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ORIGINAL ARTICLES.

THE CORONER SYSTEM IN THE UNITED STATES.

Read in the Section of State Medicine, at the Forty-second Annual Meeting of the American Medical Association, held at Washington, D. C., May, 1891.

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I am aware that the great body of the medical profession have regarded the coroner and his duties as a subject bearing only an indirect relation to the practice of medicine. It was not until 1877, when the coroner laws were pretty thoroughly investigated in Massachusetts, that I believed they demanded revision.

The investigation of the law as practiced in Massachusetts showed clearly that it was not adapted to the best ends of justice; that the coroner, no matter how skilled in any branch of special training, could, under the law, scarcely be expected to discharge his duties in a satisfactory manner. In other words, that the primal fault lay, not so much in the functionary as in the class of duties he was expected to fulfill. The analysis of these duties showed that the same person was expected to be competent as a medical expert, to serve as an administrator of the law, as a judge to hear evidence, to decide upon its admissibility, he being also a witness in the case. Upon his own authority, or assisted by a physician, he was first to determine in a case under investigation if death had occurred by natural means or by violence; that is, by the evil intent of another. It having been decided that further investigation was necessary, a jury was summoned, and testimony was taken, usually in open session. To this he added his own testimony.

From this brief review it will be clearly observed that the office demanded two entirely distinct classes of functions to be discharged by one and the same person. These duties were both legal and scientific, and each in turn might involve questions of the greatest magnitude, often requiring the highest skill and experience in two great branches of learning. A further investigation showed that in matter of fact the office

was generally regarded as political, and that the appointees were more commonly men versed neither in law or medicine, and, as a consequence, were necessarily unfitted for the proper discharge of either of the main subdivisions of their duties. This was brought so clearly to the notice of the proper authorities that the manifest unfitness of the law for the complex requirements of modern life was plainly apparent, and Massachusetts abolished her entire system of coroner laws, and established in their place provision for medical examinations and inquest in cases of death and violence. This reformation was accomplished under the leadership of Mr. Theodore H. Tynedale, a member of the Boston bar, with the active coöperation of several distinguished members of our own profession, aided by the State Medical Society, and the law which is here given in full was adopted by the Legislature of Massachusetts in May, 1877:

AN ACT to Abolish the Office of Coroner, and to Provide for Medical Examinations and Inquest in Cases of Death by Violence.

Be it enacted by the Senate and House of Representatives in General Court assembled, and by the authority of the same as follows:

SECTION 1. The offices of coroner and special coroner are hereby abolished.

SEC. 2. The Governor shall nominate, and by and with advice and consent of the council shall appoint, in the county of Suffolk, not exceeding two, and in each county not exceeding the number to be designated by the county commissioners as hereinafter provided, able and discreet men, learned in the science of medicine, to be medical examiners; and every such nomination shall be made at least seven days prior to such appointment.

SEC. 3. In the county of Suffolk, each medical examiner shall receive in full for all services performed by him an annual salary of three thousand dollars, to be paid quarterly from the treasury of said county; and in other counties they shall receive for a view without an autopsy, four dollars; for a view and autopsy, thirty dollars, and travel at the rate of five cents per mile to and from the place of the view.

SEC. 4. Medical examiners shall hold their offices for the term of seven years from the time of appointment, but shall be liable to removal from office at any time by the Governor and council for cause shown.

SEC. 5. Each medical examiner, before entering upon the duties of his office, shall be sworn and give bond, with sureties, in the sum of five hundred dollars, to the treasurer of the county, conditioned for the faithful performance of the duties of his office. If a medical examiner neglects or refuses to give bond as herein required, for the period of thirty days after his appointment, the

same shall be void, and another shall be made instead thereof.

SEC. 6. The county commissioners in each county shall, as soon as may be after the passage of this act, divide their several counties into suitable districts for the appointment of one medical examiner in each district under this act; and when such division is made, shall at once certify their action to the secretary of the Commonwealth, who shall lay such certificate before the Governor and council. But nothing herein shall prevent any medical examiner from acting as such in any part of his county.

