

SPENCER ORGAN COMPANY

*Catalog of Parts, Services and Components
for restoring electro-pneumatic pipe organs*



SPENCER
ORGAN
COMPANY
inc.

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president

Parts
Restoration Services
New Components

FOR THE RESTORATION OF
ELECTRO-PNEUMATIC
PIPE ORGANS

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Spencer Organ Company



SPENCER ORGAN COMPANY, INC. of Waltham, Mass. was formed in 1995 and specializes in restoring electro-pneumatic pipe organs and components. Our firm has worked on many Skinner and Aeolian-Skinner organs, including Boston landmarks such as Church of the Advent, Old South Church and The First Church of Christ, Scientist, Mother Church—Extension; Groton School Chapel; Palace of the Legion of Honor, San Francisco; Hill Auditorium, University of Michigan; Plymouth Church of the Pilgrims, Brooklyn Heights; and Church of the Good Shepherd in Jacksonville. We have also worked on instruments of Welte, Möller, Æolian and Kimball manufacture.

Spencer's own restorations include much of the Æolian at Longwood Gardens (1930, 146 ranks); the W.W. Kimball at Saint John's Cathedral, Denver (1938, 96 ranks); the Æolian-Skinner at Central Congregational Church in Providence (1965, 58 ranks); and relocation and restoration of a residence Aeolian-Skinner (1934, 13 ranks expanded to 17) from Dayton, Ohio to the First Congregational Church of Milton, Massachusetts. Phased projects include the vertical-selector Aeolian-Skinner console at United Parish Church, Brookline, Massachusetts (1933, Op. 885); the Great and Pedal of the Aeolian-Skinner at Calvary Episcopal Church, Memphis (1935, 32 ranks restored); and the Swell and Choir of the Skinner/Aeolian-Skinner (1930/1953, 31 ranks restored) at Saint Paul's School, Concord, New Hampshire.



Our Philosophy

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IN OUR WORK, we strive to return organs to like-new condition, blending traditional restora-

tion practices with increasing implementation of conservation techniques. While we have no desire to alter the way in which an organ sounds or functions, we occasionally make subtle changes (dowel-nutting) or employ additional elements (double gussets) in the hope of greater longevity than strictly original construction practice may offer. Materials, glues and finishes almost always echo as-built conditions, respecting the builder's intentions and promoting future restoration.



We apply the same standards to work for your projects. Pre-made parts of exacting quality save time and control costs. Our restoration services bring a project through your shop with exemplary quality and trouble-free service, in good time and at a fixed price. Where time and convenience are critical, we offer turnkey services, including on-site removal and reinstallation. Replica components make it possible to restore the much-rebuilt organ in a spirit of authenticity and sensitivity. Over time, you may find such components useful for other projects as well.

We stand ready to offer services beyond the pages of our catalog, particularly for parts, tasks or components you feel we might be well-suited to undertake.



PRICES

The current Price List indicates our latest prices. We strive to keep the Price List current, though occasionally it is necessary to revise prices prior to the publication of the next Price List. In any case, we will quote current prices before acceptance of any order. Any quoted prices are subject to your acceptance of our terms and conditions set forth below.

TERMS

Prices are F.O.B. Waltham, Massachusetts, or shipping point.

- Parts orders less than \$500 require no downpayment; cash pre-payment entitles the purchaser to a 2% discount, provided the purchaser has no outstanding invoices with Spencer.
- Parts orders above \$500 require a 50% downpayment, balance to be invoiced. Past due accounts are subject to 1.5% interest per month, beginning 30 days from the invoice date.
- Terms for Restoration Service work are quoted on an individual basis. As a guide, we generally request 30% downpayment, 60% upon completion of the work in our shops, and 10% final payment upon delivery of the work to your premises.
- Terms for Turnkey Restoration Service work are by quotation only.

