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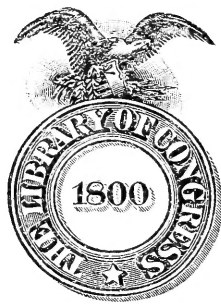
1912

Alabama Live Stock

Sanitary Board.

Regulations

1912



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1912

REGULATIONS

ADOPTED BY THE

Live Stock Sanitary Board

— AND —

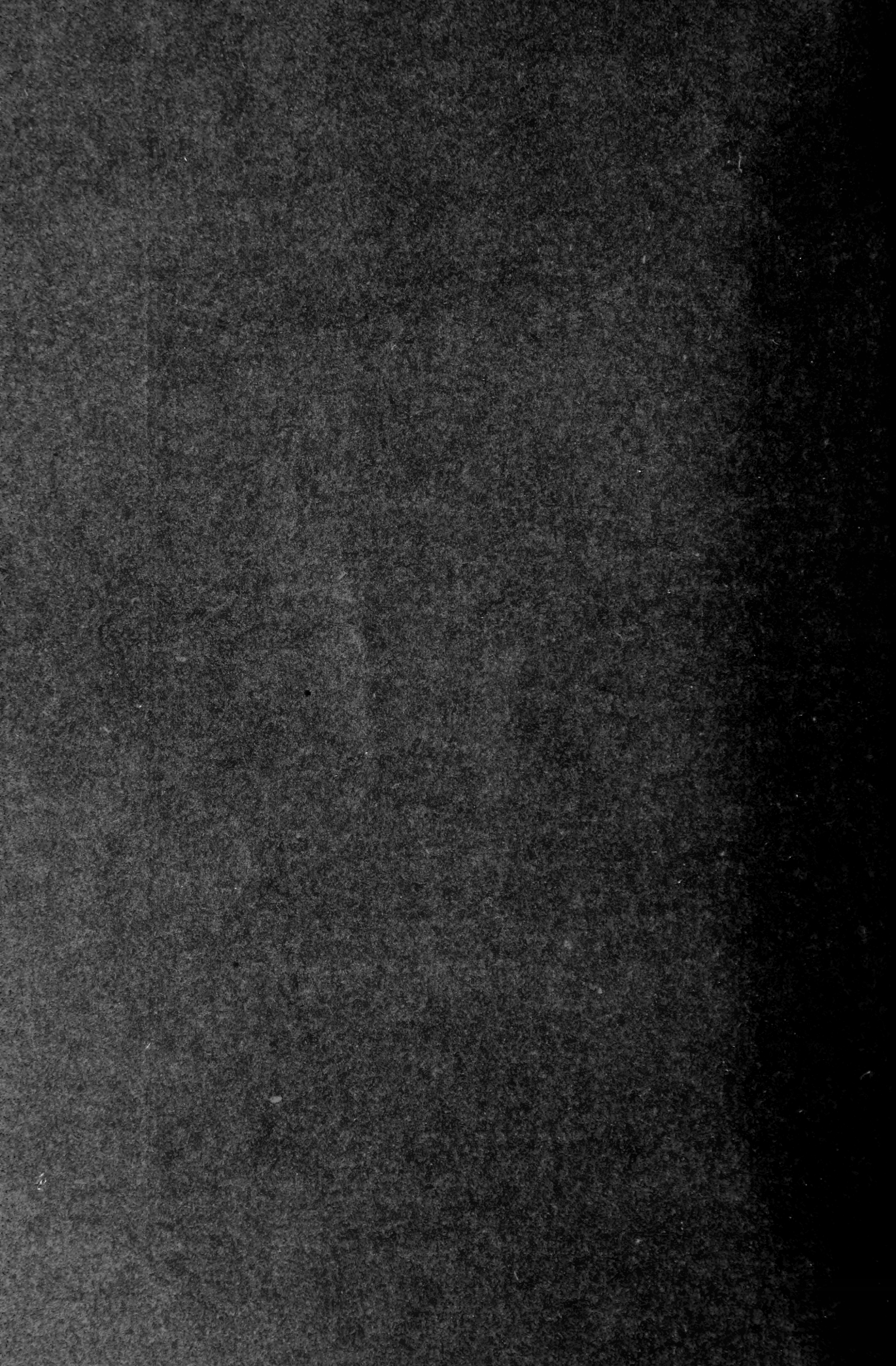
The Live Stock Sanitary Law

— OF —

ALABAMA

Dipping Vats, Dips and Directions for Killing Cattle Ticks
on Cattle may be found on the last pages.

OPELIKA, ALA.:
POST PUBLISHING COMPANY
1912



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1912

LIVE STOCK SANITARY BOARD

COMMISSIONER R. F. KOLB, *Chairman*

PROF. D. T. GRAY.

DR. C. A. CARY, *Secretary and State Veterinarian*

All communications should be addressed to C. A. Cary,
Auburn, Ala.

SPECIAL NOTICE.—In no case does the state or county take the responsibility for accidents or losses in dipping, greasing or disinfecting in any way or in driving to and from the vats or in quarantining animals. No indemnity is paid for animals having glanders or any other infectious diseases.

THE LIVE STOCK SANITARY LAW HELD CONSTITUTIONAL BY THE COURT OF APPEALS AND THE SUPREME COURT OF ALABAMA.

A decision on the constitutionality of the Acts of the Legislature establishing a State Live Stock Sanitary Board, which appears in the Code of Alabama, was rendered by Judge J. DeGraffenreid in the case of the State of Alabama vs. J. W. McCarty. This decision was reviewed and sustained by the Supreme Court of Alabama.

H. OF D.
NOV 29 1913

REGULATIONS ADOPTED BY THE LIVE STOCK
SANITARY BOARD OF ALABAMA.

REGULATION 1. Calls for inspection of live stock or investigation of infectious, contagious or communicable diseases of live stock should be sent directly to the State Veterinarian, C. A. Cary, Auburn, Ala. All requests for such work should be accompanied by a short statement of the nature, the extent, and the exact location of the outbreak, and the name of the owner and the keeper of the animal or animals affected.

REGULATION 2. Quarantined cattle shall not be removed from the field, pasture, lot or enclosure in which they are quarantined, except by special permission in written or printed form given by the State Veterinarian, and countersigned by an assistant State Veterinarian or a State Live Stock Inspector. Assistant State Veterinarians and State Live Stock Inspectors shall issue in the name of the State Veterinarian written or printed quarantine notices to every party having tick infested cattle in his or her possession or under his or her control. This is to apply only in counties or districts that have been officially quarantined for the purpose of eradicating cattle ticks.

REGULATION 3. No cattle shall be allowed to stray or be moved from any tick infested area or region into any area or region in the State in which the work of tick eradication is being conducted except by a written or printed permit issued by the State Veterinarian or an Assistant State Veterinarian or a State Live Stock Inspector; and such movement shall be made as hereinafter provided:

A. The cattle shall be free from cattle ticks (*margaropus annulatus*); shall be shipped only by rail or boat and the shipping bill shall designate them as quarantined cattle and the cars shall bear placards on each side stating that said cars contain quarantined cattle.

B. Cattle from the tick infested area or region may be shipped only to such places as may be designated by the State Veterinarian. At the present time cattle may be received by car or boat at Montgomery for immediate slaughter, and such cattle shall be free of all cattle ticks.

C. On arrival at Montgomery, or any other place of destination, said quarantined cattle shall be placed in pens marked "Quarantined Pens," that are used only for that purpose; and cattle when once placed in said quarantined pens can be taken out of said quarantined pens only for immediate slaughter and for no other purpose, except by a written or printed permit issued by the State Veterinarian, an Assistant State Veterinarian, or a State Live Stock Inspector.