SEC. 7. Medical examiners shall make examinations as hereinafter provided, upon the view of the dead bodies of such persons only as are supposed to have come to their death by violence.

SEC. 8. Whenever a medical examiner has notice that there has been found, or is lying within his county, the dead body of a person who is supposed to have come to his death by violence, he shall forthwith repair to the place where such body lies and take charge of the same; and if, on view thereof, and personal inquiry into the cause and manner of the death, he deems a further examination necessary, he shall, upon being thereto authorized in writing by the district attorney, mayor, or selectmen of the district, city or town where such body lies, in the presence of two or more discreet persons, whose attendance he may compel by subpoena, if necessary, make an autopsy, and then and there carefully reduce or cause to be reduced to writing every fact and circumstance tending to show the condition of the body, and the cause and manner of death, together with the names and addresses of said witnesses, which record he shall subscribe. Before making such autopsy, he shall call the attention of said witnesses to the position and appearance of the body.

SEC. 9. If, upon such view, personal inquiry or autopsy, he shall be of opinion that the death was caused by violence, he shall at once notify the district attorney and a justice of the district, police or municipal court for the district or city in which the body lies, or a trial justice, and shall file a duly attested copy of the record of his autopsy in such court, or with such justice, and a like copy with such district attorney; and shall in all cases certify to the clerk or registrar having the custody of the records of births, marriages and deaths in the city or town in which the person deceased came to his death, the name and residence of the person deceased, if known, or a description of his person as full as may be for identification, when the name and residence cannot be ascertained, together with the cause and manner in and by which the person deceased came to his death.

SEC. 10. The court or trial justice shall thereupon hold an inquest, which may be private, in which case any or all persons other than those required to be present by the provisions of this chapter may be excluded from the place where the same is held; and said court or trial justice may also direct the witnesses to be kept separate, so that they cannot converse with each other until they have been examined. The district attorney, or some person designated by him, may attend the inquest, and may examine all witnesses. An inquest shall be held in all cases of death by accident upon any railroad, and the district attorney or the attorney-general may direct an inquest to be held in the case of any other casualty from which the death of any person results, if, in his opinion, such inquest is necessary or expedient.

SEC. 11. The justice or district attorney may issue subpoenas for witnesses, returnable before such court or trial justice. The persons served with such process shall be allowed the same fees, and their attendance may be enforced in the same manner, and they shall be subject to the same penalties as if served with a subpoena in behalf of the Commonwealth in a criminal prosecution pending in said court or before said trial justice.

SEC. 12. The presiding justice or trial justice shall,

after hearing the testimony, draw up and sign a report in which he shall find and certify when, where, and by what means the person deceased came to his death, his name, if known, and all material circumstances attending his death; and if it appears that his death resulted wholly or in part from the unlawful act of any other person, he shall further state, if known to him, the name of such person, and of any person whose unlawful act contributed to such death, which report he shall file with the records of the superior court in the county wherein the inquest is held,

SEC. 13. If the justice finds that murder, manslaughter, or an assault has been committed, he may bind over, as in criminal prosecutions, such witnesses as he deems necessary, or as the district attorney may designate, to appear and testify at the court in which an indictment for such offense may be found or presented.

SEC. 14. If a person charged by the report with the commission of any offence is not in custody, the justice shall forthwith issue process for his apprehension, and such process shall be made returnable before any court or magistrate having jurisdiction in the premises, who shall proceed therein in the manner required by law. But nothing herein shall prevent any justice from issuing such process before the finding of such report if it be otherwise lawful to issue the same.

SEC. 15. If the medical examiner reports that the death was not caused by violence, and the district attorney or the attorney-general shall be of a contrary opinion, either the district attorney or the attorney-general may direct an inquest to be held in accordance with the provisions of this act, notwithstanding the report, at which inquest he, or some person designated by him, shall be present and examine all the witnesses.

