

Museum Fatigue

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## MUSEUM FATIGUE

By BENJAMIN IVES GILMAN

BOSTON MUSEUM OF FINE ARTS, BOSTON, MASS.

THE museum in which the photographs here reproduced were taken no longer exists; but the conditions depicted are still well-nigh universal. The museum was the first Museum of Fine Arts in Boston, of which the present great structure on the Fenway became in 1909 the successor. The conditions are those resulting from the type of museum case and of museum installation widely accepted as standards among us.

The photographs were taken with the object of determining by actual observation just what kinds and amount of muscular effort are demanded of the visitor who endeavors to see exhibits as museum authorities plan to have them seen. "Museum fatigue" is an admitted evil, hitherto tacitly accepted as admitting only relief. May not a study of how it comes about suggest some means of prevention?

The method adopted in the inquiry was the following. A series of simple questions was devised relating to certain objects mostly installed at higher or lower levels and in cases; and an observer was photographed in the act of answering them. The observer, an intelligent man with good eye-sight, and well accustomed to museums and their contents, was instructed to answer the questions with the least possible exertion and to hold the positions he needed to assume for the purpose until he could be photographed.

The pictures obtained indicate that an inordinate amount of physical effort is demanded of the ideal visitor by the present methods in which we offer most objects to his inspection. It is at once evident that these methods form an effective bar to the adequate fulfilment by museums of the public function they aim to perform. Not even the hardest sight-seer will long go through with the contortions which the pictures indicate are needed for any comprehension of much of what we display to him. After a brief initial exertion he will resign himself to seeing practically everything imperfectly and by a passing glance. If the public is to gain more than a minute fraction of the good from museum exhibits which is theirs to give and which now can be gained by the private student, radical changes in our methods of exhibition are imperative. As at present installed, the contents of our museums are in large part only preserved, not shown.

Indeed, we may even go further and claim that in some proportion of the objects put on public view in every museum the qualities for which they are shown are rendered wholly invisible by the way they are shown. They are so placed and in such lighting that it is a physical

impossibility by any exertion of limb or eye to descry the particular characteristics to which they owe their selection for show. This is literally an absurd state of things; yet there would be little risk in offering to point out to any museum curator objects so concealed by their installation in his own museum.

On the other hand, a proportion of the objects in every museum may be adequately seen without any marked exertion. These are the instances in which objects are installed approximately on a level with and near to the eye of the visitor as he stands upright before them. They constitute a minor fraction of museum installations, and are not represented in the accompanying illustrations. Our present purpose is to inquire into the larger proportion of instances in which adequate seeing demands exertion.

The questions and answers here follow, grouped according to the types of attitude represented in the illustrations. The cases called floor cases are from six to seven feet high, two and one half to three feet broad, five feet long, with a main floor at about thirty inches from the ground, and supported either on legs or on a closed lower compartment.

These pictures indicate that the principal sources of that part of museum fatigue which comes from muscular effort to see objects well are two: (1) low installations in upright cases; (2) broad installations in flat or desk cases. High installation may put objects out of sight, but is a minor source of fatigue; while to bring the eye within seeing distance of low shelves is apt to demand bending the knees; and the effort to see objects at the back of wide desk or flat cases requires bending at the hips. The pictures indicate further two ways in which objects may be exhibited in museum cases so as to make invisible some or all of the features which warrant their exhibition. They may, first, be concealed in part by others. They may, second, be placed too far back from the glass to be seen in the necessary detail. The effort of the eye muscles can not be directly shown in pictures, but is evidently considerable and may be hopeless.

The inferences are that museum fatigue would be greatly helped were upright cases to stand higher, flat and desk cases to be made narrower, and all cases shallower from front to back. This shallowing would put an end to the concealment of one object by another by putting an end to the exhibition of multiple rows of objects on the same shelf. All cases would be single row cases. The shallowing would further bring all the contents of a case within the limits of close scrutiny. These inferences from the present experiment may be made more precise by others based on measurements of the human body and of the contents of museum shelves. Estimating the height of the average visitor at sixty-three inches, his eye will be about sixty inches above



I. Bent. (a) Hands behind back.

FIG. 1. *Object*.—An Egyptian panel about six inches square set upright between two jars on a pedestal in the center of a floor case. *Question*.—What is the material of this panel? *Answer*.—Wood.

