

Care and Handling of Musical Instruments

1. Resist the temptation to play or manipulate an instrument; do not, for instance, pluck strings, blow on reeds, tighten strings, or press keys.
2. Temperature and relative humidity must be maintained at prescribed levels and checked at least daily.
3. Wear gloves to handle instruments with varnished wood and polished metal surfaces.
4. No instrument is to be dismantled, no matter what its size, without supervision.
5. Protect instruments in storage and transport by resting them on padded surfaces and using dust covers.
6. Any instrument with loose parts or flaking should be brought to the attention of the conservator.
7. Adhesives must never be used to brace an instrument for photography or display without the consent of the curator.

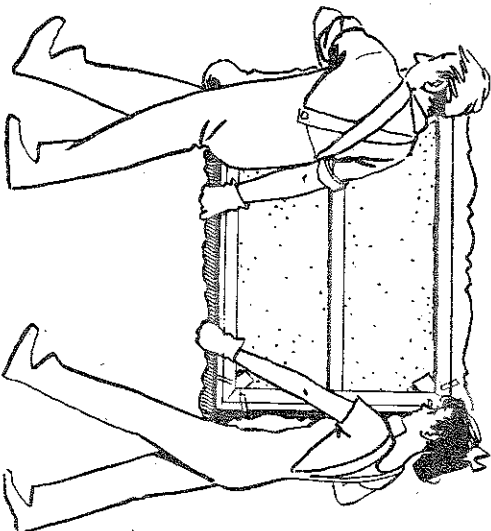
3. Paintings

PAINTINGS ON CANVAS AND PANEL

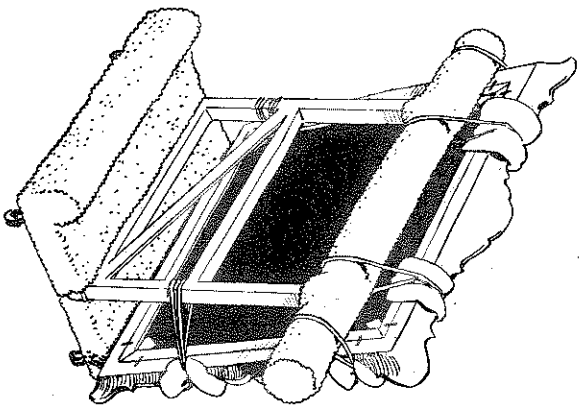
In the handling of paintings, the care and experience of the handler provide the best insurance against damage. The moving and installation of pictures and their removal from exhibition should be supervised by a responsible member of the staff.

No more than one painting should be handled at a time; large panels and canvases—with or without heavy frames—should be moved by two or more persons. Frames afford some protection, and a painting is safer with a frame than without one. It may occasionally be necessary to carry an unframed painting by the stretcher, but canvases and panels should be grasped at the edges only. Special care should be taken to protect from dirt and fingerprints twentieth-century paintings that have areas of exposed canvas. In this case, thin cotton gloves may be worn. Framed paintings should be carried with both hands, one beneath and one at the

Large panels or canvases should be carried by at least two people. Carry framed paintings with two hands, one beneath and one at the side; always grasp the frame at a solid place.



Whenever possible, move paintings—securely lashed in place—on a padded truck.



side of the frame, always at a point where the frame is solid; check the frame first for old breaks, repairs, and points of weakness. Never lift or carry a framed painting by the top of the frame, or by its stretcher.

Whenever possible, pictures should be moved on a side truck rather than carried by hand. The truck should have a padded floor with a lip along the front and back, and it should not be overloaded. The paintings should be securely lashed in place before the truck is moved, and should be accompanied by two or more persons while the truck is in motion. The structure of the truck must support at least two-thirds of the height of a painting; very large paintings should therefore be placed on the truck on their longest sides. If the picture is substantially wider than the truck, a two-by-four piece of lumber, wide enough to support both stretcher and frame, should be lashed to the top bar of the truck; the weight of a picture should never be borne by the stretcher alone.