REGULATION 4. No person, company or corporation owning or having charge of any cattle in any quarantined area or region in which the work of tick eradication is being conducted, shall drive or permit any cattle to be driven, or to run at large, or to stray upon any public road, street, highway, common, range, open or unfenced place, or shall deliver any cattle for transportation, or receive for shipment any cattle without first having obtained a written or printed permit for the specified movement of the cattle from the State Veterinarian, or an Assistant State Veterinarian, or a State Live Stock Inspector. In no case shall tick infested cattle be driven or moved or permitted to stray or to run at large upon a public road, street, highway, common, range, or upon open and unfenced places.

REGULATION 5. No car or boat shall carry both infected and non-infected cattle on the same trip, and when a car or boat has carried infected cattle, it shall be cleaned and disinfected before carrying non-infected cattle, as follows: Remove all litter and manure. Wash the car or boat and feeding and watering troughs with water until clean. Saturate the entire interior surface of the car or boat, including the inner surface of the doors, with a mixture made of $1\frac{1}{2}$ pounds of lime and $\frac{1}{4}$ pound of strong, concentrated carbolic acid to each gallon of water, or with a solution made by dissolving 4 ounces of chloride of lime to each gallon of water, or any other disinfectant that is approved by the State Veterinarian.

REGULATION 6. The movement and disinfection of horses and mules in areas in which the work of tick eradication is being conducted, shall be regulated and controlled as may be deemed necessary by the Veterinarian or Inspector in charge.

REGULATION 7. The method and manner of cleaning infected

animals and infected places of cattle ticks shall be prescribed by the State Veterinarian, the Assistant State Veterinarian, or State Live Stock Inspector in charge of tick eradication.

GLANDERS.

REGULATION 8. (a) All cases of glanders shall be quarantined and kept continuously and completely isolated from non-infected mules, donkeys and horses. In no case shall glandered animals be taken upon the public highway, into public grounds, or be fed in public places, or given water at public fountains or troughs.

(b) The carcass of a glandered animal shall be either burned or so buried that it will be at least four feet under the surface of the ground. Stalls, barns, troughs, lots, posts, harness, buckets and all places that may be infected with the germs of glanders shall be thoroughly and completely disinfected according to the directions of the State Veterinarian, an assistant State Veterinarian or a State Live Stock Inspector in charge.

(c) Horses, mules and donkeys exposed to glanders may be quarantined for sufficient time to permit the infection to develop or to permit the State Veterinarian, an assistant State Veterinarian or a Live Stock Inspector to test such animal or animals with mallein.

TUBERCULOSIS.

REGULATION 9. (a) Tuberculous cattle must be reported to the State Veterinarian, and such cattle cannot be sold unless the seller notifies the buyer of the tuberculous infection of the animal or animals. (b) When such animals are slaughtered, it must be done at a city slaughter house under the supervision of a city inspector, and if slaughtered at other places, the owner or keeper must notify the State Veterinarian at least five days in advance, so that the State Veterinarian or an assistant State Veterinarian may be present and inspect the carcass and give full directions as to the disposal of the same. (c) Tuberculous cattle must be kept in strict quarantine or isolation. (d) The use of tuberculous cows in dairies is strictly forbidden. (e) All cattle brought into Alabama for use in dairies and for breeding purposes shall be free from tuberculosis; and to determine which

fact, they shall be tested with tuberculin before entering the State of Alabama. The health certificate that accompanies the freight or express bill must specifically state that such cattle have been tested with tuberculin and are free from tuberculosis. Alabama buyers of breeding cattle or cows for use in dairies, when purchasing them outside of Alabama should buy such cattle upon condition that they pass the tuberculin test. No tuberculin test is required for cattle under six months old; but calves from tuberculous cows are rejected.

REGULATION 9a. All cattle shipped into Alabama for feeding purposes shall be accompanied by an affidavit, made by the owner, in duplicate, one copy to be sent by the owner to the State Veterinarian, certifying that said cattle shall not be used for other purposes than for feeding or slaughter without first notifying the State Veterinarian, at least ten days in advance of the date when the owner desires to use said cattle for purposes other than for feeding or immediate slaughter. The State Veterinarian shall then direct how and when said cattle shall be tested with tuberculin for tuberculosis, at the expense and risk of the owner or owners. During the time said cattle are being held for feeding or for slaughter and for testing with tuberculin they shall be kept separated from all dairy, beef or other breeding cattle. Said cattle shall not be removed from the isolated pen, lot, pasture or place to any other place in Alabama until after said cattle have been tested with tuberculin and found free from tuberculosis and a permit is obtained from the State Veterinarian to move said cattle.

HOG CHOLERA.

REGULATION 10. Hogs infected with, or exposed to, hog cholera or swine plague shall not run on ranges or commons; such hogs must be confined in strict quarantine. Carcasses of hogs that have died of cholera or swine plague must be sent to a rendering tank or must be deeply buried or completely burned. Hogs exposed to, or infected with, hog cholera or swine plague, must not be sold for breeding or feeding purposes.

ANTHRAX.

REGULATION 11. Carcasses of all animals that die of anthrax in this State shall be completely burned.

REGULATION 11a. Anthrax vaccine shall not be administered in any way to domestic animals until a positive bacteriological diagnosis has been made by the Bureau of Animal Industry, the State Veterinarian of Alabama, or some legally authorized bacteriologist.

SCABIES IN SHEEP.

REGULATION 12. Sheep that are diseased with scabies shall be held in strict quarantine until dipped twice, with an interval of ten or twelve days between the dippings. The following preparations are approved for dipping:

(a) All dips approved for sheep scab by the Bureau of Animal Industry of the U. S.

(b) The lime and sulphur dip may be made with 8 pounds of unslaked lime and 24 pounds of flowers of sulphur and 100 gallons of water. The lime and sulphur should be boiled together in 20 gallons of water for not less than 2 hours and all the sediment allowed to subside before being placed in the dipping vat. Then add sufficient water to make 100 gallons; never use the sediment.

REGULATION 13. Railroads, steamboats and all other transportation companies shall furnish a tabulated statement of the number of each kind of animals shipped into Alabama, the places to which they are shipped and the number and kind of animals shipped to each place. The record shall also state what animals are for immediate slaughter, for use as breeding animals, for feeding or pasturing or for work. Transportation companies shall make this report to the State Veterinarian at the close of each month.

REGULATION 14. Every graduate veterinarian and every county and city health officer shall promptly report all infectious and contagious diseases of live stock to the State Veterinarian.

REGULATION 15. No person or transportation company shall ship into Alabama animals for (1) immediate slaughter and (2) animals for breeding, feeding, dairying or other purposes in the same car or same part of a boat. Animals for immediate slaughter, not having a health certificate, shall be kept separated from all other animals.

REGULATION 16. Railroads or other transportation companies shipping animals through the State of Alabama and unloading such animals in Alabama for the purpose of feeding and watering them, shall maintain separate loading and unloading chutes and pens, and said chutes and pens shall be used exclusively for unloading and feeding animals being shipped through Alabama. Said chutes and pens shall be located and so designated as such by the transportation company and reported to the State Veterinarian. Said chutes and pens shall be quarantined by the State Veterinarian or an Assistant State Veterinarian. No animal when once placed in said pen or pens shall be removed to any part or place in Alabama without first being inspected and a written permit issued therefor by the State Veterinarian or an Assistant State Veterinarian.

