

FIRST BIENNIAL REPORT
OF THE
STATE OIL INSPECTOR

TO THE
GOVERNOR OF IOWA.

JUNE 30, 1885.

PRINTED BY ORDER OF THE GENERAL ASSEMBLY.

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REPORT.

To His Excellency, BUREN R. SHERMAN, Governor of Iowa:

SIR— In accordance with the provisions of section five (5), of an act entitled "An act to provide for the inspection and to regulate the sale of petroleum and its products, and to repeal chapter 17½ of the acts of the Seventeenth General Assembly, and section 3901 of the Code," passed at the Twentieth General Assembly, I herewith submit my report of the inspection of illuminating oils for the fiscal year ending June 30, 1885.

Below will be found the full text of the law above referred to:

CHAPTER 185—ACTS OF THE TWENTIETH GENERAL ASSEMBLY.

An Act to provide for the Inspection and to Regulate the Sale of Petroleum and its Products, and to Repeal Chapter 17½ of the Acts of the Seventeenth General Assembly and Section 3901 of the Code.

Be it enacted by the General Assembly of the State of Iowa:

SECTION 1. That the Governor, by and with the advice and consent of the Senate, shall appoint a suitable person, resident of the State, who is not interested in manufacturing, dealing in or vending any illuminating oils manufactured from petroleum, as State Inspector of Oils, whose term of office shall commence on the first day of April of each even-numbered year, and continue for the term of two years and until his successor is appointed and qualified. It shall be the duty of such State Inspector, by himself or his deputies, hereinafter provided for, to examine and test the quality of all such oils offered for sale by any manufacturer, vendor or dealer; and if upon such testing or examination the oils shall meet the requirements hereafter specified, he shall fix his brand or device, "APPROVED, FLASH TEST—DEGREES" (inserting the number of degrees), with the date over his official signature, upon the package, barrel or cask containing the same. And it shall be lawful for the State Inspector, or his deputies,

TO ENTER INTO OR UPON THE PREMISES

of any manufacturer, vender or dealer of said oils; and if they shall find or discover any kerosene oil, or any other product of petroleum kept for illuminating purposes, that has not been inspected and branded according to the provisions of this act, they shall proceed to inspect and brand the same. It shall be lawful for any manufacturer, vendor or dealer to sell the oil so tested and approved as an illuminator; but if the oil or other product of petroleum so tested shall not meet said requirements, he shall mark in plain letters on said package, barrel or cask, over his official signature, the words, "REJECTED FOR ILLUMINATING PURPOSES, FLASH TEST—DEGREES" (inserting the number of degrees). And it shall be unlawful for the owner thereof to sell such oil or other product of petroleum for illuminating purposes. And if any person shall sell or offer for sale any of such rejected oil or other product of petroleum for such purpose, he shall be deemed guilty of a misdemeanor, and upon conviction thereof, shall be subject to a penalty not exceeding three hundred dollars.

DEPUTIES, ETC.

SEC. 2. The State Inspector provided for in this act is authorized to appoint a suitable number of deputies, which deputies are empowered to perform the duties of inspection, and shall be liable to the same penalties as the State Inspector; provided, that the State Inspector may remove any of said deputies for reasonable causes. It shall be the duty of the Inspector and his deputies to provide themselves at their own expense with the necessary instruments and apparatus for testing the quality of said illuminating oils.

AND WHEN CALLED UPON FOR THAT PURPOSE,

to promptly inspect all oils heretofore mentioned, and to reject for illuminating purposes all oils which will emit a combustible vapor at a temperature of 100 degrees standard Fahrenheit thermometer, closed test, provided the quantity of oil used in the flash test shall not be less than one-half pint. The oil tester adopted and recommended by the Iowa State Board of Health shall be used by the Inspector and his deputies in all tests made by them.

And said Board shall prepare rules and regulations as to the manner of inspection in use of the oil tester adopted, which rules and regulations shall be in effect and binding upon the Inspector and deputies appointed under this act.

BONDS.

SEC. 3. The State Inspector before he enters upon the discharge of the duties of his office shall take the oath or affirmation provided by law, and file the same in the office of the Secretary of State, and execute a bond to the State of Iowa in a penal sum not less than twenty thousand dollars with sureties thereto, to be approved by the Secretary of State, who shall justify as provided by law, and in addition thereto state under oath that they are

not interested, directly, or indirectly, in manufacturing, dealing in, or vending any illuminating oils manufactured from petroleum; such bond to be conditioned for the faithful performance of the duties imposed upon him by this act, and which shall be for the use of all persons aggrieved by the acts of said Inspector, or his deputies, and the same shall be filed with the Secretary of State. Every deputy inspector shall take a like oath or affirmation prescribed herein for the State Inspector, and execute to the State a bond in the penal sum of five thousand dollars with like conditions and for like purposes, and with sureties thereto who shall justify and have like qualifications as herein provided for the sureties for State Inspector and such sureties shall be approved by the Clerk of the District Court of the county in which such deputy inspector resides, and said bond and oath shall be filed in the office of such clerk, and such deputy inspector shall, before entering upon the discharge of his duties forward said clerk's certificate of such filing to the State Inspector and to the Secretary of State to be placed on file.

ALL INSPECTIONS TO BE MADE WITHIN THE STATE—FEES.

