

*I feel like the old timers are whispering in my ear,
"Just a little more over here, Bill."*

Bill Finkenstein on Restoration:

ON STRIPPING: We use a flow-over system of stripping. Heat guns break down hide glue. Scraping with Exacto knives is tedious and expensive, and loosens the bond between the first layer of paint and the figure itself. Dipping causes chemicals to be absorbed into the wood, and breaks down the glue.

We never immerse animals in liquid. The chemical is hosed over the figure with a nylon brush. It flows over the piece and runs off into a five-gallon bucket. It doesn't soak into the wood but comes off as the paint does, layer by layer. We back off when the original paint starts to show; then we photograph; ogle at the shining gold leaf glittering up at us; document all colors; trace all designs we find scrolled on the saddle, blankets and harnesswork; and map out what the restored piece will look like.

We always marvel at those original primers—wishing we could duplicate them today—for their long life, durability and tenacity in protecting the animal. We do our final work with light sanding and not chemicals. Then we wait at least 3 days, during which time a piece may crack because it has been sealed for so many years that the wood is finally going to breathe. We want everything that is going to happen to happen before we start the repair.

ON GLUING & DOWELING: If a leg joint shows cracks, we take the leg off, clean off the old glue, mix up new hide glue—as was used originally—and dowel and reglue the legs. We use no screws, no nails—just hide glue and dowels. We repair the animals the way it was done by the masters. If a joint is opened more than 1/4" we place a wedge of wood in the figure and recarve it; if it is smaller than 1/4" we use a wood filler.

ON SEALING: Now the figure is ready for sealing. We prime it with 4 coats of primer. That wonderful original primer contained lead and although it covered better and wore longer, it was dangerous to use. We counter that with 4 coats of non-lead primer to give the figure enough protection. Then we match up the figure with its documentation file. I let the horse or animal talk to me for a day or so while the primer is hardening. We study the notes regarding original color, trappings and details of design, as well as the photographs we have taken.

ON PAINTING: We use Japan oils, like the old carousel paint shops, on all the figures we do. The only difference is the lead content. There is none today. This means that it may take two sittings to cover a figure that the old timers could do in one.

I usually do 5 or 6 animals at one time, using a large sable brush to lay all of my colors on. I work my medium loose, free enough to move the colors around. I do the body first; then I do all my shading. I do it light because it is easier to 'key-up' than to 'key-down.' On the second application, I brighten it up. A lot of the horses we are doing, particularly Carmels and Loofts, have lots of pastel colors on their trappings resulting in very delicate and beautiful pieces—with a lot of color. We re-apply gold and silver leaf to all figures that originally were adorned with it. I feel like the old timers are just behind me whispering in my ear and pointing to the figure in front of me saying, "Just a little more over here, Bill."

ON VARNISHING: After the figures are painted to our satisfaction, a marine Spar varnish is applied to finish and protect them. Spar varnish doesn't let ultra-violet light in; it's water-resistant, moisture resistant and stands up to heat and cold. We apply three coats overall and a fourth coat to the saddle, saddle blanket and areas of extra wear. I'm always looking for a better product which will bring more lasting life and durable quality to the figures I restore.

CHAPTER 8

RESTORATION WORK

Before winding up in Joe Minick's hands in 1981, the carousel horses were stalled in one location, but the machinery was moved several times. Storage facilities were needed by the owners for other items thus new locations for the machinery had to be found.

Minick grabbed the horse by the bridle, moved the machinery to his shops and tinkered with putting the machine's pieces together, quite an undertaking since directions for its assembly were lost in all the shuffle.

"We needed to get it running so we could get money for the building," Minick said. As if pulled by the reins, interest in the carousel had slowed to a trot over the previous six years.

Using the photos taken in Wyoming and the Historical Society's collection of original pictures of the carousel, Minick relied on his own mechanical mind to restore the machinery. Because plans were lost, Minick made his own drawings. He went through the machinery piece by piece to make the carousel sound.

Meanwhile Fred Schmidt began repairing the two-cylinder, two-horsepower steam engine, also built by Parker and used to run the carousel.



Joe Minick pieced the machine together.

Horses Need Repair

Joe and Pat Betz took on the painstaking restoration work on two of the horses, one of which had a broken leg. In an effort to determine the original color of paint and original artwork, they filed off dozens of layers of paint until they reached the first coat. It was common practice to paint the carousel each year. Designs changed as often as the paint: a white pinstripe was replaced by a small star which was replaced by a yellow stripe. The horses were the traditional black, brown, white and dapple, and the saddles were painted bright primary colors.



Joe Betz repaired a horse's broken leg.

Joe Betz discovered the horses were made of two kinds of wood - pine for the frame and poplar on the detailed areas as the softer wood is easier to carve. Betz found the body of the horse was hollow and several small pieces were glued together for the legs, head and neck.

Minick also stripped the paint of a horse and the three steeds were repainted.

A scenery panel and a graphic panel on the rounding board were painted by Ed Scheele and Judy Montgomery, who used old photographs as guidelines.

Carousel Rides Again

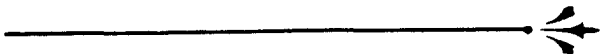
Finally in 1982, the merry-go-round again traveled down the road, with the three horses proudly strutting in their new coats. The Historical Society offered rides at various locations throughout the county and interest in the project mounted.

As funds became available a building to stable the carousel was completed in 1986 and the merry-go-round moved to its permanent home. Final repairs on the machinery were completed to make it sturdy enough for daily use.

The horses and chariots were stripped of their paint and repainted. Missing glass eyes and leather bridles were replaced. Real horsehair was found for the horses' tails. The remainder of the wooden device was painted in traditional primary colors.

The carousel was returned to its original glory in its new barn.

Machine +
buildings readied
before completion
animals + details

RESTORATION SUPPLIES ... see also, Restoration Services 

ART IN MOTION, Carol Perron, 6693 S.E. Scott Dr., Portland, OR 97215
(Horsehair tails)

CARLSON-JAMESON, INC., PO Box 100, North Beach, MD 20714
(Jewels, eyes, poles, brass findings, tails)

FLYING HORSES, PO BOX 2373, Rolling Hills, CA 90274
(Jewels, eyes, authentic brass rings, note & post cards, books)

CAROUSEL CORNER, Jon Abbott, PO Box 420, Clarkston, MI 48016
(Horse stands, brass poles)

CAST IRON & CAST OFFS, 14941 S. Henrici Rd., Oregon City, OR 97045
(Star-burst jewels and rosettes for Looff-style animals)

NOSTALGIA, Sally Craig, 336 W. High St., Elizabethtown, PA 17022
(Horsehair tails, reins, stirrups, straps, gift items)

(as of 1987)

RESTORATION SERVICES 

- ATLANTIC WEST PRODUCTIONS CO., 3805 St. Rt. 139 E., Milan, OH 44846
(Restoration of complete carousels and figures)
- TONY ORLANDO RESTORATION, 6661 Norborne, Dearborn Heights, MI 48127
(Complete services, Supplies--finials, poles, tails, stirrups, etc.)
- CAROUSEL WORKS, INC., Art Ritchie, PO Box 2756, Bristol, CT 06010
(Custom carved carousel animals. Carousel fabrication, restoration)
- BEATTY & HOLZMAN, 86 Cedar Ave., Islip, NY 11751
(Custom carved carousel figures)
- CAROUSEL CREATURES, Dan Smith, 52 Fairlawn Dr., E. Aurora, NY 14052
(Custom carved carousel figures)
- ROSA RAGAN RESTORATION, 908 W. Johnson St., Raleigh, NC 27605
(Restoration, original paint preservation a specialty)
- TOBIN FRALEY STUDIOS, 295 Fourth St., Oakland, CA 94607
(Complete restoration services. Supplies-jewels, eyes, poles, tails)
- CAROUSEL MEMORIES, M. Mendenhall, 206 Howes Dr., Los Gatos, CA 95030
(Restoration services and supplies, including stand bases)
- CHARLES RUTTER RESTORATION, 1138 Garden Lane, Lafayette, CA 94549
(Professional carving and painting of carousel figures)
- ROBERT CURLEY CO., 7608 Elizabeth St., Cincinnati, OH 45231
(Custom carved carousel horses)
- D'EVY IMPORTS, David Spiegelman, 2 Fern Ct., Hillsborough, CA 94010
(Restoration of carousel figures)
- GRAY SALES, INC., PO Box 14732, Surfside Beach, SC 29587
(Complete restoration service. Appraisals.)
- HAPPY APPY VALLEY STUDIOS, 6395 S.R. 165, Greenford, OH 44422
(Restoration of carousel figures)
- GIGI HOPKINS RESTORATION, 44 Morse St., Natick, MA 01760
(Carving, restoring to factory or new paint)
- J & P CAROUSEL WORKS, 1825 Olive Rd., Willard, OH 44890
(Carving and restoration)
- JAKUBOWSKI RESTORATION, Logtown Farm-Valleybrook Rd., Wawa, PA 19063
(Restoration of carousel figures)
- JOYFUL JUMPERS, Camille Flankey, PO Box 437, Clarcona, FL 32710
(Custom restoration)
- MARKSBURY & SON CAROUSEL WORKS, 930 W. Adams St., Sandusky, OH 44870
(Reproduction carvings, frame rebuilding and rigging)

MERRY-GO-ART, 2606 Jefferson, Joplin, MO 64801
(Restoration of carousel figures)

MYERS' CAROUSEL HORSES, 23712 Twin Oaks Pl., Hidden Hills, CA 91302
(Restoration and painting of carousel figures)

OLD PARR'S, Lisa Parr, 5041 N. Bernard, Chicago, IL 60625
(Restoration and painting of carousel figures)

WORTHINGTON WOODWORKING, 1462 Wilson Rd., E. Meadow, NY 11554
(Custom carved carousel horses)

CAPT. FEEF'S WOODWORKING, 177 Lincoln Ave., Elmwood Park, NJ 07407
(Hand-carved replicas of carousel animals)

EDWARD MC ANDREW, Ltd., Old Loomis Rd., Liberty, NY 12754
(Carver of carousel figures, full sized & miniature)

TRACEY CAMERON, 69 West 9th St.-9E, New York, NY 10011
(Carousel restoration)

I would suggest consulting with other Carousel Support Groups before undertaking a restoration and hiring someone for restoration services. --- Charles J. Jacques, Jr., Editor

(as of 1987)

PRESERVATION



Will Morton gently wipes the belly of the zebra with a cotton ball, cleansing the surface without disturbing the original paint.

Photo copyright by and courtesy of Michael Whiteman.

The Restoration of P.T.C. #6

by
Will Morton

Editor's Note: In checking through any recent census of carousels in the U.S., you will find only 6 or 8 of the more than 300 which have original paint.

On the high plains of Colorado, where the sky and the wheat fields seem to go on forever, about 175 miles east of Denver, the stout-hearted, self-reliant people of Kit Carson County now point with pride to their original paint merry-go-round; P.T.C. #6.

For 52 years it has been the delight or consternation of local generations. Built in 1905 by Philadelphia Toboggan Company for Elicht's Gardens in Denver, it operated there until 1927 when it was replaced by the elaborate, still operating, P.T.C. #51.

The old three row stationary machine, complete with a model 155 Wurlitzer "Monster" Military Band Organ, was purchased for \$1250.00 by the commissioners of Kit Carson County who installed it in the fairgrounds in Burlington.

The extravagant and frivolous use of public funds

ultimately was the political downfall of the three commissioners — but those were hard times on the eastern plains of Colorado. In 1931, because of continuing drought and depression, county officials decided not to hold the county fair. At the same time, feed for livestock was hauled from Missouri and made available to local farmers through a government program. The feed, mostly cornstalks, was stored in every available building on the idle fairgrounds, including the lovely 12-sided structure that housed the old merry-go-round. Piled on and around the animals, the building was stuffed full. Apparently the feed was not popular, even at the government's "emergency" price because it was not until 1937 that it was removed and the fair resumed.

According to Harley Rhoades, who told me this story, (he was elected commissioner in 1936, taking office in 1937 determined to get the county fair and merry-go-round going again) the cupola windows were broken out and pigeons had taken over the upper part of the carousel. Mice and snakes had honeycombed the feed and nested under the platform and in the band organ. The building



Before, left, and after, right, photos of cherubs and saddle blanket on the lion. The decorative pattern that has been re-created on the blanket is just barely visible in the small area in front of the stirrup. The P.T.C. name and address is equally faint on the scarf in the before photo.

Photo courtesy of Will Morton.

itself was becoming ramshackle. Some of the people wanted to just burn the whole thing down.

When the building was cleared, the merry-go-round would not budge — even with a chain attached to a truck. So, one section at a time, boards were removed from the deck so that the debris could be dug out. When this was completed, according to Harley, “they threw the switch and the merry-go-round started right up.” Harley said, “I had the county boys scrub it real good with soap and hot water and then varnish it when they had the time.”

Because the mice had so devastated the band organ, there was no hope of getting it operating. For the next 39 county fairs, records and then tapes played western or popular tunes as the machine whirled. Several generations grew up remembering it that way.

As the 1976 Bicentennial approached, a committee of citizens was called together which decided that restoration of the old carousel would be a worthwhile project to undertake for the celebration. Bob McClelland, a farmer and member of the National Carousel Association, was the chairman. Over the years the Bicentennial committee has become the Carousel Committee with Bob continuing as chairman. Anyone who shows up at a committee meeting is a voting member — which is the way things go in that part of Colorado; people take responsibility and a man is still as good as his word — it isn't necessary to tie everything up in formalities.

The group worked hard to raise funds for the project, and even as the fair was getting underway in 1976, Art Reblitz, of Colorado Springs and his helpers were working frantically to get the completely rebuilt band organ into place. The impact of hearing this beautiful instrument playing again after almost 46 years was inspiring. Subsequently, the people of the county, and some friends, raised the funds to restore the 45 original oil paintings

which surround the machinery and form the inner rim — three rows high. John Pogzeba, a Fine Arts conservator from Denver and I did the work.

In the spring of 1979 I was commissioned to conserve and restore the 46 original paint animals, 4 chariots and the outer rim. This work was completed in mid-August of 1980.

