XXIII. We recommend that local Boards of Health, and other persons interested, endeavor to ascertain, by exact observation, the effect of mill-ponds, and other collections or streams of water, and of their rise and fall, upon the health of the neighboring inhabitants.

We have seen (pp. 73-76) that the question involved in this recommendation has had an historical interest; though it seems of late to be almost entirely forgotten. The streams at the waterfalls, in all parts of the Commonwealth, are obstructed in their courses for manufacturing purposes; and if cases of fever or other disease occur in the neighborhood, the people have generally attributed them to some uncontrollable agency; while possibly, perhaps, they may arise from causes which their own hands have created, and which are capable of removal. It is then a question of permanent interest and importance. If mill-ponds, or stagnant waters of any kind, or places where they have existed, produce disease under certain conditions, it should be known, and certain other conditions should be provided, under which they may be permitted without injury, and without which they should not be permitted at all. Theory, vague suggestion, presumptive assertion, cannot decide the question. It can be fully done only by an extensive series of exact observations, through several years, concerning the nature of the diseases, the external circumstances under which they occur, and the condition of the water, and of the places where water has been, in the neighborhood, truthfully made, uninfluenced by party or pecuniary interests, for no other purpose than to obtain the truth. The plan of observation stated in our XVIth recommendation might be adopted. And are not some hundreds of lives, supposed to be annually lost in this State for want of this information, worth our while to obtain it?

XXIV. We recommend that the local Boards of Health provide for periodical house-to-house visitation, for the prevention of epidemic diseases, and for other sanitary purposes.

The approach of many epidemic diseases is often foreshadowed by some derangement in the general health; and, if properly attended to at that time, the fatal effects may be prevented. This is especially proper in regard to cholera and dysentery. The premonitory symptoms of these diseases, when curative measures have greater power to control the fatal effects, are most often observed during the latter stages of the disease. This measure was attended with the greatest success, and was found to be one of the greatest improvements in the practical system of these boards. We select the following statement as an illustration of what occurred:

"1. The discovery and immediate treatment of diarrhoea, in localities where the patients had not applied at the dispensaries, or medical officers, and if these are treated, the disease is controlled. "

"2. To prevent persons who have had disease, from dying and spreading the disease, even in cholera, from dying and spreading the disease. "

"3. To bring cases of cholera to the attention of the local Boards of Health, and to be visited by them daily, and to be treated according to the practice of the disease. "

"4. To bring cases of cholera to the attention of the local Boards of Health, and to be visited by them daily, and to be treated according to the practice of the disease. "

"5. To exercise a moral and practical method, in giving such instructions in relation to habits and personal habits, as might be found to be of the greatest importance in the preservation of health. "

"In Sheffield, an effective body of house-to-house visitors, appointed for the discovery of the premonitory symptoms of cholera, were under immediate medical treatment, and under the direction of house-to-house visitors, not
that local Boards of Health, and endeavor to ascertain, by exact observations, and other collections or streams to and fall, upon the health of the

3) that the question involved in this a historical interest; though it seems by forgotten. The streams at the Commonwealth, are obstructed in spring purposes; and if cases of fever the neighborhood, the people have to some uncontrollable agency; they may arise from causes which stated, and which are capable of reason of permanent interest and important waters of any kind, or places produce disease under certain conditions and certain other conditions should they may be permitted without in they should not be permitted at all. presumptive assertion, cannot decide fully done only by an extensive series rough several years, concerning the external circumstances under which tion of the water, and of the places in the neighborhood, truthfully made, pecuniary interests, for no other pur- truth. The plan of observation stated might be adopted. And are not supposed to be annually lost in this formation, worth our while to obtain it:

so that the local Boards of Health in-to-house visitation, for the prevention for other sanitary purposes.

epidemic diseases is often foreshad- ment in the general health; and, if that time, the fatal effects may be socially proper in regard to cholera and
dysentery. The premonitory symptoms of cholera are seldom absent; and if these are seasonably observed and properly treated, the disease is controllable. There are few diseases over which curative measures have less, and few over which preventive measures have greater power. This well-known characteristic of the disease led persons in many places in England, during last year, to organize a system of house-to-house visitation, by which every family, sick or well, in a given district, was visited daily by some authorized person, whether invited or not; and every inmate who had the least symptom of the disease received advice and treatment. The objects aimed at were—

1. The discovery and immediate treatment of every case of diarrhoea, in localities where cholera prevailed, and where the patients had not applied at the dispensaries, in order to prevent, as far as possible, the development of the disease.

2. To prevent persons who might not apply for medical aid, even in cholera, from dying without such aid.

3. To bring cases of cholera under treatment, at the earliest possible period of the disease.

4. To keep a constant medical inspection over affected districts and houses, so as to insure their being kept in a proper sanitary condition.

5. To exercise a moral agency over the population, by giving such instructions in regard to cleanliness, ventilation, and personal habits, as might appear needful, and by explaining and enforcing the necessity for immediate application to the dispensaries, or medical officers, by all parties who might be taken ill during the intervals between the daily visits.

This measure was attended with eminent success, and was found to be one of the greatest economy as well as humanity. We select the following statement of its effects in one district, as an illustration of what occurred in many others:—

In Sheffield, an effective body of medical officers have been appointed for the discovery of persons laboring under the premonitory symptoms of cholera, and for bringing such persons under immediate medical treatment. Besides an adequate staff of house-to-house visitors, numerous dispensaries have been
SANITARY REPORT.

opened in convenient parts of the town, for supplying all such persons gratuitously with proper medicine. Handbills have been extensively distributed, particularly among the most susceptible part of the population, giving them the necessary information respecting these dispensaries, and warning them of the danger of neglecting any degree of bowel complaint. Every person, on making application to a dispensary for a dose of medicine, is required to give his name and address; this is forwarded at once to a medical officer, who visits the patient without delay. So thoroughly have the people in Sheffield had their attention directed to the symptoms which precede cholera, and so well do they understand and appreciate the information which has been given them, that it is stated that the house-to-house visitors scarcely ever meet with a case of diarrhoea which has not been attended by a medical man in consequence of their having previously applied at one of the dispensaries for a gratuitous dose of medicine. During the first week that this system of visitation has been in practice, the visitors discovered 1882 cases of premonitory diarrhoea, and on the second week, 1387; in all, in one fortnight, 2969. Out of this great number, only four deaths have occurred; but in parts of the town not under visitation, among the wealthier classes, attended by their own private medical friends, there have occurred seven deaths. In a rural district connected with Sheffield,—namely, Alvercliffe,—not during this period under visitation, with 279 cases of diarrhoea, there were 23 cases of cholera, and 11 deaths. No stronger evidence can well be conceived of the efficiency of that preventive measure which is founded on the fact, which experience has too fully proved, that persons in general laboring under premonitory symptoms are not aware of their danger, and that, if those persons are to be saved, they must be sought out in their dwellings, and placed at once under proper treatment."

The success which attended the measure in particular localities, led the Board of Health to issue, on the 1st of September, 1849, a general order for its introduction into London, and the result for the first 52 days, up to October 22, was as follows:—

**DUTIES OF HOUSEHOLD VISITORS.**

<table>
<thead>
<tr>
<th>Diarrhoea cases discovered,</th>
<th>Rice water purging discovered,</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cholera discovered,</td>
<td>Passed into cholera after treatment</td>
</tr>
</tbody>
</table>

Had it not been for these cases, the amount of sickness suffered among persons of different classes would have been far greater. Every person is liable to the disease, but liability, however, varies in different individuals and in the same place and at different seasons. It has some, though it is uncertain how many, deaths. In every household, there is a probability that one or more persons will have, at some period of their lives, some degree of bowel complaint, which may appear as epidemics. The execution would be far less onerous if the disease, when suffered to pass unnoticed, was easily exterminated from any household, a fact which is well established. Dr. Simon, the able Officer of Health for London, in his excellent report, 1849, on the necessity of the careful supervision, as to the manner in which they should be dealt with, has shown the propriety of the system. The visitor shall be provided with medicine and rice water to be given in cases of diarrhoea.

"It will be his duty to visit every house in his district, once a day, and report the doings of every family. If he finds, at any time, that a case of diarrhoea is going to pass into cholera, he shall report it to the ordinary medical officer, and to take care that the disease is treated properly."

The visitor shall take notes of the particulars observed in each house, and at the close of each day, report the facts to the ordinary medical officer with whom he is to work. He shall be furnished with medicine and rice water, and at the close of each day, report the facts to the ordinary medical officer with whom he is to work.

"The visitor shall report to the medical officer of the district, the subject of a special report."

"He should likewise explain to them the necessity of neglecting diarrhoea, and the necessity of prompt treatment, and should see that they know the facts more forcibly illustrate the danger of neglecting diarrhoea, and the necessity of prompt treatment, and should see that they know the
of the town, for supplying all such proper medicine. Handbills have been particularly among the most sus-
tion, giving them the necessary in-
dispensaries, and warning them of the
degree of bowel complaint. Ev-
ication to a dispensary for a dose of a
medicine, is required to give his
forwarded at once to a medical offi-
without delay. So thoroughly have
their attention directed to the symp-
t and so well do they understand the
ion which has been given them, that
house visitors scarcely ever meet
which has not been attended by a
of their having previously applied
 during this
279 cases of diarrhoea, there were
1 deaths. No stronger evidence can
eficiency of that preventive measure a fact, which experience has to fully
ge laboring under premonitory
their danger, and that, if those
, they must be sought out in their
s under proper treatment.”
ended the measure in particular locali-
th issue, on the 1st of September, its introduction into London, and the
, up to October 22, was as follows:—

<table>
<thead>
<tr>
<th>Disease</th>
<th>Cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diarrhea cases discovered</td>
<td>43,127</td>
</tr>
<tr>
<td>Rice water purging discovered</td>
<td>976</td>
</tr>
<tr>
<td>Cholera discovered</td>
<td>779</td>
</tr>
<tr>
<td>Passed into cholera after treatment</td>
<td>52</td>
</tr>
</tbody>
</table>

Had it not been for these visitations, very many more of these cases would have terminated in cholera and death. What facts can more forcibly illustrate the utility of preventive mea-
sures? We earnestly commend the plan to every city and vil-
lage in which cholera, dysentery, and other similar diseases,
may appear as epidemics. The expenses which would attend its execution would be far less than result from the effects of the disease, when suffered to take its ordinary course under
ordinary treatment. Small-pox, too, might in this manner be easily exterminated from any city.

XXV. WE RECOMMEND that measures be taken to ascertain the amount of sickness suffered in different localities; and among persons of different classes, professions, and occupations.

Every person is liable to sickness. The extent of that liability, however, varies in different places and circumstances, and in the same place and circumstances in different ages and seasons. It has some, though not an exact, relation to mortal-

1 Dr. Simon, the able Officer of Health for the city of London, issued, on the 21st of Sep-
tember, 1849, the following excellent instructions to the house-to-house visitors under his
supervision, as to the manner in which they should perform their duties:

- It will be his duty to visit every house in the district assigned to him by the ordinary
medical officer of the locality, once each day, at the least; and, wherever several families
inhabit one and the same house, it will be his duty at each visit to see one adult member at
least, of every such family.

- These visits should be made as early as possible in the day, and the severer cases of in-
disposition should he revisited in the afternoon, (or as early and as often as may be neces-
sary,) in order to ascertain the result of the treatment adopted.

- The medical duties of the visitor are restricted to the treatment of diarrhoea and other
premonitory symptoms; so soon as any case shall have passed or shall appear to be on the
point of passing into cholera, it shall be the visitor’s duty immediately to transfer the case to
the ordinary medical officer, and to take care that the latter officer be apprised thereof with-
out delay.

- The visitor shall be provided with medicines suitable to any emergency likely to fall within
his observation; but in cases of no urgency he shall prescribe, and shall refer the patient to
the depot of his district, where medicine may be procured.

- The visitor shall take notes of the particulars specified in the tabular form with which he
will be furnished, and at the close of each day’s visitation he shall communicate this return
to the ordinary medical officer with whom he acts, and shall receive that officer’s directions
for the next day’s visitation.

- The visitor shall insert in his return a notice of every locality where cleansing (either ex-
ternal or internal) shall appear requisite; and wherever he shall find the condition of a house
immediately bad, or the inhabitants so densely crowded as to endanger life, he shall make
this the subject of a special report.

- Especially he should impress on the persons with whom he communicates, the extreme
danger of neglecting diarrhoea, and the necessity of obtaining medical advice as speedily as
possible.

- He should likewise explain to them the arrangements for medical relief which prevail in
the district, and should see that they know the residence of the ordinary medical officer; so
ity. Some diseases under some circumstances produce more sickness in proportion to the mortality than others. It has been supposed by Mr. Edmonds, an author entitled to credit, (Lancet, Vol. II, for 1839, p. 185,) that the average relation existing between the rate of sickness and the rate of mortality is two years of sickness to each death. “If ailments of a lighter kind are included, the proportion of sickness rises to 2½ years to each death. Assuming two years to be the proportion of sickness to each death at every age, it will follow that the proportion of the living constantly sick at any age will always be double the proportion of the population of the same age dying in one year. If the deaths at any age are at the rate of 2 per cent., or 1 in 50 per annum, the proportion of the living constantly sick will be 4 per cent., or 1 in 25.”

There are several reasons why this subject should be fully and carefully investigated, and that exact facts in relation to different populations, existing under different circumstances, that, in case of any sudden seizure in the intervals of his own visitation, there may be no ignorance of the best course for procuring medical assistance.

“All persons suffering with bowel complaint, however slight, or with sickness or other unusual ailment, are earnestly requested to procure immediate assistance, either from their ordinary medical advisers, or from the medical officer of the district, whose surgery will be open day and night, for dispensing all necessary medicines.”

The tabular forms alluded to are to contain the following particulars:—

<table>
<thead>
<tr>
<th>Particulars of Household Visitation in the parish of ——. Medical Officer, Mr. ——; Visitor, Mr. ——.</th>
</tr>
</thead>
<tbody>
<tr>
<td>-------</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

Summary of Household Visitation in the City.

<table>
<thead>
<tr>
<th>District</th>
<th>Ordinary Medical</th>
<th>Visited</th>
<th>Total families visited</th>
<th>New cases of pernicious and epidemic diseases</th>
<th>Total cases of syphilis &amp; venereal diseases</th>
<th>Cause of death</th>
<th>Amount of sickness</th>
<th>Amount of mortality</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

should be known. We shall only:—

1. It would subserve a public good to prevent the greatest vital force of a country from being wasted in the dark in regard to the subject are already known. The various branches of industry, from which the figures are obtained, are silk mills, 7.08 days; in the we
some circumstances produce more 
the mortality than others. It has 
monds, an author entitled to credit, 
p. 185,) that the average relation 
of sickness and the rate of mortality 
and each death. "If ailments of a 
the proportion of sickness rises to 
suming two years to be the propor-
ath at every age, it will follow that 
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portion of the population of the same 
the deaths at any age are at the 
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the intervals of his own visitation, there may be no ig-
ning medical assistance. 
complaint, however slight, or with sickness or other un-
ed to procure immediate assistance, either from their 
medical officer of the district, whose surgery will be 
ecessary medicines."

in the parish of ———. Medical Officer, Mr. ———; 
Visitor, Mr. ———.

<table>
<thead>
<tr>
<th>Age</th>
<th>Complaints received.</th>
<th>First seen to-day.</th>
<th>Remarks on locality.</th>
<th>Deaths.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Household Visitations in the City.

| Year | Total families de-
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total cases sent</td>
</tr>
<tr>
<td></td>
<td>treated.</td>
</tr>
</tbody>
</table>

should be known. We shall allude to two principal ones only:—

1. It would subserve a pecuniary purpose. The wealth of a 
country consists in its capacity for labor. That people who 
joy the greatest vital force,—the highest degree of health,— 
and apply it most skilfully to the production of wealth, are the 
most wealthy. It is their capital, their means of subsistence. 
Persons who sustain a low vitality only, generally have little 
skill to apply what they possess, contribute little or nothing to 
the general welfare, and may, and often actually do, become a 
public burden. This is one view. Another presents itself in 
the vast number of associations existing, under the names of 
Friendly Societies, Health Insurance Companies, Odd Fellows, 
and other titles, the object of which is, directly or indirectly, 
by the payment of a certain sum, to secure support to the mem-
dring during the contingency of sickness. For the stability of 
these societies, and the security of the members themselves, it 
is necessary that the rate of sickness under different circum-
stances should be definitely ascertained. So long as it is not 
known, no just rates of payment can be established. Some of 
the Health Insurance Companies in this State have closed their 
business, because they have had to pay out more than they 
received. Some lodges of Odd Fellows have also been obliged 
to curtail their payments. All these institutions are now grop-
ing in the dark in regard to these matters, and many of them, it 
is believed, cannot exist under the rates of payment proposed 
to be made. A misapprehension of the principles on which 
they should have been founded and managed, is a principal 
cause of their failure. Health insurance might be so man-
aged as to be a legitimate business, of a useful character.

2. It would subserve a sanitary purpose, and show the ex-
act condition of the people. Some interesting facts on this 
subject are already known. The Manchester Statistical Soci-
ety have given the average number of days of sickness an-
nually suffered by each of the operatives engaged in various 
branches of industry, from which it appears that, in the Staff-
fordshire potteries, under the age of 60, it is 9.03 days; in the 
silk mills, 7.08 days; in the woolen mills, 7.08 days; in the
SANITARY REPORT.

flax mills, 5.09 days; in the cotton mills at Glasgow, 5.06 days; among the East India Company servants, 5.04 days; among laborers in the dock-yards, 5.38 days; in the Lancashire cotton mills, 5.35 days; and for those under 16, 3.14 days.

From McCulloch's Statistics we compile the following table, to show the average number of days of sickness per annum, at different ages, suffered by each operative employed in the factories in Lancashire and Glasgow:—

<table>
<thead>
<tr>
<th>Ages</th>
<th>Days of sickness per annum to every person employed.</th>
<th>Days of sickness per annum to every person sick.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under 9</td>
<td>- 2.46</td>
<td>6.03</td>
</tr>
<tr>
<td>15 to 20</td>
<td>- 4.42</td>
<td>5.56</td>
</tr>
<tr>
<td>25 to 30</td>
<td>- 5.68</td>
<td>8.62</td>
</tr>
<tr>
<td>30 to 35</td>
<td>- 3.55</td>
<td>9.29</td>
</tr>
<tr>
<td>35 to 40</td>
<td>- 4.13</td>
<td>6.16</td>
</tr>
<tr>
<td>40 to 45</td>
<td>- 5.09</td>
<td>14.67</td>
</tr>
<tr>
<td>45 to 50</td>
<td>- 7.18</td>
<td>20.34</td>
</tr>
<tr>
<td>50 to 55</td>
<td>- 3.47</td>
<td>15.73</td>
</tr>
<tr>
<td>55 to 60</td>
<td>- 12.68</td>
<td>15.75</td>
</tr>
</tbody>
</table>

From this table it appears that, at the ages 15 to 20, every male operative in Lancashire sustains, on the average, 4.42 days of sickness annually, and every female, 5.56; in Glasgow, the males 5.52 days, and females, 6.38 days; and that the average length of sick time that every male who is sick will be, in Lancashire, 16.43 days, and every female, 12.63 days; and in Glasgow, the males, 17.14 days, and the females, 15.54 days. An inspection of the table will show a difference in the amount of sickness in the two places, in other ages.

The most reliable works which exhibit the probable annual sickness which a laboring man will sustain through life, are,—1. A Report of the Highland Society, by Charles Oliphant, Esq. This able work was published in 1824, and was the first publication of the kind. It was prepared from returns of 79 Friendly Societies, in 16 counties of Scotland, made from records kept between 1750 and 1823 inclusive.—2. A Treatise on Ansell, Esq., Actuary to the Diffusion of Useful Knowledge, published in 1835, under the supervision of Mr. Ansell, published in 1835, under the supervision of Mr. Ansell, and related to the years 1823 to 1827 inclusive.—And, by F. G. P. Neison, Esq., and General Life Office, prepared from the returns of the Friendly Societies of England, and related to 24 years.

