricultural students.

Rather, in giving basic instruction in physiology, hygiene, and the like:

Instead of proving inimical to the scientific man, men educated in this way are his best friends. If all our citizens were better instructed in the physiology and pathology of their own bodies, they would no longer support the great army of vampires that now sap their vitals with their blood purifiers, liver regulators, vital elixirs and panaceas in general. The agricultural graduates of Cornell University do not employ the man who cuts out the feeders of ringbones and spavins at a point distant from their seat, who bores the horns and slits the tails of all sick cattle, who finds in blackened teeth a sufficient cause for all the ills that swine are heir to, who corrects watery eyes and a host of other maladies of the horse by extracting apparent or concealed wolf-teeth,



Anatomy laboratory at the University of Pennsylvania in 1885. The heavy post-mortem — dissection wagons were patterned after those used in European schools and were used to transport horse cadavers at Cornell as late as 1945. Michigan State University Library

who operates by the planetary signs, who castrates cows and mares by the antiquated flank method, and who sells an infallible remedy for all kinds of worms and in whatever situation—bowels, brain, lungs, liver, spleen, kidneys, peritoneum, etc., etc. They are educated enough to distinguish, appreciate and employ sound and reliable veterinary advice, and to influence their less favored neighbors to a similar course. They are the friends of veterinary progress and of the accomplished veterinarian, and the sworn enemies of the quack and mere pretender. . . .

Agricultural and veterinary education must go hand in hand, and I hail the diffusion of sound knowledge and the capacity of arriving at a just judgement among our farmers, as the precursor of a higher appreciation of veterinary science.

In an address before the National Agricultural Congress in 1878, N. H. Paaren, V.S., later State Veterinarian of Illinois, in speaking of the need for veterinary reform, asks:

Has our government done anything in the way of aiding or encouraging instruction in the only department of knowledge that can be of service in warding off or curing the diseases of domestic animals? Absolutely nothing! . . . No torture was ever so complete as that inflicted on sick domestic animals by the ignorant quacks who pretend to know how to doctor them. Intelligent humanity revolts at the way disease and lameness are treated almost everywhere in our land; and the future historian will allude to some of the practices of our horse doctors to prove that in the year of 1878 we had not yet entirely emerged from the darkness of barbarism, inasmuch as such a state of affairs was sanctioned, nay, indirectly aided, by being tolerated, by what is called the best government the sun ever shone upon.

Paaren called for immediate action to provide:

1. For the establishment and maintenance of a National Sanitary Bureau.
2. For the establishment and perpetual maintenance of a National Veterinary College.

How well he succeeded in getting his message across may be appreciated from the following resolution adopted by the Agricultural Congress after a discussion of his paper:

Resolved, That veterinary practice in this country is quite too generally unscientific and

empirical; that the need of educating skilled veterinarians is imperative, and the attention of agricultural colleges is respectfully and urgently directed to more vigorous efforts in this direction.

Paaren inquires:

What vigorous efforts can be expected of these institutions who class veterinary science as a third or fourth-rate sub-division, and many of which do not even consider it worth employing a qualified veterinarian as teacher?

D.V.M. vs. M.D.

At this time a remarkable number of the leaders of the veterinary profession, and more than a few regular practitioners, obtained the M.D. degree. While any additional education would, of course, seem to be desirable, it may be doubted that most veterinarians who did so considered the "post-graduate" training of paramount importance as such. The medical degree was relatively easy to obtain—and without the large sacrifice of time and money invested by the "perennial sophomore" of today. Liautard, who had obtained the M.D. degree in 1865, recommended that his students take this step. And in congratulating Prof. F. W. Prentice, M.R.C.V.S., of the Illinois Industrial University, upon his obtaining the M.D. degree, Liautard stated in 1878 that this step is:

one which cannot be too much encouraged in this country as a means of obtaining from the public the respect which is so much due to veterinary science. We believe that there are now in America more veterinarians, graduates of human medicine, than in any other part of the world.

In 1884 the eminent veterinarian and educator, W. H. Hoskins, added the observation that a medical degree would make the veterinarian "a better practitioner as well as allowing him to mingle with the medical profession." The next year, however, Liautard had reversed his earlier stand, asking:

Is this at the present time a title which it is indispensable for men in our calling to possess? Is it for honor of prefixing the M.D. to their D.V.S., or is it their need of a more complete

medical education which urges our young graduates in veterinary medicine to matriculate at a human medical college? . . . If I am right, it is a step which ought to be discouraged, and if possible, checked, or the veterinary profession must for years to come fail to maintain, as it failed in times past to acquire, the position it ought to occupy, and suffer itself to be thrown back to its old ignoble place in public appreciation. . . .

If more education is what is needed; if more perfect knowledge is desired; if a post-graduate school would be thought useful—and it is, perhaps, always useful—well and good; let us have it. But let us obtain it through the proper channel; which is that in which you have already studied. . . . Be a V.S. in the strict sense of the word. Elevate your profession and your title, and yourself by that title . . . without attaching an M.D. to your name.

On the matter of titles, it is a little strange that a number of the veterinary schools awarded the degree, V.S., which was the usual designation adopted by self-denominated practitioners—many of them able and ethical, but, unfortunately, many more merely quacks and charlatans. According to Bierer, some 3,500 of these degrees were awarded at various times by the Ontario Veterinary College, the New York College of Veterinary Surgeons, the Ohio State University, the Montreal Veterinary Surgeons, and the Indiana Veterinary College.

An interesting commentary on this matter is offered by E. Mink in a letter to the editor of the *Review* in 1881. He notes that the *Review*:

directed me to have V.S. appended to my name. In times past I have called myself a veterinary surgeon, and have appended the initials V.S. to my name. I have never considered that the words veterinary surgeon were properly regarded as a title, as they merely designate the name of an occupation, and the letters V.S. are merely an abbreviation of them.

He relates having been challenged on the witness stand regarding his right to use this designation inasmuch as he was not a graduate veterinarian, whereupon the judge had ruled:

Every person has a right to designate the nature and character of his business by respect-

able and significant terms, and that he was not obliged to designate his calling by vulgar terms or coarse epithets. . . . If a man were engaged in the calling of dentistry he had a right to call himself a dentist, that he could not be compelled by any individual or legislative body to call himself a rotten-tooth doctor; and so also, you cannot compel a man pursuing the veterinary practice to adopt the vulgar epithets of horse or cow-doctor. So long as he does not falsely assume doctorate or other degrees, he was not censurable.

Mink continues:

I am not anxious to designate myself a veterinary surgeon. The term veterinarian suits me just as well, it is just as significant, quite as dignified, and I am content to designate my calling by it. I shall carefully avoid appending V.S., or veterinary surgeon, to my name hereafter, as I am anxious to avoid a feeling on the part of veterinary graduates that I am infringing on what they deem their exclusive rights. . . . I will, however, insist upon designating myself a veterinarian, and would, if possible, contest the constitutionality of any law that might be made to prohibit it. . . . There are other things than the lack of ten or fifteen months of college opportunities that unfit men for practice of human or veterinary medicine. Many men who are called qualified because they hold a college certificate, are, in reality, totally unfit to practice successfully.

Some of the continental schools conferred the title "Veterinarian" before they adopted the doctorate; R. S. Huidekoper, who studied at Alfort, but apparently did not graduate, used this title. Bierer styles the use of this title "modest," which it undoubtedly is, but it could be argued that it might be considered the highest title that could be used. Just as "physician" today connotes "M.D.," so perhaps, should "veterinarian" connote a standard of excellence without needing the qualification denoting a doctorate in medical studies.

Prerequisite to Practice

In 1882 Liautard editorialized on the need for a "College of Veterinary Surgeons of America," with functions similar to those of the Royal College of Veterinary Surgeons of Great Britain. Among the benefits to be derived from such an institution, he argues:

The various titles and degrees in vogue at the present time would be reduced to a single and common title, whatever that might be.

Other benefits would be a uniform and higher standard of education, and a system of licensing which would rapidly eliminate quackery. While the present National Board of Veterinary Examiners might be thought of as a desirable step in this direction, some seventy years were to pass before this came into being, and it would seem that some additional years will pass before this concept meets with universal approval.

Dr. A. A. Holcombe, the noted Army veterinarian, took issue with Liautard on the matter of a United States College of Veterinary Surgeons, inasmuch as:

It is the inalienable privilege of each State to determine for herself what shall constitute the proper qualifications of her recognized practitioners of a profession.

And while he thought a National Association of Veterinary Schools might do some good in raising standards of the schools:

at present it must be optional with the individual schools. . . . The majority of students of veterinary medicine have entered upon their studies with the purpose of gaining their degrees in the shortest time possible; and that institution which receives general recognition as being a school in good standing, and which, at the same time, makes it public that the enforcement of the provisions of its curriculum is more apparent than real, is the one to receive the most patronage.

The perennial subject of internship for veterinary students was discussed in the *Review* as early as 1880. A practitioner writes:

In England and Scotland, office instruction is considered as one of the essential elements of the student's education. There, in many instances, he is indentured to a practitioner for a certain term, with the same care and strictness of detail, as is observed with apprentices sent to learn a trade. . . . Perhaps some will interpose the objection, that the student is liable to learn many things which do not accord with the teachings at the college, owing to the busy practitioner getting rusty on many subjects . . . [but] he obtains much that there

is little time and opportunity to teach him at college. . . .

When the practising veterinarian accepts a student for instruction he assumes a duty the gravity of which many but imperfectly understand or do not fully appreciate. It is not enough that the student be told to read whenever he finds time, but he should be told what and how much to read, then have his memory tested to see if he retains and comprehends what has been taken in. . . . In the pharmacy . . . make him a pharmacist, not a mixer of drugs. . . . In the infirmary cultivate habits of observation. . . . Teach him hygiene in a practical manner. . . . Last, but by no means least, cultivate a disposition to original research by supervising his post-mortem examinations and indicating to him what is healthy tissue and what is diseased, and the significance of the latter.

He admits to some difficulties in putting such a system in practice, however, for "there are but few veterinarians here, and a large percentage of these have not the opportunity not the facilities for such teaching."

Out of the Depths

The quest of a higher status for veterinary medicine and its practitioners took on a variety of forms, one being the exposure of quackery both without and within the profession. A humorous example, but one nevertheless distressing when it is realized that there were those who would patronize this type of individual, was the "business card" of one of these lesser lights, reprinted from the *Prairie Farmer*:

HORSE FARRIER.—The under sind lat from chester conty Intends follown Doctern horses & stock & flaters him self able to Master Most all deases & complants among horsis Pleas giv Me a call & if no cure no pay Except for medison if bought by Me. all orders left at My Residence will be promptly attend to.

Another, apparently anxious to improve his situation, wrote the following to — of all people — the Principal of the Montreal Veterinary College:

Dr Sr. i thought i would drop you a few lines in regards to Vetrinery practis i have Ben doctern horses for the Last To years and would

like your terms and know how much it would cost mee To get a diploma i could come and stay a short time But probley could not stay the Lench of time required byt Probley you could give me some Sadsfaction . . . i cane make as much money without one as with it but i would like To go in some large citey and Doe busyness i am red up on the horse purty faire but i ame a married mane and cant aford to spent much time in College.

Liautard styles this: "knocking on the wrong door;" McEachran was a proponent of higher standards than most of his colleagues in the United States would subscribe to.

A correspondent to the *Review* in 1878 noted, however, that this form of quackery was not insurmountable; not so:

the very worst form of quackery which besets our profession, *quackery in the ranks of the qualified*. . . . When we look to our own ranks, and behold the flagrant violations of principle, preached every day by some of our members, outside quackery sinks into insignificance in quality, if not in quantity, by the comparison, and we no longer wonder that our sister professions are slow to extend the hand of fellowship and wish us success. . . . There is too much of this petty jealousy—that detestable remnant of quackery—existing in our ranks to-day, and no matter how high they may stand in public opinion, or in their profession, at the present time, all who stoop to participate in these disgraceful factious controversies, need live but a short time to find their names in the oblivion of their own production, for there are found workers coming into the field, who will win the race in which the older members have so heavily handicapped themselves with the weight of these nauseous dissensions.

. . . equally as injurious to the true science, is the deprecable practice of editing a "Veterinary column" in a "sporting" or "agricultural" paper. This is nothing more nor less than what might be called aristocratic quackery.

And in speaking of "Veterinary Ethics in Advertising," Liautard states:

Judging from what we daily see, it would seem that the methods employed to "establish a practice," are almost as universal and varied as are the individuals so striving. Many of these methods are highly objectionable, and do not serve to bring aught but reproach upon the institution granting the diploma, and upon the person holding it. . . . Have they not been taught the *dignity* of their profession? . . .

An advertisement in a paper, that simply states your profession, residence and office hours, cannot reasonably be objected to. Cards bearing only the same, are unobjectionable, and may be presented in person. These are as far as one can go in this direction, between a conscientious physician and a quack. Advertisements of specialties, of secret medicines, the issuing of circulars and posters, or newspaper puffs, cannot be too strongly condemned. . . . One had better fail in procuring practice than to obtain it by resorting to the methods employed by patent medicine men and unscrupulous charlatans.

While the classified pages and some hospital signs today offer silent testimony to the fact that a few infractions of the "law" laid down by Liautard still occur, the testimony of a practitioner a century ago offers more than ample evidence concerning what Liautard railed against. Speaking of "Practice in New York and Brooklyn from 1865 to 1923," G. H. Berns (Columbia Veterinary College, 1879), relates:

My personal experience with veterinarians in New York City and Brooklyn dates back to 1865. Engaged in the grocery trade and later on in the milk business, I had occasion to drive horses and came in contact with a few practicing veterinarians. As qualified veterinarians were few in number and ignorant, unscrupulous quacks were plentiful, I met with the latter class most frequently. To show the calibre of some of the men who practiced in Brooklyn, it is necessary only to refer to a few signs that were conspicuously displayed in various parts of the city. On the Jamaica Plank Road near Bushwick Avenue was a large sign, "Dr. Corwin, Veterinary Surgeon." On the door was painted in bold letters, "Horses Doctored Here." Painted on the fence on one side of the building was the picture of a miserable emaciated horse being dragged toward the building by a man, labeled, "Going to the Doctor's." On the other side of the building, painted on the fence, was the picture of a horse in fine condition labeled, "Coming from the Doctor's."

On Flatbush Avenue near Sixth Avenue, displayed in a show window, was a large sign, "Office of Professor Baker, the Common Sense Horse Doctor." On State Street, near Smith, displayed in a show window, was a large sign, reading: "Professor Ricord, Veterinarian. A graduate of the School of Experience. All curable diseases of the horse skillfully treated. Consultation Free." There was a Hans Pilger, with headquarters at Otten's saloon, who

prided himself upon the fact that he required no office, no cards, no signs of any description. To his German friends he would invariably declare: "Ich bin der doctor ohne schild."