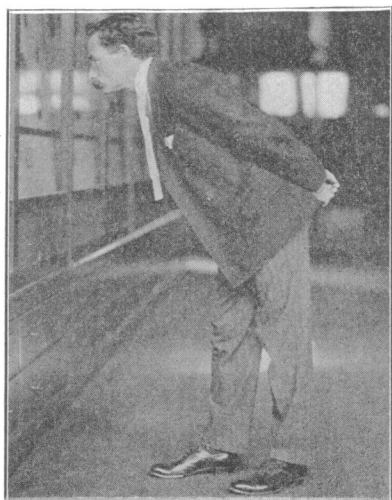


FIG. 2. *Object*.—Chinese bronze mirrors exhibited in a wall case. *Q*.—Describe the pattern of one of the mirrors in the lowest row. *A*.—A central knob in a square, with knobs about and other patterns.



FIG. 3. *Object*.—A print displayed in a desk case. *Q*.—What are these children running away from? *A*.—A dog.



(b) Hands on knee or otherwise supported.

FIG. 4. *Object*.—An Egyptian statuette of gold, about three inches high, on a stand on the center pedestal of a floor case, behind an upright lens. The observer was asked to inspect this object and to read its label.



FIG. 5. *Object.*—Electrotype reproductions of Greek coins in a frame hung against the wall. The observer was asked to read the label of a coin in one of the lower rows.

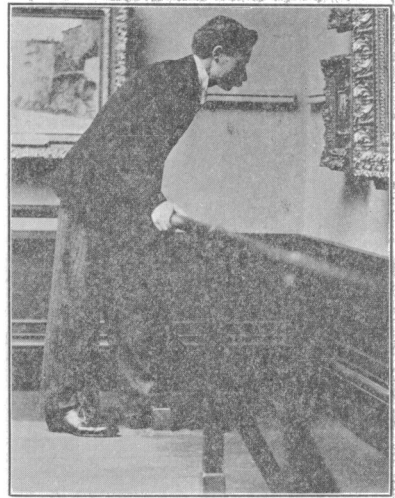


FIG. 6. *Object.*—A painting by Meissonier representing a horseman. The painting was hung on the line. *Q.*—What is represented on the horse's crupper? *A.*—A blanket rolled up.

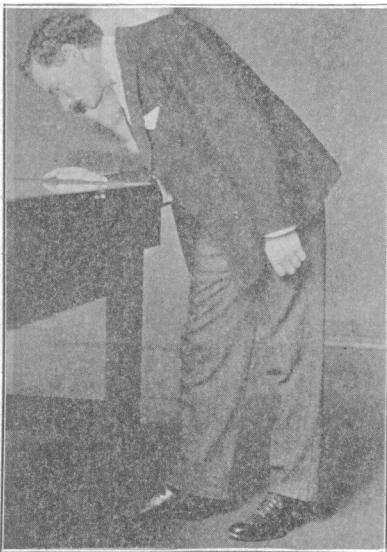


FIG. 7. *Object.*—A Greek coin exhibited toward the front of a flat case. *Q.*—Describe the device on this coin. *A.*—A cow licking her hind foot.



FIG. 8. *Object.*—Plaster impressions from engraved Greek gems, exhibited in a flat case. *Q.*—The observer was asked to describe the device on one of the gems in the center of the case. *A.*—Two goats.