SEC. 16. The medical examiner may, if he deems it necessary, call a chemist to aid in the examination of the body, or of substances supposed to have caused or contributed to the death, and such chemist shall be entitled to such compensation for his services as the medical examiner certifies to be just and reasonable, the same being audited and allowed in the manner herein provided. The clerk or amanuensis, if any, employed to reduce to writing the results of the medical examination or autopsy shall be allowed for his services two dollars per day.

SEC. 17. When a medical examiner views or makes an examination of the dead body of a stranger, he shall cause the body to be decently buried; and if he certifies that he has made careful inquiry, and that to the best of his knowledge and belief the person found dead is a stranger, having no settlement in any city or town of this Commonwealth, his fees with the actual expenses of burial shall be paid from the treasury of the Commonwealth. In all other cases the expenses shall be paid by the city or town, and all other expenses by the county wherein the body is found.

SEC. 18. When services are rendered in bringing to land the dead body of a person found in any of the harbors, rivers, or waters of the Commonwealth, the medical examiner may allow such compensation for said services as he deems reasonable, but this provision shall not entitle any person to compensation for services rendered in searching for such dead body.

SEC. 19. In all cases arising under the provisions of this act, the medical examiner shall take charge of any money or other personal property of the deceased, found upon or near the body, and deliver the same to the person or persons entitled to its custody or possession; but if not claimed by such person within sixty days, then to a public administrator, to be administered upon according to law.

SEC. 20. Any medical examiner who shall fraudulently neglect or refuse to deliver such property to such person within three days after due demand upon him therefor, shall be punished by imprisonment in the jail or house of correction not exceeding two years, or by fine not exceeding five hundred dollars.

SEC. 21. The medical examiner shall return an account of the expenses of each view or autopsy, including his fees, to the county commissioners having jurisdiction over the place where the examination or view is held, or in the county of Suffolk to the auditor of the city of Boston, and shall annex thereto the written authority under which the autopsy was made. Such commissioners or auditor shall audit such accounts, and certify to the treasurer of the Commonwealth, or the treasurer of the county, as the case may be, what items therein are deemed just and reasonable, which shall be paid by said treasurer to the person entitled to receive the same.

SEC. 22. Whenever any sheriff is a party to a suit or proceeding, or otherwise disqualified to act therein, the sheriff or a deputy sheriff of any adjoining county may serve and execute all writs and precepts, and perform all duties of such sheriff which he is disqualified to perform, and may serve and execute all such writs and precepts wherein any county, town, parish, religious society, or school district is a party or interested, notwithstanding he is at the time a member of such corporation.

SEC. 23. Whenever a vacancy occurs in the office of sheriff of any county, the senior deputy-sheriff in service shall perform all the duties required by law to be performed by the sheriff, until the office of sheriff is filled in the manner required by law, giving bond as now required by law of sheriffs. And in case of such vacancy, the deputies of the sheriff vacating the office shall continue to have and exercise the power of deputy sheriffs until said office is filled as aforesaid.

SEC. 24. Sections seventy-five, seventy-six and seventy-seven of chapter seventeen, and section one hundred of chapter sixty-three, and section eighteen of chapter one hundred and sixty-three of the General Statutes are hereby amended by substituting for the word "coroner," wherever the same occurs, the words "medical examiner," and for the word "coroners" the words "medical examiners." The second clause of section fifty-two, and sections seventy-four, seventy-eight, seventy-nine and eighty of chapter seventeen of the General Statutes, chapter one hundred and seventy-five of the General Statutes, chapter one hundred and thirteen of the acts of year eighteen hundred and sixty-one, chapter one hundred and seventy-two of the acts of the year eighteen hundred and sixty-two, chapter twenty-eight of the acts of the year eighteen hundred and sixty-four, chapter two hundred and forty-one of the acts of the year eighteen hundred and seventy-one, and chapter one hundred and fifteen of the acts of the year eighteen hundred and seventy-six, and all other acts and parts of acts inconsistent herewith are hereby repealed.

SEC. 25. For the purposes of the appointment and qualification of medical examiners and the action of the county commissioners herein provided for, this act shall take effect upon its passage, and it shall take full effect on the first day of July next.