From these works we have show the number of days of sickness per annum, which each age.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>21</td>
<td>4.025</td>
<td>5.490</td>
<td>5.917</td>
</tr>
<tr>
<td>22</td>
<td>4.032</td>
<td>5.495</td>
<td>5.900</td>
</tr>
<tr>
<td>23</td>
<td>4.040</td>
<td>5.537</td>
<td>6.009</td>
</tr>
<tr>
<td>24</td>
<td>4.067</td>
<td>5.586</td>
<td>6.062</td>
</tr>
<tr>
<td>25</td>
<td>4.095</td>
<td>5.642</td>
<td>6.120</td>
</tr>
<tr>
<td>26</td>
<td>4.130</td>
<td>5.705</td>
<td>6.183</td>
</tr>
<tr>
<td>27</td>
<td>4.172</td>
<td>5.775</td>
<td>6.240</td>
</tr>
<tr>
<td>28</td>
<td>4.221</td>
<td>5.832</td>
<td>6.291</td>
</tr>
<tr>
<td>29</td>
<td>4.272</td>
<td>5.936</td>
<td>6.355</td>
</tr>
<tr>
<td>30</td>
<td>4.347</td>
<td>6.057</td>
<td>6.574</td>
</tr>
<tr>
<td>31</td>
<td>4.417</td>
<td>6.332</td>
<td>6.407</td>
</tr>
<tr>
<td>32</td>
<td>4.487</td>
<td>6.251</td>
<td>6.475</td>
</tr>
<tr>
<td>33</td>
<td>4.564</td>
<td>6.384</td>
<td>6.577</td>
</tr>
<tr>
<td>34</td>
<td>4.641</td>
<td>6.531</td>
<td>6.713</td>
</tr>
<tr>
<td>35</td>
<td>4.725</td>
<td>6.692</td>
<td>6.885</td>
</tr>
<tr>
<td>36</td>
<td>4.816</td>
<td>6.867</td>
<td>7.061</td>
</tr>
<tr>
<td>37</td>
<td>4.914</td>
<td>7.033</td>
<td>7.381</td>
</tr>
<tr>
<td>38</td>
<td>5.026</td>
<td>7.280</td>
<td>7.608</td>
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<tr>
<td>39</td>
<td>5.159</td>
<td>7.515</td>
<td>7.910</td>
</tr>
<tr>
<td>40</td>
<td>5.306</td>
<td>7.777</td>
<td>8.265</td>
</tr>
<tr>
<td>41</td>
<td>5.488</td>
<td>8.057</td>
<td>8.647</td>
</tr>
<tr>
<td>42</td>
<td>5.698</td>
<td>8.365</td>
<td>9.057</td>
</tr>
<tr>
<td>43</td>
<td>5.924</td>
<td>8.701</td>
<td>9.495</td>
</tr>
<tr>
<td>44</td>
<td>6.314</td>
<td>9.065</td>
<td>9.982</td>
</tr>
<tr>
<td>45</td>
<td>6.734</td>
<td>9.457</td>
<td>10.457</td>
</tr>
</tbody>
</table>

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We compile the following table,
or days of sickness per annum, at
ach operative employed, in the fac-

<table>
<thead>
<tr>
<th>Glasgow</th>
<th>Lancashire</th>
<th>Glasgow</th>
</tr>
</thead>
<tbody>
<tr>
<td>Males</td>
<td>Females</td>
<td>Males</td>
</tr>
<tr>
<td>1.01</td>
<td>2.63</td>
<td>12.04</td>
</tr>
<tr>
<td>4.80</td>
<td>6.18</td>
<td>14.58</td>
</tr>
<tr>
<td>5.52</td>
<td>6.38</td>
<td>16.43</td>
</tr>
<tr>
<td>9.11</td>
<td>8.16</td>
<td>18.27</td>
</tr>
<tr>
<td>7.65</td>
<td>7.38</td>
<td>21.14</td>
</tr>
<tr>
<td>7.65</td>
<td>6.05</td>
<td>12.19</td>
</tr>
<tr>
<td>8.50</td>
<td>4.16</td>
<td>13.75</td>
</tr>
<tr>
<td>5.12</td>
<td>11.94</td>
<td>14.15</td>
</tr>
<tr>
<td>4.84</td>
<td>11.72</td>
<td>30.31</td>
</tr>
<tr>
<td>4.90</td>
<td>16.50</td>
<td>13.10</td>
</tr>
<tr>
<td>3.27</td>
<td>15.00</td>
<td>11.30</td>
</tr>
</tbody>
</table>

It appears from this table that the average number of days' sickness per annum, which each person in these societies suf-
ferred at the age of 21, was, according to Oliphant, 4.025 days; according to Ansell, 5.460 days; and according to Neison, 5.917 days. At the age of 60 it is, respectively, 16.422, 22.044, and 29.159. There is considerable discrepancy in these results, probably arising from the different methods of observation, or the different circumstances of the persons observed, or from an increase of sickness in the latter over the former periods, as we have before intimated, (pp. 103-106.)

We also compile from the deductions in Mr. Neison's work, (p. 105,) the following table, to present other views of the relations of sickness:

<table>
<thead>
<tr>
<th>Ages</th>
<th>The number of attacks of sickness which each member who is annually in each sick will suffer</th>
<th>Days of sickness which each member who is annually in each sick will suffer</th>
<th>To each 100 members who are sick, the proportion of deaths per annum will be</th>
<th>To each annual death the proportion of annual sick time, among the living, will be</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 to 15</td>
<td>21,565</td>
<td>28.8617</td>
<td>.9001</td>
<td>416.4290 wks. or 8 yrs. 3 dys.</td>
</tr>
<tr>
<td>15 to 20</td>
<td>22,0743</td>
<td>25.1209</td>
<td>2.8571</td>
<td>125.0032 &quot; = 2 &quot; 151 &quot;</td>
</tr>
<tr>
<td>20 to 25</td>
<td>21,6860</td>
<td>26.9626</td>
<td>3.0539</td>
<td>126.1271 &quot; = 2 &quot; 154 &quot;</td>
</tr>
<tr>
<td>25 to 30</td>
<td>21,6997</td>
<td>29.3447</td>
<td>3.3271</td>
<td>135.3577 &quot; = 2 &quot; 157 &quot;</td>
</tr>
<tr>
<td>30 to 35</td>
<td>21,0147</td>
<td>30.9505</td>
<td>3.6752</td>
<td>115.5411 &quot; = 2 &quot; 183 &quot;</td>
</tr>
<tr>
<td>35 to 40</td>
<td>21,5541</td>
<td>34.0241</td>
<td>4.0866</td>
<td>121.5732 &quot; = 2 &quot; 199 &quot;</td>
</tr>
<tr>
<td>40 to 45</td>
<td>22,0858</td>
<td>41.5269</td>
<td>4.5056</td>
<td>131.1468 &quot; = 2 &quot; 206 &quot;</td>
</tr>
<tr>
<td>45 to 50</td>
<td>24,6064</td>
<td>47.9892</td>
<td>5.1057</td>
<td>132.7123 &quot; = 2 &quot; 200 &quot;</td>
</tr>
<tr>
<td>50 to 55</td>
<td>27,6422</td>
<td>59.5728</td>
<td>6.2401</td>
<td>136.3839 &quot; = 2 &quot; 226 &quot;</td>
</tr>
<tr>
<td>55 to 60</td>
<td>30,2491</td>
<td>76.4877</td>
<td>7.3752</td>
<td>150.2335 &quot; = 2 &quot; 234 &quot;</td>
</tr>
<tr>
<td>60 to 65</td>
<td>35,5676</td>
<td>106.6835</td>
<td>8.6103</td>
<td>176.5360 &quot; = 3 &quot; 143 &quot;</td>
</tr>
<tr>
<td>65 to 70</td>
<td>46.8493</td>
<td>159.5519</td>
<td>9.6004</td>
<td>252.9508 &quot; = 4 &quot; 310 &quot;</td>
</tr>
<tr>
<td>70 to 75</td>
<td>58.3750</td>
<td>252.9508</td>
<td>12.1386</td>
<td>298.5670 &quot; = 5 &quot; 62 &quot;</td>
</tr>
<tr>
<td>75 to 80</td>
<td>73.3926</td>
<td>253.6579</td>
<td>11.3686</td>
<td>318.8787 &quot; = 6 &quot; 68 &quot;</td>
</tr>
<tr>
<td>80 to 85</td>
<td>74.4564</td>
<td>264.2341</td>
<td>18.4116</td>
<td>295.1004 &quot; = 3 &quot; 343 &quot;</td>
</tr>
<tr>
<td>85 to 90</td>
<td>79.4772</td>
<td>257.5803</td>
<td>17.2843</td>
<td>258.7216 &quot; = 4 &quot; 215 &quot;</td>
</tr>
</tbody>
</table>

By this table it appears that, on the average, at the age of 45 to 50, in each 100 members, 24.6 (omitting other fractions) attacks of sickness will take place, or that number of members will be sick every year; that the length of the sickness of each one who is sick will be 47.9 days; that in every 100 who are sick, 5.1 will die; and that the length of sick time which will be suffered by all will be 132.7 weeks, or 2 years, 200 days. It also appears, from the age of 15 upwards, the amount of sickness will be found to increase in regular and uninterrupted series. While 26.96 days of sickness are suffered in a year by each person sick, at the period 16 to 30, attacks of sickness at the period 65 to 70 are in the ratio of 22 to 46; at the period of 30 to 35, for every there is one death; at 10 to 15, 2.8671 times as many as at 65 to 70, 4 years and 310 days amount of sickness in proportion to youth and old age, or at those vital force exists, than in the degree of vitality is enjoyed. These are some of the interests made in England and Scotland they are applicable to this country knowing accurately. Some have sickness to health is greater in England, and others are of a different kind. The rights already made are too limited a basis for any correct opinion. If the right to be 1.

1 For some estimates on this subject, see S173-176. Dr. Jarvis (Communications, Alas 11.

There are no data to determine the amount of sickness here made up the English Benefit Societies, but these have been made up in a more sickness here than in England, and so there is 'benefits' more than they received in percentages, Gilman, says—Yesterday the last of the Massachusetts Health Insurance Companies for the years 1841, 42, 43, and 44, which, course about a year ago. During the last six years, and pay from 30 cents on a dollar, the Siloam Lodge of Odd Fellows, in Board was voted not to pay for the first week of any the same premiums as before. The average benefit money was 5.50. Dr. Lyman has furnished us with the statements made by the Siloam Lodge of Odd Fellows, in Board of Health Insurance Companies here, for the years 1841, 42, 43, and 44, which, course about a year ago. During the last six years, and pay from 30 cents on a dollar. For some estimates on this subject, see S173-176.
SICKNESS IN MASSACHUSETTS.

each person sick, at the period from 20 to 25, 169.55 days are suffered at the period 65 to 70. The relative chances, also, of being sick at the two periods of life, 20 to 25, and 65 to 70, are in the ratio of 22 to 46; while the mortality at the same period is in the ratio of 3 to 9 among those actually sick. At the period of 30 to 35, for every 2 years and 83 days' sickness there is one death; at 10 to 15, 8 years and 3 days; and at 65 to 70, 4 years and 310 days: or, in other words, a greater amount of sickness in proportion to the deaths is suffered in youth and old age, or at those periods of life in which the least vital force exists, than in the middle ages, when a greater degree of vitality is enjoyed.

These are some of the interesting results of the investigations made in England and Scotland, relating to sickness. How far they are applicable to this country we have not the means of knowing accurately. Some have supposed that the proportion of sickness to health is greater in Massachusetts than in England, but others are of a different opinion. The observations already made are too limited and imperfect to found thereon any correct opinion. If the rule of doubling the annual mor-

---

To each annual death the proportion of annual sick time, among the living, will be, 

<table>
<thead>
<tr>
<th>Age</th>
<th>Insured</th>
<th>Birk.</th>
<th>Average</th>
<th>Weeks Birk.</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>16 to 30</td>
<td>533</td>
<td>122</td>
<td>4.36</td>
<td>559</td>
<td>4.4</td>
</tr>
<tr>
<td>30 to 35</td>
<td>130</td>
<td>39</td>
<td>3.3</td>
<td>161</td>
<td>4.12</td>
</tr>
<tr>
<td>35 to 40</td>
<td>89</td>
<td>19</td>
<td>3.1</td>
<td>108</td>
<td>5.66</td>
</tr>
<tr>
<td>40 to 45</td>
<td>25</td>
<td>3</td>
<td>8.66</td>
<td>25</td>
<td>8.33</td>
</tr>
<tr>
<td>45 to 50</td>
<td>13</td>
<td>5</td>
<td>2.6</td>
<td>17</td>
<td>3.04</td>
</tr>
<tr>
<td>50 to 60</td>
<td>761</td>
<td>188</td>
<td>4.04</td>
<td>850</td>
<td>4.05</td>
</tr>
</tbody>
</table>

According to this statement, 188 of 761, or 24.70 per cent. of the members insured were sick; and the length of sick time was 31.7 days to each.
tality per cent. be applied to obtain the rate of sickness, it will appear that 5.06 per cent. of the population, or 5,787 persons of both sexes, have on the average been constantly sick, in Boston, for the last nine years. By the same rule, in a country town of an average healthy standard, containing 2,000 inhabitants, 60 will constantly be sick. This seems a large proportion or amount of sickness, but it may nevertheless be true, where those in infancy and old age are included.

This subject is of vast consequence. It would be extremely interesting and useful to know the amount of sickness in the families, and among persons of the various professions and occupations,—the farmers, the mechanics, the manufacturers, and others,—and how far it differs in different places and under different circumstances. All the facts and arguments generally used in favor of a sanitary survey, may be applied to show the utility and importance of this branch of the subject. To obtain the facts, some simple plan is needed, which may easily and without much labor be carried into operation; and such a plan we have given in the appendix.

XXVI. WE RECOMMEND that measures be taken to ascertain the amount of sickness suffered, among the scholars who attend the public schools and other seminaries of learning in the Commonwealth.

It has recently been recommended that the science of physiology be taught in the public schools; and the recommendation should be universally approved and carried into effect as soon as persons can be found capable of teaching it.\(^1\) Sanitary science is intimately connected with physiology, and deserves equal and even greater commendation as a branch of education. Every child should be taught, early in life, that, to preserve his own life and his own health and the lives and health of others, is one of his most important and constantly abiding duties. By obeying certain laws, or performing certain

\(^1\) The following are the provisions of an act relating to public hygiene, passed April 24, 1850:

**Sect. 1.** Physiology and hygiene shall hereafter be taught in all the public schools of this Commonwealth, in all cases in which the school committee shall deem it expedient.

**Sect. 2.** All school teachers shall hereafter be examined in their knowledge of the elementary principles of physiology and hygiene, and their ability to give instructions in the same.

**Sect. 3.** This act shall take effect on and after the first day of October, one thousand eight hundred fifty-one.

SICKNESS

acts, his life and health may or performing certain other acts. By knowing and avoiding these acts, his life and health may be prolonged. Wealth, happiness and long life are the great duties of morals and acceptably in a healthy than in a sickly state.

This matter has been too often neglected. Intellectual and physical training too little needed which shall impel chil- dren to think and act for themselves and the every-day duties of life. This consideration is designed to further be carried into operation in the use of the following plan to appoint a sanitary committee at the commencement of the school, and, at the beginning of every term, to fill it out, under his super- vision and with the accompanying directions. Such a plan can be carried out by the teacher. Intellectual and physical training too little needed which shall impel children to think and act for themselves and the every-day duties of life. Every young child should be taught, early in life, that, to preserve his own life and his own health and the lives and health of others, is one of his most important and constantly abiding duties. By obeying certain laws, or performing certain acts, his life and health may be prolonged.
SICKNESS IN SCHOOLS.

To obtain the rate of sickness, it will of the population, or 5,787 persons be average been constantly sick, in years. By the same rule, in a country standard, containing 2,000 inhabitants sick. This seems a large proportion; it may nevertheless be true, where age are included.

Consequence. It would be extremely now the amount of sickness in the ons of the various professions and , the mechanics, the manufacturers, it differs in different places and under All the facts and arguments generally ary survey, may be applied to show e of this branch of the subject. To ample plan is needed, which may easily be carried into operation; and such a appendix.

So that measures be taken to ascertain offered, among the scholars who attend er seminaries of learning in the Com-

recommended that the science of physi-public schools; and the recommenda-
dally approved and carried into effect as found capable of teaching it. Sanit-
ly connected with physiology, and de-
greater commendation as a branch of should be taught, early in life, that, and his own health and the lives and of his most important and constantly ying certain laws, or performing certain actions of an act relating to public hygiene, passed April one shall hereafter be taught in all the public schools of which the school committee shall deem it expedient, shall hereafter be examined in their knowledge of the ele-
and hygiene, and their ability to give instructions in the effect on and after the first day of October, one thousand

acts, his life and health may be preserved; by disobedience, or performing certain other acts, they will both be destroyed. By knowing and avoiding the causes of disease, disease itself will be avoided, and he may enjoy health and live; by ignorance of these causes and exposure to them, he may contract disease, ruin his health, and die. Every thing connected with wealth, happiness and long life depend upon health; and even the great duties of morals and religion are performed more acceptably in a healthy than in a sickly condition.

This matter has been too little regarded in the education of the young. Intellectual culture has received too much and physical training too little attention. Some measure is needed which shall impel children to make a sanitary examination of themselves and their associates, and thus elicit a practical application of the lessons of sanitary science in the every-day duties of life. The recommendation now under consideration is designed to furnish this measure. It is to be carried into operation in the use of a blank schedule, which is to be printed on a letter sheet, in the form prescribed in the appendix, and furnished to the teacher of each school. He is to appoint a sanitary committee of the scholars, at the commencement of the school, and, on the first day of each month, to fill it out, under his superintendence, according to the accompanying directions. Such a measure is simple, would take but a few minutes each day, and cannot operate otherwise than usefully upon the children, in forming habits of exact observation, and in making a personal application of the laws of health and life to themselves. This is education of an eminently practical character, and of the highest importance. All the reasons in favor of our twenty-fifth recommendation apply also to this. By adopting it, many and many a life would annually be saved in this Commonwealth, and the general health of the rising generation would be greatly improved.

XXVII. We recommend that every city and town in the State be required to provide means for the periodical vaccination of the inhabitants.

The small-pox is a terrible disease; but it is almost entirely
shorn of its terrors by the preventive remedy of vaccination. If a person is not vaccinated, there is more than two chances to one, that, if exposed, he will take the disease; but, if properly vaccinated, there is scarcely one chance in five hundred. Hence the importance of this preventive measure, and the guilt of neglecting it.

Dr. Waterhouse, of Cambridge, vaccinated his son in July, 1800; and this was the first person ever vaccinated in America. In 1810, an act was passed in this State, providing "that it shall be the duty of every town to choose persons to superintend the inoculation of the inhabitants with the cow-pox." This law was repealed in 1836; and the Revised Statutes provide "that each town may make provision for the inoculation of the inhabitants." This substitution of the word may for shall left it optional with towns to do or not to do it; and it has probably caused the loss of many lives. Under the operation of the old law many towns were accustomed, once in five or more years, to have a general vaccination of the inhabitants; but this custom, as far as our knowledge extends, has been generally discontinued, and the inhabitants have thus been left liable to the disease from every new exposure. Boston has provided that no child shall be admitted into the public schools without a certificate from some physician that it has been vaccinated. It has also provided for the gratuitous vaccination of the poor who may choose to go to the office of the city physician for that purpose. These excellent regulations should be adopted in every place. And local Boards of Health should be required to provide for a general vaccination of the inhabitants at least as often as once in five years.

Since the repeal, in 1837, of the salutary laws of the State relating to small-pox, no more restraint has been laid upon persons sick with this than with any other disease, and it has consequently seldom been absent from the large cities. During more than 30 years, prior to 1837, the disease caused the death, in Boston, of 37 persons only; and most of these were at Rainsford's Island. It seldom occurred in the city proper. During the 12 years ending December 31, 1849, since the repeal, it caused the death of 533 persons! and in the first six months of 1850, one hundred and forty persons were unnecessary deaths,—they might have been prevented! and so should the same disease which did not exist in Boston, prior to the operation of consumption, and which has never to be eradicated or ameliorated.
the preventive remedy of vaccination.
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he will take the disease; but, if prop-
scarcely one chance in five hundred.
this preventive measure, and the
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N. XXVIII. WE RECOMMEND that the causes of consumption,
and the circumstances under which it occurs, be made the sub-
ject of particular observation and investigation.

We have given some facts, (pp. 94–99,) to illustrate the
operation of consumption, and stated that if that disease is
ever to be eradicated or ameliorated, it can only be done by
preventive means and not by cure. Dr. Fisher, late of Boston,
in the circular to which we have alluded, (page 166,) states, that "the disease, when once excited and seated in the system, is necessarily fatal. No remedial agent has ever yet been, and probably never will be, discovered, which will cure the malady when once developed in the lungs. It becomes, therefore, the duty of those who are aware of this fact and of the mortality which consumption occasions, to ascertain the causes of the disease, and to inform the public how these causes may be avoided. If the mortality produced by this disease is ever to be lessened, it is to be effected by preventive means. These means, when known and fully appreciated by the community, will be adopted, to a greater or less extent, and by their adoption a vast amount of human suffering and human life will be saved." This is the opinion of an eminent professional man, who had made this disease the subject of particular investigation, and his views are entitled to the highest regard.

The causes of this disease, and the means of removal, are the great objects of investigation; and they can be accurately ascertained only by an extensive series of systematic, uniform and exact observations of the external circumstances,—atmospheric, local and personal,—occurring in each case. And we cannot too strongly impress upon local Boards of Health, upon the members of the medical profession, and upon all others interested, the importance of making a united and energetic effort to obtain such observations concerning every case which occurs in every part of the Commonwealth. Near 3,000 cases, in this State, annually terminate in death; and if they were properly observed, for a series of five, ten, or more years, it is impossible to anticipate the good results which might follow. Possibly,—and even probably,—discoveries might be made which would reduce the annual number of cases, certainly by hundreds, and perhaps by thousands. We shall hereafter suggest a form of a Register of Cases adapted to this object; and the great importance of the disease, and the confident hope that some discovery can be made which will materially abate its melancholy ravages, should arouse us all to action.

XXIX. We recommend that every nuisance which affect the comfort, life or health, be prevented, destroyed or removed, and that nuisances are divided, in large measure, into two classes: 1. Those which affect the comfort, life, or health, and which are commonly called public nuisances; and 2. Those which affect the property of individuals only, and which are called private nuisances. Some nuisances have a public character only. Others, and some of the last class, only, immediately constitute a public nuisance. A street, highway, or bridge, which is obstructed by an obstruction, pit-hole, or defect, or which is dangerous to pedestrians, or to the horses, mules, or other animals, going at large in such street or highway, is a nuisance. Horsecars, omnibuses, and carriages, going in such streets or highways, are nuisances. Locomotive steam vehicles, or stationary steam engines, whose manuf or use of gunpowder and fire-arms, or the carrying on of any trade, business, or occupation, or the combustion of any fuel, or the use of gunpowder and firearms, within the neighborhood of living quarters, is destructive of life. Gas, camphine, and other gases, of an inflammable character, which often occasion injury or death, should be so regulated by law, as to be harmless to health and life. Those who cause such obstructions and damages. There is also the same wisdom in preventing the use of any filth and other substance, which is offensive, or which could injure the health or gradually injure the life, or which is dangerous to the life or health of others. Every person who causes a nuisance to be created, or who continues it, after such regulations, that no person may use the free enjoyment of the right to which he has a right, is himself liable to prosecution. We must not allow that any nuisance, however small in the amount of the evil it produces, shall be permitted to continue. We must not allow that no person may use the free enjoyment of the right to which he has a right, is himself liable to prosecution.

XXX. We recommend that all nuisances, which are obnoxious to the comfort, health, life, or property of others, should be prevented, destroyed, or removed, and that every person who causes a nuisance to be created, or who continues it, after such regulations, that no person may use the free enjoyment of the right to which he has a right, is himself liable to prosecution.
we have alluded, (page 166,) states, that excited and seated in the system, remedial agent has ever yet been, discovered, which will cure the led in the lungs. It becomes, there-fore are aware of this fact and of the occasion, to ascertain the causes rm the public how these causes may utility produced by this disease is ever affected by preventive means. These fully appreciated by the community, or or less extent, and by their adoption offering and human life will be saved.17 eminent professional man, who had effect of particular investigation, and his highest regard.