REGULATION 17. No person owning or having in charge any cattle infested with cattle ticks (*margaropus annulatus*) shall fail to disinfect all the cattle in the herd, or in the pasture or on the farm within seven days after being notified to do so by the State Veterinarian, an Assistant State Veterinarian or a State Live Stock Inspector. The word disinfection, as here used, means that every external part of the animal shall be thoroughly covered, rubbed, sprayed, washed or dipped with crude or refined oil, oil emulsion, or an approved arsenical cattle dip or some approved and efficient material that will kill the cattle ticks on the cattle.

REGULATION 18. The annual regulations and amendments thereof of the United States Department of Agriculture concerning interstate transportation of live stock are hereby adopted as a portion of the regulations of this board during such time as said regulations are in force, in so far as said regulations conform to the Live Stock Sanitary Laws of Alabama and the regulations of the Live Stock Sanitary Board of Alabama.

REGULATION 19. When necessity demands the movement of cattle into counties where tick eradication is being conducted, the following plans may be adopted.

A. The cattle shall be cleaned of ticks and greased or dipped before being put into a car or boat or other conveyance at the shipping point.

B. At some railroad station or designated place in the county

into which the cattle are taken or shipped, the cattle shall be dipped once or thoroughly greased with an efficient oil emulsion, or twice with standard arsenical dip, giving an interval of five to ten days between the two dippings.

C. The cattle shall be driven to a pasture or place where they shall be quarantined and there greased or dipped once a week or as often as the inspector may require to eradicate ticks on premises.

The expenses incurred in doing the dipping, greasing, etc., shall be borne by the owner or shipper or the transportation company.

In all cases where the regulations do not apply the State Veterinarian shall designate the methods to be followed in moving cattle into counties where tick eradication is being conducted.

REGULATION 20. In the counties of Alabama in which the work of tick eradication is being regularly conducted and in which all cattle are being handled in accordance with the Laws, Rules and Regulations of the Alabama Live Stock Sanitary Board governing the control and extermination of contagious, infectious and communicable diseases of Live Stock the following conditions will apply:

Cattle that have been dipped regularly every two weeks for three months in an arsenical solution under the supervision of a state live stock inspector and on inspection are found free from cattle ticks may be furnished with a certificate signed jointly by the State Veterinarian and an Inspector of the Bureau of Animal Industry entitling the owner of said cattle so certified to drive them over the public road to the railroad dipping vat in which said cattle are again dipped in an arsenical solution under the supervision of a Bureau Inspector in a dipping vat approved by the Secretary of Agriculture which is located in connection with the stock pens so that after dipping, said cattle may be handled only through non-infected pens and chutes into cleaned and disinfected cars, after which they may be shipped into the free area in accordance with the regulations of the United States Secretary of Agriculture for purposes other than immediate slaughter.

REGULATION 21. On and after March 1, 1912, tuberculin of all kinds, mallein, anthrax vaccine, black leg vaccine, hog cholera

serum, tetanus antitoxin, bacterins, and rabies virus shall have the indorsement of the United States Bureau of Animal Industry and the State Veterinarian of Alabama before said product shall be sold in Alabama.

REGULATION 22. Tick infested horses, mules or cattle shall not be brought into Alabama.

THE CODE OF ALABAMA, 1907, VOL. 1, CHAPTER 22.

Health and Quarantine—Article 4. Live Stock Sanitary Board.

Sections 757-770. Went Into Effect May 1, 1908.

757. *State Live Stock Sanitary Board Established.*—The Commissioner of Agriculture and Industries of the State of Alabama, the professor of animal industry, and the professor of veterinary science of the Alabama Polytechnic Institute, shall constitute a board to be known as the State Live Stock Sanitary Board. The Commissioner of Agriculture and Industries shall be chairman and the veterinarian on the board shall be secretary of the board.

758. *Powers Generally.*—The State Live Stock Sanitary Board shall have full power to make or enact such rules and regulations as they may deem necessary for governing the movement, transportation or disposition of live stock that may be quarantined as hereinafter provided on account of being affected with, or exposed to, a contagious or communicable disease, or on account of being infected or infested with the carrier or carriers of the cause or causes of a contagious, infectious, or communicable disease of live stock.

759. *State Veterinarian and Assistants.*—The professor of Veterinary Science of the Alabama Polytechnic Institute shall be State Veterinarian of Alabama. The State Veterinarian shall, by and with the advice and consent of the State Live Stock Sanitary Board, nominate as many assistant State Veterinarians and State Live Stock Inspectors as they may deem necessary and as the funds at their disposal shall permit.

760. *Quarantine Stalls or Lots, Notice of Establishing.*—The State Veterinarian shall quarantine a stall, lot, yard, pasture, field, town, city, township, county, or any part of the State of Alabama, when he shall determine the fact the live stock in such

place or places are affected with a contagious, infectious, or communicable disease, or when said live stock are infested, or infected, with the carrier, or carriers, of a contagious, infectious, or communicable disease. The State Veterinarian or an assistant veterinarian shall give written or printed notices of the establishment of said quarantine to the owners or keepers of said live stock, and to any officer or agent of railroad, steamboat or other transportation companies doing business in or through the quarantined part or parts of the State.

761. *Transportation of Live Stock Under Quarantine.*—No railroad company, or the owners or masters of any steam or other vessel or boat, shall receive for transportation or shall transport live stock from any quarantined district into any other part of Alabama except as hereinafter provided. No person, corporation or company, shall deliver live stock for transportation to any railroad company or sailing or steam vessel or boat, in a quarantined district of Alabama, except as hereinafter provided. No person, company or corporation shall drive or cause to be driven live stock on foot, or transport live stock in a private conveyance or cause live stock to be transported in a private conveyance from a quarantined district to a non-quarantined part of Alabama, except as hereinafter provided. Live stock may be moved within the limits of a quarantined district of Alabama only under and in compliance with, the rules and regulations of the Live Stock Sanitary Board. It shall be unlawful to move or to allow to be moved, any live stock from one place to another within the limits of a quarantined district or from a quarantined district to a non-quarantined district of Alabama, in any other manner or method, or under any conditions other than prescribed by the rules and regulations of the Live Stock Sanitary Board.

762. *Live Stock Brought Into State Accompanied by Health Certificate.*—All live stock except such live stock as are to be used for immediate slaughter, when brought into Alabama by a person, company, corporation, railroad, or other transportation companies, shall be accompanied by a certificate of health, and said certificate of health shall state that said animal or animals are free of contagious, infectious, or communicable disease and the carrier or carriers of the cause or causes of such diseases. This certificate

must be made by a qualified veterinarian immediately after he has personally examined the live stock and before the live stock have been shipped into Alabama. This certificate shall be attached to, and accompany, the shipping bill of the live stock to the place to which the live stock are shipped, and the owner of the live stock or agent of the transportation company shall mail or send said certificate to the State Veterinarian immediately following the arrival of live stock at its place of destination. The State Veterinarian shall furnish qualified veterinarians and transportation company with blank health certificates at actual cost.

763. *Cleaning and Disinfecting Infected or Infested Places.*—Owners, renters, or parties in possession of quarantined live stock or quarantined places shall follow the directions in the rules and regulations of the State Live Stock Sanitary Board in cleaning and disinfecting infected live stock and infested or infected quarantined places and in destroying the carriers of the cause of a contagious, infectious or communicable disease, that infest or infect live stock and quarantined places. Said cleaning of said live stock and the disinfecting of said places, and destroying of said carriers shall be done by the owners or the persons in possession of the infected live stock and places, in a reasonable time after receiving a written or printed notice from the State Veterinarian, an assistant Veterinarian, or State Live Stock Inspector.

