

The Massachusetts Medical Society

FROM COW-PATH TO STATE ROAD*

BY REGINALD FITZ, M.D.†

IN the early days of 1636, three hundred years ago, while our forefathers were placidly tending their cows on Boston Common, Mr. William Pynchon of Roxbury led an adventuresome band of his fellow townsmen westward in search of better hunting grounds until finally he struck a pleasant camping place on the Connecticut

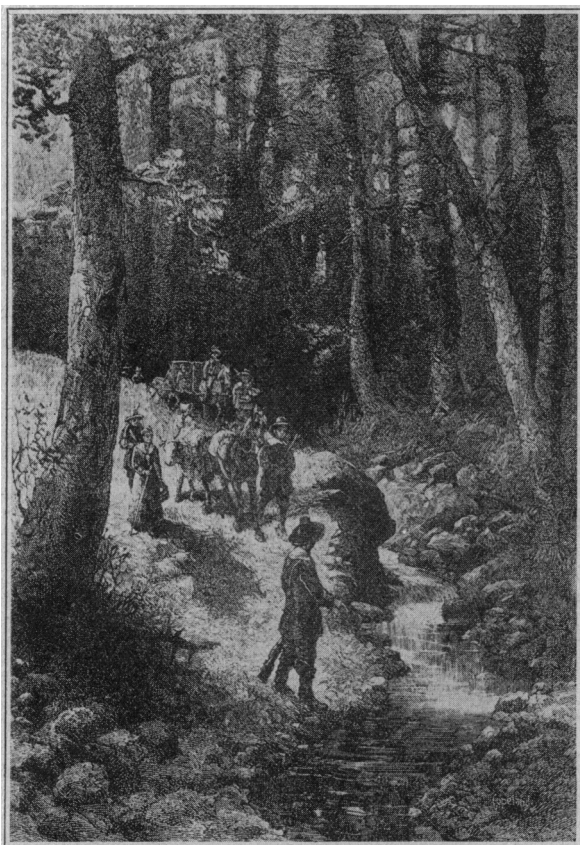


FIG. 1. 1636. The Cow Path: Boston to Springfield, William Pynchon leads the Roxbury emigrants Westward. (Springfield Public Library.)

River, settled there, and so the city of Springfield was founded. To be sure fourteen years later Mr. Pynchon had the temerity to publish a brochure called "The Meritorious Price of Our Redemption", which dealt with religious matters.

This now seems harmless enough, but at the time, it appeared so radical to the townspeople of Springfield as to cause a considerable amount

of unfavorable comment there. Censure from his friends so much upset Mr. Pynchon's feelings that at once he left the shores of America never to return. Nevertheless he founded the City of Springfield and for so doing deserves everlasting credit.

In 1636, it would have been difficult to foresee that in three hundred years the town of Boston would grow to a city with 782,000 inhabitants and that the outpost on the Connecticut River founded by that handful of Roxbury emigrants would expand to hold 156,000 people. Yet such indeed has occurred. These three centuries have been eventful epochs. They have seen the formation of the United States of America. They have been punctuated, among other great events, by four significant wars, and recently by the most widespread economic depression the country has known. Along with such major happenings has been a period of amazing growth and expansion, and interspersed among them have developed perplexing mechanical devices such as trains, telephones, electric lights, and automobiles and equally baffling medical contrivances such as hospitals, medical schools, the State Department of Health, and suggestions from the Government for insurance against the vicissitudes of old age and sickness. All these have had an appreciable influence, from time to time, in modifying the roadway which medicine has followed.

Three hundred years ago, the practice of medicine in Massachusetts was a simple business. It was conducted largely by clergymen who took an almost unwarrantable interest in peoples' bodies as well as in their souls. A pressing question at once arose as how best to safeguard people in the future in this new and unknown land.

Interestingly enough, one of the most important first steps to be taken toward the future was the establishment of a method by which people might be educated.

"After God had carried us safe to New England, and wee had builded our houses, provided necessaries for our livelihood, rear'd convenient places for Gods worship, and settled the Civill Government: One of the next things we longed for, and looked after was to advance *Learning* and perpetuate it to Posterity; dreading to leave an illiterate Ministry to the Churches, when our present Ministers shall lie in the Dust. And as wee were thinking and consulting how to effect this great Work; it pleased God to stir up the heart of one Mr. Harvard (a godly Gentleman, and a lover of Learning, there living amongst us) to give the one halfe of his Estate (it being in all about 1700.l.) towards

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the erecting of a Colledge, and all his Library: after him another gave 300.1. others after them cast in more, and the publique hand of the State added the rest: the Colledge was, by common consent, appointed to be at *Cambridge*, (a place

ruled "that such as studies phisick or chirurgery may have liberty to reade anatomy, and to anatomize once in fore years some malefactor, in case there be such as the courts shall allow

