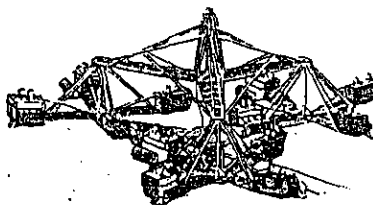
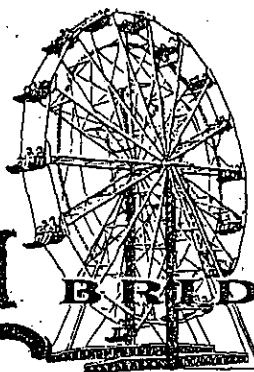


ALL STEEL PORTABLE  
**BIG ELI**  
FERRIS WHEELS

AREA CODE 217 PHONE 245-7145



**Scrambler**  
ELI POWER UNITS

# **ELI BRIDGE COMPANY**

INCORPORATED

800-820 CASE AVENUE  
JACKSONVILLE, ILLINOIS, 62650  
May 21, 1973

RE: BIG ELI Rides that have been trailer-mounted, modified, or otherwise "re-manufactured" elsewhere.

Dear Owner/Operator:

For several years, there have been a number of people across the country who have trailer-mounted their own standard model BIG ELI Wheel, have had someone do this type of modification for them, and/or have purchased such a ride that has been "mounted" somewhere other than at Eli Bridge Company. We are now hearing of similar modifications, "mounting", of BIG ELI Scrambler rides.

As some of these rides are now appearing advertised for sale as "Eli trailer-mounted" equipment, etc., it needs to be said clearly that we have never encouraged, authorized or, in any way, approved such trailer-mounting of standard BIG ELI Wheel or Scrambler rides by any person or persons outside our own organization.

None of these people have consulted with Eli Bridge Company for design approval, even though the major modification being made could greatly change the design, strength and/or operation of the original equipment. It is our personal opinion that some of these modifications, which cut up structural members, reduce critical clearances, and/or relocate important parts of the drive, etc, may actually be dangerous.

If your BIG ELI ride has been so trailer-mounted, or received other major modification, by someone other than Eli Bridge Company, for your own protection you should demand a structural analysis from that person, done by a registered professional engineer.

When a standard BIG ELI ride receives such major modification, especially being trailer-mounted, it is being "re-manufactured." As such, the original BIG ELI ride becomes "raw material" for the resulting re-manufactured product. Be aware that the owner or buyer of such re-manufactured ride must hold himself and/or the person who did the work accountable for such important matters as product safety, product liability, merchantability of the resulting product, etc. Although we continue to be greatly concerned about such matters, as the equipment is no longer of our original design, the responsibility for such matters is in no way Eli Bridge Company's.

Realizing that practically none of the people who have done, or who are presently doing this "mounting" work offer repair and replacement parts service on many of the parts for BIG ELI rides, we will continue, on request and so far as our ability will permit, to offer replacement parts service for

RE: "Re-Manufactured"  
BIG ELI Rides.

-2-

May 21, 1973

standard BIG ELI parts. However, we have no way of knowing or assuring whether our standard parts will fit a "re-manufactured" BIG ELI ride or that the parts will give the good service on such re-manufactured rides that you normally expect from BIG ELI equipment. In furnishing parts for such a ride, it is clearly understood that we are selling "parts" only--with the expressed understanding that, in doing so, we are in no way implying or warranting the serviceability of the parts furnished or the equipment on which they are to be used.

It has also come to our attention that there are those who have placed on the market for sale such items as Seats for a BIG ELI Wheel. In some cases, we are told, the manufacturer of these seats requests that his customer furnish the old castings and hardware from the old seats for use on the new seats. As, in some cases, these castings may already have 20 to 40, or more, years of use and wear on them, in our opinion, this is a questionable practice.

Then, we understand there are those who will even "recondition" an older model BIG ELI ride, and possibly other rides as well, for the ride owner.

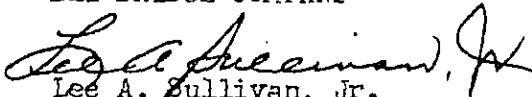
We cannot prevent others from trailer-mounting standard BIG ELI rides, or from going into the business of "reconditioning" equipment of our original manufacture, or even from manufacturing and marketing such items as Seats, or even possibly other items, to be used on BIG ELI ride equipment. However, we cannot, and will not, assume responsibility in any way for equipment that is not of our original manufacture and/or is no longer of our original design.

Friends who know us would be the first to admit that Eli Bridge Company has tried to deserve, and earned, the reputation of "standing behind" equipment of its own manufacture and design--standard model BIG ELI Wheels and Scrambler rides, and the trailer-mounted/hydraulic HY-5 BIG ELI Wheel. We do provide warranty service on new equipment of our own manufacture to the original purchaser, for a stated and reasonable time period. We have long continued to make repair and replacement parts service available to owners of BIG ELI equipment, long after the original warranty period has expired, and even though the ride may have changed hands several times over the years. There have even been times when our parts service department has been called upon for assistance by owners of Wheels that were not of our original manufacture--the original manufacturer of the equipment no longer being in business. When possible, we have responded as best we could to assist.

While we will continue to do our very best to serve our friends in the industry, especially those who own and operate BIG ELI equipment, it is our intention and desire that the above comments will end any misunderstandings that may presently exist on these subjects, and avoid any that might otherwise arise in the future.

Very truly yours,

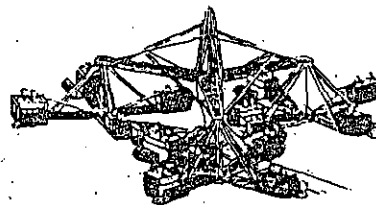
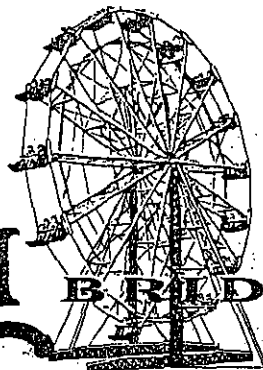
ELI BRIDGE COMPANY

  
Lee A. Sullivan, Jr.  
President

LAS Jr/rlg

7  
ALL STEEL PORTABLE  
**BIG ELI**  
FERRIS WHEELS

AREA CODE 217 PHONE 245-7145



*Scramblers*  
ELI POWER UNITS

**ELI BRIDGE COMPANY**  
INCORPORATED  
800-820 CASE AVENUE

JACKSONVILLE, ILLINOIS, 62650  
May 21, 1973

RE: Hair Guards for BIG ELI Wheel Steel Seats.

Dear Owner/Operator:

Reports of long hair getting entangled where the seat pin supports the seat have encouraged the design of the safety feature pictured and described on the attached brochure. The Hair Guards now available are an improved design of those you may have seen displayed in our booth during both the Chicago and Gibsonton trade shows.

Although these new Hair Guards are primarily designed to cope with the "hair problem" that some BIG ELI Wheel owners have experienced, the new Hair Guards offer other safety advantages as well. For example, when properly installed, the guards prevent the patron from using the side rim of the seat as an arm rest; and, with the guards, it becomes most inconvenient for the patron to attempt to operate the plunger lock of the handlebar, located on the outside of the seat.

Still other advantages are evident in the attached picture. The additional height of the guards give the patron a greater feeling of "security"; yet the "mesh" material does not prevent visibility of the patron or give a "closed-in" feeling. As shown, the new Hair Guards provide a new dimension for the seat's appearance--giving the seats, and the BIG ELI Wheel, a new and different general appearance.

Several BIG ELI Wheel owners, both park and portable, have already purchased and installed the new Hair Guards on their seats. Early reports have been highly favorable, with some reporting increased gross receipts attributable to the new style Hair Guards.

Installation of the Hair Guards on standard BIG ELI steel seats is reasonably simple. The tools required are simply a hand drill, screw driver and a hand rivet gun. Mounting hardware and complete installation instructions are "standard equipment" with the Hair Guards. Once installed, air-loc fasteners provide for quick and easy removal of the guards from the seat for cleaning, storage, transportation, etc.

Whether you are one of those who has experienced a "hair accident", we are certain you will agree that the best safety practice is accident prevention. If you have not already purchased and installed these new Hair Guards on the steel seats of your BIG ELI Wheel, we most strongly urge you to do so without delay.

May 21, 1973

We have a limited number of the new Hair Guards in stock, available for reasonably prompt shipment following receipt of firm order and your shipping instructions. In ordering, be certain to specify whether you want shipment sent to you by air-freight or motor-freight. Be sure to specify a clear destination address and, if possible, a telephone number where the carrier can notify you upon arrival of the shipment.

Additional orders for the new style Hair Guards will be filled in the same rotation that orders are received, as quickly as our production will permit.

WHEN ORDERING, be sure to specify color in which the Hair Guards are to be furnished. Choice of colors available are specified on the enclosed brochure. If no color is specified on your order, or if a color other than "standard" is requested, the Hair Guards will be furnished in prime (grey) paint only.

Cash price of the equipment mentioned in the enclosed brochure, f.o.b. our factory, is quoted at the close of this letter. We will guarantee these "per set" prices for a reasonable period, after which these prices will be subject to change without notice.

You are aware that we cannot require the addition of these new style Hair Guards, although they are now "standard equipment" with all new BIG ELLI Wheels leaving our factory, and being offered as optional equipment on new Seats being purchased to replace older seats. However, for the safety of your passengers and for your own protection, we do most certainly urge and encourage you to purchase and add these Hair Guards to your BIG ELLI Wheel steel seats.

Very truly yours,

ELLI BRIDGE COMPANY

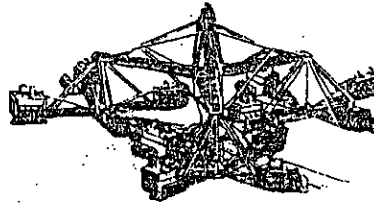
*Lee A. Sullivan, Jr.*  
Lee A. Sullivan, Jr.  
President

LASJR/rlg  
Enclosure

P R I C E S				
Part Number	Description	Wheel Size		
		No. 16	No. 12 or 5	No. 10
141	Guards, with mounting hardware, per set.....	\$672.00	\$504.00	\$378.00
142	Plastic Stacker Trays, set (for storage or portable operation)....	207.00	150.00	125.00
154-A	Standard Canvas Seat Covers, set.....	265.00	207.00	157.00
154CS	Oversize Canvas Seat Cover, set, for Seat w/Hair Guards installed.....	287.00	275.00	257.00

ALL STEEL PORTABLE  
**BIG ELI**  
FERRIS WHEELS

AREA CODE 217 PHONE 245-7145



*Scrambler*  
ELI POWER UNITS

# ELI BRIDGE COMPANY

INCORPORATED

800-820 CASE AVENUE  
JACKSONVILLE, ILLINOIS, 62650

May 21, 1973

RE: Maintenance and Safety Notes.

Dear Owner/Operator:

This is to pass along to you suggestions for taking care of a couple of problems which have occurred recently on some BIG ELI Wheels.

1. In changing to rubber packing in the Woodrims and Drive Sheave the frictional grip, or traction, of the Drive Cable has been increased, so that many operators feel they no longer need to use Pine Tar on their Drive Cable. This is wrong! The Drive Cable needs the Pine Tar to lubricate the strands of wire in the Drive Cable to preserve the cable. Also, the Drive Cable must be lubricated as it rolls around the Idler Sheave or it will wear away the Idler in a short time. Other than the "build-up" of Pine Tar, the Idler Sheave does not have a packing. The two wraps of cable on the Idler actually move opposite each other very slightly as the Wheel turns. Without the lubrication of the Pine Tar between the surfaces of the Drive Cable and the Idler Sheave, the Drive Cable will literally "saw" the Idler Sheave in half. Pine Tar on the Drive Sheave should stop most of the wear which might otherwise occur on the Idler Sheave, and it will help extend the life of the Drive Cable itself. So, even with rubber packing in the Woodrims and/or Drive Sheave, do use Pine Tar on the Drive Cable.
2. With the greater traction of the Rubber Packing in the Woodrims and Drive Sheave, some operators run their Drive Cable very loosely. Without proper tension on the Drive Cable, too much slack can develop in the Drive Cable where it feeds onto the Woodrim at the back of the Wheel, particularly when there is an unbalanced load on the Wheel. If the slack cable flops around or is blown to one side by the wind, it can miss the Woodrim completely and come back in above (on the "back" side) of the Woodrim. If this happens, there is usually no problem until the Wheel has nearly made one revolution, to the point where the Drive Cable is ready to feed off the Woodrim and onto the Idler Sheave. With the cable on top of the Woodrim it cannot feed off. This will then cause the Wheel to come to a sudden stop, which can be very hazardous to your passengers. Also, this can result in bent Spokes, Rims, Idler Stand, and even break the Idler and/or the Drive Cable. To prevent this problem from happening, the Drive Cable must always be kept fairly tight, tighter than when rope packing was used. Remember, the Drive Cable will not slip across the rubber packing as easily as it did with rope packing. So, after you have tightened the Drive Cable, run the Wheel a few turns before carrying passengers to be certain there is no slack. If you discover slack, tighten the Cable again.

Be sure that these suggestions are brought to the immediate attention of your Wheel operator(s).