There was Dr. Dellisser, who advertised his wonderful extract of carbon to cure most all the ailments of horse flesh. Another who practiced for years in the vicinity of the city hall, a most profane and vulgar spoken individual, had the reputation of being the greatest liar in Brooklyn. He occupied a small building; one side was filled with skulls of animals, specimens of ringbone, spavins, deformed limbs and feet, and other curiosities. On the other side, arrayed on shelves, were bottles, jars and boxes containing his numerous secret remedies with a bottle of whiskey and a box of cigars completing the outfit. He would display a large section of the lumbar vertebrae of a horse and declare that he took the bone from a horse that was too long in the back, to shorten him up. There were scores of others. The influenza epizootic in '72 and '73 and the enzootic of cerebrospinal meningitis gave the quack element an opportunity to fleece the public more than ever and they joyously hastened, figuratively speaking, to the haymaking while the sun shone, thus driving still lower the standing of the profession.

S. R. Howard, a sort of veterinary Will Rogers, contributed many a pointedly humorous piece to the American veterinary literature of the early twentieth century. Characterizing himself as "somewhat poky and old fashioned" (actually he was a progressive country practitioner), he admits:

Although I know I am not as thoroughly informed along certain lines as I am wont, still I am what might be called an every-day country veterinarian. Therefore, I speak not as the scribes, but as one having authority. . . . Did you ever notice how many popular titles a veterinarian has?

I have been accosted as Dock, Quack, Farrier, Veteran, Cow Leech, Hoss Doctor, Vertinary, Venitianary, Veternary, Old Honesty and Day Light Robber. . . . Once I was asked by a horse doctor if I had ever studied Dr. Kendall's work on the horse. Astounded at my ignorance, the Dr. (?) further asked if I did not claim to be a Venitian Sergeant. I modestly admitted I was one and told him I had often heard of him and his skill as a surgeon; I was pleased to meet him, etc. I finally asked him confidentially if he had ever performed "aortic regurgitation." "Yes, several times," he replied, "and I can tell you it is an awful bloody operation."

In the Eyes of Others

Liautard also faithfully recorded notices the veterinary profession received in the medical press, both good and bad. Earlier, physicians writing in the agricultural press had with good reason almost universally condemned the treatment of animals by unqualified practitioners, and had urged the establishment of veterinary schools as the only means of combatting this evil. After schools were established, however, some of this criticism, which actually should still have been leveled at the unqualified, was identified with the graduate veterinarian—or at least no distinction was made between the two groups. Some of this unfavorable climate, unfortunately, was abetted by individuals who passed for members of the veterinary profession. Thus in 1883 as reprinted in the *Review*, the *Medical Record* reported:

A person who called himself a veterinary surgeon read a paper recently before the New York Farmers' Club in the Cooper Institute, on the diseases of cattle and their treatment by veterinary doctors, whose methods he condemned. . . . It is a disgrace to the nation, the orator continued, that there is not one legally chartered, organized, and established veterinary college in the country. Veterinary science here lies deep down in the ditch of ignorance, and the billions of dollars invested in animal property, as well as the animals themselves, are left to the mercies and wantonness of chance. The country is flooded with bogus diploma mills, several of which are in this city and other parts of this State. The speaker went on in the above strain, but failed to mention where the New York diploma mills are. It is understood that parties in this city do practically sell veterinary diplomas, and it is to be regretted that some definite facts were not given.

Liautard printed this without comment, but his inner feelings may be surmised. Obviously, he did not subscribe to the theory: "Let's not notice it, and maybe it will go away."

And in 1880, following the second failure to secure passage of a bill regulating veterinary practice in New York State, the *Medical Record* had stated:

With the advent of the germ theory of disease in the late nineteenth century, moist dressings were in vogue as a means of providing continuous antiseptic applications to wounds. Liautard: *Surgery*

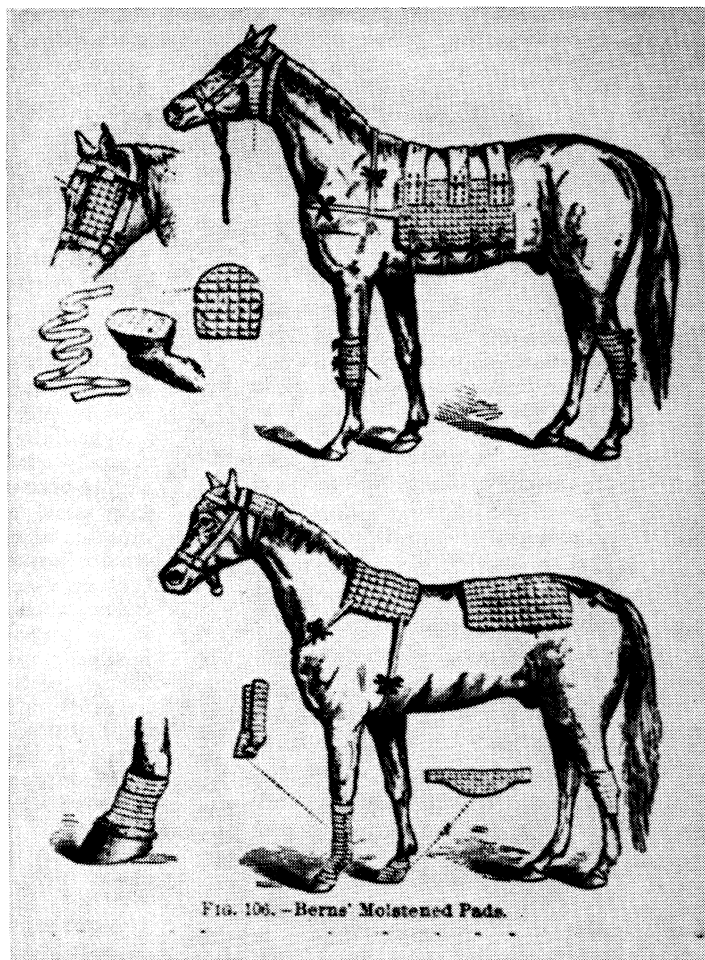


FIG. 106. — Berns' Moistened Pads.

This could hardly be expected otherwise, as it was a somewhat premature measure. It is well to encourage all proper measures for elevating the standard of veterinary medicine, but the practitioners of this art are not yet, as a rule, sufficiently advanced in education or scientific attainments to need the protection of legislation.

In response, Liautard asks:

Veterinarians of New York, what can you say to this? The *Medical Record* has told you what it believes to be the truth, and you have no one but yourselves to blame for the allusions made in those few lines. . . . We know that many amongst us are as advanced in education and scientific attainments as many members of our sister profession, but how have we shown it? When have we placed it on record? . . . Can we show any scientific work

or investigation of which any of us can be proud?

That there was an element of bias in the relentless attack of the *Record*, may be appreciated from the following exchange: At the seventeenth annual meeting of the USVMA in September, 1879, a committee was appointed to frame "a set of resolutions to be presented to Congress in relation to the investigation and prevention of contagious diseases of domestic animals." Accordingly a well-worded petition including adequate supporting evidence was drawn up on November 25, requesting that the Congress of the United States:

shall establish a Veterinary Sanitary Bureau, whose duty it shall be to advise Congress as

to what measures shall be necessary to control, restrict, or eradicate any contagious or infectious disease affecting the domesticated animals.

In the meantime, Liautard had editorialized on the matter, and had indicated that while the establishment of such a Bureau "seems to be the general demand," there were differences of opinion as to how it should be established:

With many, and among them ourselves, the National Bureau of Health seems to be the most appropriate department . . . when we consider the intimate relationship existing between many of the preventable diseases of man and the lower animals. . . . But there are a few who advocate the formation of an independent Veterinary Bureau.

Others advocated an affiliation with the Department of Agriculture, but more important than these considerations, Liautard emphasizes "is the *urgent necessity for immediate action*." There was general agreement on this latter point.

But without waiting to see the nature of the petition, and apparently wishing to capitalize on the seeming differences of opinion within the veterinary profession, the *Medical Record* on November 7 observed:

the present status of Veterinary Medicine is so undefined that a National Bureau would not have much more of legitimate professional basis than a National Bureau of Barbers to keep themselves informed upon sycosis. There is in this country only one Veterinary College which exists under legislative sanction, and which can grant genuine diplomas. Veterinary practitioners, therefore, are composed of three classes: persons who have graduated from foreign and one regular home school; persons who have graduated from other home schools and have received diplomas which are virtually only certificates; and third, persons who have no regular education whatever.

It is feared that the establishment of a National Bureau out of these elements would produce endless quarrelling, without receiving any valuable results.

Noting that the *Record* had treated his remarks to "not as kind a reception as past relations had encouraged us to look for," Liautard nevertheless states:

On second consideration . . . we are now somewhat inclined to thank . . . our friend co-editor . . . for the trouble he has taken in bringing the subject before the medical profession, to which we have accustomed ourselves to look for support, assistance and recognition. Few physicians, we are sure, will consider the subject in the same manner as the *Medical Record*, and we have every reason to believe that its sarcastic remarks will not be accepted by the large majority amongst the members of the medical profession.

Another "Veterinarian" in writing on the matter was less charitable in his censure of the *Record*:

When the editor of a scientific journal designedly stoops to malign a sister science, simply because her votaries are, as yet, numerically weak, it exhibits a development of unwarrantable bigotry that is a disgrace to an enlightened country in this period of the nineteenth century. . . . Comparisons are usually the most odious when founded in unpalatable facts, and it was probably owing to his memory of professional forefathers who, as Greek slaves, were keepers of the Roman bath and barbers, that he made reference to their vocation and deficient knowledge of dermatology. . . . The virtue of the medical profession is not entirely above reproach . . . we need not go beyond the confines of New York city to find practices perpetrated under the wing of the medical profession that would put to the blush the barbers of any age.

As in most cases where a wide divergence of opinion exists, the truth of the matter usually lies somewhere between the two extremes. Admittedly, there was some truth in the charges made by both sides, and it seems that Liautard's gentle chiding was justified. But despite the fact that there was some basis for the fulsome (five-page) indictment of the medical profession made by the latter writer, it may be doubted that he accomplished much except to further alienate the veterinary profession from its prospective friends.

Worthy Physicians

In considering the attitude of the medical profession toward veterinary medicine at this time, it must be recalled that many medical practitioners were yet of the non-graduate and noneducated variety, or were

graduates of schools that were no better qualified to serve the interests of the public than were some of the more poorly equipped veterinary schools. Worthy physicians, however, generally had a good appreciation of the value of veterinary medicine. In 1878 the Medical Society of Harford County, Maryland, adopted the following resolution:

Whereas, In consideration of the fact that there are so few educated *Veterinary Physicians* in our county, notwithstanding the existence in our midst of such an immense number of domestic animals, so essential to man's use and sustenance, at all times liable to require the physician's aid; therefore be it

Resolved, That we of the Medical Society of Harford county, Maryland, suggest to the American Medical Association . . . and respectfully advise it, in the exercise of its weighty and wide-spread influence, to recommend the establishment of Veterinary Colleges, to be conducted by strictly scientific professors; and that the Association also advise many of the young men of the country to enter this new and ungleaned field, instead of increasing the already overcrowded ranks of the regular medical profession.

While this resolution might have been prompted in part by the contention that the medical profession was overcrowded — which it was, especially with the more poorly qualified practitioners — there seems to be no doubt concerning the sincerity of this group. Dr. W. S. Forwood, who introduced the resolution, adds:

From the fact that the unskilled have had and still have it in their hands, it has brought the profession into disrepute. Do away with such ignorance and educate the people, or rather a doctor for such cases. As the medical field is crowded, so the field in veterinary surgery is open. The practice would be more lucrative than the regular profession for a time at least. . . . Some would object to the respectability of the veterinary, but it is just as respectable to treat lower animals as the higher.

In all fairness, it should be noted that the *Medical Record* freely criticized the medical profession also, although perhaps in not such direct terms. In commenting on the fact that a sampling of pigs at the Chicago Stock Yard in 1881 failed to re-

veal any cases of trichina, it states: "These results, however, are different from any previous one, and the Board of Health contents itself in advising that all pork should be well cooked." In 1882, the *Record* noted approvingly what amounted to the amalgamation of the New York College of Veterinary Surgeons with the College of Pharmacy, as "a convenient and fortunate one for both parties." And in 1883 it reported that in an address before the Kentucky Medical Society "the practice of veterinary surgery was commended to young men." Also, the recent discovery of actinomycosis in American cattle "should become promptly known to veterinarians and sanitary officials." The *American Veterinary Review* had been running a series of articles on this subject, written by George Fleming, but the first notice of the disease in America did not appear until a month after it was noted by the *Record*.

One evidence of the interest of the medical profession in veterinary medicine is the number of physicians who were called upon to address graduating classes. In 1878, J. C. Dalton, of the College of Physicians and Surgeons, in suggesting the value of preventive medicine to graduates of the American Veterinary College, states:

There is a vulgar notion that to prevent disease would be against the interest of the veterinarian, because it would lessen the number of his patients. I need hardly ask you to repudiate this idea, not only because it is degrading, but also because it is false. . . . There is no danger that the owners of animals will not always need the advice and skill of the veterinarian. . . . Beside, the more good veterinary medicine shows itself capable of accomplishing in this respect, the higher will it stand in the estimation of the public.

And J. W. S. Arnold, of the University Medical College, states:

Perhaps I am influenced in your favor, for the reason that so much good physiological work has been done in veterinary schools, by veterinary men. . . . And yet, we must, upon critical examination, come to the conclusion that our foundation stones are not rightly placed . . . physiology, although beginning to take its place among the foremost departments of medical science, is still an unfinished pillar

in our edifice. To the advancement of *experimental medicine* must be looked for the greater perfection of *practical medicine*. The rehearsal of cases, which crowd our medical journals, do little or no good to the cause; the fashion is to hurry into print an account of the first case which comes into the hands of the young practitioner. To what end? Why, to waste paper and ink in most cases. . . . Those who are in the ranks of medical men, be they horse doctors or man doctors, either take no interest in these higher studies, or being ignorant or indolent, they decry true scientific work because they can see no practical applications. This desire for instantaneous practical results is the damnation of true science. . . . You can demonstrate to the commercial mind how necessary it is that Veterinary science should be extended.

Advent of Anesthesia

One measure of progress of the veterinary profession is the use of surgical anesthesia where indicated. In speaking of the responsibilities of the veterinarian in proper restraining, Liautard states in 1882:

It is in that responsibility that the duties of the veterinary surgeon become equal, if not superior to those of the human surgeon. When the latter has an operation to perform he has his patient brought before him and placed under the influence of chloroform. . . . The veterinarian, on the contrary, has seldom occasion to have recourse to perfect anesthesia, but very often is obliged to secure his patient in such a manner that by his movements the operation is not rendered more difficult, or the life of the operator or of his assistant endangered.

And later:

The benefit that the surgeon obtains by the use of anesthesia is undoubtedly of greater importance in human than in veterinary medicine. With the former, besides the relief from pain, there is that of nervous shock or moral influence, which plays so important a part in the recovery of the patient. With the veterinarian this last condition scarcely exists, if it does, and probably for this reason anesthesia is not so commonly used. . . . There are, however, peculiar conditions where it becomes a necessity, and in which neglect of employing it might give rise to severe complications. Amongst those are the operations which, at times, rare as they may be, are performed upon the eyes, or in cases of hernia.