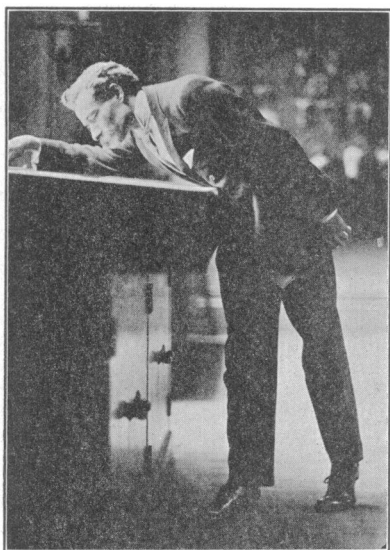


FIG. 9. *Object*.—Greek dagger handle with carved top, lying in the center of a desk case. *Q*.—Describe the carving. *A*.—It represents an animal devouring a ram's head.

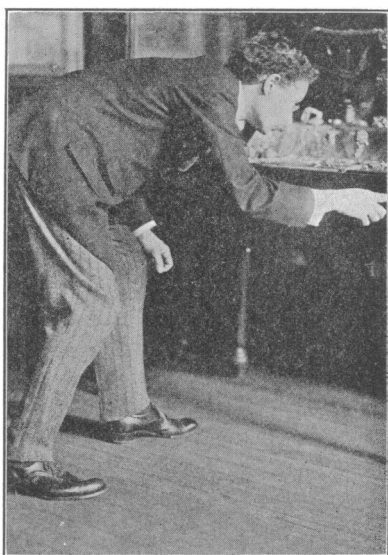


FIG. 10. *Object*.—A Renaissance crucifix lying on the bottom of a floor case, and bearing an incised design. The observer was asked to describe the design. *A*.—The figure of Christ.

## II. *Much bent.*



FIG. 11. *Object*.—A fragment of ornament lying on the bottom of a floor case. *Q*.—What does the pattern on this fragment represent? *A*.—A group of five persons dancing.

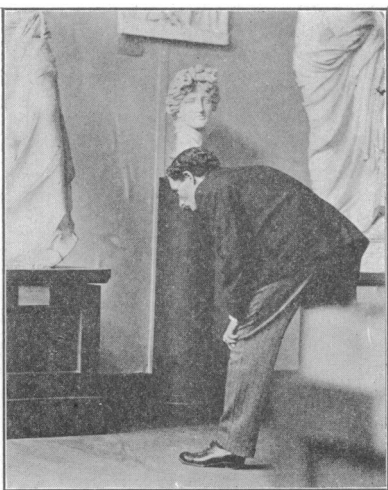
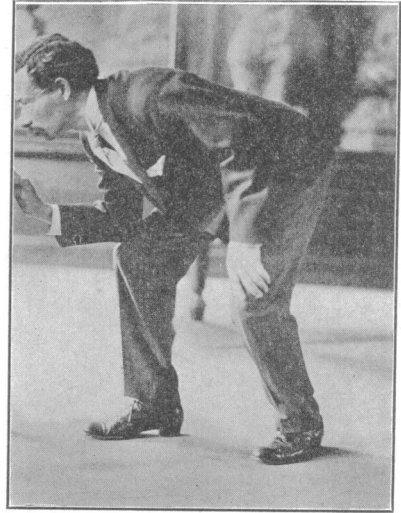
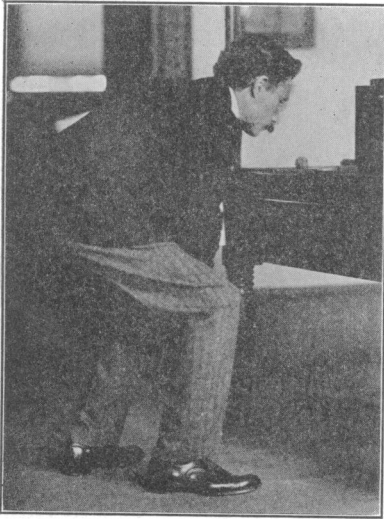


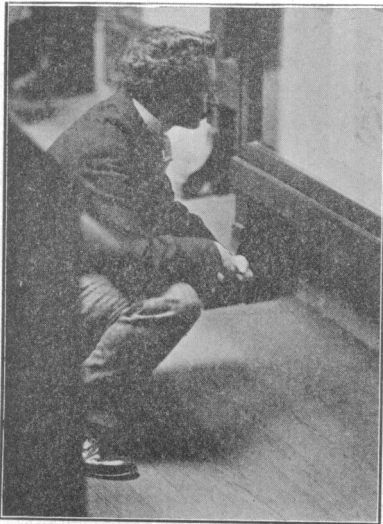
FIG. 12. *Object*.—A cast of the Venus of Melos. The observer was asked to read the label on the pedestal.