FOREIGN ORDERS

We request full prepayment on the initial order, terms to be worked out for any subsequent order, all payments made in US dollars at par. As with domestic shipments, all prices are F.O.B. Waltham, Massachusetts. Charges relating to inland and ocean freight, customs, duty, fees, brokers, overseas packing, insurance and any other charge incurred with the order are the responsibility of the purchaser.

ORDER CANCELLATIONS

Once received, orders may be cancelled only in writing, the date of cancellation being our receipt of written notice from you.

- If we have yet to begin your work, you will receive a refund less 5% of the total order price.
- If we have begun your parts order, we will compute a fair loss value to be deducted from the amount of your downpayment.
- If we have begun your restoration service order, we will ship back the work in its present state, and compute a fair value of work accomplished to be deducted from your downpayment and/or billed to you for services rendered.

TRANSFER OF TITLE

Parts and new components remain our property until payment is made in full.

RETURNS AND REPLACEMENTS

RETURNS are good for credit or exchange only, not refund. We accept returns under the following conditions:

- that parts or components are in good, working and re-saleable condition.
- that custom orders cannot be returned.
- that returned goods reach us within 60 days from the date of shipment
- that we deduct 10% from the original purchase price against your credit

REPLACEMENTS are possible where goods are deemed inadequate. Please return the part or component to us and we will exert every effort toward a satisfactory resolution. If, upon receipt, we agree that the parts or components are defective, we will cover shipping costs both ways.

CLAIMS

We inspect all parts and test all components thoroughly before shipping; we pack materials with utmost care. Damage claims should be presented to the carrier. We are not responsible for damage after goods have been delivered to the carrier in good order. Naturally, however, we will help you seek adjustment from the carrier.

WARRANTY AND LIABILITY

PARTS, NEW COMPONENTS

All parts and components are warranted for a period of five years, and will be replaced if deemed defective. We are not responsible for any consequential damage or labor charges associated with repair of damage as a result of defective parts. Our liability extends solely to the part in question, and not beyond.

We are not responsible for any consequential damage or labor charges associated with repair of damage as a result of a defective component. We will work with you to explore the most prudent means of rectifying the situation, and in that regard reserve the right either to have the defective component shipped back to us or, if more effective for all parties, for us to come repair the component on-site.

RESTORATION SERVICES

Restoration work of any pre-existing component is warranted for a period of five years. We will extend all reasonable effort to rectify a problem, beginning with technical support by telephone to on-site travel, inspection and repair. We will work with you to explore the most prudent means of rectifying the situation, and in that regard reserve the right either to have the defective component shipped back to us or, if more effective, for us to come repair the component on-site.

LEGAL CONSIDERATIONS

Any disputes will be subject to negotiation or binding arbitration under the supervision of the American Arbitration Association or other professionally-recognized arbitration organization. Disputes arising from any sales agreement will be arbitrated in the Boston, Mass. metropolitan area. Commonwealth of Massachusetts arbitration laws and regulations will be applied in any arbitration proceeding.

Parts



ONE OF RESTORATION'S MORE TIME-CONSUMING TASKS is preparing replica parts: pitmans, pouches, valves and other small action pieces. Attention to key details results in work that gives the best operation, good margin of adjustment and a long lifespan.

LEATHER: we use only the finest and most durable skins, based upon current research, our own experience, and that of colleague firms. Leathers are chosen with regard to application, pressure and desired tensile strength. Chrome-tanned sheep skins are generally used; kangaroo leather is available by special request (check for availability and price). Valve leather is double-buffed for good glue adhesion and valve seating.

PAPER and DISCS: fiber discs are used for all pouch work.

ADHESIVES: water-soluble hyde and fish glues are used in all cases where a perishable part is attached to a permanent element. Non-soluble adhesives are used where firmness of adhesion is desired and future renewability is not at issue.

FINISHES: we finish all parts as befits their application and original construction.

METAL PARTS: springs and valves wires are replaced with the best quality available.