The use of anesthesia appears to have been taught at the American Veterinary

College from the beginning, if the number of case reports mentioning its use are a criterion. Among the relatively few surgical cases reported in the first volume of the *Review* is one in which a mixture of ether and chloroform was used in fracture reduction, and one with chloroform for removal of a tumor. Frequent mention is made of the use of chloral hydrate as a sedative. In 1880, C. H. Peabody, an A.V.C. graduate, read a paper on "Chloral Hydrate as an Anaesthetic for Operations" before the USVMA, stating:

Never having seen any report made of its having been used as such, I take this opportunity to report a few cases in which it has given me satisfactory results.

Among the cases reported were prolapse of the uterus, fetlock injury, scrotal hernia, puncture wound of foot, and ovariectomy. Another veterinarian, J. C. Corlies, reported good results in a case of fracture reduction, and for firing, stating: "We have practiced the use of chloral in a number of cases before, but not with the same degree of success."

The use of anesthesia apparently increased beginning about 1882, some thirty cases being reported in a period of five years. Mention is made, in the first volume of the *Review*, of the use of morphine for colic—ending in tetanus, apparently introduced by the hypodermic needle. Both morphine and atropine were used to some extent; in 1885 a layman reportedly gave an aged horse forty grains of morphine:

to get rid of him by as painless a death as possible. . . . Having made preparations for the funeral, the grocer proceeded to the stable, where, to his astonishment, he found the horse in excellent spirits.

And a veterinarian in 1886 reported giving sixty grains of morphine to a mare for whom the farmer had already dug a grave: "Next morning she was livelier than she had been for years before," so the owner had her shot.

The first mention of the use of cocaine appears in 1885, when G. C. Faville re-

ported its use for removing a foreign body from the eye:

The introduction of any preparation into the veterinary pharmacopeia that will aid the operator in performing the minor operations, either by aiding in the control of the animal or by rendering the pain less acute must be hailed with delight. The experiments that have of late been made by members of the sister profession, in the use of muriate of cocaine, have been of great interest and the question must have come to many, why cannot this drug be used as well in veterinary practice. . . . The small amount needed for ophthalmic surgery renders its use within the means of anyone; and its perfect action in so far as my experience goes, renders its use desirable.

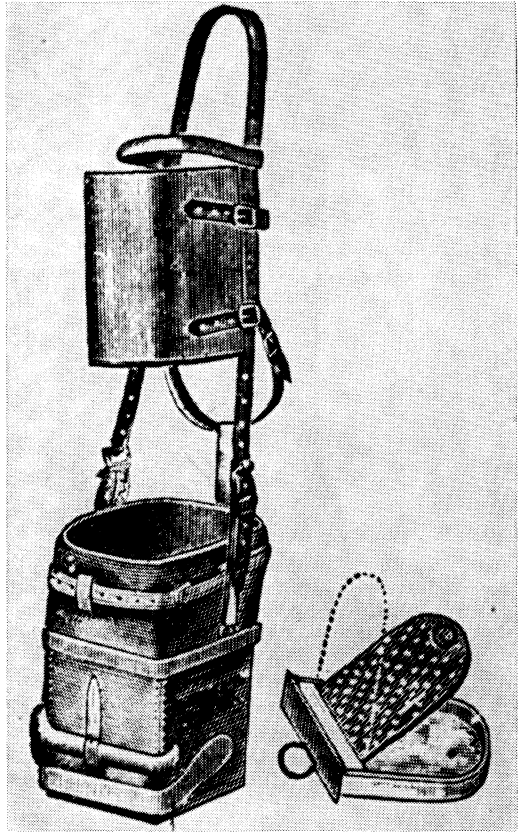
Veterinarians were quick to seize upon this new adjunct to practice; for removal of a tumor of the eyelid, C. L. Moulton states:

After consulting with an eminent ophthalmist in practice here, I concluded to try the new anesthetic "muriate of cocaine;" and I must say the results exceeded my most sanguine expectation.

And again the same year, C. C. McLean reports its use for neurotomy, with "no manifestation of pain." On the other hand, J. W. Scheibler, A.V.C. house surgeon, reported failure to obtain anesthesia with cocaine in an operation for urethrotomy in a male camel, its struggling rendering the operation impossible.

In writing on "Hydrochlorate of Cocaine in Neurotomy," H. F. James of St. Louis credits C. C. McLean with "introducing cocaine to the profession in connection with the operation of neurotomy." He says:

Neurotomy is acknowledged to be the most painful operation we are called upon to perform, and heretofore, owing to our reluctance to use chloroform on horses, their sufferings were unavoidable. Here we have a drug, cheap in price, easily used, which does away with all this needless suffering, and enables us to do the requisite cutting neatly and quickly; therefore I think I am not speaking too strongly when I say, that the hypodermic injection of cocaine will soon be accepted by advanced veterinarians as an integral part of the operation.

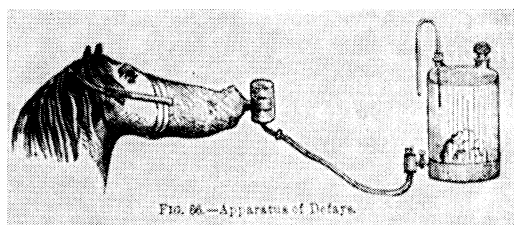


Inhalation apparatus of European design was introduced here during the 1870's and 1880's, but this proved cumbersome for practitioners working alone, and it was not until local anesthetics were introduced about 1890 that this adjunct to surgery was widely used. *Liautard: Surgery*

Society Affairs

What appears to have been an extra-curricular activity of the American Veterinary College, but one of academic significance as a means of elevating the standards of its graduates, was the College Medical Association. As reported in 1883:

This Association, which has been in existence since the first session of the college, was organized for the purpose of educating the student how to write on veterinary subjects. . . . The subjects are assigned at the close of the session to each of those who are to constitute the next year's senior class. The society meets once a week during the entire session, and at each meeting a paper is read by some one, and discussion or debate follows—the writer to de-



Some anesthetic machines employing principles used today were devised during the late nineteenth century, but without a suitable technic for premedication the excitement stage with chloroform anesthesia rendered all but the simplest devices hazardous. Liautard: *Surgery*

fend his opinions advanced as best he can. The president, a member of the Faculty, as a rule devotes a few minutes to remarks on the papers and discussion.

The *Review* gave considerable space to reports of local and state veterinary societies as these were formed. The first such report in 1877 is one of the Montreal association, formed in 1875, one of the earliest to be established. Also reported is the formation of an association in Rochester, New York, and that of the Alumni of the American Veterinary College. Meetings of the New York State Veterinary Society, founded in 1876, were reported in the *Review* in 1878. With both the New York State Society and the USVMA frequently meeting at the American Veterinary College, together with the College and Alumni Associations, the "comings and goings" at this institution must have been considerable. A number of the stalwarts of the profession were active in all four groups.

The Montreal association appears to have been one of the most active groups

from its inception; in 1879 its library contained nearly 300 volumes; that of the USVMA after 15 years, still had practically no books. In 1880 the Montreal Library was "one of the most valuable on this continent, containing all the oldest and most recent works on veterinary and collateral sciences." William Osler, M.D., was vice president and later president of the Montreal association. In 1882 he reported on experimental tapeworm infection in a calf. Appearing later in the *Review*, this is an early account of laboratory investigation.

By 1885 the *Review* carried reports of veterinary associations in Massachusetts, Connecticut, Indiana, Pennsylvania, Michigan, Ohio, New Jersey, Wisconsin, Ottawa, and Philadelphia, in addition to those mentioned earlier.

In 1883 Liautard issued a strong blast against the proposal of the *United States Veterinary Journal* that the various state associations "send delegates to a national convention to be held in Chicago, on December 12, 1883, having in view the object of forming a United States Veterinary Medical Association." Noting that the USVMA was already in its twenty-second year, and had a "large number" of members in twenty states — "all graduate veterinarians" (?) — Liautard states:

It seems to us that the time has indeed come for the veterinary profession of the country to show these gentlemen, well meaning though their intentions may be, that there are enough veterinarians in good standing in the country to manage their own affairs without being interfered with or advised by others whose interests might be interpreted as being more in behalf of their monthly publication than in that of the profession.

Yet, in an apparently equivocal stand, Liautard had stated only a few months earlier in championing the formation of state associations:

and when once each State in the Union has her State Veterinary Medical Association, how easy it will be for all to unite under a grand body, the American Veterinary Association. . . . Regular graduates may have, and again try by years of labor to elevate the pro-

fession from its low standing. Private veterinary schools may by degrees and with time have succeeded in throwing through the country enough educated men to chase the ignorant from the place they now occupy – but how many long years would it have taken? Illinois has done it at her convention – and we believe it can be done all over the country. And the essential factor, in fact the one without which it probably would not have taken place is . . . that the majority of these men were self made men.

Thus it would appear that Liautard actually envisioned two Associations: the USVMA, composed only of regular graduates, and an American Veterinary Association, with delegates from state societies for some time perhaps composed principally of nongraduates.

Veterinarians west of the Alleghenies had been dissatisfied with both the USVMA and the *American Veterinary Review*, feeling – and with justification – that these represented only the eastern interests of the profession. Apparently learning of this discontent, T. E. Daniels, a printer, seems to have conceived the idea of supplying this segment of the profession with a journal and an association – even to usurping the name of the established Association. A. H. Baker, of the Chicago Veterinary College, appears to have been editor of the *U.S. Veterinary Journal* during its brief existence; publication ceased with the first number of the third volume. One thing the *Journal* was successful in accomplishing was the formation of several state veterinary societies, for which it served as an official organ. This appears to have been a part of the over-all scheme, for the proposal to form a national association called for each state society to send delegates for this purpose. Liautard protested that representation “only by delegates” would result in an organization which “could not have a national character.” This, however, is the plan adopted by the AVMA in the 1930’s.

Competition, or merely the fear of it, can be a good thing, and as an obvious consequence of this threat, Liautard suggests:

If any good can be derived from the intended convention, all that can be expected is that more veterinarians can be induced to send their names for admission to membership to the old Association, and by thus having a larger number of representatives in the different States, the meetings could be held in places other than those where it has been found necessary to have them, so far, on account of the limited number of members belonging to it that reside outside of the Eastern States.

This was in December, 1883; at the semi-annual meeting in March, 1884 “after considerable dispute, the selection of the next place of meeting was left to the Comitia Minora.” In July it was decided that the meeting should be held in Cincinnati.

Westward Ho!

That the current provision for automatic rotation of the general area for the annual meeting is a wise one, may be appreciated by considering the long years of domination by one section. How close the 1884 meeting came to being held in New York instead of Cincinnati is of some interest in demonstrating, if not determination to maintain the *status quo*, at least the force of inertia. The Comitia Minora, consisting of the officers and Board of Censors of the Association met at the American Veterinary College. Drs. Stickney (Boston), Hoskins (Philadelphia), and Lockhart (New York) were absent. President Miller (New Jersey), Secretary Michener (New York) and Drs. L. McLean (Brooklyn), Burden (New York), and Liautard, Robertson and Coates (A.V.C.) were present, Robertson and Burden proposed Cincinnati; McLean and Michener favored New York, and only after considerable discussion was the western location decided upon.

In editorializing on the matter, Liautard states that those who favored keeping the meeting in the East were sure a quorum could not be obtained elsewhere:

If this is to be true remains for the Association to decide. If there is not enough professional ambition amongst the forty or fifty members of the Association who belong to

the East; if the apathy characteristic of the American veterinarians cannot be shaken enough . . . of course there will be no quorum; there will be no meeting; there will be a great failure, a great joy for those who are enemies of the Association — and the next best thing that the U.S.V. Med. Association will have to do will be to die, to cease her labors as unworthy of being a national institution.

Thus it may be seen that this move was one which might make or break the USVMA, and it appears that Liautard was the prime mover in urging that this calculated risk be taken. Perhaps few appreciated, as did Liautard, the full significance of this move. He saw it as the only logical step to put a quietus to those western interests that might have attempted a rival organization. But more than this, he saw it as an opportunity for the USVMA itself to become truly a national organization. Although the attendance at Cincinnati was not large, the meeting was a success, and resulted in the election of the first two western members to the Board of Censors; John Meyer, Sr., of Cincinnati and W. J. Crowley of St. Louis. Liautard characterized the meeting:

as successful as any the Association has ever had. . . . It must, however, be conceded that the Western delegation was not as fully represented as was desirable.

The meetings returned to Boston and New York for the next five years, except that semiannual meetings were held in Philadelphia and Baltimore. An inconspicuous notice appeared in the *Review* for February, 1890, stating that the Comitia Minora would meet that month to determine the place of the September meeting, and: "Those desirous of offering inducements or pleas for the place of meeting will be granted a hearing." Just what inducements were offered and by whom does not appear to be a matter of record, but in April an equally innocuous announcement was made that the meeting would be held in Chicago. As events were to prove, this was a momentous decision, for from this time on the monopoly of the

eastern seaboard was broken. The United States Veterinary Medical Association had come of age in its twenty-seventh year.

LEGISLATION AND EDUCATION

Another important function of the *American Veterinary Review* was the urging and reporting of legislation to prevent or control the spread of animal disease; to establish a national veterinary sanitary commission; and to define and protect the status of the veterinarian. In the first volume of the *Review*, Liautard urged that steps be taken to place the well-qualified, but self-educated, practitioner on the same footing as the graduate, i.e.:

a recognized member of the profession . . . we think it could be done in the same way as the human Medical Profession has done for some of its irregular.

If we look amongst many of our States, we will find that each one possesses a number of regular graduates, sufficiently large to organize and form a State Veterinary Society. Could not the same obtain, from the Legislature of their State, acts of incorporation, granting them the power to deliver the Degree of Licentiate to all those who would apply for such degree, providing they would submit themselves to certain rules and regulation as provided by a Board of Censors of said Society.

Such a move, Liautard believed, would be "a great step forward in the advancement of our noble art, and, we believe, a terrible blow to quackery and ignorance."

In commenting on a bill to regulate the practice of veterinary medicine, introduced in the New York State Legislature in 1878, Liautard states:

It seems to be almost a wonder that at last the veterinary profession should have been sufficiently appreciated by some to induce them to work in behalf of veterinary medicine and present that bill at Albany. To the Society for the Prevention of Cruelty to Animals the veterinary profession of the State of New York is indebted for the step thus taken — and it is but natural that it should come from that honorable body, for both the veterinarian and the officers of that society ought to work together.

As we go to press we are told that a deputation of physicians and *horse doctors* are to be received . . . to protest against it. . . . We

doubt if regular physicians, men of education, would dare to speak against this bill . . . and if so-named *horse doctors* join them, we cannot feel afraid of their attempts.

