

REPORT OF COMMISSIONER ADAMS.

As Commissioner of the State of Massachusetts, appointed under chapter 6 of the Resolves of 1873, to visit the Universal Exposition at Vienna, I have the honor to submit the following Report:—

Under the first section of the Resolve referred to, the governor, with the advice and consent of the council, was authorized to appoint a citizen of the Commonwealth, and such associates as might be necessary, to visit the Universal Exposition at Vienna, to assist the contributors from the State, to examine the various industries, manufactures and economies which might be exhibited or presented, and to report thereon to the legislature of 1874. A sum not exceeding \$12,000 was appropriated to carry into effect the provisions of the Resolve; which was passed and received the executive approval on the 3d of March, just fifty-eight days before the time fixed for the opening of the Exposition. Upon the 19th of the same month the nomination of the commissioner was made and approved by the council, and eight days later Gen. John C. Palfrey, of Lowell, Hon. H. G. Knight, of Easthampton, and H. A. Hill, Esq., of Worcester, were appointed associate commissioners, with Mr. Frank D. Millett as secretary. A number of other gentlemen were at the same time joined to the Commission in a purely complimentary capacity.

Of the gentlemen designated as associate commissioners, Messrs. Knight and Hill accepted their appointments, but that of Gen. Palfrey was declined on account of conflicting business relations. In the original organization of the Com-

mission it had been supposed that Gen. Palfrey would represent the largest and most important material interest of the Commonwealth, that of textile fabrics. His intimate acquaintance with these, and with the machinery used in their production, qualified him in an eminent degree to render service of real value. For this and other reasons his inability to accept the appointment proved in the event a thing deeply to be regretted. Of the other gentlemen appointed, Mr. Hill only was at the time in America. Mr. Knight was travelling in Italy and Mr. Millett was just completing his studies at the School of Art at Antwerp.

As the commissions of the several appointees did not issue until the 20th of March, and the letter of instructions drawn up for the guidance of the commissioner was dated subsequently to that time, it naturally followed, as the Exposition was opened upon the day (May 1) which had been designated, that before arriving on the ground the commissioners had no opportunity to confer with each other. They could not, therefore, decide upon any line of conduct, nor in any way organize in advance, either to aid the Massachusetts expositors or to agree upon a division of their work. In point of fact, they first met at Vienna several weeks after the Exposition was open to the public, and about the time that the American department began to assume an appearance of order.

It hardly needs to be said that this was a most unfortunate circumstance, both for the commission itself and for the expositors from Massachusetts; but under the circumstances it could not be avoided. Where men who are to act together in the performance of somewhat difficult duties in a foreign country are at the time of their appointment, immediately before those duties are to commence, both personally unknown to each other and scattered over two continents, it is not easy to concentrate them for action. Everything was, in this case, done which could be done. Mr. Millett was communicated with and went immediately to Vienna, under instructions to effect such preliminary arrangements as might be practicable. He arrived there during the latter part of April, but was obliged to return to Antwerp before the 1st of May, necessarily having accomplished little, if anything. He was unable to get

back to Vienna until the 7th of May. Mr. Hill and myself sailed from America on the 13th of April. Shortly after landing in Europe, I heard in Paris of the unfortunate difficulties which had arisen in the American department of the Exposition, and of the suspension of the United States commissioners by the authorities at Washington. Thereupon I at once went to Vienna, where I arrived on the evening of the 1st of May, the day upon which the formal inaugurating ceremonies had taken place. I immediately put my own services, and those of the other gentlemen composing the state commission, at the disposal of the American Minister and of those temporarily in charge of the American department, and, the occasion seeming to be one of a somewhat pressing nature, applied myself to the work of obtaining information as to the whereabouts of my colleagues. Certainly no circumstances could well have arisen in which a well organized and self-possessed state commission might have proved of greater service, or have more fully justified its formation, than were then presented. The condition of affairs in the American department was disgraceful, ludicrous and mortifying. The confusion was apparently complete. The work to be done was neither large nor difficult,—hardly equalling, indeed, the arrangements in this country of any ordinary Institute display or considerable County fair. Had any state commission been upon the spot, organized in advance, understanding itself and knowing both what ought to be done and how to do it, the conduct of the matter must inevitably and naturally have fallen into its hands. The difficulty would then at once have disappeared. Unfortunately, so far as the bringing about results was concerned, the Massachusetts commission was in a less effective state, if such a thing were possible, even than that of the United States. Just appointed and wholly unorganized, its members scattered over Europe and in no communication with each other, it illustrated with singular happiness the ordinary result of tardy public action. When, therefore, Mr. Jay and the gentlemen temporarily in charge expressed the utmost gratification at the prospect of having some organized body to relieve them from the embarrassing position in which they found themselves, it at once became evident that the Massachusetts commission was in no condi-

tion to perform that service. Before it could be made so, even through the most energetic telegraphing and correspondence, the occasion, fortunately for it, had passed away. While I was anxiously looking for the arrival of my several associates, the appointment of Mr. Jackson S. Schultz as United States commissioner, in place of Gen. Van Buren, was announced, and at once solved the difficulty.

In regard to the scandals and difficulties which gave such an unenviable notoriety to the American department during this period of the Exposition, neither my associates nor myself at the time or since have found it necessary to express, or indeed to form, any opinion. It was painfully evident that the mismanagement had been complete from the beginning forward. It required no investigation to make that fact patent to any one. As to who was responsible for this result, or the motives which actuated them, these were subjects which it was wholly unnecessary for us to pass upon. After the arrival of Mr. Schultz, therefore, it only remained for us to consider maturely why we had been sent to Vienna, and, having arrived at some definite conclusions upon that subject, to devote ourselves to the work before us.

Mr. Millett returned from Antwerp, and reported himself as ready to assume his duties as secretary on the 7th of May. Mr. Hill arrived upon the 11th of the same month. It was not until the 24th of May that Mr. Knight found himself able to reach Vienna, and his engagements in America were such that he was unable to remain there after the 26th of June. Consequently the commission was deprived after that time of his assistance, and was practically reduced to Mr. Hill, Mr. Millett and myself. An office was secured and opened on the 16th of May; from which time until the 8th of October one or more of the commissioners was in constant attendance at it. It was then finally closed by Mr. Millett, and all its documents and records forwarded to America. I had previously left Vienna on the 10th of August, and Mr. Hill had followed on the 1st of September. Altogether the office was open and the commissioners were in Vienna during five months of the Exposition, which lasted in all but six months.

I do not propose to enter into any general, historical, descriptive or statistical report of the Vienna Exposition. Upon

all these matters the country has been kept so very fully informed by the writers for the public press, that any further details as regards them in my power to supply would seem to be quite superfluous. As, however, preparations are now making for the American Centennial of 1876, in which Massachusetts as a state will not improbably feel obliged to take a prominent part, I shall briefly refer to a few points, a due consideration of which, as it seems to me, may save us from grave mistakes. It is true that Massachusetts is not directly responsible for this undertaking, and can exercise but a very limited influence in its direction. But if, as is proposed, it is to be a national affair,—and as such it will necessarily be regarded in all foreign countries,—the practical questions connected with it become matters of moment to each of the several states.

As a universal exposition, that of Vienna was undoubtedly the largest and most ambitious attempt of the kind which has yet been made. In some respects it was a most brilliant and gratifying success; in others it cannot but be considered as a very lamentable failure. From the careful study of it in each aspect, many useful lessons touching the coming Centennial might be drawn. Among the features of success were the structures and the surrounding grounds, which were all upon a scale of unprecedented magnitude. Yet magnificent and imposing as respects constructive skill and the space covered by them as these unquestionably were, the buildings can hardly be considered as having been well adapted to the purposes for which they were designed. They were laid out for their proposed occupants on the geographical plan: that is, taking them in order, the visitor passed through the whole range of countries as they occupy the surface of the earth; the American department being at one extremity and that of Eastern Asia at the other. This is an admirable arrangement for a bazaar, in which the largest possible sales by expositors is the single end in view; and it so proved in this case. If, however, an exposition building is designed, not as a general sales-room of the world, but as a competitive field of excellence, a worse arrangement than that described could scarcely be devised. At Vienna, productions of the same nature from different countries were not only not brought into contrast and com-

parison, as at the last Paris Exposition, but they seemed to be so placed that both comparison and contrast were impossible. Not only a guide, but a very experienced and competent guide,—one who had made a special study of a class of objects,—was an absolute necessity to any one who sought to examine all that the Exposition contained of objects of that class. Both morally and physically, the search was made as wearisome and exhausting as was possible. The investigator was equally oppressed with the number and variety of the exhibits discovered, and by the distance traversed in the journey of discovery. The method of arrangement thus became a practical matter, detracting most seriously from the general popularity of the enterprise; for the great mass of those, the presence of whom decides the success or failure of such undertakings,—the travellers and the buyers,—are brought together from motives of curiosity or in search of amusement. One principal object always, therefore, to be kept in view should be to render the work of examination as little fatiguing as possible. At Vienna it was a severe and unattractive labor. The Exposition, therefore, speedily became unpopular with the general public, and very few, who were not compelled to, paid it either long or frequent visits.

This deficiency as regards detail was in fact the point of weakness throughout the undertaking. The conception was very large and fine, perhaps too much so, but it was not sustained by any corresponding faculty for organization. A few men, indeed it might practically be said that one man, attempted to supervise everything and to do everything. Subordinates were mere ciphers. But to secure the success of an enterprise of this description, a good organizing and executive mind is even more indispensable than a large conceiving mind. Indeed, it is not difficult to imagine, or to procure designs for the largest buildings or the most perfect collection of industrial products which the world has yet seen, and by a sufficiently lavish expenditure of money these conceptions may be more or less fully realized. The difficulty is in producing, with the least degree of friction and at the smallest cost, practical and harmonious results. In neither of these respects could the Vienna Exposition be regarded as a success. Indeed, few more perilous industrial undertakings could be

devised for any community than the embarking in a world's fair, without first knowing exactly where to find that one man who both has a perfectly definite conception of what it is proposed to do and an equally definite conception of how it is to be done. An exposition cannot be made, through repeated failure, to result in ultimate success. Its fate depends wholly upon the concentration of its management and the executive capacity of its manager. At Vienna, while the concentration was perfect, the executive capacity was deficient. The danger for Philadelphia will probably be found in the attempt to evolve a management out of a caucus, which cannot but result in the absence of every accessory to an assured success.