The process of conserving an original paint carousel properly is very much the same as for a fine painting or polychromed wood sculpture. Basically it is to clean the outer surface of grime and loose dirt by wiping it down with a non-aqueous solvent such as naphtha or mineral spirit. Occasionally a mild detergent solution may be used, but remember, water, although an extremely valuable universal solvent, is a dangerous enemy of antique wood, glue and paint. (Never use any cleaning agent in a dripping wet way — damp to quite moist, but never dripping!)

After this the most important phase of the cleaning starts. As with a fine painting, the cleaning is primarily a matter of removing the overlying varnish which has collected most of the pollutants and which has darkened with age. The trick, of course, is to remove the varnish without removing the paint — the solvents being the same for both. This is complicated by the fact that on a carousel the wear has been excessive and uneven. Saddle, shoulder and rump areas on most figures have virtually been worn out — the varnish is gone, the paint is gone and even the wood itself may be worn away. Even the very best maintained machines show similar effects of use.

P.T.C. #6, now 75 years old, had been by many strokes of luck, well protected and fairly well maintained. (Overly aggressive maintenance, tinkering and making “improvements” can create as many problems as negligence for the carousel restorer.)

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Restoration restorer Will Morton poses with a friend as he prepares to carve a much needed new horn.

Photo courtesy of Don Clamp.



The goat with its new horn.

Photo courtesy of Will Morton.

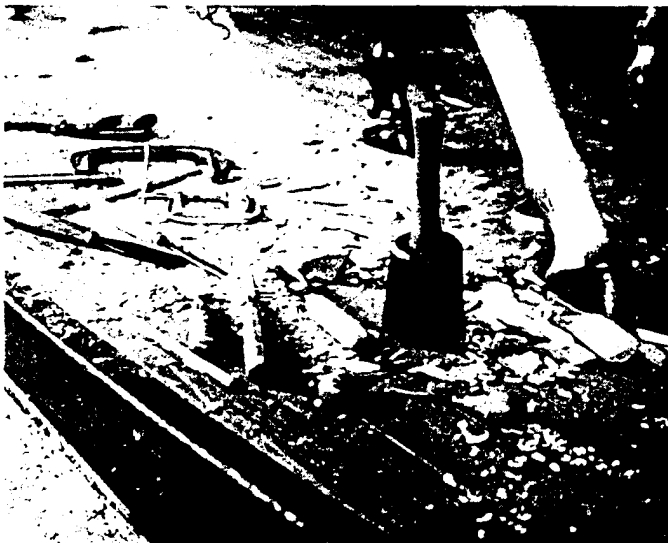
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The resins in spar varnish and pre-alkyd enamels are fairly mobile, actually remaining an extremely high viscosity liquid. This allows dirt that settles on the surface to sink deeper and deeper into the film. It also explains why individual layers of varnish can not be distinguished, while paint can often be removed layer by layer.

To remove the varnish, the correct blend of solvents must be found to soften the varnish resins. It must penetrate quickly yet allow time for removal of the softened materials. The termination of solvent action must be controllable and positive so as to prevent continued penetration. To maximize the cleaning effect, as much darkened dirty varnish as possible should be removed, while leaving a thin veil of varnish to protect the underlying paint.

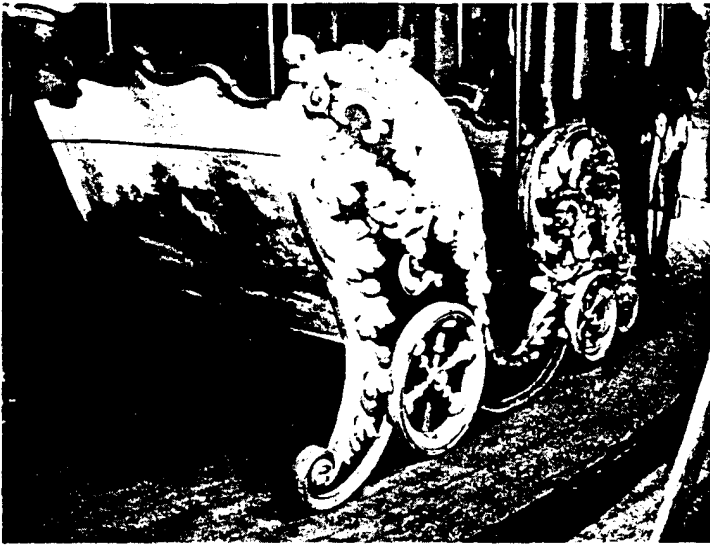
Further complicating the process is that wear-exposed original paint that has become dirty can not be cleaned except by removal of a portion of the paint itself. If the wear is great and the dirt has penetrated deeply, even this drastic measure will not help — the surface can only be improved by restoration (retouching) or left as it is. Where the paint, and even the wood are worn away, obviously there is nothing to clean and the ethically important questions regarding restoration must be dealt with.

Typically, the paints used on P.T.C. #6 were japans, topped with several coats of spar varnish. Characteristically, japan paints are compounded of fairly coarse ground pigments in a vehicle using copal varnish. They dry fast and flat, and because of the copal varnish "hard as iron" and virtually insoluble. The aged color pigments are variously soluble. Vermillion not only will have faded badly but also softens almost immediately. Some blacks



Fresh wood chips, chisels, mallet and clamps — all wonderful associations with the long gone carving shops. This scene is the platform of P.T.C. #6 after the goat's horn was carved.

Photo courtesy of Will Morton.



Beautifully carved chariot showing the painting on the seat back that, seen here, has been cleaned only.

Photo courtesy of Will Morton.

and dark blue may soften readily. One brown which may contain vermillion will dissolve quickly while another, hardly discernable from the first won't budge with the harshest treatment.

As the last of the spar is removed it is possible to feel the change in texture — even hear the different sound — as the paint is encountered. Of course this whole operation is with the use of cotton balls (thousands of them), carefully cleaning only a few square inches at a time. (Do you know how many square inches there are on the surface of a typical carousel animal?) Patience is essential.

The solvents most commonly blended are methanol, ethyl acetate, acetone, trichlor ethylene and a diluent to extend the mixture that also has the ability to reduce volatility. Lacquer thinners vary so greatly from one brand to another that their usefulness in the mixture is contingent upon selection of an effective one.

It is important to remind the reader at this point that there is great potential for disaster in these materials. Great care should be taken in handling them. Not only is it possible to destroy the very thing that you are trying to preserve, the original paint, but there are also dangers to the health of the operator and extreme danger from fire that could quickly consume the whole carousel. Observe all safety rules; no smoking (watch your guests and visitors), keep only small quantities of flammable materials at the work site, wear protective clothing and equipment, maintain good ventilation in the work area, keep fire extinguishers handy, etc...

It is important that anhydrous cleaning formulas be carefully maintained as such. Acetone will mix with water. Alcohol will absorb moisture from the atmosphere. Ethyl alcohol normally contains an undesirable 6% water, methyl alcohol only 1%. Working in a high humidity area or on a rainy day may cause excessive moisture to be introduced into the cleaning mixture, as rapid volatilization will cause cooling and condensation of moisture in the area being



The scenery paintings on the central housing area.

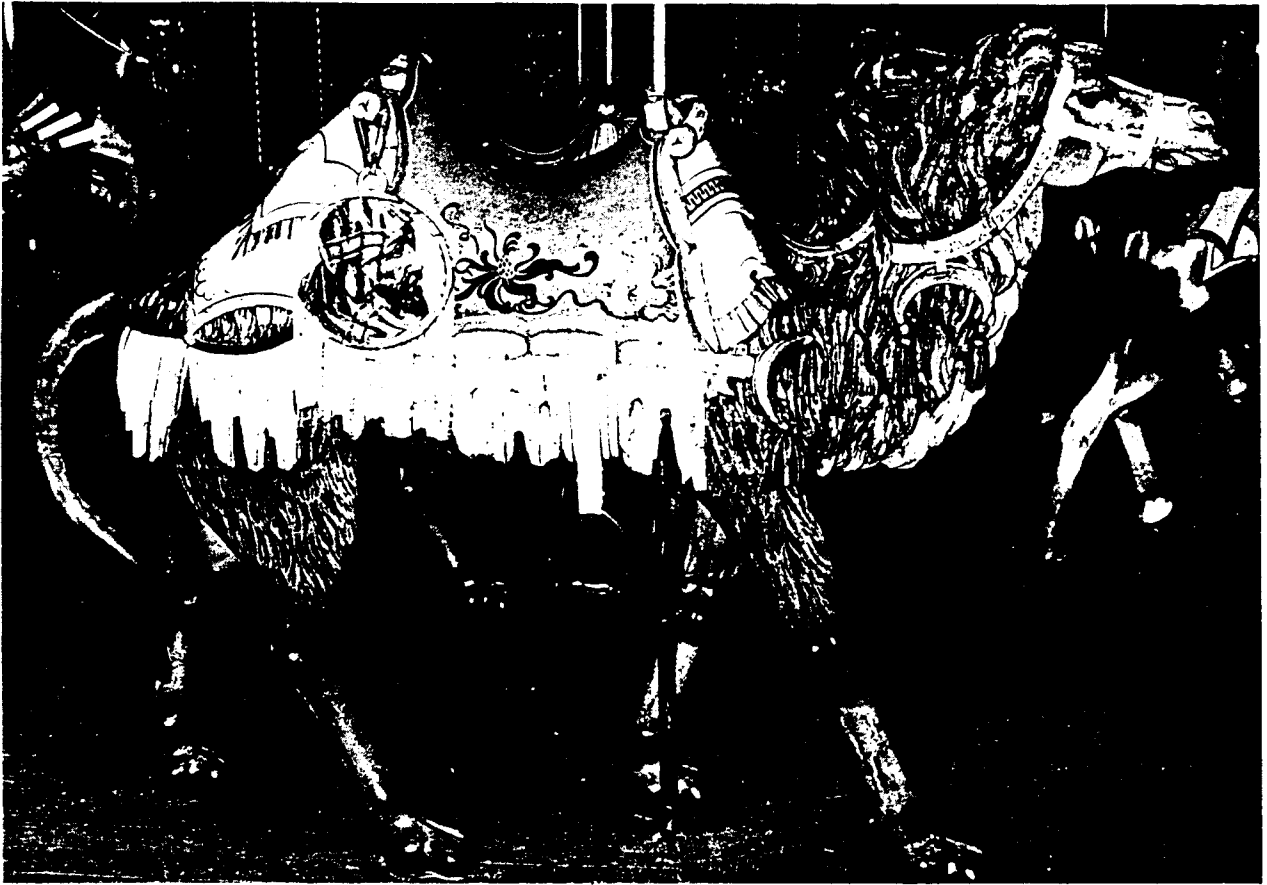
Photo courtesy of Will Morton.

cleaned. The result often is that the cleaned surfaces will develop a "bloom" (blanching), which is a clouding or whitening effect over the dried surface.

Rubbing with cheesecloth pad moistened with a Turpentine/Damar mix will usually remedy the problem if it is not too severe. If this doesn't clear it up, it may be necessary to reclean the area. This not only is more work but carries with it the danger of overcleaning and a breakdown of the original paint. Remember, you may be a skilled and clever artist, but there still is no way to replace the original paint once it is gone.

The cardinal rule applying to conservation of an original paint carousel, as with a work of Fine Art, is that you should never do anything that you cannot later undo. It is true that because of the special nature of a carousel which is to remain in use, there may necessarily have to be some bending of the rule, but I would urge every conservator to maintain the highest ethical standards in the use of materials and methods and in the handling of original materials. Think a project through carefully and consult with respected experts in the field of conservation and restoration if you have any doubts.

In a project of this sort, where the primary effort is conservation, there is always the struggle over when to restore and how much. It is largely an ethical concern with pressure being brought to bear by many practical considerations. The machine being operative and subject to uncommon stresses and risks must be protected in an uncommon way as compared to a museum piece. There is also the desire for a fresh, bright and complete appearance, which means that there is a point where the original is too fragile, dull or incomplete and must be redone. There are considerations of history and modifications that may have taken place along the way: do you return everything to absolute original, which means elimination of all modifications? Do you philosophically restore even the modifications as a legitimate part? *continued on page 17*



The outside row camel, completely restored.
Photo courtesy of Don Clamp.



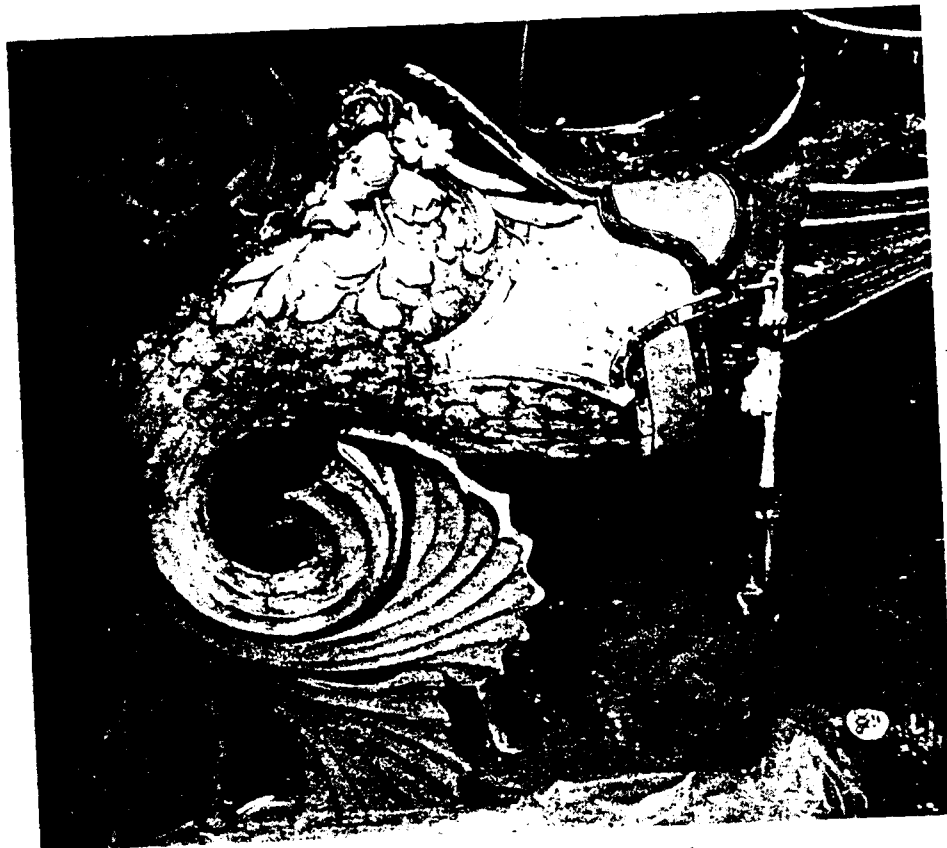
A close-up of the sheik on the camel. The carving and the painting are exquisite.
Photo copyright by and courtesy of Michael Whiteman.