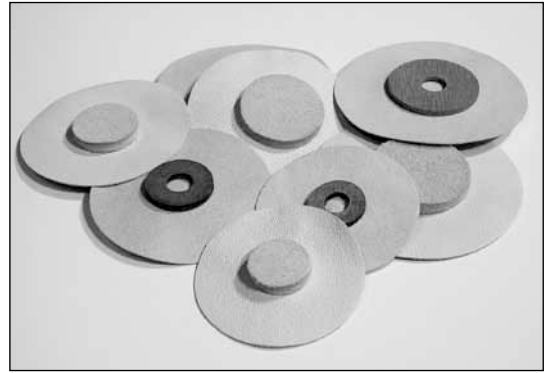


NOTE POUCHES

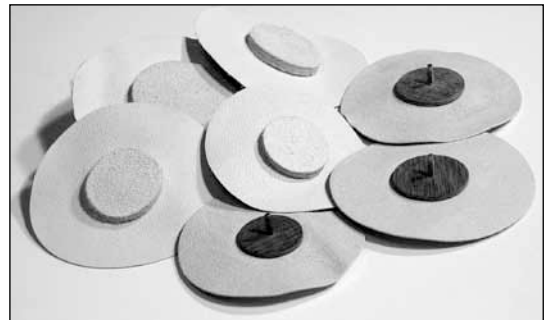
We work to your requirements for leather type as related to wind pressure and application — also any special valve thickness or construction details. Pouches are available in two standard styles, with other styles available upon request.

Note the standard Skinner sizes:

VALVE SIZE	POUCH SIZE
$5/8''$	$1\ 3/4''$
$3/4''$	$2''$
$7/8''$	$2\ 1/8''$
$1''$	$2\ 3/8''$
$1\ 1/4''$	$2\ 1/2''$



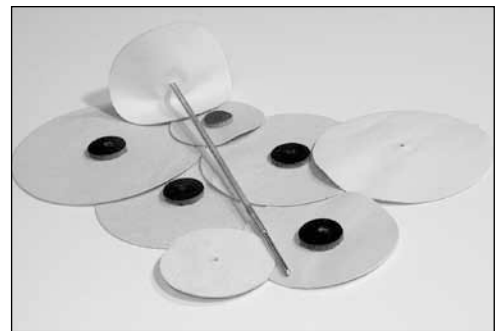
Style One



Style Two

PRIMARY POUCHES

These are backed with $1/2''$ heavy cowskin leather buttons or fiber disks of an appropriate size, threaded for No. 13 B&S gauge valve wires.



BASS NOTE POUCHES

Identical to note pouches, except that felt is applied to the bottom of the fiber disk to reduce action noise.



SQUARE NOTE PNEUMATICS

As found in Wurlitzer, Kimball and Welte organs for primary and unit actions. Our new pneumatics are made with 1/2" poplar. We will work to your requirements for leather type as related to wind pressure and application — also any special valve thickness or construction details.

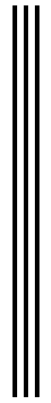
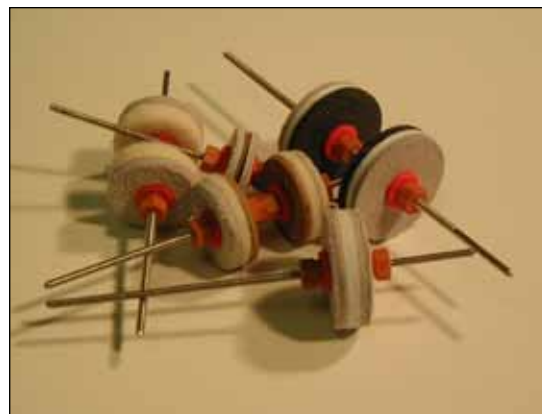
Note the standard sizes used in the pitman chests of Kimball and Welte organs.