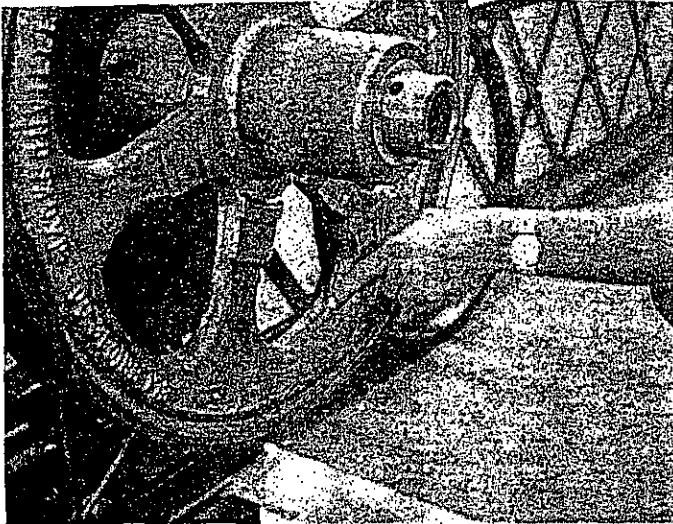
Very truly yours,

ELI BRIDGE COMPANY  
Service Department

## INSTALLING THE RUBBER PACKING IN THE BIG ELI DRIVE SHEAVE

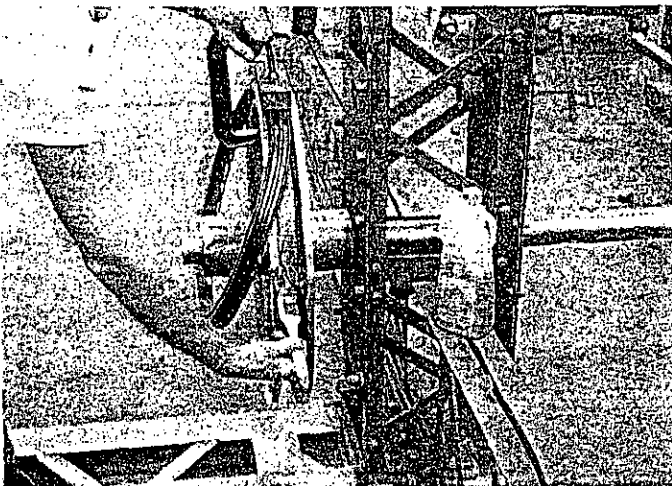
Installing the No. 35-1 Rubber Packing in the No. 35 Drive Sheave can be easily accomplished if the proper procedure is used.

It will be nearly impossible to do this unless the drive sheave is mounted on the sheave axle, with the Wheel erected. It takes considerable leverage to work the rubber on over the rim of the drive sheave, and you need the tower to lever against. Also, the drive sheave must be rotated, and so you need it on the sheave axle to turn it easily.



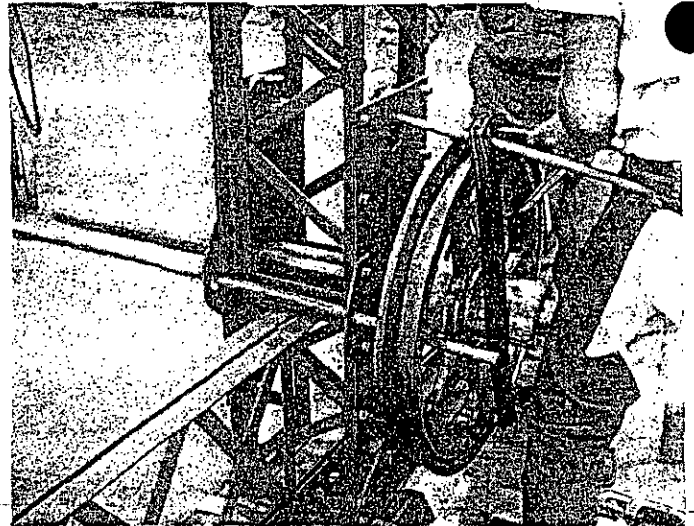
No. 1

First, drill a 1/4" hole on three sides of the drive sheave midway between the spokes as shown in Picture No. 1. If you do not do this the rubber packing will trap air inside and the rubber packing will not go all the way in. The holes allow the air to escape.

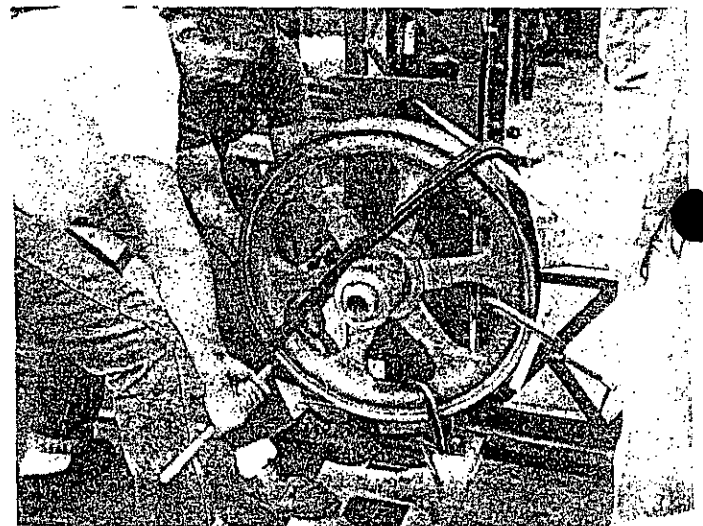


No. 2

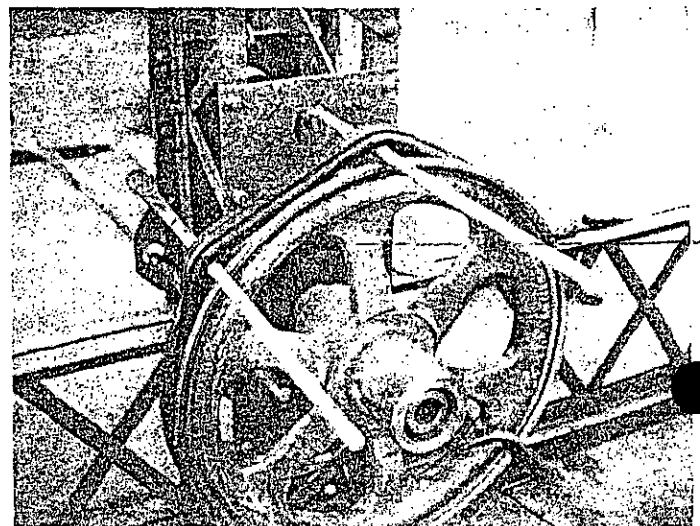
Clamp the rubber packing in the groove with a block of wood as shown in Picture No. 2, and brush liquid soap liberally along the sides of the flanges of the drive sheave as well as on the surfaces of the rubber packing which lay against the sheave. The liquid soap will permit the rubber packing to slip into place and not bind.



No. 3



No. 4



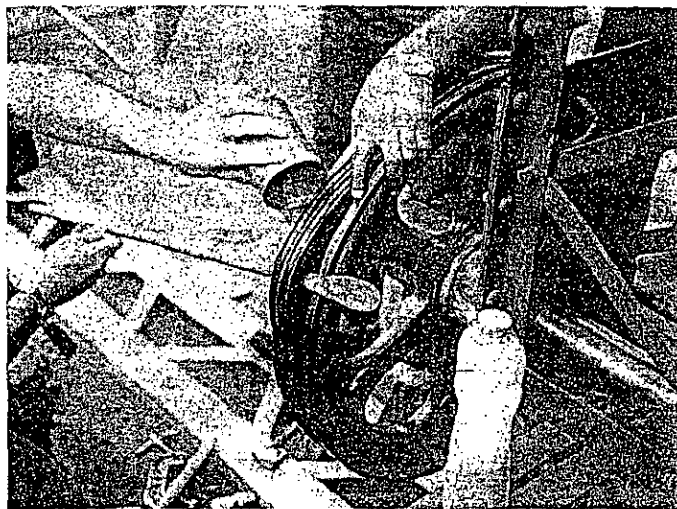
No. 5



Feed the rubber packing over the flange of the drive sheave by levering against the tower as shown in Picture No. 3. A crowbar through the tower will keep the drive sheave from turning. When you have gone nearly halfway around, then insert a second bar under the rubber packing on the opposite side as shown in Picture No. 4, and pull the two bars toward each other. This will feed the rubber packing inside the flanges as shown in Picture No. 5. Remove only one of the bars at this time. The rubber may not be going into the groove straight. It is very important that it be straight, because if it turns over in the bottom of the groove the only way you will be able to get it out is to cut it out. With the bar still under the rubber packing, turn the drive sheave around, so that the bar raises the rubber packing up out of the groove in the drive sheave. You can then straighten the rubber packing with a hammer and a wooden block as it drops back in the groove, as shown in Picture No. 6.

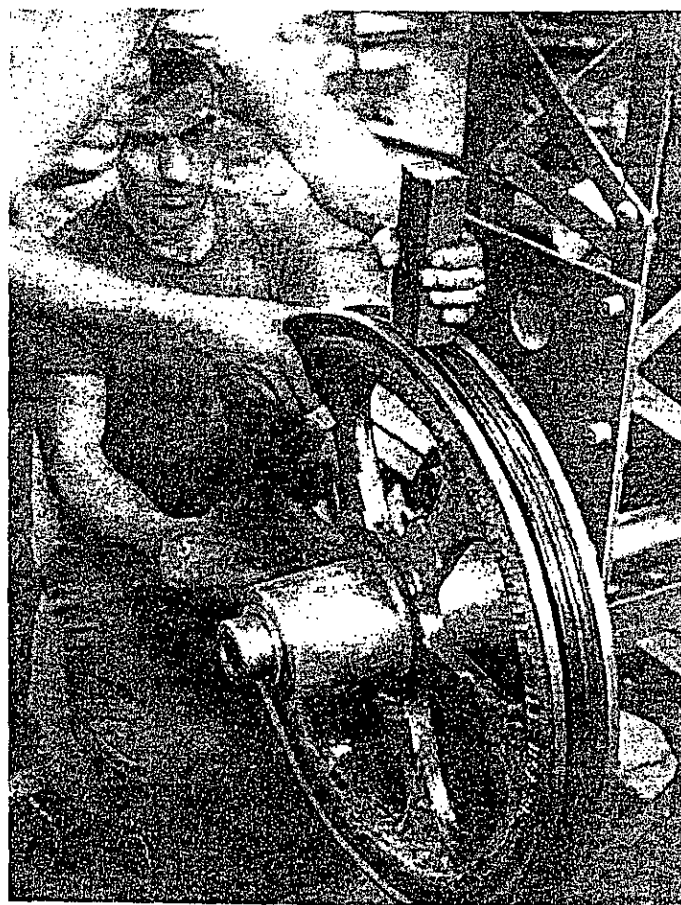


No. 6



No. 7

When the rubber packing is all lined up ready to be driven to the bottom of the groove, pour in some liquid soap as shown in Picture No. 7, and turn the sheave around so the soap will be distributed all around the inside. Then remove the remaining bar.



No. 8



No. 9



No. 10

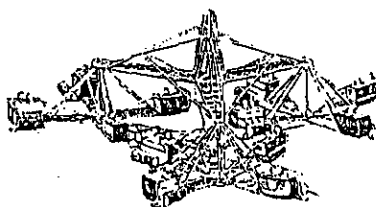
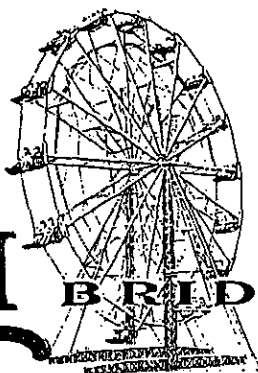
Start the rubber packing down into the groove evenly as shown in Picture No. 8, until you have set it down about a quarter of an inch all the way around. Repeat the procedure, keeping an even depth. Avoid driving down any spot more than a quarter inch more than the rest, and always drive down the high spots. If you do not, you will end up with a large bulge on one side that you will not be able to eliminate.

Continue driving with the block until the rubber packing is seated all the way in as shown in Picture No. 10. This completes the installation of the rubber packing in the drive sheave.



ALL STEEL PORTABLE  
**BIG ELI**  
FERRIS WHEELS

AREA CODE 217 PHONE 245-7145



*Scrambler*  
ELI POWER UNITS

# ELI BRIDGE COMPANY

INCORPORATED  
800-820 CASE AVENUE  
JACKSONVILLE, ILLINOIS. 62650  
March 8, 1976

Dear Owner/Operator:

**WARNING :** Long hair getting entangled where the seat pin supports the seat of the BIG ELI Wheel is a very real danger to your passengers, and can result in pain and serious injury to your patrons.

Another serious hair pulling accident has just been brought to our attention. At this point we do not know that the Wheel involved was of our original manufacture. In fact, the name mentioned to us is not listed on our records as the owner of a BIG ELI Wheel. But we feel the seriousness of the accident, and the fact that it did happen, warrants this communication.

Hair getting entangled in the seat pin of a Ferris Wheel did not become a recognized problem and danger until recent years -- with the advent of long and unrestrained hair styles. To combat this problem we designed and offered equipment which, for want of a more descriptive name, we call Hair Guards. To our knowledge, hair pulling accidents are no longer a danger on BIG ELI Wheels whose seats are equipped with these patented Hair Guards.

Many owners have already equipped their BIG ELI Wheels with Hair Guards, with most satisfactory results. They have not experienced any hair pulling accidents and, in many cases, they have reported increased business on the Wheel. The Hair Guards are an attractive addition to the seats, and they do give the Wheel an attractive and different overall appearance. But the primary reason for the Hair Guards is the safety of your patrons.

These Hair Guards have been available to owners of older model BIG ELI Wheels since the Fall of 1972, and they have been standard equipment with all new BIG ELI Wheels leaving our factory since that time. These Hair Guards were first displayed during the Winter Trade Show in Chicago in 1972, and at subsequent Trade Shows in both Gibsonton, Florida, and Atlanta, Georgia. In the Spring of 1973 we mailed information about these Hair Guards to all known owners of BIG ELI Wheels for whom we had mailing addresses. The enclosed brochure has been readily available to all who have visited our booth at every Trade Show we have attended since the Fall of 1972. Hair Guard equipment has been pictured, described, and quoted in both our ride Price List and Wheel Parts List for at least three years.

The above is mentioned to illustrate that we have exhausted all reasonable means of advising and warning owners of BIG ELI Wheels that hair pulling accidents can and do happen, and informing that equipment to prevent such accidents is available to you. We know from the comments of owners who have this equipment on their Wheels that properly installed and maintained Hair Guards do effectively prevent hair pulling accidents on BIG ELI Wheels.