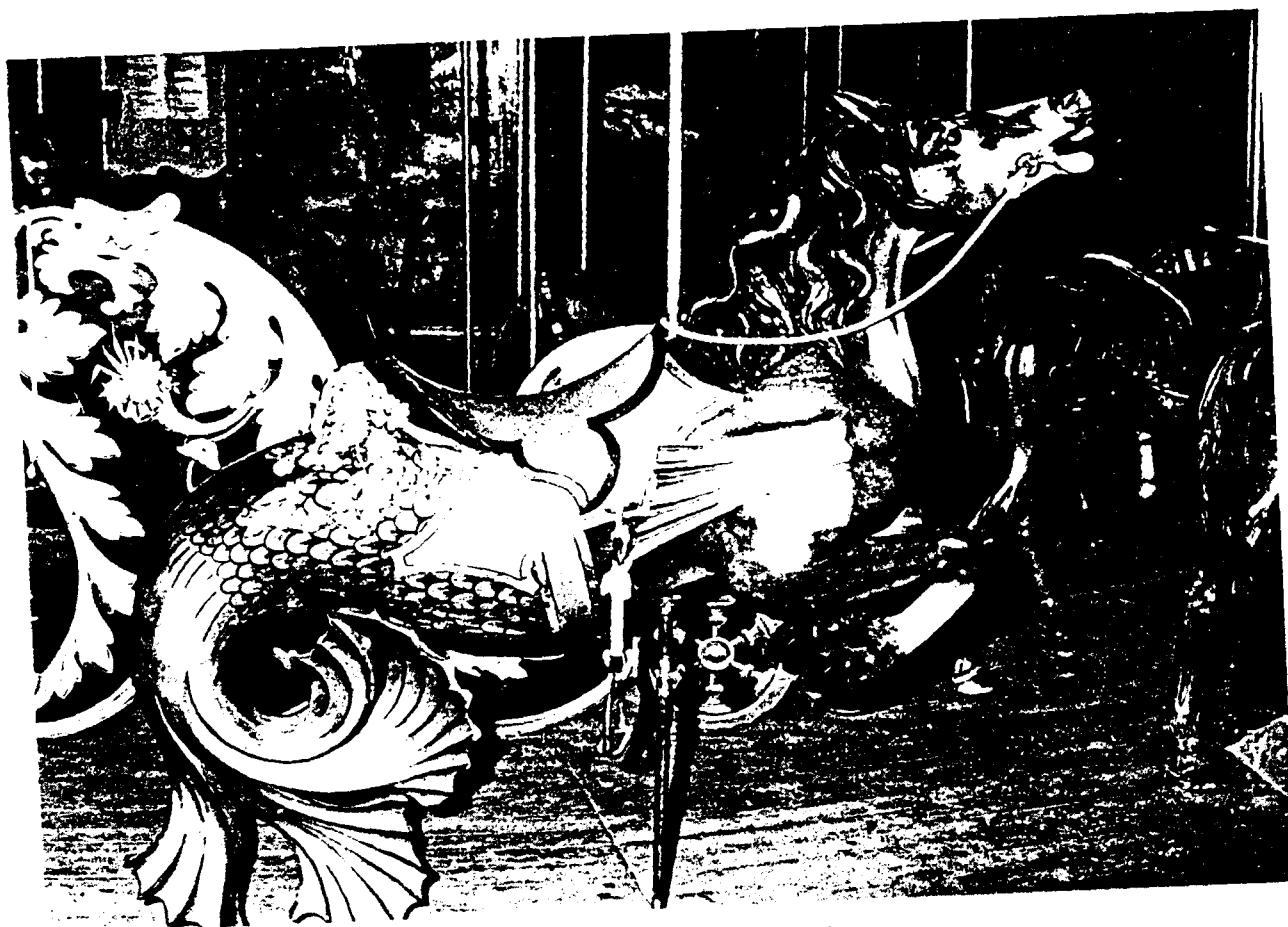
Shown here is the striking contrast between the second row uncleaned zebra and the third row cleaned and restored zebra.
Photo courtesy of Will Morton.



A dazzling array of stripes. All three zebras have been restored and appear to be very proud of their new look.
Photo copyright by and courtesy of Michael Whiteman.



The elaborate rear section of the hippocampus during cleaning.
Photo courtesy of Will Morton.



The restored hippocampus. It is interesting to note that the horse is a pinto.
Photo courtesy of Don Clamp.

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What about making changes for safety, convenience, strength or protection or to comply with today's codes? What about the use of modern materials — as a protective coating, for instance? I should warn anyone considering the conservation of even a single carousel animal to recall the basic rule; never do anything that cannot be undone later.

This implies: with no harm to the original. Therefore, use of one of the new super-tough, super long lasting finishes over original paint would be a tragic mistake. There is no possible way it could be removed without destroying the original paint. Even as it wears out naturally, which it is sure to do, it will take the paint with it. Use instead an old fashioned resin varnish, perhaps even a little softer than the original spar, in respect for the more fragile elderly paint. Then in its time it may be safely dissolved away, carrying with it accumulated pollutants of the next 10 to 20 years. In this way conservation may continue indefinitely, which means more generations of those priceless pleasurable responses that we all make to carousels.

Probably the most exciting discovery of the P.T.C. #6 restoration was that the saddle pads had been repainted once, probably in the 1920's, and that beneath the repaint was much of the original hand painted decoration. Of course it was worn and in spots totally missing, but usually there was enough that a good accurate reconstruction was possible. In some areas the reconstruction was so successful and the condition so good that even the original pencil lines where the painter had sketched out his designs are now clearly visible. Very often the designs included the use of gold leaf, and in some areas it was strong enough that we were able to preserve it intact. Cleaning gold is very difficult. In the restoration, most of the gold on bands and borders and badly abraded designs was regilded with 23 carat gold leaf.

As the work progressed, every few days was like Christmas again as we eagerly watched the painted decoration on another animal reappear after more than 60 years of hiding. Each design, of course, is unique, but as our experience continued I was able to distinguish the personal styles of several different painters. P.T.C. #6 is now a priceless resource for restorers striving for authenticity. As time permits I will complete the cataloging of all the designs.

As is the habit of Fine Arts conservators, I felt it was important to document the work being done. My daily journal contains detailed information on discoveries, problems encountered, observations and comparisons, formulas and methods, materials used, explanation of experiments, analysis of condition, details of repairs and how they were accomplished, daily work and documentation, history and facts of every kind. Also included are recommendations for operation and future work.

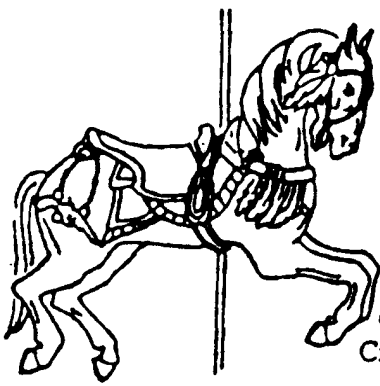
To complete this phase of the project, I replaced a number of missing ears, goats' horns, etc., carving them from the same eastern yellow poplar as was used originally. (I'll get you a free ride if you can locate them!) Several small areas of dry rot were treated using a modern wood consolidant containing a fungicide. Then came the final varnishing and the duplication of some typical original style decorative painting on several panels that had been added in a modification of the center enclosure. Last was the painting of some necessary signs rendered in 1905 styles.

END



(Photos continued on page 18)

Will Morton is a contemporary sculptor and art conservator who has also been at various times a college professor, sign painter, printer and commercial artist. He is a graduate of Parsons School of Design in New York and holds B.F.A. and M.F.A. degrees from the University of Colorado. Recently he has had the opportunity to bring a great many of his skills and experiences together in the restoration of antique carousels and carousel animals. "This may be where it all has been heading," says Mr. Morton as he enthusiastically discusses his recent work. Based in Denver, he has art concentrated in Colorado and scattered throughout the U.S.



CAROUSEL COMMITTEE

c/o PUEBLO PARKS AND RECREATION DEPARTMENT
 City Park Office Pueblo, Colorado 81005 (303) 566-1745

RESTORATION BUDGET FOR CITY PARK CAROUSEL

C.W. PARKER #72 CARRY US ALL

INVENTORY	DESCRIPTION	RESTORED	EXPENDITURE	COMPLETION ESTIMATE
12	Stein & Goldstein Horses	7	\$ 14,000.00	\$ 4,000.00
24	C.W. Parker Horses	20	30,000.00	6,000.00
1	C.W. Parker Lovers Tub	1	800.00	-0-
1	C.W. Parker Chariot	-0-	-0-	1,000.00
6	Canvas Covers For Horses		215.00	
4	Display Stands for Horses		200.00	-0-
36	Support Stirrups/Steps	12	240.00	-0-
144	Replacement Horseshoes	100	Donation	-0-
14	Drop Rod Brass Sleeves	10	350.00	840.00
14	Floor Sections	-0-	1,300.00	8,700.00
14	Upper Rim/Crestings	6	1,800.00	2,400.00
14	Upper Rim Carved Eagles	4	* 400.00	-0-
14	Upper Rim Oval Shields	8	* 500.00	-0-
14	Upper Rim Oval Murals	6	* 150.00	-0-
14	Interior Panels	14	* 200.00	-0-
12	Interior Panel Murals	12	* 350.00	-0-
2	Interior Panel Signs	2	140.00	
	Structural/Mechanical		-0-	est. 6,000.00
	Misc. Supplies, paint, horse tails		620.00	
	Printing - Postage		700.00	
	Promotion Supplies - t-shirts, mugs, cards, Christmas supplies		4,700.00	
	Photographs, slides		600.00	
	Repair of Projector		37.00	-0-
	Memberships - National Carousel Asso.- Colorado Carousel Asso.		60.00	-0-
	TOTAL		\$57,362.00	\$28,940.00

*Materials only - volunteer artists-craftsman donated labor undetermined.

Protective Building \$ 53,800.00

Building Completion - fire suppression, alarm, sound system, sidewalk, seating, lighting, landscape, 1985 Parks Budget \$45,000.00

The Restorers' Corner

Glues for Restoration and Repair

by *Lourinda S. Bray, Running Horse Studio*

I think it is important that we all share what we know, and I want to share with you the following techniques on gluing which I have found to be both long-lasting and durable.

One of my clients is Santa's Village in the San Bernardino Mountains at Sky Forest, California. The Allan Herschell merry-go-round is in an unenclosed pavilion. I have seen it with snow on the horses after a blizzard. My repairs are holding up better than I hoped for considering how badly damaged and how full of fiberglass they were. So here goes.

I don't use rabbit skin glue for several reasons. It was the best thing made at the time the ponies were blocked together, because it shrank as it dried and pulled the horses closer together. But it is not the best thing now. It is also a pain to handle and I have the burn scars to prove it. Further, the fire department would not approve of the use of skin glue in my building because of the fire hazard from a continually-heated glue pot.

For joint and block laminations I use Garrett Wade's gap-filling glue #202GF [1]. It has a high particulate content and so helps fill uneven surfaces. It must be used with pressure, such as pinch-dogs, web clamps, or Jorgensen wood clamps. And it dries stronger than the wood. If it gets onto the surface of the carving and dries, it can be chipped off without damaging the wood.

For laminating basswood replacement wood (shims, lugs, surface wood replacements), and for setting dowels I use yellow carpenter's glue, an aliphatic resin glue. Like gap-filling glue, it is water soluble so it can be cleaned away easily if it gets in the wrong place. Remember to remove any old glue, epoxy resin, PC7, Bondo, etc. first with a heat gun or rasp, as nothing will stick well to old glue.

Much as I dislike it, on occasion I have to use epoxy substances. Among their disadvantages: most of them act as a water barrier, trapping moisture between the epoxy and the wood over time and promoting dry rot. For those who argue that once wood dries it stays that way, I would remind them that the pole and tail holes (and drain holes in the bellies of some European animals) let humidity into the piece. I have also had to re-restore the work of several restoration experts and have found dry rot behind the epoxy substances used to restore the piece. I have recently found a system which does work, but it requires a lot of skill to make it work properly. It is an integrated system of Cure-Rot-type substances, microspheres and balloons, and fillers; from West Systems [2].

The treating of dry rot in an inaccessible place when it is not possible to replace it with new wood is the one instance when I use epoxy. Drill 3/8" holes on 1" centers to find the length, width and (with a 10" long, 3/8" bit) depth of the rot. The wood will offer no resistance if it is rotted. Good wood slightly binds the bit. Your bores should be parallel to one another. Set the piece on a sofa, in a floor crane, or whatever,

so that the piece is well-supported, with the bores perpendicular to the ground. Plug the exits with bits of dowel scrap if the piece is pierced through.

Fill the holes with Clorox or any household chlorine bleach, which will kill the fungus that causes the dry rot. Wick away whatever is not absorbed within five minutes. Allow the piece to dry for a few days. Mix Cure Rot, Wood-Rot Cure, Stop-Rot, or any other such product as per the directions and in sufficient quantity to fill the bores. Pour the solution in and leave it alone for 24 hours. Pour acetone into the bores and immediately wick it back out. Do a few at a time to cut the wax left behind when the epoxy cured and to prepare the bore for filling.

Pre-cut 3/8" dowels to fit each hole and set them with an epoxy filler made for wood, such as Freeman Tuf-Carv or Evercoat Formula 27 Plastic Filler. Do not use Bondo, which is made for metal only. Casting urethane will not bond well, either, nor will yellow glue.