$15/16'' \times 15/16''$
 $1'' \times 1^{3/16}''$
 $1'' \times 1^{3/8}''$
 $1^{1/4}'' \times 1^{1/2}''$



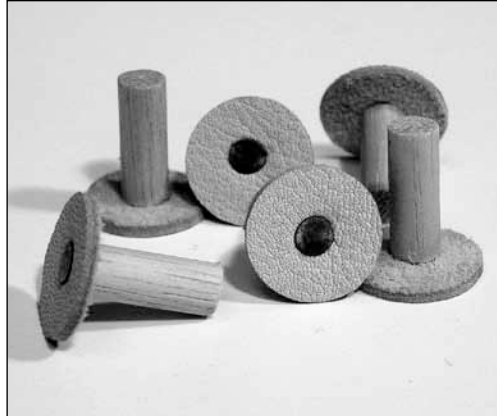
PRE-MADE VALVE WIRES

For primary and unit actions. We work to your request for leather and valve type as related to wind pressure and application — also any special valve thickness or construction details.



REPLICA PITMANS

For Hutchings, Skinner, Kimball and Welte organs, as well as Aeolian-Skinner organs built prior to 1959, we manufacture replacement stemmed pitmans. Stems are sanded smooth and can be saturated with graphite upon request. Pitman discs are glued and tacked in place. For Aeolian-Skinner or other more recent types of pitman chests with stemless pitmans, we can provide pitmans at replica sizes.



SKINNER STOP-ACTION TUBE GASKETS

To fit the underside of the pitman rail and inside the stop action box for the lead conveyance tubes.



AEOLIAN-SKINNER ALTRON MAGNET GASKETS & ARMATURES

In the restoration of Aeolian-Skinner magnets, it is often necessary to renew gaskets, as they fail with age and come apart as magnets are removed for cleaning.



Using new dies, we stamp duplicate gaskets from high-quality blotter paper (interior gasket) and leather (outer gasket).

New armatures are punched from steel, leathered on one or both sides as befits the original application.

REPLICA SKINNER MAGNET COILS

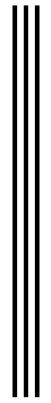
Skinner wood-capped magnets used from 1909 until 1934 are both long-lasting and straightforward to restore. But in some earlier organs, the magnets can exhibit residual magnetism or the coil leads are not soldered together. We have used these replacement coils in two such instances, and you may find them useful for one of your projects.



PRE-MADE RESERVOIR PARTS

One way to facilitate the restoration of reservoirs is to use our ready-made gussetts, caps and strips.

We can provide pre-cut, pre-skived leather gussetts of a thickness and pattern appropriate to the application — also the cap pieces and strips. Strips are available in rubbercloth or leather, pre-skived.



Restoration Services



IN A BUSY SHOP WITH MANY CONCURRENT JOBS, it is often easier to send work out. Out-sourcing affords not only cost control and peace of mind, it may allow you to take on a project without increasing your work force.

Studying the restoration work of others, and refining our own techniques, we have arrived at processes designed to yield maximum longevity from restored components. Our whole approach to pouchrail and primary releathering is geared toward preserving the quality and authenticity of original material while promoting the feasibility of the next restoration. Reservoir work involves not only careful preservation and attention to detail, but also certain subtle re-engineering to achieve better performance and long-term stability.

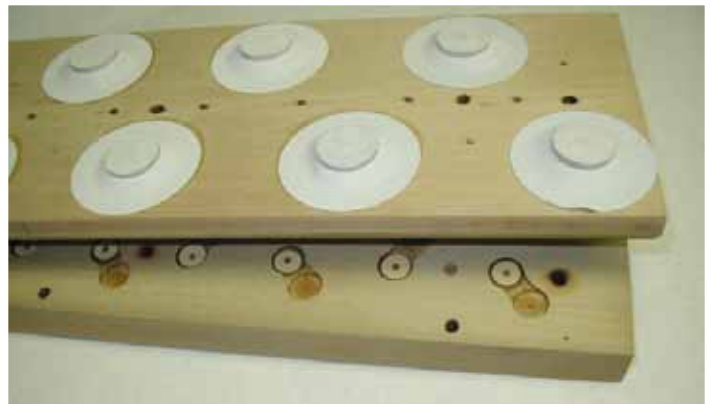
Our restoration services can be tailored to suit your needs. Components can be shipped to us for return service, clearing your shop for other work. If your workforce is already taxed with current projects, we can occasionally offer restoration service on a subcontracted turnkey basis. For this we come on-site, remove all components to be restored, bring them back to our shops for restoration, and return to the job to carry out all reinstallation and adjustment.