Installation of Hair Guards on standard BIG ELI steel seats is reasonably simple. Tools required for installation are simply a hand drill, a screw driver and a hand rivet gun. Mounting hardware and complete installation instructions are "standard equipment" supplied with the Hair Guards. Once installed, air-loc fasteners provide for quick and easy removal of the guards from the seat for cleaning, storage, transportation, etc.

We have a limited number of Hair Guard sets in stock, available for reasonably prompt shipment following receipt of firm order and your shipping instructions. Additional orders will be filled in the same rotation that orders with deposits are received, as quickly as our regular production will permit.

When ordering, be sure to specify color in which the Hair Guards are to be furnished. Choice of colors available are specified on the enclosed brochure. If no color is specified on your order, or if a color other than "standard" is requested, the Hair Guards will be furnished in prime paint only.

Cash price of the Hair Guards, per set, is quoted at the close of this letter. More complete information about this and other equipment can be found in your copy of the Wheel Parts List (1976 edition). Please write us if you do not have a copy of this booklet.

We cannot require you to purchase and use this equipment on your BIG ELI Wheel. We can only make the equipment available, and encourage its use.

However, we do leave you with this thought. If you do not have this equipment on your seats -- and you have experienced a hair pulling accident in the recent past, or one of your patrons experiences this type of accident in the future -- remember, the accident could have been prevented.

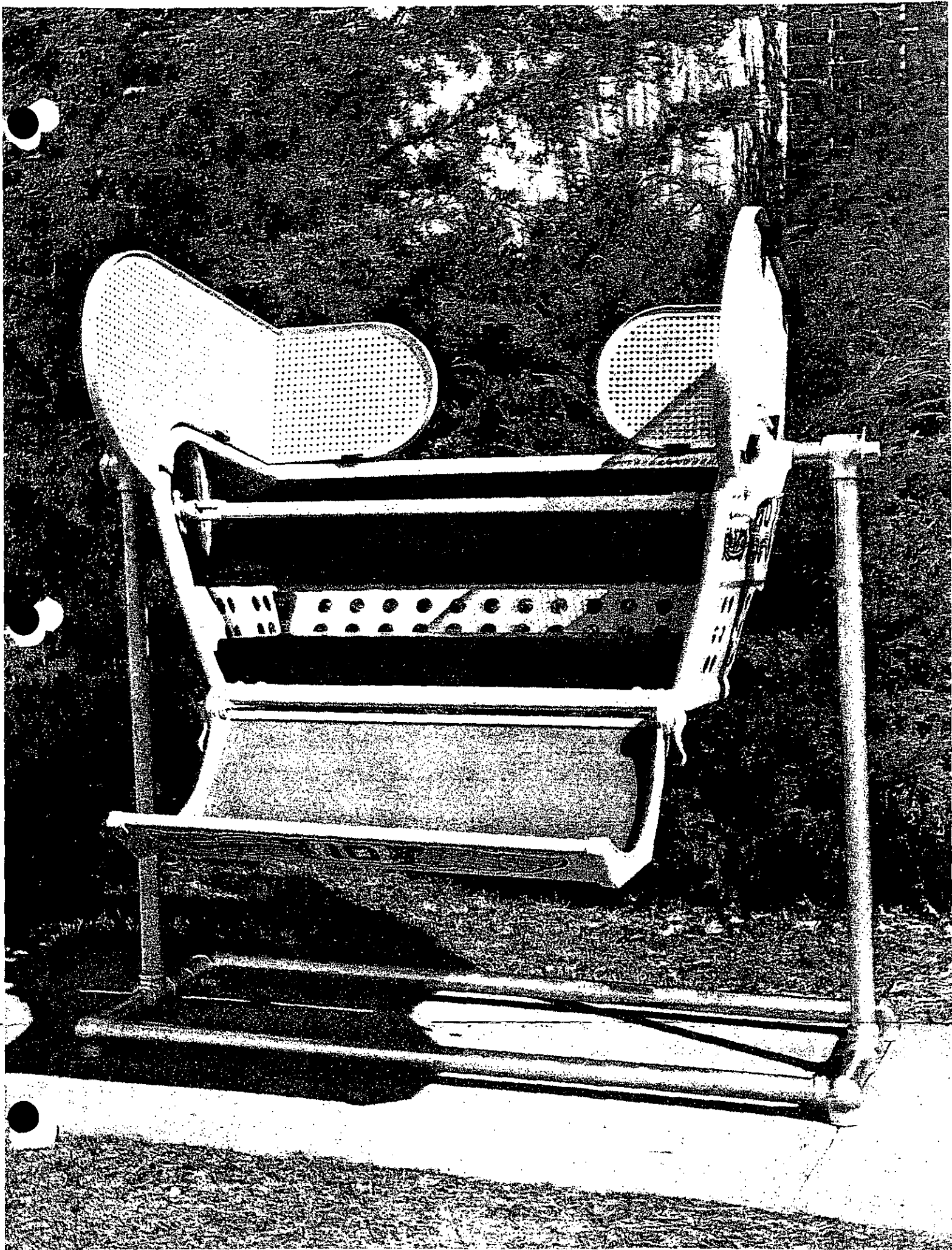
Yours very truly,  
ELI BRIDGE COMPANY

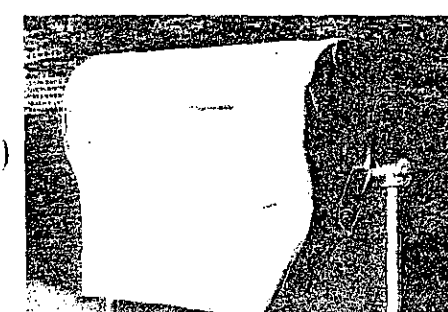
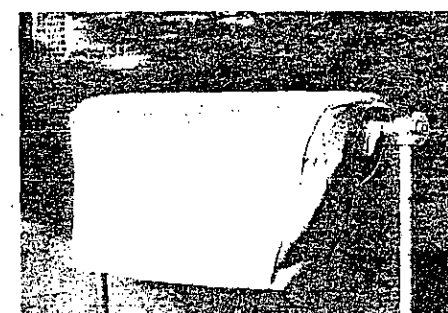
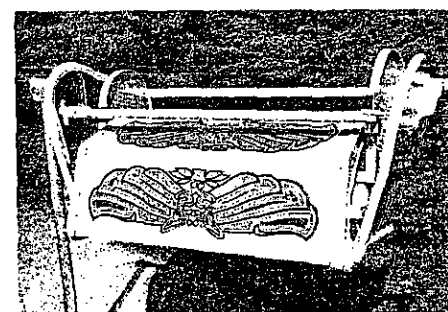
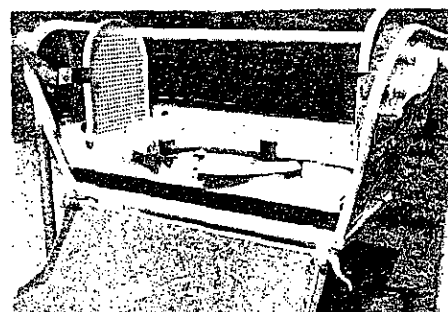
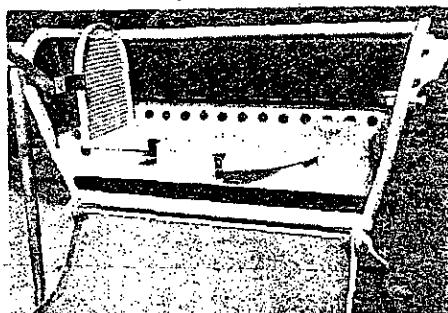
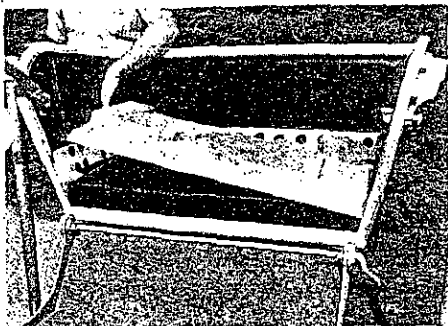
RLG/pc  
enclosure

Robert L. Garner

Part Number	Description	P R I C E S (*)		
		Wheel Size		
		No. 16	No. 5 or 12	No. 10
141	Hair Guards, with mounting hardware, per set	\$1,227.20	\$920.40	\$767.00
142	Plastic Stacker Trays, per set (for storage/portable operation)	336.00	252.00	210.00
154-A	Standard Canvas Seat Covers, set	288.00	216.00	180.00
154-OS	Oversize Canvas Seat Covers, set, for seats w/Guards installed	384.00	288.00	240.00

(\*) Current prices will be continued as long as possible, but are subject to change without notice.





## Hair Guards for BIG ELI Wheel Steel Seats

In recent months there have been reports of long hair getting entangled where the seat pin supports the seat. This has not occurred because of a change of design, because the way of hanging the seat on a BIG ELI WHEEL has remained the same since the first one was built in 1900. What has changed is that in recent years many girls and some boys have allowed their hair to grow very long and unrestrained, and this is where the problem has occurred. By factory tests, it appears that the hair must be long enough to wrap around the seat pin so that it can "cinch" on itself. If it is not, then the hair will not get tangled. *Shoulder length hair is no problem, but hair extending down to the middle of the back, or lower, can get entangled.*

To protect against this problem, some operators have tried warning the passengers to restrain their hair, and others have furnished hair nets, but neither procedure has been found satisfactory.

In an effort to make available the safest possible equipment, Eli Bridge Company, after extensive tests, has developed the hair guards shown in these pictures. They have been designed for quick and easy adaptation to BIG ELI steel seats. If you have wooden BIG ELI seats it is suggested that you contact the factory. Operators have commented favorably about the improved color and flash.

The hair guards are available prime painted, and in the following DuPont Dulux standard colors: standard seat colors of 93-223-H red, 93-1001-H green, and 93-508 white; HY-5 seat colors of 93-1021 orange, 93-78134 yellow, and 93-6282-H red; HY-5 trailer color of 4843-D Aqua; and 93-75334 violet. You might want to use colors that are the same as your present seat colors, but you might also like contrasting colors.

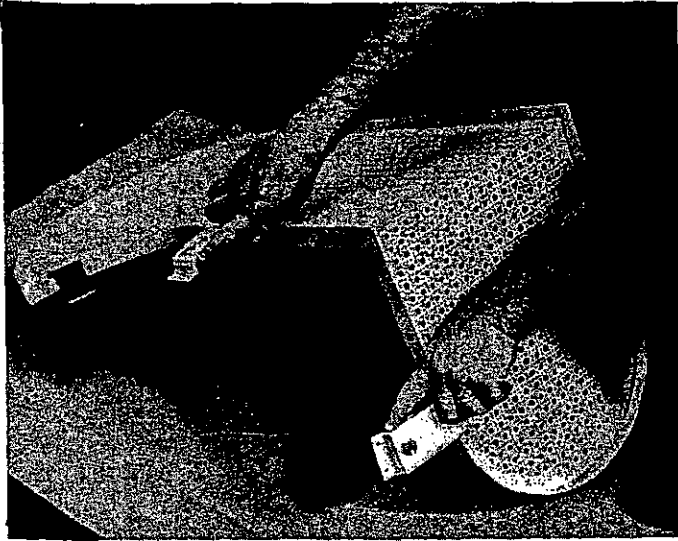
The top four pictures on the left show the method for storing away the hair guards inside the seat. A plastic stacker, designed primarily for portable operation and shown in the first picture, keeps the hair guards from wearing into the seat cushion and from striking against each other, and it also keeps the seat cushion dry.

With the hair guards stored in the seat, a standard seat cover can be used, as shown in the fifth picture. If you wish to cover the seats with the hair guards in place, larger seat covers, as shown in the last picture, are available.

For the safety of your passengers and for your own protection, you are urged to add these hair guards to your BIG ELI steel seats.

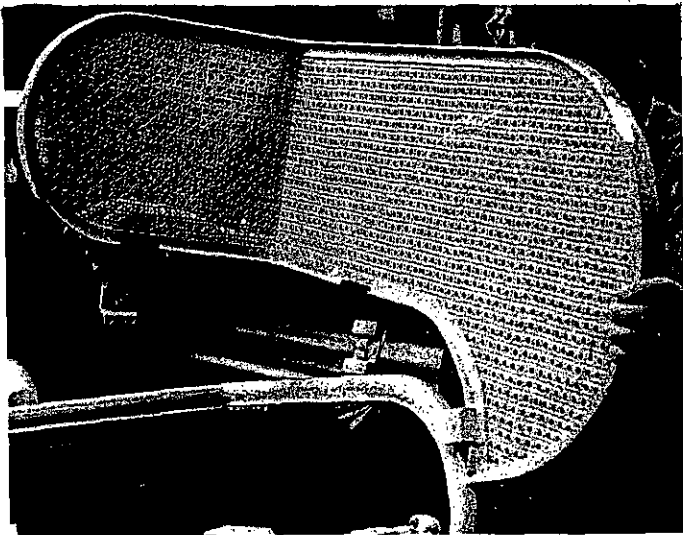
ELI BRIDGE COMPANY  
800 Case Avenue  
Jacksonville, Illinois 62650  
Phone: 217-245-7145.

## INSTALLATION OF HAIR GUARDS ON BIG ELI WHEEL STEEL SEATS



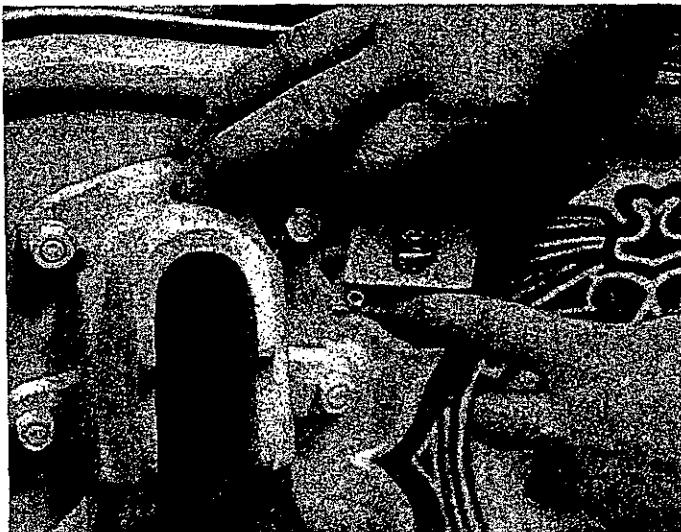
1

Installation of hair guards on Big Eli steel seats is not a difficult job if the following instructions are used carefully. Each section of hair guard rests on the top edge of the back and one side of the seat, and there are rubber pieces attached to the hair guard to separate the guard from the seat. A bracket is to be riveted to the side of the seat and another one to the back of the seat for each guard section. These two brackets are attached to each hair guard with quarter-turn Air-loc fasteners, as shown in Picture No. 1. Each bracket has four holes in it for the rivets.