764. *Veterinarians or Assistants May Enter Premises to Execute Quarantine Laws.*—The State Veterinarian, the assistant State Veterinarian, and the State Live Stock Inspectors may enter upon the premises or into any barns or other buildings where live stock are temporarily or permanently kept in the State of Alabama in the discharge of the duties prescribed in this article. No person, or persons, shall assault, resist, oppose, prevent, impede or interfere with the State Veterinarian, an assistant Veterinarian, or a State Live Stock Inspector in the execution of his or their duties, or on account of the execution of his or their duties.

765. *Cattle Ticks, or Other Infectious, Contagious, or Communicable Disease of Live Stock; Eradication of.*—The work of cattle tick eradication or the suppression or eradication of any other infectious, contagious or communicable disease of live stock shall be taken up under the provision of this article in any county

or any part of a county or any part of the State of Alabama, when the State Live Stock Sanitary Board may deem it best. The county commissioners of any county in which the State or Federal authorities take up the work of tick eradication or the suppression of any infectious, contagious or communicable disease of live stock, may appropriate for aiding in such work, such sum as the county commissioners may deem adequate and necessary.

766. *Federal Veterinarians Appointed.*—The State Live Stock Sanitary Board may appoint or elect the Federal veterinarians and live stock inspectors who are doing work in Alabama, as assistant State Veterinarians and State Live Stock Inspectors, provided they consent to act without pay from the State of Alabama.

767. *Annual Appropriation for Expenses of Live Stock Sanitary Board.*—There is appropriated annually the sum of five thousand dollars to be disbursed under the direction of the State Live Stock Sanitary Board to pay the actual expenses of the State Veterinarian in attending meetings, to pay for the printing of the official blanks, the annual report of the State Veterinarian, and the rules and regulations of the State Live Stock Sanitary Board, to pay the State Veterinarian five hundred dollars per year and expenses while on actual duty, and each assistant State Veterinarian five dollars per day and expenses while on actual duty, and each State Live Stock Inspector one to three dollars per day and expenses while on actual duty; and to pay such other expenses as may be necessary in carrying out the provisions of this article.

768. *Grand Juries, Charge to; Inquisitorial Powers of.*—The judges of the circuit and criminal courts shall give the preceding sections in special charge to each future grand jury empaneled in this State, and such grand jury shall be clothed with, and authorized to, exercise inquisitorial power for carrying out and enforcement of this article.

769. *Annual Report to Governor.*—The State Veterinarian shall make an annual report to the Governor of Alabama, giving a full account of the work done and a detailed report of the money expended.

770. *Counties Exempt from Provisions of Article.*—None of the provisions of this article shall apply to or be put in force in a

county where the majority of its area is not under a stock law; or a law prohibiting cattle from running at large.

(No. 63.)

AN ACT

(S. 56.)

To Amend Section 770 of the Code of Alabama, 1907.

Be it enacted by the Legislature of Alabama, That Section 770, of the Code of Alabama, 1907, be and the same is hereby amended so as to read as follows:

770. *Counties Exempt from Provisions of Article.*—None of the provisions of this article relating to the work of cattle tick eradication shall apply to or be put in force in a county where the majority of its area is not under a stock law prohibiting cattle from running at large.

Approved August 20, 1909.

Official,

FRANK N. JULIAN,

Secretary of State.

(No. 194.)

AN ACT

(H. 90.)

To amend an act entitled "An act to amend an act to establish a State Live Stock Sanitary Board and the office of State Veterinarian in order to further protect live stock from contagious and infectious diseases; and to provide for eradicating and excluding such diseases from this State." Approved August 6, 1907.

Section 1. Be it enacted by the Legislature of Alabama, That an act to establish a State Live Stock Sanitary Board and the office of State Veterinarian in order to further protect live stock from contagious and infectious diseases and to provide for eradicating and excluding such diseases from Alabama, approved March 12, 1907, shall be amended by adding Section 16, to read as follows: That whenever the courts of County Commissioners or the Board of Revenue, as the case may be, in any county of this State shall enter an order providing that the provisions of this act be put in force in the county, in which said Court of County Commissioners or Board of Revenue hold office, the said county shall be placed under the provisions of said act.

Approved August 25, 1909.

FRANK N. JULIAN,

Official:

Secretary of State.

(No. 351.)

AN ACT

(H. 334.)

To amend an act approved August 26th, 1909, entitled an act to amend section 7083 of the code of Alabama of 1907.

Section 1. *Be it enacted by the Legislature of Alabama, That an act entitled an act to amend section 7083 of the code of Alabama of 1907 approved August 26th, 1909, be and the same is hereby amended so as to read as follows:*

7083. *Violations of Health and Quarantine Laws of Live Stock, Penalty for.*—Any person, firm or corporation who shall drive, move, carry, or transport or cause to be driven, moved, carried or transported in violation of the quarantine laws of this State, or in violation of the rules or the regulations of the State Live Stock Sanitary Board, or who shall drive, carry, move or transport, or cause to be driven, moved, carried or transported, any live stock into or from any quarantine district, or who brings or causes to be brought into the State any live stock without being accompanied by a health certificate for the live stock so brought into the State as provided by the law; or who fails and refuses, without just cause and legal excuse, to cleanse and disinfect any infected or infested place in which live stock are kept, when directed or requested by the State Live Stock Sanitary Board, the State Veterinarian or assistants, so to do, pursuant to the rules and regulations established by said State Live Stock Sanitary Board, or who resists or interferes with such board, State Veterinarian, or assistants, or State Live Stock Inspector, in the execution of his or their duties, or who otherwise violates any of the quarantine laws of this State for live stock, or who fails or refuses without just cause or legal excuse to perform any of the duties required of him by such laws; or who impedes or prevents or attempts to so impede or prevent the execution of such laws, shall be guilty of a misdemeanor and, upon conviction, shall be punished by a fine of not more than five hundred dollars (\$500.00) and may be imprisoned or sentenced to hard labor for not more than six months.

Approved April 22nd, 1911.