We shall have occasion to revert to the experience of Massachusetts during the last thirteen years to show the advantages in the working of the new law. Suffice it to state in passing, that the radical changes made in this Act are: first, the doing away entirely with the office of coroner; second, the abandonment of examination by a jury on what is necessarily a preliminary trial; third, the adoption of a new plan by which a specially trained medical expert makes a scientific investigation, and properly qualified legal officials conduct the legal inquiry, preliminary to the final trial after indictment of the accused parties.

In 1881, Dr. John G. Lee, of Philadelphia,

published a book entitled "Hand-book for Coroners," containing a digest of all the coroner laws in the United States. This valuable work consists of the selection, collation and arrangement of such material as the author could command, and is offered especially "as a guide for the instruction of newly elected coroners, or as a convenient hand-book for occasional and rapid reference." It does not appear to the author that any especial criticism should be made upon the laws as collated, or that there is an imperative need of a radical revision of the same. He recognizes, however, that there is often a difficulty of proper adjustment of the relation which the coroner holds to the prosecuting attorney and the other departments of justice, and concludes by saying: "If the coroner will administer his office fearlessly and according to the laws of his state, we feel sure that the clamor which periodically demands the abolition of the coroner and his functions will be heard no more."

However, the impartial critic who studies at all carefully the coroner laws as they exist in the several states would seem to require no better evidence of the need of their revision than therein contained, and as if in emphasis of this conclusion, the author adds a considerable number of pages of anecdotes full of grim humor which would be high comedy were it not for the seriousness of the subject.

In 1887 a committee was appointed by the American Medical Association, of which I was chairman, to examine into and report upon the coroner system of the United States. The first report of this committee was made at the May meeting, in 1888, supplemented by a report at the annual meetings of 1889 and 1890. At the last meeting a resolution was adopted in the general session calling the attention of the various State and district societies to this subject, requesting the members of the Association to personally investigate, and as far as possible to correct the evils inherent in the present system.

I desire by this paper to enlist the interest of the profession generally in this subject, as one eminently suitable for their investigation, and I sincerely trust that the influence of this learned body may be exercised in behalf of a much needed reform. It had been my purpose to examine in detail the laws in effect in each of the several States and Territories, and to this end I entered into correspondence with the secretaries of the various boards of health, and other prominent officials, and I have, as the result therefrom, collected a large amount of valuable material. However, the limit of this paper prevents an analysis in detail. The essential principles of the coroner laws (except in Massachusetts, Connecticut and Rhode Island) are very similar in all the States, and it is a source of absolute wonder how such an absurd and valueless office for

the detection of crime should have continued through all these years.

These laws owe their origin very naturally to the laws of England, and were first adopted in the early colonial days. The conservatism of English thought is nowhere better exemplified than in the history of her legal enactments. The primary medico-legal inquiry in cases of death by violence has been conducted in England by the coroner's inquest for the last thousand years, and has not been essentially changed for several centuries. According to Sir Thomas Smith, who wrote in 1583, the name of the office originated from the word "Crowner," or "Coromator," because "the death of every subject by violence is accounted to touch the Crowne, and to be a detriment to it; in other words, the coroner was a representative of the Crown." The system of trial by jury has ever been very dear to the English heart, and this, in the earlier days of English history, when society was less complex than at present, was very properly associated with the duties of the coroner system. Then both pathology and chemistry were in their infancy, and the combined judgment of the average citizen represented the highest verdict of public opinion.

In the early part of the present century, Mr. Thomas Wakeley, the able editor of the London *Lancet*, pointed out the inefficiency of the coroner laws as practiced in England, and demanded that the office of coroner should be filled by a competent medical man, since which time the coroner in England has usually been selected from among the better class of medical practitioners.

At the present time, in nearly all the States of the Union, the coroner's office is considered one of political preferment, and as such, is subject to party politics, holding the office not seldom as a subsidy for supposed services rendered, rather than because of fitness to discharge duties of so great importance to the State.

In the progress of legal learning, as well as in medical science, these two great branches of special knowledge have outgrown their former status, and to be well versed in both is beyond the training and education of the present generation.