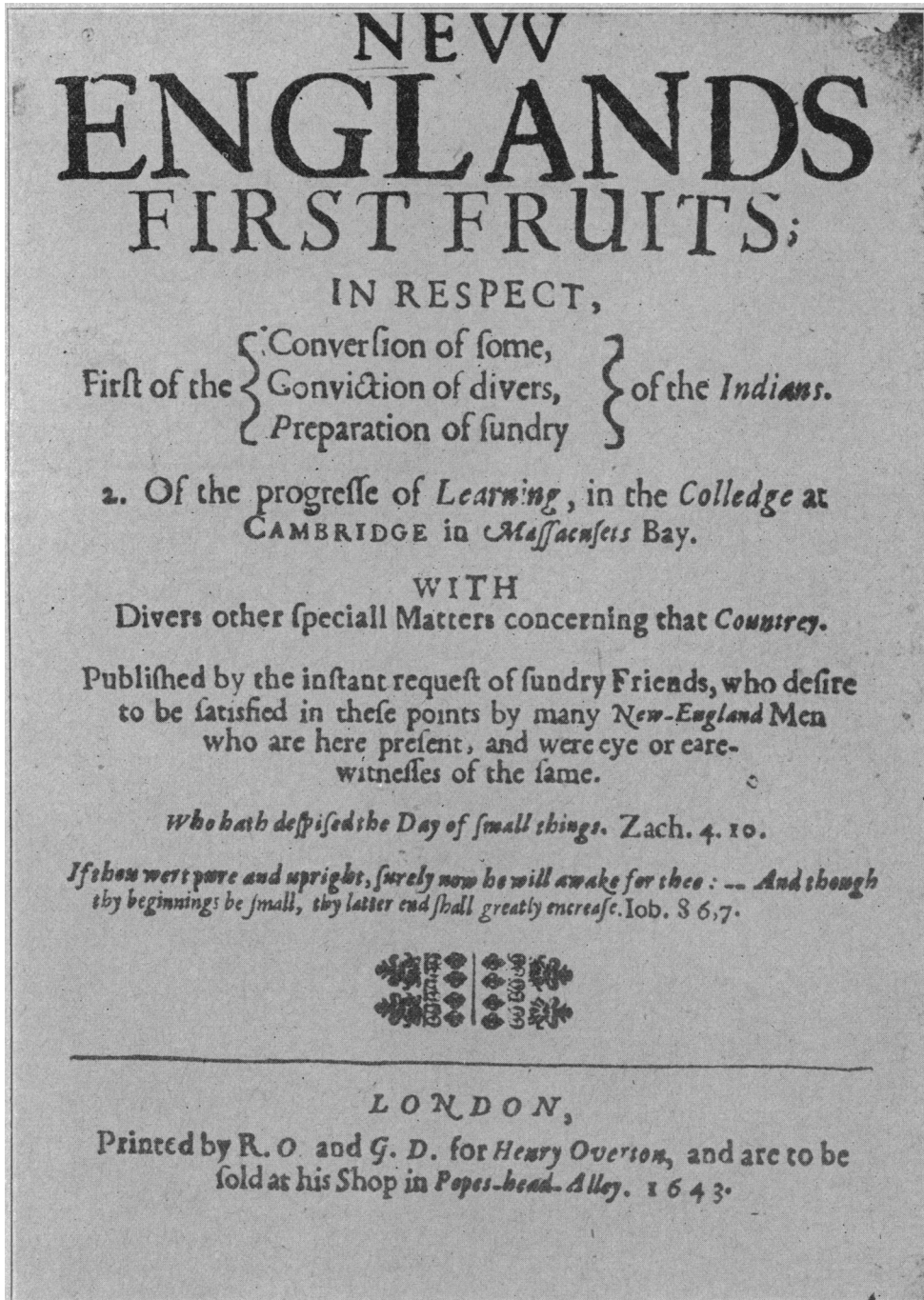


FIG. 2. 1643. Title page of "New England's First Fruits". This contains the first published description of Harvard College. (Widener Library.)

very pleasant and accomodate) and is called (according to the name of the first founder) Harvard Colledge."

That doctors must be trained systematically also was soon apparent so that presently it was

of." From such simple beginnings arose our process of medical education.

There has always been a strange fascination in certain people's minds toward trying to manage other people's business. Before long

amateur regulators of human affairs began to appear on the scene, ignorant amateurs who had never even "anatomized a malefactor", and yet who competed in the spiritual and physical management of souls in a manner thoroughly distasteful to competent professionals like William Pynchon. It became necessary to put a stop to such goings on. The manner in which medical licensure originated, also, was delightfully simple. Mistress Hawkins was said to have a knack at practical obstetrics and to be a good hand at the prescription of medicinal herbs. Unhappily for her, however, she was caught at these practices by someone who did not approve. There was no Board of Registration in Medicine and no Committee on Ethics and Discipline to contend with; all that was required to put a stop to her activities was a General Court ruling, easily obtainable, no doubt, if one knew the ropes; "Jane Hawkins, the wife of Richard Hawkins, had liberty till the beginning of the 3rd month, called May, and the Magistrates (if shee did not depart before) to dispose of her, and in the meane time shee is not to meddle in surgery or physick, drinks, plaisters or oyles, nor to question matters of religion, except with the elders for satisfaction." These restrictions not proving sufficient, 'twas ordered some months later, "Jane Hawkins is enjoined to depart away to morrow morning, and not to return againe hither, upon paine of severe whiping and such other punishment as the courte shall think meete; and her sonnes stand bound in 20 pounds to carry her away, according to order." And that was that!

In cow-path days Springfield was far removed from Boston, an isolated community in the middle of Massachusetts: the transportation problem was unsettled, there were no good roads, and there were plenty of Indians and other dangers to catch the unwary. Such being the case, there was little traveling so that each individual town in the Commonwealth was thoroughly independent and ran its own affairs in a manner to suit itself. It took no time at all for people to recognize that epidemics were uncomfortable, with high mortality, and that good health was almost a public necessity. One might argue, as did the Reverend Michael Wigglesworth of Malden, that the country was going to the dogs, that young people were not so good as they should be and that ill-health on the whole was more due to depravity than anything else.

*"Our healthful days are at an end,
And sicknesses come on
From yeer to yeer, becaus our hearts
Away from God are gone.
New England, where for many yeers
You scarcely heard a cough,
And where Physicians had no work,
Now finds them work enough.

*Massachusetts Historical Society Publications, 12: 83, 1871-1873.

Now colds and coughs, Rhewms, and sore-throats,
Do more & more abound:
Now Agues sore & Feavers strong
In every place are found.
How many houses have we seen
Last Autumn, and this spring,
Wherein the healthful were too few
To help the languishing.

One wave another followeth,
And one disease begins
Before another cease, becaus
We turn not from our sins.
We stopp our ear against reproof,
And hearken not to God:
God stops his ear against our prayer,
And takes not off his rod.

Beware, O sinful Land, beware;
And do not think it strange
That sorer Judgements are at hand,
Unless thou quickly change.
Or God, or thou, must quickly change;
Or else thou art undon:
Wrath cannot cease, if sin remain,
Where judgement is begun."

People less sentimental and more practical, however, believed that while prayer no doubt was useful yet the best way to control the spread of infectious disease was by more active methods. Boston's first quarantine law passed in 1647, marks the beginning of health control by municipal, state or federal agencies.

"For as much as this Corte is credibly informed that ye plague, or like grieves infectious disease, hath lately exceedingly raged in ye Barbadoes, Christophers, and other islands in ye West Indies, to ye great depopulating of those, it is therefore ordered, that all (our own) or other vessels coming from any pts of ye West Indies to Boston Harbor shall stop (and come to an) anchor before they come at ye Castle, under ye poenalty of 100 pounds, and that no persn coming in any vessel from the West Indies shall go ashore in any towne, village or farme, or come within foure rods of any other person, but such as belongs to the vessels company that hee or shee came in, or any wayes land or convey any goods brought in any such vessels to any towne, village, or farme, aforesaid, or any other place within this iurisdiction, except it be upon some island where no inhabitant resides, without licence from ye councill, or some three of them, under ye aforesaid poenalty of a hundred pounds for every offence."