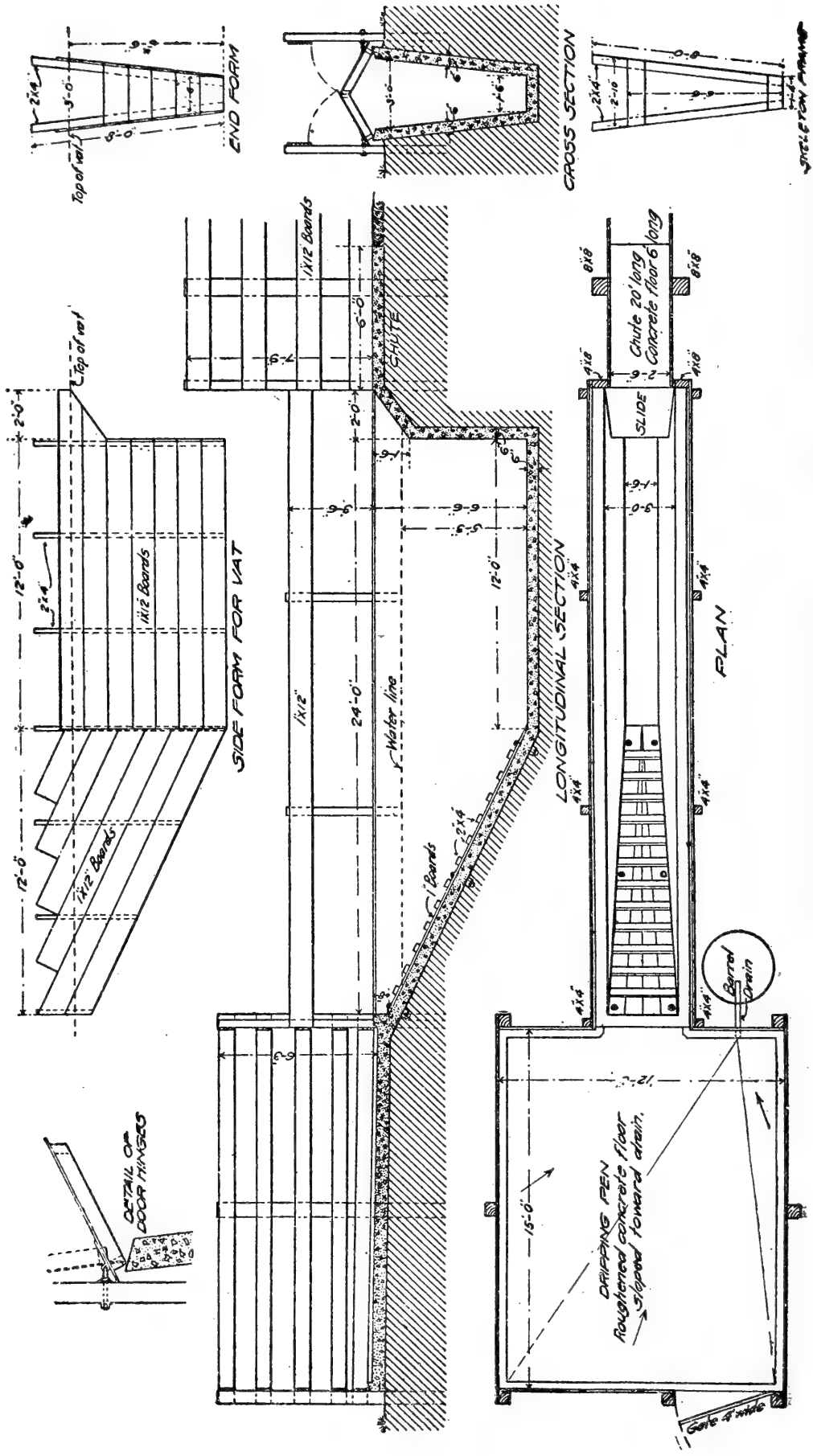


FIG. 1

DIPPING VATS.

Location.—The vat should be located at a convenient place where the ground is readily drained away from the vat. If the vat is to be a county or public one, locate it near some cross-roads or at a place near a public highway where the cattle from neighboring farms, fields and pastures can reach the vat without being driven over or through private fields or pastures. It is also best to have the long way of the vat run the level way of the ground and never attempt to run the vat up and down the hill or incline of the ground unless the incline be very slight.

The Ground Hole.—The hole should be dug 1 foot longer, 1 wider and 6 inches deeper than the respective length, width and depth of the vat to be built. It will be seen by referring to the different outlines of vats in this bulletin that some are only 12 feet long at the bottom. This is 1 to 2 feet too short, since we have found by experience that some cattle may jump off the slide and land in shallow dip on the incline and injure their limbs or feet. This is especially true when the dip gets low in the vat. Hence it is best to have the bottom of the vat 13 to 14 feet long, and this will require the top to be 28 to 30 feet long, not including the length of the slide.

Therefore, the vat should be at least 28 feet long (and 4 feet for the slide) at the top, 14 feet long at the bottom and 36 inches wide at the top; 18 inches wide at the bottom and not less than 6 feet deep in the ground, with 1 to 3 feet above the ground on the sides. For such a vat the hole should be dug 29 feet long (plus 4 feet for the slide) at the top; 15 feet long at the bottom; 4 feet wide at the top and 30 inches wide at the bottom and 6½ feet deep.

Use stakes and lines to lay off the top limits of the hole. Two lines, one on each side, a cross line at each end and a cross line at each end of the 14 feet corresponding to the limits of the bottom. In digging the hole great care should be taken to make the sides smooth and even, and the slide and incline should be even and regular. Irregularities and uneven places in the hole will require more cement, and hence will add to the cost of the vat.

The Forms.—Braces are made of 2x4 as shown in Fig. 2. The braces should be 2 to 3 feet apart and about 8 feet long, 34

inches wide (from outside to outside) at the top of the ground and 16 inches wide at the bottom. Notice in the cut that each brace is nailed to a 2x4—8 feet long, and the ends of this 2x4 are nailed to stakes driven into the ground. This firmly fixes each brace. It will take 5 to 6 long braces for the deep part (14 feet part) and shorter ones will be required for the incline and the slide parts. Braces should not be placed until the cement has been laid in the bottom and on the incline. The braces are then placed and the lower 1x10 or 1x12 planks are cut and placed as shown in Fig 1 above the "side form for vat." The first row of lower planks can be nailed on, but the remaining side planks should be lightly tacked on if they run even and straight. Notice that it is best to make the joints at the 14 foot brace. As a rule, it is best to put on the side and end planks as the grouting or mortar is put in and tamped. This will enable one to see that the concrete is properly tamped, and that the wire is kept in place when it is used to reinforce the sides.

Mixing the Concrete.—It is best to have a mortar box 1 foot deep, 4 feet wide and 6 to 8 feet long. A mortar platform 8 by 10 will do. Accurately measure the cement, sand and gravel or small stones or broken up brick. If the vat is to be reinforced and to be plastered with strong cement after the form is removed, 1 part of cement, 3 parts of sand and 5 parts of gravel or rock may be used. If the vat is not to be plastered, use 1 part of cement, 2½ parts of sand and 5 parts of gravel. Most vats must be plastered.

For each batch of concrete measure out the sand and the cement and mix them thoroughly while dry; then wet and mix and then add the wet gravel or rock; then mix until the gravel is thoroughly coated with cement. For the bottom and incline the concrete should not be too wet. If too wet it will not readily tamp into place and will run down the incline and delay the work. If the sides are to be reinforced it is best to use woven wire fencing 20 to 30 inches wide. Place the first layers along the sides at the bottom, getting it down into the bottom layer of cement. When the tamped concrete is laid to the top of it place the next layer of wire netting and let its lower border slightly overlap the upper border of the previous layer. Keep the wire netting in or near the middle of the six-inch concrete wall. Imbed two bolts at the