The object of a medico-legal inquiry is manifestly the detection of crime, and the evidence sought is the direct cause of death and the identity of the individuals committing the crime. To ascertain the cause of death, it often requires the highest qualification of a pathological expert. The post-mortem examination must often be made in a thorough and skillful manner, and must frequently be supplemented by a careful and exhaustive chemical research. To this portion of the subject an especially trained medical expert limits his inquiry. Here, in the large majority of cases requiring investigation, the examination should end, since by it, it is clearly determined that death has been due to natural

causes, and that the case does not come within the limit of criminal investigation. In such cases, at least, it is a useless and unnecessary expense to summon jurymen, and too often calls the attention of the public through the press to a subject keenly painful to all parties involved.

If death has not occurred from natural causes, the question then arises, has a crime been committed? In all doubtful cases, the evidence of this is largely determined by a careful, competent and thorough medical examination. When this has been fairly established, the further investigation of the relation of "the party or parties to the act" becomes a purely legal one, and here, singularly, the evidence, as usually rendered by the verdict of a coroner's jury, is generally considered of little value. In an able article¹ by Mr. Clark Bell, of New York, entitled "The Coroner's Office; Should it be Abolished?" he writes: "There can probably be no more startling evidence of the utter uselessness of a coroner's jury than the statement of this fact, that whatever may be the verdict in a given case, the subsequent indictment, trial, and entire judicial proceeding is absolutely independent of it, and proceeds as if the coroner's jury had never acted at all. . . .

"We cannot be too jealous of the right of trial by jury, but in all cases under existing law two juries must agree before any person can be convicted of crime, without counting the coroner's jury, viz: the grand jury which presents the indictment, and the jury in the trial of the accused after indictment; so that the abolition of the jury on the preliminary inquiry, and a change as to who shall make the inquest in its stead, is not in any sense true an infringement upon the right of trial by jury which in all cases would exist if the proposed change was made."

Under the coroner system, as in actual use in the various States, much time is frequently lost by reversing what seems the proper order of procedure. A jury is summoned, witnesses are heard, and at last it is determined that a post-mortem examination is necessary, and yet, it is often of the greatest importance that the autopsy be promptly made, before decomposition is pronounced.

In a subject the fundamental principles of which are of universal application, it may be well to broaden the inquiry as to the methods adopted by the great nations of Europe which cover the important duties relegated to the coroner's inquest in England and America. For an excellent resumé of the same, I take pleasure in making reference to the valuable articles of Mr. Bell from which I have just quoted.

FRANCE.

In France two distinct and separate officers

¹ The Medico-Legal Journal, September, 1890.

take charge of all medico-legal investigations. The legal officer, attorney of the republic, is an authority not unlike the district attorney of our States. He makes a record of evidence, has the power of seizing articles or papers if connected with crime, and can temporarily hold in durance suspected persons. He may employ detectives, and is held responsible for all the legal questions involved. The scientific investigation is under the charge of a competent medical expert, especially selected for the office, who has full power, and is held responsible for a careful, scientific investigation.

GERMANY.

The present law of the German Empire was adopted in 1879. The judicial officer (*staatsanwalt*) is called the district attorney. The police are his subordinates as officers of the law in the investigation of crime. They are obliged to report to this officer all cases of sudden death or death by violence, and no interment of the body is allowed until after the consent has been obtained from this officer or a competent court. Medical examinations are made by experts especially selected for this purpose, who are summoned by the above mentioned authorities, and they in all respects conduct the examination. Upon the evidence of the preliminary examination, the district attorney enters suit before a competent court.

SCOTLAND.

The law in Scotland is analogous to that of France.

GREECE.

The system in force in Greece is almost identical with that of France. A medical officer takes exclusive charge of the medical question of the examination, and detectives, or experts trained to the business, are subject to the call of the prosecuting officer.

RUSSIA.