The bill called for a five-man board of examiners: three graduate veterinarians and two physicians, who would grant licenses upon the satisfactory passing of an examination by nongraduate candidates. Graduates of veterinary colleges, or of veterinary departments of agricultural colleges were to be licensed without examination. Practice without a license would constitute a misdemeanor. This did not pass upon its first introduction; later in speaking at the American Veterinary College, the Hon. E. T. Gerry:

strongly recommended united action on the part of veterinarians and of the different schools in the country, saying he had no doubt that the bill would be passed by the next legislature.

In speaking before the same group, Henry Bergh, Society for the Prevention of Cruelty to Animals president, stated:

Owing to the absence of any restraining power on the part of the law, the most densely stupid blockhead may, after a brief experience in a farrier's shop, nail up his "shingle," as the dishonored piece of wood, bearing his name upon it, is called, and henceforth insult science by calling himself a veterinary surgeon! . . . Poisons the most active, blistering, firing, purging, along with the knife, the scalpel and the saw, are the barbarous instruments which these merciless ruffians employ to torture the hapless animal with, and astonish the humane and terrified beholder. . . . To put a stop to these inhumanities, as well as their kindred abomination — vivisection, the Society I represent has made repeated and earnest applications for redress to the Legislature, through its counsel, Mr. Gerry.

Speaking of the bill which "through some unknown cause was pigeon-holed, and probably will never again be brought to light," Liautard states in 1879: "The need still exists, and perhaps more than ever is strongly felt by every honest practitioner." As a substitute measure, he printed the text of a bill "adopted for presentation to the Legislature," by veter-

inarians of New York and Brooklyn. This provided for the establishment of a State Veterinary Society with powers to examine candidates and grant the degree of "Licentiate of Veterinary Medicine." This, obviously, was Liautard's original scheme, but there seems to be no record that the bill was ever presented.

In 1881 a bill was introduced in the New Jersey Legislature which would restrict the use of any degree designation to graduates of legally chartered schools, but did not prevent nongraduates from practicing so long as they conformed to this provision. This failed to pass.

The Best We Can Get

In 1882 Ezra Mink, a nongraduate of Rochester, New York, offered what appears to be his version of a bill which: "I think we can procure the passage of. I think it is the best we can get at present." This called for licensing only graduates of recognized schools, except that any person twenty-five years of age who had been practicing for three years would be exempt from this requirement, provided:

that he can read and write; and that he has in his possession some work or works recognized as authority, that he has read and studied . . . that he has knowledge of arithmetic and of pharmacy sufficient to enable him to combine or compound, and to dispense drugs in a practical and intelligent manner and with ordinary safety.

Mink states that medical practice acts so far adopted had all been "prospective and not retroactive," several exempting anyone who had been practicing from two to ten years.

A simpler version of such a bill was read twice and referred to and reported favorably from the Committee on Public Health of the New York Senate in 1882. This provided only that a diploma would be required of those who "shall hereafter practice veterinary medicine and surgery," apparently exempting anyone already in practice. Liautard objected to a bill such as this on the grounds that:

Far from being an act to regulate the practice of veterinary surgeons, and for the better protection and for the more humane and scientific treatment of dumb animals, if passed, it would prove the most dangerous blow that the advancement of veterinary science could receive, and the clearest recognition of ignorance and quackery. . . . Let us have the power to admit into our ranks good men, but not every one.

While it might be supposed that many nongraduates would have favored a bill with no restrictions on those already in practice, G. H. Kidney, V.S., writes, concerning Mink's bill:

I am not a graduate of any medical school, but have been practicing veterinary medicine for fifteen years, and should the bill become a law, I willingly will give up the practice if I cannot pass the examination required.

It is obvious that at least some of the better qualified nongraduates could have been excluded. Coupled with a provision for admitting graduates without examination, this could have been a grossly unfair practice; it was well known that many nongraduates were far superior to some with diplomas. And while the better class of nongraduates would have had little to fear from an examination, presumably there are veterinarians today who after fifteen years of practice might have trouble with some of the state board examinations.

Problems in Pennsylvania

In 1883 a bill to regulate the practice of veterinary medicine in Pennsylvania called for licensing without examination any graduate of a legal school, and required that veterinary schools — presumably in Pennsylvania:

shall upon application, without examination, issue a diploma to any person who has studied, or may study for five consecutive years in the office of a practicing veterinary surgeon . . . or who has for five years before the passage of this act been continuously engaged in the practice of veterinary surgery and medicine.

Others were entitled to a diploma after examination. As it might be supposed,

this monstrosity was opposed by the Keystone Veterinary Medical Association, and in commenting upon its defeat, W. H. Hoskins, secretary of the Association stated:

It contained so many vicious features that the Society at a previous meeting determined to oppose and were rewarded by a severe defeat of the bill.

At this time the Pennsylvania College of Veterinary Surgeons employed a preceptor system of instruction. Concerning the College, James T. Ross, V.S., recalls much later in a letter to Dr. G. H. Hart:

it was composed of a number of Doctors all practitioners who took one or two students each. And each had their own way of teaching them. James McCourt was president M. W. Birch & son Vice President James A. Marchall was secretary. They held meetings once every week. . . . Now I was with M. W. Birch and Son . . . as was also Joe Burns of West Chester and also Harry Hahn & also Chas. Devlin.

Now we studied Strangeways Anatomy did our dissecting at Jacob Meyers place 2 afternoons each week. Jake would give us any portion we would want and put it on the bench for us . . . our equipment was not just as nice or up to date as at Penn. But never the less we did pretty well at that, Now we were quizzed one hour every afternoon on what we had dissected previously. . . . We were taught practical pharmacy every day for we had a lot of that to do, You can imagine when we had to compound all medicines and blisters and ointments and liniments &c for all the Car Stables, We had 1300 head at the 2nd and 3rd St. line 800 head at Frankford Road and Lehigh Ave. & 500 head at Richmond St. & Allegheny Aven. and many more large Stables. . . . And every private stable in that Section. . . .

I will never forget when I was going over to Penn. in Oct. 1884. Dr. Glass taught us to make a cantharides blister and we used petrolatum for a base, Well it made a nice looking, ointment but it was not a blister at all, But when I used lard in the same proportion I got an Edenia about 2 in. high I never use petrolatum after that.

Dr. Hoskins apparently had his reasons for protesting the practice act.

A bill introduced in the Illinois Legislature the same year would require that the candidate for licensure hold a diploma from:

a college authorized to graduate students in veterinary medicine and surgery, or is a recognized member of the Illinois State Veterinary Medical Association or who has passed a satisfactory examination before an appointed board for that purpose.

To be eligible for membership in the Illinois Association, a nongraduate had to have been in practice for two years and present certificates from two physicians as to his standing as a veterinary practitioner, to be eligible to take the examination of the Board of Censors of the Association.

Legal and Just Legislation

The problem of what would constitute both legal and just legislation is pointed out by A. J. Murray in 1883 on the occasion of formation of the Michigan State Veterinary Medical Association, which patterned its structure after that of Illinois. Regarding the admission of nongraduates, Mr. Daniels, of the *U.S. Veterinary Journal*, who had been instrumental in having several state conventions called, urged:

If the lines of the society were drawn too tight, so as to exclude existing non-graduate practitioners, no bill would be obtained from the Legislature to protect the veterinary profession, owing to the small number of members forming the State Veterinary Association.

Although the wording of this seems to carry a veiled threat, Murray recognized that there was some truth in the proposition:

but to overcome this obstacle by adopting into the profession a large number of non graduate practitioners, would be a most ruinous policy. It will be necessary for the veterinarians of each State to wait until they are in position to ask for a protective law, and it would be a very injudicious policy to ask for such a law too soon, as it would be courting certain defeat. The status of the veterinary profession is at present low enough . . . it would become very much lower, by adopting into the profession a large number of veterinary practitioners who have received no professional education, and would also place the State veterinary societies in the position of competitors of the veterinary schools. . . . It is obvious enough that the State veterinary societies may accomplish a great deal of good to the veterinary

profession and to the people in general, by using their influence to improve the laws relating to the diseases of animals, but it is well that they should not be too active, and that they should not attempt to accomplish that for which neither the profession nor the people are prepared.

One difficulty—perhaps the major one—in getting a bill passed in New York was the lack of unanimity of veterinarians. The New York Veterinary Society, composed chiefly of graduates in and around New York City, apparently would have liked to see only graduates licensed, but proposed a bill which would place the examination of nongraduates in their hands. The New York State Veterinary Medical Association (founded upon Mr. Daniels' urging), composed largely of nongraduates in outstate New York, quite naturally opposed such a proposition, and an apparent compromise, with two examiners from each group and a fifth to be agreed upon by the four, was drawn up for presentation to the Legislature.

After a second look at this bill, however, members of the outstate Association discovered that no provision was made for disposition of the records of the examination. In presenting a substitute bill, the sentiments of the group were:

The New York city societies seem to think that all authority and control over the practice of veterinary medicine and surgery should be placed by law in their hands to be wielded by them as they may see fit. . . . The veterinarians belonging to the State society seem to have two chief objects in view. The first is to exterminate old practitioners . . . unless they can pass an examination . . . [and] this bill does not guarantee that an impartial practical examination will be given. . . . They seem perfectly oblivious of the fact that in the rural districts throughout the State scarcely a single veterinarian who is a graduate of some college can be found. . . . The principal leaders in this crusade against old and non-graduated practitioners, are those who are directly interested in the profits and emoluments arising from conducting veterinary colleges. . . . We are forced to conclude that their second object is to bring shekels to the coffers of these colleges.

The bill proposed by the outstate group provided for an examining board appointed by the Regents of the University of the State of New York, and that its reports be made a part of the public record. Although objection to the other bill was made on the grounds that it was "an obnoxious species of class legislation," the substitute bill provided for awarding the degree, Doctor of Veterinary Medicine, to nongraduates who could pass a satisfactory examination. Or nongraduates could merely register "and continue their accustomed practice undisturbed."

Liautard regretted "that so invidious an imputation of partiality and wrong motive should be made," especially in that the author of the tirade against the "big-city interests" was a recent graduate of his school. After evaluating the differences of opinion, Liautard urged:

Let, then, all the clauses requiring an examination be cancelled; let all who are now earning their living by the practice of veterinary medicine be authorized to register. . . . But let us have a law which, if of no special advantage to the present generation, will protect the next.

The matter of examination undoubtedly was the stumbling block; when the provision for it was removed, relatively speedy passage of a bill was effected.

Legislation vs. No Legislation

In noting the passage of the New York bill in 1886 after innumerable delays, Liautard states:

When the various veterinary bodies became willing to forego private feelings in order to organize into one society . . . when the interests of one had become the interests of all, the result was no longer to be doubted.

But concerning the benefits to be derived from its passage, he continues:

Upon a cursory reading, the profession in the State would seem rather to have been lowered than elevated by accepting such legislative regulation. But . . . careful consideration . . . will bring to the mind the unavoidable conclusion that it is not only a regulation

of our profession, but is a death blow to quackery. . . . While the present generation may derive but little benefit from the act, the coming generation will profit by it to such an extent that before many years have passed, no one in the State of New York will be found practicing veterinary medicine without having been regularly educated and graduated.

He notes that New York had the first veterinary schools, the first state veterinary society, and now: "She is the first to give legal recognition to the profession, and to take a decisive step towards the extirpation of quackery in the country."

W. H. Lowe, State Veterinary Inspector for New Jersey, however, took a stand quite different from that of Liautard. Admitting in 1886:

There are a few non-graduates in our State as worthy, and, if you please, more worthy than some graduates, yet I believe we have to draw a line of demarcation somewhere, and where shall we draw it if not between the graduate and the non-graduate? I believe that there are a few self-made veterinarians in the state that a license should be given by the State society. . . . But I do not believe that they should be admitted to regular membership in scientific societies . . . we must have societies of graduates or societies of quacks. . . . It is impossible for educated veterinarians to discuss scientific subjects with ignorant "horse doctors."

While Lowe would like to see a "proper" veterinary bill, he did not want one "legalizing the quacks of New Jersey," as New York had just done:

I consider this is not as good as none at all. Before the bill passed a quack was a quack, and a graduate was a graduate, but now all the quacks . . . have become legalized practitioners . . . [who] take special pains to inform the public that they are "registered veterinary surgeons," and display certificates in an unbecoming manner The legislative Act in question, puts the college graduate of the nineteenth century and the illiterate, uneducated "horse doctor" on an equal footing, while it protects a generation of veterinarians yet unborn. In my opinion we are far better off here in New Jersey without any legislation on the subject.

Actually, through defects in the New York bill as passed, the situation was worse

than suggested by Lowe. Far from being the bill presented to the Legislature, as related by Liautard:

The text of the Act had been garbled, mutilated, emasculated, and the entire essence of the law eliminated. . . . Instead of protecting the qualified practitioner by proper conditions and restrictions against the charlatan and pretender, it practically protected the ignorant pretender against the trained scientist, and threw the field open to whosoever might feel a desire to occupy it.

The most objectionable features of the bill, of course, were subject to amelioration by "tincture of time," and some improvements were effected by emendation.

The full story of veterinary practice acts would require a sizeable monograph itself. At this point it will suffice to say that other states had more or less similar troubles, but as in New York, veterinarians made every attempt to secure the best for the profession that could be obtained — although in some cases this came most belatedly. Of some interest is the fact after passage of the New York bill, sixty-five graduates and ninety-nine nongraduates registered in New York City and Brooklyn, one nongraduate by "making his cross." In some outstate counties, nongraduates outnumbered graduates by ten to one.

Concerning the agitation by veterinary societies at the turn of the century for legislation to define and protect the practice of veterinary medicine, J. W. Parker, in adopting a broader concept than many, states:

The concentrated primary aim of veterinarians, relative to needed legislation . . . must be to inform the public by precept and example that the profession is one which should be regulated by law — that the demand for legislation in these matters arises from the needs of the public. . . . Whatever degree of respect the title "veterinarian" commands is the result of the silent teaching of a very limited number of veterinarians, and in spite of the disrepute resulting from the itinerant practice of hundreds of quacks. . . . As veterinarians we must therefore become practical politicians and lobbyists; must be known as local writers for the secular press, and as speakers on all suitable occasions. We must cooper-

ate with mind, money and motive, and above all and including all these must be imbued with professional *esprit du corps*, and actuated by altruistic motives.

Upgrading by Examination

The salutary effect of state examining boards upon the veterinary profession may be surmised by the nature of questions put to candidates at the second examination of the Pennsylvania board in 1896. The examinees were required to answer ten of fifteen questions in each of eleven subjects, and to attain a grade of 65 per cent on the examination, which required two days. From the nature of the questions, it would appear that the veterinary profession in Pennsylvania was in good hands; samples of questions in each subject follow (in abbreviated fashion):

Diagnosis: Give symptoms of spavin, traumatic pericarditis, mange vs. eczema in dog, shoulder vs. foot lameness, navicular arthritis, laminitis, anthrax in cattle. How are tuberculin and mallein administered, and what constitutes a reaction?

Veterinary Practice: Give causes, symptoms and treatment of polyuria, pleurisy, choke, osteoporosis, hog cholera, periodic ophthalmia, milk fever.