The early years of the eighteenth century added two more episodes significant to my narrative. In 1721, Zabdiel Boylston, aided and abetted by the Reverend Cotton Mather, introduced public education of the layman on medical affairs, thus laying the foundation for all the Sunday afternoon public lectures and for the popular books on health and hygiene that were to come later. In that year there was an epidemic of smallpox in Boston. Boylston having conducted a careful clinical investigation dealing with the mitigation of this disease by the method of inoculation published the results of his studies. This publication stirred up a great controversy: people raved, ranted and blasphemed over it. But nevertheless as a result of

Boylston's efforts the mortality from smallpox dropped from around fourteen to a little over one per cent, and he demonstrated convincingly enough that doctors could be influential in the creation of medical propaganda and could deal effectually with masses of people through the medium of literature and public teaching.

Two years later some wise clinician pointed out that the rum drinkers of New England were

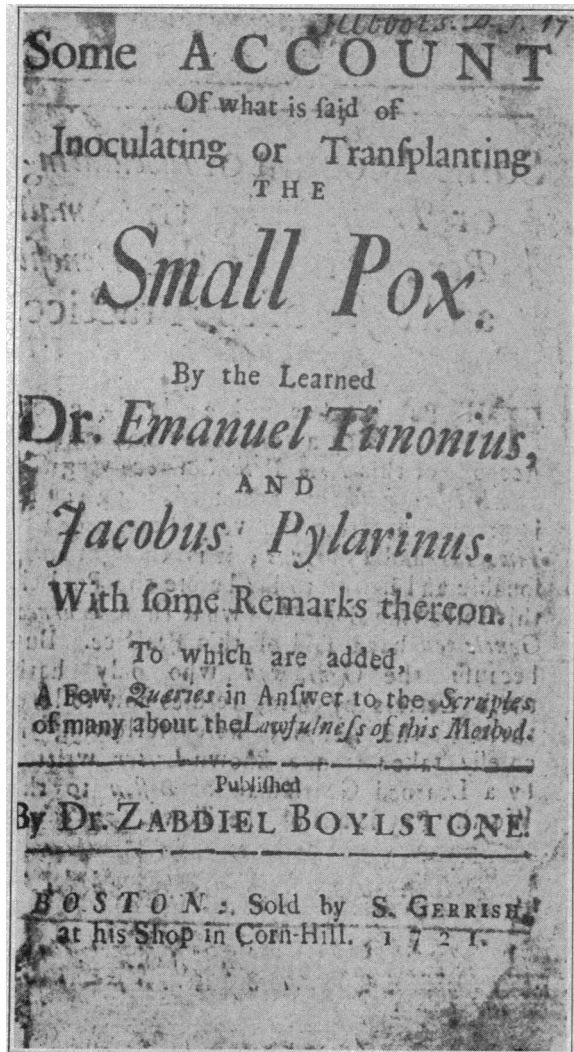


FIG. 3. 1721. Title page of Zabdiel Boylston's first paper on Small Pox inoculation. This demonstrated the importance of public education on medical subjects by medical men. (Massachusetts Historical Society Library.)

suffering inordinately from the "Dry Gripes" and that the cause of this unpleasantness lay in the fact that their rum was being distilled through leaden pipes. Accordingly the General Court ordered:

"Whereas, the strong liquors and spirits that are distilled through leaden pipes are judged on good grounds to be unwholesom and hurtful; notwithstanding which some persons to save

charge may be led into the making or using of such heads, worms or pipes; for remedy and prevention whereof,—

Be it enacted by the Lieutenant-Governor, Council and Representatives in General Court assembled, and by the authority of the same,

(Sect. 1.) That no person whatsoever shall make use of any such leaden heads or worms, for the future; and that whosoever shall presume to distil, or draw off any spirits or strong liquors thro' such leaden heads or worms, upon legal conviction thereof before any of his majestie's courts of record, shall forfeit and pay a fine of one hundred pounds.

"And be it further enacted by the authority aforesaid.

(Sect. 2.) That no brazier, pewterer or other artificer whatsoever, shall presume to make any worm or head, for distilling, of coarse and base pewter, or such as hath any mixture of lead in it, under the penalty of one hundred pounds."

This was the first time that governmental authority took steps to prevent any other disease than that of an infectious or contagious nature. Before 1775, therefore, medicine had advanced far beyond cow-path days and the State already was exerting its influence.

Surely the War of the Revolution taught New England physicians two important lessons: that there was an obvious dearth of men properly qualified by education to undertake the practice of medicine in spite of the old-fashioned preceptor system, and that hospitals were the proper places for practical clinical teaching. After the War, therefore, medical schools and hospitals soon began to crop up in appropriate centers: Harvard (1782), Dartmouth (1798), Yale (1814), Brown (1814), Castleton Medical College (1820), Bowdoin Medical College (1821), University of Vermont Medical Department (1823), Berkshire Medical College (1823), Vermont Medical College of Woodstock (1830). The Massachusetts General Hospital opened in 1821,* at once becoming, as Sir William Osler was later to characterize a good hospital, "a place of refuge for the sick poor of the city, a place where students are taught the best in medicine, a place where new thought is materialized in research and a consulting centre for the whole country in cases of obscurity."

A very interesting curve can be constructed from the available figures of the Massachusetts Medical Society and the Massachusetts census. Apparently there has been a surprisingly constant relationship for nearly a hundred and fifty years between the size of our Society and the population of the Commonwealth. With the in-

*There well may be a numerical relationship between the concentration of population and the need for hospital facilities. It is a striking coincidence that in 1810, when the Massachusetts General Hospital was being planned, the population of Boston was 33,787, and that in 1880, when the Springfield Hospital was being planned, the population of Springfield was 33,340. In 1936, Massachusetts has a population of about four and a half million; there are 272 hospitals recognized by the American Medical Association or one hospital for each 17,000 people.

creasing needs for doctors in the early days, and the difficulties of transportation between the various towns, it is evident that medical schools like those at Pittsfield and Woodstock, to men-

to meet the demands for well-trained practitioners. Changes were due to occur. In 1840, Springfield was eighty-seven miles from Boston and