Another point in its history having a decided significance for the Centennial, was the failure of the Vienna Exposition in respect to the number of visitors who attended it. It is true that this deficiency was partly due to special causes. A wide-spread apprehension of the cholera prevailed throughout Europe during almost the whole summer, and most exaggerated reports of its ravages at Vienna were everywhere current. This, however, was but one of the minor causes which deterred people from going there; it was not, indeed, even so influential as the systematic and outrageous extortions practised by the Viennese upon their visitors. During the later months of the Exposition these were not, perhaps, greater than might have been expected in any city under similar circumstances. A lasting reputation had, however, been achieved during the earlier weeks. The Viennese then showed the full spirit which ordinarily takes possession of the inhabitants of a provincial city which thinks it has for a time secured to itself the first-class attraction of a metropolis. It was thought that the whole world must come to the Exposition,—that it could not stay away; and the natives prepared to take full advantage of the necessity. During the few days of assured confidence in the unparalleled success of their great show, the extortions practised upon strangers were so unblushing, so impudent, so aggravating, as to produce a lasting impression throughout Europe. This was especially the case with the English and the Americans,—the two people most lavish in their expenditure of money,—among whom a bitter prejudice was created which was not subsequently effaced.

But apart from these two minor considerations, which unquestionably had a considerable effect in diminishing the number of visitors after the month of May, there was another and far more fundamental fact which the Austrian authorities lost sight of in planning their enterprise, and which their experience should warn us not to disregard. There is excellent reason to believe that their experiment was upon a scale altogether too large for its base and surroundings. In other words, it is very questionable whether an exposition of the superlative grandeur of that of Vienna can ever be successfully undertaken in any city of the second class. There are two cities,—London and Paris,—sufficiently large and sufficiently central to sustain a world's fair on the largest scale;—it is very doubtful if there are more than two. At least one-half probably of those who enter the doors of an international exposition belong to the population of the city in which it is held. That population must always constitute the great basis of attendance. In this respect no other cities at all approach London or Paris, and through them also passes the whole world which travels, whether for business or pleasure. It is not so with Vienna, and it is less so yet with Philadelphia. With neither of these cities are strangers familiar. They will, indeed, go to them if drawn there by sufficient attraction, but they cannot be induced to remain in them. This fact was singularly illustrated during the Exposition. The capital of the Austrian Empire certainly has the reputation of being a gay, a brilliant, an interesting and not a peculiarly severe or virtuous city. Nevertheless, even during the last summer, it was found impossible to keep the throng of travellers there for any length of time. It was most noticeable that numbers continually arrived with the expressed intention of passing weeks in the study of the Exposition, as had been so much the practice among strangers, both in London in 1862 and at Paris in 1867. Almost invariably, however, the stay of such persons was limited to two or perhaps three days. They seemed to weary of the place, and of the Exposition even more than of the place. The latter oppressed them, and Vienna failed to attract them;—they were neither amused nor instructed nor comfortable. They soon realized that they were getting very little enjoyment in return for a very heavy expenditure,

and, accordingly, they went elsewhere. Day by day after the Exposition was opened, it thus became more and more apparent that it was a world's fair held at a point which was not a world's centre. On the contrary, the world had to go out of its way to get to it. Something more attractive than a universal exposition, no matter how wonderful, was required to keep people away from their familiar haunts. Notwithstanding every conceivable effort to afford amusement in large things and in small,—from endless concerts and beer-gardens to the regularly arranged arrival and departure of every considerable sovereign or eminent public character in Europe,—there were, during the very months that the Exposition lasted, more travellers and strangers in either London or Paris than in Vienna, and they also remained in those cities for a longer time. The whole undertaking had, however, been planned upon the assumption that all previous efforts in the same line were to be wholly eclipsed. As respects magnitude of apparatus they were eclipsed, and the financial failure was in perfect correspondence. The necessary preparation to outdo everything which had gone before was made. Unfortunately, those for whose benefit it was made failed to respond.

The consequent financial experience was very suggestive. The appropriation originally made by the government on account of the Exposition was \$3,000,000, which it was further provided was in no case to be exceeded. The total cost will probably be found to amount to over \$12,000,000, as the receipts from visitors were scarcely sufficient to meet the current expenses; leaving a deficit of some \$9,000,000 to be met by the Austrian government. And yet, even from this lamentable showing, it would not be safe to draw any inferences in disparagement of the Vienna Exposition as affecting the people of Austria, or of the Centennial as affecting the people of this country. The influence of such an experience cannot easily be measured in dollars and cents. On the contrary, there can scarcely remain a doubt in the mind of any careful observer, at all familiar with the progress of recent Austrian development, that the Exposition, even had it resulted in a deficit twice as large as that stated, would have been worth far more than it cost. Its educational effects can

hardly fail to be incalculable. The people of Austria intellectually, politically and industrially are in a state of active transition. The disastrous results of the campaign of 1866 drove the Empire into a course of decided political and educational reform. The absolute necessity of a reorganization was made apparent even to those most wedded to the old ways, and from the battle of Sadowa may be dated a new era in Austrian history. Seven years of education had made their influence perceptibly felt in every department of national life, and not least in its industries. There was a general awakening. Upon a people in this receptive condition the effect of a universal exposition like that of the last summer cannot easily be overestimated. It is probably not too much to say that for the next score of years everything inventive or industrial in Austria will date a new impetus from it, as everything educational and political already dates from Sadowa.

Nor will the experience of Austria, if this expectation should be realized, be peculiar to herself. A remarkable illustration of a similar impetus given to English industries by the previous expositions at London was observable at Vienna. It was there generally conceded that the most brilliant success won was in the department of the ceramic arts, and in this the palm was generally conceded to the English exhibitors. The progress made by them, and the absolute excellence they had attained, were most noteworthy. This was attributed to the improved education and increased artistic taste of the country, largely due to the influence of the South Kensington Museum and the system of art schools of which that museum is the great centre. These again originated out of the first London Exposition of 1851, and remain as a lasting monument to its success and utility.

A more correct appreciation of circumstances and a more perfect organization of details, would obviate in a very great degree as respects the Centennial the danger of any such disastrous financial results as those experienced at Vienna. That which may be possible in London or Paris may be impracticable at Philadelphia. If, however, this appreciation of circumstances and regard to details could but be secured, it may well be questioned whether any civilized people is in a condition to derive more immediate or more im-

portant results from a successful world's fair, than are now the people of this country. They are in no respect in the condition of the people of Austria; but it was impossible to examine the rare display at Vienna, without being deeply impressed with a sense of the educational results to be derived by America from a similar experience. As respects taste and artistic development,—in all the results of a higher and more thorough education,—our people are as yet sadly deficient; they need an impetus. No one could walk through the Exposition at Vienna and not experience a realizing sense of the fact. Should the Philadelphia Centennial lead to such results with us as the Exposition of 1851 did with the people of England,—should it leave behind it with us, as that did with them, a keener appreciation both of our national shortcomings and our possibilities,—it will not be otherwise than a brilliant success, even if it bequeaths us also a deficit as large as that which the Austrian authorities are now contemplating with disappointment and dismay.

These are not, however, matters which my colleagues or myself were especially directed to investigate. The objects for which a state commission had been sent to Vienna, and which we were necessarily to keep in view, were more particularly expressed in the language of the Resolve authorizing our appointment, which has already been quoted, and in the letter of instructions of April 10th, addressed to me by the governor, a copy of which is prefixed to this report. Recurring to these, it will be observed that the duty of aiding the Massachusetts contributors was especially imposed upon us. In this respect we found the field of our usefulness extremely limited. Had the commission been authorized and appointed a year earlier, the case might have been very different. The commissioners then would have organized the Massachusetts exposition, would have been familiar with the conditions under which the contributions were to be forwarded and displayed, and would have been somewhat advised both as to what was expected of them and what it would be in their power to accomplish. As it was, all that was done in the way of organization at all, had been done by the commissioners of the United States before our appointment was even contemplated. It was entirely out of the question, therefore,

for us to be of any service in the work of preparation, or to assist contributors in forwarding their goods. It only remained to hurry to Vienna, without the possibility of arriving there before every article should have been in its place. When we did arrive there, we found, it is true, nothing in place, and the Massachusetts expositors, in common with all of those from America, utterly paralyzed by the troubles in the United States commission. I have already sufficiently referred to these, and to the extreme care with which my colleagues and myself abstained from all participation in them. Meanwhile, even had our commission then been in a thoroughly effective condition, it would have been wholly out of the question for it to separate the Massachusetts from the other expositors. A state commission had, of course, no recognized position with the Austrian authorities, and could communicate with them only through the representative of the United States. There can hardly be said to have been any such representative until after the arrival of Mr. Schultz, when everything that could be done for the expositors of any state was done for all. Circumstances would afterwards occasionally arise to induce some Massachusetts exhibitor to apply to us for advice or assistance; such occurrences were, however, rare, and the matters presented trivial. In fact, judging by my own experience at Vienna, I should say that in this respect any state commission was wholly superfluous; no field of usefulness is open to it. It can, if properly organized, do a great deal of work of the utmost value in the earlier stages of preparation,—while the display of goods is being gotten together and forwarded,—but after the expositor is on the ground, he must necessarily look to the national representatives, and those of a state are, so far as he is concerned, of about as much value as would be those of his county or town. The most they can do is to be at hand in case they are wanted to supply a vacancy, such as arose in Vienna, among those really in charge. They then, however, cease to be state and become national commissioners.