2

Hook the front edge of the hair guard over the front of the seat as shown in Picture No. 2, so that the rubber is down over the roll of the seat.

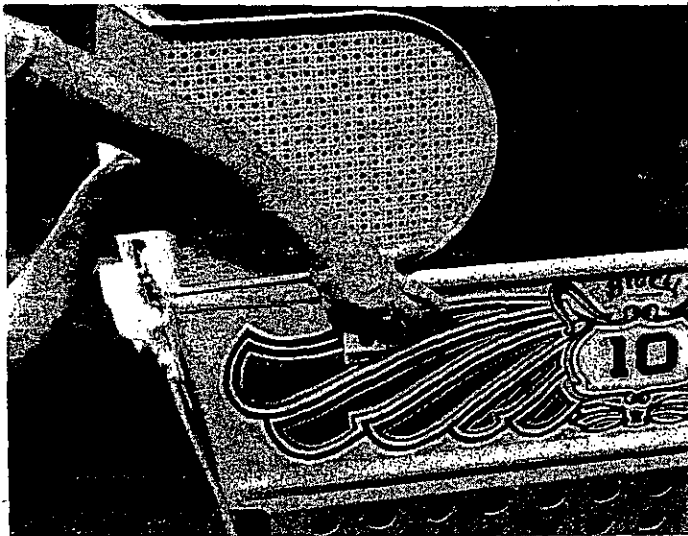


3

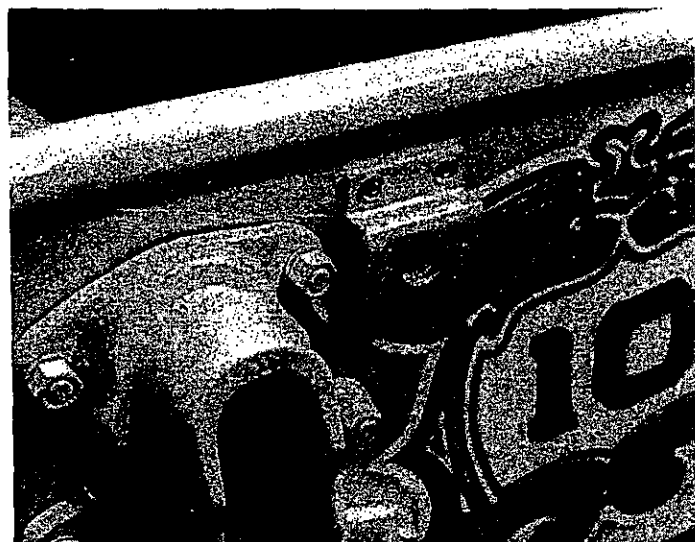
The bracket on the side of the seat should be located about  $\frac{1}{2}$ " from the seat hanger casting, as shown in Picture No. 3. Push down on the hair guard until the rubber under the side bracket on the hair guard is against the top of the seat. Hold the seat bracket so it will not turn and drill the hole for the rivet shown in Picture No. 3. This is the rivet on the bottom side of the seat bracket and closest to the seat hanger casting. When drilling, as soon as the drill point has penetrated the metal do not let the drill go more than  $\frac{1}{4}$ " into the plywood. If you are not careful you will drill right through the upholstery material, leaving a hole in the surface of the material where it can be seen.

After the hole has been drilled, install the rivet, being sure to keep the bracket straight on the seat. Next, install the second rivet in the bottom flange of the seat bracket in the same way as you did the first one.

The rear corner of the hair guard will be sticking out beyond the top corner of the seat after the side bracket has been installed. This is the way it should be. Push in on it until it is in line with the rear corner of the seat and until the rear bracket lies against the back of the seat. Be sure the rubber under the hair guard is firmly seated on the top roll of the seat. Hold the bracket straight and drill the hole on the bottom flange that is closest to the center of the seat. To hold the bracket properly, to hold the hair guard in position, and to drill the hole requires two persons. The best way to drill the hole is just to start the drill, then swing the hair guard out of the way to finish drilling. Then re-position the hair guard and bracket, and install the rivet. With one rivet in place the strain on the hair guard will want to pull the seat bracket out of line. Be sure it is straight on the seat when you drill the second hole in the bottom flange, and install the rivet. This positioning of the hair guard and seat bracket is shown in Picture No. 4.

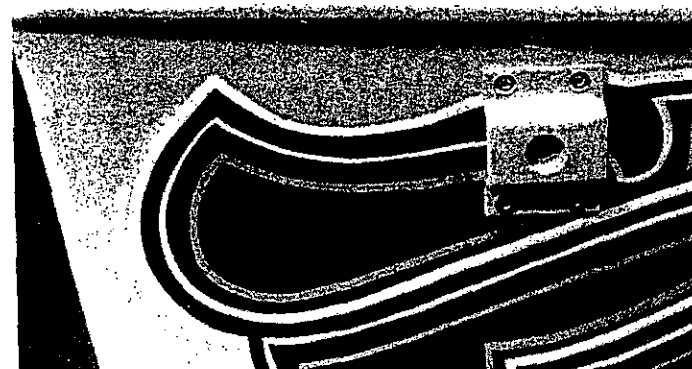


4



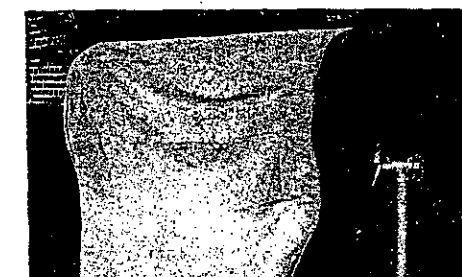
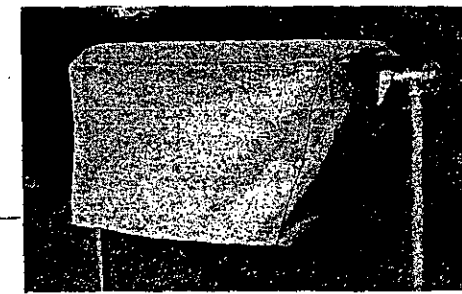
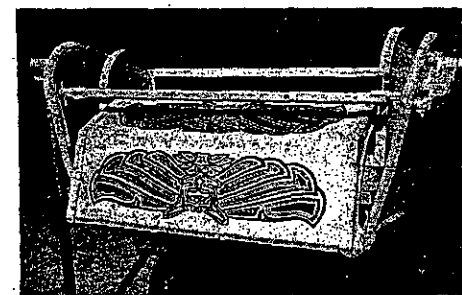
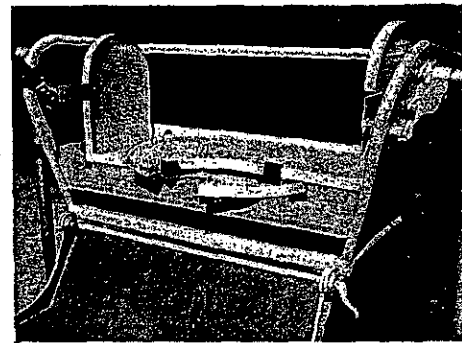
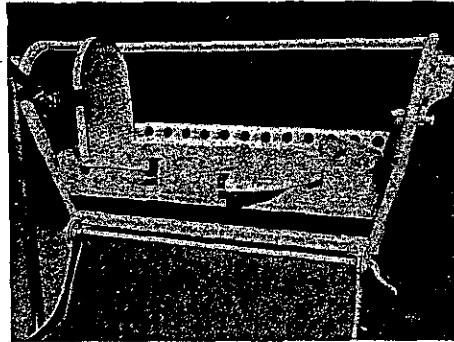
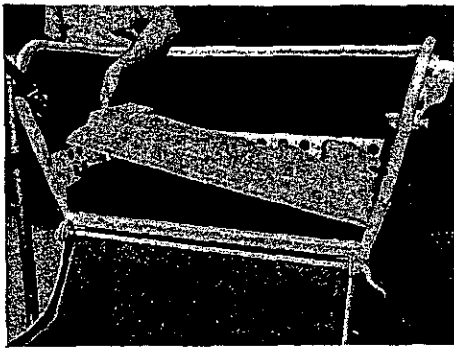
5

Remove the hair guard by releasing the two quarter-turn fasteners. Then pull the Air-loc stud out of the seat bracket on the back of the seat by flexing the hair guard, after which the entire guard can be lifted away. With the guard out of the way install the remaining rivets in each bracket, as shown in Picture Nos. 5 and 6.



This completes the installation of a hair guard section. The other half is installed in the same way.

6



## STORING AWAY THE HAIR GUARDS IN THE SEAT

When transporting the seats from one location to another, the hair guards are designed to be removed and stored away. If you order them you will be supplied with formed plastic stackers, as shown in the first picture. The stacker rests on top of the seat cushion, and positions the hair guards so that they will not cut into the seat cushion and not strike against each other. It also acts to protect the entire top surface of the seat cushion, to help keep it clean and dry. This is a desirable feature for park installations.

Position the stacker on the seat cushion so that the highest portion in the middle is toward the front. The plastic stacker can be located backwards on the seat, but the hair guards cannot be stored away unless it is installed properly as shown in the first picture.

Loosen the left hair guard from the seat (left as you sit in it) by unfastening the two quarter-turn fasteners. Pull the back side of the hair guard away from the seat, and after that the entire guard can be lifted from the seat.

Place it on the plastic stacker as shown in the second picture so that the top edge of the hair guard is toward the rear of the seat.

Next, remove the right hair guard and position it above the left guard as shown in the third picture.

The fourth picture shows the hair guards stored away, the footbottom folded away, and the handlebar closed. The D6 footbottom locks must be in good working condition or the footbottom may drop down on the hair guards and chip off the paint. Replace the D6 locks if they are worn and will not lock the footbottom in the folded position.

With the hair guards stored away, a standard seat cover can be used, just as before the hair guards were added. This is shown in the fifth picture. Most portable operators will probably prefer to do this in order to be able to use their original seat crates and to conserve space on the truck.

A Ferris Wheel used in a permanent location will not need to have the hair guards removed as a regular thing, and for that kind of operation special larger seat covers are available, as shown in the sixth picture. Some portable operators have expressed a preference for leaving the hair guards on the seats and using larger seat crates to hold the seats with guards in place. These larger seat crates are also available on special order.

Use the hair guards at all times to help prevent accidents to your passengers and to help protect yourself against lawsuits.



## BULLETIN

Subject: Replacement of hair guard brackets and modification of seat pins.

Installation instructions were included with each set of Big Eli Wheel seat hair guards shipped. Of the six pictures on the instruction sheet, four of them show clearly the way in which each bracket should be mounted on the seat: that is, with the flanges of the bracket above and below the quarter-turn fastener, and the open ends of the bracket to the left and right.

Eli Bridge Company has found that not all installations have been made according to these instructions, and that the brackets were located with the flanges to the left and right, and the open ends at the top and bottom.

Improper installation of the brackets, plus lack of inspection of the completed Wheel before carrying passengers, appear to have caused an accident involving one fatality. What appears to have happened is that in hanging the seat on the Wheel the right end (off-tower side) was not hung on the seat pin but on the improperly installed hair guard bracket. The seat pin has a large diameter on the end which can just slip inside the hairguard bracket when it is improperly installed with the open end down. A glance at the end of the seat would have shown that the seat was not hanging properly, but such an inspection obviously was not made. Consequently, after the Wheel had turned two or three times the seat pin apparently rolled out of the bracket, allowing that end of the seat to drop.

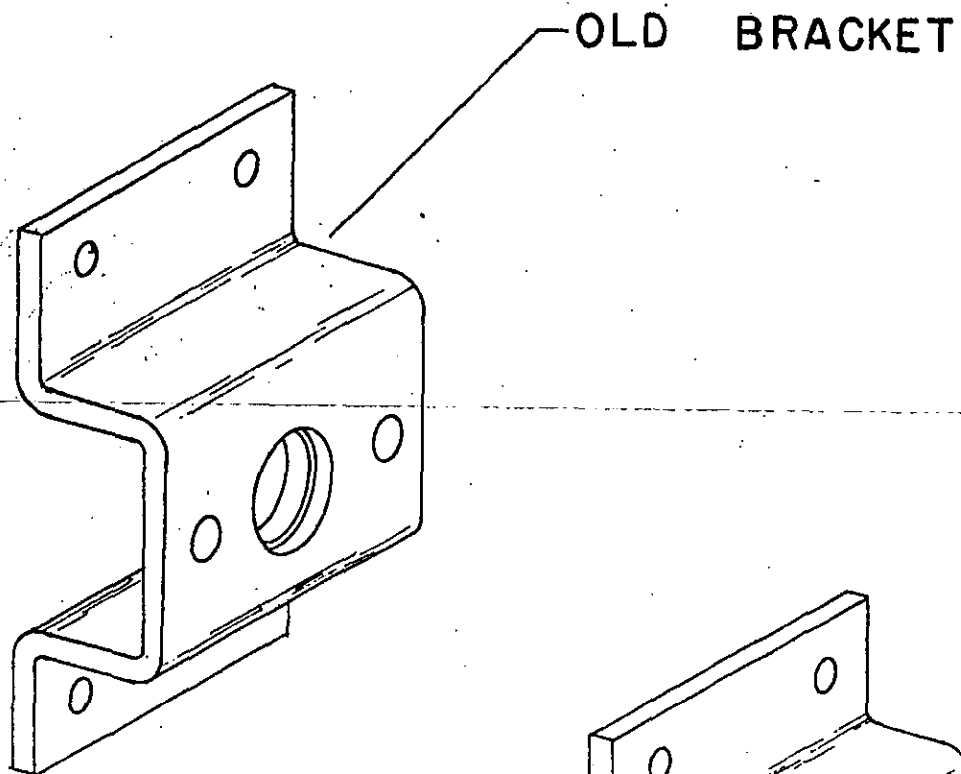
Long time Wheel operators, familiar with Big Eli Wheels, will probably feel that no operator would hang a seat on a Wheel in such an improper way, but nevertheless it appears to have happened.