POUCHRAIL RELEATHERING

Our standard practice includes:

- Disassembly, stripping and cleaning, noting original spring tension and spacer block dimensions. Pouch rails are lightly sanded to clean. Only in extreme cases are rails planed smooth, such as in the application of non-water-soluble glues such as PVC-E or Pliobond, or where Perflex™ has been applied. Even in these cases, planing is as minimal as possible. Pouch wells are lightly sanded to remove any burrs.
- All original hardware is cleaned in a basket bead blaster and finished in a lacquer wash.
- New pouches, springs and spacer blocks are provided. Pouches are applied with fish glue. Once dry, pouches are rubbed with talcum and stretched to proper height.
- New punch pitmans are replaced per standard practice. Stemmed pitmans are replaced at additional cost, depending upon your request, our discretion and/or condition.
- Where necessary, new paper is applied to the bottoms of pouch rails, all borings burned through.
- Where necessary, new bolster strip cork and paper are provided.
- New stop-action gasket fitted in all cases.



KEY-PRIMARY RELEATHERING

Our practice follows the general spirit of pouchrail leathering work.

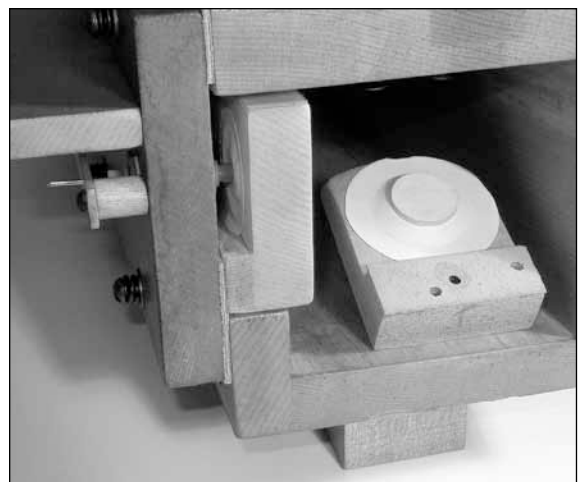
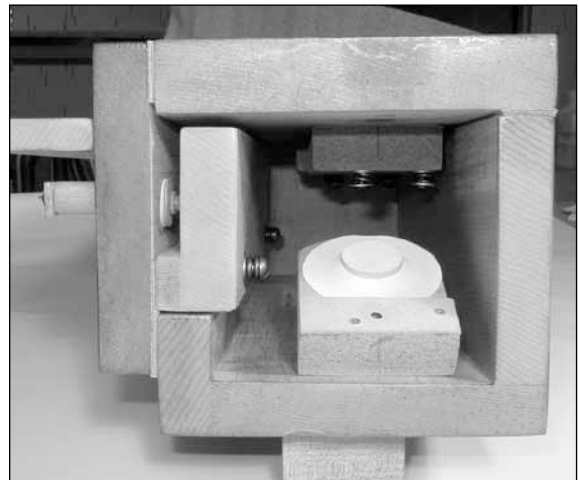
- Where a primary board incorporates the magnet rail, all magnets are taken apart and cleaned. Where necessary, new gaskets are applied and armatures releathered or replaced.
- New pouches, valves, valve wires, nuts and felts; shellac and regasket primary board
- In the case of a single-faced Skinner double-primary, the original communication tubing is cut and removed. New lead tubing is fitted and swedged tight.



UNIT/TUBULAR BASS CHESTS

It is our preference to receive the entire chest, so that all elements can be restored at once. However, if you desire, we can releather only the interior components.