As it was practically out of their power to render any material aid to the Massachusetts contributors, it only remained for the commissioners to give their undivided attention to the work of investigation imposed upon them; to

examine the industries, manufactures and economies presented with a view to bringing back in a body of reports the largest amount possible of information likely to prove useful to the people of the State. I have no intention of attempting any elaborate report myself, either upon the exhibition as a whole or the American department in it, or upon the Massachusetts representation in that department. I do not either feel myself competent to undertake such a task, nor was I appointed with the expectation that I should do so. Speaking generally, however, and taking into account the civilization, the wealth, the standing and above all the pride of the country which contributed it, the American department was the least creditable part of the Exposition. The exhibit of machinery saved it from being wholly discreditable, and the educational department excited some general interest. Including these redeeming features, however, the whole result would have reflected no credit whatever on a Worcester County fair.

The official classification divided the articles in the whole Exposition into twenty-six groups. In twenty-three of these America was more or less represented, though in all but one the representation was in no way calculated to give a correct impression of our progress or condition as a people. The difficulty had evidently lain in the work of preliminary organization. It was quite apparent from the most superficial examination that such articles as were there had been in greatest part gotten together at hap-hazard; and that, while few things had been judiciously selected, absolutely nothing had been rejected. It would have been far better, so far as the general impression created was concerned, if all else had been refused and our contributions had been wholly confined to the hall of machinery. A walk through the American department left on the mind an unpleasant impression of meagreness in production, absence of taste and poverty of imagination, which was even painful if the visitor happened to approach it through the superb English and French displays next to it in order of arrangement.

Appended to this Report tables are submitted showing,—

First. The entire number of American exhibits, with the groups to which they severally belonged, and the medals or diplomas of each description awarded to them.

Second. A similar table relating solely to the Massachusetts exhibits.

Third. A table showing the contributions of the several states of the Union to each of the groups.

Fourth. The diplomas or medals awarded in each of the groups to the exhibits of the several states; and

Fifth. A table of thirty-two of the leading industries of Massachusetts reported in the last United States census, showing the number of establishments engaged in each and the total value of their annual production, with the number of exhibits contributed by them to the Exposition.

The last table reveals with sufficient distinctness the utterly imperfect character of the Massachusetts contributions, if they were intended in any way to reflect the industrial development of the State. Of the 3,926 establishments reported to the census as engaged in these thirty-two forms of production, but thirty-seven were represented. Seventeen of these thirty-seven contributions were in the single group of machinery. Twenty of the thirty-seven industries enumerated were wholly unrepresented. Among those thus conspicuous for their absence were the manufactures of cars, of agricultural implements, of cutlery, of drugs and chemicals, of paper, of glass, of clothing, of prints, of plated ware, of straw work, of watches, of wire and worsted goods. Of the 1,123 establishments engaged in the manufacture of boots and shoes, three contributed. One solitary contributor only, represented our annual production of \$45,000,000 of cotton goods. Our famous edge-tools, our India-rubber goods, our musical instruments and our woodenware numbered also one contributor each. Our woollen goods had two.

Turning to the several groups, and excluding the educational department, in regard to which a special report will be made by Mr. Philbrick, the commissioner in charge, it will be seen that in eleven out of the twenty-five the State was wholly unrepresented. In this number were included all the departments of art, metallurgy, agriculture and horticulture; stone, earthenware and glass; all small wares and fancy goods; paper and stationery; civil engineering and architecture; and interior household decoration and arrangement. In four of the fourteen groups in which it was represented at all, it had

single contributions. In five it had two; in one it had three; in one it had four; in one, that of textile fabrics, it had seven; in one other, that of machinery, it had seventeen. Our manufacturers of condensed food and preserved fruit and vegetables (Group IV.) exhibited two excellent examples, the one of canned articles, the other of cocoa and chocolate. Our engravers, book-printers, lithographers, photographers and decorators (Group XII.) were represented by Prang's chromo-lithographs, which, with a solitary landscape-painting by Mr. C. Granville Way, of Boston, were the sole indications of progress in our artistic development. Our philosophical and surgical instruments (Group XIV.) were two models, the one of an "Hyperbolical Paraboloid," the other of an "Hyperboloid" and a "Hygrodielk." In the great field of chemical industries (Group III.), we were represented by some lubricating oil, some leather-dressing, and by the "Rising Sun Stove Polish."

It does not, of course, need to be said that no discrimination whatever had been exercised as regards a selection of exhibits in the case of the State, any more than in that of the nation, and in six only of the fourteen groups in which she was represented, were the contributions such as to call for special commendation. Among the textiles (Group V.) were specimens of cassimeres, and of carpets of excellent quality produced in Massachusetts by Blackinton & Sons, of North Adams, and by the Bigelow Carpet Co., of Clinton, though forwarded by New York selling agents. Gardner Brewer & Co. also exhibited some superior shirtings, though these again were manufactured in New Hampshire. In Group VII., the contribution of the Douglas Axe Co. was highly creditable. In Group VIII., A. S. Parks, of Winchendon, exhibited water-pails, manufactured on the spot, and B. F. Sturtevant, of Boston, some specimens of prepared wood for shoe-pegs, both of which exhibits received and deserved high commendation. In Group XV., our single contribution of musical instruments—for our great piano manufacturers were not represented—were some highly creditable organs, from the Mason & Hamlin Organ Co., of Boston; and in Group XVI. the Smith & Wesson revolvers fairly represented our progress

in fire-arms. In Machinery only, however, was the Massachusetts contribution otherwise than a ludicrous failure.

In this Group (XIII.) the American exhibits generally attracted attention, on account of their merit and novelty, and, though by no means the best specimens of our mechanical engineering, did not reflect discredit. An examination of the list of awards will show, that in proportion to its exhibitors, the United States received a larger number of high prizes than any other country. The reason for this is not that the jury were lax or partial in their decisions, but that nearly every one of our machines, when compared with those of foreign make, had some points of superiority.

Massachusetts was not wanting in contributing to this result. The wood-working machinery, the boot and shoe machinery and the wool-spinner were among the chief attractions of the Exposition, not only for the gazing crowd, but for experts; and for this reason, in an official report, the exhibits from the State in this department should receive more than a merely passing notice.

The collection of wood-working tools exhibited by Mr. B. D. Whitney, of Winchendon, without considering the novelties in design, were most creditable in point of construction, since they showed careful calculation and accurate workmanship, for lack of which American tools have been too often exposed to criticism. Mr. Whitney's pail-machinery was sent only to interest visitors, and not as a new invention. His saw-bench and short planer, which were at the Paris Exposition in 1867, were unsurpassed by any similar tools on exhibition. The scraping-machine, designed to smooth the surface of small pieces of hardwood, such as are used in cabinet-making, was an entirely original invention. It performs its work quicker and far better than is possible by hand-labor. In order to secure the peculiar edge required on the scraping-knife, a special grinding-machine was provided, without which the utility of the scraper would be much lessened. There was also a jig-saw, balanced in a novel way, so that it could be run at a high speed without producing the trembling which usually attends the action of such machines. The most prominent of his exhibits, and the one which was brought into competition with those of nearly every manufacturer at the

Exposition, was the improved band-saw, in which he has accomplished two things, which are essential to its perfect working; viz., a suitable surface for the back of the saw to rub against, and an automatic device to keep the tension of the saw-blade uniform.

The firm of Witherby, Rugg & Richardson, of Worcester, had a planing-machine for general work which possessed several advantages. In some way it was unfortunately injured in transit, so that its operation was rather imperfect.

The Knapp dovetailing machine, from Northampton, was in constant operation. It makes a form of dovetail which can be used whenever machine-dovetailing is admissible. For rapidity and accuracy of work it can hardly be excelled.

The continuous wool-spinner exhibited by Mr. J. G. Avery, of Spencer, was one of the most interesting exhibits in the hall. By a simple and ingenious device, a motion is attained in drawing out the roving and reducing it to yarn, which imitates that of the arm of a hand workman. As the material is drawn constantly from the spool, and continuously wound upon the bobbin, the capacity of the machine is at least double that of those now in use. There are in addition several small contrivances which greatly increase its efficiency.

The set of shoe-machinery was most complete of its kind, and the only one worthy of mention in the Exposition. During several hours in the day, workmen were engaged in making shoes, or in showing the operation of special machines. The pegging-machines, roller, sewing-machines and burnisher, from the Shoe Machinery Manufacturing Co. of Boston, were comparatively new. The "wire-nailer" was the more interesting, because the French showed a far inferior machine for the same work. The machines for making and attaching heels, sent by the Bigelow Heeling Machine Association, of Worcester, were exhibited for the first time. These machines make it possible to manufacture cheap heels from good or refuse stock, so that they will be as durable as when made in the ordinary way. There were also special devices for attaching and finishing heels. The attention paid to labor-saving contrivances and to strength in construction was noticeable. The enterprise of the representatives of this firm in persevering in the manufacture of shoes, although they were not

allowed to sell them, deserves commendation. A few shoe-machines, from T. A. Dodge, Cambridge—prominent among which was the well-known McKay sewing-machine—were brought in after the jury had finished its work, and therefore received no award.

There were no large iron-working tools from Massachusetts, a fact which is the more astonishing when the reputation of our manufacturers is considered. Among the shop-fittings were a parallel-jawed vise by Mr. Thomas Hall, of Northampton; one of a style peculiarly American, so contrived that the jaws can be rapidly pulled backward and forward, and almost instantly fastened on any interposed object. The Morse Twist Drill Co. showed a case of their increase-twist drills and fluted reamers. The hand-knitting machine, from the Lamb Knitting Machine Co., at Chicopee Falls, and the Excelsior Gas Machine from Warren, sustained their reputation as standard machines.

From this brief survey of the important Massachusetts mechanical exhibits, it will be seen that even in those departments which were best represented, we had but two or three exhibitors, and the majority of kinds were nearly or wholly unrepresented. The only mitigating consideration is, that what we did have was uniformly good, and carried away the highest honors.