To eliminate absolutely the possibility of this ever happening again, Eli Bridge Company has developed a new bracket to be used on each side of the seat to replace the ones you have already installed there. The necessary brackets, rivets, and instructions

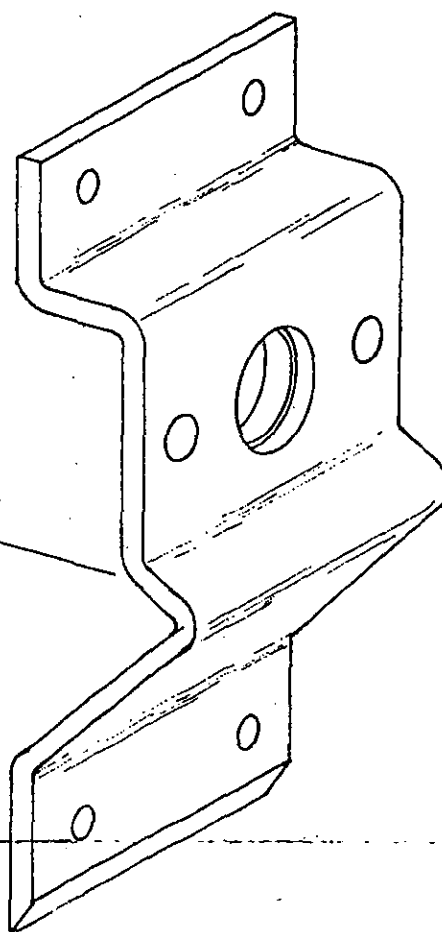
are being sent to you at no charge. As soon as possible, remove the old brackets and install the new ones. NOTICE: THE LONG TAPERED PART OF THE BRACKET IS TO BE ON THE BOTTOM. If you install it in any other way it will provide you no protection.

Secondly, take your seat pins to a machine shop and have them turn a radius on the end of the pin as shown in the accompanying drawing. Changing the brackets will not give you the protection you need unless you have also rounded off the outer edge of each seat pin.

Both of these modifications, if done according to our instructions, will, in our opinion, give you complete protection against this kind of thing ever happening again, even if an operator does not make a proper inspection, because these two modifications will eliminate any ledge or recess for the seat pin to fit into or lodge against.



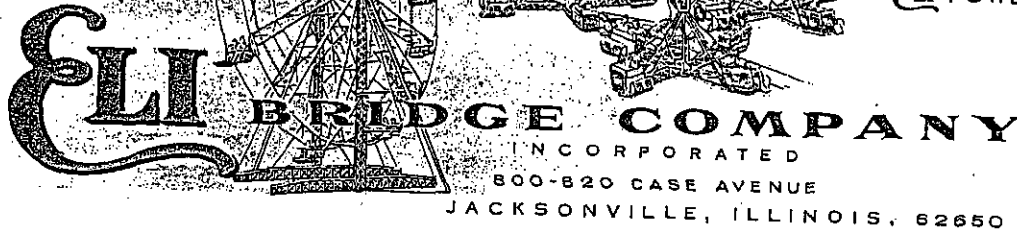
NEW BRACKET



ALL STEEL PORTABLE

**Big Eli**  
FERRIS WHEELS

AREA CODE 217 PHONE 245-7145



**Scrambler**  
ELI POWER UNITS

### WEAR OF BIG ELI WHEEL SEAT PINS AND SEAT HANGER CASTINGS

From time to time we are asked about wear on seat pins and seat hanger castings, and when they should be replaced.

To answer these questions we performed load tests to determine the breaking strength of both parts. The pins used were taken from the supply we have used for years in setting up and testing our Big Eli Wheels. The seat hanger castings were taken from new stock, but were machined to represent an extreme wear condition. Normally, the thickness of the casting at the top is three-eighths of an inch ( $3/8$ "). This was machined down to a thickness of three-sixteenths of an inch ( $3/16$ ").

At a load of 14,250 pounds the seat pin broke next to the spoke at the small diameter. The weight of an entire No. 5 Big Eli Wheel with complete standard equipment is only about 12,000 pounds. It can be seen from this test that the design of the seat pin and the seat hanger casting is very conservative, and is well able to carry normal loads, even when badly worn.

Nevertheless, when wear becomes excessive in either the seat pins or the seat hanger castings they should be replaced. Therefore, we recommend replacement:

1. When the one-inch diameter (1") of the seat pin (where the seat hanger casting rides) is worn down in any place to seven-eighths of an inch ( $7/8$ ") in diameter.
2. When the top of the seat hanger casting, which is normally three-eighths of an inch ( $3/8$ ") thick, is worn down one-sixteenth of an inch ( $1/16$ ") so that the total thickness is five-sixteenths of an inch ( $5/16$ ").

ELI BRIDGE COMPANY  
Engineering Department

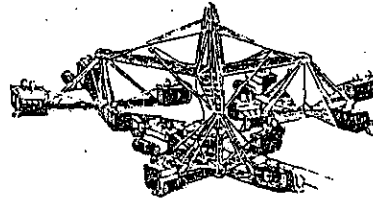
*William C. Deem*

William C. Deem  
Chief Engineer

March 9, 1980

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**BIG ELI**  
FERRIS WHEELS

AREA CODE 217 PHONE 245-7145



*Scrambler*  
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# ELI BRIDGE COMPANY

INCORPORATED

800-820 CASE AVENUE  
JACKSONVILLE, ILLINOIS, 62650

Toll-free WATS line (800) 637-7444 for the entire United States except for Alaska, Hawaii, and Illinois is available during normal business hours, 8 AM to 5 PM, Monday through Friday, excepting holidays.

## BIG ELI WHEEL BULLETIN

NUMBER 1

WHEEL MODEL:      (x) NO. 5                      (x) NO. 12                      (x) NO. 16

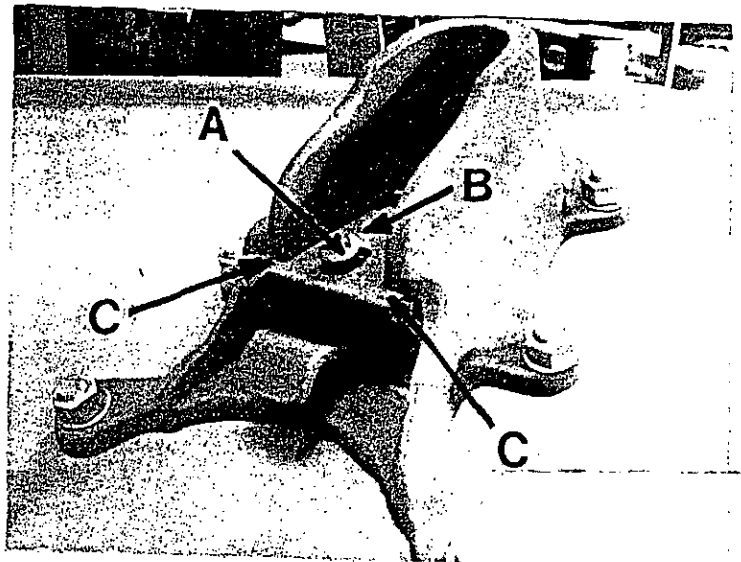
APPLIES TO SERIAL NUMBERS \_\_\_\_\_ THROUGH \_\_\_\_\_

DATE:      June 2, 1982

SUBJECT: Short Pin Ferris Wheel Seat Locks

Recently a shipment of Ferris Wheel MYNY seat locks was sent to a customer. Yesterday, June 1, they called to report that these seat locks were not satisfactory. Their operator reported that you "just barely touch them and they pop out."

We immediately began an investigation to determine what the situation was. We found that on our last production run completed on April 28 some of the pins marked "A" were slightly shorter than the standard length. The hinged part, "B", was prevented from pressing against the shoulders, marked "C", because "B" was touching pin "A". Therefore, even though the seat lock did lock in the seat hanger casting, it was not as firmly locked as we feel it should be.



Our records indicate only five customers have been shipped seat locks since that production run was completed, and you are one of them. It is possible that you received one or more of these short-pin seat locks, and we ask that you check each one to be sure that the hinged part "B" is touching the seat hanger casting at points "C". Those that do not touch points "C" should be replaced.

Big Eli Wheel Bulletin No. 1 (continued)

Looseness of the seat lock can also be caused by a spring weakened after years of use. This has always been a reason for replacement of the seat lock, but this bulletin refers only to new seat locks which happen to have short-pins.

Please let us know the number of short-pin seat locks in your recent shipment, and we will send you replacements. These will be billed to you, and when you return the original ones we will credit your account in full.

We feel that it is mandatory that all short-pin seat locks be replaced.

---

*William C. Deem*

William C. Deem  
Chief Engineer  
ELI BRIDGE COMPANY

Big Eli Wheel Bulletin No. 1 was sent to the following:

Mrs. Gene Beecher  
Coney Island  
736 N. W. 22nd Ave.  
Miami, FL 23125

Max Walden  
Courthouse Square  
Hanford, CA 93230

Hehn Amusement Co.  
80 Walnut St.  
Seymour, CT 06483

Robert Howard  
201 So. 23rd Street  
Cambridge, OH 43725

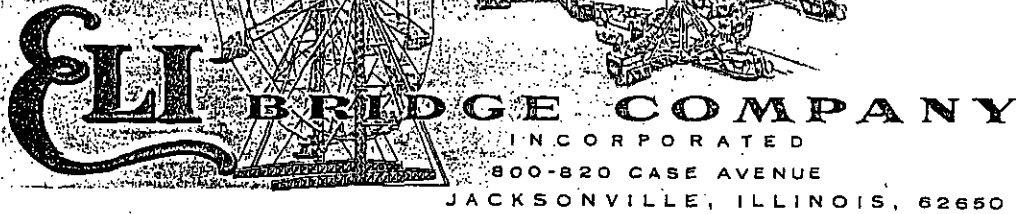
Santa Cruz Seaside Co.  
P. O. Box 625  
Santa Cruz, CA 95060



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## BIG ELI WHEEL BULLETIN

NUMBER 2

APPLIES TO SERIAL NUMBERS ALL THROUGH \_\_\_\_\_

DATE: March 14, 1988

SUBJECT: Lap bar modification for BIG ELI WHEEL seats

A new pivoting "lap bar" has been developed by us to provide the passengers riding in BIG ELI WHEEL seats with an additional safety restraint.

The "lap bar" is made of aluminum, and is designed to be easily mounted to the existing handlebar with a minimal amount of time and labor. (SEE PICTURE NO. 1)

(PICTURE NO. 2) shows the handlebar on a BIG ELI WHEEL seat opened for loading/unloading passengers. Notice that the "lap bar" pivots down out of the way with the handlebar in this position.

(PICTURE NO. 3) shows the handlebar in the closed position, with the "lap bar" positioned as it would be with passengers in the seat, resting on top of their legs. In this operating position, it will only pivot up so far and stop. Thus, it not only greatly reduces the amount of space it would take to come up out of the seat to a minimum, but, at the same time, it prohibits upward movement of passengers.

The new "lap bars" pivot freely on nylon bushings, so as to avoid "freezing-up" because of corrosion and are virtually "maintenance-free".

Addition of the "lap bar" creates no significant increase in the time it takes to unload and reload the seat. The Wheel operator simply needs to hold the "lap bar" up, in the closed position, (SEE PICTURE NO. 3) while at the same time, closing the handlebar in a normal fashion.

(PICTURE NO. 4) shows the seat as it would be during transporting or possibly during your non-operating hours on location, with the footbottom folded up into the seat.

At this time, we do not consider this to be a mandatory modification, as the handlebar on the BIG ELI WHEEL seat has been proven reliable in over 85 years of service. However, we highly recommend that you consider the addition of these "lap bars" to your BIG ELI WHEEL seats for both the added safety, and the extra feeling of security that they provide to your passengers.

The "lap bars" come with everything necessary for installation, including a jig to lay over the front of the handlebar to locate the four holes needed to mount them, along with illustrated mounting instructions.

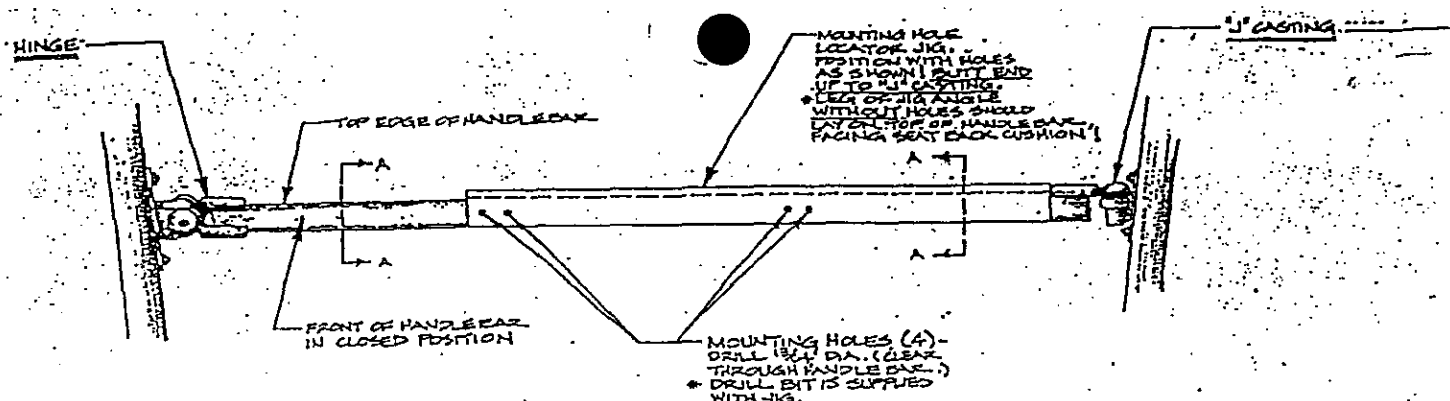
The current cost of the new "lap bar" is: \$48.50\* each.  
or: \$582.00 for 12 seats  
\$776.00 for 16 seats

Should you decide that you would like to add the new "lap bars" to your BIG ELI seats, call or write to place your order. "Lap bars" will be furnished to interested Wheel owners on a 'first come, first served basis'.