The stacking of paintings and frames on trucks or in storerooms is inherently risky and must be avoided if possible; both frames and painted surfaces can be damaged. If stacking is unavoidable, it

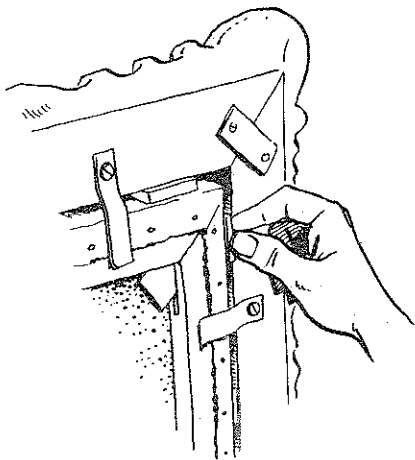
must be done with the utmost care. Paintings and frames should be stacked upright, never laid flat, and padding must always be inserted between each item at the corners and wherever there is projecting ornamentation. The padding may be paper bolsters or some other soft material. Twentieth-century paintings, many of which have areas of exposed canvas and fragile paint layers, should always be covered while in storage with a smooth acid-free paper, such as acid-free glassine, to protect them from abrasion, fingerprints, and airborne dirt. Sheets of acid-free board may also be inserted between paintings stacked in storage racks as additional protection for the painted surface. No more than five pictures should be placed in any stack, and all pictures in a stack should be similar in size. The paint surface should never come in contact with padding materials placed at the corners or between paintings in a stack.

Place felt pads with rubber skidproof bottoms under pictures standing against gallery or storeroom walls. Set heavily ornamented frames on lengths of two-by-four lumber covered with carpet or felt. To avoid all chance of slippage or accidental abrasion by a passerby, hang pictures on gallery walls or storeroom racks as soon as possible.

When hanging a picture, make certain that the supporting wires and fixtures are strong enough to bear its weight. Screw eyes and dangling wires should be removed from the frame as soon as a picture is taken from the wall; screw eyes can damage the frames of other pictures in a stack, and dangling wires can abrade any paint surface with which they come into contact.

It should never be necessary to touch the surface of a painting. Fingerprints on paint surfaces or on frames can damage and spoil the finish. They cause some varnishes to bloom and might thereby necessitate treatment of the whole surface.

The security of a canvas in its frame should never depend on nails; they work loose too easily and fall out. It is preferable to use metal brackets bent in such a way that when one end is screwed to the frame, the other end will press against the stretcher. Paintings on wood require flexible brackets to allow the panel to expand and contract. Pieces of cork or rubber, perhaps in combination with



To secure a canvas in its frame, use metal brackets not nails. If a frame is too large, pieces of cork or rubber can be used to adjust the space.

strips of wood, can be used to adjust the space between a painting and its frame if the latter is too large.

A painting should be held in its frame in such a way that the edges of the paint surface cannot be chipped or abraded. Whenever possible, thin strips of dark-stained wood should be fixed to the outside edges of the stretchers supporting paintings on canvas. The strips should be fitted so that they project forward sufficiently to prevent the rabbet of the frame from rubbing against the edges of the paint surface. If the rabbet is not large enough and cannot be cut back, then the edges of the paint surface can be protected by lining the face of the rabbet with strips of adhesive felt. The edges of paintings on wood panels can be protected only with strips of adhesive felt attached to the rabbet.

Adjusting the securing stretcher keys and removing objects that become wedged between canvas and stretcher are the responsibility of a conservator and should not be attempted by anyone else.

Labels should not be applied to the backs of canvases. They may cause the portion to which they are attached to expand and contract at a rate different from that of the rest of the canvas, with resultant cracking and possible flaking; the chemicals in the adhesives can also seep through the canvas and adversely affect the paint on the other side. A backing of, for example, cardboard, Foam-Cor, or Masonite will protect the painting from blows to the reverse and from dust; to allow for the circulation of air, small holes should be cut in the backing before it is applied.

At no time should anyone but a conservator touch the painted surface or the back of a canvas, not even for the removal of dust; pressure of any kind may disturb the paint surface. Paintings should not be treated with oil of any kind, solvents such as alcohol or benzine, commercial cleaning preparations, soap, water, erasers, bread crumbs, raw potato, or household cleansers. *Neglect is less dangerous than inept treatment.* If there is any doubt about the condition of a painting, or if it has been damaged accidentally, it should be left untouched until it can be examined by a conservator.

Owing to the often mercurial nature of the media used in twentieth-century paintings, it is advisable to secure information about technique and process (from the artist if possible) when such a painting enters the collection. This will assist in the future care of the work.