SEC. 4. All inspections herein provided for shall be made within the State of Iowa, and the Inspector or deputy inspector shall be entitled to demand and receive for his services from the owner or party calling on him, or for whom he shall perform the inspection, the sum of forty cents for a single barrel, package or cask; twenty-five cents each when the lot exceeds one but does not exceed ten in number; fifteen cents each when the lot exceeds ten but does not exceed twenty in number; ten cents each when the lot exceeds twenty but does not exceed one hundred in number, and five cents for all lots exceeding one hundred barrels; but nothing herein shall preclude the inspection of oil in tanks used for transportation on railroads or in storage, provided, the Inspector or deputy so inspecting the same shall see and know that the identical oil inspected in such tank is placed in the package, barrel or cask upon which the brand or device herein provided for shall be placed, and his fees therefor shall be four dollars for each tank. All fees accruing for inspection shall be a lien upon the oil so inspected.

SHALL KEEP RECORD.

SEC. 5. It shall be the duty of the State Inspector and every deputy inspector to keep a true and accurate record of all oils so inspected and branded by him, which record shall state the date of inspection, the number of gallons rejected, the number of gallons approved, the number of gallons inspected, the number and kind of barrels, casks or packages, the name of the person for whom inspected and the amount of money received for such inspection and such record shall be open to the inspection of all persons interested, and every deputy inspector shall return a true copy of such record at the beginning of each month to the State Inspector. It shall be the duty of the State Inspector to make and deliver to the State Auditor for the fiscal period ending the thirtieth day of June, 1885, and every two years thereafter

a report of the inspections made by himself and deputies for such period, containing the information and items required in this act to be made of record, and the same shall be laid before the General Assembly.

PENALTIES PROVIDED.

SEC. 6. If any person or persons, whether manufacturer, vendor or dealer shall sell or attempt to sell to any person in the State any illuminating oil, the product of petroleum, whether manufactured in this State or not, which has not been inspected as provided in this act, shall be deemed guilty of a misdemeanor and subject to a penalty in any sum not exceeding three hundred dollars, and if any manufacturer, vendor or dealer in either or any of said illuminating oils shall falsely brand the package, cask or barrel containing the same, as provided in this act, or shall refill packages, casks or barrels, having the Inspector's brand thereon, without erasing such brand, having the oil inspected, and such packages, casks or barrels rebranded, he shall be deemed guilty of a misdemeanor and shall be subject to a penalty not exceeding three hundred dollars, or be imprisoned in the county jail not exceeding six months, or both in the discretion of the court.

SEC. 7. Any person selling or dealing in illuminating oils produced from petroleum who shall sell or dispose of any empty kerosene barrel, cask or package, before thoroughly canceling, removing or effacing the inspection brand on the same, shall be guilty of a misdemeanor, and, on conviction thereof, shall pay a fine of one dollar for each barrel, cask or package thus disposed of; and any person who shall knowingly use any illuminating oil, the product of petroleum for illuminating purposes, before the same has been approved by the State Inspector of Oils, or his Deputy, shall be guilty of a misdemeanor, and, on conviction thereof, shall pay a fine in any sum not exceeding ten dollars, for each offense.

SEC. 8. No person shall adulterate with paraffine or other substance, for the purpose of sale or for use, any coal or kerosene oils, to be used for lights, in such a manner as to render them dangerous to use,

NOR SHALL ANY PERSON KNOWINGLY SELL OR OFFER FOR SALE, OR KNOWINGLY USE

any coal or kerosene oil, or any products of petroleum, for illuminating purposes, which, by reason of being adulterated, or for any other reason, will emit a combustible vapor at a temperature less than 100 degrees of standard Fahrenheit's thermometer, tested as provided in this act; provided, that the gas or vapor from said oils may be used for illuminating purposes when the oils from which said gas or vapor is generated are contained in closed reservoirs outside the building illuminated or lighted by said gas. Any person violating the provisions of this section shall be deemed guilty of a misdemeanor, and shall, upon conviction thereof, be punished by imprisonment in the county jail not more than one year, or by fine not exceeding \$500, or by both such fine and imprisonment, in the discretion of the court; provided, further, that nothing in this act shall be so construed as to pre-

vent the sale for and use in street lamps of lighter products of petroleum, such as gasoline, benzine, benzole, naphtha, or to prevent the use of machines or generators constructed on the principle of the "Davy safety lamp."

SEC. 9. It shall be the duty of the State Inspector, and of any Deputy Inspector, who shall know of the violation of any of the provisions of this act, to prosecute before a court of competent jurisdiction any person so offending. And in case the State Inspector, or any Deputy Inspector, having knowledge of the violation of any of the provisions of this act, shall neglect to prosecute as required herein, he shall be deemed guilty of a misdemeanor and punished accordingly, and, upon conviction, shall be removed from office.

QUALITY OF OILS TO BE USED ON RAILWAYS AND STEAMBOATS.

SEC. 10. No oil, nor fluid, whether composed wholly or in part of petroleum or its products, or of other substance or material, which will ignite and burn at a temperature of three hundred degrees of the standard Fahrenheit thermometer open test, shall be carried as freight, nor shall the same be burned in any lamp, or vessel, or stationary fixture of any kind, in any passenger, baggage, mail or express car, on any railroad, nor on any passenger boat moved by steam power, nor in any street railway car, stage coach, omnibus or other public conveyance in which passengers are carried, within this State. A violation of any of the provisions of this section shall be deemed a misdemeanor, and the offender shall, on conviction thereof, be fined not less than one hundred dollars nor more than one thousand dollars, and shall be liable for all damages resulting therefrom.