The dowels should be roughed-up prior to use. I use a #6 carpenter's rasp, but #60 open-coat garnet sandpaper would do. Always treat dowels in this manner as it removes the glaze caused by milling and provides a tooth for the glue to adhere to.

For shimming, I use basswood from Glenn Craft [3]. It is made for model railroad buffs and comes in sizes from 1/32" x 1/32" x 12", to 1/2" x 2" x 12 and all the sizes in between. They list 99 fractional sizes. The wood can be found in train shops, model shops, and from the source.

Large areas can be filled by gluing together various pieces of basswood with yellow glue into or onto a project and shaping it once it has dried at least 14 hours. A filler can be made by mixing the sawdust from a band saw with yellow glue to the consistency of drop cookie dough. It will be sharp when dry, but rasps nicely to shape. I have used it with wood to restructure internal damage and to take up slack in a lamination. It only binds well wet to wet so glue the area first before you pack the filler in.

I like to think that glue that oozes out of a seam is glue well used. It means there are minimal air holes inside. Always apply the glue to both pieces to insure proper bonding. Clamp. Strap down or put a weight on surface additions.

Craft sticks and tongue depressors are limited in size and shape, but should be roughened the same way as the dowels. Try to run added wood along the grain to help keep moisture out.

A word on Exacto knives: I swear by the Exacto whittling set, particularly the convex blades. When the handles get too full of glue I use them as scrapers, with used straight or curved blades in them, when stripping. Tom Guyot [4] sells sets of whittling tools with blades that can be sharpened when they've dulled. I can't seem to manage the veining set. It's easier to sharpen a traditional veiner.

I would like to suggest as a final idea that gravity is a tool which can help or hinder like any other tool. Keep the area you are repairing perpendicular to gravity (horizontal) and it will help keep what you are gluing in place until you can clamp or dog it down. I hope these tips will help those of you who are repairing and restoring carousel figures.

1) Garrett Wade, 161 Avenue of the Americas, New York, New York 10013.

2) Gougeon Brothers, Inc., 706 Martin Street, Bay City, Michigan 48706.

3) Jon McAtee, Glenn Craft, 7380 Croy Rd., Morgan Hill, California 95037, 408-779-4206.

4) Guyot Arts, 2945 SE 140th, Portland, Oregon 97236.

A handy hint and some warnings of danger from the processes of restoration:

Barbara Tousignant sent a clipping from CRAFTS, February 1988 which tells of an easy way to remove spilled paint from your clothes: spray on Mr. Muscle (R) and allow it to work for a few minutes. Then rub the spot gently and rinse well under running water. The hint claims that it will not damage or fade colors, but it would be prudent to test on a hidden spot first. Use only Mr. Muscle. Other cleansers are too caustic and will probably damage the fabric.

Cuprinol can be hazardous to your health. Another clipping from Barbara T. details the health hazard of using Cuprinol to kill powder post beetle eggs and larva. These insects, whose presence is shown by fine sawdust, can do irreparable damage. The best cure is to take the piece to an exterminator who has an airtight fumigation chamber and who uses fumes, not liquid, for the process. Refinishing chemicals (stripper, penetrating stains and finishes) do not kill the eggs or larva. Do not try to treat the wood yourself. Consult a professional.

An article in CHIP CHATS, the magazine of the National Wood Carvers Association for January, 1988, carries a warning, "Wood Dust: a Tragic Lesson," written by a hobby woodworker who later died from a lung disease probably contracted from breathing wood dust.

An even greater threat, according to Diane Vaught, who spoke at the Kansas City Technical Conference, is that of contracting lead-poisoning from breathing the dust made by sanding old carvings. Even those which have been stripped are hazardous, because the lead from the early lead-based paints penetrates into the wood. Diane has promised to write an article for the *Merry-Go-Roundup* detailing the danger and the ways to combat it.

If you have any hints to make restoration easier or less hazardous, send them in to share with the rest of us.

Crossroads Village Carousel

The Crossroads Village Carousel, Flint, Michigan, will begin its 1988 season on the Village's opening day, May 23, with six more horses restored. The first six were finished for the 1987 season. The plan is to complete six each year. Also new this year will be a replica of a C. W. Parker Ticket Booth. June 4 and 5 will be Carousel Days. The new Friends logo appears at the head of the article.

A more complete report in the next issue.



RESTORATION 21
National Carousel Association

Devoted to the Preservation of the Classic Carousel

905 West Johnson Street
Raleigh, North Carolina 27605
January 9, 1989

Dear Restorer,

As you may know, the National Carousel Association has put together a Carousel Manual for owners of operating carousels and support groups. The manual is filled with information on subjects ranging from promotion to legal matters when it comes to dealing with a carousel. It is constantly updated and is given free of charge to carousel owners and support groups. There is a section in the manual on 'Restoration'.

As chairman of the Restoration Committee of the NCA I would like to invite restorers who have restored whole carousels to submit some information to be included in the manual. If you are interested please send a one page description of your work along with a one page resume that includes a list of machines on which you have worked. Please state in your description the areas of restoration in which you could provide help such as information, consultation, hands on restoration work, machine surveys, dealing with specific special problems, and etc. This is a good opportunity to inform owners about your work while at the same time provide a resource for restoration services. The work descriptions and resumes will be presented for the manual at the NCA Technical Assistance Conference in Denver in April, 1989. Please get all information to me before February 28, 1989. Be sure your information is printable on a Xerox type copy machine.

I hope you decide to participate. All of us have valuable information to share. Enclosed is a list of restorers I know about who have at one time or another worked on a carousel. I have sent these people a copy of this letter. If you know of others who have worked on whole carousels or should be on this list, please let me know their names and addresses immediately! I realize that some on this list are not actively seeking a carousel to restore but they do have experience and valuable information that could benefit a restoration project. If you are willing to be recruited for any service that could benefit a restoration, please send some information.

Thank you! I look forward to hearing from you.

Sincerely,

Rosa P. Ragan

UPDATE 3 (5/30/89)

Rosa P. Ragan
Recording Secretary

I. JOSEPH CHIARELLO
OBJECT CONSERVATION

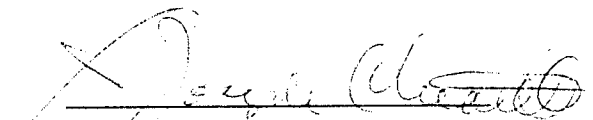
Working as an object conservator, my medium of specialization is wood. As such, I restore sculpture, architectural ornament, and antique furniture. My restoration of carousels is confined to their wooden members: the carved sculpture, decorative ornament, and, occasionally, their wooden structural frame.

As a member of The American Institute for Conservation, I follow their established professional standards, whereby all my restoration procedures are reversible and executed with minimal alteration to the original physical fabric of the object. More specifically, when restoring a carousel, my preliminary intent is to halt any further deterioration. As a consequence, my conservation techniques aim to preserve the antiquity of the carousel while simultaneously evoking the feeling and spirit of the carousel when it was first constructed.

Frequently, the carousel surfaces I restore are painted. In these instances, I never obscure by overpainting or remove the original paint but instead treat the surface in such a manner so as to draw out the chromatic values of the original in situ paint. Areas of pigment loss are only inpainted to enhance and give continuum to the existing painted surfaces, never to camouflage areas showing natural paint wear caused by use.

I am also an expert wood carver and able to sculpt portions of figures and designs where the original has been lost or is in need of structural reinforcement.

UPDATE 3 (5/30/89)


I. Joseph Chiarello

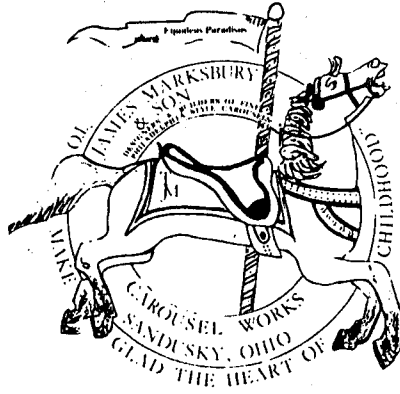
I. Joseph Chiarello
 Object Conservation
 49 Lawrence Hill Road
 Huntington, New York 11743
 516-549-3686

SELECTED PROFESSIONAL EXPERIENCE

- since 1986 Consulting Conservator, Whitney Museum of American Art, New York. Responsible for the conservation of wood sculpture, frames and loaned furniture (e.g., furniture in the Shaker Design exhibition of 1986).
- since 1983 Consulting Conservator, Museum of American Folk Art, New York. Responsible for the conservation of furniture, wood and metal sculpture.
- since 1972 Carousel Conservation. Responsible for the conservation of various dismantled carousel sculptures, presently at the Museum of American Folk Art and in private collections, by such firms and carvers as Carmel, Cernigliaro, Dentzel, Herschell, Illions (originally located at the Steeplechase, Coney Island), Loeff, Spillman, and Stein and Goldstein (originally located at the Steeplechase, Coney Island).
- 1984-86 Consulting Conservator, The Museum of Tobacco Art and History, Greenwich, Connecticut and Nashville, Tennessee. Responsible for the conservation of wooden sculpture and objects.

EDUCATION

- 1970 B.S., Vocational Education, New York Institute of Technology, Westbury, New York.
- 1966-73 Study of museological conservation techniques with European master sculpture and cabinet maker, Charles Zima.
- 1960-63 Study of anatomical drawing and painting with artist Frank Reilly, Art Students League, New York.



Jim and Susan Marksbury 930 West Adams Street Sandusky, Ohio 44870 627-9786

January 20th, 1989

Dear Rosa,

Please find enclosed the information you requested for the Carousel manual. I hope that it is sufficient in scope so as to cover the required needs. We are very busy here preparing a number of animals as well as two complete machines for the 1989 season.

If any further information is required we can be reached at our shop phone as well as at home. Our plant is located at 526 Carroll Avenue, Sandusky, Ohio 44870. Thanks for thinking of us.

A handwritten signature in cursive that reads "Jim".

Jim Marksbury
President
James Marksbury & Son
Carousel Works

James Marksbury & Son Carousel Works
 930 West Adams Street
 Sandusky, Ohio 44870
(Home)(419)627-9786,(Business)(419)627-8738

Specializing in mechanical and artistic manufacture and restoration of carousels either as individual pieces or as whole, complete operating units. Complete rebuilding and manufacturing services available. Engineering consultation and machine surveys performed as well as complete design and installation of electrical systems and controls.

Staff is controlled by James Marksbury and all work is performed under his direct supervision. Carving repair work by James Marksbury and son, Scott, as well as complete new carvings as reproductions or original works manufactured. Artistic restoration by James and Susan Marksbury to include research and documentation of original colors.

Complete molding services available for trim and chariots of many manufacturers to include but not limited to C.W. Parker, Allen Herschell, Spillman, Dentzel, PTC, etc. Custom built organ cases and restoration of facades. Rigging of all makes and models available with prices upon request. We also offer a complete line of architectural accoutrements to include, but not limited to, corbels, spandrels, capitals, brackets, cornices, and all manner of fretwork in many architectural styles.

Past Performance

Mechanical survey, rigging and rebuilding of carousel mechanism for the Baltimore Zoological Society, 1985.

Installation and rigging of 1890 Fredrick Savage carousel for film production at Asbury Park, New Jersey, 1986

Complete rebuilding of C.W. Parker circa 1914 mechanism for the Indianapolis Zoological Society to include: new platform, all mechanicals, complete new rounding boards, trim, bearings, drive. All art work color scheming for the entire machine and installation rigging and transportation, 1988

New sweeps and under sweep lighting system and installation for ^{*}Tuscora Park's 1928 Spillman carousel, in New Philadelphia, Ohio. Machine assembly for the 1988 season.

New sweep separators, platform, platform sills and total bearing relining for the above machine due to be installed for the 1989 season in April, 1989. Also new gearing and drive rebuild.

The recarving, repair and painting of many individual collector's pieces by all manufacturers and of all periods.

Susan Price Hofsass
Seabreeze Park
4600 Culver Rd.
Rochester, NY 14622
716-323-1900

Project: 1915 Philadelphia Toboggan Carousel No. 36

I am in the process of restoring the horses and chariots on the working carousel that has been owned and run by my family since its purchase. I start by scraping sections of paint off in layers to determine the original factory colors and designs which I then record for future use. Once the colors have been recorded and the designs traced, I then strip off all paint. I do try to keep original paint whenever possible, such as in the case of the chariots where I have found some landscape paintings that had been painted over. These I am cleaning, touching up where needed and simply varnishing so they can be visible once again.

The next step is to do repairs. Our animals are in very good shape, so they don't need very much major repair. Mainly I have only needed to fill dents, tighten up joints, re-dowel joints, and occasionally replace missing parts, such as ears. Then sanding and priming is done.

When I am ready to paint, I then refer back to my records of original paint for that animal and reproduce the original look of the horse. All the saddles and detail work is done by hand with a brush. The body colors are done with an airbrush. Finally, a clear-coat is sprayed on to give the animal durability. The horse is then placed back on the machine until the time that touch-ups are needed.

Another portion of our carousel that we have worked on is the facade which was varnished shortly after its purchase. We feel that this coat of varnish has helped to protect the original paint. After a careful washing, I needed only to re-varnish the paintings and carvings without any repairs at this time.

Some other areas that have been worked on by my father, Merrick Price, include the replacement of the nearly 1100 light sockets on the machine, and the repainting of some trim along the facade which involved the duplication of the original stencil. Also very important was the restoration of the metal vaulted ceilings which had shown severe signs of rusting through the paint. These he cleaned, treated specially for the rust, and repainted as close to the original as our records could show.

These are some of the areas which we have had experience with. We would be happy to help out anyone who has run into a problem or who is just interested by answering questions in regards to what we have encountered with our own machine.

UPDATE 3 (5/30/89)

OLD PARR'S, INC.