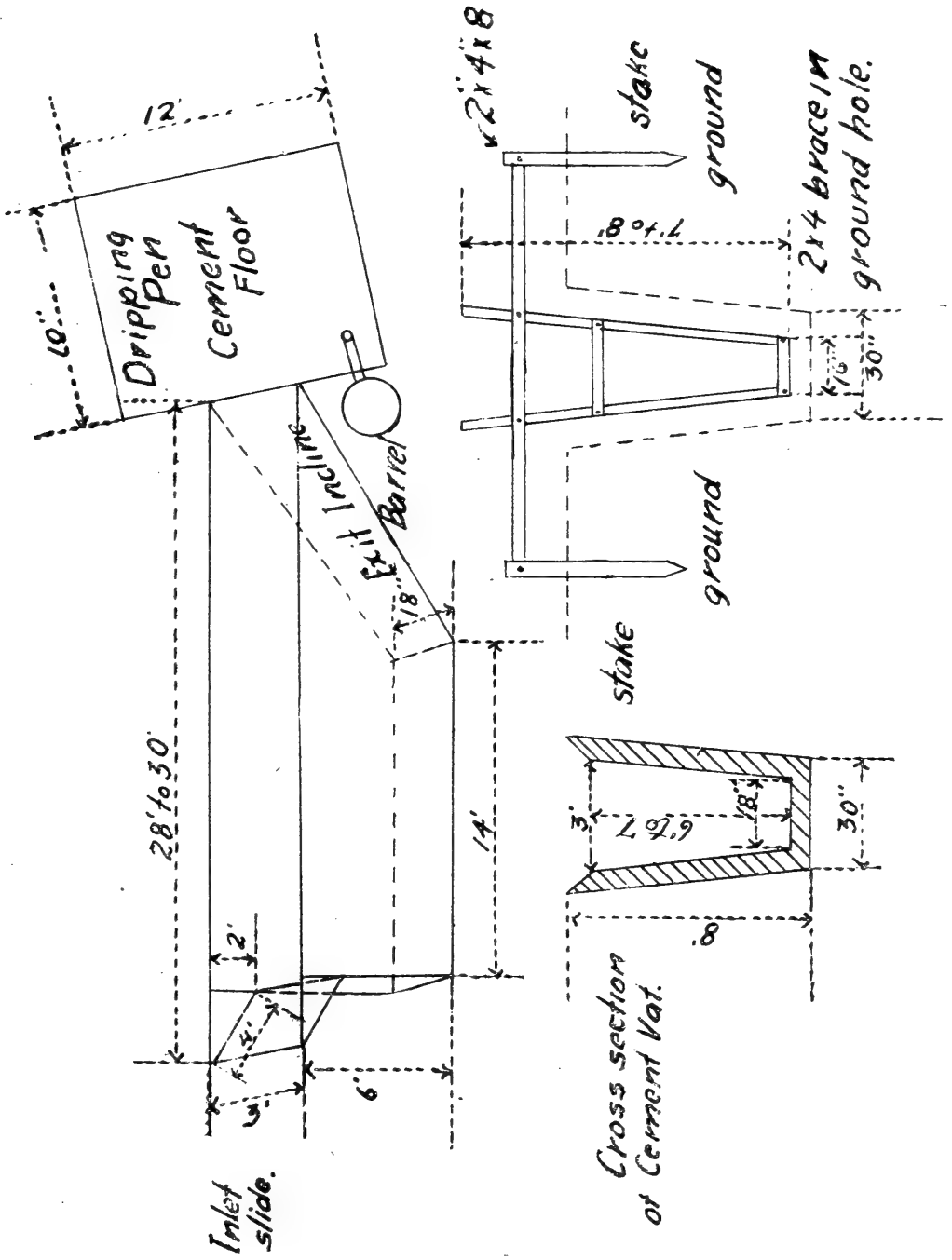


FIG. 2

top and two at the bottom of the incline to hold the incline plank. As a rule, it is best to complete the laying of the concrete at one time, so that all the parts will set together. Some let the concrete in the bottom and incline set for 12 to 24 hours before laying the sides and end. When this is done place the first layer of wire netting and make rough borders of the grouting in the floor and incline. Also let the wire netting extend up all along the incline. If the vat is built 2 to 3 feet above the ground it will be necessary to have outside forms above the ground. These can be made full size and fixed at the bottom by stakes and by top cleats to the braces of the inside forms. The top of the side walls should be beveled—the outside 6 inches higher than the inside. This is especially necessary if the wall stops at the top of the ground and lap splash boards are to be used.

In dry weather the forms may be removed carefully after 24 hours, but in wet weather let the forms remain two to six days.

Plastering Inside.—After the forms are removed dampen bottom, incline, walls and end and plaster the entire inside of the vat with a well mixed mortar made of one part cement and two parts sand. Let this coat be at least one-half inch thick.

If it is desired to waterproof the inside of the vat, paint it over three times a day for three days with a heavy crude petroleum that contains an asphalt base. This can be bought of the big oil companies.

The Incline.—Planks (1 inch thick) are cut the length and form of the incline, and 2x4 cleats are nailed or bolted to these planks, about 10 to 12 inches apart. Then this false plank, cleated floor is put on the incline and held in place by the bolts imbedded in the cement at the top and bottom of the incline. When this wears out it can be replaced by a new one.

The Slide.—Should be 4 feet long, with a 2 foot drop. In some of the plans it will be seen that the slide is 2 to 3 feet long and that is correct for all but milch cows. Cows on short, abrupt slides permit their front feet to slide forward before they jump, and then they slide into the vat on the body, scraping and bruising the udder and teats. The longer and less steep slide prevents this trouble. Making a double slide may also obviate this serious defect. The floor of the slide may be covered with sheet iron

one-fourth of an inch thick. If the cement is properly laid this iron is not required. It is well to make a sufficient rise in the concrete at the entrance of the slide to prevent surface water from flowing into the vat.

The Dripping Pen—Should be 10x12 feet or 10x15 feet and placed at the end of the incline. Some of the dirt from the hole can be used to level up the ground. This dirt should be well tamped. The concrete should be laid so that the dripping solution from the cattle will all run to a corner next to the vat, where it can run out through a 1½ inch pipe into a barrel in which the solid particles can settle and the top part can be dipped out with a bucket and returned to the vat. The outer borders of the draining pen should be raised 2 to 3 inches to prevent the wasting of the dip. The upper end of the incline should be raised 3 to 4 inches to prevent all material from running back into the vat. The draining pen should be surrounded with a good plank fence not less than 6 feet high. In it must be a good strong outlet gate. The dripping pen should be covered to prevent rain water from flowing into the barrel and tank. It is also essential that the vat be covered to prevent evaporation and keep out rain water.

If the side walls of the vat are not raised 2 to 3 feet above the ground the top of the concrete wall at the ground level should be beveled and posts are then set (2 feet in ground) close up to the wall. Then 1x6 boards are lapped and nailed on the inside of the posts just as siding is put on a house. The lower board laps over the bevel of the concrete wall. These same posts may be high enough to support the roof or the posts may be cut off at the top of the splash boards and other posts may be set some 2 to 3 feet from the side of the tank (6 to 8 feet high) and on these may be placed the roof over the vat. Hinged covers for the vat may be made as suggested in Fig. 1. These hinge covers serve also as splash boards. The objections to the hinge covers are that they are in the way when one wants to get at the vat, and they are difficult to handle and liable to get out of order.

The Chute—Should be 20 or more feet long and 30 inches wide. The boards should be nailed on the inside of the posts. It is also wise to have a good, strong receiving pen connected with the entrance chute and another holding or retaining pen connected with the dripping pen.

MATERIALS FOR VAT.

Portland cement, 36 to 44 sacks.

Sand, $4\frac{1}{2}$ cubic yards.

Gravel, fine broken rock or broken brick, 7 cubic yards.

FOR DRIPPING PEN.

Cement, 8 to 20 sacks.

Sand, 2 to 3 cubic yards.

Gravel or stone, 3 to 4 cubic yards.

In some places "pit-run" gravel, or gravel as it comes from the gravel-pit, is used. This works alright if the sand is good and there is no clay in the mixture and there is a proper amount of gravel. One part of cement is then mixed with six parts of "pit-run" gravel. For the vat and dripping pen it would take 12 to 16 yards of "pit-run" gravel. Never use "pit-run" gravel unless some good authority assures you that it is the proper mixture of sand and gravel.

The vat can be made entirely of cement and sand, but will cost more, since it takes more cement.