SEC. 11. If any Inspector or Deputy shall falsely brand or mark any barrel, cask or package, or be guilty of any fraud, deceit, misconduct, or culpable negligence in the discharge of his official duties, or shall deal in, or have any pecuniary interest, directly or indirectly, in any oils or fluids used or sold for illuminating purposes while holding such office, he shall be deemed guilty of a misdemeanor, and upon conviction thereof, shall be fined not exceeding one hundred dollars, or imprisoned not exceeding thirty days, and be liable to the party injured for all damages resulting therefrom.

SEC. 12. It shall be the duty of the Governor to remove from office, and to appoint a competent person in the place of any Inspector who is unfaithful in the duties of his office.

SEC. 13. Any person who shall knowingly or negligently sell or cause to be sold any of the oils mentioned in this act for illuminating purposes, except for the purposes herein authorized, which are below the standard and test required in this act, shall be liable to any one purchasing said oil, or to any person injured thereby for all damages resulting from any explosion of said oil.

SEC. 14. Within sixty days of the passage of this act, the State Board of Health shall make and provide the necessary rules and regulations for the inspection of illuminating oil, as contemplated in this act, and on application shall furnish the Inspector and his Deputies with the same.

SEC. 15. Chapter 172 of the acts of the Seventeenth General Assembly, and section 3901 of the Code, are hereby repealed.

SEC. 16. This act being deemed of immediate importance shall take effect and be in force from and after its publication in the Iowa State Register and Iowa State Leader, newspapers published at Des Moines, Iowa.

Approved April 14th, 1884.

This bill was passed after much debate and amendment, both in the committee room and upon the floors of the Legislature, and it might be reasonably inferred that the bill was about perfect in its character. But a regard for the truth compels me to say that such is not the case. It is a very defective and loose-jointed statute, and farther on in this report I shall point out some of the defects, and recommend some very radical changes.

The work of fulfilling the requirements of the law, was no ordinary task. It was necessary, first, to district the State; discover in what manner the oil used in Iowa was distributed; ascertain in what portion of the State the larger amount of work would be required, and arrange for prompt inspection in all cases. It was found that a very large proportion of the oil used in the State was sold by the companies having tank line depots, at which oil was received largely in huge tanks mounted on flat cars, from which it was drawn, barrelled and shipped all over the State. Depots of this character were found at Des Moines, Dubuque, Davenport, Council Bluffs, Keokuk, Sioux City, Fort Dodge, Cedar Rapids, Marshalltown, Clinton, Burlington, and other points. These tank line depots were found to be almost without an exception, the property of the Standard Oil Company. It was also found that other companies, not having tank line facilities in Iowa, were shipping oil into the State in barrel lots, and covering a large area, some portions of which were not reached by the tank line trade. Therefore, while it was essential that the tank line depots be furnished with prompt inspection, it was also necessary that the products of other refineries be attended to with similar promptness and efficiency. The utmost vigilance on the part of the State Inspector and his deputies was demanded, in order that no evasion of the law could go unpunished. With a view to accomplishing the best results, the task of apportioning the labor, and selecting competent men as deputies, was undertaken. From an abundance of material, I succeeded in selecting what I believed to be five capable and trusty men, who have, thus far, with perhaps a single exception, performed their duties faithfully and well. At the beginning of the work, the roster stood as follows:

R. Morrill, of Dubuque, for Dubuque, Clinton, Cedar Rapids and Fort Dodge.

John Behrens, of Davenport, for Davenport and Muscatine.

W. S. Moore, of Des Moines, for Des Moines, Marshalltown, Boone and Carroll.

J. K. Mason, of Keokuk, for Keokuk, Burlington and Ottumwa.

C. H. Crawford, of Jefferson, for Council Bluffs, Sioux City, etc.

Inspection began on the 15th day of May, 1884. On the 15th of August, having secured more agreeable employment, Mr. Crawford resigned, and was succeeded by Mr. C. S. Lefferts, of Council Bluffs, who, owing to a pressure of other business, resigned on March 22d, 1885, and was succeeded by C. J. Blanchard, of Dubuque. On the 15th of June, 1885, W. S. Moore, of Des Moines, resigned, and was succeeded by W. C. Huntington, of that city. By the above apportionment, it will be seen that the State was pretty thoroughly covered, and when it is remembered that each deputy was instructed to attend to all the territory surrounding the larger cities in which he labored, there will be little doubt left as to the thorough manner in which the State was covered. Indeed, so thorough has been the work, that at the end of the first year, I have less than a half dozen cases reported where oil has escaped inspection, and these cases have been promptly attended to and the violators of the law properly punished. No complaints, whatever, having any good foundation, have reached this office regarding the prompt inspection of oil. Many rumors have gained circulation, calculated to reflect upon the efficiency of the State Inspector and his deputies, but these have invariably been found to emanate from an unreliable source, and have passed for nothing among persons of good judgment or information. I have also been somewhat confused by arbitrary rules forced upon me by the State Board of Health,—arbitrary when taken in connection with the imperfect law under which we are working—but have quietly moved along, aiming only to do my duty as I have sworn to do it, and to render unto the people of Iowa that safety which the spirit of the present law intends shall be guaranteed. I have endeavored to recognize the rulings of the State Board of Health even when I felt positive that that body had transcended its authority, but I regarded the members of the Board as gentlemen of the highest honor and esteem them as such, and felt positive that any action of theirs seemingly unjust or unfair, was simply an error of the head and not of the heart. Some effort has been made to create antagonism

between the State Board of Health and the State Inspector, but thus far all such efforts have been futile.