In comparison with the other states of America, Massachusetts stood fourth in respect to the number of her contributions to the Exposition as a whole, being exceeded by New York, Ohio and Louisiana. Judged by the test of prizes awarded, the state stood second with Ohio in respect to their quality, being exceeded only by New York. A detailed list, both of the exhibitors from Massachusetts and of the prizes awarded them, will be found appended to this Report. Of the fifty-five contributors from the State in fourteen groups, thirty-three received either prizes or honorable mention. Of these, however, the medals for progress and merit—the two highest awards, after the grand diplomas of honor—alone deserve any great degree of consideration, the others having been so widely distributed as to lose their significance. Of the sixty-four medals of progress awarded to Americans, Massachusetts received thirteen; and of the hundred and fifty-six medals of

merit, she received fifteen; being in all twenty-eight medals, as compared with seventy-eight received by the New York exhibitors, twenty-eight by those from Ohio, and seventeen by those from Pennsylvania. Four diplomas of honor were, however, awarded to individual American expositors, two of whom were from Pennsylvania, and one each from Rhode Island and from New York. The four individuals thus distinguished were, Messrs. Sellers, for machine tools, Corliss, for his steam-engine, White for dentistry, and Wood for the invention of the mowing-machine. It will be noticed that every state in the Union was represented by expositors, though no less than thirteen states numbered three or less. America was not, however, represented in all the groups. Nothing was contributed to Group XIX., which related to the arrangement and interior decoration of the private dwelling-house; or to Group XXII., which was devoted to showing the influence of museums of fine arts on industry; or to Group XXIV., which was made up of objects of fine arts of the past, exhibited by their owners. In Group XXV., in which were included the fine arts of the present time, produced since 1862, the American exposition was wretchedly and disgracefully inadequate. In Group XX., being the farm-house, its arrangements, furniture and utensils, Mr. F. H. Appleton, of West Peabody, furnished the solitary contribution, a modest plan of the farm owned and cultivated by him. In Group XXI., of national domestic industry, which included the superb potteries, porcelains, tapestries, laces, metal articles and carved work, which were the brilliant feature of the Exposition, the only American contributors were two young ladies, respectively from New York and Michigan, who sent, the one an "Embroidered Picture," and the other a "Phantom Bouquet." In Group XXIII., relating to art applied to religion, and which included the entire ornamentation of all sacred edifices, the American contributions were two in number, and both from New York, the one being a "Bronze Lectern," and the other an improved "Burial Casket."

Turning from the American department to the Exposition as a whole, the general field was as rich in material for special reports of value as the particular field was barren. A very cursory examination, however, of most of the col-

lections of public reports which have been made on previous Expositions supplied the means of forming a clear idea, both of the nature and value of these productions. As a rule they have added simply a heavy printing bill to the other expenses of representation. This experience the Massachusetts commissioners felt no ambition to repeat. A general report of our own could easily have been compiled, which would have included, in a compendious form, much that has already appeared in the columns of the press. A large body of perfunctory reports of a similar character could also have been procured from others at a moderate cost. Neither of these methods of completing our work commended itself to our judgment. Very serious difficulties, however, presented themselves in the way of any systematic plan of reports calculated to be of real value. Two plans on which they might be prepared suggested themselves. The first looked to a comparison of results presented in the Vienna Exposition with those observed in the expositions of London or of Paris. Such a comparison, properly instituted and developed by competent hands, should reveal more or less accurately the departments in which industry or art had made advances, or had retrograded, between the expositions. Had it been within our power to carry out this scheme of reports, the result could not but have been most instructive, as showing the hidden influences which had been and now were in operation in different countries. The conception was, however, too general, and presupposed a command of means and of agents altogether beyond the reach of a state commission. The other plan was calculated to be of more immediate interest to Massachusetts. A very brief study of the Exposition sufficed to show, that, so far as America was concerned, the articles contributed to it were divided by a broad line of demarcation into two classes. In one class were included the articles of practical utility, including especially all labor-saving appliances; in the other were those results of human skill, the production of which was due to a more educated hand or to a more developed artistic taste; which showed a finer touch or a more thorough technical training. As regards the first class of exhibits, revealing a ready resource and a great, though somewhat coarse, practical ingenuity, America, even

at Vienna, showed a sufficient degree of strength, and certainly seemed to call for no reports from public agents. It would indeed be little less than a display of folly for a body of state officials, with, at best very general information, to undertake to instruct in the details of their business men managing interests, the annual product of which amounts to tens of millions of dollars. It is not to government reports that these men go for information. There was little probability that we could discover much that has escaped their search, even if they were not themselves on the ground in person, or by their representatives. It is not so, however, as regards the exhibits of the second class. No richer field of instruction for Massachusetts industry could have been desired than was presented at Vienna in the display of articles, the excellence of which lay in the nice skill or educated taste or thorough training of those who produced them. America was here immeasurably behind all leading competitors. After full consideration, therefore, it was determined to devote especial attention to securing detailed reports bearing upon the exhibits belonging to this class, and to confine the reports relating to machinery and labor-saving inventions within very general limits. A comprehensive schedule was accordingly prepared, and it remained only to secure the services of the specialists competent to develop its several parts. But here again was encountered the great obstacle of an imperfect organization. Our scheme included some thirty papers on various subjects, a special prominence being given to the exhibits in Group XXII., described in the official catalogue as that part of the exhibition showing the organization and influence of museums of fine art as applied to industry,—to which group, it will be remembered, not a single contribution was made by America. We further desired to procure more or less thorough and authoritative information on the recent developments in the production of pottery, porcelain and the ceramic arts generally,—in which this Exposition was wonderfully rich,—on gold and silver wares; embroideries and fine textile fabrics; on paintings, bronzes, statuary and engravings; on glass and on manufactures of ivory, of paper and of leather. A body of reports, some twenty in number, was promised us, all of which, we

believe, would have proved of value, and many of which have already been completed, and are now in our hands ready for publication. As a whole, however, the design could not be carried out. The cause of our failure to do all that we hoped to do in this respect, I shall hereafter refer to more fully. At present it is sufficient to say that we had relied upon finding at Vienna, upon the juries, in the national commission, or among the Americans drawn thither by the Exposition, many who were interested in specialties, and from whom suggestions and even reports might be procured. A few such there were, and to them we owe those portions of the general plan of our reports which we succeeded in procuring. The result, however, constitutes at best but a series of fragments. As a rule, the material we had to work with was of the most discouraging description, from which no results worthy of preservation could be expected. Even where men of character and knowledge were found, in the great majority of cases they were either so disgusted with the disrepute into which America and Americans had fallen, that they refused to assume any labor in connection with the Exposition, or they remained at Vienna merely long enough to get an idea of what the Exposition contained, and then dismissed the whole subject as rapidly as possible from their minds. Two examples will illustrate the disappointments the commissioners had to encounter in this respect. The production of paper and glass is among the most promising industries of Massachusetts, and admits of great development. In both, the Vienna Exposition was peculiarly rich; and to the manufactured results of both artistic taste and technical skill have of late years contributed a greatly increased value. In spite of the most careful inquiry, however, we were unable to discover any one possessing a knowledge of the growth or present condition of these industries in Massachusetts, who would undertake to furnish a paper upon them. A formal and superficial report could of course have been procured with little trouble and at small expense. It was not, however, deemed advisable in securing the requisite quantity of reports to evince a too complete disregard of their quality.

Under these circumstances, long before the labors of the commission were brought to a close, the fact of a practical

failure in our mission had become very evident to me. The failure was due to either of two causes—to the defective organization of the commission at home, or to the absence of the material necessary for it to work with at Vienna. The commission had not been selected with a view to its being complete in itself, and it failed to secure outside of itself the assistance necessary to carry out any broad plan of general review. Whatever the cause, however, and whether personally responsible for it or not, I early concluded that there was but one course to be pursued. The fact of failure must be met squarely, and in this way only could it be converted into a success. Instead of attempting to silently ignore the unsatisfactory results of our mission, or to conceal them under a cloud of perfunctory platitudes, it seemed to me our duty to state them with all possible precision of language, to the end that the Commonwealth might derive from our experience the most definite conclusions for its future guidance. For to me it is very clear that the Vienna Exposition is not destined to be the last of its kind. Whether financially it proved a success or failure is matter of small moment, so far as the continuance of the great succession of international fairs is concerned. They constitute a part of the machinery of modern development. As mere bazaars of the nations, if as nothing else, they are destined to an indefinite repetition; for as sensational sales-rooms they are profitable. Others will then hereafter take place in which it will be well for Massachusetts to take her part. Many and obvious reasons will render such a course advisable. The people of Massachusetts form a community, the whole future prosperity of which depends upon its maintaining a superiority over others in matters of education, of ingenuity and of skill. The figures of the census are significant of coming danger in these respects. Our people will have to follow the path which others have trodden before, and consent to accept lessons from all who can teach them. We, no less than the people of England, of France and of Austria can learn much in these great industrial arenas, where our products will be brought in contact and comparison with those of other communities before our own eyes and those of the world. The State itself, also, as an educator, may derive most useful les-

sons from the experience ; for here in America we are at best too far removed from what are still and will long remain the great models of art and the most thorough systems of instruction. If, however, the State is to take her part with other civilized communities in these tests of relative development, it is a matter of no small import that she should appear in a manner not unworthy of herself. If this could hereafter be secured, it would be perhaps the best and richest result possible to be derived from her own and the nation's experience at Vienna. In no event, however, should that experience be repeated. That it may not be repeated, it is proper that the truth in regard to it should be told, even though it prove somewhat unpalatable. In doing this, it will be necessary for me to refer to the national representation and that of other States as well as of Massachusetts, though no individual application belongs to any of my remarks.