Sanitary Medicine: What measures are required to suppress and eradicate contagious pleuro-pneumonia, tuberculosis, glanders? How would you demonstrate the contagiousness of rabies? Under what conditions would you condemn meat and milk for human food? Describe the duties of a slaughterhouse inspector.

Surgery: Give symptoms and surgical treatment for: pus in maxillary sinuses and guttural pouches, roaring, quittor, spavin, paraphimosis, conjunctivitis, stringhalt. Describe operations for tracheotomy, ovariectomy in bitch, impaction of rumen.

Zootechnics: Describe an eight-year old mouth, a Friesian cow, signs of a good milk cow. Define atavism, precocity, hybridization. Give ages of puberty in domestic female animals.

Therapeutics: Give uses, doses and contraindications for camphor, opium, chloral hydrate, belladonna, lobelia, chloroform. Give antidotes for opium, lead and arsenic poisoning. Write a prescription for purpura. How would you disinfect a stable?

Obstetrics: Give causes of sterility, signs of pregnancy, gestation periods, diseases peculiar to pregnancy, accidents of pregnancy, stages

of parturition. How would you deliver a mare or cow with sterno-abdominal presentation, head retained? Describe hygiene of pregnancy, normal parturition, fetal circulation.

Chemistry: Define chemistry, element, atomic weight. Give tests for sodium, copper, arsenic, albumen and sugar in urine, a case of lead poisoning in a cow from its milk.

Anatomy: Describe the bones of the pelvis, a dorsal vertebra, the flexor pedis perforans, ligaments of the fetlock, plantar nerves, arterial supply of the foot. Give regional anatomy in low neurectomy, difference between lungs of horse and cow.

Physiology: Describe salivary, gastric, intestinal digestion. Give functions of the liver, lungs, testicles. What is the source of bile pigments? What is chyme?

Pathology: Define inflammation, glanders, tuberculosis, malignant tumor, leukemia, anthrax. What is the cause of moist gangrene? What are the terminations of inflammation?

At this point it might be pertinent to ask: "What is your score?"

That the idea of a National Board of Veterinary Examiners had already been conceived is evident from an editorial in 1896 on "Uniformity." The Association of Veterinary Faculties of North America had concluded:

that the State Boards should be organized as far as possible upon the same lines, that the requirements should be similar, and that the action of any single board should be recognized by the others. In this way a license obtained by an applicant would be accepted in any other state of the union having a similar examining body . . . [and] would as nearly approach the much-discussed "National Board of Veterinary Examiners" as it is possible to attain.

At this time eight states had similar requirements. Liautard notes that New York, under the Board of Regents, had "obtained more than she needed."

The Continuing Quest for Status

In writing on "Physicians as Veterinarians" in 1878, a senior medical student states:

You speak of the "false pride of the doctors." That may be the case with some, but the difficulty often lies with public opinion. There

are plenty of tender hearted physicians, who possess the requisite knowledge, and would take pleasure in giving relief publicly to suffering animals; but I know of cases where it is thought necessary to treat them on the sly, the owners promising secrecy. I am a medical student in my last College year, having a knowledge of comparative as well as general anatomy, and an understanding of the commoner diseases among domestic animals. This summer I undertook the treatment of several horses and was quite successful. For this I was censured by half the old ladies, as well as a great many men.

As a student in his last year I am allowed to practice, and have had many cases, and some admit having received benefit from my treatment. Yet the influence of their acquaintances was so great, that I was discharged by them because I dared give relief to a suffering brute. In fact many would hurt me all they could, saying, "He's only a horse doctor." Is it any wonder that physicians fight shy of such criticism? I have not the least doubt, if the public would consider it honorable for a physician to relieve suffering anywhere that life exists, that the Medical Colleges would not be slow to take up more of the diseases of the brute and their treatment. It is my intention to, if possible, practice on man or beast, giving relief wherever pain is found, pay or no pay.

To this, the editor of the *American Agriculturist* responded:

There are "horse doctors" and horse doctors; or the line is now drawn between "horse doctors" and veterinarians. If a calling is not respected, it is because of the men who fill its ranks, and occupy its offices. We know of veterinarians who are as much respected as any physician in their town or city, and of those who practice upon all kinds of animals, both human and brute, without detriment to their standing. If physicians are thoroughly educated in, and fitted to practice, veterinary medicine, there is little danger that public opinion will be long against them. They have only to persevere in their course, and show their ability and respectability, in order to be respected, and to have all the work they can accomplish.

The editorial opinion is laudable, of course, but it seems as likely as unfortunate that there would have been instances at this time when physicians might have persevered until they starved to death.

Later, in response to an inquiry from a correspondent as to whether he "can be-

come a veterinarian by studying books on the subject," the editor states:

Our reply to this is the most positive NO! . . . We would most earnestly dissuade him from the attempt to become a self-instructed veterinarian, and thus add, however unintentionally, to the number of half-qualified or not at all qualified empirics who all over the country bring the veterinary profession into contempt.

Abundant Harvest

Like other agricultural journals of its time, the *Breeders Gazette*, which began publication in 1881, assured its readers: "Inquiries, concerning the proper treatment of diseased animals, will be promptly answered, free of charge," and offered Law's *Veterinary Medical Adviser* as a subscription premium. N. H. Paaren, State Veterinarian for Illinois, was in charge of the veterinary department of the *Gazette*. He also wrote ably on some of the more general aspects of health and disease, and in response to an inquiry concerning the desirability of studying veterinary medicine, he states:

The frequency with which we receive inquiries concerning the study of veterinary science, convinces us of an increasing appreciation among the people of the services of thoroughly skilled veterinarians, and of the need that exists in all parts of the country of such men. Even the common "hoss" doctor and the quack begins to see that his days are fast passing away; and among his efforts to retain a foothold, which at best is on very slippery ground, he aims at improvement by inquiring from us what kind of a book it is necessary for him to buy for the purpose of becoming a scientific "veterinary sargent." However, the reading of one or a few books can no more make a good veterinarian than it can make a good physician. . . .

As instances of the encouragement with which educated veterinarians have met during late years in America, and especially the professional recognition which many of them have attained, are their appointments to honorable and responsible positions in some departments of our municipal and State governments. State veterinary inspectors have been appointed in various parts of the country. A Veterinary Bureau has been established in connection with the Agricultural Department in Washington. In the army none but regular graduates

are now appointed as regimental veterinarians. In our National Congress matters relating to veterinary sanitary science have received careful attention. The result of all this cannot fail to exalt the status of the veterinarian, while it will extend his sphere of usefulness. . . . In veterinary medicine "the harvest is plenty, the laborers few."

That all was not yet sweetness and light is suggested by a communication to the *Gazette* a few issues later in reference to a lame cow:

The owner, a lady, being ignorant of the fact that the veterinary surgeon who had for years treated the sick and lame horses on the place, was conversant with the diseases of cattle, Dr. K. (a farmer, although he claimed to be a veterinary surgeon) was called, who pronounced the animal to be tail sick. A slit five inches long was made in the tail and filled with salt. The treatment not being satisfactory to the owner a veterinary surgeon was called, who, on examination, found a fracture of the humerus, and advised slaughter as she was suffering intensely. In another case where he [Dr. K.] was called in the absence of the veterinary surgeon, the superintendent being accustomed to see the pulse examined, asked the question: "How is the pulse, Doctor?" The reply was, "I have felt the critters all over and find they hain't got any."

Defense vs. Excuse

Of particular interest is a series of articles by D. E. Salmon on such topics as: "Why lose fowls by cholera?" "Degeneration of improved animals"; "Acclimatization of cattle in the South"; and "Are the trichinae of salted meats dangerous?" In a biting satire of "Hollow-horn — Absurdities of an Amateur Veterinarian," Dr. Salmon castigates the prominent agriculturalist and physician, Henry Stewart, for using (in another paper):

his influence and reputation to bolster up such barbarous customs by giving them what would be accepted by the masses as a scientific foundation. To the honor of the veterinary profession be it said that its members . . . have never failed to discourage both horn-boring and tail-splitting, as well as the belief in such diseases as hollow-horn and hollow-tail, which led to these cruel and useless practices; and if they have not succeeded in entirely preventing such absurdities, they had at least driven their recommendation from the columns

of the more respectable portion of the agricultural press.

In rebuttal, Stewart claims: "I did not defend the popular error, I only excused it," and continues:

I have heard it charged against Dr. Salmon that he is a young man—a fearful thing to contemplate anyhow—but if the charge is true, let me assure Dr. Salmon as he becomes purged of that crime by advancing years he may, perhaps, find some facts in popular knowledge just as good as the theories and deductions of his science.

Dr. Salmon replies:

It is comforting at least to know that our friend does not "defend" the barbarous practices which were criticized,—he only excuses them; and though the distinction may be more apparent than the difference, we should be thankful even for this admission. . . . More than a dozen years ago I began a contest against certain cruel and useless forms of treatment for very common diseases of animals—treatment which is a disgrace to any civilized people, and I feel it a duty to continue that fight while such practices are either defended or excused.

And in reference to Stewart's charge of guilt by association in claiming that a "D.V.M." of his acquaintance had defended the theory of spontaneous generation, Salmon counters:

the degree of D.V.M. can only be obtained after six years of special study . . . it would, consequently, be impossible for any D.V.M. to hold such views as he charges them with; that as a matter of fact no one with this degree has ever held such views, and that Dr. Stewart never was acquainted with nor ever saw a D.V.M.

Salmon, whose D.V.M. was awarded by Cornell in 1876 after he had obtained clinical experience in Europe, was one of only a handful of men in the United States to hold this degree or its equivalent at this time.

Member of Society

Veterinarians continued to be aware of their responsibilities to the community, and

an admirable statement of the duties of "The Veterinarian as a Member of Society" is contained in the *Review* for 1887. The value of this contribution, however, would have been none the less had the author acknowledged that it consisted of a series of passages taken directly from Fleming's *Veterinary Sanitary Science and Police*. Crediting Fleming with the authorship, therefore, we are assured:

The veterinary surgeon has not only the dictates of humanity to inspire him, and which is the sole incentive of the physician, but he has, in addition, those springing from the importance of his task in a monetary point of view.

The national fortune, as far as animals are concerned, is more or less at stake, and also the comforts, nay, the very necessities of life of large numbers of people may depend upon his exertions; the health of mankind may even be, and frequently is, endangered by the outbreak of an animal plague. It is, therefore, a duty he owes to himself to cultivate his intelligence and to maintain those moral qualities which alone can enable him to exercise his professional qualifications with credit to himself and advantage to others. His duties toward his profession are pretty well summed up in his duties toward himself. Its value and status depend entirely upon the intelligence, zeal and proper conduct of its members. When a man practices a profession which gives him an honorable position in society, and to which he owes his means of subsistence, it becomes an imperative duty, as it should likewise be a grateful acknowledgement of these benefits, to devote himself entirely to its advancement in every legitimate way, and to demonstrate its importance and utility. At no other period, perhaps, can this be so well shown as in the matter of contagious diseases. The veterinary surgeon is, in the controlling of these, in a position to testify to its utility and importance to agriculture and the public in general.

Prospects and Possibilities

In addressing a gathering of Illinois veterinarians in 1888 on "The Veterinary Profession: Its Opportunities and Needs for the Future," W. L. Williams suggests:

In whatever station or pursuit of life, it behooves men to pause occasionally for a time, and make a careful reckoning of their surroundings; to look carefully into the past and consider the forces which have been at work;

then examine critically their present status, determining what useful or baneful effect this or that force has exerted, and in what essentials their present position differs from that which should have been attained or desired; and then turning to the future, ask what are their prospects and possibilities, and what need they do to attain and secure them.

And in speaking of the days when veterinarians were all too few and all too little appreciated:

The ignorance of the general public seemed so profound that many apparently thought veterinarians were merely born so, and scarcely thought of the existence or need of veterinary colleges for their theoretical and practical education, and from this state of affairs, as well as the character of the men claiming to be veterinary surgeons, developed the idea—which still exists to some extent—that veterinarians cannot and need not be gentlemen, and this feeling has exerted a powerful influence against the adoption of the veterinary profession as a vocation by worthy men. . . .

Later, as the demand for qualified veterinarians became partially recognized, and before there was a sufficient learned force, or a sustaining demand for such institutions, veterinary colleges began to appear, at first proving sort of still-born monstrosities, followed closely by a few premature, sickly, short-lived affairs; not wholly fruitless, however. . . . The tottering colleges became settled, and their influence in moulding the then shapeless veterinary profession in America became apparent. . . .

Slowly, higher-toned public sentiment brought new and better influences to bear upon veterinary education, some colleges obtaining valuable financial and other encouragement, and also there being established veterinary professorships in many of our agricultural and polytechnical institutions, which exerted a powerful influence for good. . . . The honorable position of the lecturer made his profession honorable in the student's eye, bringing worthy young men into such relations as to interest them in veterinary science . . . and in their turn influencing other capable young men to become qualified veterinarians.

The National and State Governments, through their efforts to extirpate and prevent the spread of contagious disease, have unintentionally done much to advance our profession, by employing almost exclusively well qualified scholarly gentlemen, of honor and integrity, who by their extensive associations in their official capacity, and undoubted usefulness to the stock owner, have favorably influ-

enced the sentiment of the general public. The United States War Department, on the other hand, seems unfriendly to veterinary science, allowing a starving salary and a rank just below a private, all ranks above being filled. . . .

The public press, especially agricultural and live stock journals, has wielded a notable influence, each usually having its veterinary column, generally presided over by competent and gentlemanly veterinarians, their influence for good or evil varying with the men and the times. . . . Such a column has not been an unmixed good to the profession, or if it has, it is about the only purely good thing, except Christianity, that comes "without money and without price." Many of these columns are now injurious and unprofessional, proving disastrous in various ways.

Concerning the present status of veterinary education, Williams states, "Everywhere there exists a stronger and ever increasing sentiment in favor of a higher standard in veterinary education." This despite his assertion: "A college draws students in proportion to the percentage of students graduated each year, and in inverse ratio to the length of curriculum."

Honor and Wealth

Dr. Williams continues:

Turning now to the future, we may safely assert that, to the young man of today, well equipped with integrity, energy and brains, no profession offers a brighter prospect for honor, usefulness, comfortable income and even wealth than that of veterinary medicine. . . . The increasing number and value of live stock demands of us, and offers due reward for, higher knowledge and skill in the treatment of their maladies. . . . Diseases hitherto unmanageable, or treated only at a loss to the owner, must be studied carefully and rendered more amenable to treatment. . . . The ever augmenting menace to national wealth, through the ravages and spread of contagious diseases of animals, must necessarily afford honorable and lucrative employment to a large number of veterinarians. . . . Many, if not all, of these diseases, must eventually be referred to the veterinary profession for control or extirpation, affording inexhaustible fields of research. . . .

The veterinarian of the future is destined, also, to be a useful and appreciated guardian of public health. It is generally well known that a large proportion of the meat and milk,

especially that sold in large cities, is unfit for human food, endangering the health or even the life of the consumer, and the learned veterinarian may render an important service by indicating what is or is not suitable for human food, or by directing such reforms in the care of meat or milk producing animals as would insure healthy products. Highly important, also, are the talents of the skilled veterinarian, when employed to prevent the transmission of serious and fatal contagious diseases from animal to man. . . .