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SANITARY REPORT.

That intemperance is an enormous evil is universally acknowledged. That it is the cause of a vast amount of direct sanitary suffering,—of unnecessary sickness, and of unnecessary death,—to those who indulge in it; and of a still greater amount of indirect sanitary suffering and death to their associates, relatives, and dependents, is equally true. The evil consequences are so great, and so widely diffused, that they have long since arrested public attention. Good citizens, moral reformers, religious teachers, and other classes of philanthropists, have deplored the evil, and devised various measures for its removal. It still exists, however, and fills the cup of suffering, and provides a premature grave for many and many a person, who might otherwise have lived to become a blessing instead of a curse to humanity. It is unnecessary, however, here to discuss the subject. Through thousands of channels it is brought to public notice. These channels should be widened and deepened, and the number should be increased, until all shall feel their influence. Local Boards of Health, by a careful observation of the sanitary evils of intemperance, and the local and personal circumstances under which they occur, and by adopting and enforcing such salutary regulations as will remove or mitigate them, may confer an immeasurable benefit upon the people.

XXXI. WE RECOMMEND that the laws for taking inquests upon the view of dead bodies, now imposed upon coroners, be revised.

In our judgment, every matter relating to life, to health, and to death, should, to some extent, come under the cognizance of Boards of Health. The cause of the death of every person who dies should be fully known to them; and in their offices records of inquests upon dead bodies should be preserved. These Boards, and especially the medical health officers, are presumed to be better informed than others in relation to such questions as present themselves in investigations of this kind; and hence they would be able to act more intelligently and correctly. It sometimes happens that inquests are held when there is no occasion for them, and unnecessary expenses are incurred. For the last nine years, this State has paid, for coroners' inquests,

INQUESTS AND

$6,968.95; and, for the four payments have been $1,030 3 part, if Boards of Health had far as to decide when inquests would suggest, either that Boards of Health should be appointed to form the duties now imposed upon holding inquests, or that they would expedite of holding such inquests, or that they would the expediency of holding such inquests, a copy of the verdict of the Board.

XXXII. WE RECOMMEND that the justices of the peace, relating arrested or indicted for crime, or such as the Board.

By the present laws of the State, other than paupers, can be committed to places of confinement, except on conviction by justices of the peace, or some other than paupers, can be committed by the overseers of this unfortunate class of persons. Of an unsound mind be considered merely, is often the only one that has occurred to us that the local boards of Health. By whom they should be disposed of, such Boards will be better acqua, and more that their decisions will be, more the in accordance with the spirit of humane to that class of persons.

XXXIII. WE RECOMMEND that cemeteries and other places of the dead, be regulated by the law.

The Revised Statutes provide for burial-grounds, and that Boards of Health may issue regulations which they may just
(Continued in next page)

INQUESTS AND INSANE PERSONS. 185

$6,968 95; and, for the four last years, the average annual payments have been $1,030 33. This would be avoided, in part, if Boards of Health had some control over the subject, so far as to decide when inquests are necessary or expedient. We would suggest, either that some members of the local Boards of Health should be authorized and appointed to perform the duties now imposed upon coroners, in relation to holding inquests, or that the Boards should be consulted on the expediency of holding such inquests; and that, in all cases, a copy of the verdict of the jury should be returned to the Board.

XXXII. WE RECOMMEND that the authority now vested in justices of the peace, relating to insane and idiotic persons, not arrested or indicted for crime, be transferred to the local Boards of Health.

By the present laws of the State, no insane or idiotic person, other than paupers, can be committed to any hospital or place of confinement, except on complaint, in writing, before two justices of the peace, or some police court. Paupers may be committed by the overseers of the poor. By these proceedings, this unfortunate class of persons appear on the records as criminals, while they are guilty of no crime, unless the possession of an unsound mind be considered one. A sanitary question, merely, is often the only one presented in such cases, and it has occurred to us that the local Boards of Health would be the proper tribunals before whom they should be brought, and by whom they should be disposed of. It may be supposed that such Boards will be better acquainted, generally, with the medical jurisprudence of insanity, than justices of the peace; and their decisions will be, more than those of criminal courts, in accordance with the spirit of humanity which has been extended to that class of persons.

XXXIII. WE RECOMMEND that the general management of cemeteries and other places of burial, and of the interment of the dead, be regulated by the local Boards of Health.

The Revised Statutes provide that towns may grant money for burial-grounds, and that Boards of Health "shall make all regulations which they may judge necessary for the interment
of the dead, and respecting burying-grounds in their towns." This is all the legal authority that is necessary for the purposes of this recommendation. Boards of Health and the selectmen of towns have ever had the management of these matters in this State. There are few if any states or countries, where more excellent regulations relating to the burial-grounds and the interment of the dead exist, where the ceremony of burial is conducted with more propriety, and where greater respect is paid to the deceased. Yet in some particulars improvement might and ought to be made. The history and condition of burial-grounds, and the regulations for the interment of the dead, are intimately connected with public health, and should form a part of the sanitary regulations of every city and town. We can, in this connection, notice only some general matters, which the subject suggests.

There are two principal objects which should be kept in view in these regulations,—1. To pay proper respect to the dead; and 2. To protect the health of the living. To accomplish these objects, there are several matters to be considered.

1. Plans for obtaining a place of burial. Several have existed in this State. One plan permits a family to select a private place of burial on its own estate. This is adopted in some parts of this Commonwealth, especially in the western and southern counties, but we cannot but regard it as highly objectionable. In this country, estates do not descend to successive generations of the same family, as in Europe. In the vicissitudes and revolutions of American life, the owners of property, real as well as personal, often change; and there is no security that the remains of a person, if deposited on an estate he owned, will remain undisturbed by other owners who succeed him. The occupant has no guarantees from a public or responsible body that it shall be so. This single consideration, in our judgment, should induce every one to discontinue the custom, and even to remove the remains already so deposited to a more secure and quiet resting-place.

Another plan allows proprietors, under an act of incorporation, to sell lots, or places of burial, under such regulations as they choose to make. This is of recent date, and originated at Mount Auburn. This mortuary-place of the dead, Securities forming the corporation, subsequently incorporated at Braintree, Feb. 18, 1839; at Worcester, Feb. 23, 1838; at March 23, 1840; and at Low passed March 17, 1841, all town to organize themselves for the purpose; and, since that time, cemeteries have been established Some object to these companies the burial of the dead too regulation.

Another, and the more general, all burial-grounds in the town individuals, sometimes gratuitous consideration, rights for family graves. This plan has been implemen men of the State; and we every town should have the excl for many reasons, which it is The city of Roxbury has set an ment, in its corporate capacity Cemetery.

The place of burial should be regulated, and not in the most cases should be combined with such to inspire those feelings of solemnity belong to the city of the would ever be liable to be encro a cemetery might be assigned to the town which it is designed to large enough to meet the wants nation, and, if desired, specially generally regarded as dangerous,
DIFFERENT PLANS OF BURIAL.

At Mount Auburn. This model cemetery was consecrated as a burial-place of the dead, Sept. 21, 1831. Cemeteries were subsequently incorporated at New Bedford, April 12, 1837; at Worcester, Feb. 23, 1838; at Hingham, Feb. 28, 1839; at Braintree, Feb. 18, 1839; at Salem, Feb. 19, 1839; at Dudley, March 23, 1840; and at Lowell, Jan. 23, 1841. A general law, passed March 17, 1841, allows ten or more persons in any town to organize themselves into a corporation for these purposes; and, since that time, numerous companies and cemeteries have been established in different parts of the State. Some object to these companies, however, because they make the burial of the dead too much a matter of commercial speculation.

Another, and the more general plan, vests the ownership of all burial-grounds in the town, which grants to families and to individuals, sometimes gratuitously, and sometimes for a consideration, rights for family lots, for tombs, and for single graves. This plan has been in existence from the first settlement of the State; and we much prefer it to the others. Every town should have the exclusive control in these matters, for many reasons, which it is unnecessary now to mention. The city of Roxbury has set a noble example, in the establishment, in its corporate capacity, of the beautiful Forest Hills Cemetery.

The place of burial should be selected in a somewhat secluded, and not in the most conspicuous part of the town, and should be combined with such natural scenery as will tend to inspire those feelings of solemnity and decorum which properly belong to the "city of the dead." It should not be where it would ever be liable to be encroached upon for buildings, roads, or any other purpose; but where the tenants may remain forever undisturbed in their quiet resting-place. And it should be large enough to meet the wants of the probable future growth of the town which it is designed to accommodate. Parts of such a cemetery might be assigned to a particular religious denomination, and, if desired, specially consecrated for its use. It should never be within a populous city or village. Such a site is now generally regarded as dangerous to the health of the living;
though in this State we have not as yet experienced, to a great extent, the evils which have existed in London and other large cities in England, as the following statements will show:

"When the living body is exposed to putrid emanations in a highly concentrated state, the effects are immediate and deadly; when more diluted they still taint the system, inducing a morbid condition, which renders it more prone to disease in general, but especially to all the forms of epidemic disease, and which further predisposes it to pass into a state verging upon if not actually that of putrefaction. The most recent examination of the grave-yards of the metropolis appears to us to show that they contain putrefying matter enough to communicate this putrefying process to those who are exposed to it. It is stated by Sir James Maclure, that on one occasion in Spain, soon after 20,000 men had been put into the ground within the space of two or three months, the troops that remained exposed to the emanations of the soil, and that drank the water from the wells sunk in the neighborhood of the spot, were attacked by malignant fevers and by dysentery; and that the fevers constantly put on the dysenteric character. In the metropolis, on spaces of ground not exceeding in all 218 acres, closely surrounded by the abodes of the living, crowded together in dense masses, upwards of 50,000 dead bodies are buried every year. In Bethnal Green burial-ground alone, consisting of an area of about two acres and a half, there have been interred, since its opening in the year 1746, upwards of 56,000 dead bodies. In Bunhill Fields burial-ground, City Road, consisting of an area of less than four acres, there have been interred, from April, 1713, to August, 1832, according to the registry, which, however, in the earlier years was very imperfectly kept, 107,416 dead bodies. But in St. Pancras church-yard, one-half of which has been used as a burial-place for at least six centuries, there have been deposited the remains of more than twenty generations; and in this space of ground, which does not even now exceed four acres, and a large portion of which was considered as full to excess twenty years ago, there have been interred since that period upwards of 26,000 bodies."

1 Chadwick's Report on Extramural Sepulture, pp. 9, 15, 30; Dr. Simon's Report, p. 24; Dr. Duncan's Communication in the Official Circular of the General Board of Health, No. 7, pp. 101, 102, 103.
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period upwards of 26,000 bodies. Estimating the duration of
a generation at 30 years, there must have been interred in the
small space of 218 acres, in the last generation, a million and a
half of dead bodies; and within the next 30 years, more than
another million and a half of the dead,—that is, a large propor-
tion of those who now people the metropolis,—will have to be
crowded into those same church-yards, unless other and better
provision for interment be made.”

“The placing of the dead body in a grave, and covering it
with a few feet of earth, does not prevent the gases generated
by decomposition, together with the putrescent matters which
they hold in suspension, from permeating the surrounding soil,
and escaping into the air above and the water beneath. Under
the pressure of only three-fourths of an inch of water, gas,—
common coal-gas, for instance,—rapidly makes its way to the
surface through a stratum of sand or gravel several feet in
thickness; the soil appearing to oppose scarcely any resistance
to its passage. The evolution of the gases of decomposition
takes place with so much force, that they often expand and
occasionally burst the leaden coffin in which the body is con-
fined; and when, as in a common grave, they pass gradually
and without restraint into the surrounding earth, they are only
in part absorbed by the soil, and some of them are scarcely ab-
sorbed at all, but are diffused in every direction, though it
would appear in the upward direction chiefly, thus directly pol-
luting the air. Such, indeed, is the tendency of these gases to
reach the surface, that it does not appear to be possible to pre-
vent the occurrence. ‘If,’ says Mr. Leigh, a chemist at Man-
chester, who appears to have paid particular attention to this
subject, ‘bodies were interred eight or ten feet deep, in sandy
or gravelly soils, I am convinced little would be gained by it;
the gases would find a ready exit from almost any practicable
depth’; while it is obvious that their occasional escape would
be still more easy through the fissures which are so common in
clayey soils. ‘I have examined,’ says Dr. Lyon Playfair, ‘va-
rious church-yards and burial-grounds, for the purpose of ascer-
taining whether the layer of earth above the bodies is sufficient
to absorb the putrid gases evolved. The slightest inspection
SANITARY REPORT.

show that they are not thoroughly absorbed by the soil lying over the bodies. I know several church-yards from which most fetid smells are evolved; and gases with similar odor are emitted from the sides of sewers passing in the vicinity of church-yards, although they may be more than thirty feet from them. If these gases are thus evolved laterally, they must be equally emitted in an upward direction. Some of these gases, as has been stated, are either not absorbed at all, or only very sparingly,—carbonic acid gas, for example; yet so abundant is its evolution, that, in old church-yards or near grave-pits, the ground is absolutely saturated with it, so that, when a deep grave is dug, such an amount of it is rapidly collected, that the workmen cannot descend without danger. Dr. Reid states, as the result of his own observation, that on sinking a pit in the earth, near which a number of bodies were interred, the pit in a few hours became filled with such an amount of carbonic acid gas as arising from the decomposition of the neighboring bodies, that the workmen could not re-enter it without danger; that lives have been lost by the incautious descent into such a pit, only a few hours after it has been opened; that a well of carbonic acid gas is thus formed, into which a constant stream of the same gas continues perpetually to filter from the adjacent earth; and that, in fact, the earth around these pits is loaded with carbonic acid gas, as other places are with water. Dr. Playfair estimates that the amount of the gases evolved annually from the decomposition of 1,117 corpses per acre, which is very far short of the number actually interred in the metropolitan grave-yards, is not less than 55,261 cubic feet; but as 52,000 interments take place annually in the metropolis, according to this ratio the amount of gases emitted is equal to 2,572,580 cubic feet, the whole of which, beyond what is absorbed by the soil, must pass into the water below or the atmosphere above.

"Whatever portion of these gases is not absorbed by the earth,—earth already surcharged with the accumulations of centuries,—and whatever part does not mix with and contaminate the water, must be emitted into the atmosphere, bearing with them, as we know, putrescent matters perceptible to sense. That these emanations do act on people resident in the immediate vicinity from which they issue, appears to be indubitable. The diffusion of gases, they may, indeed, traverse the whole of the atmosphere that is near them, although they thereby become proportionally innocuous, yet it may be said to the contamination of the air of galleries and churches. Lives have been lost by the incautious descent into such a pit, only a few hours after it has been opened; that a well of carbonic acid gas is thus formed, into which a constant stream of this gas continues perpetually to filter from the adjacent earth; and that, in fact, the earth around these pits is loaded with carbonic acid gas, as other places are with water. Dr. Playfair estimates that the amount of the gases evolved annually from the decomposition of 1,117 corpses per acre, which is very far short of the number actually interred in the metropolitan grave-yards, is not less than 55,261 cubic feet; but as 52,000 interments take place annually in the metropolis, according to this ratio the amount of gases emitted is equal to 2,572,580 cubic feet, the whole of which, beyond what is absorbed by the soil, must pass into the water below or the atmosphere above.

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That these emanations do act injuriously on the health of the people resident in the immediate neighborhood of the places from which they issue, appears to us, by the evidence that has been adduced, to be indubitably established. From the law of the diffusion of gases, they must be rapidly spread through the whole of the atmosphere that surrounds the metropolis; and though they thereby become diluted, and are thus rendered proportionally innocuous, yet that they do materially contribute to the contamination of the air breathed by two millions of the people, cannot, we think, admit of any reasonable doubt.”

Dr. Simon says—“Intramural burial is an evil, no doubt, that varies in its intensity according to the numbers interred,—becoming appreciable in its effects on health only when several interments occur annually, or when ground is disturbed wherein much animal matter had previously been left to decay; but be the evil large or little in any particular case, evil undoubtedly it is in all, and an unmitigated evil.

“That the atmosphere in which epidemic diseases most readily diffuse their poison and multiply their victims, is one in which organic matters are undergoing decomposition. Whence these may be derived signifies little. Whether the matter passing into decay be an accumulation of soaking straw and cabbage leaves in some miserable cellar, or the garbage of a slaughter-house, or an overflowing cess-pool, or dead dogs floated at high water into the mouth of a sewer, or stinking fish, or the remnants of human corpses undergoing their last chemical changes in consecrated earth, the previous history of the decomposed material is of no moment whatever. The pathologist knows no difference of operation between one decaying substance and another; so soon as he recognizes organic matter undergoing decomposition, so soon he recognizes the most fertile soil for the increase of epidemic diseases; and I may state with certainty, that there are many church-yards in the city of London where every spade full of soil turned up in burial sensibly adds to the amount of animal decomposition, which advances too often inevitably around us. I have therefore no hesitation in counting intramural interments as one of the influences prevailing against health, in the city of London; and I have no doubt
that it contributes considerably to swell our list of deaths from fever and the allied disorders."

Dr. Duncan says:—"There are 39 burial-grounds within the borough of Liverpool. The interments take place in graves, vaults, or pits. In 23 burial-grounds, graves only are used; in 7, graves and vaults only; in 4, graves and pits; in 2, graves, vaults, and pits; and in 1, pits only.

"The aggregate annual number of interments within the borough is, in ordinary years, from 10,000 to 11,000. Of this number, as nearly as can be estimated, about two-thirds take place in pits, and one-third in graves; the interments in vaults probably not exceeding 20 annually.

"The pits vary in depth from 18 to 30 feet, being from 7 to 12 feet long, and 3½ to 9 feet wide. The number of bodies deposited in each pit varies from 30 to 120. In St. James's Cemetery, about six inches of earth are placed over the coffins after each day's interments; in the others, the coffins are covered with 2½ feet of soil, which is removed previous to the next interments; but with this exception the pits remain open, or only covered with a frame-work of boards, until filled with coffins,—a period varying from ten days in the case of the smaller, to ten weeks in the case of the larger pits. Although the evils connected with the practice of intramural interment have been less severely felt in Liverpool than in the metropolis, where many of the grave-yards situated in densely peopled neighborhoods have been in use for centuries, there can be no doubt that, under any circumstances, the practice of burying within the precincts of towns, unless guarded by the strictest regulations, must be productive of injury to the health of the inhabitants.

"It has been estimated that an acre of ground is capable of affording decent interment to not more than 136 bodies yearly; but in the thirty-seven burial-grounds of Liverpool, taking one with another, the number of burials to an acre is fully double of that just stated. Were the calculation confined to the burial-grounds in most frequent use, the proportion would be greatly augmented.

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some, the soil, when opened up, appears to consist chiefly of
human remains in a state of decomposition. It cannot be
doubted that grave-yards thus impregnated with decaying an-
imal matter must contaminate the atmosphere in such a way as
to injure the health, not so much by the production of sudden
disease, which may be directly traced to its cause, as by a
gradual process of deterioration, leading to the development of
disease in a more slow but equally certain manner. It was the
observation of the injury to health arising from the practice of
intramural interment, which caused the legislature of France,
as well as of the other warmer continental countries, upwards
of eighty years ago, to declare "illegal" all interments in
towns, and subsequently to deprive even the priests of the
privilege which they had enjoyed of interment within their
own churches.

" But the grand evil in the case of Liverpool, and that which
calls most urgently for interference, is the practice of burying
large numbers of bodies in open pits. It must be unnecessary
to say anything as to the injurious nature of this practice, if it
be considered that in the hot weather of summer more than
100 bodies are collected together in an open pit, in all stages of
decomposition, some of them having lain there for upwards of
two months! Only two feet of space are left between the pits,
so that the moisture, saturated with the decomposed matter of
an adjoining pit, not unfrequently percolates through the inter-
vening rock or soil into one which is newly made. In no case
does the soil covering the pit, when filled, exceed the legal
minimum of \(2\frac{1}{2}\) feet."

2. There are two modes of interment practised in this State;
one in graves, and the other in tombs. We much prefer the
former. Dangerous gases often escape from tombs, when inse-
curely closed, or when often opened for new deposits. Besides
these evils, there is no security that deposits in tombs will ever
"return to the earth as they were," undisturbed. They are
there exposed to removal and desecration, which sometimes
take place. In Mount Auburn, very properly, tombs are not
SANITARY REPORT.

now allowed. Graves alone are used. It is desirable, too, that in no grave should more than one body be placed.

The following statement gives the burial accommodations in Boston, and the number of interments in 1849. Deposits can be made only in tombs in the city proper; graves have not been allowed for many years:—


**Boston Proper.**—Copp's Hill and Hull Street, 222 395
Chapel Burial-Ground, 79 62
Under Chapel Church, 21 15
Granary Burial-Ground, 233 92
Under Park Street Church, 38 24
Central Burial-Ground, 149 160
Under St. Paul's Church, 64 23
Under Christ Church, 34 39
Under Trinity Church, 55 21
South Burial-Ground, 248 663

Total in City proper, 1119 1479

**South Boston.**—Hawes Place Burying-Ground, 7 131
Union Burial-Place, 4 9
Under St. Matthew's Church, 60 66
Roman Catholic Burial-Ground, 2 190
House of Industry, 6 295
House of Correction, 3 20

**East Boston.**—-East Boston Burial-Ground, 8 244
Jews' Burial-Ground, 12
Deer Island, 214

Total interred in the City, 1203 2740

This includes 98 who died elsewhere, and were brought into the city for interment. The following interments of persons who died in the city took place elsewhere:—

Roman Catholic Burial-Ground at Cambridge, 1562
" " " at Charlestown, 365
" " " at Roxbury, 80
Mount Auburn Cemetery, at Cambridge, 212
Forest Hills Cemetery, at Roxbury, 14
Various other places in Massachusetts, 364
Removed to other states, 143

Total removed from the city, 2980
Total interments in 1849, 5490

INTERMENTS IN BOSTON.