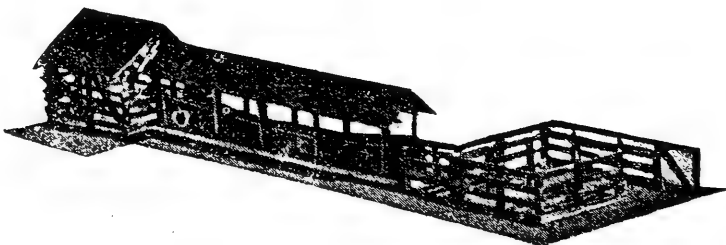
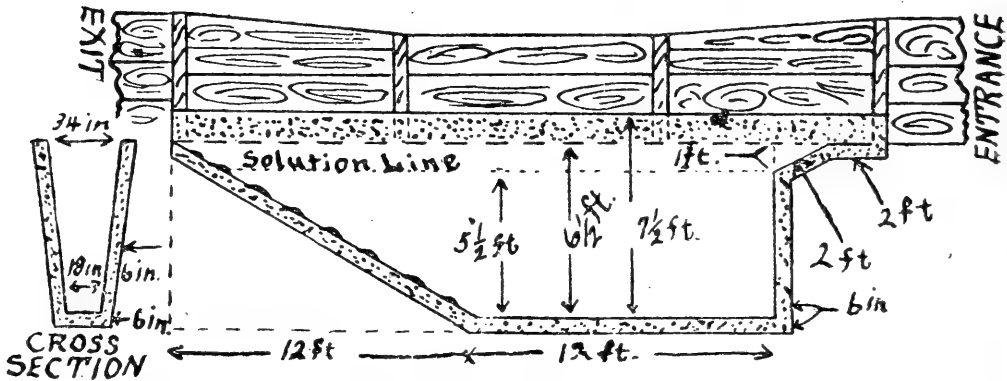


FIG. 3

LUMBER FOR VAT FORMS.

12 to 16 pieces 1x12 inches, 14 feet long, or the equivalent in 1x6, 1x8 or 1x10.

8 to 10 pieces 1x12 inches, 14 feet long, or the equivalent in 1x6, 1x8 or 1x10.

2 pieces 1x12 inches, 9 feet long, or the equivalent in 1x6, 1x8, or 1x10.

2 pieces 1x12 inches, 6 feet long, or the equivalent in 1x6, 1x8, or 1x10.

2 pieces 1x12 inches, 4 feet long, or the equivalent in 1x6, 1x8, or 1x10.

30 pieces 2x4 inches, 8 feet long.

2 pieces 2x4 inches, 7 feet long.

2 pieces 2x4 inches, 6 feet long.

2 pieces 2x4 inches, 4 feet long.

2 pieces 2x4 inches, 2 feet long.

8 to 12 posts, 8 to 10 feet long, will support roof over the vat.

The sheeting and rafters for roof may be made from the 2x4 braces, and the 1-inch plank in the forms and the roof may be covered with galvanized iron, shingles, or tar paper.

6 posts 8 feet long.

2 posts 10 feet long.

1 post 12 feet long.

These will support the roof over the dripping pen.

The rafters may be obtained from the braces and part of the sheeting for the roof from the forms. Cover with galvanized iron, shingles or tar paper.

LUMBER FOR CHUTE.

8 posts, 7 to 8 feet long.

12 pieces, 1x6, 12 feet long.

12 pieces, 1x6, 8 feet long.

Lumber for receiving and retaining pens will vary with the size. The receiving pens can be built with posts, woven wire fence and barb wire.

The Hardware will include nails, 4 bolts $\frac{5}{8}$ by 8 to 10 inches long, hinges for dripping pen gate, and

1 piece 1½ inch pipe, 6 inches long.

1—1½ inch elbow.

1 piece 1½ inch pipe, 4 to 8 feet long.

These pipes should have threads on one end or both ends.

ARSENICAL DIP FOR KILLING TICKS ON CATTLE.

Arsenic Trioxide, 1 lb, or for dip. tank 8 lbs.

Sodium Carbonate, 3 lbs., or for dip. tank 24 lbs.

Pine Tar, 1 pint, or for dip tank 1 gallon.

Water, 60 gallons, or for dip. tank 500 gallons.

Dissolve the 3 pounds of carbonate of soda in 4 or 5 gallons of hot water; then add the 1 pound of arsenic and boil and stir for 20 to 30 minutes, remove from the fire; the tar is then warmed and added slowly and stir the dip vigorously at the same time. Next add sufficient hot water to make the entire quantity measure 6 gallons and 1 quart. This is a strong solution and is very poisonous, and should be kept in a well-covered wooden barrel or keg. To get it ready for use take one pint, one quart, or one gallon and add nine pints, nine quarts or nine gallons of hot water to it. In other words, dilute the stock solution by adding nine times as much hot or warm water to it and then it is ready for use.

It may be used by applying it all over the cattle with swab or spray; or it may be used in a dipping vat or tank. In making it for dipping vat dissolve 24 pounds of carbonate of soda in 30 to 40 gallons of hot water, then add 8 pounds of arsenic and stir and boil for 30 minutes; remove the fire from under and around the kettle and let the kettle and its contents cool for 10 to 20 minutes; then add the warm tar and pour it into the dip slowly, stirring it at the same time. This can be placed in dipping vat and sufficient water added to make the entire quantity measure 500 gallons. Make this quantity four times and the tank will contain 2,000 gallons; or five times and it will contain 2,500 gallons. The dipping tank should be measured and marks placed so as to tell how much it will require to fill it, or what it contains at different levels.

Cattle to which this arsenical dip is applied should be placed in a pen or lot where there is no feed or grass, so that the dip will

not drip on the feed or grass. The dip is poisonous and should not be handled carelessly.

Some prefer filling the vat with water so that the water in the vat is 5 to $5\frac{1}{2}$ feet deep. The water is measured as it is put into the vat or the number of gallons of water in it determined by adding the length in inches of the vat at the top water line to the length of the vat at the bottom and dividing this product by 2 to get the average length. Now add the width in inches at the top water line and the bottom of the vat and divide by 2 to get the average width in inches. Then multiply the average length by the average width and this product by the depth of the water in inches, and this product will be the number of cubic inches of water in the vat. Divide this number of cubic inches of water in the vat by 231 (the number of cubic inches in a gallon) and the result will be the number of gallons of water in the vat. For example:

The top water line may be 26 feet or 312 inches.

The bottom water line may be 14 feet or 168 inches.

312 plus 168 equals 480, divided by 2 equals 240 inches, the average length.

The width at top of water may be 34 inches.

The width at the bottom is 18 inches.

18 plus 34 equals 52, divided by 2 equals 26 inches, the average width.

$5\frac{1}{2}$ feet or 66 inches equals the depth of the water in the tank.

$240 \times 26 \times 66$ equals 421,840 cubic inches of water in the vat.

421,840 divided by 231 equals 1,826 gallons of water in the vat.

By calculation it is found that 1.6 per cent of the number of gallons in the vat will give the number of pounds of arsenic required to make the dip the required strength. Hence, $1,826 \times .016$ equals 29.21 pounds of arsenic trioxide will be required and three times as much sodium carbonate, or 29.21×3 equals 87.63 pounds of commercial sodium carbonate and $3\frac{3}{4}$ gallons of pine tar.

The arsenic, carbonate of soda and tar may each be divided into three or more equal parts and each batch cooked and mixed as above directed, taking the required gallons of water from the tank to be used in the kettles for that purpose. Be sure to put into the vat the same number of gallons of the

concentrated mixture as there were gallons of water removed. If some water is lost in boiling, add sufficient water to make up for the loss.

The dip in the vat will decrease from dipping, and from time to time it should be added to or replenished. This can be done by measuring the water poured into the vat to raise it to the required depth. Then take 1.6 per cent of the number of gallons of water added, and this will be the number of pounds of trioxide of arsenic to add; multiply the number of pounds of arsenic thus obtained by three and this will give the quantity of commercial carbonate of soda needed. Add one pint of pine tar for every one pound of arsenic added.