- Clean, re-shellac and re-gasket chest and bungs.
- New pouches, valves and springs. New block gaskets as necessary. Where blocks are nailed in, screws replace nails.
- New primary valves, valve wires, nuts and felts.
- All magnets taken apart and cleaned. Where necessary, new gaskets are applied and armatures releathered.
- Tubular-pneumatic actions can be converted to electro-pneumatic on special order.



WEDGE AND SQUARE PNEUMATIC RESTORATION

Console pneumatics, individual swell shade actions from Wurlitzer, Möller, Kimball or Welte organs — any kind of detachable square pneumatic that requires simple recovering.



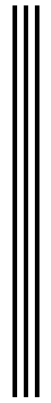
SKINNER AND AEOLIAN-SKINNER STOP-ACTION BOXES

- Disassembly and cleaning, exterior surfaces re-shellaced.
- All original hardware is cleaned in a basket bead blaster and finished in a lacquer wash.
- New pouches, valves, springs, valve wires, nuts and felts are provided.
- All magnets are taken apart and cleaned. Where necessary, new gaskets are applied and armatures releathered or replaced.
- Bungs are regasketed. A new felt-and-leather pillow gasket is fitted to the box top joint.
- Any cracks are sealed; screw holes are dowel-nutted.



SKINNER AND AEOLIAN-SKINNER WHIFFLETREE SWELL ENGINES

- Disassembly and cleaning, exterior surfaces re-shellaced.
- All original hardware cleaned in a basket bead blaster and finished in a lacquer wash.
- New primary pouches, valves, springs, valve wires, nuts and felts.
- All magnets taken apart and cleaned. Where necessary, new gaskets are applied and armatures releathered or replaced.
- New gaskets applied.
- Pneumatics recovered in high-quality rubber cloth.
- New “witch-hat” seal(s) provided, replacing or restoring flange as deemed most appropriate.
- Linkages checked and de-rusted as necessary.



RESERVOIRS

- Disassembly and cleaning, exterior surfaces re-shellaced.
- Original hardware cleaned in a basket bead blaster and finished in a lacquer wash. Any missing hardware replaced with appropriate vintage materials.
- Panels regasketed.
- New hinges of 2oz. packing leather
- Folds and frames relieved to allow for setting-in of hinge.
- New interior and exterior gussets, carefully skived at all edges on both inside and outside surfaces.
- Renewal of cone-valve seat and re-felting of cone valve.
- Dowel nuts installed across all screw holes in the reservoir head and back, to eliminate stripping of screws.
- Where necessary, spring rail screw holes are retrofitted with interior one-inch plugs and re-bored to fit the original screws.
- Re-engineering of windbox attachment method: in location of original screw holes, $\frac{1}{4}$ -20 "T" nuts are installed (covered with a leather punching to prevent leakage). $\frac{1}{4}$ -20 round-head machine screws with compression springs and washers are used to fasten the windbox the reservoir bottom.
- All interior wooden joints sealed in leather.
- Reservoir head, back and parts are given two coats of glue sizing to the inside and edges; end grain portions of the head and back receive three coats of glue sizing.



OPTIONAL SERVICES

- New wind boxes, where old boxes have deteriorated beyond prudent repair. New boxes are made from 1" Poplar/poplar veneer core plywood, all edge voids filled in with wood, not putty.
- Cross-tab hinging, for additional fold strength where reservoirs are mounted on their sides.
- New panels: poplar for top panels, 1" plywood for bottom panels.