Deaths in Boston during the ;
Still-born during the same ti
Brought into the city for inter

The city poor were interred
Ground until August 27, 1845.
The common charges for a
varying, however, according to
in each case:—Rights in a ;
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19 00. This is exclusive of
extra expenses. Many, of cou
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improper, and dangerous to the
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from other places, where it wou
the public health to permit
from Mr. Chadwick's recent wo
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ARY REPORT.

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interments in 1849. Deposits can
in the city proper; graves have not

The following interments of persons

The city poor were interred in the tombs in the South Burial-
Ground until August 27, 1849; since then, at East Boston.
The common charges for a burial in Boston are as follows,—
-varying, however, according to the age and other circumstances
in each case:—Rights in a public tomb, $6 00; pine coffin,
$7 00; City Registrar's and the undertaker's fees, $6 00; total,
$19 00. This is exclusive of carriages for mourners, or any
extra expenses. Many, of course, incur a much heavier expen-
diture. A family lot at Mount Auburn, of 300 square feet,
costs $100, besides laying out, grading, and ornaments; and the
expense of a private burial there is about $15, besides car-
riages. The expenses in other cities, and in country towns,
 vary according to location and other circumstances.

3. "Wakes," which are sometimes held over the bodies
of the dead, by the foreign population, should be prohibited as
improper, and dangerous to the public health and to good mor-
als. In cities and populous villages, public reception-houses
should be provided, and placed under proper regulations, to
which dead bodies might be removed, from families living in
a single room, or from a public boarding or lodging house, or
from other places, where it would be inconvenient or dangerous
to the public health to permit them to remain. We extract
from Mr. Chadwick's recent work (p. 102) the following pas-
sage, to show the effect of retaining bodies in such localities:—

"Of the condition in which the surviving members of a fam-
ily are placed, who have only one living and sleeping room,
when the calamity of death occurs, and of the deplorable con-
sequences that often ensue, some conception may be formed
from the following statements:—

"There are some houses in my district," says Mr. Leonard,
the medical officer of the parish of St. Martin's-in-the-fields,
that have from 45 to 69 persons, of all ages, under one roof;
and in the event of death, the body often occupies the only
bed, till they raise money to pay for a coffin, which is often

<table>
<thead>
<tr>
<th>Tombs.</th>
<th>Interments in 1849</th>
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<tbody>
<tr>
<td>Hull Street,</td>
<td>229 395</td>
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<td>Island,</td>
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<td>Church,</td>
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<td>Place,</td>
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<td>d removed from the city,</td>
<td>2630</td>
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<tr>
<td>Interments in 1849,</td>
<td>5420</td>
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</tbody>
</table>
several days. The body is retained in the room beside the living, from five to twelve days. In one instance the corpse had been retained twelve days; I could not remain in the room two minutes, from the horrible stench. The coffin stood across the foot of the bed, within eight inches of it; this was a small room, not above ten feet by twelve feet square, a fire being always in it; it was, as in most cases of a like kind, the only room for sleeping, living, and cooking in. In another instance, a mother and her infant were brought, ill with fever, to her father's room, which was ten feet square, with a small window of four panes; the infant soon died; then the grandmother was taken ill, and in a few days she also died; the corpse of the grandmother lay beside her husband in the same bed; in the next place the husband was seized with fever, attended with violent delirium, and died; and subsequently two of his children, one within a week, and the other within ten days, fell victims to the disease; in short, five out of the six inmates of this room died. Found in another similar room the corpse of a young person who had died of fever; the father and mother were just taken ill, and in a few days she also died; the corpse of the grandmother lay beside her husband in the same bed; in the next place the husband was seized with fever, attended with violent delirium, and died; and subsequently two of his children, one within a week, and the other within ten days, fell victims to the disease; in short, five out of the six inmates of this room died. Found in another similar room the corpse of a young person who had died of fever; the father and mother were just taken ill, and in a few days she also died; the corpse of the grandmother lay beside her husband in the same bed; in the next place the husband was seized with fever, attended with violent delirium, and died; and subsequently two of his children, one within a week, and the other within ten days, fell victims to the disease; in short, five out of the six inmates of this room died. Found in another similar room the corpse of a young person who had died of fever; the father and mother were just taken ill, and in a few days she also died; the corpse of the grandmother lay beside her husband in the same bed; in the next place the husband was seized with fever, attended with violent delirium, and died; and subsequently two of his children, one within a week, and the other within ten days, fell victims to the disease; in short, five out of the six inmates of this room died. Found in another similar room the corpse of a young person who had died of fever; the father and mother were just taken ill, and in a few days she also died; the corpse of the grandmother lay beside her husband in the same bed; in the next place the husband was seized with fever, attended with violent delirium, and died; and subsequently two of his children, one within a week, and the other within ten days, fell victims to the disease; in short, five out of the six inmates of this room died. Cites these cases merely as examples of the fatal consequences of the long retention of the body in these small and crowded rooms; they could be multiplied indefinitely; believes that the retention of the corpse in the room with the living is fraught with greater danger than even that produced by emanations from crowded grave-yards, because when a body is retained in a small, heated and ill-ventilated room, decomposition proceeds rapidly; the noxious gases evolved cannot escape; they accumulate, and become highly concentrated; and they often prove rapidly and extensively fatal to the living inmates.'

"Other witnesses state that the death of parents, leaving the children orphans and destitute, is a frequent occurrence under those circumstances; and that they have sometimes seen whole families swept away."

4. Local Boards of Health should appoint intelligent and competent health officers, under whom be required to ascertain the sat

REGULATIONS

4. Local Boards of Health should appoint intelligent and competent health officers, under whom be required to ascertain the sat in which a death has occurred with reference to the funeral may require; to direct and soo dead from single rooms, occupied by one or more families affected in a respectful manner wishes and feelings of the fri

structions to the survivors for the as far as may be practicable, the det the presence of the corpse, until ine into the existence of any loc the extension of disease, more or caused by any form of epidemic, and without delay to take such m advisable for the removal of the the fact of the death, where the d where there has been one; to gr of the fact of death, whenever f premature interment; to see that f formalities in the houses of reception; t friends of the deceased, and with sk as to the time and the mode of the preservation of regularity, qu

5. Boards of Health should m of each burial-ground in their sh should be drawn and numbered a

Undertakers should return the gr

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Health should appoint intelligent and

REGULATIONS OF INTERMENTS.

competent health officers, undertakers, and others, who should be
required to ascertain the sanitary condition of every family
in which a death has occurred; to give advice and assistance
with reference to the funeral and other matters, as occasion
may require; to direct and superintend the removal of the
dead from single rooms, occupied as dwelling and as sleeping
rooms by one or more families; to see that this removal is ef-
fected in a respectful manner, with all due attention to the
wishes and feelings of the friends; to give the necessary in-
structions to the survivors for their own safety; to obviate, as
far as may be practicable, the danger to be apprehended from
the presence of the corpse, until it can be removed; to exam-
ine into the existence of any local causes calculated to promote
the extension of disease, more especially if the death has been
caused by any form of epidemic, endemic, or contagious disease,
and without delay to take such measures as may be necessary or
advisable for the removal of the evil; to verify the cause as well
as the fact of the death, where there has been no medical attend-
ant; to ascertain the cause of death from the medical attendant,
where there has been one; to grant, when required, a certificate
of the fact of death, whenever apprehension is entertained of
premature interment; to see that due care is taken of the bod-
ies in the houses of reception; to make arrangements with the
friends of the deceased, and with the officers of the cemeteries,
as to the time and the mode of the removal of the dead, for
the preservation of regularity, quiet, and order; and to super-
intend and carry into effect any other regulations of the Board
of Health.

5. Boards of Health should make an exact survey and plan
of each burial-ground in their respective towns, on which
should be drawn and numbered separately, each family or per-
sonal lot, each tomb, and each grave; and these numbers
should be entered in a record-book, and against each the name
of the individual or individuals interred therein. These rec-
ords should, as far as practicable, contain the names and
location of the tenants already there, as well as new ones.
Undertakers should return the number of the lot, tomb, or
grave, to be entered under "place of interment," in the records.
SANITARY REPORT.

of deaths. All these records should be carefully preserved, so that any person may be able to identify the exact spot where a friend or connection was deposited. The precise quantity of land, in acres or parts of acres, in each ground, should be entered on the plan.

XXXIV. We recommend that measures be taken to preserve the lives and the health of passengers at sea, and of seamen engaged in the merchant service.

Vessels at sea are the floating habitations of living beings; and in these, as in dwellings on the land, the air may be corrupted by over-crowding, filth, and other causes, and thus become a fruitful source of disease. "Of all known poisons," says Dr. Combe, "that produced by the concentrated effluvia from a crowd of human beings, confined within a small space, and neglectful of cleanliness, is one of the worst; and in ships where ventilation is not enforced,—especially if the passengers are dirty in their habits, and much kept below by bad weather,—it frequently operates with an intensity which no constitution can long resist." "The occurrence of a single case of fever on board a merchant-vessel, and much more the spreading of disease among a ship's crew or its passengers, is, prima facie, evidence of neglect,—neglect of removable causes of disease; causes which might be certainly obviated by simple and inexpensive means, and for the prevention of which, therefore, the well-being of large classes requires that securities should be provided. That such securities should be provided for the crews and passengers of ships, their peculiar situation when overtaken by sickness appears to render peculiarly necessary. They are restricted to a narrow space; they cannot shift their locality; they cannot alter, in any way, the sanitary condition of the vessel; and they are out of the direct reach of civil authority,—all which peculiarities seem to be special reasons, calling for general sanitary regulations."

"A foul ship is not only a centre of disease to those on board, but a source of disease to her neighborhood. From a variety of evidence it appears indisputable that, while the foul state of a ship's hold is the frequent cause of malignant fever to her crew, the air issuing from such a hold, and the cargo taken from it, are capable of p

SANITARY REGUL.
Sanitary Regulations for Seamen.

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that measures be taken to preserve f passengers at sea, and of seamen service.
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occurrence of a single case of fever, and much more the spreading of 
ship; foul and putrid cargoes should be avoided; and every 
between, by proper diet and regimen, to preserve the health 
the seamen and passengers. Sanitary improvement was 
early introduced on board ships, as we shall presently show; and a great number of human lives have consequently been 
saved. In no department of social economy can preventive 
measures have a greater influence. Boards of Health might 
do a good service to humanity, by issuing a simple and judi-
cious code of sanitary regulations for ships.

2 The Introduction to the Statistical Reports on the Health of the Navy, already referred to, (p. 37,) and the Reports of the General Board of Health of England on Quarantine, contain many very valuable suggestions on this subject, to which we refer those interested.
We extract from the latter work (pp. 115-118) an account of one regulation, which has had great influence—

"It is stated that when the system of transportation was first adopted, in some of the ear-
lir voyages half one-half of those who embarked were lost; later, on the passage to New South Wales, as in the 'Hillsborough,' out of 366 who embarked, 100 were lost; and in an-
other ship, the 'Atlas,' out of 175 embarked, 61 were lost. Yet there were no omissions 
palpable to common observation, or which could be distinctly proved as matter of crimina-
tion, to which responsibility might be attached. The shippers were no doubt honorable men, 
chargeable with no conscious designs against the lives of the human beings committed to 
their care, and with no unusual omissions; but their thoughts were directed by their interests 
exclusively to profit: they got as much freight as they could, and they saw no reason why 
convicts or emigrants should not put up with temporary inconveniences to make room for 
cargo.

"By a simple change, (based on the principle of self interest, the most uniform, general, 
and, when properly directed, really beneficial of all principles of action,) by the short alter-
ation of the terms of the contract, so as to apply the motive where alone there was the effec-
tual means of prevention, by engaging to pay only for those landed alive, instead of paying 
for all those embarked,—these extreme horrors were arrested; the generation of extensively 
mortal epidemics was in a short time prevented, and clean bills of health might have been
XXXV. We recommend that the authority to make regulations for the quarantine of vessels be intrusted to the local Boards of Health.

The seventeenth section of the proposed act contains all necessary authority for making quarantine regulations. Boards of Health in sea-port towns will be able to obtain all needful information regarding their duties, by consulting the works referred to in the appendix, and making such regulations as are adapted to their own peculiar circumstances. The extremely valuable Report of the General Board of Health of England on Quarantine, published last year, is particularly commended. Public opinion on this subject seems to have undergone a great change within a few years past.

XXXVI. We recommend that measures be adopted for preventing or mitigating the sanitary evils arising from foreign emigration.

This recommendation involves one of the most momentous, profound, and difficult social problems ever presented to us for solution. When carefully examined, that the view presented i to the extent to which the principle of pecuniary responsibility has been applied to the transport of pauper emigrants, with complete success, as far as the experiment has been made; affording a result which stands out in strong contrast with the horrible events on board vessels where this principle has not been applied.

There is strong reason to believe, from recent experience, that the general adoption of this principle in its full extent would do more to meet the formidable difficulties of these emigration ships, than the best devised system of inspection in the absence of this principle."
ARY REPORT.

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ations of vessels be intrusted to the local
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lating to making such regulations as are
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last year, is particularly commended.

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sanitary evils arising from foreign
emigration, involves one of the most momentous,
ial problems ever presented to us for
solution. When carefully examined with its attendant circum-
stances, the view presented is startling and sickening. Every
man in whose veins courses any puritan blood, as he looks
back upon the events of the past, or forward to the hopes of
the future, is appalled and astounded. Public attention has
been frequently called to this most important matter. We de-
sire again to present the subject, with a special view to its
sanitary relations. And we earnestly hope that the few facts
which we shall now give, even if they come in the shape of
figures and statistics, will arrest notice and careful considera-
tion. In making an application of these facts and statements,
it should be recollected that they are made concerning classes.
There are individuals who are highly worthy, and are not ob-
noxious to the general character of the whole class.

The Report on the Census and Statistics of Boston, for 1845,
first gave the birth-place of the inhabitants, and stated that the
foreigners and their children were then 37,289, or 32.61 per-
cent. of the whole population; and that there arrived in Bos-
ton, during the nine years previous, 50,000 alien passengers,—
33,436 by water, and the remainder by land, increasing annu-
ally from 1,262, in 1838, to 8,550, in 1845.

From the facts we have since collected it appears that 15,504
arrived by water, in 1846; 24,245, in 1847; 25,042, in 1848;
and 34,873, in 1849, making 99,658; and that others arrived
by land sufficient to make the whole number equal to 125,000
within the last four years.¹

¹ "I have boarded," in 1849, says Mr. Monroe, Superintendent of Alien Passengers, "ten
hundred and seventeen vessels, in which were brought the following numbers:

| Number of those who had been in the State before | - | - | 3,912 |
| Number for which bond have been taken | - | - | 2,998 |
| Number for which head money has been received | - | - | 11,046 |
| Number for which no security or tax has been received, as per decision of | - | - | 16,815 |
| Supreme Court | - | - | - |
| Total | - | - | 34,873 |

The foregoing passengers were from the following ports, in such vessels as is hereunto
annexed, viz.:

| In 32 English vessels from Liverpool | - | - | 4,037 |
| In 41 English vessels from Ireland | - | - | 4,341 |
| In 555 English vessels from the Provinces | - | - | 5,191 |
| In 69 American vessels from Liverpool | - | - | 13,350 |
| In 9 American vessels from Ireland | - | - | 1,510 |
| In 69 American vessels from the Provinces | - | - | 4,682 |
| In 133 American vessels from all other ports | - | - | 1,782 |
| Total | - | - | 21,204 |
| | - | - | 34,873 |
SANITARY REPORT.  

We estimate the increase of the population of Boston, during this period, at about 23,000; and that the whole of this increase was of foreigners. The American residents are believed to be no more numerous now than in 1845.  

Of 1,133 intentions of marriage entered by the City Registrar, in Boston, from July 12th, when the record commenced, to December 31, 1849, the foreigners were 621, or 55 per cent.; and the Americans only 45 per cent. The actual marriages show a still greater proportion of foreigners.  

Of 5,031 children born in Boston, in 1849, and returned to the Registrar's office, 3,149, or 62 per cent., were the children of foreigners, and 38 per cent. only, of Americans.  

Boston has paid on the average, for the last four years, about $1,100,000 taxes; of this sum, $350,000 per annum is for the benefit of the public schools; and half of that sum, or $175,000, for the education of children of foreign parents, most of whom contribute little or nothing to the public expenses, in taxation or otherwise. And in many cases the admission of great numbers of these children excludes children of American parents.  

The City Marshal of Boston estimated, in January, 1849, that there were 1,500 truant and vagabond children in the city, between the ages of 6 and 16 years, who, from neglect and bad habits, were unfit to enter the public schools; and of 1,066 whom he actually enumerated, 963, or 90.3 per cent., were foreigners, and 103, or 9.7 per cent., only, were Americans!  

The Boston Society for the Prevention of Pauperism, in their office for providing employment for females, have received, during the last five years, applications for employment from 15,697 females, of whom 14,044, or 90 per cent., were foreigners, and 10 per cent. only were Americans.  

*The principal part of those arrived are Irish laborers, say three fourths, and the balance from all nations, of all professions and occupations.*  

*The condition of the passengers, so far as relates to their health, (notwithstanding the cholera has been among them to some extent,) has been better than the two preceding years, but their poverty is full up to the usual standard. Not only have large families of children been sent for by their parents, who have managed to get money sufficient to pay their passage to this country, but many orphan children and paupers, of the most unfortunate kind, assisted (by their landlord) to this country, and will very soon become inmates of our public institutions,—in fact, many are already there.*  

*While this sheet is passing through the press, the State census of the City has been published; and it appears that the population is now 138,788,—of whom 63,320, or 45.62 per cent., were foreigners. This proves the correctness of the above estimate, and shows a decrease of 1,879 Americans, and an increase of 26,031, or 13 per cent., of foreigners.*  

The whole number of paupers in the county of Suffolk, for the year 1849, was 2,765, in 1838; showing an increase of 1 per cent. In the last 11 years, a large number have been committed, at an expense, beside all from them, of $737,564.  

The city of Boston is the largest extensive jail, at an expense of $441,600, are unnecessary for the native inhabitants, the public buildings would have been increased by the intake of foreigners.  

Of 1,170 dramshops in Boston, 70 per cent., were kept by foreigners. More than three fourths of the leaders and police in Boston, and nearly all commitments to the county jail, and to the state and municipal courts, were of foreigners.  

There have been commitments to the county jail, at an expense of $441,600, of 2,348, or 63 per cent., were of foreigners. The mere number of foreign paupers, during the last eight years, 10,253, or 41 per cent., were of foreigners. The increase among the foreign population, of the native inhabitants, has not increased.  

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Boston estimated, in January, 1849,
t and vagabond children in the city,
ad 16 years, who, from neglect and
enter the public schools; and of 1,066
ated, 963, or 90.3 per cent., were
7 per cent., only, were Americans!
the Prevention of Pauperism, in their
loyment for females, have received,
rs, applications for employment from
m 14,044, or 90 per cent., were for-
ly only were Americans. And at the
ved are Irish laborers, say three fourths, and the balance
ed occupations.
ns, so far as relates to their health, (notwithstanding the
extent,) has been better than the two preceding years,
ual standard. Not only have large families of children
have managed to get money sufficient to pay their pas-
ian children and paupers, of the most unfortunate kind,
country, and will very soon become inmates of our public
ly there.3
ough the press, the State census of the City has been pub-
ation is now 120,700,—of whom 63,520, or 52.62 per
the correctness of the above estimate, and shows a de-
crease of 26,031, or 13 per cent., of foreigners.

EFFECTS OF EMIGRATION.

male employment office, of 8,602 applicants, 5,034, or 58 per
cent., were foreigners.
The whole number of persons relieved as paupers in the
county of Suffolk, for the year 1849, was 7,728,—of whom
4,549, or 58 per cent., were foreigners; and their proportion of
the whole expense of $103,716, was over $60,000. The num-
ber of paupers in the whole State was 24,892,—of whom
10,253, or 41 per cent., were foreigners, and their proportion of
the whole expense of $441,675, was $182,311.
The number of foreign paupers was 7,413, in 1848, and only
2,765, in 1838; showing an increase in 10 years of 268 per
cent. In the last 11 years, 42,928 foreigners have been assisted,
at an expense, beside all money which has been received
from them, of $737,564.
The city of Boston is this year building a large house at
Deer Island, for paupers, at an expense of $150,000; and an
extensive jail, at an expense of 5 or $600,000; both of which
are unnecessary for the native population! The existing pub-
building would have been sufficient but for the great in-
crease of foreigners.

Of 1,170 dramshops in Boston, in June, 1849, over 800, or
70 per cent., were kept by foreigners.
More than three fourths of all the arrests by the night watch
and police in Boston, and nearly three fourths of all the com-
mitments to the county jail, and of the cases before the police
and municipal courts, were those of foreigners.

There have been committed to the house of correction in
Boston, during the last five years, 3,737 persons,—of whom
2,348, or 63 per cent., were foreigners, and 37 per cent. Amer-
icans; and, in the last year, the proportion of foreigners was
very much larger. And in the whole State, during last year,
the commitments were 3,035,—of which 1,770, or 58 per cent.,
were of foreigners. The increase of crime has been very great
during the last eight years, but it has been almost entirely
among the foreign population. Notwithstanding the increase
of the native inhabitants, the number of commitments among
them has not increased.

About one third of all the inmates of the State prison, for
the last twenty years, have been foreigners. And the State has appropriated $100,000, this year, for the erection of an additional building for the reception of prisoners, which would have been unnecessary were it not for the great increase of foreign criminals.

In the Boston Lunatic Hospital, 327 inmates were received, from the time it was opened, in 1839, to 1845, of whom 160, or 48.93 per cent., were foreigners.

For the nine years, 1837-1845, inclusive, the Boston Dispensary had under its care 21,908 cases; of these, 15,522, or 70.56 per cent., were those of foreigners and children of foreigners, and 1,876 only of Bostonians, And during the year ending September 30, 1849, it had 3,950 cases,—of which 3,487, or 88 per cent., were those of foreigners, and 463, or 12 per cent., only were those of Americans.