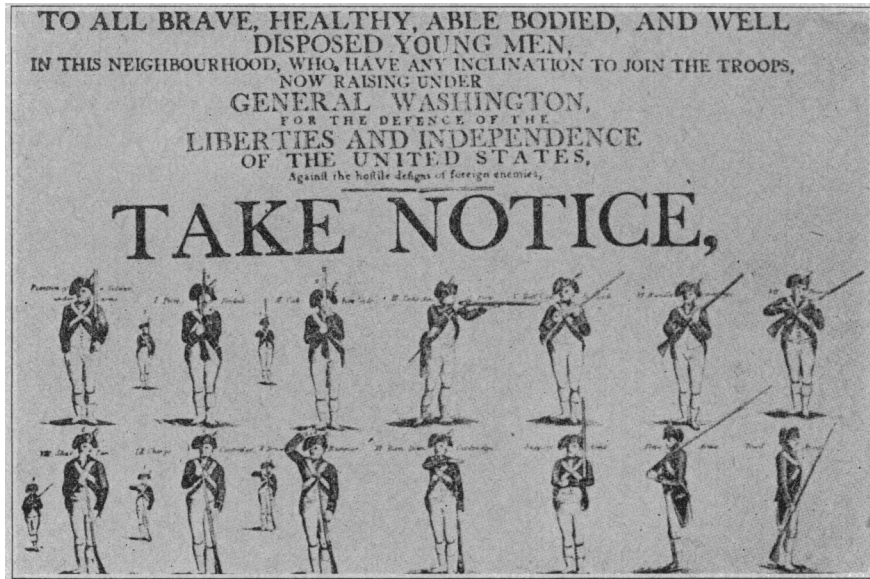


FIG. 4. 1775-1790. The Revolutionary Period: An appeal for volunteers by General Washington. There were almost no doctors to answer this call. (Pennsylvania Historical Society Library.)

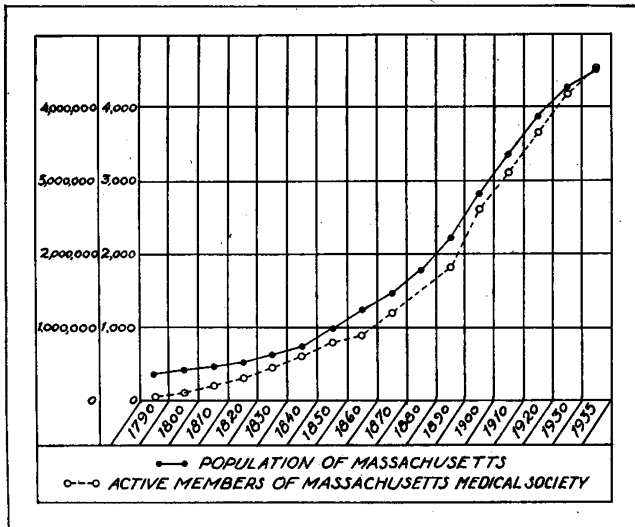


FIG. 5.* 1790-1935. The Growth of the Massachusetts Medical Society and the Population of Massachusetts.

tion two of the more ephemeral ones, did an excellent and essential piece of work in helping

*Unfortunately this diagram does not tell the whole story. In 1933, there were 4406 active members of the Massachusetts Medical Society and yet there were 7014 doctors listed as of Massachusetts by the American Medical Directory. In that year 269 new doctors were licensed to practice in Massachusetts, of whom 53 (20 per cent) were graduates of medical schools unrecognized by the Society. In recent years the number of doctors with unrecognizable medical education who have migrated to Massachusetts has steadily increased. The citizens of the Commonwealth cannot be guaranteed adequate medical supervision until they regain the courage of their Puritan forbears and handle medical licensure in as forceful a manner.

sixteen hours away. It was a homelike village of eleven thousand souls, with *"two banks, several printing offices, six churches and many elegant private residences". To get there a Bostonian stepped aboard the mail stage at Earl's, 36 Hanover Street, at two o'clock in the morning, drove leisurely over the turnpike through Waltham, Sudbury, Marlborough, Worcester, Brookfield, Palmer and arrived in Springfield at six o'clock in the evening.

Only a few years later railroads were to be built, opening up new country very quickly and shortening distances between old places even more remarkably. Almost overnight, it seemed, Boston and Springfield were close neighbors, now only three and a half hours apart. Such increased facilities for transportation had at once, I believe, a significant effect on medical education and progress. The Commonwealth grew richer rapidly, and many boys heretofore unable to afford a college education could now obtain one. The smaller medical schools were no longer necessary for it was nearly as easy for a Springfield student, for example, to go to the Harvard Medical School as it had been for his brother a few years earlier to go to Pittsfield. People soon realized that large medical centres like Boston afforded better opportunities for medical institutions than the smaller towns.

*Historical Collections. John Warner Barber. Worcester: Dorr, Howland and Co. 1841.



FIG. 6. 1836. The Turnpike: Boston to Springfield. (Harvard Medical School Library.)

Hence the smaller medical schools, having filled a useful purpose before the railroads came, now were gradually snuffed out, the larger ones continuing to exist in accordance with the law of survival of the fittest.

The year 1850 is important to the tale I am trying to unfold for, in this year, Mr. Lemuel Shattuck published his famous monograph "Report of a General Plan for the Promotion of Public and Personal Health." This remarkable

document, assisted by the Massachusetts Medical Society* as obstetrician, eventually brought forth the State Board of Health.

It should be emphasized that Lemuel Shattuck was not a medical man, but a school-teacher, bookseller and publisher. He wrote his report with practically no assistance, and from an extraordinarily farsighted point of view. He be-

*In 1861, the Massachusetts Medical Society petitioned the Legislature for the establishment of a State Board of Health, a petition which finally was heeded eight years later.