III. *Half-crouching.*

FIG. 13. *Object.*—A fragment of a relief on wood lying flat on the bottom of a floor case. *Q.*—What is represented on this relief? *A.*—A bird.

FIG. 14. *Object.*—A crystal ball on a carved metal pedestal in a floor case. *Q.*—What does the pedestal represent? *A.*—Cliffs, with houses and trees.



IV. *Crouching.*

FIG. 15. *Object.*—Engraving after Canaletto in the lower row of a wall-case. *Q.*—Is the space in the center land or water? *A.*—Water.

FIG. 16. *Object.*—Terra-cotta statuette on lower shelf of case. *Q.*—What is this goddess resting her elbow on? *A.*—A smaller statuette bearing a drum-shaped object on its head.



FIG. 17. *Object*.—English posset cup in the base of a floor case. The observer was asked to read the label.



FIG. 18. *Object*.—A Greek vase on lower shelf of case. *Q*.—Describe the design on this vase. *A*.—A rough vine pattern.

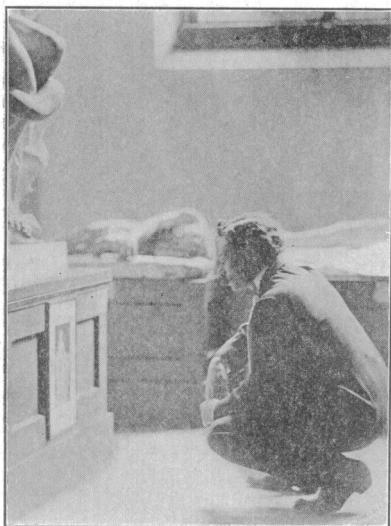


FIG. 19. *Object*.—Cast of the Laocoon. The observer was asked to read the label.

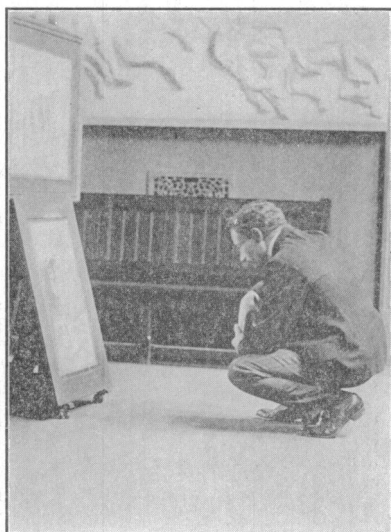


FIG. 20. *Object*.—Drawing of the Propylea on an easel. The observer was asked to read the label.

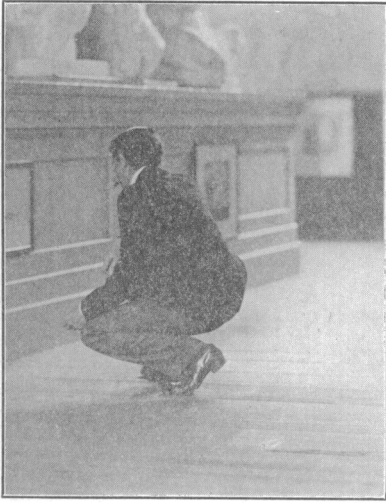
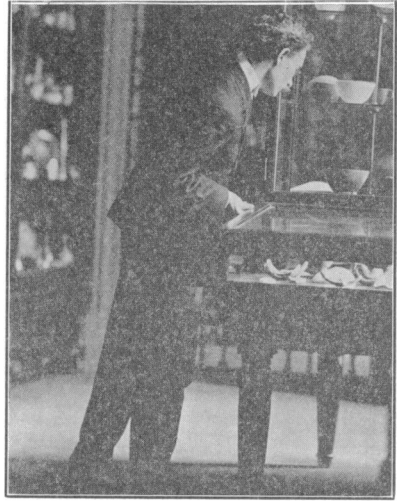