Carousel carvings, no matter how simply carved or "primitive" in form, represent a unique time in art in America. European, Scandinavian, and Russian talents meshed to create fine American carousels which should be preserved and somewhat revered. With this fact in mind, we restore carousel objects as though they are museum pieces. So, we restore for strength and endurance, especially if the piece is to be used on a carousel, but so repairs are reversible. We always restore with regard to original construction. We feel we do not have the right (for conservation's sake), to improve on the original design. Though this is often an arguable point for an active machine, we maintain that philosophy for two reasons: all carousel carvings will eventually be museum pieces, and there is something to be learned from the original carvers and manufacturers.

With regard to original construction and carving, we do several technical things:

- 1). Pay attention to the wood. Replace as little as possible but if necessary, match the kind and grain direction. (If the animal is to remain stripped, we try to obtain slow grown wood as well, but this is often difficult).
- 2). Wood is natural; it "breathes" and moves with humidity and temperature changes. We use a carpenter's glue, unless the animal is to be used, because it lets the wood react more naturally than epoxies. That means, if it cracks after time, it cracks where it should--at the joints--instead of someplace new.
- 3). Since wood is soft, we use a vinyl spackle for fill because it is also soft. When sanding, we will not accidentally sand original carving. We never use Bondo; it is so strong that it tears good wood fibers if it has to be removed.
- 4). We use as many natural surfacing agents (primer, paint, varnish), as possible because they will bind better to each other and create a better surface. We stay away from acrylics, use B.I.N. for primer, oil base paints for color and try to stay away from polyurethane varnishes. Compatibility among primer, paint and varnish is crucial.
- 5). If we find factory mistakes and oddities in construction, we preserve them and repair them accordingly. They are part of the history of the piece.
- 6). We do not know everything and are always discovering new problems. We work in conjunction with the Field Museum of Chicago, other knowledgeable conservators and fine woodworkers. Ask and compare; that is what the old carvers did.

UPDATE 3 (5/30/89)

OLD PARR'S, INC.
 7235½ N. Sheridan Road
 Chicago, Illinois 60626
 (312) 743-1700 (312) 588-8474

We restore carousel carvings for active carousels,
 private collectors, museums, and galleries.

'87-- Restoring active c. 1911 Parker portable machine
 in Fireman's Park, Waterloo, Wisconsin.

Beginning with 28 carousel horses and 2 chariots:

wood in poor condition, previous poor repairs and
 damage resulting. Previously tank stripped. Complete
 reconstruction required of all animals and animals
 repainted as closely to original as possible with
 some town requests.

'84-- Restoration of carousel carvings for Portals Gallery, Chicago

'88-- Instructor for the Art Institute of Chicago for carousel
 restoration

'74-- Research and piece reconstruction of carousel animals for
 private collectors

'71-75 Taught Studio Art and Art History:

Cornell University summer crafts program, Ithaca, New York
 South Seneca Senior High School, Interlaken, New York

UPDATE 3 (5/30/89)

ROSA P. RAGAN

905 West Johnson Street
 Raleigh, North Carolina 27605
 (919) 829-1884

CAROUSEL RESTORATION

- | | |
|---------------------------------------|---|
| .Restoration of carousel animals | .Wood restoration |
| .Conservation scenic panels | .Marbleizing, graining, faux finishes |
| .Research/Conservation original paint | .Teaching and training |
| .Consultation | .Surveys and restoration specifications |

EDUCATION:

B.S., Art, East Carolina University, 1969. Majors painting/crafts design
Graduate School, East Carolina University, 1969-1971. Major in Art
Workshops in paint conservation, Pullen Carousel Restoration, 1980.

EXPERIENCE:

Owner Restoration/Conservation Business, single person business
 specializing in carousel restoration and the restoration of decorative
 painting in historic houses, 1983-present.

Supervisor Chavis Carousel Restoration and Pullen Carousel Restoration,
 City of Raleigh Parks and Recreation Department, Raleigh, N.C.
 Organized and supervised/managed restoration projects, 1980-83.

Director of Conservation and Research, City of Raleigh Parks and
 Recreation Department, Raleigh, N.C. Research and documentation of
 original paint and public relations in preparation for the restoration
 of the Pullen Carousel, 1978-1980.

Art Teacher, New Bern City Schools and Johnston County Schools, North
 Carolina. Planned and taught art to grades 1-9, 1972-1978.

WORK ON CAROUSELS AND CAROUSEL ANIMALS:

Pullen Park Carousel, Raleigh, N.C. 1978-1982. Complete restoration.
Chavis Park Carousel, Raleigh, N.C. 1982-1983. Complete restoration.
Glen Echo Carousel, Glen Echo, Md. 1983, 1987. 2 animals, 5 pieces, workshop.
Highland Park Carousel, Meridian, Miss. 1985. 2 animals, survey.
Ontario Beach Carousel, Rochester, N.Y. 1986. 1 animal, technical survey,
 manual for restoration.
Dutch Village Carousel, Holland, Mich. 1984. Paid consultant.
Michigan State University Carousel, Lansing, Michigan. 1984.
 Conservation of 14 landscape paintings, restoration 14 frames.
Walentas Carousel, Brooklyn, N.Y. 1987. Paid consultant.
Prospect Park Carousel, Long Island, N.Y. 1989. Color research
Private collections, nationwide. Restoration of numerous carousel
 animals, pieces and band organ facades. 1983-present.



RESTORATION METHODS

As a professional carousel restorer I am committed to preserving as much of the original factory paint, wood and structure on carousels and carousel pieces as possible. I believe that work on carousels should be done thoughtfully and as slowly as necessary to preserve the history of each piece. Every element of design and history must be carefully and thoughtfully considered.

The first step in restoration is a survey of the machine, structure, the animals and all other pieces. I specialize in paint surveys to determine the presence of original paint on animals, rounding boards and other pieces. Many times I find beautiful original paint on the animals and decorative panels. Other times I find that the pieces have been stripped and repainted in the past and little or no original factory paint remains. If original factory paint does exist it cannot be ignored as it's presence adds to both the monetary and historic value of the pieces. I write specifications of how the carousel could best be restored based on my findings, the weather conditions the carousel exists in and the yearly number of riders. There are a number of ways to successfully restore a carousel animal and the specifications involve choosing the best method of restoration which suits the needs of a specific carousel.

My methods of restoration vary according to need and owner preference. The following describes the steps of restoring carousel animals preserving the original factory paint under a repainting:

1. Photograph all pieces before restoration
2. Clean sample areas to the factory paint to determine color & design
3. Document factory paint with drawings, color matching, photographs & tracings of designs
4. Clean off park paint layers to the first stable layer of park paint without disturbing the original paint layer
5. Repair all wood damage with dowels and reversible fillers
6. Prime with oil base primer, fill with reversible fillers, and sand until smooth without sanding the original wood surface.
7. Repaint using oil base paints and the information collected from the factory layer as a guide to color, design and painting technique.
8. Varnish with several layers of a durable oil base varnish

Animals restored in this way will retain the original factory paint while at the same time be durable enough to ride. My restoration methods would vary if the animals had previously been stripped of all paint or if the owner requests that original factory paint be preserved as the outer layer of paint. Also, I make every effort to preserve all decoratively painted roundings boards and panels in their original factory paint. Since these pieces are not touched, I clean them to the original factory paint, inpaint them, and coat them with a reversible protective coating.

Whenever possible I like to involve the community which supports the carousel and the restoration. This means working with community volunteers, giving workshops and talks on restoration and cooperating with the media.

I submit a final report to the owners of the carousel including a list of techniques, color research, photographs, list of materials, and a complete description of all work. This report is important for proper maintenance of the newly restored carousel.

Saving Original Paint on Carousel Animals and Pieces

by Rosa Ragan

When we look at an antique carousel animal, scenery panel or band organ facade, the outer surface doesn't always tell the whole story. There can be layer upon layer of old paint underneath. There can even be original paint underneath, paint that can be saved.

Why should it be saved?

- First, original paint on a carousel piece preserves the integrity of the piece; it is as much a part of the history as the carving. Having original paint and decoration on a piece makes it more whole and complete; more as it was in its beginning.
- Second, the presence of original paint means that the original preparation of the wood surface has not been disturbed. The wood has not been damaged by harsh chemicals, stripping or sanding. Usually wood under undisturbed original paint looks like new wood.
- Third, because it is more complete and more stable, the carousel animal with original paint is more valuable monetarily.
- The decorative painters who worked on carousels during the late 19th and early 20th centuries were skilled at their trade. They worked quickly and precisely. They produced flawless blending of color as well as seemingly perfect painted and stencils designs.

Carousel scenery painters rendered decorative surfaces ranging from quiet landscapes and tranquil animal portraits to the bizarre. Because of changes in fashion and continued maintenance most carousel pieces including scenery paintings have either been stripped or have been painted over many times.

Determining if a piece has original paint or if its history includes stripping is sometimes a simple matter but can be extremely difficult. Confirming the presence of original paint requires experience in looking at layers of paint. In

my ten years' experience probing for original paint, I've encountered no carousel piece that is exactly like another when it comes to looking for the original layer.

Experience in knowing what to look for, and how to look, is a must. My basic technique to determine whether or not an animal or piece has original paint is as follows:

With a No. 10 Exacto or scalpel blade, I do test spots on several areas of the piece. I carefully clean a minute spot (pinhead size) to the wood or support of the piece and identify the print coat which lies on top. On older carousel

It is indeed a national treasure . . .

pieces the prime coat does not always clearly exist as a white primer. Sometimes it is gray or a wood preparation which may appear blue or nonexistent.

Next I identify the base color and then whatever decoration lies on top of that. Once I identify the original paint layer, cleaning it is a matter of finding the best of several methods of cleaning it.

This all sounds simple, and if you are interested in finding out if your piece has original paint you might carefully examine it. Perhaps the original paint will be easy to find and clean, but if you are at all confused about what you see, you should stop and ask someone with experience to examine the piece for you.

Several times I have worked on animals where an owner thought they had cleaned to the original paint only to find that it was several layers beneath. The main thing to remember is *do not damage the original paint*. It's better to have extra paint layers on top than to damage the original.

Before starting to look around for the original paint on a carousel piece you should be aware that you will be dealing with old paint that contains mercury, arsenic and lead as well as toxic solvents and chemicals. Lead that is in

the dust from scraping and sanding can enter your system through the nose and mouth.

I once asked a doctor specializing in occupational health and lead poisoning how you could get all the lead off a carousel animal. He said that the lead from old paints penetrates the wood and that the only way to have a lead-free situation would be to burn the animal!

You should always wear lead-approved respirators and protective clothing when doing any dust-producing procedure. You should also isolate the work dust from your living areas, and by all means **Keep Children Away!**

Wash your hands and avoid tracking dust and droppings into your home. I use a triple filtering vacuum cleaner for vacuuming up paint chips, as a conventional vacuum cleaner disperses dust in the air. Manufacturer's recommendations for safety should be followed on all solvents and chemicals.

Once it is established that the original paint is there under the layers of park paint, the owner of the piece or the carousel must weigh the circumstances and decide if it should be saved. Saving original paint is time-consuming and thus expensive.

Original paint is fragile and generally an unsuitable surface for riding. Personally, I think the original paint on carousel scenery paintings and other pieces that are never touched should always be cleaned and saved. The original paint on animals in a private collection which are not ridden should be saved rather than stripped. In a private collection, if consolidated, the original paint on a piece would be fine even if the paint is unstable.

There are ways of saving the original paint and preparation layer even when the animal is to be repainted. If an animal is to be sat upon and the original paint is unstable and flakes, it would not be a good idea to save it under any circumstances. I recommend saving original paint on animals on operating carousels if the original paint is stable and if a new repainting is applied on top.

UPDATE 3 (5/30/89)

The problems of operating a carousel with original paint showing is exemplified by the Kit Carson County Carousel in Burlington, Colorado. It has never in its life received a "park paint" job. It has always had its original paint showing. It is indeed a national treasure, but it takes a lot of work to keep the fragile original paint intact. As Will Morton, its conservator, has often said, it cannot be stripped and repainted; it cannot be painted over. Its caretakers can only accept the problems, and patience is required to maintain the original paint exposed on this carousel. This carousel is so wonderful, beautiful and whole that there are no alternatives. If there are any other working carousels left with original paint exposed, the owners have a responsibility to carefully consider the options.

Operating carousels that have original paint under layers of park paint also have an opportunity to preserve the original paint. Glen Echo Carousel, Glen Echo, Maryland; Highland Park Carousel, Meridian, Mississippi; and Ontario Beach Carousel at Rochester, New York, all have beautiful original paint under layers of park paint. I have examined them and the original paint is in great condition under layers of park paint. The owners of these carousels should make every effort to preserve it while restoring the carousels for riding.

Once I know original paint is present under other layers, I use one of several methods to clean old park paint off. I try each method on the animal and choose the method that works the quickest without damaging the original paint.

A brief description of some of the methods I use follows:

Scalpel with hair dryer - I use a No. 10 Exacto blade to scrape away park paint often with a hair dryer to soften the paint. A heat gun is too hot and will soften the original paint as well.

Paint remover - some brands of methylene chloride paint removers will remove paint layers without disturbing original paint.

In some cases this works well, especially when there is only one layer of park paint over the original. I use the remover in a very controlled way, brushing it on in small areas approximately 4 x 4 inches. I let it sit for several minutes and wipe the residue off with cotton and mineral spirits.

Denatured alcohol - I sometimes use denatured alcohol for softening upper layers as well as cleaning old varnish off the original layer. I brush it on with a scrubbing action and wipe it off with mineral spirits and cotton.

All of these methods require detailed instruction to obtain good results. Each method involves a whole set of health hazards that must be addressed.

There are several ways to save

... knowing what to look for, and how to look

original paint on working carousel animals and at the same time have a durable riding surface. Two methods I have used follow:

Method 1: Clean to original paint, carefully document the colors and designs and paint techniques, coat with tinted white shellac (reversible in mineral spirits), prime and prepare surface, repaint and varnish. This method requires an additional 100 to 150 hours to the restoration of an animal.

Method 2: Spot-check original paint in enough sample areas to document colors, designs, and paint techniques. Quickly clean to the first layer of stable paint (perhaps two layers up from the original), coat with tinted white shellac, prime and prepare surface, repaint, and varnish. This method is not as expensive as the first and adds 20 to 30 hours to the time it would take to strip and repaint an animal.