I feel quite safe in saying, after a deliberate view of the entire field, that the law is giving general satisfaction, and accomplishing the end for which it was created. Surely, no better evidence of the truth of this assertion is necessary than the fact that since the law went into effect on the 15th of May, 1884, there has not been a dollar of property destroyed, nor a single life lost by the explosion of kerosene oil. One or two cases have been reported where a lamp has fallen, and after being broken, its contents have ignited, or where a lamp has been left standing in a heavy draught of air, and the flame has been blown down into the oil, thus causing combustion—but the loss to property in each case was merely nominal, and in no reasonable sense could the guardians of the law be held responsible. Any oil, no matter how high the grade, will burn when placed in direct contact with a flame, but Iowa legal test oil will not explode under ordinary circumstances and with proper care.

A great deal of anxiety is felt by certain persons that low grade oil may find its way into the State, and the State Inspector has even been charged with permitting some dealers to sell low-grade oil that has been branded above legal test. If any low-grade oil has found its way into Iowa other than that which the Inspectors have discovered, and which appears in this report, I do not know where it is located, nor do I believe that those who complain of it can tell. The larger refineries shipping oil into Iowa have in their possession Iowa cups, and all oil shipped into this State is carefully tested and made to conform to the requirements of our law before it is shipped. In most cases a certificate is forwarded by the refinery inspector to the deputy in whose territory the oil may happen to be sent, showing the test which the oil stood at the refinery. This certificate reaches the Inspector in advance of the oil. In nearly every case the Iowa Inspector finds his test to correspond with that at the refinery. The difference between the value of low grade oil and legal test oil is not sufficient to induce eastern manufacturers or dealers to send illegal oil to Iowa, and run the risk of having it condemned and sent back to them at an expense of freight both ways and a loss of trade in the future. If people would consider these matters in their proper light, and see how small the inducements are to violate the law, and how great the risks, they would not be so suspicious, or so ready to make senseless charges. A few dealers have been found selling oil that

was not inspected, but almost invariably it was through an ignorance of the law. A nominal fine has been sufficient to properly instruct them, and guarantee that they will not again be found selling uninspected oil.

GASOLINE.

By an adroit construction in the wording of the law, or, perhaps, more properly, a misconception of the law, gasoline escaped for a long time the attention it should have had. Being a product of petroleum each package should have been branded "Rejected for Illuminating purposes," the same as illegal kerosene. The opinion of Attorney-General Baker was asked, and he decided that gasoline should be so branded, consequently I have put into effect the system of branding as above mentioned. The law requires that all "products of petroleum" shall be branded as they deserve. Gasoline being a product of petroleum, and being used in many cases for illuminating purposes, brought it within the operations of the law. That it is used for illuminating purposes is established by a case which happened in Dubuque on the 18th of June, 1885. The following report is clipped from the local columns of the Dubuque Times:

THAT LAMP EXPLOSION.

THE RESULT OF TRYING TO BURN GASOLINE IN A KEROSENE LAMP.

Last Thursday night, a lamp sitting on a show-case in Mrs. Kistler's jewelry store on Main street, exploded with terrific force, smashing the glass case into fragments and doing damage to jewelry and other articles to the extent of \$200. It was almost a miracle that the entire building was not consumed, and there is no doubt but what the result would have been a serious conflagration had not the blaze been discovered by a policeman and checked in its incipency. The explosion occurred about half-past one in the morning. The lamp had been lighted and left upon the show-case. Had the explosion occurred while the occupants of the store were present some one might have been seriously if not fatally burned.

The day following the explosion the State Oil Inspector, B. W. Blanchard, began an investigation. This, by the way, was the first explosion of an oil lamp, as far as reported, which has occurred in the State since the new law governing inspections went into effect. The State Inspector called on Mrs. Kistler and secured the can from which the lamp had been filled. She informed him that her boy had purchased the oil at the drug store of Frautz