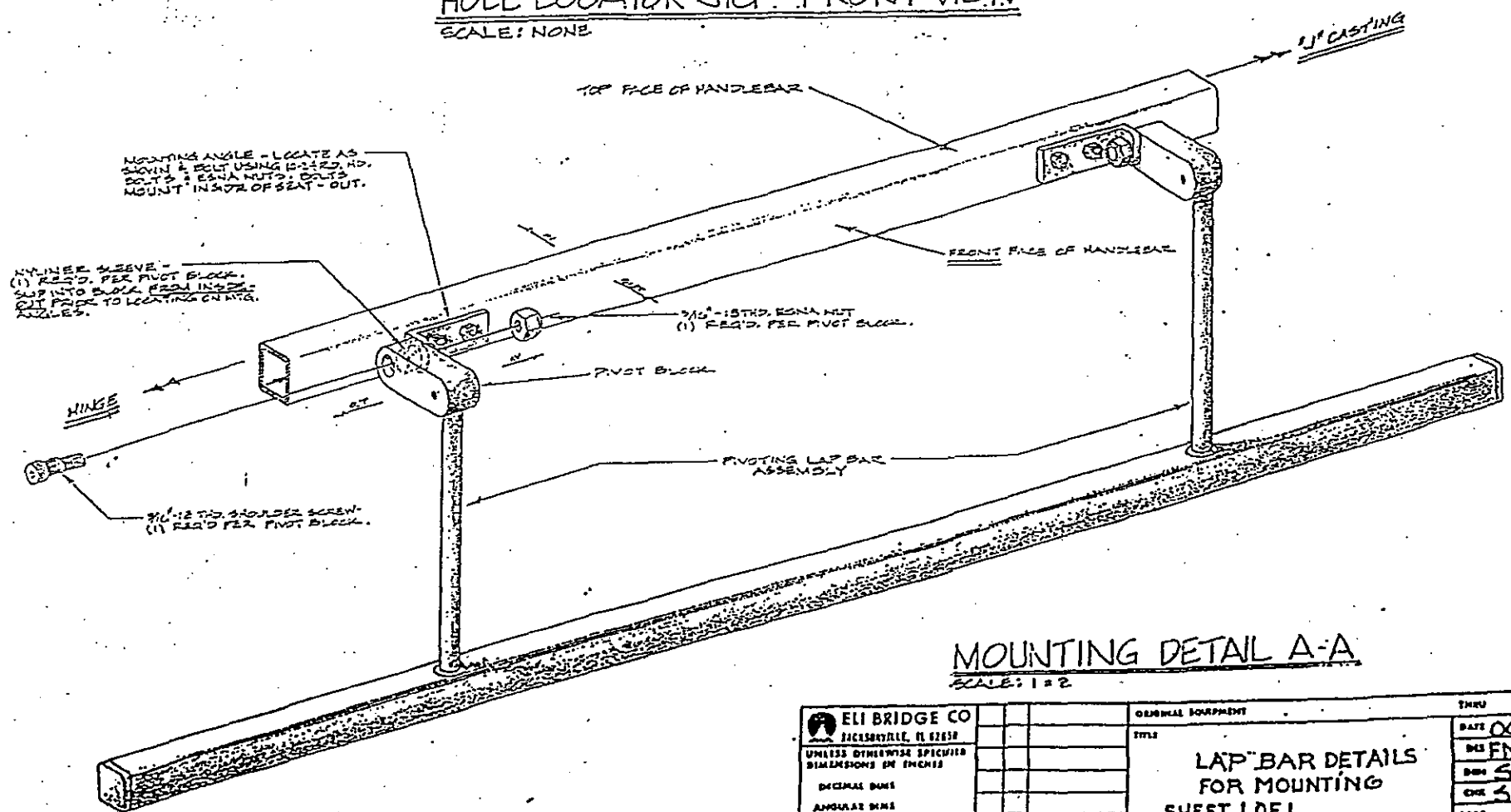
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*Lee A. Sullivan*  
Lee A. Sullivan, President  
Eli Bridge Company

\* Subject to change without notice.



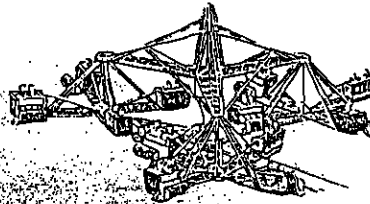
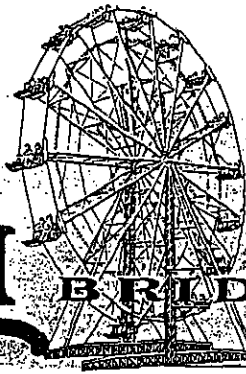
**HOLE LOCATOR JIG - "FRONT VIEW"**  
SCALE: NONE



**MOUNTING DETAIL A-A**  
SCALE: 1/2"

INDEX NO.	ASSEMBLY DATE	PART NUMBER	DESCRIPTION	Eli Bridge Co JACKSONVILLE, FL 32250 UNLESS OTHERWISE SPECIFIED DIMENSIONS IN INCHES DECIMAL DIMS ANGULAR DIMS				ORIGINAL EQUIPMENT TITLE <b>LAP BAR DETAILS FOR MOUNTING</b> <b>SHEET 1 OF 1</b>		THRU DATE <b>06/18/87</b> DES <b>FM-EJS</b> DIM <b>SF</b> CHK <b>SF</b> APPR	
				BY CHG DATE	NO. <b>ALL STAN. WHEEL SEATS</b>		PAK <b>306-525</b>				

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FERRIS WHEELS



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## BIG ELI® WHEEL BULLETIN

NUMBER 3

APPLIES TO ALL BIG ELI® WHEEL SEATS

DATE: March 20, 1990

SUBJECT: Mandatory Hairguards and Lapbars

This bulletin makes the application of hairguards and lap bars mandatory on all BIG ELI® WHEEL seats.

Based on seventeen years experience with hairguards, the evidence is abundant that hairguards are effective against hair pulling accidents. There is no need to risk this potential hazard for lack of guards.

Although we do not yet have a comparable length of experience with lap bars, we feel the protection afforded by them far outweighs any reluctance to invest in them.

When installed, the lap bars should reach within five (5) inches of the top edge of the seat bottom structure. There should not be more than two (2) inches gap between the lap bar and the top, front edge of the seat cushion; at its closest point. These dimensions are very important to the effectiveness of the lap bars.

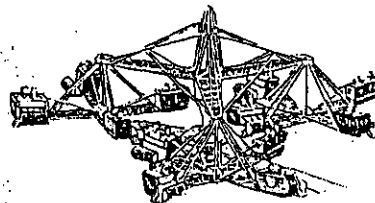
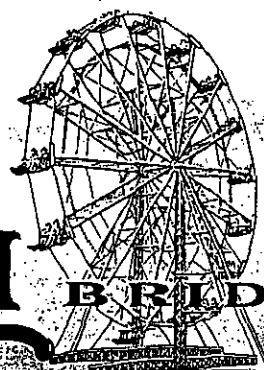
**ELI BRIDGE COMPANY**

*Lee Sullivan*

Lee Sullivan  
President

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**Eli**



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## Big Eli® Wheel Bulletin No. 6

Applies to ALL Serial Numbers

**DATE: October 8, 1992**

**SUBJECT: Wheel Seat Handlebar Latch**

The purpose of this bulletin is to establish the Eli Bridge Company specification for the proper fit of the latching hardware on the Big Eli Wheel seats. This involves the "J" malleable handlebar lock, which is attached to the handlebar, the "T" malleable handlebar socket, which is bolted to the side of the seat, and the "AB" seat escutcheon and plunger assembly, which is attached to the outside of the seat and which locks the "J" and "T" parts together when the handlebar is fully closed.

There has been confusion about the proper measurement because of the unauthorized distribution of a sketch which was prepared for an entirely different purpose. That sketch was not a part of any bulletin issued by Eli Bridge Company. The Spring 1982 issue of the **Big Eli® News** described the proper measurement to be taken, and that measurement is still the Eli Bridge Company specification, which is that the plunger of the "AB" assembly must extend inside the "T" socket 1/4 inch. It is acceptable for the plunger to extend an additional 1/16 inch, for a total of 5/16 inch, or it can be shorter by 1/32 inch for a total of 7/32 inch.

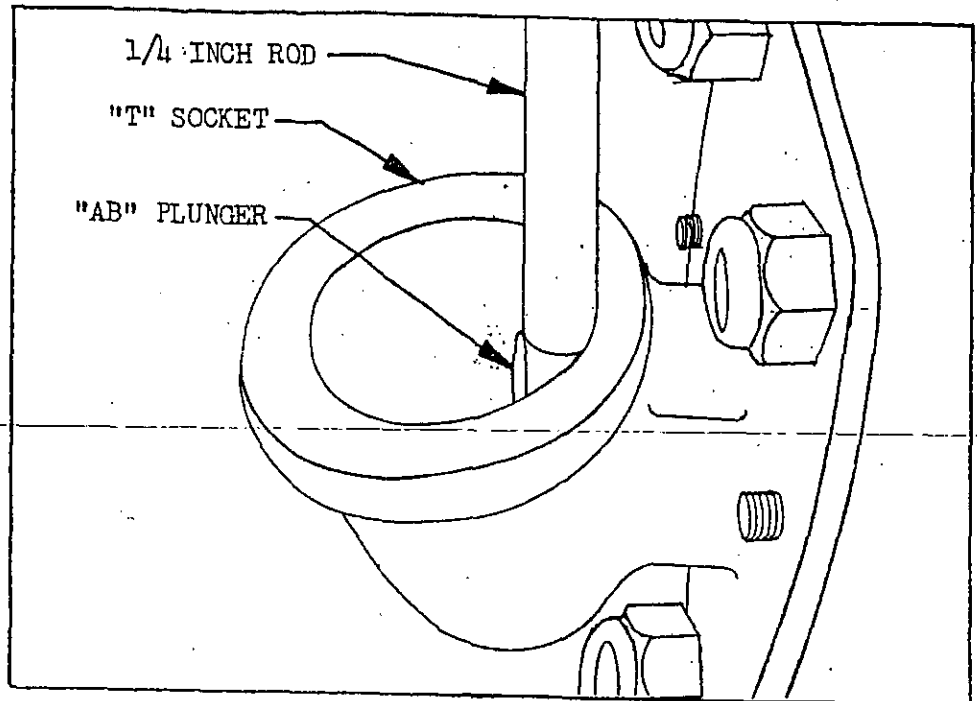
Raise the handlebar so that the "J" lock is withdrawn from the "T" socket. Be sure that the "AB" plunger extends into the "T" socket as far as it will go. The measurement is to be taken on the top side of the "AB" plunger as you look down into the "T" socket. It is obvious that a measurement cannot be made on the bottom side of the plunger because it is not accessible.

Because the plunger is down inside the socket it is difficult to measure. We recommend a simple procedure: use a 1/4 inch diameter rod, or, if you cannot find one, cut the threaded portion off the end of

**DATE: October 8, 1992**

**SUBJECT: Wheel Seat Handlebar Latch**

a 1/4 inch bolt. Set the rod or bolt on end on top of the plunger and against the "T" socket where the plunger sticks out. If the end of the plunger is in line with the side of the rod or bolt, then the plunger is the proper dimension. Note that the plunger can stick out an additional 1/16 inch, or be shorter by 1/32 inch, and still meet Eli Bridge Company specification. It is not necessary to measure in thousandths of an inch.



Next, check to be sure that the spring in the "AB" plunger assembly is strong enough to drive the plunger firmly into the "T" socket. Unless the plunger is in the way there may not be enough engagement of the plunger in the "J" lock. If it appears you have a weak spring, do not hesitate to replace it.

The slot milled in the "J" lock is cut deeper than absolutely necessary to allow for a plunger extension of 5/16 inch or more. A depth measurement of 9/32 inch at the bottom of the slot is of no consequence, if the plunger extends 1/4" into the "T" socket as specified above.

Over a period of time if the lower edge of the slot in the "J" lock becomes rounded or chipped as much as 1/16 inch, then the "J" lock should be replaced.

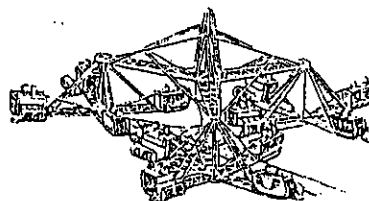
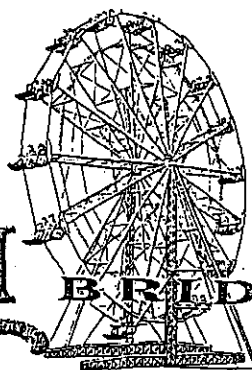
Load testing at Eli Bridge Company has been performed using the measurement specified above. With a 1/4-inch plunger extension, the latch will consistently sustain upward loads on the handlebar latch of more than 1,000 pounds. Such testing can be readily duplicated.

To repeat this specification, the "AB" plunger must extend 1/4 inch (plus 1/16 inch, or minus 1/32 inch) inside the "T" socket, when measured on the top side of the plunger. There is no other measurement required as a part of this specification.