Hereafter, also, the veterinarian can and must be a humanitarian. Closely interwoven in the higher sentiments of every enlightened people, there exists a tender, beautiful, ever extending feeling of humane sympathy for the sufferings of the lower animals, especially of those so inexorably faithful as servants, or true as companions, as are most of our domestic animals. We can and should, when occasion permits, arouse public sentiment in this regard, and in our own work we should study how best to alleviate and avoid suffering, as well as to save money to our patrons. We very much fear that, as a body, we have been habitually far too inhuman in our operations and methods of treatment, sometimes from lack of appliances or the attendant expense, but in too many cases, from a fundamental want of true humanitarian ideas. . . .

Here then are vast opportunities for usefulness, for affluence, honor and distinction, abundant work for willing hands, boundless field for enthusiastic research, which must yield rich results to the earnest and conscientious student. . . . The future demands a veterinarian who shall be a genuine scholar, with a broad, liberal preparatory and collateral education, to expand the mind and the better enable him to appreciate scientific theories and facts, and give him a standing as a man of learning, and then he should be deeply and thoroughly grounded in veterinary science, not hurriedly crammed for a loose examination, but be truly and ineffaceably learned in every branch of veterinary knowledge.

Probably no more comprehensive nor admirable statement of the situation had been made to this time, and perhaps few since. And although many of the points Williams outlines for the future have long since become reality, his philosophy is just as valid today as it was eight decades ago.

The Spectre of Specialization

The matter of specialization in veterinary medicine became an issue about 1890,

as it has periodically since. Although the *Review* commended the development of new fields of veterinary knowledge, the concept that veterinarians should be trained as specialists was condemned. In 1891 Liautard editorialized:

Specialists in veterinary medicine exist, it is true, but their pretensions and the extent of the ground covered by their specialties are without significance or importance. . . . A competent practitioner must possess a familiar knowledge of the science as an entirety, even to become exceptionally expert in one or more of its branches.

In 1888 the *Review* published a series of articles translated from the German, on the diseases of the skin of the domesticated animals, with the notation:

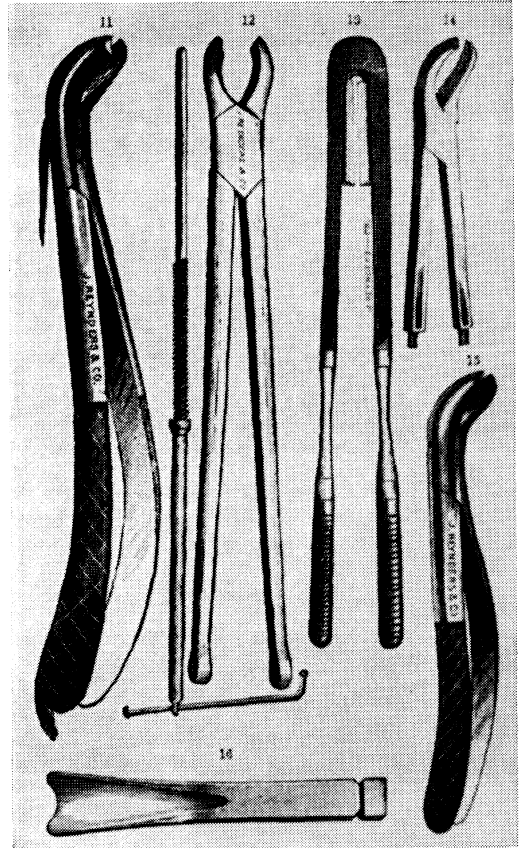
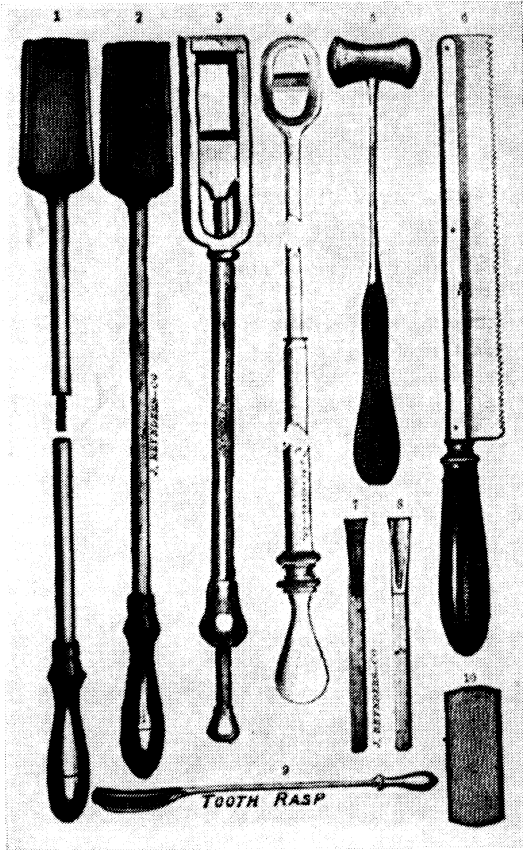
We are quite sure that our readers will recognize in this treatise a work of importance and value. . . . The subject of dermatology is one which has been comparatively an ignored department of veterinary education. In fact, we know of no veterinary colleges which include this among their regular subjects of study. Like medical ethics . . . dermatology is rather than otherwise adjudged to be a fit subject for instruction alone.

In 1891, C. S. Sayre, Professor of Dental Surgery, Chicago Veterinary College, notes:

Until within the last few years no branch of veterinary science has been so much neglected as veterinary dental surgery. Recently, however, there has been a revulsion among veterinarians, and now about one-half of the cards one sees read "John Smith or Tom Jones, V.S., Dentistry a specialty."

Sayre states that little advancement had occurred in the past two hundred years until the discovery by C. D. House of a method for operating on the teeth without the aid of a speculum. House, a non-graduate:

deserves the respect of the profession, for he certainly taught us a great deal about operative work. With his discovery followed many evils. He immediately started out as a professional veterinary dentist, and made a grand success; and this tempted many poorly qualified men to follow his example, who did more harm than good to the poor brutes subjected



Dental instruments of the late nineteenth century, including forceps, saws, chisels, and elevators, had changed but little from those used a century or two earlier—and some have undergone little change since. Liautard: *Surgery*

to their treatment, until the veterinary dentist came to be looked upon as a veritable charlatan.

One redeeming merit of this, Sayre claims, is that:

It started the public mind to thinking that our dumb brutes suffered with their teeth as well as ourselves . . . for after one of these itinerant dentists has visited your towns you have done twice as much dental work as before.

Sayre, however, did not advocate that veterinarians become dental specialists, although:

I am glad that now the profession are giving more attention to this sadly neglected branch

of veterinary science. . . . We do not want veterinary dentists any more than we want veterinary oculists or veterinary gynecologists. We want *veterinarians* in the broadest sense of the word: men educated in all branches of veterinary science. At one time I thought we needed veterinary dentists as well as human dentists, but the field of usefulness is too limited.

As is frequently the case with new developments, the pendulum swings farther than their first proponents anticipated. W. L. Williams, who had contributed an extensive study of odontomes in 1891, recommending the attention of the veterinarian to this subject, in 1906 deplored the fact that:

During the past few decades there has developed in America a conspicuous tendency to

interfere with the teeth of horses and an attempt has been made to dignify the practice by the appellation of "Veterinary Dentistry."

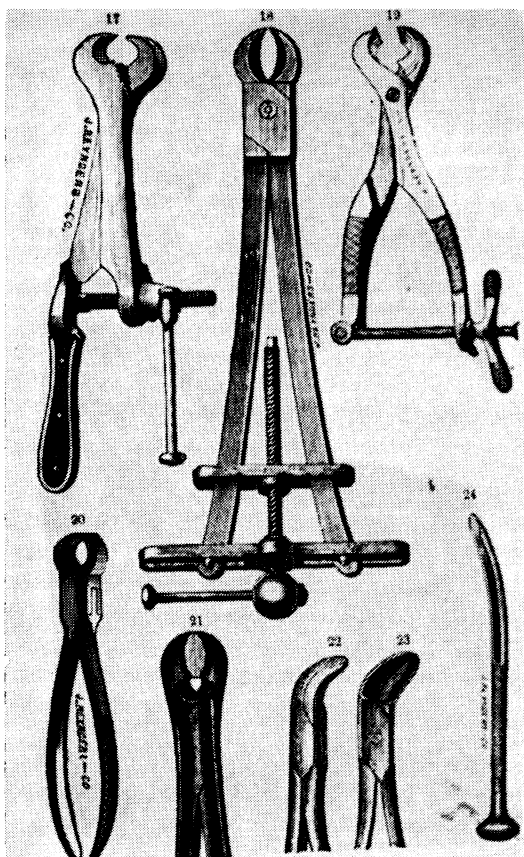
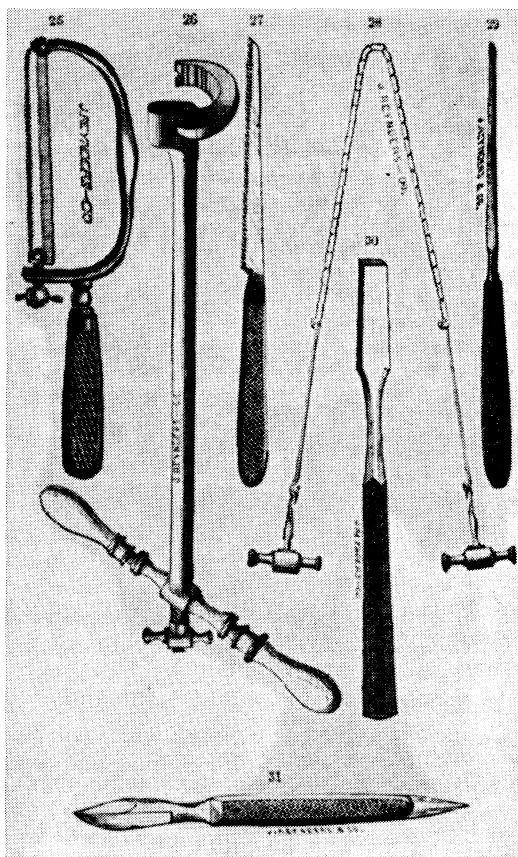
Not only did veterinarians advertise this as a specialty, but a voluminous literature was produced, and at least two Veterinary Dental Colleges at Detroit and St. Louis were organized in 1904-1905, the Detroit school advertising a correspondence course in veterinary dentistry. Few today, perhaps, would wish to append "V.D." after their names to indicate their special acquirements, but whether "officially" recognized or not, other areas of specialization have become reality.

A Dark Age Coming?

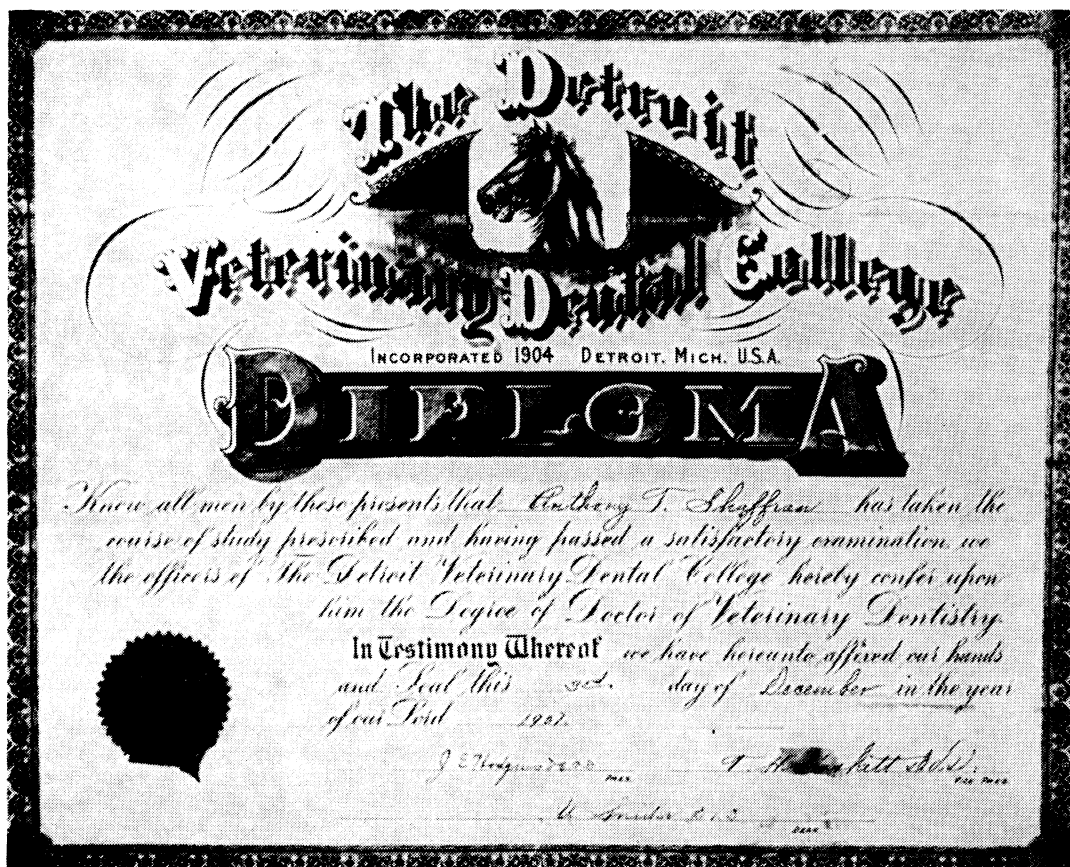
As editor of the *American Veterinary Review*, Dr. Liautard had boundless op-

timism concerning his beloved profession, although he could never be accused of viewing it through rose-colored glasses. One of his more pessimistic pieces, entitled: "Is There a Dark Age Coming?" was occasioned, in 1891, by the threat of the establishment of a host of new schools, including a "veterinary dental school," none of which seemed to bode but evil for the veterinary profession. Liautard notes:

The revolution in veterinary practice in America is a success, and all we want now is more of the same kind. Yet there are discouragements. We hear a cry of danger, and we fear there is a severe struggle coming between the true friends of veterinary science and those who are moved by mere mercenary considerations, and who would so combine business objects with the promotion of veterinary science as to inflict irreparable evil upon



Inadequate leverage was a major handicap with early dental instruments, and vise-action forceps and molar cutters only partially solved the problem until the introduction of double-action instruments toward the end of the nineteenth century. Liautard: *Surgery*



Veterinary dental surgery was an early specialty which spawned several short-lived dental schools, but professional opinion was not favorable to the development of specialties. Michigan State University Library

the latter. We would like to be convinced that the cry of danger is a false alarm, but what are we to think when we hear of the contemplated establishment of new schools, in which the investment of capital for speculative purposes is a leading incident, and a faculty is appointed containing not a single veterinarian of education, and with an empiric at its head to "run the machine"?