Both methods preserve original paint for future generations and for the protection of the wood surface. Also provided is valuable information for

repainting authentically. These methods could also be used by the collector who wants to preserve the original but wants a repainted animal. I recommend the second method over the first because of the saving in time and money. Both methods are durable. Pullen Park Carousel in Raleigh, North Carolina, has operated for seven years with a yearly ridership of 125,000. It is in great condition with only yearly minor touch-ups. Pullen Carousel was restored according to the first method and the original paint on 28 animals rides underneath the repainted animals. 41 scenic panels at Pullen were cleaned to original paint and ride exposed under a protective reversible varnish.

At Glen Echo Carousel in Glen Echo, Maryland, one carousel animal has been restored according to the second method. It has held up excellently well for its first operating season

Original paint adds to the integrity, the history, and the value of the carousel animal as a folk art piece. Every year more and more people realize this. I predict that animals and pieces with original paint will continue to be more and more valuable and desirable than those without.

Rosa Ragan is a decorative painter specializing in preserving original paint on carousel animals and original marbleizing and graining in historic houses. She was supervisor of the restorations of the Pullen Park Carousel and Chavis Park Carousel in Raleigh, North Carolina. She has worked on various other carousels and carousel pieces during her ten years' experience in the restoration business.

UPDATE 3 (5/30/89)

From: Restore the Carousel Assn. Rexburg, ID

Repair Record:

Horse # _____

	Repair Type	Date/Hours Worked	Completed ?
Right front leg	_____	_____	_____
Left front leg	_____	_____	_____
Right rear leg	_____	_____	_____
Left rear leg	_____	_____	_____
Mane, neck	_____	_____	_____
Head	_____	_____	_____
Tail	_____	_____	_____
Saddle	_____	_____	_____
Body	_____	_____	_____
Cracks	_____	_____	_____
Cuts	_____	_____	_____
Scratches	_____	_____	_____

Stripped	_____	Repaired	_____
Patched	_____	Ph Checked	_____
Sanding #1	_____	Primer#1	_____
Sanding #2	_____	Primer #2	_____
Base Coat color	_____	Color coat Final	_____
Trim Colors	_____	Gloss Varnish	_____

Horse Description:

Body Color _____ Mane/Tail _____

Socks? _____ Shading _____

Trim Palette _____

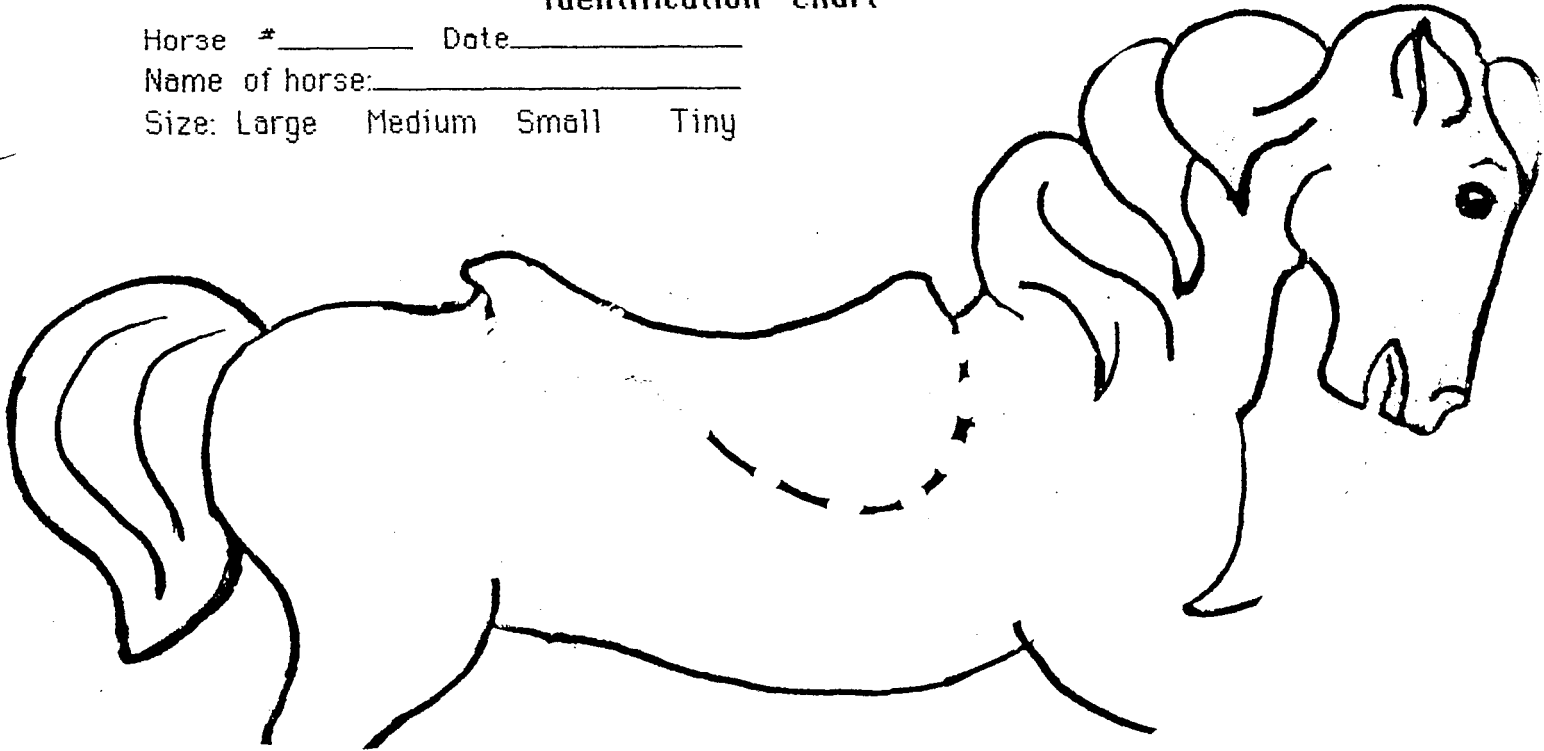
Other _____

From: Restore the Carousel Assn. Rexburg, Idaho
Identification Chart

Horse # _____ Date _____

Name of horse: _____

Size: Large Medium Small Tiny



Romance markings _____

Saddle, Medallion _____

Bridle design, reins _____

Blanket (double, single) _____

Foot position, Front _____

Foot position, Back _____

Tail style _____

Previous repairs? _____

Needed repairs: Date completed : hours to complete:

Right front leg _____

Left front leg _____

Right rear leg _____

Left rear leg _____

Mane, neck _____

Head _____

Tail _____

Saddle _____

Body _____

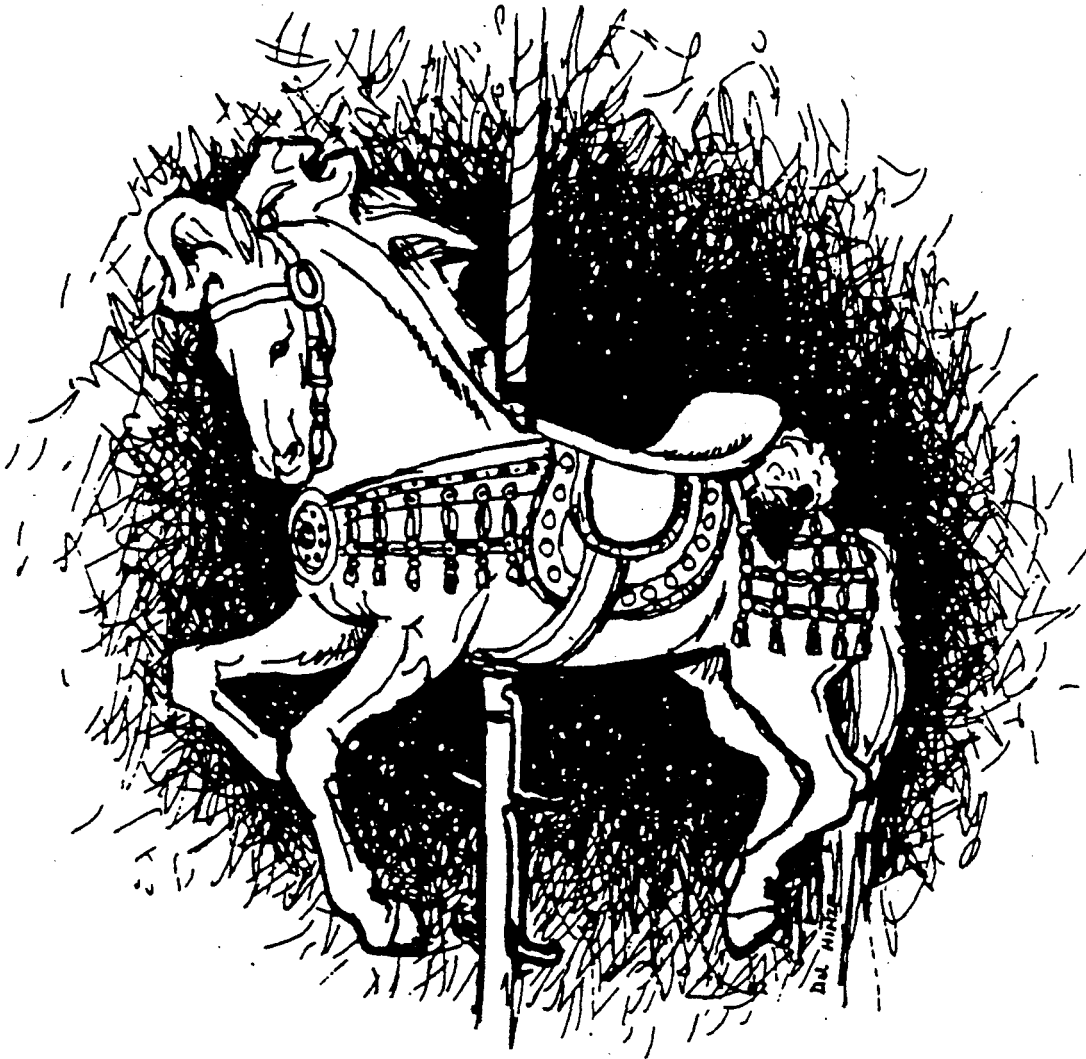
Cracks, cuts, scratches _____

Reins _____

Stirrups _____

Horseshoes _____

BUDGET ESTIMATE
FOR RESTORATION OF THE
PROSPECT PARK CAROUSEL AND
THE CAROUSEL BUILDING



PREPARED FOR:
THE PROSPECT PARK ADMINISTRATOR'S OFFICE

DECEMBER 1987

UPDATE 3 (5/30/89)

DESCRIPTION OF CONSTRUCTIONThe Building

Primarily of masonry construction, the 72-foot-wide Carousel building has a concrete foundation and a reinforced concrete floor slab. Above a reinforced concrete base, the walls, which vary from 8" to 10" to 12" in width, are composed of red and tan brick laid in American Common bond with alternating fourth and fifth courses composed of headers. The tan bricks form four narrow horizontal bands and a fifth broad band at the top of the walls. The decorative bands are spaced eight brick courses apart.

There is a 10'-10" wide by 9'-5" high ticket booth projecting from the center of the front facade. The booth, with a bay front, is composed of concrete and red brick at the base. Currently covered with plywood, the upper portion was originally constructed of metal and wired glass, which may no longer be extant. The ticket booth has a metal roof.

On each side of the ticket booth, there is a 6'-0" wide entryway, with a segmental arch. The arch is composed of red and tan gauged brick set in a sunburst pattern. Each of the additional seven building facades has a 17'-0" wide opening with a similarly designed segmental arch. All of the arched openings have rolling steel doors and each of the wide openings has a fixed wrought-iron fence in front of it. The doorways on the front facade provide entry and exit to and from the building. Fixed wood and glass partitions, which allow the building to remain partially open in bad weather, are located at three of the openings. These partitions do not appear on the original construction drawings and may be later additions to the building.

The sloped roof of the carousel building is covered in gray slate. There is a 30' wide by 4'-2" high octagonal clerestory above the center of the roof. The clerestory is constructed of wood and has three fixed wired glass windows with steel security grilles on each of the eight sides. The clerestory has a gray slate roof.

A 3'-6" wide by 10'-0" high octagonal fleche, or spire, is located above the center of the clerestory. The fleche is built of wood and has metal roofing and a metal weather vane with a carousel horse motif.

There is a continuous gutter at the eave of the main roof with leaders and down spouts at four corners of the building. The clerestory and fleche roofs drain onto the main roof and into same gutter and leader system

UPDATE 3 (5/30/89)

The building's structure is exposed on the interior surfaces. Besides the brick walls, laminated timber arches and purlins, which support the roof, and the clerestory and the fleche above are visible. Metal partitions, enclosing two of the building's interior corners, form storage closets. Except for the laminated timbers, the interior woodwork and metal work is painted.

The Carousel and the Organ

The Carousel is located at the center of the building. There is a storage pit near one edge of the wooden Carousel platform. The floor pit is covered with a steel hatch cover. The Carousel platform is 48'-10" in diameter and is constructed of wooden planks with a steel-banded edge. There are three rows of Carousel figures with locations for 64 animals and two carriages. A fourth row was added very recently and is not safe or appropriate. The seven horses in that row are to be removed. A metal decorative screen at the center of the Carousel conceals the Carousel machinery and the organ.

UPDATE 3 (5/30/89)

EXISTING CONDITIONS AND RECOMMENDATIONSThe Building

The building is in generally good condition. There is some masonry damage, however, at the corners of the building where downspouts have been leaking. Some brick work will need to be replaced at these locations. The masonry should also be cleaned with special attention given to removal of existing graffiti.

The slate roofs of the main building and the clerestory are deteriorated and should be repaired. The metal roofs on the fleche and ticket booth may also need repair.

The flashings, gutters, leaders, downspouts and storm drains should be carefully surveyed. Replacement will be required in a number of areas, but repairs may suffice for others. Repairing or replacing the storm drains may be an extensive and costly project because one of the lines runs beneath the floor slab of the building. If that line is in need of repair or replacement, it may be more practical to put in a new drain line along the side of the building, rather than removing the carousel platform and trenching through the floor slab.