FIG. 21. *Object*.—Drawing of the sculptures on the western pediment of the Parthenon, installed on the pedestal of the casts reproducing their remains. *Q*.—Describe the figure farthest to the right. *A*.—A youth lying down.



V. *Twisted*.

FIG. 22. *Object*.—A fragment of Arretine pottery lying near the end of a desk case. *Q*.—How many musical instruments can be seen in this group? *A*.—two: harp and pipes.

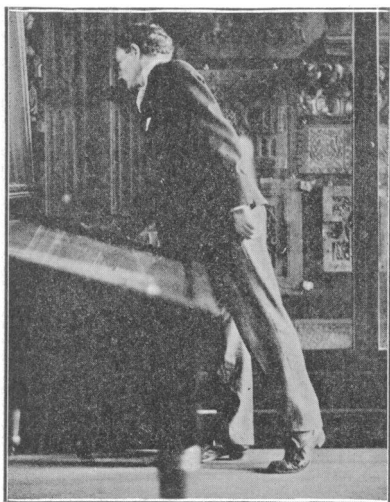


FIG. 23. *Object*.—A landscape hung high. *Q*.—Is the sky clear or cloudy? *A*.—Overcast.



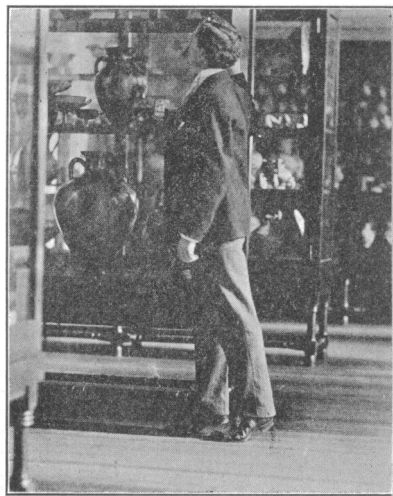
VI. *Looking up*.

FIG. 24. *Object*.—A textile hanging over a wall case. *Q*.—Has the upper border the same pattern as the lower? *A*.—Yes; but reversed.



VII. *Stretching forward.*

FIG. 25. *Object.*—Statuette on a bracket back of a desk case. The observer was asked to read the label.



VIII. *Stretching up.*

FIG. 26. *Object.*—A vase on upper shelf of case. The observer was asked to read the label and notice the pattern.

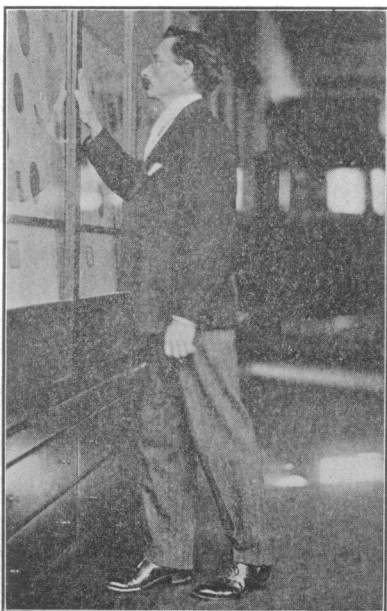


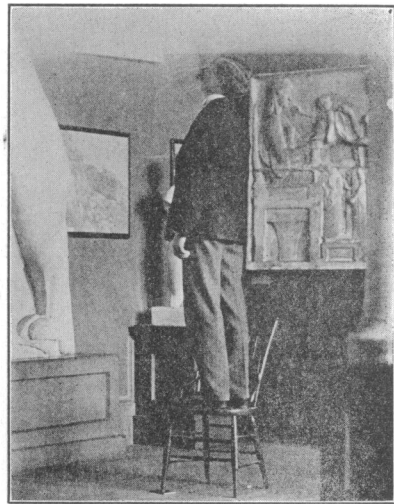
FIG. 27. *Object.*—Chinese bronze mirrors in a wall case. *Q.*—Describe the pattern of one of the mirrors on the top row. *A.*—A central knob in a square with knobs about and other patterns.