At the Boston almshouse establishment, on Deer Island, 4,816 persons were admitted, from the time it was opened, in 1847, to January 1, 1850, of whom 4,661, or 97 per cent., were foreigners; and 155, or 3 per cent. only, were Americans. The number who were sick when admitted were 4,069, of whom 759 have died; 402 remained January 1, 1850, of whom 369 were foreigners, and 33 Americans.

In 1849 there died of cholera, in Boston, 707 persons, of whom 572, or 81 per cent., were foreigners; and 135, or 19 per cent. were Americans; 43 only were Bostonians.

5,079 persons died in Boston in 1849, of whom 2,982, or 59 per cent., were foreigners.

Similar facts might be multiplied; but if these will not command attention, it would be a work of supererogation to go farther.

As long ago as 1834, the commissioners for revising the poor laws of England, among other measures, "recommend that the vestries of each parish be empowered to order the payment, out of the rates raised for the relief of the poor, of the expenses of the emigration of any persons having settlements within their parish."1 This recommendation was embodied in the 62d section of the Poor Law amendment act,2 and there

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1 Report of Commissioners on Poor Laws, 1834, p. 357.
2 First Report of Poor Law Commissioners, p. 94.
BY REPORT.

been foreigners. And the State this year, for the erection of an ad-
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uld be a work of supererogation to go
he commissioners for revising the poor
The State should pass suitable laws on the subject, and the
general and local Boards of Health should carefully observe
these evils in all their sanitary bearings and relations. We
would, however, suggest,—

1. That emigration, especially of paupers, invalids, and

is no doubt, that, in very many instances, it has been carried
into practical operation. Some poor-houses have been em-
tied, and their inmates have been transported to America,—to
Massachusetts! The stream of emigration has continued to
increase, and seems to gain a new accession of strength in
every passing year. Massachusetts seems to have resolved
itself into a vast public charitable association. Into her instit-
tions are admitted the emigrant pregnant woman at her
lying-in; the child to be nursed and educated; the pauper to
be supported; the criminal to be punished and reformed; the
insane to be restrained and cared for; the sick to be nursed
and cured; the dead to be buried; the widow to be comforted;
the orphan to be provided with a substitute for parental care;
and here ten thousand offices of social and personal kindness
and charity, not recognized by the public laws of the State,
costing thousands upon thousands of dollars, are bestowed.
The doors of these great institutions have been thrown wide
open; the managers of the pauper-houses of the old world, and
the mercenary ship-owners who ply their craft across the
Atlantic and pour their freight freely in, each smile at the
open-handed, but lax system of generosity which governs us,
and rejoice at an opportunity to get rid of a burden, or
make a good voyage. And a yet greater calamity attends this
monstrous evil. Our own native inhabitants, who mingle
with these recipients of their bounty, often become themselves
contaminated with diseases, and sicken and die; and the
physical and moral power of the living is depreciated, and the
healthy, social and moral character we once enjoyed is liable
to be forever lost. Pauperism, crime, disease and death, stare
us in the face.

We will not attempt to suggest a remedy for this most preg-
nant anomaly. It requires to be more carefully studied, and
more thoroughly surveyed than the present occasion allows.
The State should pass suitable laws on the subject, and the
general and local Boards of Health should carefully observe
these evils in all their sanitary bearings and relations. We
would, however, suggest,—

1. That emigration, especially of paupers, invalids, and
criminals, should, by all proper means, be discouraged; and that misrepresentation and falsehood, to induce persons to embark in passenger-ships, should be discountenanced and counteracted.

2. That ship-owners and others should be held to strict accountability for all expenses of pauper emigrants, and that existing bonds for their support should be strictly enforced.

3. That a system be devised by which all emigrants, or those who introduce them, by water or by land, should be required to pay a sufficient sum to create a general sinking fund for the support of all who may require aid in the State, at least within five years after their arrival.

4. That such a description of each emigrant be registered as will afford the means of identification of any one, at any time, and in any place, within five or more years after arrival.

5. That encouragement be given to emigrate from places in this State, where there is little demand for labor, to other places; and that associations be formed among the emigrants for settling on the public lands of the United States.

6. That efforts be made, by all proper means, to elevate the sanitary and social condition of foreigners, and to promote among them habits of cleanliness and better modes of living.

7. That our system of social and personal charitable relief should be revised and remodeled, and that a general plan be devised which shall bring all the charities of the city, county and state, under one control, and thus prevent injudicious almsgiving and imposition.

8. That an establishment for paupers, including a farm and workshops, be formed in each county in the State, to which State paupers might be sent, and where they should be required to labor, as far as practicable, for their support.

II. SOCIAL AND PERSONAL MEASURES RECOMMENDED.

Most of these recommendations may be carried into effect without any special legislative authority, State or municipal.

XXXVII. WE RECOMMEND that a sanitary association be formed in every city and town in the State, for the purpose of collecting and diffusing in personal health.

The subject of sanitary is few minds, in this country, examine it, to see its bearing on the welfare of humanity. Those, however, who may wish to form such a jointed form of a constitution. Sanitary Association existed and a Branch Sanitary Association for the State, they might do much in collecting and diffusing useful information with the public authorities, duties comparatively more easily be thus be secured to the cause; and associations for the accommodation of the poor, be formed in every city and town in the State, for the purpose of sanitary inquiries and improvements, and the nature and design of sanitary laws, ordinances and regulations. Cooperation and assistance, in carrying on the works of health and life may be extended, the term of life extended, the greatest possible amount of physical and mental benefit may be secured to the cause.

XXXVIII. WE RECOMMEND that a sanitary association be formed in every city and town in the State, for the purpose of collecting and diffusing in personal health.

This association shall be called the Sanitary Association. The object of the association shall be to promote the nature and design of sanitary laws, ordinances and regulations, relating to the sanitary condition of this town, condition of this State and other places, in personal and public health. The association shall meet statedly for the accommodation of the poor, and such other times as the Board of Directors may appoint. The officers of the association shall be chosen at the time when a vacancy shall have occurred; and the Board of Directors. Committees may be appointed to investigate and report shall be made of the proceedings during the term of the Board of Directors. No alteration of this constitution shall be made by the Board of Directors present.
proper means, be discouraged; and falsehood, to induce persons to should be discountenanced and others should be held to strict ses of pauper emigrants, and that sort should be strictly enforced. vised by which all emigrants, or by water or by land, should be um to create a general sinking fund every require aid in the State, at least arrival.
on of each emigrant be registered as notification of any one, at any time, he or more years after arrival.
be given to emigrate from places in a little demand for labor, to other ns be formed among the emigrants ends of the United States.
by all proper means, to elevate the ion of foreigners, and to promote nilness and better modes of living, social and personal charitable relief modeled, and that a general plan be all the charities of the city, county trol, and thus prevent injudicious nt for paupers, including a farm and each county in the State, to which sent, and where they should be re-tractable, for their support.

PERSONAL MEASURES RECOMMENDED. ndations may be carried into effect ative authority, State or municipal. MEND that a sanitary association be town in the State, for the purpose of collecting and diffusing information relating to public and personal health.

The subject of sanitary improvement is comparatively new. Few minds, in this country at least, have as yet been led to examine it, to see its bearing upon the welfare and progress of humanity. Those, however, who have looked at it with any considerable degree of care, have been convinced of its importance; and it only requires to be generally understood to be universally regarded as the great subject of the age. Public opinion needs to be educated, and in no way can it be more effectually done than by associated effort. If a Metropolitan Sanitary Association existed in Boston, as a central agency, and a Branch Sanitary Association in every city and town in the State, they might do much to effect this object, by collecting and diffusing useful information; and, by their cooperation with the public authorities, render the discharge of their duties comparatively more easy. Inestimable benefits might thus be secured to the cause and to the people. To aid those who may wish to form such associations, we suggest the subjoined form of a constitution: 1

XXXVIII. We recommend that tenements for the better accommodation of the poor, be erected in cities and villages.

1 I. This association shall be called the —— [here insert the name of the place] Sanitary Association.
II. The object of the association shall be,—1. To institute and promote local and personal sanitary inquiries and improvements. 2. To correct misconception and misrepresentations of the nature and design of sanitary measures. 3. To promote the passage of useful laws, ordinances and regulations, relating to public health. 4. To aid the public authorities, by cooperation and assistance, in carrying them into effect. And 5. To collect and diffuse, by personal intercourse, public lectures, printed works, or otherwise, information, especially as to the sanitary condition of this town and its inhabitants, and generally as to the sanitary condition of this State and other places, and their inhabitants; so that among all persons the laws of health and life may be better understood, the causes of disease known and avoided, the term of life extended, the vital force and productive power increased, and the greatest possible amount of physical and sanitary happiness enjoyed.
III. Any subscriber paying —— annually shall be a member for one year; and any subscriber paying —— at any one time shall be a member for life.
IV. The officers of the association shall be, a president, vice president, secretary, treasurer, and auditor, who shall be chosen at the stated meeting in January, or at any other time when a vacancy shall have occurred; and who together shall constitute the Board of Directors.
V. Committees may be appointed to investigate and report upon local or general subjects embraced in the objects of the association.
VI. The association shall meet stedially on the second Thursday of each month, and at other times as the Board of Directors shall appoint. At the meeting in January a report shall be made of the proceedings during the next preceding year.
VII. By-laws for the more particular government of the association may be made by the Board of Directors.
VIII. No alteration of this constitution shall be made, except at a stated meeting, on recommendation of the Board of Directors, and by a vote of two thirds of the members present.
The condition of dwelling-houses has a most intimate and important relation to the health of the inmates; and there is no doubt that the diseases of the laboring classes and the poor, are often produced and accelerated to fatal results, from defects in these respects, which are removable.

In 1846, a meeting of the citizens of Boston was held, and a valuable “Report of the committee on the expediency of providing Better Tenements for the Poor,” was adopted and published. After stating many interesting particulars relating to the subject, the committee came to the conclusion:

“1st. That property invested in well-constructed and well-situated houses, to be leased to the poorer classes of tenants, by apartments and by the week, is as safe as any other real estate excepting the best, and far more so than the average.

“2d. That it yields as much as any real estate which is equally safe.

“3d. That, by putting a portion of his funds into such buildings, the capitalist may confer an immense benefit on his fellow-citizens, which must soon react upon himself or his children.

“4th. That he would thereby incur no risk of doing a collateral injury, such as, in many forms of charity, goes so far to offset the most obvious benefits.”

And they recommend to accomplish such an object:

“1st. To form a company to hire buildings and let rooms to poor tenants under direction of a paid agent; and

“2d. To take such steps as may seem to them best, by the establishment of chartered or private companies, to procure the construction of large, well-fitted buildings, especially designed for the use of such tenants.”

Wishing to learn what had been done, and how far the experiment had succeeded, we addressed inquiries to Stephen H. Perkins, Esq., of Brookline, the author of the Report above referred to, and obtained from him the communication which appears in the appendix. We have also given, immediately following that communication, extracts from the able Report of Dr. Simon, “On the sanitary condition of the city of London,” presented November 6, 1849. These documents afford much interesting information on this question, and we particularize them and give them general attention. We invite the patronage of the wealthy, who, after having raised the public sanitary sentiment, “cast their bread on the waters” again.

XXXIX. WE RECOMMEND \[wash-houses be established in the cities and towns of the United States \]

Within the last few years, the interest and sanitary benefit of the poor in the establishment of public bathing-houses has been shown. Duncan, the Medical Officer of the Board of Health of the city of New York, has the honor of originating this institution, which was opened in 1845, and one was erected there in 1847. The establishments show that the public is increasing in their comprehensive and extensive character. In the year ending August 31, 1849, the receipts were $1,230 4s. 11d.; the number of doz. washings amounted to 104,661; and the number of doz. washings was 372,553. Mr. Dr. Duncan, the Medical Officer, whose kind attention we are happy to acknowledge, has just furnished us with the following report:

During the year 1848, the number of persons who availed themselves of these institutions in that city was nearly, but not quite, equal to the population of the city, and the number of doz. washings amounted to 1,046,920; the number of doz. washings was 1,046,920. Mr. Dr. Duncan, the Medical Officer, whose kind attention we are happy to acknowledge, has just furnished us with the following report:

The example of Liverpool has been followed by many other places in Great Britain. Dr. Simon, the Medical Officer of the city of Liverpool, has just furnished us with the following report:

On the sanitary condition of the city of Liverpool, September, 1849, there had been
EXPANDING THE INFRASTRUCTURE AND SERVICES FOR THE POOR IN GREAT BRITAIN

BATH-HOUSES AND WASH-HOUSES

XXXIX. WE RECOMMEND that public bathing-houses and wash-houses be established in all cities and villages.

Within the last few years, a new movement for the general and sanitary benefit of the poor has been made, in the establishment of public bathing-houses and wash-houses. Liverpool has the honor of originating the idea, and of erecting the first institution, which was opened the 28th of May, 1842. A second one was erected there in 1847. The statistics of these two establishments show that the public patronage has been annually increasing from their commencement, and that, during the year ending August 31, 1849, the number of baths taken was 104,691; the number of dozen clothes washed, 120,875; the receipts were £1,230 4s. 11d., and the expenses £1,392 17s. Dr. Duncan, the Medical Officer of Health of Liverpool, to whose kind attention we are much indebted, wrote us on the 4th of December last:—"You will observe that the income nearly, but not quite, equals the expenditure; but so well satisfied are the town council of the benefits conferred on the working classes by these establishments, that they have recently decided to erect six additional baths and wash-houses in different districts of the borough, at a cost of £25,000. The land for four of these buildings is purchased, and one of them is now in course of erection. This will contain two plunge baths, one 42 by 27 feet, and the other 39 by 27 feet; 49 dressing boxes, 87 washing halls, 8 infected washing halls, 10 first class private baths, and 33 second and third class."

The example of Liverpool has been followed in many other places in Great Britain. Dr. John Robertson, of Manchester, furnished us with the following facts concerning a portion only of these institutions in that city. In three years, ending September, 1849, there had been given 79,408 baths, of which afford much interesting information on the present state of this question, and we particularly commend them to public and general attention. We recommend the subject as worthy the patronage of the wealthy and philanthropic, as a means of raising the public sanitary condition of cities. Those who "cast their bread on the waters" in this way give to receive again.
SANITARY REPORT.

30,242,—27,626 for men, 2,616 for women,—were of the first class; and 49,166,—43,377 for men, and 578 for women,—were of the second class. There had been 16,907 washers, and 594,294 dozen articles washed. The receipts had been £1,227, and the expenses £1,194, leaving a balance in their favor, for the three years, of £33.

Dr. Simon, of London, says, in his report, already referred to, that "the committee for promoting the establishment of baths and wash-houses, having Sir H. Dukinfield for its chairman, and including in its number, with other influential persons, several members of this corporation, founded, at great pains and expense, a model institution at Goulston Square, Whitechapel. In spite of many circumstances conspiring to render this first and experimental establishment particularly expensive, it has more than supported itself by the small payments of the poor; and its arrangements are sufficiently extensive for it to have given on one day as many as 932 baths. This fact having occurred in the first year of its establishment, shows how much the poor must have appreciated the additional comfort placed within their reach; and I may add, that, from the first opening of the building, the annual receipts have been progressively on the increase. Somewhat earlier, and under the influence of the same parent committee, though specially directed by a branch committee, a similar establishment was founded in George St., Euston Square. During the year 1848, the number of payments made here for bathing was 111,788; the number of payments for washing in the laundries, 246,760. This establishment has not only proved self-supporting, but has been enabled to accumulate a large surplus, which is now being applied to enlarge and improve the building. At Glasshouse Yard, near the entrance to the London Docks, there has been founded, on the same model, a small establishment of free baths and wash-houses for the destitute poor. It was opened in May, 1845. In its first year, the baths given amounted to 27,662; the usings of the laundry, to 35,840; and its total working expenses were covered by £378.

"No language, however eloquent, no comment, however instructive, could equal the significance of the figures which I have cited, as illustrating the great utility of these institutions; and, as regards their pecuniary advantage, if anything, the figures which I have recently, out of the poor fund, been able to accumulate, for the destitute poor, at the Glasshouse Yard, would have been still greater if the washing has continued as it did in the first year. Having in view the advantages which the poor are enabled to derive from these institutions, you will hardly doubt that the guardians of the poor have been justified in devoting to them a portion of the public funds which were available for the purpose. That the poor, being enabled to indulge in the comforts of cleanliness which such institutions provide, is a matter which none can deny. That the removal of the long and offensive accumulations of impurities from their bodies, is a benefit which is appreciated by all. But I must add, that the advantages which should especially be sought for are those which the poor are enabled to derive from such institutions, without setting aside the comforts of their bodies, without incurring the dangers of any increased expense of water supply, and only with an unlimited water supply. The public are well aware of the most admirable complemen
tary of such facilities, must often have suffered from the lack of such facilities, must often have suffered from the limitation of the number of persons who can use the ordinary baths; the former of the latter.

"In the sanitary point of view, much on the advantages which have been referred. You will hardly doubt that the poor are enabled to indulge in the comforts of cleanliness which such institutions provide, is a matter which none can deny. That the removal of the long and offensive accumulations of impurities from their bodies, is a benefit which is appreciated by all. But I must add, that the advantages which should especially be sought for are those which the poor are enabled to derive from such institutions, without setting aside the comforts of their bodies, without incurring the dangers of any increased expense of water supply, and only with an unlimited water supply.
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and, as regards their pecuniary success, it is impossible to fur-
nish you with better testimony than is comprised in the fact,
that the guardians of the poor in a great metropolitan parish
have recently, out of the poor-rates, founded an institution
of this nature. They have become witnesses to the financial
economy of that sanitary and social boon. In their establish-
ment, which is not only self-supporting but amply remunerative,
the poor are enabled to have baths at an expense of a
denny for a cold and two pence for a warm bath; and the
women are enabled to do their washing, ironing, and drying,
with an unlimited water supply, and with other arrangements
of the most admirable completeness, at an expense of only two
pence for the first two hours during which they occupy the
separate chambers allotted to them. A very considerable pro-
portion of the expense is covered by the receipts for baths giv-
en at the higher price of six pence, and with some additional
luxuries, to persons of a higher grade in society than those who
use the ordinary baths; the former, though used by a different
class of persons, being sought with almost as much avidity as
the latter.

"In the sanitary point of view, I probably need not insist
much on the advantages which these establishments have con-
ferred. You will hardly doubt how good and wholesome a
thing it has been for so many thousands to have had the means
of cleansing their bodies and their clothing, who, in the absence
of such facilities, must often have carried about their persons a
long and offensive accumulation of dirt and sweat."

A movement was made by the city of New York to estab-
ish these institutions, and a valuable report on the subject,
submitted to the Board of Aldermen, May 29, 1849, has been
published. An act of incorporation was obtained from the
legislature; but how far their proposed measures have been
carried into effect we are not informed.

In Boston there are twelve or more bathing establishments,
owned by individuals, who charge twenty-five cents for ad-
mission. At the Eolian Baths in Washington Street, fitted up in
excellent style, those on Cragie's Bridge, and those on Warren
Bridge, twelve and a half cents is charged. These establish-
ments are much frequented, and, on a single Saturday night, 200 bathers are known to have been admitted to one of them. The sanitary advantages which would result to all, and especially to the poorer classes, by a more extended practice of bathing, have often been subjects of discussion. On the 7th of January, 1850, Dr. Samuel Cabot, Jr., read before the "Society in Aid of Social Improvement," a report on the subject, which was published. The Boston Bathing and Wash-house Company was incorporated, March 11, 1850, for the purpose of establishing bath and wash-houses in different parts of the city; and this organization, it is believed, if properly conducted, will serve all the purposes designed by such establishments.

XL. We recommend that, whenever practicable, the refuse and sewage of cities and towns be collected, and applied to the purposes of agriculture.

The refuse and sewage of cities and villages are of great value as manure; and plans have been devised abroad to collect and apply them for agricultural purposes. Companies have been formed, estimates made, and experiments tried, to test their value, and to devise the best means by which they might be used. As to their great value all agree; but the different plans of collecting and distributing them, seem not as yet so fully tested as to warrant a recommendation of any particular one in preference to others. We insert some extracts from different works, and recommend the subject to the careful examination of those interested. Public urinals and public privies should be erected in every populous city and village, and placed under regulation of public authority, for the purpose of convenience, economy, and health.