& Clark. Mr. R. Morrill, the deputy inspector, proceeded to test a sample of oil taken from the can. A taper was applied, when the temperature of the oil marked 80 degrees, and an explosion occurred. This proved the oil to be unfit for use and illegal. Matters began to look interesting. The inspectors then proceeded to the drug store of Fraatz & Clark. They had on hand oil branded by Mr. Morrill 106 degrees. A sample of this oil was tested, and the result was 106 degrees—the same as indicated by the brand on the barrel, thus proving that the inspectors had performed their duties faithfully. By this time, the inspectors arrived at the opinion that the contents of the can were not kerosene but gasoline. A test was made. Some of the contents of the can were poured into an open vessel and a match applied. The liquid burst into a flame instantly. This proved beyond a doubt that the liquid was not kerosene, for had it been legal test oil, the match would have been extinguished when plunged suddenly into the oil. That the contents of the can were gasoline or benzine, was established beyond a doubt. As Fraatz & Clark do not keep gasoline for sale, it was evident that the can had not been filled at their store. The boy who had bought the oil was questioned, and he claimed to have purchased the oil at White Bros'. store, corner of Main and Eighth streets. His mother had ordered him to go to the store of Fraatz & Clark, but White Bros. being nearer and the lad being afflicted, as most boys are, with a sort of tired feeling, he preferred to make the purchase nearer home. Mr. Thos. White was called on, and asserted that if the contents of the can were gasoline the purchase was not made at his store, for he does not handle gasoline in any way. Now, there are two theories to account for the explosive character of the contents of the can. If the can was filled at White Bros'. store, it had previously contained gasoline or benzine, and enough remained in the can to vitiate the kerosene and render it dangerous. The other theory is that the boy had the can filled, by some careless person, with gasoline or some other lighter product of petroleum. How the gasoline came in the can may never be known. The inspectors have done all in their power to get at the actual facts. The investigation proves that the explosion was not due to illegal kerosene, and no blame can rest upon the State Inspector or his deputies.

The thought of burning gasoline in a lamp is appalling. The wonder is that the result was not more disastrous. Gasoline is one of the most dangerous and inflammable products of petroleum. How Mrs. Kistler came to get it in place of kerosene is a mystery that may never be solved. That it is possible for gasoline to be sold in place of kerosene, is sufficient reason why it should be branded and condemned the same as illegal kerosene, and the next legislature should take the matter up and incorporate that feature fully and fairly into the oil inspection law.

Hereafter the danger signal will be put upon each barrel or package of gasoline, and if it is then used for illuminating purposes with disastrous results, no blame can attach to the State or the State Inspector.

THE DISPOSITION OF FINES.

Under this heading I will briefly consider what I believe to be a defect in the law, or, rather, an omission. No provision is made for the disposition of fines collected from violators of the law. Those already collected have been ordered into the school fund in the absence of any better place. In nearly all cases the violators of the law are dealers living in remote places, who are not informed as to the requirements of the law, or imagine their obscurity will enable them to violate the law with impunity. A number of dealers in a small town will club together and buy a car load of oil from some eastern jobber. When the car arrives the oil is divided up among the merchants, and, either through ignorance or maliciously, no notice is sent the inspector. When these cases are found, and they usually are, it is at considerable expense to the State Inspector, who is compelled to travel sometimes many hundreds of miles to reach the offenders. No provision is made for any portion of the fines to go toward paying the expenses of the prosecution, so that he is also compelled to pay the fees of an attorney. Several cases are now on hand awaiting trial, that will cost no small sum to carry to a conclusion. I would suggest, therefore, that one-half of the fines collected be paid to the informer, in case there be one, and the other half, together with the proceeds from all sales of casks, barrels, packages and contents thereof, seized as provided by law, after the expenses of the prosecution are paid, shall be covered into the city, village or township treasury. This would stimulate many to watch closely after all offenders, and after a few rigid prosecutions, we would have no more violations of the law.

THE LETTER OF THE LAW.

The oil inspection law passed by the Iowa Legislature was drafted by a careless hand. It possesses some peculiar features. Among others, if it be strictly construed, it requires each barrel or package of oil to be separately inspected. As much of the oil used in the State is received in barrels, and as each test requires about half an hour of time, it will be seen how impossible it would be for the Inspector to strictly follow the wording of the law. For instance, a car of oil contains one hundred barrels. If each barrel was separately tested, five days would be consumed in the inspection of one car of oil. If the car should contain 101 barrels (as is often the case,

the purchaser crowding in the extra barrel to bring the inspection within the five cent range), the inspector would receive five dollars and five cents for five days labor, when his expenses in reaching the oil may have exceeded that sum. I have not asked my deputies to carry out the letter of the law. To do so would require over a hundred deputies in the State. The State Board of Health have felt disposed to complain because I did not strictly construe the law, but I felt sure that such was not the spirit or intent of the statute, and ordered my deputies to inspect the oil by drawing off a portion from each barrel, and making up a test from a number, so that any poor oil that might be in the lot would appear and vitiate the test of the good oil. In this way the spirit of the law could be obeyed, and unnecessary labor saved. It is nonsense to suppose that any effort on the part of refiners would be made to smuggle into a car of oil a few barrels of low grade oil, the difference in the cost of which would not amount to enough to buy a cigar. I have urged upon every deputy the necessity of watching closely every detail of his work, and if any effort was made to pass low-grade oil they would soon discover the fact. It is an easy matter to do so. In this connection I would suggest that some change be made in the law covering the above named point, and that the fees be made ten cents a barrel in all lots from fifty to five hundred, instead of five cents per barrel in hundred lots as at present. As it now is, very often an inspector is compelled to make a long trip for the purpose of inspecting a car of oil when the expenses of his trip will exceed the amount received for his labor.