FIG. 28. *Object.*—A vase on the back row of the upper shelf of a case. *Q.*—Is there a pattern on the neck? *A.*—Yes; bands of horizontal lines.



FIG. 29. *Object*.—A small ivory carving (netsuke) on the upper shelf of a floor case. *Q*.—How many wounds are there in this decapitated head? *A*.—Five.



IX. *Climbing up.*

FIG. 30. *Object*.—A cast of a head of Hera hung high on the wall. The observer was asked to read the label. *A*.—I can read the large letters, but not the small.

the floor and his hip joint about thirty-eight or thirty-nine inches. For the minutest inspection of a work of art, as for reading fine print, the eye should not be more than about twelve inches from it. The distance forward of a perpendicular from the feet, to which the eye may easily be carried by bending the body from the hips, is not over about fifteen inches. Of the objects commonly preserved in cases in our museums, but a small fraction, perhaps hardly more than a twentieth, are over twelve inches in diameter. Of objects of the nature of ornamented surfaces in frames or settings, or otherwise needing to be seen only on one side, but a smaller proportion are more than two or three inches from front to back.

From these figures approximate dimensions for cases which shall reduce the muscular effort of good seeing to a minimum may be deduced as follows: the lowest exhibition level for case objects should not be more than eighteen inches below the average eye, or forty-two inches from the ground instead of thirty inches or less, as often at present. This would be the indicated height for the bottom of upright cases and the front level of desk or flat cases. The use of the base compartment of cases for exhibition should be given up. The breadth of flat cases should not be greater than about eighteen inches, instead of twenty-eight inches or more as at present. Desk (inclined) cases may be somewhat wider. Beyond these limits the eye can not easily be brought within close seeing distance of the back of the case. The depth of flat or desk

cases from the glass to the bottom should not be greater than from two to four inches, instead of from six to twelve inches as at present. A depth from front to back of four inches would often also suffice for wall cases, instead of from sixteen to twenty-four inches as at present. Six inches might be regarded as their maximum supposing them used to receive only objects seen to full advantage from one side. The depth of upright floor cases from front to back should not exceed twelve inches. A smaller standard depth of eight inches would probably also be found useful. Upright floor cases or wall cases might be eighty-four inches high instead of one hundred or more as at present. It is true the bottom of an object twelve inches high installed at the top of such a case with three inches above to spare would be six inches above the average eye, and the top eighteen inches. But since, on the twelve-inch shelf assumed, all parts of the object would be within six inches of the glass, it would all be within practicable seeing distance, although only the lower part could be closely examined.

The stability of floor cases a foot or less in breadth and seven feet high would require to be secured by special means. If the legs were perpendicular, they would need to be fastened to the floor, otherwise they would need a wider bearing by extended feet; or a removable bar at the top of the case connecting it with another might be given a design in harmony with their framing and join the two into a stable pair.

One result of the use of shallower cases would be that there would be less waste space within them. At present the space within a floor case of the usual broad dimensions is only very partially used. The exhibit is generally arranged in a pyramidal form of which the lower levels are seen against the successive steps of an interior pedestal and only the top row is shown above it and can be seen on all sides. All the space above the lower rows of objects is empty. In the narrow case proposed there would be in general no pedestal, but shelves alone. There would be no empty space above any row of objects and every object would be visible from all sides. Since a larger number of cases could be placed in a given area, another result would be that a greater proportion of museum objects would be exposed to view on all sides. An economy of case-space would be coupled with a completer showing of case-contents.