The value of manures as promoters of vegetation is known to result from their possession of the essential element, nitrogen, in the form of ammonia, with the subordinate properties of alkalies, phosphates, and sulphates. Now the experiments of Boussingault and Liebig have furnished us with the means of estimating the quantity of nitrogen contained in the excrements of a man, during one year, at 16.41 lbs., upon probable data, and also that this quantity is sufficient for the supply of 800 lbs. of wheat, rye, or oats, or of 900 lbs. of barley. 'This

is much more,' says Liebig, 'acre of land, in order to obtain nitrogen absorbed from the air. By adopting a systematic collection and farm might thus supply its soil with nitrogen from the excrements. By using, at the increased ashes of wood, animal and vegetable substances containing the most necessary phosphates. By using, at the same time, the excrements are treated in a proper degree of moisture without permitting them to be put into such a form as will carry them even to great distances.' Mallock, assuming the reduced quantity produced by the population of London, and allowing for the rough calculation, the manure would thus be to supply the growth of wheat, rye, or oats, or of barley. 'This vast quantity of manure, (reduced by assuming the nitrogen thus required to be equal to the supply of bread per diem for every one of the population of London, or 600 lbs. of wheat to the average of 600 lbs. of wheat per diem, the manure would thus be to supply the growth of wheat, rye, or oats, or of barley. 'This vast quantity of manure, (reduced by assuming the nitrogen thus required to be equal to the supply of bread per diem for every one of the population of London, or 600 lbs. of wheat to the average of 600 lbs. of wheat per diem, the manure would thus be to supply the growth of wheat, rye, or oats, or of barley. 'This vast quantity of manure, (reduced by assuming the nitrogen thus required to be equal to the supply of bread per diem for every one of the population of London, or 600 lbs. of wheat to the average of 600 lbs. of wheat per diem, the manure would thus be to supply the growth of wheat, rye, or oats, or of barley. 'This vast quantity of manure, (reduced by assuming the nitrogen thus required to be equal to the supply of bread per diem for every one of the population of London, or 600 lbs. of wheat to the average of 600 lbs. of wheat per diem, the manure would thus be to supply the growth of wheat, rye, or oats, or of barley.'
d, and, on a single Saturday night, have been admitted to one of them. which would result to all, and espec-
s, by a more extended practice of subjects of discussion. On the 7th
uel Cabot, Jr., read before the “So-
rovement,” a report on the subject,
e Boston Bathing and Wash-house
March 11, 1850, for the purpose of
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it is believed, if properly conduct-
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one year, at 16.41 lbs., upon probable
quantity is sufficient for the supply of
oats, or of 900 lbs. of barley. 'This
is much more,' says Liebig, 'than it is necessary to add to an
acre of land, in order to obtain, with the assistance of the
nitrogen absorbed from the atmosphere, the richest crops every
year. By adopting a system of rotation of crops, every town
and farm might thus supply itself with the manure, which, be-
sides containing the most nitrogen, contains also the most
phosphates. By using, at the same time, bones and the lixiv-
ated ashes of wood, animal excrements might be completely
dispensed with on many kinds of soil. When human excre-
ments are treated in a proper manner, so as to remove this
moisture without permitting the escape of ammonia, they may
be put into such a form as will allow them to be transported
even to great distances.' Making reasonable allowance for the
reduced quantity produced by children, we shall be safe in
assuming the nitrogen thus resulting from any amount of pop-
ulation to be equal to the supply required for affording 2 lbs. of
bread per diem for every one of its members! Or assuming an
average of 600 lbs. of wheat to be manured by each individual
of the population of London, and taking this at two millions
for a rough calculation, the manure thus produced is sufficient
to supply the growth of wheat of a total weight of 1200 mil-
ions of pounds, or 535,714 tons. The total manuring matters,
solid and liquid, produced in a town, allowing for those which
are produced in manufactories and sewage water, are probably
equal in weight to one ton annually for each member of the
population, or two millions of tons produced in the metropolis.
That this vast quantity of manure should be made available
for agricultural production, is a principle which cannot be de-
nied, and which is properly limitable only by the consideration
of expense as weighed against the value of the results. The
expense will be made up mainly of three items, viz.: of the
collection, of the raising, and of the distribution of the refuse
matters.'

"A very reduced estimate of the value, for manure, of the
excreta of human beings, (reduced avowedly for the sake
of gaining public belief,) represents it at 5s. for each person, an-
nually. The value of the produce of the population of Lon-
don would thus be £500,000 per annum. Admitting one-half
of this to be now made available, we shall have the other half, amounting to £250,000, gained by the proposed mode of collection; and adding this to the £134,000 estimated saving, we have a total of £384,000 annually available for the expenses of construction and repair of apparatus, and current cost of collecting, raising and treating the sewage of the metropolis. This sum will endow thirty-eight stations with an annual income each exceeding £10,000, for interest of capital in first construction and current expenses of working and treating. And this number of stations appears fully adequate to realize all the economy of power which can be attained by judiciously providing for several levels in each district of the metropolis."

Mr. Charles F. Ellerman, in his treatise on "Sanitary Reform and Agricultural Improvement," urges two points on this subject:

"1. Any plan is unhealthy, uncleanly, and enormously wasteful, which consigns the excreta of the population to rivers or water-courses.

2. Any plan whereby the refuse of towns is employed to fertilize the country, is seriously defective, unless due provision is made that nuisance and injury to public health shall not arise; that substances pernicious to vegetation shall not be mixed with those which are beneficial to vegetation; that the smallest possible quantity of the latter shall be suffered to escape; and that it shall be saved in such a form as may admit of its being rendered available in any place, and in such a state of dilution or concentration as varying soils, seasons, or other circumstances, may require.

"Of the immense economic value of the preservation of human excreta, when we are sending whole fleets in search of those of birds, [guano,] which consist of precisely the same materials in a less advantageous form, no thoughtful man can entertain a reasonable doubt. Mr. Smith, a well-known agriculturist, rates the average annual value of the excreta of each individual at £1; so that, taking the whole population of Great Britain at twenty-eight millions, we are positively throwing away, every year, that which is equivalent to twenty-eight mil-

1 Dempsey's Drainage and Sewage of Towns and Buildings, pp. 4, 5, and 20.
BY REPORT.

able, we shall have the other half, and by the proposed mode of col-
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lions sterling! The actual saleable value in Belgium of the excreta is 37 shillings for each individual.” There may be ex-
travagance in this estimate; but, according to Dr. Playfair, a pound of urine is capable of increasing the production of grain by an equal weight; so that, even allowing for some exaggeration, the human urine at present wasted in this country would serve to produce more than all the grain required for the consumption of the entire population.”

“It is a law of nature that the vegetable and animal king-
doms should be, as it were, supplementary the one to the other. Animals, by breathing air, load it with carbonic acid, and render it noxious to themselves; while vegetables absorb the acid gas, and give out oxygen in its stead, and thus supply the animal kingdom with vital air. Then again, whatever elements an animal takes from the soil as food, it returns again to the earth in a different form, noxious to itself, but nevertheless furnishing to the vegetable kingdom abundant and wholesome nourish-
ment. It is thus that the organic elements complete their circuit in living beings. Nothing is lost, it is only reproduced in another form. These principles lie at the root of the whole science of agriculture, while they constitute the basis of all economical sanitary arrangements.

“The principle has been long admitted, and to a certain ex-
tent acted upon, that the refuse of a town, when applied to agricultural purposes, has some money value; but there seems, with few exceptions, to have been no approximation even to an adequate estimate of that value. It is stated in Dr. Play-
fair’s report, made in 1844, that the amount obtained by the sale of the town manure of Manchester was £800 per annum; and in Liverpool it produced £1,150; while at Rochdale it was only worth £18 10s. In some of the Scotch towns these things are managed better. The cost of cleansing Edinburgh is £12,000 pounds a year, and the manure, which is public property,—as it ought to be in all towns,—sells for £10,000 per annum. At Perth and Aberdeen the manure pays the whole cost of cleansing, and returns, in addition, an annual revenue of £430 to the former town, and £600 to the latter.

The whole of the rich and beautiful country extending from Gravelines to Ostend, originally consisted of a barren, sandy waste, which has, in the course of ages, been converted into a garden by the continued application of manure brought from a distance.

"The instances given above show, in all probability, the most that has been made of solid town manure. It is expensive to collect and remove, as well as to distribute over the land, and a good deal of the weight and bulk of it is unproductive; while in all towns where cesspools exist, the best part of the manure sinks into the subsoil or evaporates into the atmosphere, so as not only to be a loss to the public, but a serious cause of disease. Common sense, therefore, as well as economy, would point out the necessity of having a perfect system of sewers for every house, court, and street, so as to convey away all the manure in a liquid form, diluted with water. It should never be mixed with coal-ash and cinders, which ought to be removed separately. Now this liquid manure, sewer water, which at present poured into our dock-basins, as a nuisance to be got rid of, might be made a source of great wealth to the town. If by any means it could be brought in contact with the barren soils in the neighborhood, it would cover them with the most luxuriant vegetation. Fortunately this is not a matter of mere speculation. It has been in operation for many years, and we are much mistaken if the practice does not become universal, so far, at least, as circumstances will permit.

The sewer water of several of the towns in Devonshire is employed for the purposes of irrigation, particularly at Ashburton, where it has been so applied for above forty years. The meadows are deep drained, to prevent any stagnation, and the sewer water is thus allowed to pass off as soon as it has given its nutritious principles to the grass. Land which is not under this irrigation yields a coarse herbage, with rushes; but after the application of the liquid manure it grows the finer and more nutritious grasses in abundance, and there is a crop for ewes and lambs fully a month earlier than in other situations not similarly circumstanced. The value of unimproved land is from 30s. to 40s. an acre, but after irrigation it is worth from £8 to £12 per acre. We have proof of the value of the method employed.

"The whole of the sewer 150,000 inhabitants, is distributed over a tent of meadow land, which during the summer months is irrigated by the sewer water, which is poured into the meadows for stable feeding. The meadows are mown for hay in May and April, for stable feeding; but after the application of the liquid manure, they furnish abundant pasture for the winter irrigation. These lands are worth three crops of hay each year. The meadows are deep drained, to prevent any stagnation, and the sewer water is thus allowed to pass off as soon as it has given its nutritious principles to the grass. Land which is not under this irrigation yields a coarse herbage, with rushes; but after the application of the liquid manure it grows the finer and more nutritious grasses in abundance, and there is a crop for ewes and lambs fully a month earlier than in other situations not similarly circumstanced. The value of unimproved land is from 30s. to 40s. an acre, but after irrigation it is worth from £8 to £12 per acre. We have proof of the value of the method employed.

The most remarkable example of this kind of irrigation is afforded by the neighborhood of Edinburgh. The sewage of the Old Town is received into a system of sewers, and from thence is poured into a considerable quantity of solid matter, which is allowed to flow equally over the land. It is thus allowed to flow equally over the land, and after passing through the subsoil, is used for irrigation. Three kinds of soil are found in the vicinity of Edinburgh, which, in the order of their depth below the surface, are: 1st, a strong loam on a clay subsoil; 2nd, a claysandy loam, which, as it is covered with sea water, is nearly worthless; and 3d, a pure sea sandy loam, which is called "the clay" or "the sea". In the year 1833, the average value of the unimproved land was £38 an acre; and in 1842, as much as £57 per acre was fetched. Mr. Smith, of Deanston, who has made a careful study of the subject, concludes his report on the subject as follows:—

"The practical result of this kind of irrigation is that land, which let formerly at £3 an acre, is now let annually at from £8 to £12 an acre, and the average value of the land, irrespective of the quality of the soil, is now £57 per acre. The sewage is thus a source of great wealth to the town, and the meadows are now deep drained, to prevent any stagnation, and the sewer water is thus allowed to pass off as soon as it has given its nutritious principles to the grass. Land which is not under this irrigation yields a coarse herbage, with rushes; but after the application of the liquid manure it grows the finer and more nutritious grasses in abundance, and there is a crop for ewes and lambs fully a month earlier than in other situations not similarly circumstanced. The value of unimproved land is from 30s. to 40s. an acre, but after irrigation it is worth from £8 to £12 per acre. We have proof of the value of the method employed."
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£8 to £12 per acre. We have here, at all events, a very strong
proof of the value of the manure.

"The whole of the sewer water of Milan, a city containing
150,000 inhabitants, is distributed by channels over a large ex-
tent of meadow land, which it fertilizes to a prodigious degree.
During the summer months the irrigation takes place for a few
hours once a week, and during the winter it is nearly perma-
nent. The meadows are mown in November, January, March,
and April, for stable feeding; and in June, July, and August,
they yield three crops of hay for winter; while in September
they furnish abundant pasture for cattle till the beginning of
the winter irrigation. These lands, after paying land-tax and all
other expenses, yield a net annual rent of eight guineas an acre.

"The most remarkable example, however, of the value of
this kind of irrigation is afforded by certain meadows in the
neighborhood of Edinburgh. A portion of the sewer water of
the Old Town is received into ponds, and allowed to deposit a
considerable quantity of solid matter. From these ponds it is
allowed to flow equally over plots of land, so as to cover them,
and after passing through the soil it is carried off by thorough
drainage. Three kinds of soil have been treated in this way:
1st, a strong loam on a clay subsoil; 2d, a lighter soil nearer
the sea; and 3d, a pure sea sand, without any appreciable mix-
ture of earthy matter, going down to high-water mark. About
300 acres have been irrigated at various times, some for upwards
of 30 years. The productiveness of these meadows is extra-
ordinary. In the year 1835, some of the richest land was let
for £38 an acre; and in 1826, which was a scarce year, as
much as £57 per acre was obtained for the same meadows.
Mr. Smith, of Deanston, who is the highest authority on such
subjects, concludes his report of this most satisfactory ex-
periment as follows:—

"The practical result of this application of sewer water is,
that land, which let formerly at from 40s. to £6 per Scotch
acre, is now let annually at from £30 to £40; and that poor,
sandy land on the sea-shore, which might be worth 2s. 6d. per
acre, lets at an annual rent of from £15 to £20. * * The
average value of the land, irrespective of the sewer water ap-
plication, may be taken at £3 per imperial acre, and the aver-
age rent of the irrigated land at £30, making a difference of £27; but £3 may be deducted as the cost of management, leaving £25 per acre of clear annual income due to the sewer water.  

XLI. **We recommend that measures be taken to prevent, as far as practicable, the smoke nuisance.**

The smoke of furnaces, manufactories, and other establish-
ments, is often a great nuisance to a neighborhood, and is sup-
sposed to be deleterious to health. It corrupts the air, and often renders it unfit for respiration; and all proper and practi-
cable measures should be adopted to prevent the evils which result from it. Experiments have been made in the manu-
facturing towns in England, to construct furnaces and fireplaces so as to burn up the smoke, as fast as produced, and thus pre-
vent its escaping, to become an inconvenience, nuisance, or injury to the inhabitants. These experiments have shown that the arrangement is an economical and practical as well as a sanitary improvement. Less fuel is required when the smoke is burned than when it is permitted to escape unburned. We desire to call the attention of all interested to the subject, as worthy of careful investigation. Several important facts and illustrations relating to this subject may be found in recent English sanitary publications.

XLII. **We recommend that the sanitary effects of patent medicines and other nostrums, and secret remedies, be observed; that physicians in their prescriptions and names of medicines, and apothecaries in their compounds, use great caution and care; and that medical compounds advertised for sale be avoided, unless the material of which they are composed be known, or unless manufactured and sold by a person of known honesty and integrity.**

1 Liverpool Health of Towns Advocate, pp. 60-62.

2 "The smoke nuisance is, perhaps, one of the most gratuitous injuries inflicted on the public, for, in the first place, it is altogether unnecessary, and, secondly, it costs the perpetrators of it a good round sum every year to keep it going. The loss to the public, from excess of washing, &c., which a smoky atmosphere renders necessary, is more than at first sight might appear. Dr. Lyon Playfair has shown, that in this one item Manchester has been expending £250,000 a year, and that, if the expense of additional painting and white-washing be added, the actual money loss would be double the amount of the poor rates every year. The Rev. Mr. Clay states, that in Preston only two furnaces consume their smoke, and even that imperfectly; but were all the factories in town to do as much, the public would save £9,000 a year in extra washing."—Liverpool Health of Towns Adv.

The sanitary effects of nostrums, advertised for sale, is a present day. If the people of such sales, and of the im-
tentions, and the premature death would be astounded. An i-
frequently without regard it means, on the part of the mi-
inclination to do something for suffering, and an unenlighten-
chasers, that what is advertised is a prominent cause of this m-
attracted much public attent-
tance demands; and no plan would be perfect in which it is
good sense in the Transact-
State of New York. On the
was adopted, from which we
"So far as the pecuniary in-
nterest, the vending of secret
it unquestionably greatly incre-
ever such nostrums are used.
ination in this matter for the
members of a humane profes-
withhold our advice, as all ex-
effectual mode of correcting in-
tery, and thus enable an intelli-
truth or falsity; and because we
designed for the relief of phys-
to deprive the world of any kno-
of the means of saving life or
fore we recommend, that all ex-
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be accompanied with the name,
printed in plain and legible En-

On the same day another reso-
"Resolved, that a prize of $100
society for a tract, of not less
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d at £30, making a difference of
ucted as the cost of management,
r annual income due to the sewer

measures be taken to prevent, as

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manufactories, and other establish-
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piration; and all proper and practi-
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ashing."—Liverpool Health of Towns Adv.

The sanitary effects of patent medicines and other nos-
trums, advertised for sale, is one of the greatest evils of the
present day. If the people were aware of the immense amount
of such sales, and of the impaired health, the ruined constitu-
tions, and the premature deaths, which they occasion, they
would be astounded. An insatiable desire to make money,
frequently without regard to the justice or morality of the
means, on the part of the manufacturers and venders, and an
inclination to do something for the relief of real or imaginary
suffering, and an unenlightened belief, on the part of pur-
chasers, that what is advertised as true must be true, are the
prominent causes of this monstrous evil. This matter has
attracted much public attention, but not so much as its impor-
tance demands; and no plan for a sanitary survey of the State
would be perfect in which it was omitted. There is much
good sense in the Transactions of the Medical Society of the
State of New York. On the 7th of February, 1849, a report
was adopted, from which we make the following extracts:—
"So far as the pecuniary interests of our profession is con-
cerned, the vending of secret nostrums is advantageous, since
it unquestionably greatly increases the amount of disease whenever
such nostrums are used. We, therefore, invite no legisla-
tion in this matter for the protection of ourselves, yet, as
members of a humane profession, we do not feel at liberty to
withhold our advice, as all experience has shown that the most
effectual mode of correcting imposition is to divest it of mys-
tery, and thus enable an intelligent community to judge of its
truth or falsity; and because we think, in a humane science,
designed for the relief of physical suffering, it is a great wrong
to deprive the world of any knowledge which one may possess
of the means of saving life or alleviating suffering. There-
fore we recommend, that all articles designed for medical use,
and put up for sale as merchandise, shall be by law required to
be accompanied with the names of the constituents, written or
printed in plain and legible English."

On the same day another resolution was passed:
"Resolved, that a prize of twenty dollars be offered by this
society for a tract, of not less than four nor more than sixteen
pages, which shall most clearly expose the pernicious influence of nostrums and secret remedies, upon the health and morals of the community."

"The time will come when that system of legislation which allows unprincipled men, for their private benefit, to send forth patent medicines under the great seal of the nation, will be seen to be no other than a licensed imposition on the public. Health and life are too valuable to be thus sacrificed. Any man who really believes that he has discovered the means of mitigating human suffering, is bound, by every principle of morality and benevolence, to publish it to the world. The power to do good implies and involves an obligation to do it, and the fact of an attempt to conceal from men that which is represented to be of paramount importance for them to know, is presumptive evidence of want of integrity. The triumph of ignorance over science is the precursor of the downfall of our republic."

XLIII. We recommend that local Boards of Health, and others interested, endeavor to prevent the sale and use of unwholesome, spurious, and adulterated articles, dangerous to the public health, designed for food, drink, or medicine.

The evil suggested in this recommendation is nearly allied to that preceding. It is one of immense magnitude and importance, and exists to an extent greater than has been generally supposed. Prodigious quantities of spurious articles, of food, drink, and medicine, which are highly injurious, are daily palmed upon the public by mercenary and fraudulent manufacturers and dealers. And it is generally conceded that a great amount of disease and numerous premature deaths are thereby produced.

Food is adulterated in various ways. A recent writer enumerates the following purposes of these adulterations:

"1. To make the substance more saleable by improving its appearance, by the addition of some body innocuous or otherwise.

"2. To depreciate its quality, by adding to it some substance which will diminish its real, without altering its apparent strength or general appearance.

"3. "To depreciate its quality, by water, sugar, carbonate of magnesia, sulphur, or other substances. Few of other kinds of food."

"Drink is also very extensively adulterated. Milk is watered, sugar sand, &c."
ADULTERATION OF FOOD. 231

ent strength or general appearance. This is generally a very deadly fraud.

3. "To depreciate its quality by the addition of some simple substance, as water, or, if it be a solid body, as plaster of paris, sand, &c."

Bread is often adulterated with alum, carbonate of ammonia, carbonate of magnesia, sulphate of copper and zinc, &c., to improve its appearance, when made of flour of inferior quality. Butter and cheese are often poisoned with coloring matter. Milk is watered, sugar sanded, and various other intentional frauds are practiced. Unintentional adulterations may also sometimes take place by means of keeping or cooking different kinds of food.

Drink is also very extensively adulterated. It is said that very little of what is sold as champagne wine is made from the juice of the grape, but is a deleterious compound of other substances. Few of other kinds of spirituous liquors go to the consumer in a pure state. It is the opinion of eminent temperance reformers that one of the principal causes of the sad sanitary effects of intemperance arises from the poisonous substances compounded with the pure spirit and taken in the intoxicating cup. Other kinds of more ordinary drink, not intoxicating, and even water itself, may be adulterated and rendered unfit for use.

Drugs and medicines have been adulterated by the foreign producer, manufacturer and dealer, expressly for the American market, and vast quantities of such articles have been imported and sold in this country. Some of our own producers, manufacturers, and dealers, also, have been guilty of a similar fraud. By careful study the properties and mode of operation of the various articles used as medicine have been ascertained, and the intelligent, conscientious, curative physician, can estimate their effect with some degree of accuracy. It is necessary, however, to enable him to do this successfully, that they should be of known purity and strength. If spurious, of inferior quality, or adulterated with other substances, not contained in the genuine article, disappointment follows, and the patient suffers and perhaps dies. This result may happen
SANITARY REPORT.

under the advice of the best curative medical skill, and life may be, and has actually been lost, from some defect existing alone in the medical remedies used. A mere statement of this fact will render obvious the importance of this recommendation.

In some of the governments of Europe no one is allowed to deal in drugs and medicines unless properly educated and licensed for the purpose; and a constant governmental supervision is exercised over all apothecaries, to keep them within the line of their specific duties, and to prevent them from selling articles which may be injurious to health. The system of free trade, and the entire absence of all such supervision in this country, has led many incompetent and fraudulent manufacturers and dealers to enter largely into this kind of business, and a system of imposition and positive evil has been carried on, which, if fully known, would fill the people with astonishment.

The subject was brought to the attention of Congress, and, on the 26th of June, 1848, "an act to prevent the importation of adulterated and spurious drugs and medicines," was passed. Under this act special examiners are appointed to reside in the various ports of entry, to carry the law into execution. Dr. W. J. Bailey, the examiner at New York, has reported that, during ten months ending April, 1849, about 90,000 pounds of various kinds of drugs have been rejected and refused admittance at the custom-house in that city alone! Among these were 16,989 pounds of rhubarb; 3,253 pounds of opium; 34,570 pounds of spurious yellow bark; 12,483 pounds of jalap; 5,058 ounces of iodine, and large quantities of various other articles. It has been said that "more than half of many of the most important chemical and medicinal preparations, together with large quantities of crude drugs, come to us so much adulterated, or otherwise deteriorated, as to render them not only worthless as a medicine, but often dangerous."