Extremes of temperature and humidity are bad for paintings. The temperature of galleries and storage areas should stay within the range of 68°–72° F (20°–21° C); a steady relative humidity of about 50 percent is desirable. Heat, including heat from photographic flood lamps, is particularly dangerous to lined canvas and panel paintings. It will soften waxes (thereby attracting dust), cause distortion and bulges, and promote pinpoint flaking. Paintings should therefore not be hung near windows, radiators, or heating vents, or otherwise exposed to heat (particularly that from photographic lamps) for prolonged periods. HMI lamps radiate minimum heat and are recommended for photographing paintings, particularly panel paintings. The sensitivity of paintings to ultraviolet and visible radiation varies considerably depending upon the pigments, binding media, and presence or absence of varnish. Illumination should not be excessive, nor should paintings be hung in direct sunlight. The conservator is to be consulted for the appropriate lighting conditions in gallery and storage areas. In storage, pictures should have some access to light and air; light cotton dustcovers may be used if necessary, but plastic sheeting in direct contact with the object can cause dangerous problems of condensation and is not recommended.

Report any damage, however slight. If paint flakes or parts of

frames become detached, save all the pieces, for repairs are much easier if these are available. Keep a record of all damage and repairs.

Based on contributions by the late Mary Ann Wirth Harris, of the Department of European Paintings, and by members of the Departments of Twentieth Century Art and of Conservation

PORTRAIT MINIATURES

Frequent examination of a miniature collection and careful control of the environment are the best safeguards against such common problems as warping of the support, flaking, and the emergence of mold growth.

Unframed miniatures on ivory and vellum, both highly hygroscopic materials that respond radically to even minor fluctuations in relative humidity, are exceptionally fragile. The warmth and slight perspiration of a hand, as well as pronounced changes in relative humidity that may occur during display, storage, or photography, can quickly cause an ivory miniature to warp or to crack along the grain, or cause a vellum miniature to cockle. When this occurs, areas of the weakly adhering paint layer, usually watercolor or gouache, are apt to flake. In addition, over the course of time the binding media in the pigment will often dry out, leaving it semipowdery and easily disrupted by any mechanical action, even a very slight inadvertent brush with the tip of the finger.

Because of the delicacy of both the painted surface and the support, unframed miniatures should be handled as little as possible and with extreme caution. When it is not necessary actually to touch the unframed object, a small sheet of thin ragboard with a beveled edge can be slid beneath the miniature to support it. When a miniature must be handled, it should be held between the fingertips, with the slightest possible pressure, at its top and bottom edges, which on an ivory miniature are usually the end grains. Pressure at the sides will cause the miniature to bend and

thus provoke paint flaking or splitting. Cupping a miniature in the palm of the hand is dangerous, as these hygroscopic materials are particularly sensitive not only to moisture and heat but also to the oils in the skin. Obviously, care must be taken not to touch the painted surface.

Miniatures painted in oil or enamel on metal pose conservation problems comparable to those for larger easel paintings in the same media. To avoid one of the most serious conditions, pinpoint flaking, it is particularly important that such miniatures not be exposed to high heat levels.

Only a conservator or experienced expert should attempt to remove a portrait miniature from its sealed frame case or try to refit one. The cases, which can have the intricacy of fine jewelry, are often complicated in structure, the components are very small, and their assembly is not always straightforward. Pressure on any of the parts can lead to serious damage, including splitting, breaking, or abrasion of the paint layer.

Ordinary flat glass or acrylic sheeting should never be used to reframe miniatures. Almost all miniatures were originally glazed with a convex glass crystal. This shape does not rest on the painted surface and thus will not mar it. The air space a convex crystal provides also limits the likelihood of condensation staining should there be a drastic drop in temperature.

Both framed and unframed miniatures are subject to mold. Gums, sugar, or honey, traditional binding agents for pigments, are nutrients for micro-organisms, which will flourish in an atmosphere of high humidity. Most frequently, mold appears as a pale gray bloom on the painted surface or on the underside of the glass. Any such condition should be brought to the immediate attention of a conservator for fumigation or treatment.