*Les Sullivan*  
Les Sullivan

Chairman of the Board  
Eli Bridge Company

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## Wheel Bulletin No. 7

Applies to ALL Serial Numbers

**DATE:** January 14, 1994

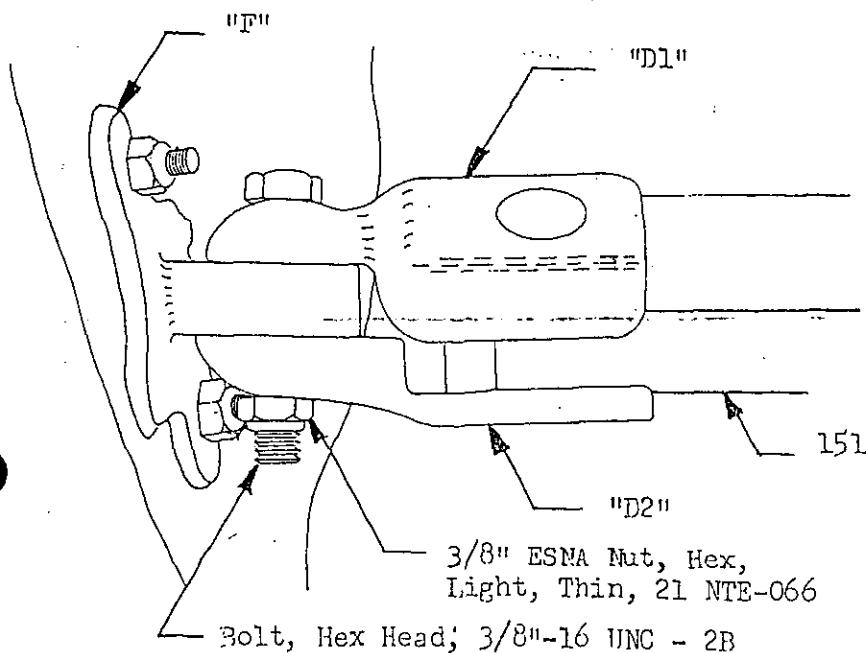
**SUBJECT:** Wheel Seat Handlebar Hinge

The handlebar hinge on Big Eli® Wheel seats consists of a central "F" casting fastened to the side of the seat. The end of the No. 151 Aluminum Handlebar is nested between a "D1" Malleable Hinge End for Handlebar, hole not threaded; and a "D2" Malleable Hinge End with threaded hole. The No. 152 Handlebar Cap Screw holds the "D1" and "D2" to the "F" casting, and acts as the pivot for the handlebar.

There have been reports of the No. 152 Handlebar Cap Screw working loose, which requires re-tightening. In an effort to prevent it becoming loose again, the cap screw is sometimes tightened too much, and the

"D1" and "D2" castings are bent toward each other. This then squeezes the two castings against the "F" hinge, so that the handlebar will not swing freely.

We are installing on all new seats a 2 inch long 3/8" coarse thread bolt, and outside the "D2" casting we are adding a 3/8 inch coarse thread thin height self-locking nut with a Nylon insert. The bolt should be tightened enough to hold the two castings to the handlebar, but not so tight that they are bent. Then the self-locking nut should be





**DATE: January 14, 1994**

**SUBJECT: Wheel Seat Handlebar Hinge**

run on until it is against the outside of the "D2" Hinge End. These are available from Eli Bridge Company, but they can usually be obtained locally. The self-locking nut we use has the following specification:

3/8" ESNA nut, hex, light, thin, Part Number 21 NTE-066.

Any good self-locking nut will do, provided at least 1-1/2 threads are sticking out beyond the nut.

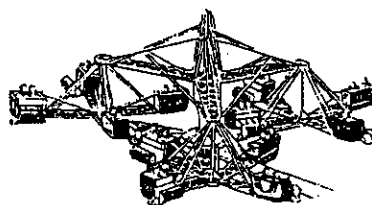
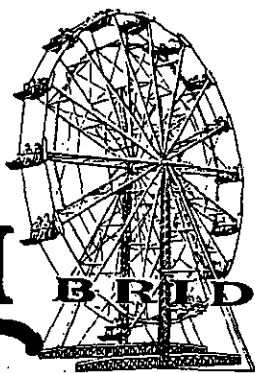
We consider this a mandatory change, which applies to Little Eli Wheels, HY-5, HY-5 II, Eagle, and Double Eagle Wheels.



Lee Sullivan

Chairman of the Board  
Eli Bridge Company

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## Wheel Bulletin No. 8

Applies to ALL Serial Numbers

**DATE: November 16, 1994**

### **JBJECT: Wheel Seat Fiberglass Inserts**

Fiberglass seat inserts are being manufactured and sold to owners of Big Eli® Wheels. These inserts are not manufactured by Eli Bridge Company. In our testing and many years of working with customers regarding their Big Eli® Wheels, we believe we have developed a seat design that has stood the test of time. Eli Bridge Company does not condone nor authorize the use of these fiberglass seat inserts on Big Eli® Wheels and believes that all who are using them ought to be warned not to use them and to remove them promptly.

It appears as though the fiberglass shells being sold by the manufacturers do not enhance security, but in fact, reduce security. The fiberglass shells require changes in the entire handlebar and latching equipment. Any alteration of these component parts can make the latching less positive and potentially dangerous.

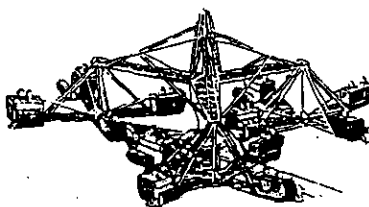
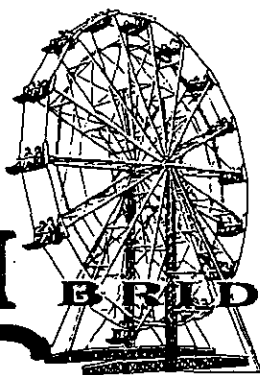
This alteration of the structural integrity of the seat and lessening of the security of the handlebar and latching mechanism makes it mandatory that anyone currently using these fiberglass seat inserts on Big Eli® Wheels immediately discontinue same.

Lee Sullivan

Chairman of the Board  
Eli Bridge Company

ALL STEEL PORTABLE  
**BIG ELI**  
FERRIS WHEELS

**ELI**



*Scrambler*  
ELI POWER UNITS

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**BIG ELI**

**Bulletin No. 950427-2**

Applies to All Eli Wheels of Every Size

**Date: April 27, 1995**

**Subject: Wear of "Y" Castings**

It has always been the policy of Eli Bridge Company to provide our customers with the best information we can, and to alert them to any problem areas that come to our attention.

Some months ago we sent out to all Big Eli® Wheel owners of record a supplement for their Wheel manual. In it, under the title of WEAR OF "Y" SEAT HANGER CASTINGS, it was stated that the thickness of the top of the casting, when new, was 3/8", and when it was worn down to a thickness of 5/16" then the casting should be replaced.

This has resulted in a rash of orders for these castings, considerably beyond what has normally occurred. This has caused us to go back and review this decision.

Some years ago we performed tests to determine what load the "Y" casting and the seat pin could withstand. Before beginning the test we machined out the top of the "Y" casting so that it was only 3/16" thick. At a load of 14,250 pounds the seat pin broke, but the "Y" casting was still intact.

# Engineering Bulletin # 950427-2

Date: April 27, 1995

Subject: Wear of "Y" Castings

Since the entire weight of a No. 5 ground-model Big Eli Wheel, containing 24 seat pins and 24 "Y" castings, is only about 12,000 pounds, it can be seen that the loading of the "Y" casting is very conservative and is well able to carry normal loads, even when badly worn.

As a result of this review we believe the wear limit should be changed on the "Y" casting. In the light of our test results, and from our experience over 94 years, we have determined that we should allow 1/8" wear, so that the remaining thickness could be reduced to 1/4" ~~instead of the 5/16" we previously specified as the wear limit.~~

The manual supplement did not cover wear limits on Little Eli Wheel "Y" castings. These castings are also 3/8" thick at the top, and when they are worn down to a 1/4" thickness, then the castings should be replaced.

We consider these wear limits to be mandatory.

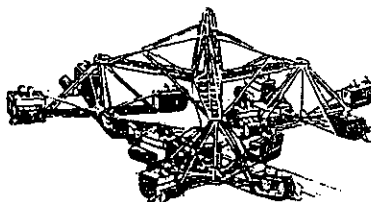
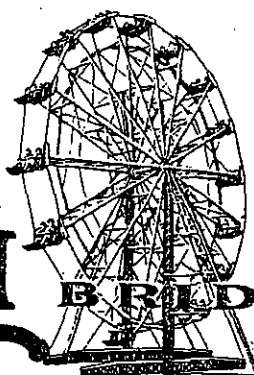
ELI BRIDGE COMPANY



Lee A. Sullivan  
Chairman of the Board

ALL STEEL PORTABLE  
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**Big Eli**

## Bulletin No. 950427-3

Applies to All HY-5, HY-5 II, Eagle & Double Eagle Wheels  
Applies to All No. 5, No. 12 & No. 16 Wheels

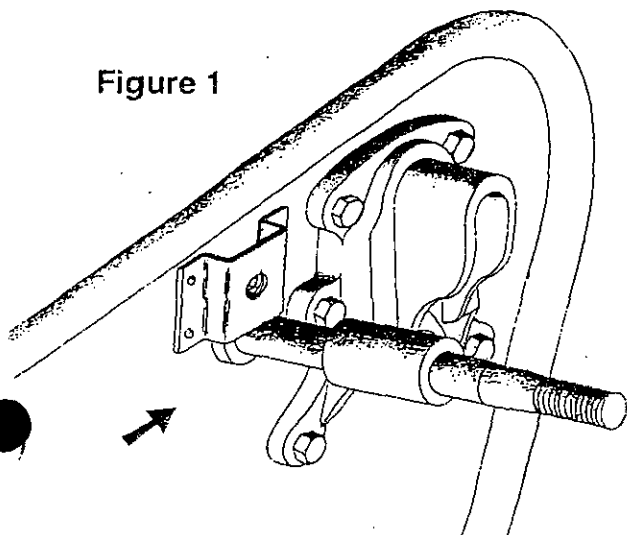
Date: April 27, 1995

### Subject: Hanging Seats Correctly on Big Eli® Wheels

Hanging a seat on a Big Eli® Wheel would seem to be an obvious thing that could not be done incorrectly. However, on two occasions reported to us operators failed to do this properly.

In one case, instead of the seat pin being inserted up into the "Y" seat hanger casting the end of the seat pin was wedged between the "Y" casting and the hair guard bracket.

Figure 1



In the other case, the owner had installed the hair guard bracket incorrectly: he had rotated the bracket one-quarter turn so that the opening under the bracket was on the bottom instead of on the side where it should have been. The operator then lowered the seat into position, but instead of the seat pin entering the "Y" casting the head of the pin was inserted inside this hair guard bracket. This is shown in Figure 1.

Thinking that the seat was hung properly the operator reached around and inserted the "MYNY" seat lock without looking at the end of the seat. Had he looked, it would have been obvious the seat was not hanging properly, and the seat lock was actually locking nothing.

# Engineering Bulletin # 950427-3

Date: April 27, 1995

## Subject: Hanging Seats Correctly on Big Eli® Wheels

In each case, the Wheel was started turning, and eventually the end of the seat pin rolled out of where it had lodged. This allowed the end of the seat to drop so it was hanging by only one seat pin, and the seat became wedged against the other spoke so it could not turn freely. In both cases serious accidents resulted, and both could have been avoided if the operator had been making the proper installation.

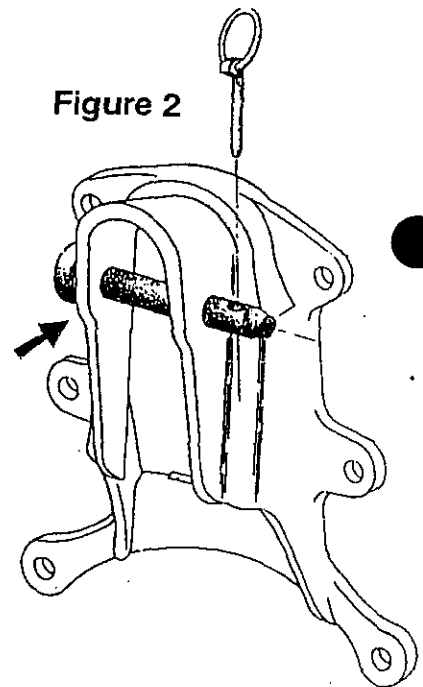
Long time Wheel operators, familiar with Big Eli® Wheels, will probably feel that no operator would hang a seat on a Wheel in such an improper way, but nevertheless it has happened twice.

### SEAT LOCKS

In order to require the operator to look at the end of the seat when locking it to each seat pin we discontinued the use of "MYNY" seat locks and replaced them with the seat lock pin shown in Figure 2. While it might be possible to slip the seat lock pin through the "Y" casting without looking at it, we felt that the operator would have to look at it in order to insert the Klik-pin the seat lock pin.

With that in mind, in June of 1993 we sent to all Wheel owners of record a supplement to the Wheel manual in which we specified that these seat lock pins were to be used in place of the "MYNY" seat locks. We considered this a mandatory change.

The "MYNY" seat locks worked very well for a great many years, and when properly used they would continue to be quite satisfactory. However, we felt that discontinuing their use in favor of the seat lock pins was an improvement in safety that had to be made.



### HAIR GUARD BRACKETS

The installation of hair guards on Big Eli® Wheel seats became standard twenty-two years ago. The hundreds of Wheels sold before that time did not have the hair guards, and so we made available installation kits to permit using the hair guards with older seats. It was on one of these older Wheels in which the bracket was installed incorrectly, as in Figure 1. We have never known of this happening again, but because of how important this can be for the safety of the ride we felt it was important to call this to your attention. Through the years many Wheels have changed hands several times, and not always are bulletins and manuals handed over with the change of ownership.