We extract from a report on this subject, by Hon. T. O. Edwards, M. D., the following passage:—"That adulterations of medicines, to a very considerable extent, will be carried on in this country, none can deny. Had Congress the power to prevent it, by a general law, it might be avoided. The general

ADULTERATION government has done all in the several states, by special acts that endangers the lives and can believe that adulteration will be practiced by foreigners. The druggists will be engaged in rivalry of business, the pride and nobler motives of human and invention of the dishonest, and the watchfulness of the numerous medical journals, just the protection afforded by this law against frauds by this law, An older and more experienced law and public opinion will prove all medicinal agents imported will give an elevated and capital in our own country, and the protection afforded by this law, against frauds by this law, Are necessary articles."

The Revised Statutes of Missouri provisions of law on the subject are:—

"SECT. 1. If any person sells, diseased, corrupted, or unwholesome meat or drink, without making it known to the buyer, he shall be punished by imprisonment in the county jail for not more than six months, or a fine not exceeding three hundred dollars.

"SECT. 2. If any person, with the purpose of sale, any substance into wine, spirits, malt liquor, or other beverage, with any substance injurious to health, shall be imprisoned in the county jail for not more than six months, or a fine not exceeding three hundred dollars.

"SECT. 3. If any person should sell..."
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that endangers the lives and health of the citizens. No one
can believe that adulterations here would be carried to the ex-
tent practised by foreigners. It is scarcely presumable that all
the druggists will be engaged in a traffic so nefarious. The
rivalry of business, the pride of the profession, and the higher
and nobler motives of humanity, will be equal to the ingenuity
and invention of the dishonest, and will effect its exposure. If
this law be faithfully complied with, the house that sells an
adulterated and spurious medicine must needs have made it;
and the watchfulness of the profession, together with the
numerous medical journals, jealous of the interests and informed
of the rights of the medical profession, will proclaim the fraud.
Law and public opinion will point to the remedy. The law requir-
ing all medicinal agents imported to be pure, and of an acknowl-
edged standard, will give an impetus to the employment of tal-
ents and capital in our own country. Having the advantage
of the protection afforded by the duty, and a further guard
against frauds by this law, American enterprise will soon rival
older and more experienced chemists in the manufacture of
necessary articles.”

The Revised Statutes of Massachusetts contain the following
provisions of law on the subject:—

"Sect. 1. If any person shall knowingly sell any kind of
diseased, corrupted, or unwholesome provisions, whether for
meat or drink, without making the same fully known to the
buyer, he shall be punished by imprisonment in the county jail
not more than six months, or by fine not exceeding two hun-
dred dollars.

"Sect. 2. If any person shall fraudulently adulterate, for
the purpose of sale, any substance intended for food, or any
wine, spirits, malt liquor, or other liquor, intended for drinking;
with any substance injurious to health, he shall be punished by
imprisonment in the county jail not more than one year, or by
fine not exceeding three hundred dollars, and the articles so
adulterated shall be forfeited and destroyed.

"Sect. 3. If any person shall fraudulently adulterate, for the
purpose of sale, any drug or medicine, in such a manner as to render the same injurious to health, he shall be punished by imprisonment in the county jail not more than one year, or by fine not exceeding four hundred dollars, and such adulterated drugs and medicines shall be forfeited and destroyed.”

This act gives sufficient legal authority to prevent the evil. If it be carefully observed, and only those dealers who are properly qualified for their business, and are of known honesty and integrity, receive public patronage, and those of an opposite character are disavowed, and instances of flagrant abuse prosecuted and punished, it may be reasonably supposed that the evil will greatly diminish.

XLIV. We recommend that institutions be formed to educate and qualify females to be nurses of the sick.

It is hardly necessary to commend the importance of good nursing in the cure of disease. Let a physician be ever so skillful, and prescribe his remedies with ever so much care and sagacity, if the nurse does not follow his directions, or if she neglects her duty, or performs it unskilfully, or imperfectly, or with an improper disposition, the remedies will be unsuccessful, and the patient will suffer; and perhaps life is lost as the consequence. On the other hand, let a physician of moderate capacity prescribe with ordinary skill, if his orders are carried into execution by a nurse, who understands, loves, and conscientiously discharges her duty, the patient is relieved, and life is preserved as the consequence. It is thus that bad nursing often defeats the intention of the best medical advice, and good nursing often supplies the defects of bad advice. Nursing often does more to cure disease than the physician himself; and, in the prevention of disease and in the promotion of health, it is of equal importance. Many and many a life, which might have been saved, has been lost in the hands of quack nurses, as well as in those of quack doctors.

In consequence of the great ignorance which generally prevails in regard to the laws of health, and the causes and cure of disease, there are few females or others who are really capable of acting as intelligent nurses. Many, it is true, announce themselves as professional nurses, and many in more private life suppose themselves capable of the duties of a nurse, or the room, and how many lives are ignorant! We have long devises for this imperfection.

In 1836, there was founded in the Rhine, in Prussia, an “Institution for the Education of Nursing Sisters.” Its object was to care for the sick and poor in the neighborhood, and it was erected, into which the females of proper age as well as the nurses and care of the sick. It was a sufficient period of time to acquire the knowledge and practice of their profession, and they were afterwards sent to diffuse the blessings of the to the care of the sick in their own or of private charitable institutions.

Its original object has been to make an immense central institution, fostering benevolence, and promising the future.

To the Rev. Thomas Fliedner, in Kaiserswerth, belongs the institution. He paid a visit to one of this commission had the following extracts:-

“The success which the establishment met with has been very great. In the printed report for 1849, above one hundred and fifty nurses, in different parts of Germany and occupied in twenty-five hospitals. Dresden, Frankfort, Worms, and others. Sometimes, in a large congregation, supporting and nursing them, from their wants to their pastors and
EDUCATION OF NURSES.

In 1836, there was founded at Kaiserswerth, a city on the Rhine, in Prussia, an "Institution of Protestant Deaconesses and Nursing Sisters." Its original object was the care of the sick and poor in the neighborhood of its location. A hospital was erected, into which the sick were admitted, and also such females of proper age as wished to devote themselves to the nursing and care of the sick. Here these females remained for a sufficient period of time to receive a thorough education in the knowledge and practice of the nursing and care of the sick; and they were afterwards sent forth on their mission of mercy, to diffuse the blessings of their superior education wherever their services might be wanted. Some have been employed in the care of the sick in their own homes, others at the expense of private charitable institutions, and others in public hospitals. Its original object has been extended, and it has become an immense central institution, having the highest object of benevolence, and promising the greatest benefits to humanity.

To the Rev. Thomas Fliedner, pastor of a Protestant church in Kaiserswerth, belongs the honor of founding this noble institution. He paid a visit to the United States in 1849, and one of this commission had the pleasure of making his acquaintance. From a notice of the institution, which he furnished, we make the following extracts:

"The success which the establishment at Kaiserswerth has met with has been very great. For, according to the twelfth printed report for 1849, above 115 deaconesses are now at work in different parts of Germany and England. Sixty-six are occupied in twenty-five hospitals and orphan-houses at Berlin, Dresden, Frankfort, Worms, Cologne, Elberfeld, London, etc. Sometimes, in a large congregation, which has no hospital, several of these nurses go about as mothers of the poor and sick, supporting and nursing them in their dwellings, and reporting their wants to their pastors and the overseers."
The hospital at Kaiserswerth has received in these thirteen years about 3,500 patients, of both sexes, and of all religious persuasions, afflicted with divers diseases; many of them were admitted gratuitously.

Some deaconesses have also been educated at Kaiserswerth, for hospitals in Switzerland, France, and Holland; and the calls from many parts of the continent, for deaconesses from Kaiserswerth, are so numerous, that this establishment cannot satisfy them all. It results from the testimonies of the administration and the medical officers of those public institutions, and it is a fact of general notoriety, that wherever these deaconesses have been intrusted with the care of a hospital, a visible change for the better takes place in all departments, and the satisfaction, the gratitude, and the blessings of the patients follow these self-devoted nurses everywhere.

On the fifth of July, 1849, the Rev. Mr. Fliedner brought over, from the parent institution, four of these deaconesses, to the United States, to take charge of an infirmary established in Pittsburg, Pa., by the Rev. Wm. Passavant. It is proposed in this institution, likewise, to qualify other Christian females as deaconesses, to nurse the sick and poor in other American hospitals, congregations, and families. In this way, we trust, the new infirmary at Pittsburg will become, under God's blessing, a centre of light, love, and mercy.

To the Christian reader it will be interesting to know, that the provision for the care of the sick and poor is not the only blessing which the parent establishment diffuses over many lands. It contains also three branch institutions, for other purposes:—First, a seminary, to train young females for infant, day, and industrial schools, which has already educated more than 370 such teachers for different parts of Europe, by the instrumentality of whom many thousands of poor children have been rescued from ignorance and misery, and led to their heavenly Friend. Secondly, an orphan asylum, connected with the mother-house, where twenty-five to thirty orphans of clergymen, missionaries, schoolmasters, &c., are educated by the sisters, in a Christian manner, as nurses, school-mistresses, &c. And third, a branch institution, designed to educate deaconesses for the nursing and moral instruction of female prisoners, which Pastor Fliedner, more than forty years ago, and which has received more than one hundred and eighty poor, deeply-fallen women, has been enabled, by Christian instruction and respectable members of society.

The eminent success which this branch has led to the formation of similar institutions in many parts of the continent of Europe, and in the present notice which appears in the European press, is illustrated by the following statement, to illustrate the effect of a single deaconess in a single parish.

An epidemic nervous fever having broken out among the peasantry of the circle of Duisburg, Germany, in a most virulent outbreak took place in a small included village, of scarcely 130 inhabitants, where an apothecary in the neighborhood, upon the point of leaving for a vacation, had not yet been appointed. After the death of his superior, Pastor Fliedner's wife sent for a deaconess, who arrived at the scene of wretchedness, and for seven days and nights attended the fever patients in the most alarming manner. In the most wretched hovels, four children in one hovel, foul straw, no change of clothing, no change of bedding for weeks, almost no food; many had died already, and in the neighborhood an apothecary lived four German leagues distant, which could not reach there in an hour, and every day. The first care of this deaconess was to introduce cleanliness and ventilation into the hovels inhabited by the peasantry; they washed and combed their hair every night by turns at their hovels. Such success, that only four persons died. The rest were left convalescent, except in one family of Gahlen, in two families, of a single deaconess had this work. One family, a single deaconess had the care of, leaving every patient restored.
for the nursing and moral improvement of female prisoners. This branch is therefore connected with an asylum for released female prisoners, which Pastor Fliedner founded sixteen years ago, and which has received since then more than one hundred and eighty poor, deeply-fallen individuals, many of whom have been enabled, by Christian instruction, to become good servants, and respectable members of society.”

The eminent success which attended these establishments has led to the formation of similar ones in other places on the continent of Europe, and in England. From an interesting notice which appears in the Edinburgh Review, we extract the following statement, to illustrate their good results:—

“An epidemic nervous fever was raging in the two communes of the circle of Duisburg, Gartrop, and Gahlen. Its first and most virulent outbreak took place at Gartrop, a small, poor, secluded village, of scarcely 130 souls, without a doctor, without an apothecary in the neighborhood, while the clergyman was upon the point of leaving for another parish, and his successor had not yet been appointed. Four deaconesses, including the superior, Pastor Fliedner’s wife, and a maid, hastened to this scene of wretchedness, and found from twenty to twenty-five fever patients in the most alarming condition; a mother and four children in one hovel, four other patients in another, and so on; all lying on foul straw, or on bedclothes that had not been washed for weeks, almost without food, utterly without help. Many had died already; the healthy had fled; the parish doctor lived four German leagues off, and could not come every day. The first care of the sisters, who could have found no lodging but for the vacancy of the parsonage, was to introduce cleanliness and ventilation into the narrow cabins of the peasants; they washed and cooked for the sick, they watched every night by turns at their bedside, and tended them with such success, that only four persons died after their arrival, and the rest were left convalescent after four weeks’ stay. The same epidemic having broken out in the neighboring commune of Gahlen, in two families, of whom eight members lay ill at once, a single deaconess had the happiness, in three weeks, of leaving every patient restored to health, and of having pre-
vented the further spread of the disease. What would not Dr. Southwood Smith or Mr. Chadwick give for a few dozen of such hard-working, zealous, intelligent ministers, in the field of sanitary reform?"¹

We commend this matter earnestly to public attention. In what way it could be best carried into effect, we will not attempt to specify. We would, however, suggest that arrangements be made in the Massachusetts General Hospital, and in other similar institutions, to admit females of a proper character to be educated for these special objects.

Preliminary proceedings have taken place for erecting a new hospital in Boston, for the accommodation of the laboring classes and the poor. If such an institution should be established, this should be one of its purposes. It might be made a kind of normal school, of the highest character and usefulness, at which females and males might be educated and prepared to be intelligent nurses in and out of the city; and thus confer the double benefit of relieving its own patients and contributing to the relief of others. There are many females among us who wish for employment and support; and we know of no way better than this in which they might obtain their desires, and at the same time make themselves honored and eminently useful to others.²

XLV. WE RECOMMEND that persons be specially educated in sanitary science, as preventive advisers as well as curative advisers.

The great object of sanitary science is to teach people the causes of disease,—how to remove or avoid these causes,—how to prevent disease,—how to live without being sick,—how to increase the vital force,—how to avoid premature decay. And one of the most useful reforms which could be introduced into the present constitution of society would be, that the advice of the physician should be sought for and paid for while in health, to keep the patient well; and not, as now, while in sickness, to cure disease, which might in most cases have been avoided or prevented. And this practice, we understand, exists to some extent in some civilized countries. It must, however, now occur to us, with what importance our country, at least for a considerable period, would derive from this useful reform. Those who are well generally think themselves cured by the advice of the physician;—another, that if advice is sought for at all times, it is not generally considered. A third, that there are few persons sufficiently aware of the error of giving good advice, and capable of giving good advice. To this extent, this matter is contained in the Weekly Summary of the Public Health, in the Registrar-General, Sept. 19.

"No city, perhaps, ever possessed medical men as are now practising in this epidemic they have performed such services that they must have won the highest honor, night and day in the most perilous situations, and have been of great service. Another, that if advice is sought for at all times, it is not generally considered. A third, that there are few persons sufficiently aware of the error of giving good advice, and capable of giving good advice. To this extent, this matter is contained in the Weekly Summary of the Public Health, in the Registrar-General, Sept. 19."

¹ For further information, see the Edinburgh Review, Vol. LXXXVII, for 1848, p. 430-451, and the works there reviewed.

² For further information, see article "Deaconesses and Protestant Sisterhoods," Edinburgh Review, Vol. LXXXVII, for 1848, p. 442.
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extent in some civilized countries. Three existing reasons, however, now occur to us, which we fear will prevent or ob-
struct, at least for a considerable period, the introduction into our country of this useful reform. One reason is, that persons who are well generally think that they have no need of a physi-
—another, that if advice is sought for or given at such times, it is not generally considered worth paying for;—and a third, that there are few persons educated in sanitary science, and capable of giving good sanitary advice. These are fatal errors, and should be corrected, for they have cost thousands of lives. Sanitary professorships should be established in all our colleges and medical schools, and filled by competent teachers. The science of preserving health and preventing disease should be taught as one of the most important sciences. It would be useful to all, and to the student in curative medicine as well as to others. To the young man who is educating himself for the great purposes of life, whatever profession he may select, it cannot be inferior, in interest and importance, to any other branch of education. An illustration of our ideas on this matter is contained in the following extract from the Weekly Summary of the Public Health in London, issued by the Registrar-General, Sept. 19, 1849:

"No city, perhaps, ever possessed such an efficient body of medical men as are now practising in London. During this epidemic they have performed services which in any other field must have won the highest honors; combating the disease night and day in the most pestilential quarters, and that on much more settled principles than the public might be led to suspect from certain discussions at the medical societies. And their office has been discharged with so much kindness as to deserve the gratitude of the poor, instead of drawing down on their heads the charges with which the physicians of other countries have often been assailed by the populace. Nearly all the sick have been seen by these practitioners, yet 14,500 persons have already died of cholera in London. How is this? The medical force will be found to have been employed at an immense disadvantage. It is called into action at the wrong end of the malady. Inquiries prove, that while medical advice

XVII, for 1848, p. 442.
side. "Deaconesses and Protestant Sisterhoods," Edin-
1846, pp. 430-451, and the works there reviewed.
is generally sought in the characteristic stage, it is seldom obtained in the premonitory stage, when the power of medicine is decisive; and to that earlier and still more important period preceding the premonitory stage, which is prevented as easily as cured, medical practice has had little or nothing to say. Cholera here, also, only shows in high relief what exists in ordinary circumstances. Medical men rarely if ever treat the beginnings of diseases, and are scarcely ever consulted professionally on the preservation of the health of cities or families. The art of preserving health is taught in no regular course of lectures at any of the great schools of medicine in the United Kingdom. Yet the classical sanitary works of Pringle, Lind, Blane, Jackson, Johnson, and Martin, have been framed from observation in the British navy and army. In the science of health there are more exact, demonstrable truths than in the science of disease; and the advantage of 'prevention' over 'cure' requires no proof. In the Cyclopaedia of Xenophon, physicians who only treat the sick are compared to 'menders of torn clothes,' while the preservation of health is declared a noble art, worthy of Cyrus himself. Vegetius speaks in similar, Jackson in stronger terms, but perhaps unjustly: for if it is godlike to save many from suffering, and to carry them in healthy life up to the natural term of existence, it is a worthy occupation to rescue a few from the arms of death or incurable infirmity.

"But the preservation and restoration of health are parts of one science; and if, as has been done by London and Liverpool, health officers be appointed in all the districts of the kingdom, the art of preserving health will be studied by a high order of men, well paid by the public; and ultimately, with an increase of their remuneration,—the diminution of sickness, the disappearance of epidemics, immense advantage to the public,—the whole medical profession may devote themselves to the preservation and development of the vigor of the human faculties, instead of being tied down to the treatment of the sick and dying. 'And this,' Lord Bacon says, after his great survey of learning, 'we hope might redound to a general good, if physicians would but exert themselves, and raise their minds above the sordid considerations of the daily cost of preserving the life of man; especially, what is safe, commodious, and not ill attempted. And certainly it is for the public favor if, whilst we are journeying in our garments, those frail bodies are carried out in the wilderness of this life.

In connection with these sentiments, there is another matter deserving of still greater consideration, and which has not received the attention it deserves. We allude to the numerous inferior advisers, who are employed and respected in the art of living in an enlightened era, compared with many others, of less importance. This age is indeed remarkable for the many systems that have preceded it. The electrophatic, the hydropathic, the botanical, the eclectic and eclecticistic, the electro-biologic, the very many other denominations; but there are besides physicians educated in various state medical organization, or tied. There are men of integrity, of most of them, a vast amount of other denominations; but there are men of great men of integrity, or who do violence to health and life, or who do violence to health and life;

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of the divine power and goodness, both in prolonging and re-
store the life of man; especially as this may be effected by
safe, commodious, and not illiberal means, though hitherto un-
attempted. And certainly it would be an earnest of divine
favor if, whilst we are journeying to the land of promise, our
garments, those frail bodies of ours, were not greatly to wear
out in the wilderness of this world.'
In connection with these sentiments, in which we fully concur,
there is another matter deserving investigation, which has as great
if not greater influence on the sanitary condition of the people.
We allude to the numerous incompetent, uneducated medical
advisers, who are employed as curative physicians. We boast
of living in an enlightened era of the world, and perhaps, when
compared with many others, our boasting may be well founded.
This age is indeed remarkable in many respects, and unlike any
that have preceded it. The elements of progress that exist in
its very constitution, hold out, for the future destinies of society
and for the elevation of man, higher hopes than have ever be-
fore been entertained. Notwithstanding this general character-
istic, there was never a period when ignorant pretension was
more bold, or seemed to have greater patronage. We have,
besides physicians educated according to the rules of some
state medical organization, or some medical school, the homeo-
pathic, the hydropathic, the analytical, the Thomsonian, the
botanical, the eclectic and electrical, the mesmeric, the pathet-
istic, the electro-biologic, the chrono-thermal, the Indian, and
very many other denominations of physicians, each putting
forth their own system as the only sure one for the cure of all
diseases. Looking superficially at all these classes, it would
seem that at no period has medical practice been more unset-
ttled. There are men of integrity and skill in these different
denominations; but there undoubtedly exists in most, if not
all of them, a vast amount of practice which is injurious, or
does violence to health and life.
"An immense extent of suffering, of abridgment of human
life, is regularly bought and paid for, among us. A market of
imposition is opened to supply the demands of ignorance; and
this must continue to be so, until the people are more enlight-
ened. Did the pretenders to medical science, who infest the
country in such formidable numbers, confine themselves to the
barbarians' practice of charms and incantations, the mischief
wrought by their art would be far less deplorable; but accus-
tomed as they are to more potent prescriptions, they commit
wider havoc of human health and life, than the medicine-men
of the savages themselves."

It is not our intention here to discuss the causes which pro-
duce this characteristic of society, but to call public attention
to it, that it may be examined, and its effects made known
among all classes of the people. If the fatal consequences
which result from the practice of those who deal in the human
constitution and its diseases, and in the credulity and confi-
dence of its possessors, as a trade merely, were truly exhibited,
the disclosure would be startling. Men to whom human life
and human health are intrusted, should know something
of the natural constitution of the body, the operation of
disease upon it, and the nature and effect of remedies; and
they should possess common sense and experience sufficient to
apply this knowledge skilfully to the almost infinite variety of
forms and circumstances under which disease appears. Neither
a blacksmith from his anvil, an hostler from his stable, a bar-
ber from his shop, or a woman from her wash-tub, can be sup-
posed, without previous education or experience, even if "ac-
quired from the Indians," to possess this knowledge, or to be
qualified to act as a curative physician.