There is damaged exterior woodwork at the clerestory and fleche which will need to be replaced. The clerestory windows are currently glazed with a variety of glass types and some windows are covered with plywood. The windows should be replaced with one material. Lexan is a good shatterproof material recommended for this purpose.

The condition of the upper portion of the ticket booth was not visible. It is likely that extensive repairs will be required.

The wrought-iron fences have been altered from their original design. They should be replaced, as should all of the steel roll-up gates.

The interior of the building is in very good condition. Repairs to the metal closets, the wood and glass partitions and the ticket booth interior are minimal. All presently painted surfaces should be repainted.

The Carousel and the Organ

The Carousel and the organ are in need of extensive repairs. The organ is currently in complete disrepair and will need to be rebuilt. The carousel needs a new mechanical system and the metal decorative apron at the top of the carousel must be replaced. All of the existing carousel figures, including the carriages, need repair work (see Appendix B).

UPDATE 3 (5/30/89)

Recommended Professional Services

Project Manager

Because of the wide range of trades involved in the restoration of the carousel and the carousel building, the involvement of a project manager is advisable. The project manager would act as Owner's Representative while coordinating and overseeing the work of the various professional consultants, contractors and subcontractors.

Special Consultants

A pool of funds should be earmarked for special advisors whose assistance could be called for as the need arises.

UPDATE 3 (5/30/89)

ESTIMATE
FOR RESTORATION OF THE
PROSPECT PARK CAROUSEL AND CAROUSEL BUILDING

BUILDING EXTERIORROOFING

Slate Roofing: 3,300 sq. ft. \$25,000

Repair all existing slate, (25% breakage factor).

Metal Roofing \$ 7,500

Repair or replace metal roofing, as necessary, on fleche and ticket booth.

Drainage

Gutters: 250 l.f. \$ 5,000

Down Spouts: 80 l.f.

Clean and repair gutters, leaders and hangers or replace where necessary. Replace cast-iron base of down spouts as required.

(Estimate provided by Mr. Tim Gannon of Horn Waterproofing Co.)

Masonry

Brick Repair \$20,000

150 square feet of brick replacement (1,000 bricks). Bricks to be special ordered for color and shape.

(Estimate provided by Mr. Tim Gannon of Horn Waterproofing Co.)

Clerestory and Fleche Woodwork and Window Repair \$22,000

Removal and replacement of deteriorated wood facias, moldings and sills. Installation of Lexan shatterproof windows and new metal security grilles.

UPDATE 3 (5/30/89)

Wrought-Iron Fencing \$25,000

Fabrication and installation of seven fences. Each fence is 17' 0" long x 6' high.

(Estimate provided by Whittkamp and Sons Wrought Iron Works.)

Steel Roll-Up Gates

Installation of seven prefabricated steel gates.

Five gates @ 17' 0" x 12' 0" (\$2,500 each) \$12,500

Two gates @ 6' 0" x 12' 0" (\$1,735 each) 3,470

Total for 7 gates \$15,970

Ticket Booth \$ 6,000

Metal and glass repairs as required.

BUILDING INTERIOR

Wood and Glass Partitions \$ 4,000

Repair as necessary and refinish woodwork.

Repairs to Storage Closets \$ 3,500

Repairs as necessary.

Ticket Booth Interior \$ 3,800

New countertop and door and shutter repairs.

Painting \$ 12,000

Wood and metal surfaces including ceiling, which were previously painted.

SUBTOTAL FOR RESTORATION OF CAROUSEL BUILDING \$149,770

UPDATE 3 (5/30/89)

CAROUSEL

<u>Carousel Repairs</u>	\$196,180
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Repairs to mechanical equipment and carousel figures.
See estimate provided by Carousel Works, Inc. of
Bristol, Conn. (Appendix B)

<u>Organ Repairs</u>	\$ 16,000
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Estimate provided by Mr. Tim Westman of Woodside, N.H.

<u>Insurance</u>	200
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For carousel parts during construction and while
in transit and storage.

SUBTOTAL FOR RESTORATION OF CAROUSEL AND ORGAN	\$212,380
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PROFESSIONAL FEES

<u>Project Manager</u>	\$ 40,000
------------------------	-----------

To act as liaison between Prospect Park
Administrator's Office, professional consultants
and construction trades. To supervise and
coordinate preparation of construction documents
and construction work on building and carousel.

<u>Special Consultants</u>	\$ 10,000
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For expert consultations on an ad hoc basis as
the restoration progresses and the need arises.

SUBTOTAL FOR PROFESSIONAL FEES	\$ 50,000
--------------------------------	-----------

OVERHEAD	31,000
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TOTAL BUDGET ESTIMATE FOR PROJECT	\$443,150
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Total estimate reflects 1987 costs for labor and materials.

SUMMARY OF TOTAL BUDGET ESTIMATE

Carousel Building Restoration	\$149,770
Carousel and Organ Restoration	212,380
Professional Fees	50,000
Overhead	31,000
<hr/>	
TOTAL	\$443,150

Prepared by David Robinson
December 4, 1987

UPDATE 3 (5/30/89)

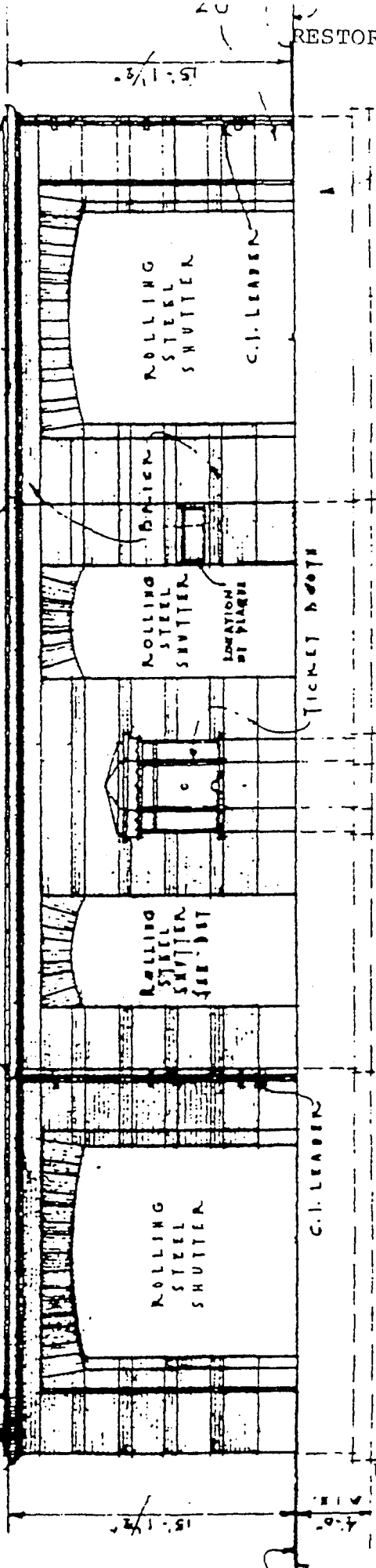
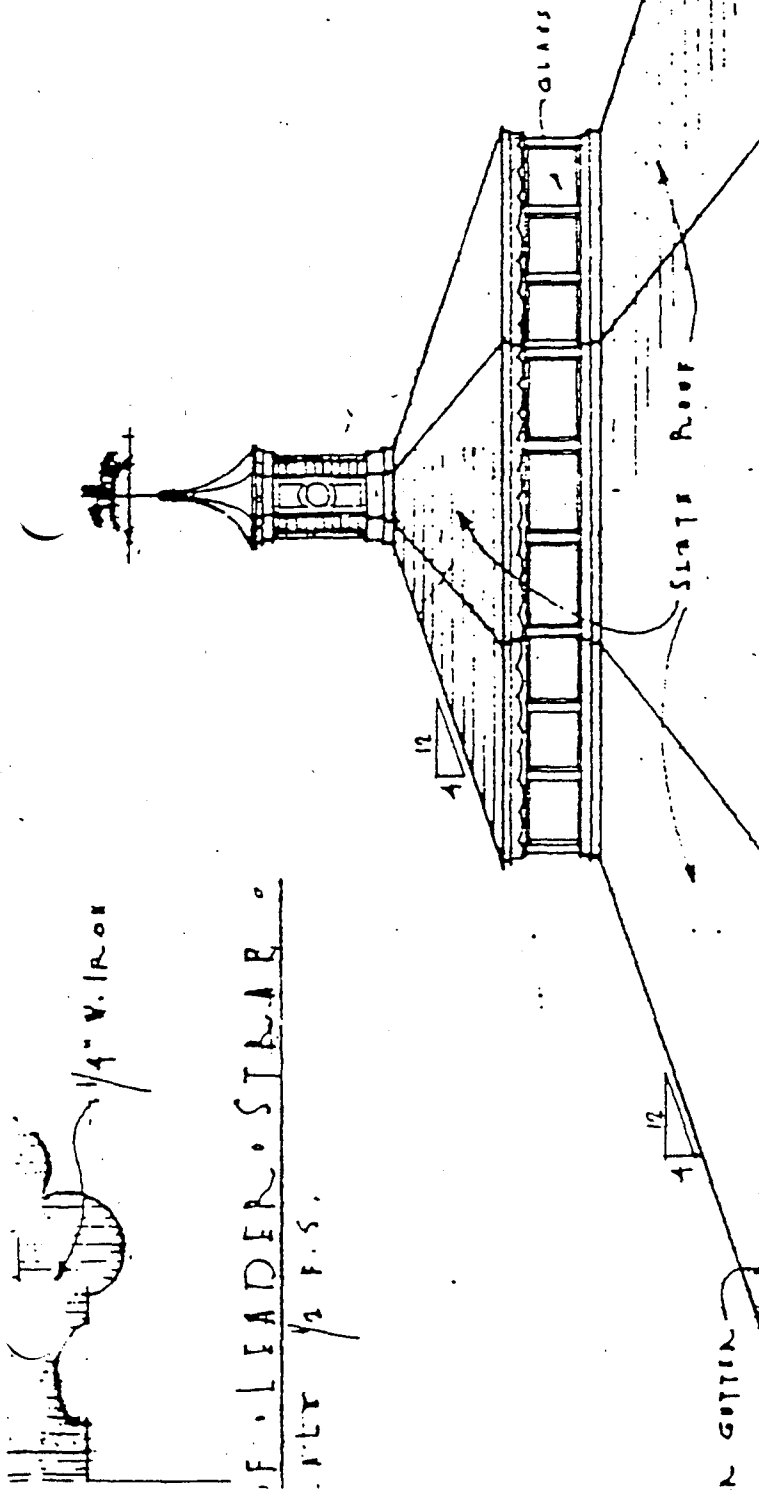
1/4" V.I.R.O.E

F. LEADER & STAR

PLT 2 F.S.

DET. OF CENTER

1" x 0" PUNILIA
PUNILIA TO BE SPACED
EQUALLY



RESTORATION - 43

FRONT ELEVATION
SCHEME "A" & "B"

UPDATE 3 (5/3/89)

Proposal

The Carousel Works, Inc.

RESTORATION - 46

P.O. Box 2756
375B Lake Avenue
Bristol, CT 06010
(203) 584-5544

No 1096

PROPOSAL SUBMITTED TO <u>DAVID ROBINSON</u>		PHONE	DATE <u>NOV. 1, 1987</u>
REET <u>333 West 86th St.</u>	JOB NAME <u>Prospect Park</u>		
CITY, STATE AND ZIP CODE <u>New York, New York 10024</u>		JOB LOCATION	
CHITECT	DATE OF PLANS	JOB PHONE	

We hereby submit specifications and estimates for:

Complete RESTORATION - COSMETIC AND MECHANICAL

* TOTAL COST \$ 196,180.00

COSMETIC RESTORATION

- | | | |
|------------------------------------|---|--------------|
| A. (1) FIGURES | 64 @ \$1,450.00 each
(includes tails where needed) | \$ 92,800.00 |
| (2) CHARIOTS | 2 @ 1,600.00 ea. | \$ 3,200.00 |
| (3) BAND ORGAN FACADE | (includes GOLD + SILVER LEAF) | \$ 3,200.00 |
| (4) SCENERY PANELS | 20 @ 450.00 ea. (Upper) | \$ 9,000.00 |
| (5) SCENERY PANELS | 20 @ 350.00 ea. (Lower) | \$ 7,000.00 |
| (6) ROUNDING BOARDS | 20 @ 250.00 ea. | \$ 5,000.00 |
| A. ROUNDING BOARDS | 20 @ 400.00 ea. (Scenes) | \$ 8,000.00 |
| (7) ROUNDING BOARDS | 20 @ 175.00 ea. (Shields) | \$ 3,500.00 |
| (8) PAINT INCH MECHANISM ENCLOSURE | | \$ 1,200.00 |

(CONT'D)

We Propose hereby to furnish material and labor — complete in accordance with above specifications, for the sum of:

_____ dollars (\$ _____)

Payment to be made as follows:

All material is guaranteed to be as specified. All work to be completed in a workmanlike manner according to standard practices. Any alteration or deviation from above specifications involving extra costs will be executed only upon written orders, and will become an extra charge over and above the estimate. All agreements contingent upon strikes, accidents or delays beyond our control. Owner to carry fire, tornado and other necessary insurance. Our workers are fully covered by Workmen's Compensation Insurance.

Authorized Signature MR

Note: This proposal may be withdrawn by us if not accepted within _____ days.

Acceptance of Proposal — The above prices, specifications and conditions are satisfactory and are hereby accepted. You are authorized to do the work as specified. Payment will be made as outlined above.

UPDATE 3 (5/3-/89)

Date of Acceptance: _____

Signature _____

Signature _____

The Carousel Works, Inc.