Shall we veterinarians who love our profession, and who appreciate our calling and its requirements, stand by silent and inert, and permit a state of affairs so disgraceful to continue, without at least a protest and an effort to put an end to it? . . . It is the duty of every veterinarian to watch the work of the parasites who would ruin a noble cause by assuming to identify themselves with its name and its mission. Would that we could inspire every true veterinarian in the land to combine with his fellows in an effort which should never cease until our most honorable profession is

established upon foundations which can never be shaken, and then we should never more have occasion for apprehension of the approach of "A Dark Age."

That the established schools were not immune to criticism at the time is indicated by Tait Butler, who in 1890 enumerated the "evils" of veterinary education in America:

that of matriculating men possessing not even the rudiments of a general education . . . that of employing men to teach veterinary students who are not themselves veterinarians . . . that of filling (?) two or three chairs by one man. . . . [And] eighteen and not eleven months should certainly be the minimum for actual college work.

The report of the USVMA Committee on Intelligence and Education this year, how-



FIG. 113.—Binocular Band (full view).

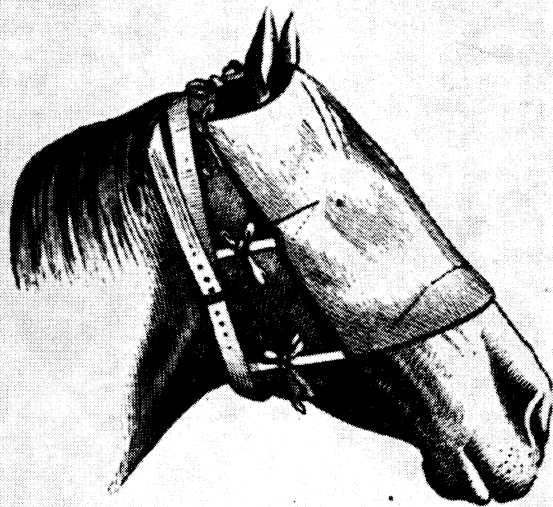


FIG. 114.—Binocular Band (side view).



FIG. 115.—Ear Bandage (full view).

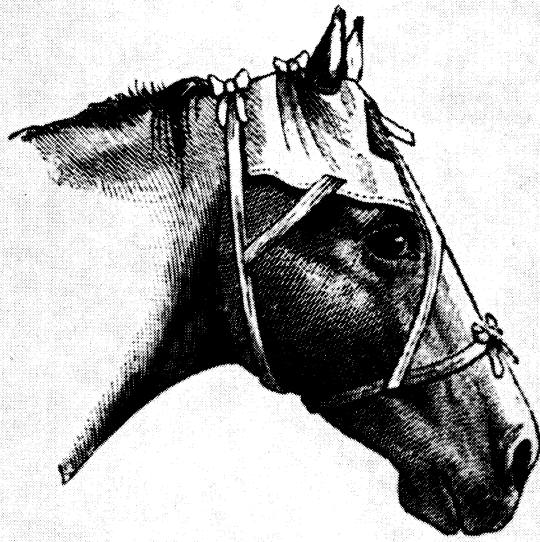


FIG. 116.—Ear Bandage (side view).

The ability to apply a neat bandage was a major criterion of surgical acumen during the late nineteenth century, when the rationale of wound treatment included the need "to shield it from injurious atmospheric effects, malarious or otherwise." Liautard: *Surgery*

ever, concerns itself largely with the need for veterinary legislation as a means of improving the lot of the practitioner, and casting doubt upon the aphorism that "the men of a profession build up their own profession."

The following year, Austin Peters, as the new chairman of the committee, added a "fervent amen" to Butler's sentiments, and proposed "educating the veterinary practitioner," as well as the student, emphasizing in particular, the value of the veterinary journals and societies as agents of "continuing education."

Aptitude and Antisepsis

A factor to which perhaps too little attention had been given, that of "aptitude for veterinary practice," was discussed in 1891 by W. H. Dalrymple, later president of the Association:

We often have young men drifting into our ranks whose only incentive has been, probably, that some one whom they knew had made a success of it as a veterinarian. . . . It seems to us, that to attain to any degree of success whatever as a veterinary practitioner, a man should . . . have an innate love for animals, be brought up along with them, study their life and habits, get as perfect a knowledge as possible of them in health; for it is only when we have this knowledge that we can observe the slightest deviation from the normal standard.

Such an individual, he says, "goes about his patients more like a horseman than an old woman, which latter is very prejudicial to a practitioner, in the eyes of horsemen."

In a paper on "Antiseptic Surgery" in 1891, the first time this title appears in the *Review*, the author, Roland Lord, notes that those (including "medical authorities") who still oppose the principles of antisepsis fall into three categories:

they have never tried the method . . . or having tried, did it bunglingly . . . or they are of that unfortunate class of people, also too common, who know everything, and amid that knowledge, they *know* that antiseptic surgery

is all bosh. . . . An objection is often made to the minuteness of the details in our method; it is the attention to these details which go to make up the complete whole. . . . If you carry out this system of surgery you will achieve some glorious results.

Among the several factors leading to an improved status of veterinary medicine, W. L. Williams states in 1892, concerning "Veterinary Science in Agricultural Colleges":

It was these instructors of veterinary science, more than any other one agency, which made the phenomenal moral and educational progress of our profession within the past few years possible.

The eminent men holding these positions not only inculcated a respect among their agricultural students for the profession of veterinary medicine, but were the cause of numbers of these students going on to qualify as veterinarians, and to induce promising young men to do likewise. Among the personnel of the Bureau of Animal Industry, the faculties of veterinary colleges, and the USVMA "we find the names of these once agricultural students occupying prominent places."

Liautard had long urged that ethics be made a special subject in the veterinary curriculum, and in 1892 he addressed the Massachusetts Association on: "Ethics as a Means of Elevating the Veterinary Profession." Accepting the fact that the *ne plus ultra* had not yet been realized, he points to those veterinary colleges which advertise their presumed superior merits as the first offenders. Far too often the graduate used his alma mater as a trademark, inscribing his card with: "Graduate of the *Blank* Veterinary College," and going still further:

while his shoes are yet covered with the dust of the lecture rooms, he sets out to drum up trade by becoming a specialist! One is a dentist, another chooses lameness for his specialty, a third is great on castration and its various requirements, or perhaps becomes a canine pathologist.

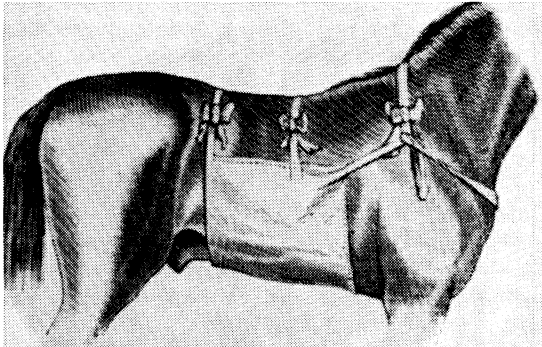


FIG. 112.—Bandage for the Abdomen.

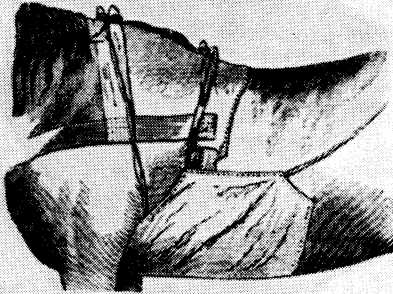


FIG. 113.—Bandage for the Chest.

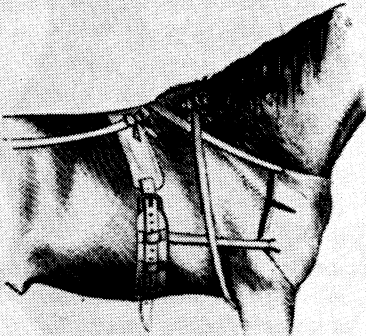


FIG. 114.—Bandage for the Breast.

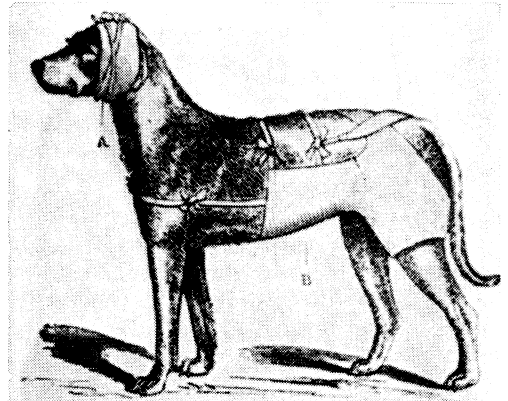


FIG. 119.—Bandage for the Ears, A. Bandage for the Manes, B.

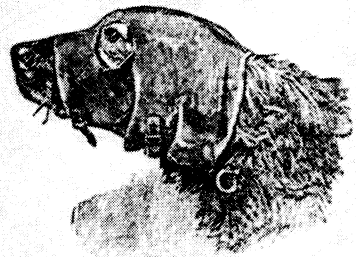


FIG. 120.—German Bandage for the Ears.

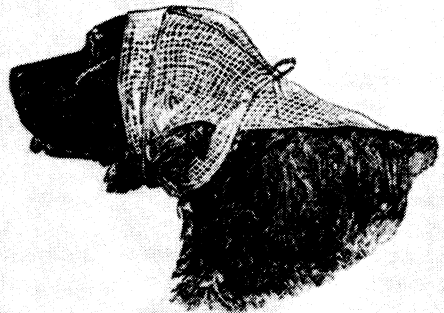


FIG. 121.—Another German Bandage for the Ears.

Before antisepsis and aseptic surgery were practiced, many of the elaborate impervious bandages probably did harm by favoring the growth of anerobic organisms, and some practitioners adopted a mesh bandage as an alternative. Liautard: *Surgery*

Liautard is particularly censorious of those veterinarians who offer gratuitous advice anonymously in the sporting papers. *A Veterinary College of America*, similar in function to the Royal College of Veterinary Surgeons, long advocated by Liautard, would, he thinks, be the best means of securing a uniformly high standard of excellence. As a matter of passing interest, it would appear that Liautard's foreign

background, after thirty years, had not been entirely suppressed, for in a report of this meeting, the Secretary of the Massachusetts Association affectionately refers to Dr. Liautard as "the Frenchman."

The Old and the New

Concerning veterinary practice in the 1890's, G. W. Browning (N.Y.C.V.S., 1892),

a frequent contributor to *Veterinary Medicine* in the 1920's recalls:

While I was a senior student of the New York College of Veterinary Surgeons, the house surgeon made the remark: "Give me a good set of firing irons and a bottle of turpentine and I can do almost all it is necessary to do in the successful practice of the veterinary art." After leaving college and settling down to practice in a stock raising community in the black land belt of Illinois in 1892, I hewed strictly to the line of treatment I had been taught while in college. I fired everything. . . . How-

ever, in time I began to ask myself why I used such heroic treatment. The result was that except for spavins, I haven't fired a horse in twenty years. . . .

Acute indigestion and the different colics were treated by large draughts out of a long necked bottle. The drenches consisted of a quart of linseed oil, one ounce of turpentine and one ounce of spirits of niter. The horse's head was pulled up by running the halter rope over the limb of an apple tree. It was often pulled so high the animal could not or would not swallow and the drench ran down the trachea causing strangulation. Usually a part of

The first major improvement over the hot poker—other than the simple firing needle, which cooled too quickly—was a point-cautery with a large metallic "heat reservoir" (left), followed by one with its own charcoal burner and two needles, one of which was heating while the other was in use. Liautard: *Surgery*

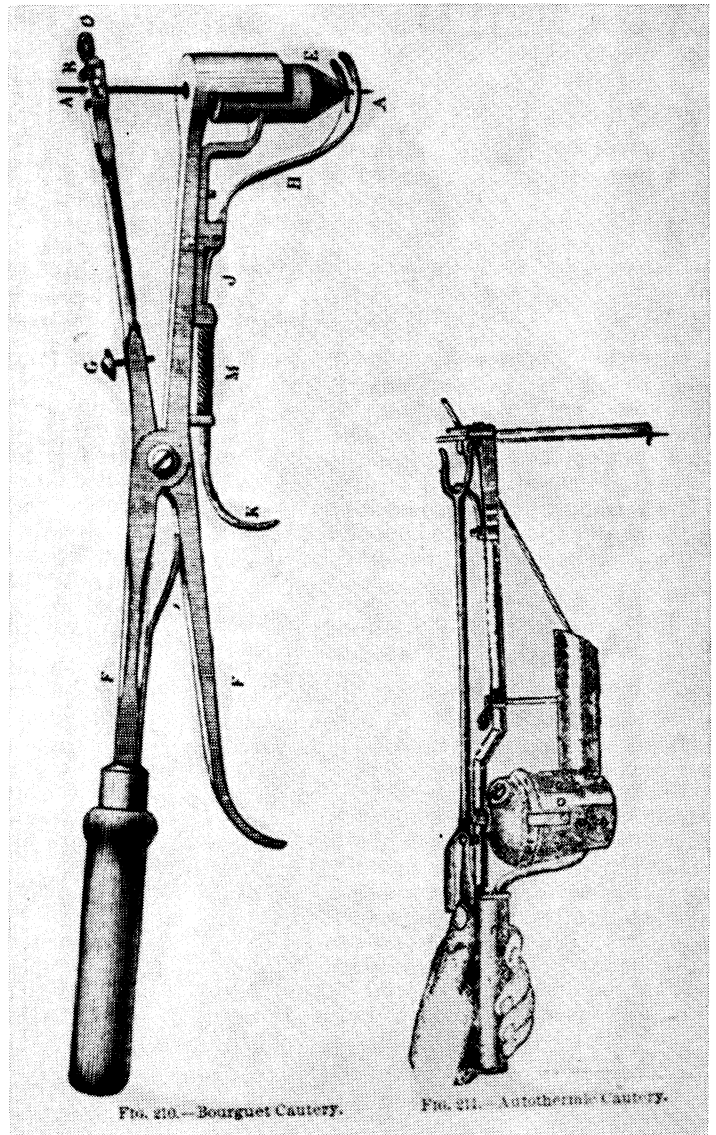


FIG. 210. — Bourguet Cautery.

FIG. 211. — Autothermic Cautery.

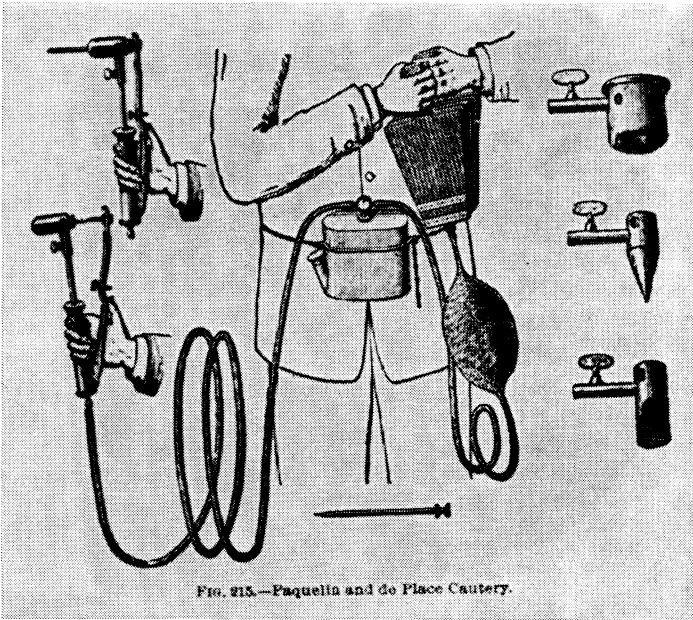


FIG. 215.—Paquella and de Place Cautery.