Some discussion has arisen, and complaints been made by the State Board of Health, over the fact that occasionally deputies have allowed others to use their stencils in branding barrels containing oil they have inspected and found to be standard. Owing to the fact that the dealers are often short of barrels, and do not have enough on hand to contain the contents of a tank of oil, unless the deputy should remain constantly at the oil warehouse, he would be compelled to allow some one else to brand the remaining barrels. Of course, he cannot remain there, for his duties call him elsewhere. I see nothing in the law forbidding the use of the stencil by others, providing the inspector positively knows (as he can and should) that he has had access to and inspected all oil coming into the oil house, and have permitted the leaving of stencils in cases where it was found *absolutely necessary* to do so. The law says that the Inspector "must see" and know that the identical oil inspected in such tank is placed in

"the package barrel or cask upon which the brand or device herein "provided for shall be placed." This he can know to a reasonable and even positive certainty, and when satisfied that he possesses such knowledge, he would be, in my judgment, justified in leaving his brand. The State Board of Health, in their rules and regulations regarding the inspection of kerosene, has forbidden the use of stencils by any but the Inspectors themselves. The rule is an arbitrary one. While the reckless distribution of stencils is not advisable nor permissible, I have found that in some instances it is necessary and unavoidable. Another reason why one or two tanks cannot be barreled and branded at the same time, is that when oil is barreled for a considerable length of time, the loss by shrinkage is large, and dealers do not care to barrel largely in excess of orders. I suggest also a change in the law, whereby any further dispute regarding the branding process may be avoided, by the insertion of a clause making perfectly legal the act of the Inspector in allowing others to use his brand, in cases where it is absolutely necessary, and when the Inspector is satisfied he has inspected the oil for which the brand is used.

REPORT OF INSPECTIONS.

Following will be found a report by months of the oil inspected in Iowa for the fiscal year ending June 30, 1885, as required by the statute:

REPORT OF INSPECTIONS FOR MONTH ENDING MAY 31, 1884.

NAME OF INSPECTOR.	No. of barrels approved.	No. of tanks approved.	No. of barrels rejected.	No. of gallons rejected.	No. of tanks rejected.	Total number gallons inspected.	Total amount of fees.
O. H. Crawford.....	666	5				55,800	\$ 87.50
R. Morrill.....	1,317	7	223	11,150		108,500	116.00
J. K. Mason.....	981	4	14	700		67,750	73.75
W. S. Moore.....	439	3	100			35,550	45.75
John Behrens.....	277	5				36,350	44.55
Total for month.....	3,750	24	239	11,950		303,950	\$ 367.55

REPORT OF INSPECTIONS FOR MONTH ENDING JUNE 30, 1884.

NAME OF INSPECTOR.	No. of barrels approved.	No. of tanks approved.	No. of barrels rejected.	No. of gallons rejected.	No. of tanks rejected.	Total number gallons inspected.	Total amount of fees.
C. H. Crawford.....	775	2				47,750	\$ 80.75
R. Morrill.....	401	19				105,550	119.95
J. K. Mason.....	571	12				82,550	76.55
W. S. Moore.....	76	10				48,800	48.15
John Behrens.....	363	11				65,650	83.80
Total for month.....	2,186	54				350,300	\$ 409.20

REPORT OF INSPECTIONS FOR MONTH ENDING JULY 31, 1884.

NAME OF INSPECTOR.	No. of barrels approved.	No. of tanks approved.	No. of barrels rejected.	No. of gallons rejected.	No. of tanks rejected.	Total number gallons inspected.	Total amount of fees.
C. H. Crawford.....	668	12				87,400	\$ 102.95
R. Morrill.....	306	27				136,800	140.90
J. K. Mason.....	283	13				72,650	66.10
W. S. Moore.....	12	8				36,600	35.00
John Behrens.....	394	7				51,200	63.95
Total for month.....	1,663	67				384,650	\$ 408.90

REPORT OF INSPECTIONS FOR MONTH ENDING AUGUST 31, 1884.

NAME OF INSPECTOR.	No. of barrels approved.	No. of tanks approved.	No. of barrels rejected.	No. of gallons rejected.	No. of tanks rejected.	Total number gallons inspected.	Total amount of fees.
C. H. Crawford.....	278					13,900	\$ 29.70
C. S. Lefferts.....	454					22,700	27.15
R. Morrill.....	653	33				181,150	191.95
J. K. Mason.....	940	12				101,000	110.00
W. S. Moore.....	629	24				139,450	147.65
John Behrens.....	486	25				136,800	145.00
Total for month.....	3,410	94				595,900	\$ 651.45

REPORT OF INSPECTIONS FOR MONTH ENDING SEPTEMBER 30, 1884.

NAME OF INSPECTOR.	No. of barrels approved.	No. of tanks approved.	No. of barrels rejected.	No. of gallons rejected.	No. of tanks rejected.	Total number gallons inspected.	Total amount of fees.
C. S. Lefferts.....	1,334					66,700	\$ 69.45
R. Morrill.....	891	48				250,550	236.35
J. K. Mason.....	1,010	21				145,000	133.50
W. S. Moore.....	891	15				112,650	133.35
John Behrens.....	846	7				73,800	106.35
Total for month.....	4,772	91				648,100	\$ 679.00

REPORT OF INSPECTIONS FOR MONTH ENDING OCTOBER 31, 1884.