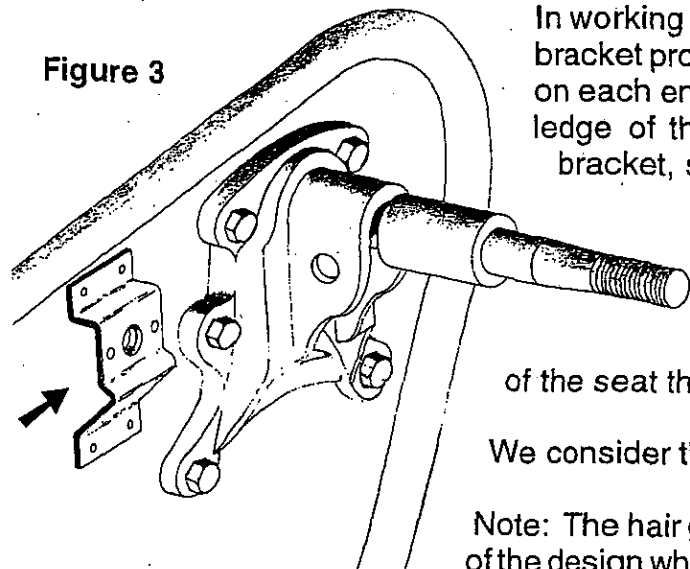
If your Wheel does not have hair guards, we consider it mandatory that they be used. If the hair guard bracket on either side of the seat has been located as shown in Figure 1, then it should be replaced. The hair guard brackets on the back of the seat can be turned either way because safety is not affected.

# Engineering Bulletin # 950427-3

Date: April 27, 1995

## Subject: Hanging Seats Correctly on Big Eli® Wheels

Figure 3



In working out these modifications we found that, with the original bracket properly installed, with the opening under the bracket open on each end, it might be possible to rest a seat pin on the bottom ledge of the bracket. Consequently, we developed the longer bracket, shown in Figure 3, which has no ledge on the bottom side. If an attempt is made to rest the seat pin on the bottom side of the bracket, it will simply slide up the bracket. This longer hair guard bracket, shown in Figure 3, is needed only on the sides of the seat, and not on the back. If the shorter brackets are on the sides of the seat they should be replaced with the longer brackets.

We consider this to be a mandatory modification.

Note: The hair guard brackets shown in both Figure 1 and Figure 3 are of the design which used Air-Loc quarter-turn fasteners to fasten the hair guards to the seats. In recent years each hair guard bracket has a stud sticking out with a hole in it, through which a Klik-pin can be inserted after the hair guard has been slipped over the stud. If you need to order hair guard brackets, be sure to specify which kind you will need. If installing hair guards for the first time, then the hair guard brackets with the studs should be ordered.

### SEAT PINS

With the longer hair guard bracket, there is still the edge of the sheet metal at the bottom. Even though this is a very small ledge, we have found it is possible to rest the end of the seat pin on this edge.

To eliminate even this possibility, in recent years we have been adding a 1/8" radius to the end of the seat pin, as shown in Figure 4. This rounded edge eliminates any possibility of the seat pin resting on the bottom edge of the sheet metal of the hair guard bracket.

Rounding this edge also performs another function. As the "Y" casting and the seat pin may become worn, there is sometimes a tendency for the end of the seat pin to rub against the side of the seat, occasionally wearing a hole in the seat. This is not a safety problem, but rounding the edge provides a small additional clearance and keeps the sharp corner from bearing against the side of the seat.

Rounding off this edge can be done easily and quickly in any machine shop, and we consider adding the radius to the end of the seat pin to be a mandatory change.

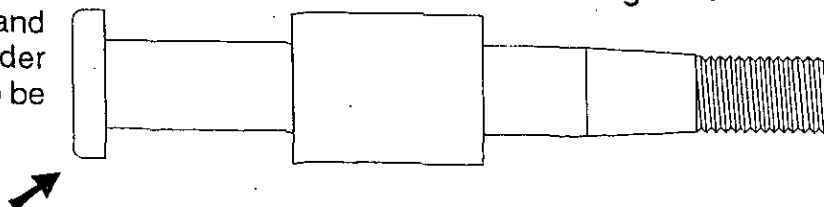


Figure 4

## Engineering Bulletin # 950427-3

Date: April 27, 1995

### Subject: Hanging Seats Correctly on Big Eli® Wheels

The changes we are requiring in this bulletin are not major, but we believe in the interests of safety they must be done. Thousands of Wheel seats are hung properly on our Big Eli® Wheels every year, and the likelihood of a seat being hung improperly is extremely remote, but two accidents are two too many.

While we believe making these modifications will improve safety, the owner and operator have the final responsibility for the proper erection, maintenance, and operation of the ride.

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ELI BRIDGE COMPANY



Lee A. Sullivan  
Chairman of the Board





**Eli Bridge Company**  
800 Case Avenue  
Jacksonville, IL 62650  
USA  
Phone: 217-245-7145 FAX: 217-479-0103  
Email: [Elibridge@aol.com](mailto:Elibridge@aol.com)  
Website: [www.EliBridge.com](http://www.EliBridge.com)

Bulletin No.: 060131-1  
Release Date: January 31, 2006  
Effective Date January 31, 2006  
Supersedes: None  
Completion Date: As Necessary  
Page 1 of 1

# SERVICE BULLETIN

**Ride Manufacturer:** Eli Bridge Company  
**Ride Names:** All BIG ELI® Aluminum Wheel Seats

Affected Production Dates: All  
Affected Serial Nos.: All

**Abstract of Issue:** Fatigue stress cracks can occur on the side of the aluminum seat at the Y-casting bolted connections due to flexing sustained over time and if left unchecked, will grow to the point of requiring seat replacement. The seat can be repaired by the method discussed below, **ONLY IF** the crack is small and does not allow the aluminum to actually flex in and out, opening up the crack when pressure is applied and is no longer than 3 ½".

**Reason For Release:** Fatigue stress cracks can occur on the side of the aluminum seat at the Y-casting (attachment to the seat pins) bolted connections due to flexing sustained over time and if left unchecked, will grow to the point of requiring seat replacement. This bulletin addresses an accepted method of repair to extend the service life of your seat, **ONLY IF** the cracking has not progressed to the point that the crack is opening up when flexed or is more than 3 ½ inches long. Observe the condition of the aluminum skin around the bolt holes and if a crack is visible, perform repair as soon as possible to minimize further damage.

**Action to be taken:** Eli Bridge has a doubler kit (Kit #326-900) available to install around the Y-casting to spread the stress out to new and undamaged metal. With the doubler kit in hand, remove the internal side seat padding to expose the Y-casting bolts. Remove the bolts and Y-casting. Drill a 1/8" hole at the end of the existing crack(s) to isolate the fracture line(s). Install the .125" doubler to the inside of the skin and the .063" doubler to the outside of the skin (between the skin and the Y-casting). Reinstall the assembly with new 3/8" x 1" long bolts, star lock washers and nuts.

Drill out rivet holes with a #20 drill bit and install #56 pop rivets to complete the sandwich connection of the doublers. If the outside doubler plate interferes with the hair guard bracket, field trim to suit. The addition of the doubler causes the side seat padding not to lay flat against the side of the seat, so the seat pad should be relieved by routing out just enough of the back side to allow it to do so. If you fail to get the padding flush with the side of the seat, when you reinstall the handlebar hardware, it will not fit properly. Reinstall all padding assembly and hardware on side of the seat.

**Eli Bridge Company**

800 Case Avenue  
Jacksonville, IL 62650  
USA

Phone: 217-245-7145 FAX: 217-479-0103

Email: [Elibridge@aol.com](mailto:Elibridge@aol.com)

Website: [www.EliBridge.com](http://www.EliBridge.com)

Bulletin No.: 060131-4

Release Date: January 31, 2006

Effective Date: January 31, 2006

Supersedes: Mfr. Original recommendations

Completion Date: Before Operating

Page 1 of 1

# NOTIFICATION

**Ride Manufacturer:** Eli Bridge Company

**Affected Production Dates:** N/A

**Ride Names:** BIG ELI® Electric Rim-Drive Wheels

**Affected Serial Nos:** 33-00, 34-00, 35-01, 36-02, 37-02, 1034-56RD00, 1081-59RD04, 851-49RD04

**Abstract of Issue:** Filling the oil level in the gear reducers, upper and lower of both sides, to "Full" was the original recommendation of the manufacturer. However, for the application on BIG ELI Wheels, where the ambient outside temperature added more heat than expected from operation alone, the oil tended to build up more than expected pressure because of expansion from heat.

**Reason For Release:** After consulting with the gear reducer supplier, it has been determined that the oil level should be filled 95% to allow for expansion. This suggestion has been taken into consideration and is being passed to all electric rim-drive Wheel owners.

**Action to be taken:** To check the oil level in the reducer, insert a piece of stiff material, such as a dipstick, and measure the distance from the oil to the top of the reducer box. The oil level should measure between ½" and 1" from the top. If the oil is too high, then remove the excess oil to ensure the proper level. Keep in mind that these instructions supercede the original manufacturer's instructions.



**Eli Bridge Company**  
800 Case Avenue  
Jacksonville, IL 62650  
USA  
Phone: 217-245-7145 FAX: 217-479-0103  
Email: [Elibridge@aol.com](mailto:Elibridge@aol.com)  
Website: [www.EliBridge.com](http://www.EliBridge.com)

**Bulletin No.:** 060131-14  
**Release Date:** January 31, 2006  
**Effective Date:** January 31, 2006  
**Supercedes:** None  
**Completion Date:** April 1, 2006  
**Page 1 of 1**

## SAFETY ALERT

**Ride Manufacturer:** Eli Bridge Company

**Ride Names:** All BIG ELI® Wheels, Scramblers® and Little Wheels

**Affected Production Dates:** All

**Affected Serial Nos:** All

**Abstract of Issue:** There has been an increased incidence of patrons coming out of their seats in the past several years in BIG ELI® Wheels and Scramblers®. After much testing and evaluating historical data, it has been shown that if a patron sits properly in the seats of all of the above rides with properly maintained safety devices, they will remain in the seats. The reason for this bulletin is NOT to place blame as to whether these accidents are due to increased misbehavior by the riding public and/or the incidence of maintenance and/or operating deficiencies, but rather to prevent another incident from occurring.

**Reason for Release:** There are many Wheels and Scramblers operating which have been outfitted with seatbelts and we have received no reports of patrons coming out of seats so equipped. We therefore feel it prudent to strongly recommend that all Eli Bridge Company rides have and use SEAT BELTS to help keep patrons in their seats. Seat Belts are available for both BIG ELI Wheels and Scramblers® to help keep patrons properly restrained.

**Action to be taken:**

**Strongly** consider installing SEAT BELTS on your Eli rides. Please be aware that seat belts must be properly installed to a) be effective and b) not damage the seats. Eli Bridge Company has SEAT BELTS available for BIG ELI Wheels and Scramblers. When you order seat belts, please read and follow the instructions carefully.

The operations currently using seat belts have reported that it takes very little extra time to incorporate seat belt use with passenger loading and unloading. In most cases, the operator only needs to instruct patrons to buckle their seat belts and visually check to be sure that each has been latched properly and tightened snugly while they are checking the secondary latches already installed.

For more information call us at 217-245-7145, or contact us by email at [EliBridge@aol.com](mailto:EliBridge@aol.com).

**Eli Bridge Company**

800 Case Avenue  
Jacksonville, IL 62650  
USA

Phone: 217-245-7145 FAX: 217-479-0103

Email: [Elibridge@aol.com](mailto:Elibridge@aol.com)

Website: [www.EliBridge.com](http://www.EliBridge.com)

Bulletin No.: 060131-15

Release Date: January 31, 2006

Effective Date January 31, 2006

Supersedes: None

Completion Date: July 10, 2002

Page 1 of 1

# NOTIFICATION

**Ride Manufacturer:** Eli Bridge Company

**Ride Names:** BIG ELI® HY-5 Cable Drive Wheel

**Affected Production Dates:** All

**Affected Serial Nos:** All

**Abstract of Issue:** It has come to our attention that some jurisdictions have begun requiring covers over the drive sheave on the HY-5 BIG ELI® Wheel. This came about as the result of an accident on a former Park Model Eli Wheel converted to a trailer-mount by a company other than Eli Bridge Company. As we understand the incident, an individual was injured when their foot came in contact with the moving parts of the drive sheave. In receiving information about the incident it appears that the distance between the drive unit and the seats was reduced during the unauthorized modification to make the ride trailer mounted.

**Reason For Release:** To the best of our knowledge, no such accident has ever happened on a Park model or a factory designed and manufactured Eli Trailer-mounted model Wheel. We have serious concerns about placing covers around the drive sheave as a "barrier" on Eli models. First, we believe that such a cover may change the point of contact to a position more readily accessible to the patrons' extremities, resulting in more accidents. Obviously, none of us wants that result.

The second problem with placing a cover close to the drive sheave is that it is also in close proximity to the moving drive cable. If the cable is constantly rubbing against an added cover, it could produce two new results, neither good. First, it adds a pinch point for fingers and toes and second, then the cable could more quickly wear and even snap while under tension. Eli Bridge stands behind our products and we are always concerned with rider safety first. We do not support any modification that would compromise the safety of the ride for the customers.

In summary, while we are not aware of incidents of the type described above on an Eli Wheel (not remanufactured by another company), we feel compelled to notify you of the accident that occurred and to recommend that Eli Wheel Owners take steps to prevent such incidents from happening.

**Actions to be taken:**

- 1 -- Owners/Operators display obvious warnings to patrons to "Keep hands and feet inside the seat at all times"
- 2 -- Train the operator to vigilantly practice proper care with respect to patron behavior as well as their own, to promote safety and enjoyable entertainment.

Note: As a matter of record, the only practical way to completely eliminate, mechanically, the opportunity for an incident-as-described above, is to upgrade-from-your-HY-5®-Wheel-to-a-rim-drive-HY-5H-BIG-ELI®-Wheel. Eli Bridge Company began building Rim Drive HY-5® II Wheels in 1984, so the technology is 22 years old and the durability and safety records of these Wheels are well documented and established. Most BIG ELI® Wheel purchasers since that time have chosen the rim-drive option. Eli Bridge Company no longer manufacturers cable drive Wheels because we feel strongly that the rim drive Wheel is a much safer product, and certainly easier to operate by today's ride operator.