A nation or a community in entering upon the competition of a world's fair must have one or both of two objects in view ; it must go there to exhibit, or it must go there to observe. In going there, however, for the one object or the other, or for the two combined, there is, after the experience we now have of such undertakings, no possible excuse for any people in going so unprepared or so represented as to either fail in accomplishing the objects it has in view, or to humiliate itself and its citizens in the eyes of those with whom it proposes to compete. Whether to exhibit or to observe, however, it is not too much to say that the entire arrangement of the American organization at Vienna, both state and national, was an utter, entire and disgraceful failure ; a failure in conception and a failure in execution ; a failure unjust to our industries, discreditable to the country and humiliating to those more immediately concerned. To us representing the State upon the spot, it was painful to think of what the Massachusetts exposition might easily have been made,—most mortifying to see what it was. A better opportunity to achieve a great and brilliant success in the eyes of all civilized nations was never offered to any community than was lost by the Commonwealth at Vienna. It was lost simply from the fact that the State, as such, undertook to participate without previously having any definite idea either as to what it proposed

to do, or how it proposed to do it. The means appropriated to the end were ample; the matured design was wanting. In this and in every similar case all depends upon thoroughness of preparation. The course which should have been pursued is now perfectly apparent. The legislative action taken in February, 1873, should have been taken in February, 1872, and the Commissioners who were to carry the design into execution should then immediately have been selected. By them the State should have been thoroughly canvassed and its industries marshalled; those best representing its products should have been interested in the scheme, and their contributions collected and shipped, while the agents of the Commonwealth should have been upon the ground to receive them as early as January, 1873. Had this been done, no one at all familiar with the resources and results of her industry can for an instant doubt that the triumph of Massachusetts would have been as conspicuous as was the failure of the United States; her success would have redeemed the credit of the nation. It is idle to regret an opportunity lost, but, in future, it will be for Massachusetts to remember that it is better, much better, not to appear at all, than unworthily to exhibit herself at a world's fair. A worthy appearance cannot be improvised; it implies labor, prevision and experience. Money even is less necessary than organization; unless this last is provided, both the State and its citizens had best stay at home.

All this, however, related merely to the Exposition as a mart,—to the sales-room only into which all countries brought their choicest products in competition with each other. But a no less pointed lesson of experience can be drawn from the manner in which we approach the Exposition as a school. It was not possible to look at the amazing results of science and skill there displayed, and not be impressed with the inexhaustible wealth of suggestion they contained for any American community. There is probably no other people which could draw so many benefits from it. But to secure those benefits it was necessary that the displayed, and yet more the hidden resources of the Exposition should be studied and developed by men who were masters of their subjects. As a rule, however, the men selected officially to represent

America were even less creditable to the country than were the wares. It would convey a wholly erroneous impression to say that among the many Americans present during the Exposition, and occupying more or less official relations with it, there were not some competent to fill the positions in which they found themselves placed. It was, however, a melancholy fact that this was the exception and not the rule. The various organizations, as a whole, were the furthest possible from what they should have been. This criticism applied to all, from the commission of the United States down through those of the several states, and to our representatives on the juries. I have already sufficiently referred to the strenuous and very partially successful efforts made to discover the material which would enable us to carry out the plan of special reports which we had conceived. As a rule, our researches brought to light only a noticeable absence both of education and of a thorough practical knowledge of specialties. It surely should be a fair matter for presumption, that individuals selected to represent America upon international juries, which are to pass upon the relative excellence or the best results of the industries of all civilized countries, would know *something*. In far too many instances, those Americans who were appointed to this honorable function at Vienna seemed to fail as regards this elementary prerequisite. It was thus no unusual circumstance to find an individual holding the position of a judge, whose ignorance of the subject-matter under discussion was only surpassed by his ignorance of the language in which the discussion was necessarily conducted. Certain men there were upon the juries amply competent to fill any position,—men of education, at home in the languages and thoroughly versed in their specialties. These, however, constituted brilliant exceptions to the general rule of incompetence. As a whole, the American official representation was a curious and instructive commentary in the eyes of all other countries of both hemispheres upon our national system of appointment to office. Previous qualification for the performance of duties had apparently not been regarded as requisite. There accordingly had flocked to Vienna a motley accumulation of nondescripts, the highest general ambition among whom appeared to be a mention in reportorial paragraphs,—newspaper

celebrities in matters of education, of science and of art. It was indeed matter of curious observation how very rarely the names of the true scientific authorities—those on the spot recognized as such—were ever mentioned; and what frequent and noisy reference was made to others whose efforts were least appreciated by those most competent to judge of their worth. There were also in attendance a large number of others occupying positions more or less official, whose presence it was not easy to explain. They had certainly not been commissioned on account of any public service they were qualified to render, and it was difficult to appreciate the exact amount of private benefit they were deriving from their sojourn. They certainly knew nothing, and to all appearances they did nothing. They had apparently secured appointments abroad as an agreeable change from a monotonous and dreary idleness at home. These, however, were at least a negative element,—they were unnoticeable units in a vast aggregation of men. This could not, however, truthfully be said of all. There were among the accredited representatives,—especially the "Honorary Commissioners" of certain of the States,—not a few who reflected a direct discredit upon those by whom they were sent, and whom they were supposed to represent. Individuals who could have received public credentials to the Exposition for no conceivable reason except that they wished to see it, or had some less creditable ends in view, and regarded a governmental commission as a species of letter of credit.

It surely need not be said that such a gathering as this is not one from which it is easy to procure complete or philosophical *résumés* of the results of modern progress. That we succeeded in securing so many as we did, is now somewhat of a matter of surprise to me. The lesson to be derived from this portion of our experience is, however, an obvious one. So far as studying results upon any general or comprehensive plan of value is concerned, I am persuaded that it is useless for Massachusetts or for any other individual State to send its agents to future expositions. It is in fact a mere waste of public money. The end is out of all proportion to the means. The material to be met with on the spot is not sufficiently good or reliable, and the field of operations is too remote to justify the great expense which must of neces-

sity be incurred in selecting and sending to it a complete corps of specialists. The national government only could undertake the task; and the experiences of the past do not justify any confident expectations for the future from that quarter. Should Massachusetts or any other state conclude, therefore, on any future occasion, that results of general importance to its people could be derived from a careful study of the exhibits in a world's fair, it must abstain from attempting too much. The public press furnishes everything of a general and superficial character that any state commissioner could procure. The art of "cramming" is by it carried to perfection. Beyond this, however, a real want exists of exhaustive studies in special departments. These, state commissioners, if selected for that purpose, could supply better than any other agency. Take, for instance the great branch of technical and artistic education which has already been referred to. It has of late years undergone a surprising development in Europe, the results of which supplies its most interesting and instructive feature to the recent Exposition. It is now exciting the greatest interest among all thoughtful men in America, and promises infinite results in our immediate future. The Massachusetts commission might well have been organized with a single view to dealing thoroughly with this department. Had it been so organized, the end in view would have been strictly proportioned to the means at command. To me, personally, from an early period after my arrival at Vienna, it has been a cause of deep regret that this view of the subject was not earlier taken. The experience came, however, too late, and it only remains to see that it is not again repeated.

Meanwhile the American Centennial must now be prepared for. It is greatly to be regretted that those who are to represent the Commonwealth there should not also have represented it, as was the original design, at Vienna; the experience would have been invaluable. Meanwhile, if the results of the Vienna commission can be made to contribute to the successful participation of the State in the Centennial, the expense incurred in sending it out will prove a most fortunate outlay. This desired result can be secured in a very simple way. A timely organization must be effected. The work of

preparing the contributions of any community for their proper display in an international exposition is now a profession in itself, which, among European nations, has been carried to a high degree of development. Almost every foreign government which participates has, among its agents, men whose experience dates back to the Prince Albert original of 1851, and who know just what ought to be done and exactly how to do it. The organization effected by these men is as perfect as experience and familiarity with the work can make it. No progress in this direction has as yet been made in America. At Vienna, our authorities showed an utter inability to appreciate either the magnitude and complexity of the undertaking, or the labor and devotion necessary to bring it to a successful issue, while the course which ought to have been pursued was clearly indicated through the success of others. Our own failure both happily and forcibly illustrated almost every conceivable blunder which a people could commit.

The work of preparation for 1876 cannot commence too soon in the several states. It should have commenced already. The legislature now in session ought at once to decide upon the course which Massachusetts as a state proposes to take. If it decide to do nothing, then that decision should be final, and should on no account hereafter be reversed at a moment so late that action will be synonymous with failure. If, on the contrary, it is decided to enter into the affair with a local organization, the necessary provision for it should then immediately be made. Under no circumstances should our action be marked by hesitation, or by that tardiness which rendered barren the mission to Vienna. No action at all is better than action after the opportunity is lost. The simplest organization is the best, and to be efficient should be inexpensive. No cumbrous system of salaried commissioners, or*of honorary commissioners with perquisites, is either necessary or desirable. Those who are to represent the State have already been designated. So far as any state organization, as such, is concerned, their duties should be merely advisory; or, if it is thought proper or desirable to create another commission, then those appointed upon it should act simply as a board of unpaid trustees or directors, performing no executive duties themselves, but

supervising, counselling or authorizing the steps taken by him upon whom responsibility must finally rest. Their function is an ornamental, and yet a most important one; they are to lend weight and character and authority to the occasion; their names should inspire that faith and confidence in the undertaking without which success is not possible. To carry out the work of detail, upon which everything depends, a single secretary to the commissioners should be appointed, who should be the executive officer in charge. He should receive an adequate salary, and for the next three years his whole time and thought should be devoted to the success of the Massachusetts department. With the ordering of the affair as a whole, he would have no connection; his duties would relate simply and solely to the share of his own state. No ordinary or inexperienced man could fulfil the duties of the position, for it is a great error to suppose that it is one either of holiday-work or newspaper renown. On the contrary, these incidents of the exposition business are for others, while only the dry, repulsive, tedious labor of organization and of detail falls to the lot of the executive subordinate. Upon this subject many useful suggestions will be found in a valuable paper supplied to us by Prof. Thomas C. Archer, of Edinburgh, the managing head of the museum at that place, whose long experience qualifies him to speak with the highest degree of authority. This report was procured with a view to its bearing on the Centennial Exposition, and is ready, with others, for immediate publication, should the legislature so order. Meanwhile, as a practical example in point, the English commission at Vienna was probably as good an illustration as could be found. The means placed by the government at its disposal were small, but the results accomplished were all that could be desired. No department was better or more thoroughly organized than the British. The Prince of Wales was the president of the commission, which included fourteen other persons, all of the highest rank, or men well known from their connection with business, science or art. These constituted a species of board of direction, or of trustees, acting, of course, without pay. The secretary of the commission was Mr. Owen, of the South Kensington Museum; and upon him, assisted by a small but

very efficient staff of his own selection, devolved the whole responsibility and labor of execution. Mr. Owen was a very perfect illustration of what the "one-man power" ought to be, to which should be confided the work of organizing a national department in a universal exposition. Naturally gifted with remarkable executive powers, he brought to his work a long experience and a great capacity for silent labor. He fully appreciated the magnitude and importance of his task, and devoted himself wholly and unreservedly to it. He knew perfectly well, both what had to be done, and how to go to work to do it. To him, therefore, was mainly due the very remarkable success of the British display. In him a competent agent had been secured, and he was not trammelled.

