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The Historical Series of Harvard Dioramas

DURING the early autumn there was installed in the east corridor of the main floor of the Widener Library the first of a series of dioramas of Harvard University. The project, authorized by a friend of Harvard, was conceived as a tangible expression of the form and development of the University, as well as a permanent memorial of the Tercentenary. The undertaking has been executed by Theodore B. Pitman, '14, and his associates of the Pitman Studio in Harvard Square.

There are to be three models in all, each provided with a painted background and a key denoting the various buildings in the area. The first in point of time will show the Harvard of 1677, when the first Harvard Hall was completed and the Old College, near the present Grays Hall, was still standing. This year marks the departure from college construction along Braintree Street (Massachusetts Avenue) and the beginning of a new development overlooking Cambridge Common. The 1677 model, naturally the smallest in scope, will be placed within the embrasure of the central window in the west corridor of Widener.

Second in point of time will be the eighteenth-century model, for which the year 1775 has been selected, as showing Harvard on the eve of the Revolution. Shortly after, the college buildings were turned over to house troops and Cambridge was bereft of its orchards in order to meet the increased demand for fuel. The 1775

model will be placed in the angle of the west corridor.

Latest in date is the model of the Tercentenary Year, providing an exact replica of the University in June 1936, and already installed, as indicated above, in the angle of the east corridor. A nineteenth-century model was not planned, on the ground that changes over the general area were not extensive enough to warrant its preparation.

In the 1936 model approximately 315 acres have been reconstructed, at the scale of one inch to fifty feet. The tallest tower on the model is about five inches high; the average motor car is about three-eighths of an inch long; the general height of the trees is one and one-quarter inches. For the 1677 and 1775 models a somewhat larger scale is used, one inch to thirty feet, as more satisfactory for showing the architectural detail of buildings which in general were smaller than those of the twentieth century.

For each of the models a large amount of preliminary research was required, in order to assemble the necessary data. That of 1936, representing a contemporary scene, and with many more buildings, naturally presented different problems from those of the earlier centuries. For the University buildings, plans whenever available were willingly supplied by the College Library, the University Archives, and the Department of Buildings and Grounds. Those buildings, usually among the older ones, for which no plans could be found,

were systematically photographed, with a stadia rod included in each photograph for full-size scale. The same procedure was carried out for all privately-owned buildings within the area, block by block, including all types of architecture, from churches to garages.

For the terrain, a preliminary model of plastilene, based on a specially prepared contour map of Cambridge, was first formed. From this a negative mold of plaster of Paris was cast, which in turn gave a positive mold representing the terrain in its final form. As an integral part of this latter mold, wire screening and burlap were used as 'binders' to give added strength to the model.

The University buildings were constructed of savogran, a plastic material similar to plaster of Paris, but superior for its density, with its hardness increasing the longer it sets. The towers, balustrades, ornamental cornices, and ornaments were made of brass. Each building required individual construction. It was originally thought that these buildings might be cast, but the variability in the types of buildings and the roundness of corners of cast buildings proved unsatisfactory for finished results. Other buildings, such as private dwellings, were constructed of wood. All buildings were painted to appear as they did in 1936.

Data for the Harvard fences were obtained from the same sources as the Harvard buildings, with photography again used to supplement. Construction was at scale, the materials used being brass and copper wire. To increase the reality of an air view, all fences throughout the area were surveyed and reproduced.

Tree maps were made of the entire area, proceeding block by block. Data concerning shrubs and hedges were included. As already indicated, the season to be reproduced was summer. Several materials were suggested for the leaves but the most realistic was found to be sea algae, of which quantities were gathered at Nahant at low tide, to be dried in the studio. The complete shape of the tree was formed by fastening the dried algae to the branches of a tree armature constructed of picture wire. The tree was then sprayed with lacquer followed by various color sprays to harmonize with the painted background. Positions were located on the model according to the tree maps, holes were drilled, and the trees inserted.

Every effort was made to achieve accuracy in the aerial scope of the model. Data were obtained from the Boston Elevated Railway concerning its buildings, yards, tracks, and specifications for subway cars. Similar information was obtained from the Cambridge Fire Department respecting the fire equipment included in the model. Automobiles and trucks were made at scale. The Harvard Athletic Association supplied specifications for the shells on the river.

Grass areas and pavings were painted. To obtain the proper colors under average atmospheric conditions, Mr Pitman and his associates surveyed the area from an airplane. Particular attention was paid to water surfaces (such as the Charles River), street surfaces, grass areas, and foliage color and texture.

The research for the periods of 1677 and 1775 was carried out by the writer of the present note previous to

his publication in 1939 of 'A Pictorial Map of Cambridge, 1760-1770.' Data, from original sources, were obtained from the University Archives, the College Library, the Cambridge City Hall, the Middlesex County Courthouse, the Cambridge Public Library, the Massachusetts State Archives, and the Massachusetts Historical Society. All available sketches, theses, maps, and photographs were searched for evidence. Often a modern photograph revealed an old building or portion of an old building still standing in the background. Recorded descriptions by travelers and antiquarians were utilized. Research in one case involved tracing a building removed from Cambridge and rebuilt thirty miles away. In another instance, a building formerly standing in the present Harvard Yard, but thought to have been demolished, was discovered only a block or two away. Deeds and inventories were studied. The former supplied descriptions and bounds and sometimes house plans; the latter, data of real estate and house furnishings. Often an entire house could be reconstructed in plan by following through an inventory.

From this mass of material reconstruction drawings of the buildings for both the seventeenth- and eighteenth-century models were prepared. These drawings in turn have provided a basis for the making of the buildings themselves, of which those for the 1775 model have been completed. Materials used are similar to those for the buildings in the 1936 model.

For reconstruction of terrain, a topographic map, based on engineering and historical research, has been drawn. This map serves for both

models, since no changes in terrain occurred between 1677 and 1775. The terrain for the 1775 model is in course of construction. When it is completed, surface textures will be added, such as road surfaces, water and grass areas, and paving. The season of the year to be represented is autumn, the trees giving variation from the summer foliage of the 1936 model.

The 1677 model, to be completed last, will probably be a winter scene, providing still further contrast. As previously suggested, its area will be less than that of the 1775 model, to agree with the smaller extent of Cambridge at that date.

The T. B. Pitman Studio, originally known as Guernsey and Pitman, was founded by Samuel Guernsey, formerly of the University Museum, in partnership with Mr Pitman, a sculptor. Together they produced a number of models for various museums, and began the Harvard Forest models which are now in the Fisher Museum, Harvard Forest, Petersham. Working with Mr Pitman and his associates on the present models have been students from the Harvard School of Design and from nearby art schools. Henry Brooks, '22, painted the background for the 1936 model and will execute those for the other two models.

The series, when completed and installed, will present the story of the development of Harvard University and Cambridge in the third dimension. It will also serve as a historical record of the physical appearance of the University and of the city. As far as is known, this is the only series of dioramas showing the growth of a university in the United States.

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