The officer designated in charge of the medico-legal examinations is known as judge of the institute; is an officer of the Crown, appointed in and for each district by the central governor or council of the province or state. He is possessed of large powers, and may even place in close confinement an accused or suspected person. The medical side of the case is in charge of a physician who is a salaried officer under the Crown. He conducts autopsies, and carefully reduces his examination and conclusions to writing, which he furnishes to the court, and also to the central medical council, or board, held in every province at the seat of the government, who have a power of review of the same in case doubt exists.

In 1883 a new law was enacted in Connecticut, appointing a properly qualified attorney as a coroner for each county, and a medical examiner for each town. I quote briefly from a letter written

me upon the subject by Dr. M. C. White, medical examiner for New Haven: "One feature of our new law, giving all the business of the county to one lawyer, secures immediate investigation by an experienced officer who understands law and the best methods of examining witnesses. . . . He must investigate immediately all suspicious cases. He may call a jury. All this works admirably. Three-fourths of all the sudden, violent or untimely deaths are disposed of by the medical examiners, reported and recorded, but require no legal investigation, since there is no suspicion of crime. . . . After nearly five years experience under the present law, I think the defects or questionable points are so few that we may say there is very general satisfaction with the law."

Rhode Island somewhat recently passed laws similar to those of Massachusetts, and Dr. Chas. H. Fisher, secretary of the State Board of Health, writes me "that it is a great improvement upon the preceding law and methods."

I am indebted to Dr. Samuel W. Abbott, the efficient secretary of the Massachusetts Board of Health, for most valuable information upon the working of the law as enforced in this State since 1877. I take pleasure in referring to a valuable article published by Dr. Abbott in the *Forum* for 1889, entitled "The Defects of the Coroner System." Under the new régime, about 15,000 cases of death from sudden, suspicious, violent or unknown causes have been investigated in a manner much more satisfactory than was possible under the old system. "Another important feature of the new method of procedure is the decided lessening of expense. Under the coroner system, the cost of executing the law for three years (1874, 1875, 1876) was found to be \$63,712.04, and under the new law it was \$54,509.31 for the three years (1878, 1879, 1880), a decrease of \$9,202.73, or more than three thousand dollars per year, notwithstanding an increase in the population of about eight per cent. The principal reasons for this diminished expense are found in the abolition of the jury, and in the decrease in the number of inquests. The ratio of inquests to cases investigated under the old law was forty per cent, while under the present law for the period of eleven years (1877-1888) it has been but twenty per cent, or half as many."

In review of the celebrated Barron case, in Maine, which created a wide interest outside of the State, Dr. Abbott wrote a valuable criticism, from which I quote. In the trial of one Stain, as having committed the murder, the chief question of interest was the uncertainty as to the exact cause of death: "The cashier of the Dexter bank was found dead in the vault of the bank under suspicious circumstances. Marks of violence were found upon his head. Two theories were advanced, and the little community of Dex-

ter became divided as to the question of murder or suicide. What would have been the most reasonable course to pursue under such circumstances? An immediate and thorough examination of the body, especially of the brain and stomach, would undoubtedly have settled the question of murder or suicide at once.

"What was actually done? The good-natured coroner (to use the words of the account printed at the time of the affair) deferred to the wishes of the family, and *made no autopsy*. Then came the farce of a coroner's jury. Six men sat in solemn conclave and pronounced a verdict, and of what possible value was the verdict?"

From the advanced sheets of the report of the State Board of Health, Dr. Abbott furnishes me the following statistical table:

EXPENSES OF MEDICAL EXAMINATION FOR 1889.

The total expenses of the medical examinations for the year 1889, including the cost of registration, was \$19,489.69. The average cost of each of the 1,654 medical examinations was \$11.78. In Bristol, Essex, Hampden, Hampshire and Middlesex the expense was greater, and in the remaining counties it was less, than that of the previous year.

The expenses of the four years 1885-1889 were as follows:

YEAR.	Total Number of Cases Examined.	Autopsies.	Total Expenses.	Average Expense of Each Case.
1885	1,260	165	\$16,322.54	\$12.95
1886	1,378	202	18,024.22	13.08
1887	1,556	188	18,626.26	11.97
1888	1,651	219	19,611.53	11.88
1889	1,654	216	19,489.69	11.78

In the following itemized table are presented the expenses of conducting the medical examinations in each county and for the whole State, for the year 1888:

Expenses incurred in conducting the Medical Examinations required by the Medical Examiner Laws of Massachusetts.—1889.