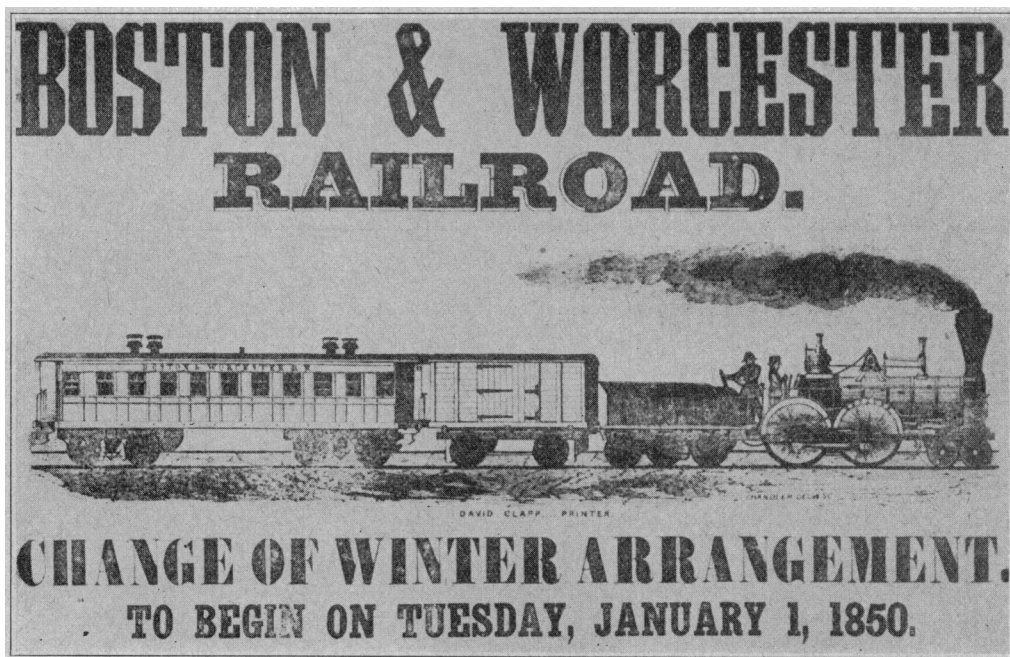


FIG. 7. 1850. The Railroad: Boston to Springfield. (Harvard Business School Library.)

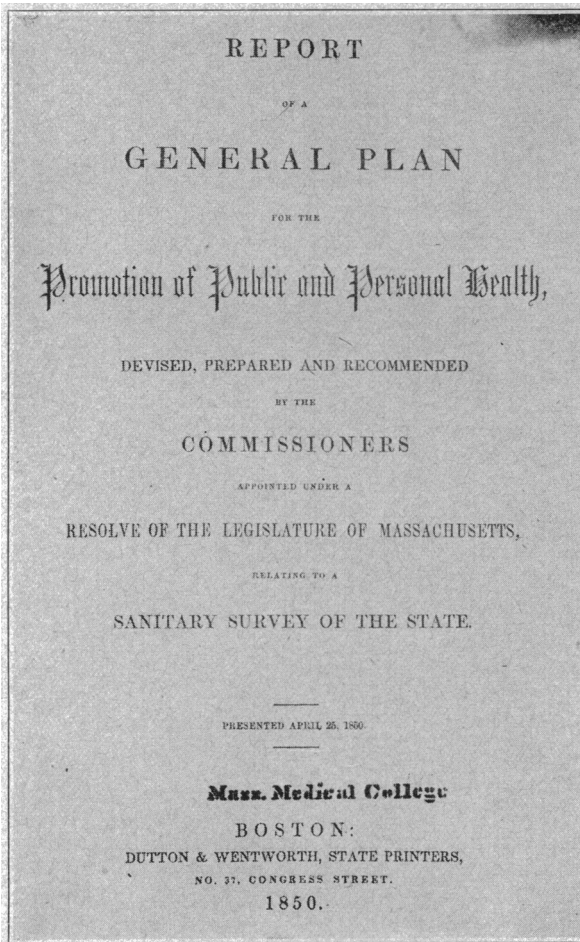


FIG. 8. 1850. Title page of Lemuel Shattuck's report. This report initiated the formation of the State Board of Health in 1869. (Harvard Medical School Library.)

lieved, as others had believed before him, that public good health was an essential attribute to civilized living and was public property. There was a vast amount of unnecessarily impaired health that could be prevented: the prevention of disease, on the whole, was much more important than its cure. He proposed that the State should enter the practice of preventive medicine in so far as this was possible by studying public health through accurately maintained vital statistics, by establishing and enforcing rational public health laws, by investigation of public health problems as they arose, and by continued improvement of public health by carefully controlled research. He advocated such modern projects as the medical inspection of school children, the development of training schools for nurses, the periodic health examination of apparently healthy people: in fact he was far ahead of his time in many ways. Like so many pioneer efforts in medicine, the importance of his work at the time was largely overlooked, bearing fruit, however, many years later.

It is curious how slight an impression was made on medicine by the Civil War. Army surgeons were busy enough to be sure, and well organized modern-looking army hospitals were established. But no new medical knowledge came into existence during this period. The Civil War, however, brought forth one baffling thought that many doctors subsequently have pondered over. In concluding his Gettysburg speech President Lincoln said, "Government of the people, by the people, and for the people, shall not perish from this earth." How can this phrase best be construed in terms of medical pol-

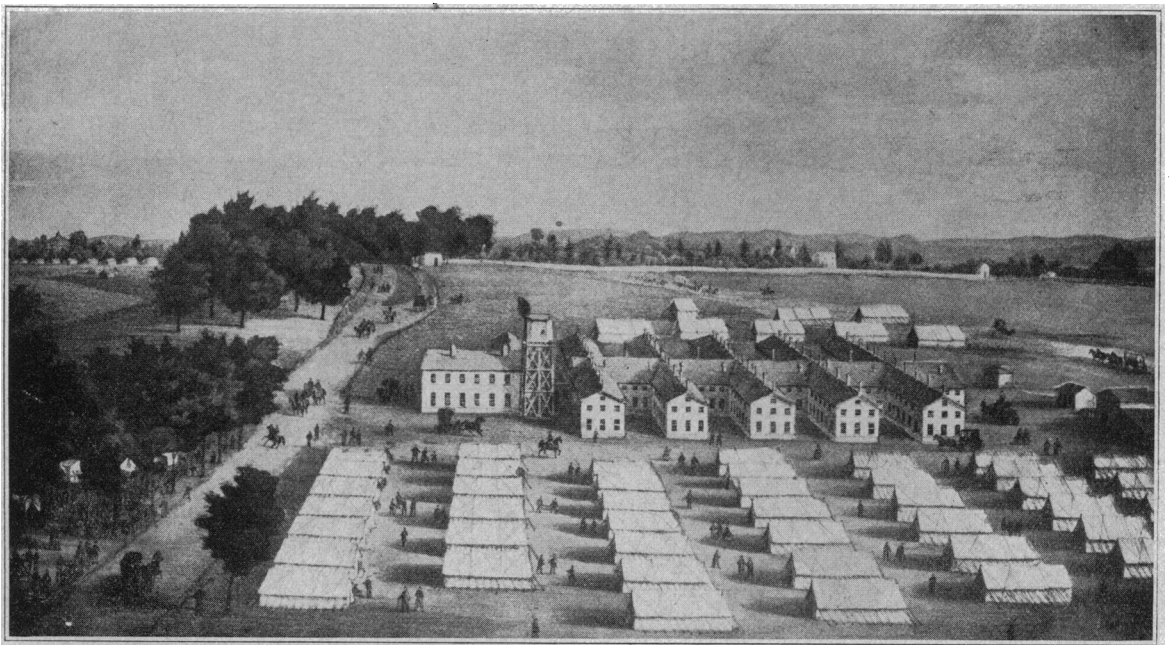


FIG. 9. 1864. The Civil War: Mount Pleasant Hospital. Washington, D. C., a typical war Hospital. (Harvard Medical School Library.)

icy? Shall medicine becoming, as it has year by year, increasingly complex in its social and economic relations, best be regulated for the people, by the people, through governmental control? Or will medicine in future be developed most safely, by the people, and for the people, through their insistence on a better trained, more efficient profession managing its own affairs and operating for their benefit in a manner unhampered by overzealous legislative restrictions?