If Massachusetts is to be properly represented at Philadelphia, the work of organization should, with as little delay as possible, be entrusted to a similar agent. It would then be for him to acquaint himself thoroughly with the industries, science and art of the State, and to put himself in correspondence with those most willing and competent to represent them. It would devolve upon him to see that the plan of representation was perfect in all its parts; and to be assured of this he must acquaint himself with the experience of other expositions. Such a labor requires high qualities of patience, industry, thorough education, and, above all, great powers of organization. It calls for a familiar acquaintance with all that Massachusetts has done, and with what she is now doing. To procure such an agent may not be easy, but unless he is procured, and that in good time, the legislature can rest assured that, as respects confusion, waste of money, and poverty of result, the experience of Massachusetts at Philadelphia will be but a repetition on a small scale of that of the United States at Vienna. The idea that such an undertaking can be brought to a successful result, either through the action of any committee, or by means of mellifluous oratory, enthusiastic rallies and patriotic appeals, is wholly deceptive. It absolutely requires perfect concentration, silent work and exclusive devotion.

There is good reason to believe that every condition exists necessary to make a decided success of the proposed Philadelphia Centennial. The court pageant, which has played so brill-

iant and essential a part in its great European prototypes will, it is true, necessarily be wanting. The mercantile element, however, which has proved the great main-spring of all recent expositions, will there be present in a more than ordinary degree. Throughout the civilized world America is known as a great market; as a market in which fabulous prices are paid, especially for those things which are rich or rare. Accordingly, all the leading producers of the world, whether of objects of utility or of art, will wish to be represented. They will come with every conceivable product of human skill, and, more especially, with those a familiarity with which is in itself a liberal education, and the production of which offers well-nigh unlimited fields for American development. The zeal and public spirit with which the city and state most immediately concerned have thrown themselves into the undertaking have been most creditable, and, unaided, should suffice to secure the happiest results. All that is needed is a thorough concentration, economy and direction of force. The vulgar ambition of unprecedented bigness should be made to yield to an educated appreciation of excellence. There can be no question that the devotion of those who have the Centennial in charge will create in it a wide-spread and sufficing interest. Mismanagement, arising from ignorance, incompetence and jobbery,—a repetition of the Vienna experience,—will be the great danger to be apprehended. If that experience can now be turned to an immediate profit in preventing its own recurrence, we shall have some cause not wholly to deplore it. This, however, can only come from action, both intelligent and prompt, on the part of the various state governments, who will be the leading participants. Should this be deferred to the last moment, and then hastily improvised, those who rashly implicate themselves will probably have as good ultimate cause for regret as did the vast majority of their countrymen, who, during the last summer, found themselves in any way officially connected with the national fiasco at Vienna.

CHARLES FRANCIS ADAMS, JR.

TABLE I	...
TABLE II	...
TABLE III	...
TABLE IV	...
TABLE V	...
TABLE VI	...
TABLE VII	...
TABLE VIII	...
TABLE IX	...
TABLE X	...
TABLE XI	...
TABLE XII	...
TABLE XIII	...
TABLE XIV	...
TABLE XV	...
TABLE XVI	...
TABLE XVII	...
TABLE XVIII	...
TABLE XIX	...
TABLE XX	...
TABLE XXI	...
TABLE XXII	...
TABLE XXIII	...
TABLE XXIV	...
TABLE XXV	...
TABLE XXVI	...
TABLE XXVII	...
TABLE XXVIII	...
TABLE XXIX	...
TABLE XXX	...

TABLES OF EXHIBITS, Etc.

TABLE I	...
TABLE II	...
TABLE III	...
TABLE IV	...
TABLE V	...
TABLE VI	...
TABLE VII	...
TABLE VIII	...
TABLE IX	...
TABLE X	...
TABLE XI	...
TABLE XII	...
TABLE XIII	...
TABLE XIV	...
TABLE XV	...
TABLE XVI	...
TABLE XVII	...
TABLE XVIII	...
TABLE XIX	...
TABLE XX	...
TABLE XXI	...
TABLE XXII	...
TABLE XXIII	...
TABLE XXIV	...
TABLE XXV	...
TABLE XXVI	...
TABLE XXVII	...
TABLE XXVIII	...
TABLE XXIX	...
TABLE XXX	...

No. 1.—Table of American Exhibits, showing the Groups to which they severally belonged, and the Medals or Diplomas of each description awarded to them.

GROUP.		Number of Exhibits.	Diploma of Honor.	Medal of Progress.	Medal of Merit.	Diploma of Merit.	Medal for Fine Arts.	Medal for Good Taste.	Medal for Co-operators.	Total Awards.
I.	Mining, Quarrying and Metallurgy,	36	-	1	9	4	-	-	1	15
II.	Agriculture, Horticulture and Forestry,	42	-	1	3	5	-	-	-	9
III.	Chemical Industry,	41	-	-	19	10	-	-	-	29
IV.	Substances of Food as Products of Industry,	69	-	9	25	17	-	-	-	51
V.	Textile Industry and Clothing,	34	-	2	20	5	-	-	-	27
VI.	Leather and India-rubber Industry,	25	-	1	4	10	-	-	-	15
VII.	Metal Industry,	53	-	1	7	16	-	-	-	24
VIII.	Wood Industry,	13	-	2	4	1	-	-	-	7
IX.	Stone, Earthenware and Glass Industry,	19	-	-	1	2	-	-	-	3
X.	Small Ware and Fancy Goods,	10	-	-	1	1	-	-	-	2
XI.	Paper Industry and Stationery,	17	-	2	8	5	-	-	-	15
XII.	Graphic Arts and Industrial Drawing,	36	-	6	10	7	-	3	2	28

XIII.	General and Agricultural Machinery,	151	3	33	29	25	-	-	18	108
XIV.	Philosophical Surgical Instruments,	31	1	2	1	3	-	2	-	9
XV.	Musical Instruments,	6	-	2	-	2	-	-	-	4
XVI.	The Art of War,	16	-	1	11	-	-	-	-	12
XVII.	The Navy,	8	1	-	2	2	-	-	-	5
XVIII.	Civil Engineering, Public Works and Architecture,	15	-	1	2	6	-	-	-	9
XX.	The Farm-house, its Arrangements, Furniture and Utensils,	* 1	-	-	-	-	-	-	-	-
XXI.	National Domestic Industry,	2	-	-	-	1	-	-	-	1
XXIII.	Art applied to Religion,	2	-	-	-	-	-	-	-	-
XXV.	Fine Arts of the Present Time,	16	-	-	-	-	2	-	-	2
	Total,	643	5	64	156	122	2	5	21	375

Total awards for exhibited objects, 349

No. 2.—Table of Massachusetts Exhibits, with the Groups to which they severally belonged, and the Medals or Diplomas of each description awarded to them.

GROUP.		Number of Exhibits.	Medal of Progress.	Medal of Merit.	Diploma of Merit.	Medal for Co-operators.	Total Awards.
I.	Mining, Quarrying and Metallurgy,	-	-	-	-	-	-
II.	Agriculture, Horticulture and Forestry,	-	-	-	-	-	-
III.	Chemical Industry,	4	-	1	1	-	2
IV.	Substances of Food as Products of Industry,	2	-	2	-	-	2
V.	Textile Industry and Clothing,	7	2	3	-	-	5
VI.	Leather and India-rubber Industry,	2	-	-	-	-	-
VII.	Metal Industry,	10	-	1	3	-	4
VIII.	Wood Industry,	2	1	1	-	-	2
IX.	Stone, Earthenware and Glass Industry,	-	-	-	-	-	-
X.	Small Ware and Fancy Goods,	-	-	-	-	-	-
XI.	Paper Industry and Stationery,	-	-	-	-	-	-
XII.	Graphic Arts and Industrial Drawing,	1	1	-	-	-	1

XIII.	General and Agricultural Machinery,	17	7	4	1	1	13
XIV.	Philosophical Surgical Instruments,	2	-	-	-	-	-
XV.	Musical Instruments,	1	1	-	-	-	1
XVI.	The Art of War,	3	1	3	-	-	4
XVII.	The Navy,	-	-	-	-	-	-
XVIII.	Civil Engineering, Public Works and Architecture,	2	-	-	-	-	-
XX.	The Farm-house,	1	-	-	-	-	-
XXI.	National Domestic Industry,	-	-	-	-	-	-
XXIII.	Art applied to Religion,	-	-	-	-	-	-
XXV.	Fine Arts of the Present Time	1	-	-	-	-	-
	Total,	55	13	15	5	1	34
Total awards for exhibited objects,							33

No. 3.—Table showing the Contributions of each of the several States of the Union to each of the Groups.