Cleaning of framed miniatures by those other than experts should be limited to the use of a soft, dry cloth. Metal polishes, soap and water, alcohol, or any other liquid must never be used. Fluids can easily seep into crevices in the case, quickly blurring the painted surface and damaging the support and the unexposed parts of the frame.

Cotton barring is not suitable for storage of unframed miniatures because the fibers may catch and dislodge partially detached paint flakes. Velvet is more suitable, and its surface will also help to prevent the object from sliding. If a framed miniature is to be wrapped, it should be wrapped loosely with acid-free tissue. Both framed and unframed miniatures may be stored in flat, acid-free boxes with separate compartments for individual miniatures and for the various mounting components. There should be sufficient space surrounding each object to permit its safe removal, either with the fingertips or by means of a piece of ragboard slid beneath it as a support.

To avoid such problems as surface deformation, splitting, mold growth, and paint flaking, relative humidity should be maintained at 50 percent and temperature at 68°–72° F (20°–21°C). Miniatures done in watercolor or gouache must be protected from fading. Because it is not possible to use ultraviolet-filtering acrylic sheeting for framing, miniatures should be kept in darkness when not on exhibit. During an exhibition, light levels should be kept between 5 and 8 footcandles. Display of miniatures should be limited to three months or less per calendar year.

Care and Handling of Paintings

PAINTINGS ON CANVAS AND PANEL

1. No one but a conservator should touch the front or back of a painting whether on canvas or panel.
2. No more than one picture should be handled at a time. Large paintings should be moved by two or more persons. Carry a framed picture with one hand beneath and the other at the side of the frame, where the frame is solid. Never carry a painting by the top of the frame or by the stretcher. An unframed canvas or panel should be held at the edges only, and thin cotton gloves may be worn to avoid marring the surface.
3. Whenever possible, move paintings on a side truck. Enlarge the supporting framework of a truck when necessary to support an outside frame and stretcher. Lash paintings in place before moving the truck.
4. Do not stack paintings unless absolutely necessary. If paintings have to be stacked, separate the frames with soft padding at the corners. Place paintings that must stand temporarily on the floor on skidproof pads or padded wooden two-by-fours.
5. Remove screw eyes and wires from frames as soon as pictures are taken from the walls.
6. Frame pictures in such a way that the edges of the paint surfaces are not damaged. Avoid fingerprints on the edges of the paintings and on the frames.

7. Do not expose panel or canvas paintings to heat from any source, including photographic lamps. HMI lamps are recommended for photography, particularly of panel paintings.

PORTRAIT MINIATURES

1. To lift an unframed miniature, support it with ragboard.
2. Hold unframed miniatures with the fingertips at the top and bottom edges only. Do not cup in the palm of the hand.
3. Do not expose miniatures to light and heat. Miniatures should be on display for no more than three months a year. Keep light levels during an exhibit between 5 and 8 footcandles.
4. Maintain approximately 50 percent relative humidity and keep temperature at 68°–72° F (20°–21° C).

4. Works on Paper and Books

WORKS ON PAPER

Works of art on paper, a category which includes prints, drawings in all media, pastels, photographs, and works on related materials such as parchment and papyrus, are among the most vulnerable of objects. They are readily damaged by mishandling, excessive light, fluctuations and extremes of temperature and humidity, and the materials with which they come in contact.

Lighting, climate, and fumigation

Works on paper are highly sensitive to the effects of any type of intense illumination and should not be exposed to direct sunlight, unfiltered fluorescent lamps, or the heat of incandescent bulbs. The ultraviolet rays from sunlight and fluorescent tubes will cause structural damage and oxidative reactions such as yellowing or bleaching of paper, and will alter the color of many pigments. The heat from tungsten lighting causes drying and embrittlement. Light levels in gallery and storage areas (see Part II, 1) should be kept low, at 5–8 footcandles. The eye is capable of adapting to low illumination; adaptation will be quicker if adjacent galleries are not brightly lit, and limiting light exposure will protect paper and pigments from chemical and physical deterioration. For an individual work of art, exhibition time (both within the Museum and on loan) over the course of a calendar year should not exceed three months. In storage, to protect from light as well as dust, matted and unmounted works on paper should be kept in solander boxes or acid-free folders. Framed works of art that cannot be kept in solander boxes should be protected from light by a cover of dark paper or cloth. Lights should be turned off when not needed. Works on paper must never remain uncovered if not on display or being examined.