TREMOLOS

- Disassembly and cleaning, exterior surfaces re-shellaced.
- Original hardware cleaned in a basket bead blaster and finished in a lacquer wash. Any missing hardware replaced with appropriate vintage materials.
- Internal muffler felt cleaned and retained, or replaced
- Motor rebuilt, re-using card stock where possible
- New leather nuts on motor adjustment rod
- Starter pouch replaced, pouch plate cleaned and re-shellaced, plate felt replaced (in the case of early tremolos, book pneumatic starter recovered)
- Starter primary restored with new pouch(es), valve(s), wire(s), felts, nuts
- Magnet cleaned, regasketed as necessary, armature releathered or replaced
- Starter pouch retaining strips refurbished, provided new, or re-engineered as appropriate
- “Helper” spring checked and replaced if necessary
- Tremolo feet re-felted
- Wicking on one-inch feed duct replaced

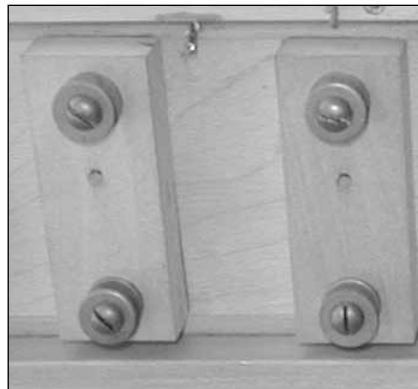


MAGNET OVERHAUL

Where magnets have given trouble, rather than outright replacement it is often easier and more cost-effective to overhaul them systematically.

- Disassembly and thorough cleaning
- Original hardware cleaned in a basket bead blaster and finished in a lacquer wash. Any missing hardware replaced with appropriate vintage materials.
- Check armatures and replace with duplicates as needed
- Recover armatures as applicable
- Check coils for consistency, reliability; replace as needed
- Repair, refresh leads
- Refresh, replace gaskets as needed

Note: this service is limited to magnets of Skinner, Æolian, Aeolian-Skinner, Welte, Kimball and Wurlitzer manufacture.



PERCUSSIONS

We have restored percussion actions, among them Chimes, Harps, Orchestra Bells and Xylophones, as well as Wurlitzer, Skinner and Aeolian toy counters. Due to the unusual nature of such machinery, let us make a specific quotation for restoration work of this kind.





METAL PIPE RESTORATION

OUR GENERAL TREATMENT for metal pipes is to submerge them in hot water with a mild detergent, rinse them copiously in cold and buff them dry. We then put every pipe on a mandrel to check for roundness and remove dents, as well as checking toes for sound form. Although we generally replace tuning sleeves, in certain instances we retain the originals. Canistered stops are repacked after discussion and research into the best method, either the original or some modified approach.

WOOD PIPE RESTORATION

WE REMOVE caps, stoppers/flaps, and toes; blow and brush out windways and interiors; and repair all splits and cracks, splining as necessary. Apart from damp wiping, no water is applied internally or externally. Where the original finish is in good condition, we apply only a coat of wax for a good appearance and to repel dust. Where the finish has been compromised, we re-shellac or lacquer as needed.

FLAPS are cleaned as befits their material described above for metal pipes. STOPPERS are repacked generally following the original pattern, unless time has revealed a better method.

New Components in Vintage Style



MISSING OR MANGLED EQUIPMENT? In a restoration project, we attempt to make new components so that they will assume the appearance of the originals, for uniform appearance and sensitivity to the builder's aesthetic.

As with our parts, materials, glues and finishes follow in the spirit of the originals. For example, when providing new components for Skinner and Aeolian-Skinner organs, we use No. 1 grade California sugar pine, finished in orange shellac; in a Kimball organ, however, we would build from straight-grain white pine finished in clear lacquer.



CONE-VALVE RESERVOIRS

Especially suited to wind pressures from 5 to 30 inches, following Skinner pattern. We manufacture reservoirs in the five most commonly used Skinner sizes, but are happy to accommodate custom orders.

New reservoirs are made of the following materials:

- #1 California sugar pine, finished in orange shellac (frame)
- Poplar (folds, top panels)
- Maple (spring rails, windbox cleats)
- One-inch voidless plywood (bottom panels, windbox)

Construction details echo not only original techniques but the new features we build into restored units. Regardless of pressure, double gussetts are introduced. Hinging is let in to frames and folds, rather than surface-mounted; screws are dowel-nutted. Windboxes are made of voidless plywood, attached using T-nuts instead of wood screws. The reservoir head, back and parts are given two coats of glue sizing to the inside and edges, with three coats applied to the end-grain portions of the head and back. All leather is meticulously skived on both inside and outside surfaces, for appearance's sake and superior bond. Cross-tab hinging is available at additional cost, desirable where added strength is required (such as sideways-mounted reservoirs).

