

STORAGE FOR TEXTILES

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Fig. 1

Providing appropriate storage for textiles is crucial for their preservation, as it is for most types of items found in museum collections. The very qualities that make textiles pleasant to wear or convenient to use, such as flexibility, softness, or bright colors, also make them fragile and susceptible to damage (Fig. 1). Several of the primary causes of deterioration of textiles -- heat, moisture, light, insects, and rodents -- can be controlled by providing a suitable environment and appropriate furniture. Another prominent cause of deterioration of textiles is wear. Textiles do not support themselves; they constantly flex and fold in use. Flexing and folding of any fiber from which a textile is made, whether wool, cotton, linen, or synthetic, eventually results in breakage. In this paper, we'll discuss methods of storage within the museum that minimize distress to textile items, concentrating on mounts. We'll use collections and storage at the Minnesota Historical Society as our examples.

The Minnesota Historical Society is a private, non-profit educational and cultural institution established in 1849. We moved into the building pictured here (Fig. 2) twelve years ago. The Society is comprised of a major reference library, the state archives, and a museum. The museum collections contain approximately 260,000 items. Of these, 25,000 are textiles. Another roughly 60,000 items are composite objects that contain textile elements. These collections document the diversity of life in Minnesota and support the Society's mission of helping people understand the lives of Minnesotans across time. In fact, each item's primary value lies in its historical significance -- in the stories it tells -- and the strength of the collection is in the high number of items that tell more than one story. These stories are conveyed to the public by using items in exhibitions and educational programs, publications by our Press, and scholarly research.



Fig. 2

A sampling of the variety of the Society's textile holdings includes its more than 250 quilts and coverlets that date from the late eighteenth century to the present, its wealth of American Indian items from the Upper Mississippi River Valley region, its collection of 3,500 Munsingwear undergarments that, along with forty boxes of business records, document an important Minnesota corporation, and its Alexander Ramsey House filled with furnishings chosen and used by one family for three generations. Items range in size from a three inch Queen Elizabeth doll with throne (Fig. 3), one of 200 dolls from around the world collected by a Minnesotan, to a sail from the ten-foot boat Yankee Girl (Fig 4), the smallest craft ever to have crossed the Atlantic from west to east in 1979. The collections are filled with eclectic and unique items, many of which reflect aspects of Minnesota's popular culture. Examples are a 300-foot long yellow ribbon (Fig. 5) weighing 200 pounds that wrapped around the Foshay Tower in Minneapolis to celebrate the release of hostages in Iran, Prince's Purple Rain costume (Fig. 6), and the parkas worn by explorers Will Steger and Ann Bancroft on their expedition to Antarctica in 1986 (Fig. 7).



Fig. 5



Fig. 3



Fig. 4.



Fig. 7



Fig. 6

Issues related to access, use, and staffing levels influence how we store our textile items. We have standard museum closed storage, where the storage areas are kept locked, and public access is by appointment and only when accompanied by a staff member. Nevertheless, the Society is committed to readily sharing its collections with a broad constituency and to promoting their use. This commitment affects how we store items, using furniture and mounts that are geared toward accessibility. For example, we have found that visitors can be accommodated more quickly and easily if items are stored in a drawer (Fig. 8) or on a sliding shelf (Fig. 9) that can be pulled out, so that they can see several items fully at once, than if items are on a fixed shelf and only partially visible. When a fixed shelf is used for the storage of textiles, we store items on a mount or support that can be easily pulled out for viewing so the item can be seen quickly and completely without being handled (Fig. 10). When appropriate, we hang garments in wardrobes (Fig. 11) so that all staff need to do is open the doors and visitors can see an assortment of costumes at once and at a glance. These measures are especially important now that we, like many cultural institutions across the country, are facing staff reductions due to funding cut-backs and have limited staff to meet with visitors. Figures 12-19 further illustrate our textile storage areas and methods.



Fig. 11



Fig. 8



Fig. 9



Fig. 10



Fig. 13



Fig. 12



Fig. 14



Fig. 15



Fig. 16



Fig. 17



Fig. 18



Fig. 19

Textile Storage at MHS

Mounts play an important role in the storage of textiles. The goal of a storage mount is to promote the long-term preservation of a textile and to prevent further distortion or physical damage to it by providing a safe, stable support. Flat, boxed, hanging, and rolled mounts are commonly employed to support textiles and, as you just saw, we use all of these at the Society. We prefer mounts that serve the dual purpose of securing and supporting items in drawers or on shelves and also that can be used to move them safely from one location in the building to another. In general, we attempt to design mounts in such a way that they are handled, rather than the textile on them, and so that the textile can remain on them for examination and study, again to reduce handling of the textile itself. We use materials that are chemically and physically stable and of an appropriate durability in the construction of our mounts, and we affix textiles to them in a passive manner allowing for easy removal if needed. As a rule, we do not construct mounts of display materials, since our storage mounts are rarely used for exhibition. Finally, we try to design mounts that can be made easily, quickly, and inexpensively by volunteers, upon whom we are increasingly reliant in these times of fiscal challenge.