COUNTIES.	Number of Cases.	Autopsies.	Fees of Medical Examiners.	Mileage.	Witnesses and Clerks.	Chemists and Other Experts.	Burial, Removal, Recovery and Care of Bodies.	Incidentals.	Totals.
Barnstable	13	6	\$65.00	\$27.10	...	...	\$6.00	\$0.95	\$99.05
Berkshire	51	6	405.00	42.40	\$41.00	\$50.00	15.00	12.50	565.90
Bristol	132	7	835.00	59.40	58.00	160.00	26.00	10.40	1,148.80
Dukes	4	...	20.00	3.30	6.00	...	...	...	29.30
Essex	203	16	1,415.00	82.70	106.00	100.00	23.50	10.00	1,737.20
Franklin	15	...	75.00	24.30	...	...	...	...	99.30
Hampden	126	14	980.00	77.60	134.00	435.00	217.00	31.50	1,875.10
Hampshire	24	5	245.00	36.99	18.00	...	7.00	...	306.99
Middlesex	276	19	1,855.00	174.55	136.00	50.00	124.00	...	2,339.55
Nantucket	2	...	10.00	...	...	...	...	...	10.00
Norfolk	84	8	620.00	51.65	72.80	50.00	12.50	...	806.95
Plymouth	39	4	295.00	57.30	17.50	...	...	6.00	375.80
Suffolk	533	125	6,500.00	169.50	970.00	275.00	562.75	...	8,477.25
Worcester	152	12	1,060.00	115.10	113.00	...	100.50	...	1,388.60
Totals	1,654	216	14,380.00	\$921.89	\$1,672.30	\$1,120.00	\$1,094.25	\$71.35	\$19,259.79
Registration	...	...	...	...	...	...	...	...	229.90
									\$19,489.69

In evidence of the great value of the working of the new law in Massachusetts, I quote from an exhaustive article upon the subject, "The

Abolition of the Coroner in Massachusetts," by T. H. Tyndale, Esq.:² "With the abolition of the composite functionary and of the jury, a highly-trained class of 'medical examiners,' an office gladly accepted by the first physicians in the State, we open the door for special interest in, and previously unknown penetration into, fields of detailed investigation of pathology; we have laid the foundation of a valuable body of observed facts, as shown by the publication of our Medico-Legal Transactions, contributed entirely by the medical examiners; we have attained accuracy, and we have never, since the passage of the Medical Examiner Act, failed in a single prosecution, for want, or insufficient clearness of the medical testimony. The previous statistics were—some hundreds of inquests annually—some tens of convictions. Now the great majority of prosecutions begin with the skillful investigation of trained men, acting promptly and delayed by no cumbersome, meaningless machinery, and end in convictions. . . . We have attained that greatest deterrent of crime, the chief terror to criminals—swiftness in discovery and certainty in punishment.

Incidentally, a gain dear to the lover of social cleanliness and morality has been obtained. I refer to the total disappearance from the press—except as news from other States—of the nauseous and offensive details formerly furnished by the coroner's inquest, and eagerly sought after by the prurient curiosity mongers. These changes have been wrought by a simple act, abolishing the office of coroner, and appointing for Boston two, for each other county in the State some four medical examiners whose business is solely

² The Medico-Legal Journal, March, 1890.

been in operation about twelve years, and has proved itself capable of exact and valuable work; no instance of willful dereliction of duty under it has taken place. It has now the commendation of judges, prosecuting officers, and the general public, and may fairly be pronounced a step in the direction of purifying the public service."