Group.	Alabama.	California.	Colorado.	Connecticut.	Dist. Columbia.	Georgia.	Illinois.	Indiana.	Kansas.	Kentucky.	Louisiana.	Maine.	Massachusetts.	Maryland.	Michigan.	Missouri.
I. Mining, Quarrying and Metallurgy, . . .	-	1	2	-	-	-	2	1	-	-	3	-	-	-	1	7
II. Agriculture, Horticulture and Forestry, . . .	2	1	-	-	-	-	-	1	-	-	19	-	-	-	-	6
III. Chemical Industry,	-	-	-	-	-	-	2	-	-	1	3	-	4	-	-	1
IV. Substances of Food as Products of Industry, . . .	-	3	-	-	-	-	1	1	-	1	19	1	2	-	-	9
V. Textile Industry and Clothing,	-	-	-	-	1	-	1	-	-	-	3	-	7	1	-	2
VI. Leather and India-rubber Industry,	-	-	-	-	-	-	-	-	-	2	1	-	2	1	-	1
VII. Metal Industry,	-	-	-	4	1	-	2	-	1	-	1	-	10	-	-	-
VIII. Wood Industry,	-	-	-	1	-	-	-	-	-	-	1	-	2	-	-	-
IX. Stone, Earthenware and Glass Industry,	-	1	-	-	-	-	1	-	-	1	-	-	-	-	-	2
X. Small Ware and Fancy Goods,	-	-	-	1	-	-	-	-	-	-	2	-	-	-	-	1
XI. Paper Industry and Stationery,	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	1
XII. Graphic Arts and Industrial Drawing,	-	3	-	-	1	-	2	-	-	-	4	-	1	-	-	2

XIII.	General and Agricultural Machinery,	-	-	-	14	-	-	8	1	1	-	2	-	17	2	-	-
XIV.	Philosophical Surgical Instruments,	-	-	-	1	-	1	-	1	-	-	5	-	2	-	-	-
XV.	Musical Instruments,	-	-	-	-	-	-	-	-	-	1	-	-	1	-	-	1
XVI.	The Art of War,	-	-	-	2	-	-	-	-	-	1	-	-	3	-	-	-
XVII.	The Navy,	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-
XVIII.	Civil Engineering, Public Works and Archite,	-	-	-	-	1	-	-	-	-	1	1	-	2	-	-	-
XX.	The Farm-house,	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-
XXI.	National Domestic Industry,	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-
XXIII.	Art applied to Religion,	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
XXV.	Fine Art of the Present Time,	-	-	-	-	1	-	1	-	-	-	-	-	1	-	-	-
	Total,	2	9	2	23	6	1	20	5	2	8	65	1	55	4	2	33

XIII.	General and Agricultural Machinery,	-	-	58	4	1	23	8	6	-	-	-	1	1	-	4	151
XIV.	Philosophical Surgical Instruments,	-	-	11	1	-	3	5	1	-	-	-	-	-	-	-	31
XV.	Musical Instruments,	-	-	2	-	-	-	-	-	-	-	-	1	-	-	-	6
XVI.	The Art of War,	-	-	5	-	-	-	2	1	1	-	-	-	-	-	1	16
XVII.	The Navy,	-	-	5	-	-	-	-	-	-	-	-	-	-	-	2	8
XVIII.	Civil Engineering, Public Works and Archite're,	-	-	7	-	-	1	1	-	-	-	-	-	-	-	1	15
XX.	The Farm-house,	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
XXI.	National Domestic Industry,	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	2
XXIII.	Art applied to Religion,	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	2
XXV.	Fine Arts of the Present Time,	-	-	6	-	-	4	2	1	-	-	-	-	-	-	-	16
	Total,	3	1	216	15	1	86	43	12	3	1	2	1	9	2	10	643

No. 4.—Table showing the Diplomas or Medals awarded to the Exhibits of the several States in each of the Groups.

STATE.	Number of Exhibits.	Diploma of Honor.	Medal of Progress.	Medal of Merit.	Diploma of Merit.	Medal for Fine Arts.	Medal for Good Taste.	Medal for Co-operators.	Total Awards.	Awards for Exhibited Objects.
Alabama,	2	—	—	1	—	—	—	—	1	1
California,	9	—	5	4	—	—	—	—	9	9
Colorado,	2	—	—	—	—	—	—	—	—	—
Connecticut,	23	—	4	9	6	—	—	3	22	19
District of Columbia,	6	1	—	1	1	—	—	—	3	3
Georgia,	1	—	—	—	—	—	—	—	—	—
Illinois,	20	—	—	6	6	—	—	—	12	12
Indiana,	5	—	—	2	1	—	—	1	4	3
Kansas,	2	—	—	—	—	—	—	—	—	—
Kentucky,	8	—	—	2	3	—	—	—	5	5
Louisiana,	65	—	2	9	7	—	—	—	18	18
Maine,	1	—	—	1	—	—	—	—	1	1
Massachusetts,	55	—	13	15	5	—	—	1	34	33
Maryland,	4	—	—	1	2	—	—	—	3	3
Michigan,	2	—	—	—	1	—	—	—	1	1
Missouri,	33	—	1	4	4	—	—	—	9	9
Mississippi,	3	—	—	—	1	—	—	—	1	1
Nevada,	1	—	—	1	—	—	—	—	1	1
New York,	216	1	23	55	56	1	4	9	149	136
New Jersey,	15	—	2	3	6	—	—	—	11	11
North Carolina,	1	—	—	—	—	—	—	—	—	—
Ohio,	86	—	7	21	10	—	1	7	46	38
Pennsylvania,	43	2	4	13	6	—	—	—	25	25
Rhode Island,	12	1	2	4	2	—	—	—	9	9
Tennessee,	3	—	—	1	—	—	—	—	1	1
Texas,	1	—	—	1	—	—	—	—	1	1
Virginia,	2	—	—	—	—	—	—	—	—	—
West Virginia,	1	—	—	—	—	—	—	—	—	—
Vermont,	9	—	—	—	1	—	—	—	1	1
Wisconsin,	2	—	—	1	2	—	—	—	3	3
Miscellaneous,	10	—	1	1	2	1	—	—	5	5
Total,	643	5	64	156	122	2	5	21	375	349

No. 5.—Table showing the Number of Establishments engaged in each of thirty-two of the Leading Industries of Massachusetts, as reported in the United States Census for 1870, and the total value of their Annual Production, with the Number of Exhibits contributed by each to the Vienna Exposition.

Number.	KIND OF INDUSTRY.	Number of Estab- lishments.	Value of Products.	Number of Ex- hibitors.
1	Boots and Shoes,	1,123	\$86,565,445	3
2	Cars,	6	2,408,827	—
3	Carriages,	326	4,038,656	—
4	Buttons,	9	511,175	—
5	Agricultural Implements,	37	1,033,590	—
6	Cutlery,	12	1,617,904	—
7	Cotton Goods,	191	44,832,375	1
8	Fire-arms,	12	865,481	3
9	Furniture,	324	11,522,448	—
10	Drugs and Chemicals,	22	1,800,399	—
11	Edgetools and Axes,	12	969,224	1
12	Glassware and Window Glass,	14	2,371,000	—
13	India-rubber Goods,	32	3,183,218	1
14	Instruments, Prof. and Scientific,	12	328,800	2
15	Leather,	138	9,984,497	2
16	Machinery,	346	18,354,052	17
17	Men's Clothing,	446	20,212,407	—
18	Musical Instruments,	60	4,453,794	1
19	Paper,	95	12,677,481	—
20	Jewelry,	59	2,342,025	—
21	Prints,	11	17,325,150	—
22	Paper Collars,	9	997,000	—
23	Saddlery and Harness,	247	1,503,994	—
24	Plated Ware,	37	1,012,100	—
25	Nails and Tacks,	43	5,285,244	3
26	Straw Goods,	14	4,869,514	—
27	Watches,	3	1,281,160	—
28	Whips and Canes,	38	604,367	—
29	Wire,	6	2,354,672	—
30	Woodenware,	25	538,402	1
31	Wooden Goods,	182	39,489,242	2
32	Worsted Goods,	35	8,280,541	—
	Totals,	3,796	\$313,514,184	37

LIST OF MASSACHUSETTS EXHIBITORS.

GROUP I.

MINING, QUARRYING AND METALLURGY.

No Exhibits.

GROUP II.

AGRICULTURE, HORTICULTURE AND FORESTRY.

No Exhibits.

GROUP III.

CHEMICAL INDUSTRY.

- | | | | | |
|---------------------|-----------|--------------|-----------|--------------------|
| 1. Morse Bros., | | Canton, | | Stove Polish. |
| 2. Hathaway & Sons, | | Boston, | | Leather Dressings. |
| 3. Nye, W. F., | | New Bedford, | | Oils. |

GROUP IV.

SUBSTANCES OF FOOD AS PRODUCTS OF INDUSTRY.

- | | | | | |
|---------------------------|-----------|---------|-----------|----------------------|
| 1. Underwood, Wm., & Co., | | Boston, | | Canned Articles. |
| 2. Baker, Walter, & Co., | | Boston, | | Chocolate and Cocoa. |

GROUP V.

TEXTILE INDUSTRY AND CLOTHING.

- | | | | | |
|------------------------------------|-----------|---|-----------|------------------|
| 1. Blackinton, S., & Sons, | | N. Adams, | | Cassimeres. |
| | | Exhibited by Pomeroy & Plummer, New York. | | |
| 2. Bigelow Carpet Co., | | Clinton, | | Carpets. |
| | | Exhibited by W. & J. Sloane, New York. | | |
| 3. Brewer, Gardner, & Co., | | Boston, | | Shirtings. |
| 4. Schayer Brothers, | | Boston, | | Boots and Shoes. |
| | | (See Group VI.) | | |
| 5. Neil, Mrs. J. G., | | Cambridge, | | Feather Wreath. |
| 6. Lilly, Young, Pratt & Brackett, | | Lynn, | | Shoes. |
| 7. Walker, J. H. & G. M., | | Worcester, | | Boots. |

GROUP VI.

LEATHER AND INDIA-RUBBER INDUSTRY.

1. Upton, Franklin & Co., . . . Boston, . . . Sole Leather.
2. Schayer Brothers, . . . Boston, . . . Alligator Hides.

GROUP VII.

METAL INDUSTRY.

1. American Tack Co., . . . Boston, . . . Tacks and Brads.
2. Barny, E. H., . . . Springfield, . . . Skates.
3. Douglas Axe Manuf. Co., . . . Boston, . . . Axes.
4. Dunbar, Hobart & Whidden, So. Abington, . . . Tacks and Nails.
5. Field, A., & Sons, . . . Taunton, . . . Tacks and Nails.
6. Henshaw, Edward, . . . Boston, . . . Shoe Findings.
7. Moulton, E. S., . . . Chelsea, . . . Pipe Tongs.
8. Nichols, F. W., . . . Boston, . . . Hinge.
9. Tower, Geo. W., . . . Cambridgeport, . . . Pipe Tools and Dies.
10. Sherman, W. B., . . . Boston, . . . Spades and Shovels.

GROUP VIII.

WOOD INDUSTRY.