This paper focuses on storage mounts designed for entire collections of one type of item, rather than on mounts custom-made for a specific item. The collections we discuss below are the samplers, the moccasins, and the bandolier bags.

When preparing to make mounts for an entire collection, it is usually important to begin by conducting a survey that identifies the number and size-range of items, the amount of space available, the type of furniture to be used, such as drawers or shelves, and the width, depth, and height of these. These factors, as well as the intended use of the items, influence the design of a storage mount. It is this basic information that allows you to design a mount that makes the most efficient use of space and provides the greatest ease in handling while protecting the item.

The Society has over 100 samplers in its collection (Fig. 20 and 21). These two dimensional textiles vary widely in size and shape. Previously the samplers were piled in three drawers, interleaved with layers of tissue paper. Staff knew which samplers were in a drawer, but not where in the drawer they were located, so each time a specific sampler was needed, staff would shuffle through the pile folding back the corners of the samplers in search of accession tags. This method of storage, while initially supportive, inert, and safe, resulted in unnecessary handling and flexing of every sampler in the drawer during a search. Also, it tended to exasperate the staff member whose task it was to locate a particular sampler that had shifted at some point and was now lost between layers of tissue paper.



Fig. 20



Fig. 21

To facilitate the location and handling of these samplers and to provide adequate support for them, a hinged window mount with a fabric-covered backboard was designed (Fig. 22 and 23). Information gained during a survey of the sampler collection led to the selection of three standard sizes that would best fit our drawers. These three sizes fill the drawers front to back and side to side, preventing shifting or movement of the mounts as the drawers are opened and closed. However, while the overall dimensions are standardized, the window is cut to the size of the sampler. Sometimes multiple smaller samplers (Fig. 24) are stored on a single larger mount with corresponding windows. The sampler lies passively on the fabric-covered backboard and is held in place by friction. Constructed of acid free bi-corrugated board, de-sized muslin, Beva 371 thermo-plastic adhesive, and cotton-wrapped polyester thread, these mounts are made of inert materials.



Fig. 22



Fig. 23



Fig. 24

The mounts are stacked in the drawers to fill them from bottom to top (Fig. 25). By standardizing the sizes we can stack mounts on top of one another in a methodical manner. The design of the window mount creates the space necessary to prevent abrading, crushing, or stressing the textile below. Each mount is numbered, eliminating the need to flex a sampler in search of accession tags and to provide a reference linking a specific mount to its sampler. The rigidity of the mount (Fig. 26), which allows for safe movement of the textile within the museum, along with the standardized dimensions, facilitate use and handling. Finally, examination of the textile by scholars is easily accomplished without touching the sampler. The one disadvantage of this mount system is that it requires more space for storage than was originally used. We now house the samplers in four drawers instead of the previous three.



Fig. 25



Fig. 26



Fig. 27

The American Indian moccasin collection (Fig. 27 and 28) was also in need of storage improvements. Stored in drawers, the moccasins rolled over or slid whenever the drawers were opened or closed. Falling to one side, a moccasin could be separated from its mate. Worse yet, beads and other embellishments could be separated from a moccasin, which could take an enormous amount of examination to reunite with the correct one. Also, every time a pair was moved within the museum, each moccasin was handled directly. In response to these concerns, we produced a tray mount that facilitated handling, provided support, and minimized the confusion caused by separated beads and other embellishments.

The Museum of the Fashion Institute of Technology designed a coroplast tab and slot tray (Fig. 29 and 30) for their footwear collection in three standardized sizes: boots, adult's, and children's. The design enhances access by making it easier to handle and move footwear, and it prevents rolling within a drawer and the consequent separation of pairs. We followed their model and had similar storage trays manufactured for our entire footwear collection of 1,300 pairs. We chose three standard sizes suited to our needs, which we designated as small, medium, and large. The tray mounts were designed to fit in our drawers, again filling them front to back and side to side to minimize shifting. We sketched out a pattern in each size, had a die made from each pattern, and had the mounts cut from the dies by a commercial fabricator.