Approximately the following will suffice:

Water.	Arsenic.	Soda.	Pine tar.
For 60 gallons-----	1 pound	3 pounds	1 pint
For 120 gallons-----	2 pounds	6 pounds	2 pints
For 180 gallons-----	3 pounds	9 pounds	3 pints
For 240 gallons-----	4 pounds	12 pounds	4 pints
For 300 gallons-----	5 pounds	15 pounds	5 pints

When the old dip is to be thrown away and the vat cleaned (this must be done once or twice a year), it should be done with care. The old dip can be run or poured into a large run or brook or creek when the latter is full of running water that will quickly dilute the solution. The sediment in the bottom of the tank should be carefully placed in some hole in the ground away from wells or drinking water. It would be safe to throw it into a creek that has a good flow of water.

Dr. Dalrymple, of Louisiana, has devised a means of neutralizing the arsenic in the old dip before it is thrown away. He says add 6 pounds of slaked lime for each 100 gallons of the old dip. Mix this in the solution in the vat thoroughly and allow it to stand for 2 hours. Then for every 100 gallons of the dip add 6 pounds of commercial sulphate of iron that has just been dissolved in hot water; stir well and allow to stand 10 to 12 hours. The clear fluid on top will contain no arsenic and can be dipped out of the vat and thrown away. The arsenic has united with the iron and sunk to the bottom as an insoluble and harmless sediment. This sediment can be removed and put in a hole or

thrown into the creek. The vat is cleaned and refilled with new, freshly made dip.

OIL EMULSION FOR KILLING CATTLE TICKS ON CATTLE.

This is made by using crude petroleum, Beaumont oil or Gulf Refining Oil. *Do not* use the *thick* black oil as it will not emulsify.

(1) Take one pound of hard soap and dissolve it in one gallon of hot, free-stone, or soft, or rain water; then add one gallon of crude petroleum; place in a ten-gallon can or keg and stir vigorously. When thoroughly emulsified add two gallons of hot or warm water and stir. When tepid or milk warm it is ready to apply with a swab, rags or by a spray. This makes a 25 per cent emulsion.

(2) An 80 per cent stock emulsion is made by dissolving one pound of hard soap in one gallon of hot water and then add four gallons of the oil; stir vigorously. To make a 25 per cent solution, take one pint, one quart or one gallon of the 80 per cent stock emulsion and add two and one-fifth times as much warm water to it. This makes a 25 per cent emulsion, but does not contain quite as much soap as when made by the first method.

Always let the animal go into the shade immediately after applying any oil or emulsion, as this will prevent blistering. Also see that the cattle get plenty of good drinking water. *Never apply oil or emulsion to cattle having tick fever or a high temperature.* If the oil is good and the emulsion properly made it will kill all the ticks except the large ones, and they should be picked off and destroyed at the time the emulsion is applied. The emulsion should be thoroughly applied all over every part of the external surface of the body, as often as live ticks are found on the animal—at least every one, two or three weeks. It can be applied by hand, by spray or in a dipping tank. The quantity of the emulsion required to cover an animal will vary from one quart to one gallon depending upon the size of the animal, length of the hair and the way it is applied. The inspectors will tell you where to get spray pumps and how to use them and will tell you how to make dipping vats and how to make and apply emulsions. Your merchant can order for you or sell you the crude

petroleum. In order to kill ticks you must watch the cattle and apply the emulsion thoroughly and regularly.

HOW ANY COUNTY IN ALABAMA CAN TAKE UP THE WORK OF TICK ERADICATION.

The law provides that any county in Alabama can begin the work by the County Commissioners or Board of Revenue passing an order to that effect and requesting the State and Federal authorities to co-operate with the county.

The first thing the county should do is to build public dipping vats in all parts of the county in sufficient number to make it convenient for all the cattle of the county to be dipped conveniently once every two weeks during the spring, summer and fall. Some counties furnish all the materials and build the vats. Other counties furnish the cement, sand and gravel and the people build the vats under the direction of an inspector. Other counties furnish only the cement and the people supply the sand, gravel, plank and work to build the vats.

The veterinary inspector in charge of the county is usually paid by the federal or state authorities and the local or beat or district inspectors are paid by the county. The county also furnishes the arsenic, the carbonate of soda and the pine tar to make the arsenical dipping solution to fill the vats. The inspectors mix the ingredients and boil them and fill the vat and conduct the dipping.

THE FIRST YEAR.

Each county should build and fill 70 to 100 different vats. To do that it will take \$3,000 to \$6,000. It will take 6 to 10 inspectors to make farm to farm inspections and see that all cattle in the country are dipped regularly every two weeks. The government or the State will supply the trained veterinary inspector in charge. The remaining 6 to 10 local inspectors will cost the county \$4,000 to \$6,000 a year.

Some counties build the vats one year and the next year put on a full force of inspectors and thus clean the county of ticks in two years. Other counties, outside of Alabama, have built the vats and put on a large number of inspectors and cleaned a county of ticks in one year. This is the cheapest method providing the people will co-operate regularly and efficiently. Does it pay?

As a rule the cattle ticks destroy every year from 3 to 20 times as much as it costs to eradicate the ticks. It has been proved beyond question that cattle and ticks can not be profitably raised in the South. Hence the cattle industry and indirectly the live stock industry of the South depends upon the eradication of the cattle tick.

Madison County Alabama has eradicated the tick and the United States Government will lift the quarantine on that county and puts its cattle on a world market. This year about 18 counties were cleaned of cattle ticks in Mississippi. Texas, Georgia, South Carolina, Tennessee and Oklahoma have each cleaned from 3 to 5 counties of cattle ticks during 1912. The work is going forward and the federal government will appropriate more money to help the infested states and counties that will co-operate. Every county in Alabama should take up this work at once and make short work of it.

REQUIREMENTS GOVERNING THE SHIPMENTS OF LIVE STOCK INTO ALABAMA.

1. The Regulation Uniform health certificate must be used as issued by the State Veterinarian of Alabama or Bureau of Animal Industry.

2. Every health certificate must be filled out in every detail, otherwise it is void.

3. Horses, mules and asses must be inspected and mallein tested if exposed to glanders and a health certificate issued in duplicate, by a legally qualified veterinarian indorsed by his State Veterinarian. All cases of glanders, pneumonia, bronchitis, nasal catarrh, influenza, so called shipping fever and all other infectious and contagious diseases, must not be brought into Alabama. Designate each animal, as mare, gelding, stallion, jack, jennet, horse or mare mule.

4. All cattle over six months old, except those for immediate slaughter, must be tuberculin tested and the temperature records sent to the State Veterinarian. Calves from tuberculosis mothers, or herds, cannot come into Alabama. Feeders may be brought in on affidavit of owner that he will keep them separated from all other cattle during feeding period and then ship them for slaughter. Uniform Certificate issued in duplicate.

5. Hogs must be inspected. Uniform Certificate in duplicate stating no exposure to any infectious or contagious disease, as cholera, swine plague, etc.

6. Sheep—Uniform Health Certificate in duplicate.

7. Dogs—Uniform Health Certificates in duplicate.

8. No ticky horses, mules or cattle can be brought into Alabama.

9. *Who May Inspect.*—Any legally qualified veterinarian who is indorsed by his State Veterinarian, or by the Bureau of Animal Industry. All certificates must be sent to Dr. C. A. Cary, State Veterinarian, Auburn, Alabama—the duplicate by the railroad agent and the original by the inspector.

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