1. Sturtevant, B. F., . . . Boston, . . . Wood for Shoe-pegs.
2. Parks, A. S., . . . Winchendon, . . . Water-pails.

GROUP IX.

STONE, EARTHENWARE AND GLASS INDUSTRY.

No Exhibits.

GROUP X.

SMALL WARE AND FANCY GOODS.

No Exhibits.

GROUP XI.

PAPER INDUSTRY AND STATIONERY.

No Exhibits.

GROUP XII.

GRAPHIC ARTS AND INDUSTRIAL DRAWING.

1. Prang, L., & Co., . . . Boston, . . . Chromo-Lithographs.

GROUP XIII.

GENERAL AND AGRICULTURAL MACHINERY.

- | | | |
|----------------------------------|--------------------|---|
| 1. Ashcroft, E. H., | . . . Boston, | . . . Steam-fittings. |
| | | Afterwards exhibited in British Department. |
| 2. Avery, J. G., | . . . Spencer, | . . . Wool-spinner. |
| 3. Bigelow, H. H., | . . . Worcester, | . . . Heel Machinery. |
| 4. Dodge, Theo. A., | . . . Cambridge, | McKay Shoe Mach'ry. |
| | | Not examined by the Jury. |
| 5. Eames, Bigelow & Co., | . . . Framingham, | . . . Wheels. |
| 6. Evans, A. D., | . . . Boston, | . . . Covered Shuttles.* |
| 7. Excelsior Gas Machine Co., | . . . Warren, | . . . Gas Machines. |
| 8. Hall, Thomas, | . . . Northampton, | . . . Vise. |
| 9. Knapp Dovetailing Mach. Co., | Northampton, | . . . Dovetailing Machine. |
| 10. Lamb Knitting Machine Co., | Chicopee Falls, | Knitting Machines. |
| 11. Morse Twist Drill Co., | . . . New Bedford, | . . . Twist Drills. |
| 12. Raddin, J. G., | . . . Lynn, | . . . Carriage Wheels. |
| 13. Stephens,—, | | . . . Vise.† |
| 14. Townsend, H. E., | . . . Boston, | . . . Shoe Machinery. |
| 15. Whitney, Baxter D., | . . . Winchendon, | . . . Wood-work'g Mach'y. |
| 16. Witherby, Rugg & Richardson, | Worcester, | . . . Wood-work'g Mach'y. |
| 17. Ferguson,—, | . . . Roxbury, | . . . Sheep-shear'g Mach.† |

GROUP XIV.

PHILOSOPHICAL SURGICAL INSTRUMENTS.

- | | | |
|-----------------|--------------------|---|
| 1. Lowe, N. M., | . . . Boston, | . . . Hygrodeik. |
| 2. Spare, John, | . . . New Bedford, | { Hyperbolic Paraboloid
and Hyperboloid. |

GROUP XV.

MUSICAL INSTRUMENTS.

- | | | |
|------------------------------|---------------|---------------|
| 1. Mason & Hamlin Organ Co., | . . . Boston, | . . . Organs. |
|------------------------------|---------------|---------------|

GROUP XVI.

THE ART OF WAR.

- | | | |
|-------------------------|--------------------|----------------------------|
| 1. Smith & Wesson, | . . . Springfield, | . . . Revolvers. |
| 2. U. S. Armory, | . . . Springfield, | . . . Arms, &c. |
| 3. U. S. Cartridge Co., | . . . Lowell, | . . . Metallic Cartridges. |

GROUP XVII.

THE NAVY.

No Exhibits.

* In official catalogue, but not exhibited. † Not in catalogue, but exhibited.

GROUP XVIII.

CIVIL ENGINEERING, PUBLIC WORKS AND ARCHITECTURE.

- | | |
|---|--|
| 1. Voelckers, Theodore, . . . Boston, . . . | } Models of plates and
anchors for floor-
timbers. |
| 2. Brackett, E. A., . . . Winchester, . . . |  | Fishway. |

GROUP XIX.

THE PRIVATE DWELLING-HOUSE, ITS INNER ARRANGEMENT AND
DECORATION.

No Exhibits.

GROUP XX.

THE FARM-HOUSE, ITS ARRANGEMENTS, FURNITURE AND UTENSILS.

1. Appleton, F. H., . . . West Roxbury, . . . Plan of model farm.

GROUP XXI.

NATIONAL DOMESTIC INDUSTRY.

No Exhibits.

GROUP XXII.

EXHIBITION SHOWING THE ORGANIZATION AND INFLUENCE OF MUSEUMS
OF FINE ART AS APPLIED TO INDUSTRY.

No Exhibits.

GROUP XXIII.

ART APPLIED TO RELIGION.

No Exhibits.

GROUP XXIV.

OBJECTS OF FINE ARTS OF THE PAST, EXHIBITED BY AMATEURS AND
OWNERS OF COLLECTIONS.

No Exhibits.

GROUP XXV.

FINE ARTS OF THE PRESENT TIME, WORKS PRODUCED SINCE THE SECOND
LONDON EXHIBITION OF 1862.

1. Way, C. Granville, . . . Boston, . . . Landscape Painting.

LIST OF AWARDS.

MASSACHUSETTS EXHIBITION.

GRAND DIPLOMAS OF HONOR.

1. The State of Massachusetts, for valuable Reports and Documents, and for the enterprise shown by its organized personal representation at Vienna.
2. The City of Boston, for its full and complete illustration of its School System and Schools.

MEDALS FOR PROGRESS.

1. Avery, John G., Spencer, . . . Continuous Wool-sp.
2. Bigelow, Horace H., . . . Worcester, . . . Heel Machinery.
3. Blackinton, S., & Sons, . . . N. Adams, . . . Fancy Cassimeres.
Exhibited by Pomeroy & Plummer, N. Y.
4. Excelsior Gas Machine Co., . . . Warren, . . . Appar. for mak. gas.
5. Hall, Thomas, Northampton, . . . Parallel Bench Vise.
6. Howe, Dr. S. G., Boston, . . . Pub. for Blind.
7. Knapp Dovetail'g Machine Co., Northampton, . . . Dovetailing Mach.
8. Lilly, Young, Pratt & Brackett, Lynn, . . . Boots and Shoes.
9. Mason & Hamlin Organ Co., . . Boston, . . . Cabinet Organs.
10. Morse Twist Drill Co., . . . New Bedford, . . . Incre'se Twist Drills.
11. Prang, L., & Co., Boston, . . . Chromo-Lithogr'phs.
12. Smith & Wesson, Springfield, . . . Revolvers.
13. Sturtevant, B. J., Boston, . . . Wood for Shoe-pegs.
14. Whitney, Baxter D., Winchendon, . . . Wood-w'k'g Mach'y.

MEDALS FOR MERIT.

1. United States Army, . . . Springfield, . . . Arms & Ammunit'n.
2. Baker, Walter, & Co., . . . Boston, . . . { Chocolate and Cocoa
preparations.
3. Blackinton & Co., North Adams, . . . Cassimeres.
Exhibited by Pomeroy & Plummer, N. Y.
4. Barny, E. H., Springfield, . . . Club Skates.
5. Brewer, Gardner, & Co., . . . Boston, . . . Fine "G. B." Shirt'gs.
6. Brewer & Tileston, Boston, . . . School Publications.
7. Hauthaway, C. L., & Sons, . . Boston, . . . Leather Dressings.
8. Lamb Knitting Machine Co., . Chicopee Falls, Hand-knitting Mach.
9. Marcon, Jules, Boston, . . . { Geognostic Map of
the World.
10. Mason, Luther Whiting, . . . Boston, . . . { Syst'm of Instruction
in Music.
11. Parks, A. S., Winchendon, . . . Amer'n Water-pails.
12. Ross, Joseph L., Boston, . . . School Furniture.

- | | | |
|----------------------------------|--------------------|--|
| 13. Bigelow Carpet Co., | . . . Clinton, | . . . Carpets. |
| | | Exhibited by W. & J. Sloane, New York. |
| 14. Stephens, —, | | . . . Vises. |
| 15. Townsend, H. E., | . . . Boston, | . . . Shoe Machinery. |
| 16. Underwood, Wm., & Co., | . . . Boston, | . . . { Canned Fruits, Fish,
V'getab's & Meats. |
| 17. United States Cartridge Co., | . . . Lowell, | . . . Metallic Cartridges. |
| 18. United States Army, | . . . Springfield, | . . . Gunstocks. |
| 19. Walker, Q. H. & G. M., | . . . Worcester, | . . . Boots. |
| 20. Witherby, Rugg & Richardson, | Worcester, | . . . Wood-w'king Mach. |

MEDALS FOR CO-OPERATORS.

1. Felt, Luther W., with J. G. Avery, Spencer.

DIPLOMAS OF MERIT OR HONORABLE MENTION.

- | | | |
|-----------------------------|--|--|
| 1. American Tack Co., | . . . Boston, | . . . { Samples of Tacks &
Brads. [Nails. |
| 2. Dunbar, Hobart & Widden, | . . . So. Abington, | . . . Samples of Tacks & |
| 3. Ferguson, —, | . . . Roxbury, | . . . Sheep-shear'g Mach. |
| 4. Henshaw, Edward, | . . . Boston, | . . . { Shoe Tools and Sam-
ples of Pegs. |
| 5. Lowell Institute, | . . . Boston, | . . . { Dissemnat'n & Pro-
motion of Science. |
| 6. Newton, the town of, | School Reports and Photographs of Buildings. | |
| 7. Nichols, F. W., | . . . Boston, | . . . Wall Desk. |
| 8. Nye, W. F., | . . . New Bedford, | . . . { Sewing-machine and
Watch Oil. |
| 9. Shattuck, W. G., | . . . Boston, | . . . Sch'l Desks & Seats. |
| 10. Worcester, city of, | School Reports and Photographs of Buildings. | |
| 11. N. B. Sherman, | . . . Boston, | . . . Shovels and Spades. |

Diplomas of Honor,	. . . . .	2
Medals of Progress,	. . . . .	14
Medals of Merit,	. . . . .	20
Diplomas of Merit,	. . . . .	11
Medal for Coöperators,	. . . . .	1
		—
Total Awards,	. . . . .	48