Fig. 28

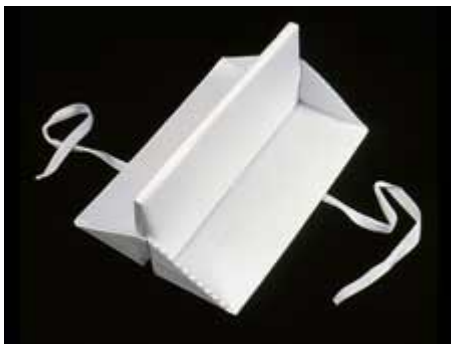


Fig. 29



Fig. 30

The moccasin collection (Fig. 31) was the first of our footwear collections to receive re-housing. In this instance a detailed collection survey was not necessary. A simple query of our database showed that we had ninety pairs of moccasins. We tested several of the moccasins for fit and found that the medium size tray worked best, so we did not need to use trays in more than one size for this particular footwear collection. A volunteer made socks of cotton knit tubular fabric (Fig. 32), put them into the moccasins, and then stuffed them with poly fiber fill to support the moccasins. Another volunteer folded the mounts into their tray shape (Fig. 33 and 34). The supported moccasins (Fig. 35) were then placed on the tray and secured with a twill tape tie. The materials used in this mount system are polyethylene corrugated board, cotton stocking tubular fabric, polyester fiberfill, cotton-wrapped polyester thread, and twill tape. I have a hand-out about this mount for anyone who would like it.



Fig. 31



Fig. 33



Fig. 32



Fig. 34



Fig. 35

Mounts for our collection of bandolier bags were the most demanding ones to design, standardize, and fabricate (Fig. 36 and 37). The Society's 130 bags, believed to be the nation's premier collection, are highly prized and consequently are requested frequently. Previously the bags were stored in drawers on sheets of acid free paper and a cushion of expanded polyethylene foam sheeting. Removal of a bag from the drawer required sliding a board under it and lifting it out flat. Often, however, the bag was removed instead by using the acid-free paper under it as a sling because this was quicker. Doing this required the additional manipulation of folding the bag's straps over the body of the bag. Unfortunately both methods of removal – the rigid board and the paper sling -- caused flexing of these often-heavy items. Another serious problem was the separation of beads and other embellishments or fragments from a bag. Frequently these small bits would be lost when the drawer was opened or would roll to the back and be separated from their bag.



Fig. 36

This project was carried out without a survey of sizes because the bags were highly guarded, which limited our access to them, and because of time constraints of the curatorial staff who needed to be involved in the process. As a result, the sizes of the mounts were not standardized or chosen to fit the drawers. Instead, the mounts were made as small as possible while still providing adequate support. This was to save space. We were concerned about movement of the mounts in the drawers since the mounts did not completely fill them. This, however, did not prove to be a problem. The mounts are heavy enough that they do not slide unless a drawer is opened or closed much more vigorously than it should be. And if sliding does occur, it's the mount that slides, not the bandolier bag.

Even though we made the mounts as small as we could, once the bags were placed on their mounts, they took up much more drawer space than previously. Cultural considerations dictated that these items not be stacked on top of one another in a drawer. To solve the space problem, we replaced each deep drawer in which the bags had been stored previously with two shallower ones.



Fig. 37

The mount (Fig. 38) we designed is a flat padded board with a sunken well. The board provides a rigid support on which to move these fragile bags without flexing or manipulation. Two twill tape ties are slotted through the board and padding. Their primary function is to act as handles for lifting the mount out of a drawer (Fig. 39). They also can be used to carry the mount from one location to another. Bandolier bags vary greatly in size, shape, construction techniques, and materials. With this in mind, we developed a method for customizing the well for each bag. The well prevents disengaged fragments, especially beads, from rolling into other bags or being lost. Another important feature of the mount is that it allows the bag to be viewed without handling. The mounts were fabricated of bi-cor corrugated acid free board, polyester felt and batting, desized muslin, twill tape, 3M double-sided adhesive tape, Beva 371, and cotton-wrapped polyester thread.



Fig. 38



Fig. 39

Again volunteers fabricated the mounts (Fig. 40). Because these were by far the most complicated of the storage mounts to construct, directions written in detail with diagrams were needed. Each volunteer was trained by making a sample mount before making one for an actual bag (Fig. 41). Also, it was necessary for a conservator to work with the volunteers to assist with different issues as they arose. Each mount took approximately four to six hours to make. With the volunteers' help we were able to produce 111 within one year.



Fig. 40



Fig. 41

With this project it was difficult to utilize space to the best of our ability. We did not have access to the bags for a survey, and cultural considerations demanded a more individual approach. Nevertheless, by using a standardized format we were able to provide a supportive passive mount that allows for movement in the museum, study, and safety in storage (Fig 42).



Fig. 43

In closing, the storage practices just described are, of course, neither novel nor unique. They reflect an approach to preservation that is collection-wide and that is based on the principles of preventive maintenance. These practices and mount systems have proven to work well for us, being practical and economical. They promote accessibility, facilitate handling, and make good use of limited resources. Most important though, they extend the useful life of our collections so that these textiles can continue to tell stories for years to come (Fig. 43).



Fig. 42

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