After the Civil War ended, Massachusetts continued to grow. Between 1880 and 1900 three new complications to life were introduced.

portance, and singularly well fitted to terrorize horses, was to become a universal means of transportation. In the fullness of time the motor car was to do to the railroad what the railroad had done to the stagecoach: it was to wipe out distance and timetables; inaccessible places were to exist no longer and all Massachusetts doctors were to be within easy driving range of one another.

In the meantime, before all this happened, the youthful State Board of Health was maturing. All over Massachusetts were developed improved conditions for maintaining good public health—better food, water and sewage control,

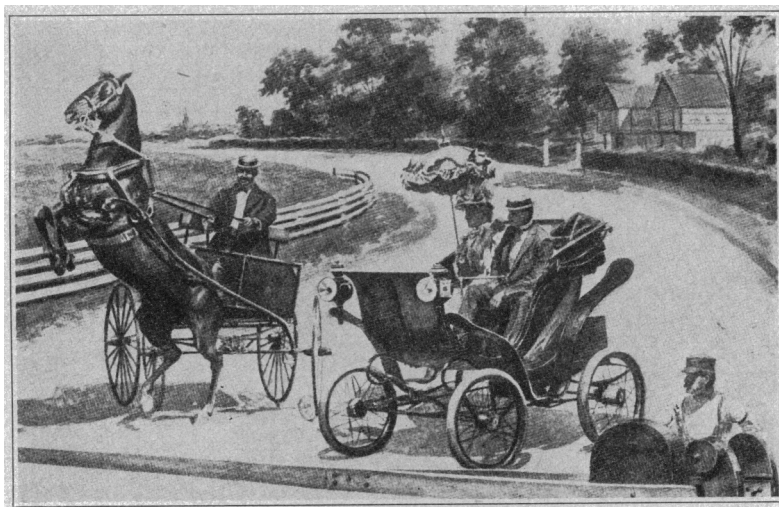


FIG. 10. 1890-1898. The Gay Nineties: The horseless carriage seemed a foolish means of transportation, of little practical use and singularly well fitted to terrorize horses. (Brookline Public Library.)

Thomas Edison devised the electric light, Alexander Bell the telephone, and electrically driven horseless carriages began to appear on the roads. One could write an entertaining essay upon the effect on medicine of these three inventions. To be sure, knowledge regarding electricity had been developing gradually for a long time. But the invention of the telephone with dramatic suddenness shortened distance even more notably than had the railroads. Springfield and Boston were now within easy speaking distance instead of three and a half hours apart.

The electric light, by the interest it at once aroused in scientific minds, opened up a new pathway to increased medical knowledge. New physiological equipment with modern electrical devices soon developed and made possible new researches; and new clinical apparatus like the x-ray, the electrocardiograph and the basal metabolism machine presently came into existence and general use, each dependent upon advancing knowledge of how to use electricity to good advantage.

The horseless carriage, at first regarded as a freakish toy for the rich, of little practical im-

better housing conditions and public parks, a better realization of the essential community health problems.

The Spanish War proved an important event to Massachusetts doctors because it focused public attention on typhoid fever. In 1895, three years previously, when clinical bacteriology came to light, the State entered the practice of therapeutic medicine by manufacturing and giving away diphtheria antitoxin. No one objected to this kind of lifesaving State medicine. A little later, when it became known that nearly one out of every five soldiers who enlisted for the Spanish War developed typhoid, there was no notable objection to the suppression of this disease by the State. People now were being informed that various other infectious diseases might be prevented or cured by modern methods. Hence as the State increased its work no one rebelled. Smallpox vaccine was freely distributed; gonorrhoeal ophthalmia was attacked; a laboratory was established for the early diagnosis of tuberculosis; State-made antitetanic and antimeningococcal sera were soon available. This chapter in the medical history of Massa-

chusetts is extremely interesting to think about, for it seemed to depend so definitely on three factors. A man at the head of the State Board of Health (the title of which was later changed to the State Department of Health) was essential, with vision and courage enough to combat the problems at hand. This man was Henry P. Walcott, a former President of the Massachusetts Medical Society. An event was necessary

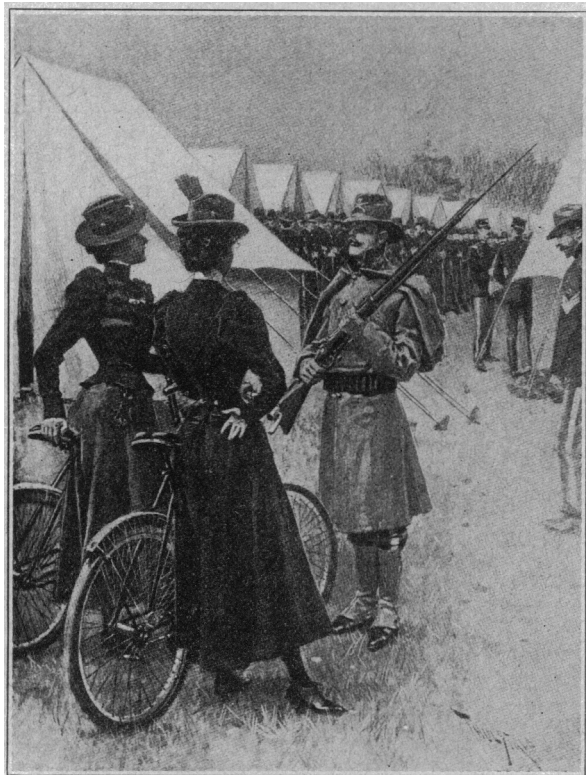


FIG. 11. 1898. The Spanish War: Visitors to Camp. One out of every five men in the Camp developed Typhoid Fever. (Brookline Public Library.)

to excite the people over the unnecessary loss of human life from preventable infection and thus arouse a public opinion favorable to action. This event was the Spanish War. A scientifically trained man with sufficient expert knowledge to develop the State Laboratory Department satisfactorily and critically had to be found. This man was Theobald Smith. The combination of these three factors was largely responsible for the rapid development in State Medicine which has just been mentioned.