Such changes would make a radical difference in the appearance of museum galleries. They would be fitted with a number of small cases, very shallow and standing but not reaching high, instead of a few large ones, broad, set low and rising higher. Wall cases would shrink to one quarter their present depth, upright floor cases to one third their present depth and to a less average height, and desk and flat cases to three quarters their width and one third their vertical depth. Delicate,

instead of heavy, construction would be the rule. The exhibits would be shown spaced and unobstructed instead of grouped into decorative pyramids or serried ranks. The small fraction of objects which are over twelve inches in diameter would be installed either in the open or each in its separate case.

Nevertheless, there would remain opportunity within the cases for the more or less advantageous showing of more or less meritorious objects. The upright cases on the floor and the wall would still have a *piano nobile*, or main level, in the space directly opposite the eye. Between a bottom at forty-two inches above the floor and a top at eighty-four inches, there would be forty-two inches of space which, if divided by two shelves giving three spaces about fourteen inches each, would offer three gradations of prominence: first, the middle at fifty-six to seventy inches, because seen without effort by the average eye at sixty inches; second, the lowest, because perfectly seen at forty-two to fifty-six inches by inclining the body a few inches; and third, the uppermost, from seventy to eighty-four inches, because seen simply by raising the glance, although inaccessible to the closest inspection. If divided by a central shelf at sixty-three inches, the upper space of twenty-one inches would be the *piano nobile*, because the lower and generally more important part of the object would be open to close inspection without fatigue. On the under shelf, only the upper and generally less important part of an object could be studied without bending.

In cases such as these museums would, for the first time, possess veritable show cases. Hitherto these indispensable protective devices have in reality been glazed storage chests valuable primarily for their capacity. Their wide shelving with double or triple or multiple rows of objects is a survival from the days when museums were thought of as magazines where things were kept in safety ready for inspection when needed. Such shelving has no real place in these days of serious attempts to deal with the problems of public show.

The present argument is not the first that has been offered in support of narrow cases; nor are they unknown in newer museum installations. Mr. Lewis Foreman Day wrote a few years ago:

Museum cases are nearly always too big—and especially they are much too wide.

One argument against deep cases is:

that the things at the back of them (and in the center of square cases) are reduced to background. Another is, you can not get close enough to see things properly. . . . Think what a big vase you can put on a mantel-piece from nine to twelve inches wide, and you will realize how seldom it is necessary to have cases much wider than that. . . . Some of the cases at Munich are not more than nine inches deep, and it is astonishing the size of the objects they hold.<sup>1</sup>

<sup>1</sup> Lewis Foreman Day, F.S.A., "How to Make the Most of a Museum," *Journal of the Society of Arts*, January 10, 1908, p. 153 f.

The smaller shelf-widths which Mr. Day notes at Munich have come into occasional use also in other museums, American and foreign. In Boston the show-space tends also to be set higher.

The reduction in the cubic contents of museum cases here advocated, in harmony with Mr. Day's suggestion and newer practice, is the second radical improvement in these fixtures since public museums were instituted. The first is an improvement from the point of view of the museum; the second from the point of view of the visitor. The device known in Europe as the Reichenberger case (due to Dr. Gustav E. Pazaurek, Director at the time of the North Bohemian Museum of Industrial Art), and in America as the Boston case (independently invented with a different mechanism by Mr. W. W. MacLean of the Boston Museum), consists in opening a case by lifting its top with a windlass instead of unlocking its doors with a key. This was a proposal in the interest of the security of the contents from dust, damp and theft. The reduction of the size and particularly of the depth of cases is a proposal in the interest of the easy visibility of their contents. By making also this second advance in the construction of these necessary fixtures, the museum would be in a position to fulfill more perfectly both of its essential functions, first as guardian and then as expositor of the treasures committed to its charge.

The use of smaller cases has for a corollary a reduction in the number of objects shown simultaneously. It would be another step in the pathway which modern museums have already entered upon in dividing their contents into show and study series and in alternating objects between the two. The era of smaller and changing exhibits is also an era of better exhibition.