NAME OF INSPECTOR.	No. of barrels inspected.	No. of tanks approved.	No. of barrels rejected.	No. of gallons rejected.	No. of tanks rejected.	Total number gallons inspected.	Total amount of fees.
C. S. Lefferts.....	1,500	.....	.....	.....	.....	75,000	\$ 79.10
R. Morrill.....	677	65	.....	.....	.....	328,350	325.25
J. K. Mason.....	720	21	.....	.....	.....	130,500	128.40
W. S. Moore.....	1,534	24	.....	.....	.....	184,700	204.95
John Behrens.....	759	13	.....	.....	.....	96,450	123.50
Total for month.....	5,190	123	.....	.....	.....	813,000	\$ 861.20

REPORT OF INSPECTIONS FOR MONTH ENDING NOVEMBER 30, 1884

NAME OF INSPECTOR.	No. of barrels approved.	No. of tanks approved.	No. of barrels rejected.	No. of gallons rejected.	No. of tanks rejected.	Total number gallons inspected.	Total amount of fees.
C. S. Lefferts.....	2,032	.....	.....	.....	.....	101,600	\$ 105.60
R. Morrill.....	1,097	72	.....	.....	.....	378,850	484.50
J. K. Mason.....	2,871	22	.....	.....	.....	242,550	235.30
W. S. Moore.....	904	15	.....	.....	.....	112,700	135.80
John Behrens.....	966	29	.....	.....	.....	178,800	194.25
Total for month.....	7,790	138	.....	.....	.....	1,028,900	1,155.45

REPORT OF INSPECTIONS FOR MONTH ENDING DECEMBER 31, 1884.

NAME OF INSPECTOR.	No. of barrels approved.	No. of tanks approved.	No. of barrels rejected.	No. of gallons rejected.	No. of tanks rejected.	Total number gallons inspected.	Total amount of fees.
C. S. Lefferts.....	1,792	.....	.....	.....	.....	89,600	\$ 91.60
R. Morrill.....	915	77	.....	.....	.....	377,250	374.50
J. K. Mason.....	3,010	4	.....	.....	.....	168,500	171.25
W. S. Moore.....	1,381	25	.....	.....	.....	178,550	179.75
John Behrens.....	959	29	.....	.....	.....	164,950	189.30
Total for the month..	8,053	132	.....	.....	.....	978,850	1,006.40

REPORT OF INSPECTIONS FOR MONTH ENDING JANUARY 31, 1885.

NAME OF INSPECTOR.	No. of barrels approved.	No. of tanks approved.	No. of barrels rejected.	No. of gallons rejected.	No. of tanks rejected.	Total number gallons inspected.	Total amount of fees.
C. S. Lefferts.....	1,129	.....	.....	.....	.....	56,450	\$ 58.25
R. Morrill.....	774	54	.....	.....	.....	281,700	255.00
J. K. Mason.....	2,210	11	.....	.....	.....	160,000	159.50
W. S. Moore.....	1,107	42	.....	.....	.....	245,350	240.80
John Behrens.....	923	23	.....	.....	.....	172,400	184.45
Total for month.....	6,148	135	.....	.....	.....	1,424,900	898.00

REPORT OF INSPECTIONS FOR MONTH ENDING FEBRUARY 28, 1885.

NAME OF INSPECTOR.	No. of barrels approved.	No. of tanks approved.	No. of barrels rejected.	No. of gallons rejected.	No. of tanks rejected.	Total number gallons inspected.	Total amount of fees.
C. S. Lefferts.....	1,122	.....	.....	.....	.....	58,100	\$ 65.15
R. Morrill.....	674	34	.....	.....	.....	188,700	181.65
J. K. Mason.....	595	5	.....	.....	.....	52,250	55.75
W. S. Moore.....	970	23	.....	.....	.....	152,000	149.70
John Behrens.....	310	20	.....	.....	.....	105,500	103.20
Total for month.....	3,671	82	.....	.....	.....	552,250	\$ 555.45

REPORT OF INSPECTIONS FOR MONTH ENDING MARCH 31, 1885.

NAME OF INSPECTOR.	No. of barrels approved.	No. of tanks approved.	No. of barrels rejected.	No. of gallons rejected.	No. of tanks rejected.	Total number gallons inspected.	Total amount of fees.
C. S. Lefferts.....	969	.....	10	500	.....	48,450	\$ 52.75
C. J. Blanchard.....	323	.....	.....	.....	.....	16,400	20.50
R. Morrill.....	976	65	.....	.....	.....	341,300	327.60
J. K. Mason.....	2,069	24	.....	.....	.....	211,450	208.45
W. S. Moore.....	1,240	15	.....	.....	.....	129,500	128.75
John Behrens.....	849	23	.....	.....	.....	141,450	163.10
Total for month.....	6,431	126	.....	.....	.....	1,038,550	\$ 901.15

REPORT OF OIL INSPECTOR.

REPORT OF INSPECTIONS FOR MONTH ENDING APRIL 30, 1885.

NAME OF INSPECTOR.	No. of barrels approved.	No. of tanks approved.	No. of barrels rejected.	No. of tanks rejected.	Total number gallons inspected.	Total amount of fees.
C. J. Blanchard.....	510	24	.....	.....	25,500	\$ 28.90
R. Morrill.....	408	1	.....	.....	128,400	132.35
J. K. Mason.....	614	4	.....	.....	35,200	39.55
W. S. Moore.....	610	4	.....	.....	46,500	54.45
John Behrens.....	194	12	.....	.....	63,700	71.75
Total for month.....	2,336	41	.....	.....	299,300	\$ 327.00

REPORT OF INSPECTIONS FOR MONTH ENDING MAY 31, 1885.