One of the first continuous heat cauteries (ca. 1890) — a considerable improvement over the older type which required a charcoal burner or blacksmith's forge. Liautard: *Surgery*

the drench ran down the veterinarian's shirt sleeve. . . .

Finally the absurdity of it all was too much for further negligence and I began to look around for a more successful line of treatment, and one with less discomfort to the patient. I discarded a great many of the remedies which I was using at that time. However, I never used a new remedy until I freely consulted old medical literature as well as new. I found that a great many drugs valuable for treating the sick and afflicted of olden times had been discarded because they did not know how to use them.

On the subject of anesthesia, Robert Robb, V.S., M.D., writes in 1898:

Owing to surgery in the veterinary profession advancing so rapidly, it is now a question whether or not anesthetics will be carried out successfully as in the medical profession. I cannot see why this neglected branch of veterinary medicine for operations has been so slow in the past; whether it has been due to the lack of experience, or to the valuation of animals or environments, I will not attempt to state. . . . In the past there have been a great many operations neglected or put aside owing to the fact that it was impossible to carry out such a procedure, but at the present day there is such a demand for surgeons that one has to be on the alert, or else he will have his clients seeking new pastures to reap the benefits of more skilled hands.

Robb recognizes an obvious reason for many practitioners — the majority of whom worked alone — not using anesthesia to any great extent:

Many an animal has passed to that other shore on account of the anesthetist, his eyes being centered and his mind so occupied with what was being done with the knife, only to find out when too late that he was kneeling over a cadaver.

His Lot Is Not a Happy One

In 1896, *Turf, Field and Farm* notes:

The lot of the practicing veterinarian is by no means a desirable one. With the diminishing use of the horse, low prices and increasing intelligence of the people, and flooding the country with prepared nostrums, the veterinarian is bound to find his field of future operations a circumscribed one indeed, and he has our sympathy.

To this Liautard retorts:

The writer of that paragraph is not sufficiently acquainted with his subject to know that the veterinarian's future calling is an expanding rather than a contracting one.

The following year, however, E. L. Volgenau, D.V.S., writing in the *Review* on:

"The Future of the Veterinary Profession," notes:

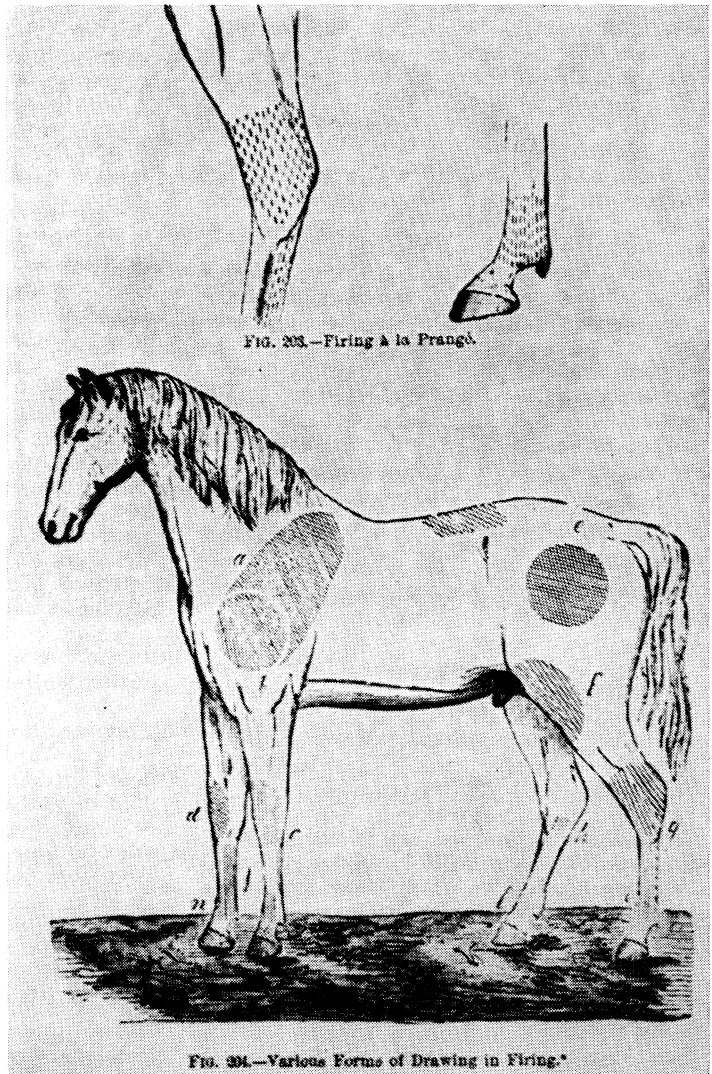
some startling figures as to the effect of the bicycle upon business in general and particularly its effect upon the horse and livery business.

A New York paper had put this loss during the last year at some \$45,000,000; Volgenau states:

To the veterinarian these figures are significant. For the past three years the earnings of veterinarians have been steadily on the decline . . . [and] the main cause for the

diminished earnings throughout the whole country has been the almost universal adoption of the bicycle. The main question is, has the bicycle come to stay? If the answer is in the affirmative, veterinarians will soon have to seek new fields, and other methods of earning a livelihood.

From the four corners of the earth come the reports of veterinarians who are taking up other professions or trades more profitable than the honorable profession to which they have linked their destinies. Salaried positions under the state, municipal and federal governments are in greater demand than ever before, and there is an uneasiness throughout the profession which is ominous. As long as the



The precision of pattern firing was long considered the mark of a competent practitioner — dating from the time when farriers fired in cathedral-window configurations. Liautard: *Surgery*

cattle, sheep and hog interests of the country are of such magnitude, there will always be a demand for veterinarians, but the problem in the large cities is a great one. The young man desirous of entering the profession, had better consider well before entering a veterinary college and spending time and money in acquiring an education which will hardly net him interest on the investment. . . .

You laugh and say horseless carriages are impracticable, it is visionary, ridiculous to say that this motive power will be applied to delivery wagons, trucks, and the thousand and one purposes for which the horse is now used as the propelling power. Why is it visionary? . . . Who would have dreamed fifteen years ago, when the first cumbersome bicycles were built, that to-day millions of wheels could be in use all over the world. . . . The bicycle is no fad . . . the motor-cycle and horseless carriage, which at the present time seem bulky and impracticable, will within a short time become so improved that the horse will be supplanted.

Now comes the ultimatum. Granting that the demand for the services of our equine friends is on the decrease, where is the veterinarian to find a market for his professional skill? The municipal, state and federal offices can employ but a limited number of veterinary surgeons. The balance must of necessity be content to earn a scant livelihood by means of the deteriorated general practice, or leave the profession to engage in more remunerative employment.

Having followed the prophet of gloom and doom thus far, it may be hoped that none of his readers stopped here and turned their casting ropes into final instruments of despair, for he continues in a hopeful vein:

There will always be a demand for educated veterinarians, and as their field of usefulness broadens it will devolve upon the colleges to give more attention to the essentially scientific studies embraced in the curriculum. . . . Within these fields lies the work of the future veterinarian, and he will gain his success in life, both social and financial, not so much upon his ability as a skillful surgeon, or by his success in treating colic, fistulous withers or spavin, but upon his scientific knowledge and attainments.

Our fault has been that we have paid too much attention to the practical side of everyday practice, and often at the expense of the theoretical and experimental. We have judged other practitioners and been judged ourselves

upon our money-getting powers, the ability to convert our professional skill into dollars and cents. . . . The bicycle and horseless vehicle mark the beginning of a new era for the veterinarian. From this time onward the marketable commodity will not be what we can do, but what we know.

Yet, for decades to come many veterinarians continued — in effect — to give diagnosis and other consultations free, depending upon the profits of what they could prescribe to provide their bread and butter.

Auto-destruction

The veterinary journals had started a running feud with the automobile interests in the 1890's, and took advantage of every occasion to disparage or lampoon the use of the horseless carriage — often with more malice than logic. An early report on the economics of the automobile in practice was offered by Mark White of Colorado in 1909:

For the benefit of my brother colleagues that may be contemplating the purchase of an automobile to displace the horse in their practice, I desire to give them this tip. I have used a machine for the past months in my practice in Denver; I drove a machine 23,000 miles at a cost of \$2,500. I found the automobile wholly unreliable for my business, and very expensive. If I saved an hour to-day, I would lose two to-morrow. . . . I found that when it became necessary to go to the shop for repairs that I fell into the hands of men without any conscience or honesty. They would work on my car one hour and probably charge for two or three, at the rate of 75 cents per hour. . . . An automobile will consume the profits of a medium business. . . .

It requires more thought to keep up with the running of the machine and keep it all together than it does to look after one's practice, or study how to make a living therefrom. A doctor, in my judgement, needs to think over his cases and business when he is traveling from one to another during the day, but it is impossible to do so when running a machine, for it must have your entire thoughts.

What Dr. White perhaps failed to realize was that he had driven his machine in several months as far as he would have driven a horse in several years.

In 1916, however, the irrepressible E. T. Baker reports:

That a car is a trade-getter, one must own a car for awhile to fully realize. To be at a rancher's place, five or ten miles out in the country, twenty or thirty minutes after being called; to relieve a writhing animal of its pain, while chance for recovery is good, is what an auto will accomplish. And even in case of a funeral, the rural verdict will be: "Well, me an' Doc done all we could, fer I got him right away!"

Formerly, upon arriving at a place some hours after being called:

"Well, Doc, yuh don't need to git out; th' mare seems all right now, an' she's eatin'!" used to be a common greeting in the olden days of horse and buggy. The rancher seemed to think that if one did not get out, the bill would be so much less.

On the matter of economics, Baker suggests we forget about cost per mile:

If there is a veterinarian who has kept strict account of all his auto expenses, let him send his photo to Dr. David Roberts for publication. Looking back over old paid bills is as merry an occupation as spending the night in a country cemetery. Outside of horse trading, perhaps more lies have been told about the upkeep of autos than anything else. . . . An auto will double one's practice and size of territory; it will decrease one's mortality enough to make him forget repair bills.

One practitioner who appears to have been satisfied with the horse was A. W. Baker, of Brasherfalls, New York, who in 1914 had a horse twenty-four years old that he had driven 78,175 miles, an average of sixteen miles per day: "One day he was driven seventy-nine and four-tenths miles, in twelve hours. Many a day I have driven him fifty miles." The horse, apparently, was a good one, and in good hands.

While a number of prominent veterinarians were still lamenting "the passing of the horse," Dean E. E. Wegner in 1926 observed:

The motor car has trebled or quadrupled the time of the veterinarian as well as every



"Mud scow" devised by a rural practitioner to cope with bottomless roads where even the famed Model T Ford was known to occasionally let a man down. *Veterinary Medicine*

other professional man. He could not today afford to take his lost horse practice back and drive a horse and buggy. Drives that used to require a half day's time can now be made in one hour. The motor car has done more to increase the earning power of the veterinarian than all events together of the past twenty years, and all that it cost him was a small percentage of his horse practice.

To this the editors of *North American Veterinarian* add:

The motor car has increased the volume of small animal practice by leaps and bounds in cities large and small, as the passing of the horse from the social life of the American family seems to have increased the fondness for dogs and other pets and has not only increased the demand for well-bred dogs but has thus created a better understanding of the value of pets in the family circle.

Consulting the Oracle

The turn of a century being an appropriate time to take a forward look, W. L. Williams, in outlining: "The Future of the Veterinary Profession" in 1900, states:

We must base it upon our past history and present condition, considering the forces at work, the obstacles in the path, and the progress thus far attained.

With reference to the Mosaic law regulating the use of meat, he continues:

Functions now properly devolving upon our profession have been deemed essential to

human welfare since the earliest dawn of history. . . . In recent years we have come to see the importance of this law, through bacteriology and pathology, which have demonstrated the close relationship or identity of numerous diseases of animals and man, and have fully shown the importance of wholesome meat and dairy products. . . . The future of our profession in relation to meat and milk inspection is as plain as it is inevitable. The national inspection will be increased and strengthened, and states and municipalities will be compelled to introduce systematic inspection in harmony with the needs of a civilized people.

Concerning the progress made in eradication of animal plagues: "The rude, gross work already done has merely served to uncover deeper, more complex questions." And in reviewing the status of the military veterinarian, Williams says:

The most serious obstacle to a better army veterinary service is the army veterinarians. . . . They have largely assumed the prerogatives of the army mule and expended their energy in "kicking" about their low pay and absence of rank.

He notes, however, that proper rank and pay are essential to a competent service.

Noting that "only a sheet of thin parchment" separates the better self-educated practitioner from the graduate with lesser qualifications, he calls for higher educational standards:

Veterinary education has passed forever from the realm of commercialism and cannot now be conducted in harmony with the needs of civilization except by the philanthropy of men of wealth or through state support. The laboratory is replacing the lecture room: some other than the veterinary student must pay for the enormous increase in cost. . . . In the future the value of a college faculty must be based upon the quality and quantity of teaching done supported by original research and contributions to our store of veterinary knowledge. . . .

Future veterinary education, reflecting the future of our profession, will be more intensely

a part of our university system, the graduates possessing high attainments, a general education in all parts of veterinary science coming first, the general practitioner immeasurably better prepared in surgery, obstetrics, medicine and other essential subjects, and from this well trained body can be drawn all specialists of a high order which exigency may demand.

Pets vs. People

Speaking on "The Relation of Veterinary Medicine to the Public Health," before the AVMA in 1900, W. H. Lowe states:

People recognize and appreciate much quicker and in a fuller sense what veterinary medicine does for their pet animals and for themselves, in a commercial sense, in protecting the animal wealth than they do for what the science does for the health and lives of the people themselves.

He notes that the creation of the Bureau of Animal Industry came about largely through the inroads of contagious pleuropneumonia, for: "This disease struck the most sensitive thing in all creation — the bank account." On the other hand:

The scandals and sensational reports of bad meat supplied to our soldiers in the Spanish-American war must have suggested the importance of an adequate veterinary inspection of animal food and what it would have meant to their health and the lives of the men serving in our army.

Milk inspection, he contends, is set up on the wrong basis in most cities:

Instead of beginning by inspecting the milk, as is often done, they should begin by inspecting the animals, their stables, and the dairy generally. . . . The public need educating in this matter.

If veterinary medicine had not yet become a major power in public health circles, veterinarians had given these problems serious consideration for some two decades or more, and a voluminous literature on the veterinary aspects of public health already existed by 1900.