P.O. Box 2756
375B Lake Avenue
Bristol, CT 06010
(203) 584-5544

RESTORATION - 47

Nº 1097

PROPOSAL SUBMITTED TO DAVID ROBINSON		PHONE	DATE NOV. 1, 1987
ADDRESS 333 West 86th St.		JOB NAME	
CITY, STATE AND ZIP CODE New York, New York 10024		JOB LOCATION	
ARCHITECT	DATE OF PLANS	JOB PHONE	

We hereby submit specifications and estimates for:

B. FRAME RESTORATION

- | | | |
|---|-------------------------------------|---------------------------|
| (1) SWEEPS AND BRACES | 20 @ 200. ⁰⁰ ea. | \$ 4,000. ⁰⁰ |
| (2) PLATFORM - SAND, REPAIR + PAINT | | \$ 4,500. ⁰⁰ |
| (3) DROP RODS - CLEAN + RETAP | | 250. ⁰⁰ |
| (4) NEW BRASS POLES 1" 64 pieces @ 45. ⁰⁰ ea | | 2,880. ⁰⁰ |
| | 2" 40 pieces @ 70. ⁰⁰ ea | 2,800. ⁰⁰ |
| (5) MISCELLANEOUS HARDWARE | | 500. ⁰⁰ |
| SUBTOTAL (A) | | \$ 147,830. ⁰⁰ |

(Cont'd)

We Propose hereby to furnish material and labor — complete in accordance with above specifications, for the sum of _____

dollars (\$ _____)

Payment to be made as follows: _____

All material is guaranteed to be as specified. All work to be completed in a workmanlike manner according to standard practices. Any alteration or deviation from above specifications involving extra costs will be executed only upon written orders, and will become an extra charge over and above the estimate. All agreements contingent upon strikes, accidents or delays beyond our control. Owner to carry fire, tornado and other necessary insurance. Our workers are fully covered by Workmen's Compensation Insurance.

Authorized Signature *ML*

Note: This proposal may be withdrawn by us if not accepted within _____ days

Acceptance of Proposal — The above prices, specifications and conditions are satisfactory and are hereby accepted. You are authorized to do the work as specified. Payment will be made as outlined above.

UPDATE 3 (5/30/89)

Signature _____

Date of Acceptance: _____

Signature _____

The Carousel Works, Inc.

RESTORATION - 48

P.O. Box 2756
375B Lake Avenue
Bristol, CT 06010
(203) 584-5544

No 1098

PROPOSAL SUBMITTED TO <u>DAVID ROBINSON</u>		PHONE	DATE <u>NOV 1, 1987</u>
CITY, STATE AND ZIP CODE		JOB NAME	
CITY, STATE AND ZIP CODE		JOB LOCATION	
ARCHITECT	DATE OF PLANS	JOB PHONE	

We hereby submit specifications and estimates for:

C. MECHANISM

- (1) DRIVE UNIT - REBUILD BRAKE GEARS, ELECTRICAL DRIVE UNIT, REBUILD MOTOR \$15,000.00
- (2) GEAR - QUOTE UNAVAILABLE
- (3) CRANKS 12 @ 750.00 ea. \$9,000.00
- (4) JUMPER BEARINGS 40 @ 75.00 ea. \$3,000.00
- (5) PILLOW BEARINGS 48 @ 50.00 ea. \$2,400.00
- (6) NEW 1 1/4" JUMPER POLES 40 @ 45.00 ea. \$1,800.00
- (7) BUSHINGS FOR HIGH HATS 40 @ 25.00 ea. \$1,000.00
- (8) CLEAN + REPAINT STIRRUPS 40 @ 35.00 ea. \$1,400.00
- (9) CONNECTING RODS FOR SWEEPS - CLEAN, RETAP + PAINT 1,000.00
- (10) CENTER POLE BEARING, CLEAN, CHECK + GREASE \$750.00

D(1) DISMANTLE + PACK FOR SHIPPING - TO BRISTOL AND BACK
 FIGURES - \$4,000.00 + FOR MECHANICS \$4,000 = \$8,000

(2) TRANSPORTATION (LICENSED) TO + FROM \$5,000

SUBTOTAL(B) \$48,350.00

We Propose hereby to furnish material and labor - complete in accordance with above specifications, for the sum of _____

Payment to be made as follows: _____ dollars (\$ _____)

All material is guaranteed to be as specified. All work to be completed in a workmanlike manner according to standard practices. Any alteration or deviation from above specifications involving extra costs will be executed only upon written orders, and will become an extra charge over and above the estimate. All agreements contingent upon strikes, accidents or delays beyond our control. Owner to carry fire, tornado and other necessary insurance. Our workers are fully covered by Workmen's Compensation Insurance.

Authorized Signature DR
 Note: This proposal may be withdrawn by us if not accepted within _____ day

Acceptance of Proposal - The above prices, specifications and conditions are satisfactory and are hereby accepted. You are authorized to do the work as specified. Payment will be made as outlined above.

Date of Acceptance: _____ Signature _____

UPDATE 3 (5/30/89)

The Carousel Works Inc.

375 Lake Ave.

P.O. Box 2756

Bristol, Conn. 06010

Procedure for Stripping, Restoration, and Painting

I. Stripping

The stripping system is a cold-chemical flo-over system that will not harm the glue joints.

Procedure:

1. Flo-over chemicals to loosen all of the old paint from the figures.
2. Pressure washing with water to remove all loosened paint particles and neutralize the stripping chemicals.
3. Figures are then allowed to air dry for a minimum of three days prior to beginning the restoration.

II. Restoration:

Upon completion of the stripping and drying process, each figure will be thoroughly examined and assessed for the following:

1. Over-view of general condition.
2. Check all joints for delaminating.
3. Surface cracks and dents.

4. Condition of carving details (heavy wear areas.
i.e. saddles, strap areas, missing pieces).
5. Check for signs of dry rot.

Procedure:

1. Self explanatory.
- 2 Any joint in need of repair will be cleaned of old glue and re-glued with water and heat resistant epoxy. Loose or broken joints to be re-pinned with hardwood dowels to increase their strength.
3. Small surface cracks and dents will be filled with non-shrinking epoxy filler. Larger cracks will be filled with new wood and re-carved.
4. All worn carvings and missing parts will be re-carved to bring back the intensity of the details (new wood where needed).
5. All areas showing any signs of dry rot will be removed and replaced with new wood.

With the restoration work completed, the figure will then be thoroughly sanded to assure a good bonding surface for the sealer.

A high quality sealing primer (NON-LEAD base) to be applied in two to three coats. the figure is then sanded to prepare for the decorative painting.

III. Decorative Painting:

In order to insure an authentic design result, we will use the same methods as early Carousel Artisans. Will be using oil paints (NON-LEAD base) and hand painting techniques on the figures. Gold leafing where applicable.

IV. Final finish:

Application of three coats of a high quality spar-varnish-sanded between each coat to ensure proper bonding and a smooth surface.

375 Lake Avenue P.O. Box 2756 Bristol CT 06010

(203) 584-5544

Hello,

This is a brief letter of introduction explaining our corporation and its services to you. Please feel free to contact us with any questions you have or for any further information you may need.

Carousel Works is proud of its reputation and of its highly specialized abilities. Unlike most carousel companies, Carousel Works offers expertise in a full range of services, from the restoration of a single figure or hand carving of a replacement figure, to the complete rehabilitation of the carousel itself, from inner mechanism to hand painted finishing touches.

My partner and I combine twenty-five (25) years of experience in the woodcarving and restoration field. In addition our close association with other professional and dedicated craftsmen allows us to "package" a restoration project to include the services of architects, mechanical experts, transportation companies, etc.

Many of our customers, however, have only a single carousel animal. Restoration work in such a case may range from a simple stripping and repainting to extensive repair and even the carving of replacement parts.

The following is a list of the most frequently requested services that we perform:

Restoration (Structural)

Analysis of overall mechanical condition of the carousel, including bearings and drive mechanisms, and the band organ mechanism.

Analysis of structural woodworks, including platforms, sweeps, center pole and center pole braces.

Restoring or replacing as needed:

Update electrical standards
Re-Turn center pole
Cast new gears

Repour bearings
Rebuild pistons
Rebuild highhats

Restoration (Cosmetic)

Our aim here is always to achieve a standard of museum quality and, as nearly as possible, to duplicate original factory appearance. To this end, our work necessarily includes extensive research into original materials used; wood and woodworking tools, paint, hardware and glue. We also pride ourselves on our ability to produce hand carved replacements (partial or complete) for any portion of your carousel. For example:

Band organ facades	Scenery panels
Carousel figures	Chariots
Rounding boards	

Carousel Works makes every effort to reproduce the "look" of the original carousel by using the painting, stenciling and gilding techniques employed by the craftsmen of our grandfathers' generation. Where it is possible, we will also document the original colors found during the stripping process.

Fabrication

As noted above, Carousel Works can carve an entirely new figure; as a replacement for a missing piece on a carousel, to meet an operator's special "theme" needs or to simply fulfill the desires of a private collector.

For the collector, we can reproduce a childhood favorite, the style of a specific carver, or bring a fantasy to life. We have a scrapbook full of pictures to illustrate where the imagination can lead.

An entire carousel can be carved, assembled and installed to meet the needs of an amusement park, recreation area or township.

We hope this gives you food for thought. We offer estimates on any restoration or new carvings, regardless of size. Please call to talk with us or arrange a visit. We look forward to hearing from you.

Sincerely,

Art Ritchie

Dan Jones

Lynn Brown
c/o Bushnell Park Carousel
Hartford. CT 203-728-3089

Richard & Betty Rangoon
50 Shingle Mill Rd.
Simsbury . CT. 203-658-2396

Paul Serff
c/o Hershey Resort and Entertainment Co.
300 Park Blvd.
PO Box 860
Hershey, PA 17033 717-534-3319

Frederick Fried
875 West End Ave.
N.Y. N.Y. 10025

Wm. F. Markey
c/o Markey Trucking Co.
Dallastown. PA. 717-244-2479

John or George Frantzis
c/o Quassy Amusement Park
Middlebury. CT 06762 203-758-9690

Michael Jenkins
c/o L.A.R.C. Industries
2181 Fortworth Ave.
Dallas. Texas 75211 214-942-4478

Gray @ Judy Tuttle
Box 4732
Surfside Beach. S.C. 29577
803-238-0251

Ross Park Zoo
c/o Steven Contento
Binghanton. N.Y. 607-724-5461

Riverside Park
c/o William Jatkevius
RT. 159
Agwam. Mass. 413-786-9300

IF YOU NEED A CAROUSEL

HORSE OR HORSES.....
FOR YOUR CAROUSEL

Dear Friend,

Thank you for requesting information about our exciting new line of do-it-yourself carousel horses and kits! The charming magic of carousels has created an enormous demand for collector horses and an intense pressure to break up the few remaining living carousels to satisfy that demand. Now you can have an enchanting wooden horse, just like that beauty on the carousel you love, without destroying a carousel for future generations. You can also take pleasure in creating a priceless heirloom without the inconvenience of building it yourself.

Even with the extravagant prices which antique wooden carousel figures now command, you can afford to own a genuine, hand-carved wooden horse. With a quality kit from the Carousel Man, you can carve or paint your favorite animal. We specialize in designing one-of-a-kind figures which include a family crest or are individualized with a name or personal symbol. We offer kits in five stages and five sizes, so you can do as much or as little of the construction and carving as you wish. You have hundreds of possibilities.

Our kits are constructed using the same materials and methods used by master carvers in the Golden Age of Carousels. Kiln dried basswood is laminated into a hollow box (coffin construction). Wooden dowels and precise joinery assure a well made horse. The finished animal is a REAL carousel animal, not a plastic copy.

The enclosed brochure tells you why Carousel Man kits are such a bargain. Quality construction, variety of styles and sizes, and honest value for your dollar are only three of the reasons you will want to check out the enclosed price list, then daydream a little and plan the horse of your imagination. Enjoy!

Call us today; we can be working on your horse tomorrow. . . .

Sincerely,

Sherrell S. Anderson
Sherrell S. Anderson
The Carousel Man

Enclosures: Brochure, design plan, price list.

UPDATE 6 (8/10/90)



PRICE LIST

Our carousel horse kits come in five sizes and four stages of completion. This allows you to choose how much of the work you want to do, and how much time you want to invest in the project. Body measurements are from breast to rump, and do not include head and neck or tail. All measurements are approximate and will vary slightly from horse to horse.

1. One-third size, (20" body).
2. Baby, such as on a kiddy machine (27" body).
3. Small, an inside horse from a portable machine, (38" body).
4. Medium, an outside horse from a portable or inside horse from a park machine (45" to 48").
5. Large, an outside horse from a park machine such as Dentzel or Illions (60" to 65").

FOR MORE INFORMATION ON THE DIFFERENT STAGES OF COMPLETION, SEE THE ENCLOSED BROCHURE.

	Stage 1	Stage 2	Stage 3	Stage 4
1/3	\$145	\$288	\$895	\$995
Baby	225	432	1295	1495
Small	425	895	3065	3795
Medium	495	1140	4145	5545
Large	595	1350	5545	6495

All kits are available in either stander or jumper configuration. Of course, if the stock kits do not meet your needs, we will be happy to make a kit in any size or configuration you desire. Custom design work, unusual sizing, or special effects such as gold or silver leaf, overglazes, custom laminations, etc. are available for an additional charge. Since each of these jobs is different, we will quote prices upon request. We accept visa, mastercard, money orders, or certified checks. If you need more information, please call us at (208) 356-3741. Thank you for your interest in saving our existing carousels by doing-it-yourself!



STYLE SELECTION GUIDE

Style of horse preferred: (Circle one) Coney Island Philadelphia Style Country Fair

Configuration: (Circle one) Jumper Stander

Head position: (Circle one) Tucked Down Up

All heads slightly cocked to the right unless otherwise specified.

Tail style: (Circle one) Carved Horsehair

Scetch or photo of horse: Close-up of trappings

AMOUNT ENCLOSED \$ _____

CHECK

M.O.

VISA

MASTERCARD

CARD # _____

SIGNATURE _____

EXP. DATE _____

SHIP TO: NAME _____

 ADDRESS _____

 TELEPHONE # () _____

I Can hardly wait ot get started on my horse! Please send me:

Stage _____ kit, _____ Size _____ Cost _____

TERMS: All kits stages one and two are cash or credit card with order. Stage 3 kits are one half down, balance on delivery. Stage 4 kits are one third down, one third upon completion of carving, and one third upon delivery.

We accept Visa, MasterCard, cashiers checks, or money orders. Orders sent with personal checks will be delayed 2-3 weeks.