The years passed quickly and soon 1917 was reached. A new war was in the offing and was to teach Massachusetts doctors a new lesson. The War of the Revolution had revealed that there were not enough doctors to care for the needs of the rapidly growing population and that hospitals were the proper places for the best conduct of practical clinical teaching. The Great War demonstrated that there were not enough *well-trained* doctors to care for the

needs of the population and that properly organized hospitals afforded excellent opportunities for well-directed postgraduate instruction. Many doctors in practice but a little out of step with what was going on were to enter the Army Medical Corps and receive intensive postgraduate teaching by well-qualified instructors.

Many doctors were to learn in the army good medical organization: the relation of modern laboratory methods to diagnosis and treatment; the value of systematic history taking and physical examination; the difference between haphazard and skilled medical or surgical therapy. A certain number of doctors were to return from the army to civilian life, wondering whether it might not be possible to conduct civilian medicine on a military-like basis, with a properly organized profession under able leadership working as a unit to bring to the sick and wounded of the community all that is best in advancing knowledge.

The last few years, in the light of the trend that has been developed in the past, are especially noteworthy. For the period since 1920, at a time when American life was very complex, has demonstrated the effect on medicine of an era of too great prosperity. We still are so close to these years that it is impossible to evaluate them properly. Certain facts, however, are apparent which afford an interesting field for speculation.

To my mind three of the most striking features of the last few years have been the general realization of how important a profession medicine is, how intimately its development and that of American industrial life appear to be correlated, and how much simpler it is for the State to finance medicine than for charitable members of the community to do so.

The various statistical tables which have been published demonstrate that the wealth of the country increased in notable fashion between 1920 and 1930, and that the high tide of prosperity was immediately followed by an equally impressive ebb. Statistical tables dealing with medical affairs reveal a similar rise and fall. This can easily be demonstrated by comparing, for instance, the income of the country, the income of almost any large Massachusetts hospital, and the income from advertising paid to the *Journal of the American Medical Association* during this period. The resultant curves are strikingly parallel.

It is a reasonable conclusion that from 1920-1930, when the country's income was becoming larger and larger, medicine, like other industries, overexpanded. In those days, evidently, it paid to advertise. New and expensively built hospital plants were established, old hospitals were made over, new laboratories were built, new and expensive hospital equipment was manufactured and sold, new and expensive

drugs became popular, new books were written and found a market, the cost of good medical care was exaggerated. When depression came after the stock market crash in 1929, there was no longer money available to carry on the great

A few pioneer medical economists began to express their ideas and warnings during the era of prosperity: when hospitals and doctors suddenly became poor there was a sharp almost hectic rise of interest in medical economics which

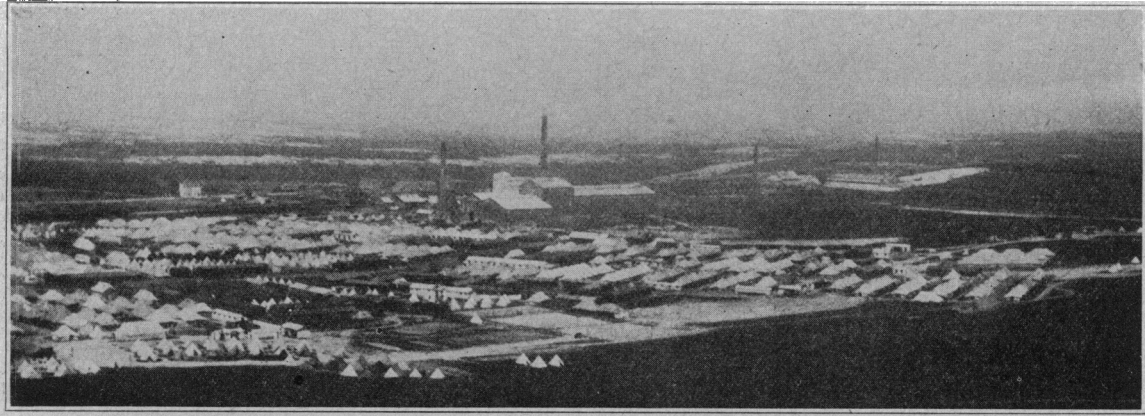


FIG. 12. 1918. The Great War: Base Hospital 5 in France, a typical war Hospital. (Harvard Medical School Library.)

overhead expense that had been set up. The question arose as to what should be done.

The immediate effect of such a situation has been to bring into existence a new field of medical literature. A few years ago the sub-

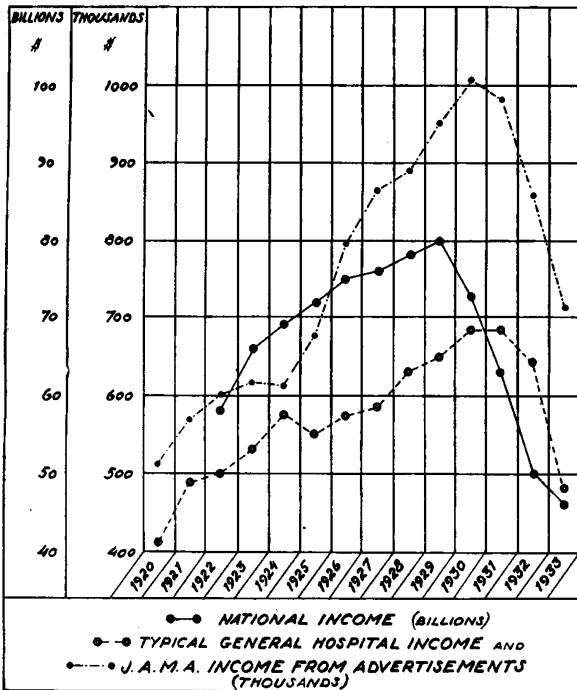


FIG. 13. 1920-1933. The relation between the income of the United States, of a typical Massachusetts Hospital, and of the *Journal of the American Medical Association* from advertising.