The limit of time at my disposal prevents a more detailed discussion of a subject of such vast importance, and in closing I desire to commend for earnest consideration in each of the several States the following propositions:

1. To abolish the office of coroner.
2. To dispense with jury service.
3. To separate the medical from the legal duties in all cases involving the examination into the causes of death where crime is suspected.
4. To entrust the medical examination only to competent medical officers properly trained in their work.
5. To make the number of these medical officers as small as consistent with the proper discharge of their duties.
6. To consign all questions of law only to properly qualified legal magistrates.
7. To remove the appointment of these officers entirely from the question of political consideration; and to be based only upon their possession of the requisite and proper qualifications.

Upon some basis of this character should the coroner's laws be revised. Much useless expenditure of time and money will be avoided, often great sorrow and anxiety will be prevented, and that which is of vastly greater importance, the ends of justice will be far better served.

SICKNESS AND MORTALITY IN THE ARMY OF THE UNITED STATES.

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All statistics telling the amount of disease and death in any considerable portion of the community, and showing the variations in said amount from year to year, seem properly to belong to State Medicine.

As there is no Section of military medicine and surgery in the American Medical Association, I deem it proper to present to the Section on State Medicine the following paper, in which I have collated and compared figures showing the absolute and relative amount of disease, death, and non-effectiveness in the Army of the United States.

While these statistics have been collected under conditions of considerable uniformity from year to year, yet it is to be remarked, that they

have been collected by a large number of observers, all of them medical officers of education and intelligence, yet each differing from the other in powers of observation, and in mental characteristics or peculiarities.

To some, this last named fact will make the statistics more reliable and valuable, than if they had been collated and reported by a single individual; to others, less reliable and valuable.

In 1882, I presented to the American Medical Association a paper which was printed in its Transactions, and contained the health statistics of the U. S. Army for eleven years—from 1871 to 1881 inclusive.

I now present similar data from the annual reports of the Surgeon-General for a period of nine years, from 1882 to 1889 inclusive.

TABLE I.
Showing the Sickness and Mortality from Disease in the Army of the United States during the years 1882-1889, inclusive.

YEAR ENDING	Cases per M. of mean strength reported as taken on sick report for disease.			Deaths from disease per M. of mean strength.			Deaths from disease per M. of cases of disease treated.		
	White.	Colored.	Total.	White.	Colored.	Total.	White.	Colored.	Total.
June 30, 1882	1461	1537	1468	6.79	7.06	6.81	4.65	4.60	4.64
" 1883	1570	1620	1575	6.98	6.28	6.91	4.45	3.87	4.39
" 1884	1583	1558	1580	8.80	6.50	8.56	5.56	4.17	5.42
Dec. 31, 1884	1236	1458	1257	7.27	9.15	7.45	5.88	6.28	5.92
" 1885	1110	1203	1118	4.92	3.19	4.76	4.43	2.65	4.26
" 1886	1017	1236	1036	6.53	4.67	6.36	6.43	3.78	6.14
" 1887	992	1094	1002	6.02	8.48	6.25	6.06	7.76	6.24
" 1888	1013	1164	1028	6.05	11.59	6.59	5.97	9.95	6.41
" 1889	1073	997	1066	3.98	7.45	4.32	3.71	7.47	4.05
Total for whole period of nine years	1222	1319	1231	6.33	7.20	6.42	5.18	5.47	5.21
Total in former Reports for eleven yrs.	1551	1498	1546	8.45	11.40	8.71	5.45	7.61	5.63

The number taken sick or dying from disease, and the number constantly sick at different times, are both, in their own way, measures of the health of an army; each has its own peculiar value.

The difference between the numbers admitted on sick report for disease in the two periods tabulated in 1882 and now, might be due to difference of physique of the soldiers, to differences in the nature of their service, and to differences in the sanitary care and attention bestowed upon them.

So far as can be discovered, the material in both periods was about the same; the nature of the service was unchanged. So, reasoning by exclusion, better sanitary care and attention must have been mainly or entirely operative in causing the decrease of numbers taken sick during the period 1882 to 1889 inclusive.

Differences in the ratios of those dying from disease (not injury) per 1,000 of mean strength, might be due to these above named causes, and, in addition, to a difference in the character or constitution of each individual disease, and to better therapeutics.