XLVI. We recommend that physicians keep records of cases
professionally attended.

The science of medicine, like most other sciences, is founded
upon facts. Many of these facts are stated in the recorded ob-
servation and experience of the profession, gathered up and
handed down to us in the accumulated medical literature of the
age. In anatomy and physiology, (and in surgery, too, to some
extent,) branches of this science, truth and demonstration may
be found; but in the practice of medicine more uncertainty

1 Mann's Sixth Report of the Board of Education, p. 74.
ply the demands of ignorance; and until the people are more enlightened to medical science, who infest the numbers, confine themselves to the charms and incantations, the mischief be far less deplorable; but accurate potent prescriptions, they commit death and life, than the medicine-men

Therefore to discuss the causes which pro-
society, but to call public attention 


tice, and its effects made known to people. If the fatal consequences 
tice of those who deal in the human 
es, and in the credulity and confi-
trade merely, were truly exhibited, 

rtling. Men to whom human life 


ber the almost infinite variety of 
der which disease appears. Neither 

a hostler from his stable, a bar-
man from her wash-tub, can be sup-

ed, should know something 


tory and effect of remedies; and 
sense and experience sufficient to 

ly to the almost infinite variety of 
nder which disease appears. Neither 


al, like most other sciences, is founded 

facts are stated in the recorded ob-
of the profession, gathered up and 

mology, (and in surgery, too, to some 

icine, truth and demonstration may 

of medicine more uncertainty 


brethren all over the country, would ultimately accumulate a large mass of materials, which could not fail to advance medical science. Too much need not be attempted at first; all cases should be noticed; but those facts should be chiefly recorded which are of an unquestionable nature, and that admit of precise statement and comparison, in respect to number, time, weight, and measure."

How shall this register be constructed? We have examined a large number of different plans, but none of them exactly meet our views. After consulting with several different physicians, whose opinions and approval are entitled to all respect, we propose one for adoption, a double page of which is presented and explained in the appendix. It may be afforded at a low price; and its form is such that it may be conveniently carried about by the practitioner, thus allowing him to have at hand the means of entering his observations in the place and at the time they are made.

Such a register would enable the physician to give the certificate of the cause of death, required under the registry laws, and also to give the amount of sickness suffered in any family he visits, as proposed to be obtained in our XXVth recommendation.

XLVII. WE RECOMMEND that clergymen of all religious denominations make public health the subject of one or more discourses annually, before their congregations.

The American Quarterly Register, Vol. XII, for February, 1840, contains a plan for an Ecclesiastical Register, in which several forms for keeping records are suggested; and among others, one for the record of deaths which take place among the members of the church and congregation. The introduction into Massachusetts of a system of public registration renders some of the particulars there proposed to be recorded, unnecessary; yet it would be useful to any clergyman to know some facts concerning the history of every person in his congregation, and especially those who become or cease to be members of his church; and he should keep records for this purpose. The name, sex, date of and age at admission; date of dismissal, of removal, or of death; cause of and age at death,—are important to be recorded as will show the physical and moral condition and progress of the members of a clergyman's congregation.

XLVIII. WE RECOMMEND that clergymen of all religious denominations make public health the subject of one or more discourses annually, before their congregations.

Between the sanitary condition and the physical and moral condition of the members of a clergyman's congregation an intimate relation exists. Whatever discourses or means are adopted to promote an interest in public health, in the sphere of a clergyman's duty, will greatly aid all concerned.
CLERGYMAN'S REGISTER.

would ultimately accumulate a
ich could not fail to advance medi-
all but those facts should be chiefly re-
questionable nature, and that admit
comparison, in respect to number,

constructed? We have examined
plans, but none of them exactly
suiting with several different physi-
approval are entitled to all respect,
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those who become or cease to be
 and he should keep records for this
, date of and age at admission; date
, or of death; cause of and age at
dead, — are important to be recorded. It would enable him to
give a history of human life, localized so as to include acquaint-
ances and fellow-worshippers. The influence of sickness and
death upon the congregation; the number who have died dur-
the year; the increase and decrease of epidemic and other
fatal diseases; the state of the public health of the town, of
the State, and of the world; the laws by which physical life
and health are improved; the wonderful plan of human orga-
nization; the incomings and outgoings of human existence;
man's mortality, and its connection with immortality; the na-
ture, design, and importance of sanitary measures, and their
intimate relation to moral and spiritual life; and the various
collateral subjects connected with these matters, are themes of
absorbing interest, and cannot fail of suggesting the most use-
ful and important lessons,—physical, social, moral, and reli-
gious; — and as such, they very appropriately come within the
sphere of a clergyman's duty.

XLVIII. WE RECOMMEND that each family keep such records
as will show the physical and sanitary condition of its members.

Between the sanitary condition of families and of the State
an intimate relation exists. What affects the former must of
course affect the latter. And reform, if begun at all, must first
commence in these primary communities. It is here that those
great principles of sanitary improvement, which promise such
favorable results, must first be adopted and developed. A sys-

tem of simple but exact observations, concerning the physical
condition and progress of the different members of the family,
would greatly aid all concerned in the adoption of such a plan
of management as would promote their highest welfare and
improvement.

In 1841, a "System of Family Registration" was published,
which contained, among other matters, blanks, for entering, in
a simple and concise manner, some of the personal and physi-
cal facts concerning the members of the family. Among the
blanks was one designed to exhibit some of the main facts con-
cerning each child; another, the sickness suffered; another,
the progressive development in weight and height; and another,
the average physical and social condition, the increase, and
The following are the headings of some of these blank forms. One of them covers two opposite pages, for making, on the left, a record concerning the father, and, on the right, concerning the mother; and, under them, the following particulars concerning the children:

|------------|----------------|----------------|------|---------------------|-------------------|-----------------|--------|---------|------|------------------|---------|

"Chart showing the progressive development in weight and height":

|-------|------|----------|--------|---------------------|------------|----------------|-------|---------|---------|

The following facts are entries concerning five families, in the table entitled, the Increase and Longevity of the members of the families bearing one's own name, from whom descended, and with whom immediately connected. Six classes of facts were suggested, which might come under notice in the records, to be observed or omitted, as circumstances or convenience might dictate. 1. Physical Facts; 2. Intellectual Facts; 3. Moral and Religious Facts; 4. Professional Facts; 5. Miscellaneous Facts; and 6. General Results.” The design of these suggestions was, to obtain the physical and sanitary facts relating to genealogy. 2

The report on “The Physical and Moral Conditions of males and females, in Belgium, at different periods of life; of climate, seasons, place of residence on physical developments, health, disease, mind, and the general health; what they are and where they are. 1. We select the following inquiries relating to the first class of facts: 1. Physical facts.—1. The height and weight of children at birth, and at the end of each three months, during the first year of life; also, the height, weight, and strength of the several members of the family, to be taken and recorded on each birth-day or new-year’s day. 2. At what age and date began to walk alone and to talk; at what age attained the greatest height, weight and strength; and at what age began to decline. 3. Causes which promote or retard the growth of the body. 4. The color of the hair, the eyes, the complexion of the skin, the tone of the voice, or any other peculiar formation or expression, and whether they have been uniform through life. 5. The phrenological characteristics and developments of the different individuals, and of the same individuals at different ages. 6. In what respects the children, either in person or temperament, resemble the father, mother, or any other more distant ancestor or relative; and the peculiar temperament or propensity of individuals. 7.
The following facts are selected, as illustrations, from the entries concerning five families in Massachusetts,—A, B, C, D, and E,—in the table entitled "The Physical and Social Condition, the Increase and Longevity;"—

Subjects of Inquiry.

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Children</td>
<td>60</td>
<td>34</td>
<td>19</td>
<td>32</td>
<td>25</td>
<td>170</td>
</tr>
<tr>
<td>Male children</td>
<td>31</td>
<td>19</td>
<td>11</td>
<td>16</td>
<td>13</td>
<td>90</td>
</tr>
<tr>
<td>Female children</td>
<td>29</td>
<td>15</td>
<td>8</td>
<td>16</td>
<td>12</td>
<td>80</td>
</tr>
<tr>
<td>Males who were married</td>
<td>29</td>
<td>13</td>
<td>11</td>
<td>16</td>
<td>10</td>
<td>70</td>
</tr>
<tr>
<td>Their average age at marriage</td>
<td>24</td>
<td>25</td>
<td>25</td>
<td>28</td>
<td>27</td>
<td>254</td>
</tr>
<tr>
<td>Females who were married</td>
<td>25</td>
<td>11</td>
<td>6</td>
<td>13</td>
<td>9</td>
<td>64</td>
</tr>
<tr>
<td>Their average age at marriage</td>
<td>24</td>
<td>27</td>
<td>24</td>
<td>24</td>
<td>23</td>
<td>244</td>
</tr>
<tr>
<td>Average births to each marriage</td>
<td>7</td>
<td>7</td>
<td>5</td>
<td>7</td>
<td>9</td>
<td>7</td>
</tr>
<tr>
<td>Males whose ages at death were known</td>
<td>23</td>
<td>15</td>
<td>9</td>
<td>10</td>
<td>6</td>
<td>63</td>
</tr>
<tr>
<td>Their average age at death</td>
<td>654</td>
<td>584</td>
<td>76</td>
<td>66</td>
<td>68</td>
<td>65</td>
</tr>
<tr>
<td>Females whose ages at death were known</td>
<td>6</td>
<td>11</td>
<td>6</td>
<td>7</td>
<td>2</td>
<td>32</td>
</tr>
<tr>
<td>Their average age at death</td>
<td>65</td>
<td>57</td>
<td>46</td>
<td>55</td>
<td>58</td>
<td>55</td>
</tr>
</tbody>
</table>

This table shows, in the last column, that in the total of the five families named, containing 170 persons, 90 were males, 80 females.

Effect of marriages between blood relations, and of other marriage connections; and of peculiar propensities of fathers or mothers on offspring. 8. Effect of peculiar diet, food, clothing, exercise, exposure, amusement, and occupation; of sedentary, active, and other habits of life; of climate, season, place of residence, and other external circumstances or influences, on physical development, health, disease, and life. 9. Accidents which affect the body, the mind, and the general health; what they are, and the date and place of their occurrence. 10. When vaccinated, or had measles, whooping cough, or other epidemic diseases; the name, characteristics, and various forms of all diseases, the date of their commencement and termination, and their effect on the constitution; the length of time disabled by sickness, name of physician, and remedies used. 11. When eyesight or hearing began to fail, and the cause of failure. 12. The cause, place, and particulars of death.

As a further illustration of this subject, we have compiled from M. Quetelet's valuable work, "Sur L'Homme," the following table, representing the weight and height of males and females, in Belgium, at different periods of life—

<table>
<thead>
<tr>
<th>Ages</th>
<th>Males</th>
<th>Females</th>
<th>Males</th>
<th>Females</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Feet</td>
<td>Pounds</td>
<td>Feet</td>
<td>Pounds</td>
</tr>
<tr>
<td>Birth</td>
<td>1.64</td>
<td>7.05</td>
<td>1.64</td>
<td>7.06</td>
</tr>
<tr>
<td>1 yr.</td>
<td>1.64</td>
<td>7.05</td>
<td>1.61</td>
<td>6.42</td>
</tr>
<tr>
<td>2</td>
<td>2.29</td>
<td>20.84</td>
<td>2.26</td>
<td>19.39</td>
</tr>
<tr>
<td>3</td>
<td>2.56</td>
<td>23.53</td>
<td>2.50</td>
<td>21.00</td>
</tr>
<tr>
<td>4</td>
<td>3.00</td>
<td>26.70</td>
<td>3.20</td>
<td>30.00</td>
</tr>
<tr>
<td>5</td>
<td>3.70</td>
<td>36.57</td>
<td>3.26</td>
<td>34.68</td>
</tr>
<tr>
<td>6</td>
<td>4.07</td>
<td>40.00</td>
<td>4.00</td>
<td>39.00</td>
</tr>
<tr>
<td>7</td>
<td>4.37</td>
<td>44.60</td>
<td>4.37</td>
<td>44.60</td>
</tr>
<tr>
<td>8</td>
<td>4.60</td>
<td>48.68</td>
<td>4.60</td>
<td>48.68</td>
</tr>
<tr>
<td>9</td>
<td>4.90</td>
<td>52.60</td>
<td>4.90</td>
<td>52.60</td>
</tr>
<tr>
<td>10</td>
<td>5.20</td>
<td>56.57</td>
<td>5.20</td>
<td>56.57</td>
</tr>
<tr>
<td>11</td>
<td>5.50</td>
<td>60.57</td>
<td>5.50</td>
<td>60.57</td>
</tr>
<tr>
<td>12</td>
<td>5.80</td>
<td>64.57</td>
<td>5.80</td>
<td>64.57</td>
</tr>
<tr>
<td>13</td>
<td>6.10</td>
<td>68.57</td>
<td>6.10</td>
<td>68.57</td>
</tr>
</tbody>
</table>

The report on "The Physical and Moral Condition of the Children and Young Persons employed in Mines and Manufactories," contrasts the height and size of children employed
and 80 were females; that 79 males were married at the average age of 25 years, and 64 females at the average age of 24 years; that each marriage produced 7 children; and that the average age at death, of the males, was 65 years, and of the females, 55 years.

Another statement, compiled from a larger number of families, and inserted in the same blank form, exhibits the following facts:—In 306 families, containing 2,267 children,—1,197 males, and 1,070 females,—1,680, or 74 per cent., were married, and 587, or 26 per cent., were not married. Each marriage produced 7.3 children.

If similar observations, more or less extended, were made and abstracted, concerning a large number of families, the results might show, in a striking manner, the philosophical and statistical uses of genealogy, and could not fail to operate favorably upon the sanitary welfare of all concerned.

XLIX. WE RECOMMEND that parents, and others to whom the care of those in infancy and childhood are intrusted, endeavor to understand and discharge their duties so that a good foundation may be laid for vigorous manhood and old age.

The management of infancy and childhood has an immense influence upon the health, vigor, and continuance of life; and the concurrent testimony of all intelligent men, who have examined the subject, is, that a great proportion of the debility, disease, premature deaths, and sanitary suffering, which are constantly occurring around us, is attributable to ignorance of the physical laws, and inattention to the physical wants, in the early years—the formative periods of life. Debility, scrofula, consumption, and premature death, which are brought on by neglect of a proper system of the commencement of infant enlargement and growth and development of management, and of the dangers at its early periods, could be told us, what a lesson would it give to the Creator has given for our use, one-half of all the deaths in one year in about one quarter in all places of 10 years of age. If the laws of and obeyed, this great sanitary re lessened, and thousands of lives which have been lost.

This is a great, all-important, thoroughly examined and carefully by fathers and mothers, as well as by nurses, and others interested in the care of the subject, great, however, for discussion is merely to call public attention to measures in which there is great real reform would be immensely valuable works already publication on the subject. These works, which the more aged and the younger own careful examination and may adapted to different circumstances; generations might thus be gr many and many a useful citizen.

L. WE RECOMMEND that individuals, examinations of themselves, as health, and prevent personal di

If there is a fault in the pri

1 "The Physiological and Moral Management of the best popular works on the subject will
0 males were married at the average age of 24\frac{1}{2}; females at the average age of 24\frac{1}{4} produced 7 children; and that the males, was 65 years, and of the
led from a larger number of families, blank form, exhibits the following containing 2,607 children, 1,197
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t a great proportion of the debility,
and sanitary suffering, which are d us, is attributable to ignorance of attention to the physical wants, in the periods of life. Debility, scrofula,
port, it appears that 10 collier boys, between 12 and 14
gate, 44 feet 6 inches in height, and 274 inches round
ed 47 feet in height, and 272 inches round the breast.
ue of 14 and 17, measured in the aggregate 46 feet 4
bd the breast; while 10 farm girls measured 36 feet 5
the breast. Other similar facts might be extracted employment and external circumstances have an impor-
d development. Such facts, when derived from an extremely interesting,
of the physicians, as they should be by all, in Massa-
children at birth. From an exceedingly valuable pa-
by Dr. John G. Metcalf, of Mendon, published in the
Vol. XIV, for 1847, p. 295, we learn that of 836
the average weight of 429 males was 8 lbs. 10 oz.
ent than in Belgium, as indicated in the table.
1 consumption, and premature decay, as well as various epidemic diseases, are brought on and accelerated to their fatal termination, by neglect of a proper system of management from the very commencement of infant existence. If the history of the growth and development of the human body, of its parental management, and of the dangers to which it has been exposed at its early periods, could be truthfully made and spread before us, what a lesson would it give of the imperfection of human knowledge, and of the disobedience of those wise laws which the Creator has given for our guidance! From one-third to one-half of all the deaths in populous cities and villages, and about one quarter in all places, are those of children under five years of age. If the laws of health and life had been known and obeyed, this great sanitary evil might have been materially lessened, and thousands of lives might have been preserved, which have been lost.
This is a great, an all-important matter, and deserves to be thoroughly examined and carefully studied in all its bearings, by fathers and mothers, and those who expect to be fathers and mothers, as well as by nurses, governesses, teachers, and all others interested in the care of the young. The subject is too great, however, for discussion in this connection. Our purpose is merely to call public attention to it, as one of the sanitary measures in which there is great room for reform, and in which real reform would be immensely beneficial. There are many valuable works already published, which afford useful instruction on the subject. These works, the lessons of experience which the more aged and the wise might impart, and each one's own careful examination and reflection, might suggest systems adapted to different circumstances; the vital force of incoming generations might thus be greatly increased, and the life of many and many a useful citizen prolonged. L.

L. WE RECOMMEND that individuals make frequent sanitary examinations of themselves, and endeavor to promote personal health, and prevent personal disease.

If there is a fault in the printed discussions of sanitary re-
1 "The Physiological and Moral Management of Infancy," by Dr. Andrew Combe, is one of the best popular works on the subject with which we are acquainted.
formers, it is in attaching too much importance to public, and too little to personal measures, for the promotion of health. The causes of disease may be diffused in the atmosphere, or may exist in a locality, or may be connected with the individual himself. If the person be well fortified and well guarded, little need be feared from an unseasonable invasion of the enemy from without; but if otherwise, its onset will be easy, and its victory certain. This is a matter in which uncertainty should, as far as possible, be excluded. We should not guess at the value of life, or the mode of preserving it. Every person should know, by his own observation and experience, his own capabilities and his own liabilities; and make the matter of preserving his health and continuing his life a subject of the same care and prudent forethought, and apply to it the same intelligence and sagacity, that he uses in any or all of his ordinary affairs.

Every person should make frequent sanitary investigations relating to himself. The history and condition of his constitution should be studied. The hereditary organization and tendency, and the character of the blood that courses in his veins, should be ascertained. The alterations of the original constitution, produced by disease, habits of life, or any other means, and the causes of these alterations, and the remedies that have been used to counteract and prevent their effects, should also be carefully studied and noted. The influence of various habits and actions upon the organs and functions of our bodies, whether relating to their protection, nourishment, or preservation, should be carefully observed; and such as are found to be favorable should be repeated, and such as are known to be unfavorable should be discontinued. Everything which may excite or develop an unhealthy tendency, hereditary or acquired, should, as far as possible, be avoided; and everything of an opposite tendency should be done to check such development.

Our persons should be protected, and kept in uniform temperature, by clothing of the right kind, properly made, and worn at such times, in such a manner, and in such quantities, as are best adapted to promote health. Disease should not be allowed to invade the system by means of too little or too much clothing, or through any other defect. Our persons should wear just such clothes as will keep them in the least risk, and produce the greatest enjoyment.

Our persons should be properly prepared, and taken care of, and in such quantities, as will enable us to eat that we may live. We should eat to nourish us, not to satisfy our appetites. Our food and our regimen, at the same time and sanitary condition of the body, are, and must be, the limit, and in the least possible time, which our constitution and circumstances will permit. If healthy and strong, we cannot take with impunity so large a quantity of food as when in a different state.

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diffused in the atmosphere, or may be connected with the individual
all fortified and well guarded, little reasonable invasion of the enemy
wise, its onset will be easy, and is a matter in which uncertainty
cluded. We should not guess a mode of preserving it. Every
own observation and experience, own liabilities; and make the mat-
and continuing his life a subject of forethought, and apply to it the
ity, that he uses in any or all of his
ake frequent sanitary investigations into the condition of his constit-
he hereditary organization and tenure of the blood that courses in his veins,
alterations of the original constitution, habits of life, or any other means,
ations, and the remedies that have
prevent their effects, should also be avoided; and everything of an
be done to check such development. Protected, and kept in uniform temper-
kind, properly made, and worn in a manner, and in such quantities, as are
alth. Disease should not be allowed means of too little or too much cloth-

ing, or through any other defect or imperfection; but each per-
son should wear just such clothing, at all times, as will involve
the least risk, and produce the greatest vigor and physical en-
joyment.

Our persons should be nourished by food of the right kind, properly
prepared, and taken at such times, in such a manner, and in such quantities, as will promote
the greatest vigor. We should “eat that we may live, not live that we may eat;” take
food to nourish us, not to satiate a depraved appetite; and adapt
our food and our regimen, at all times, to the present physical
and sanitary condition of the body. When debilitated and fat-
tigued, we cannot take with impunity the same kind or quantity of food as when in a different
condition.

Our persons should be preserved and strengthened by wise and
uniform care and training. We should cleanse our persons
by daily ablutions, properly applied, at suitable times, and of the
right kind and temperature; strengthen our persons, physically and intellectually, by regular
and progressive, not transient and excessive, exercise and labor, at such times, to such
extent, and in such places, as will be most invigorating; and should refresh our persons by rest and sleep, at proper times, in
right places, by suitable means, and in sufficient quantities.

What is right and suitable and proper, in each of these cases, must be determined by each one’s own intelligence, observation, experience, feelings, and condition, ascertained by himself. If careful personal sanitary examinations were frequently made in this way, and personal health was guarded and improved by these means, we should hear less of the ravages of cholera, typhus, and other epidemics, and of isolated sporadic diseases.

IV. REASONS FOR APPROVING THE PLAN RECOMMENDED.

We have presented, in the preceding pages, some of the principal measures that have occurred to us as worthy of being embraced in a plan for a sanitary survey of the State, which we recommend for adoption. We might have included other collateral subjects, and might have given a more full explanation and illustration of those already presented, but the occa-