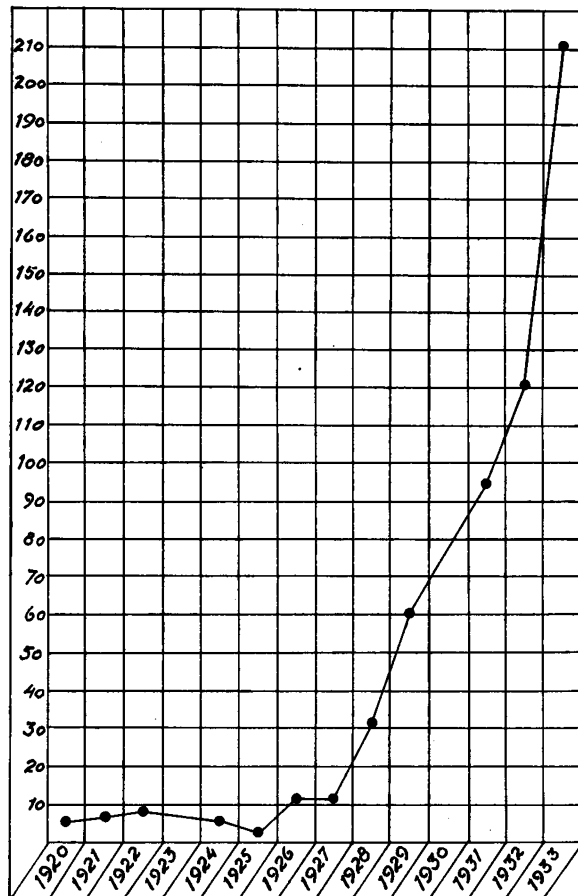


FIG. 14. 1920-1933. Articles on Medical Economics: The development of a new medical literature.

ject of medical economics was rarely discussed; now it is a favorite topic. The growth of this type of reading matter as reported in the Quarterly Cumulative Index presents a curve almost inverse to the curves of hospital income and medical advertising.

persists. It is only comparatively recently that various plans for hospital or health insurance have been widely debated and are receiving seri-

ous consideration and that community chests have become a common method for attempting to keep alive medical interests that otherwise might die.

The State, on the other hand, has continued its medical work untrammled. Regardless of depression or prosperity, money has been forthcoming to make sure that good public health should be maintained in Massachusetts; so far new funds have always been found to carry forward such new projects as our Department of Health has considered advisable.

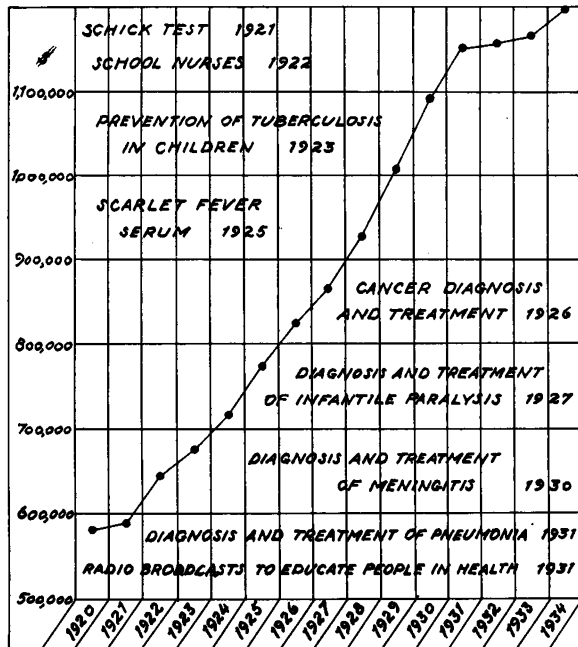


FIG. 15. 1920-1934. The growth in annual appropriation and certain activities of the Massachusetts State Department of Health.

Fortunately no historian is expected to do more than study the past: it is not his function to attempt to forecast the future. As one reviews, even casually, the three hundred years of medicine that have elapsed since Springfield was founded, it is difficult to avoid one definite conclusion. In 1855, the Massachusetts Medical Society met here for the first time. The members from Boston who drove to the meeting rose early for their unhurried journey over the turnpike through Waltham, Sudbury, Marlborough, Worcester, Brookfield and Palmer. Today, I will wager, the members from Boston who drive homeward from Springfield after their third meeting here, will be conscious of one very significant impression which never before has been so inescapable. As they speed past green, red and yellow lights on the new highway, they must realize, perhaps somewhat sadly, that the old independent days of cow-path and turnpike are gone. Now, with the rest of the citizens of Massachusetts, they are traveling, on occasion too fast for safety, along the State Road.

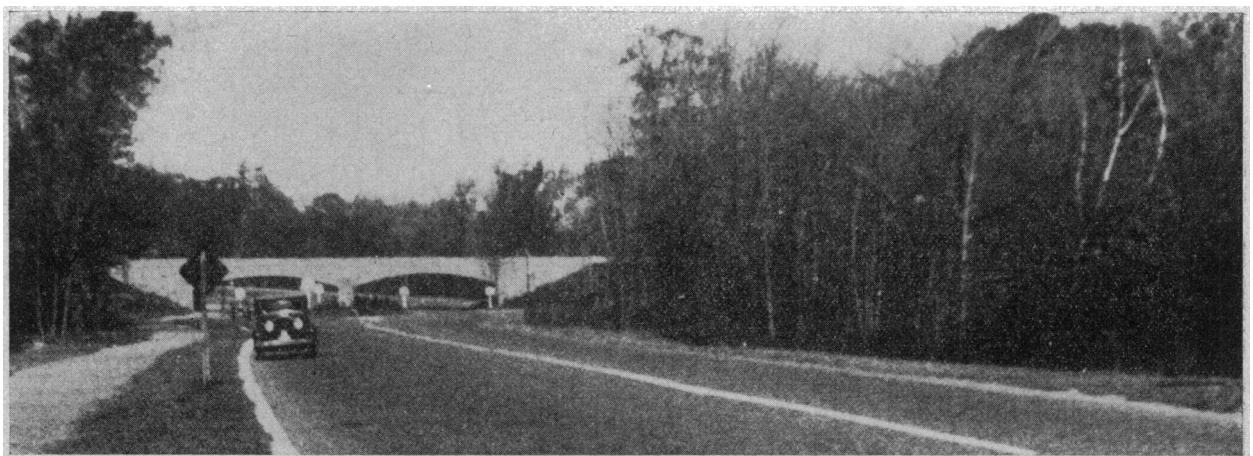


FIG. 16. 1936. The State Road: Boston to Springfield.