NAME OF INSPECTOR.	No. of barrels approved.	No. of tanks approved.	No. of barrels rejected.	No. of tanks rejected.	Total number gallons inspected.	Total amount of fees.
C. J. Blanchard.....	574	15	.....	.....	23,700	\$ 29.75
R. Morrill.....	160	6	.....	.....	75,500	74.50
J. K. Mason.....	376	14	.....	.....	45,800	46.90
W. S. Moore.....	570	5	.....	.....	91,500	100.80
John Behrens.....	205	.....	.....	.....	32,750	42.45
Total for month.....	1,885	40	.....	.....	274,250	\$ 304.40

REPORTS OF INSPECTIONS FOR MONTH ENDING JUNE 30, 1885.

NAME OF INSPECTOR.	No. of barrels approved.	No. of tanks approved.	No. of barrels rejected.	No. of tanks rejected.	Total number gallons inspected.	Total amount of fees.
C. J. Blanchard.....	639	17	.....	.....	31,950	\$ 33.50
R. Morrill.....	87	3	.....	.....	80,850	80.05
J. K. Mason.....	496	3	.....	.....	38,300	34.25
W. S. Moore.....	937	10	.....	.....	60,350	64.45
John Behrens.....	261	.....	.....	.....	58,050	61.00
Total for month.....	2,420	33	.....	.....	269,400	\$ 273.85

REPORT OF OIL INSPECTOR.

RECAPITULATION.

Total number barrels inspected	57,554
Total number tanks inspected	1,085
Total number gallons inspected	7,992,000

RECEIPTS AND EXPENSES.

Amount received from all sources	\$8,798.55
Amount paid deputies salaries and expenses.....	\$ 5,200.31
Amount paid for apparatus.....	50.00
Amount paid for office stationery, postage, telegrams, etc.....	250.00
Amount paid traveling expenses State Inspector and for prosecutions.....	978.00 6,478.31
Net amount to State Inspector.....	\$2,320.24

The above covers a period of fourteen months.

IN CONCLUSION.

I have every reason to believe that the law is now rigidly enforced throughout the State. Manufacturers and dealers cheerfully comply with the provisions of the statute, and in its operation, the law is giving general satisfaction to all, and particularly to underwriters and insurance men in the State. Only 249 barrels of illegal oil have been found in the State since the law went into effect. This establishes the fact that manufacturers are sending to Iowa a good grade of oil and that dealers are making no attempt to sell other than high-grade goods. The record for the past year has been a good one. The people of Iowa have enjoyed perfect immunity from lamp explosions and have been given a grade of oil that can be safely used with anything like ordinary care or prudence. The inspection law is based upon the right and duty of the State to protect the lives and property of its citizens, and I am gratified to know that the law is accomplishing the object sought by its enactment. I do not think any State in the Union is enjoying more perfect immunity from accidents in the way of oil explosions than Iowa. In other states, where there are no inspection laws, or where the test is low, accidents are quite common and loss of life and property frequent. Paragraphs may frequently be seen in the papers like the following:

"Disastrous Fire—Another lamp explosion—Damages \$20,000."

"Burned to Death—Three children lose their lives by the explosion of a kerosene lamp."

In Pennsylvania, where the test is low, or was at the date of my last information, we hear of such instances as reported by a Pittsburgh paper :

DEATH IN THE LAMP.

Important Statement by Oil Inspector Ramsey—Causes and Prevention of Explosions.

The recent death of Mrs. Duparri, in Diamond Valley, resulting from the explosion of a coal oil lamp, has again drawn the public attention to this prolific source of death. In referring to this subject, yesterday, Oil Inspector Ramsey remarked : It's the old story—there can be no change for the better, so long as the law in this State remains as it is. Oil is branded 110° fire test : well, what is fire test ? The statute reads that fire test is that point where oil will take fire and permanently burn. That is the trouble ; oil that is branded 110° fire test may not permanently burn until it reaches that point, but my experience goes to show that it will flash at 85°, and at even a lower temperature, and it is the flash temperature of oil that causes the explosion. In Ohio, Indiana, and other States, both tests are much higher than here. This State is the only one where it is possible for oil to be made under so low a fire test. I hope to be able to get the law modified."

Here in Iowa we have the flash, or close test. Oil is required to stand 100 degrees close test, which is fully equal to 120 degrees open test, instead of 85 degrees, such as the Pennsylvania oil. Consequently, we do not now hear of lamp explosions in Iowa.

In regard to carelessness in filling and handling lamps, I wish to state that the burners are all fitted with a sieve or grating around the wick tube, and the perforations admit air to the wick ; dust and dirt are allowed to collect on the sieve until its openings are completely closed, then the flame smokes, heats up the chimney, the burner, and the oil, until the burner is forced from its fastenings by the vapor from the heated oil, which then comes in contact with the flame, and an explosion is the necessary result. If burners were boiled or the sieve was thoroughly and frequently cleaned, there would be no lamp explosions, where Iowa legal test oil is used.

Respectfully submitted,

B. W. BLANCHARD,

State Oil Inspector.