Five standard sizes:

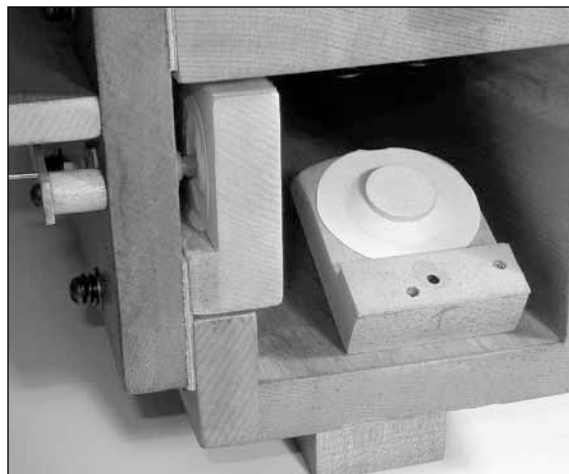
20" x 30"
24" x 36"
30" x 48"
36" x 60"
48" x 72"



UNIT WINDCHESTS

MANUAL OR BASS

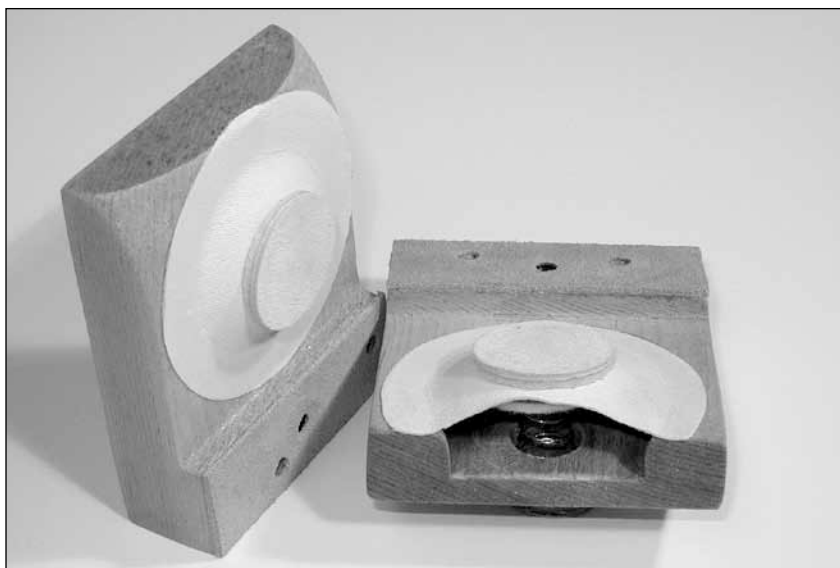
Closely patterned after the Aeolian-Skinner style, the only outward difference of appearance in our new chests are the modern magnets. Made of #1 California sugar pine and finished in orange shellac, our chests use single primaries to exhaust either individual pouch-block actions for offset chests, or a pouch rail for a manual stop. Ideal for sensitive additions or for reconfigured organs where the occasional offset chest cannot be successfully re-employed.



SKINNER AND AEOLIAN-SKINNER BASS BLOCKS

Made of #1 California sugar pine to common sizes found in Skinner and Aeolian-Skinner organs unit chests. End grain is sealed with shellac. Blocks can be provided either leathered or raw. Block sizes are identified by valve size:

$\frac{5}{8}'' - \frac{3}{4}'' - 1'' - 1\frac{1}{8}'' - 1\frac{1}{4}'' - 1\frac{1}{2}'' - 1\frac{7}{8}'' - 2\frac{1}{8}'' - 2\frac{3}{8}''$

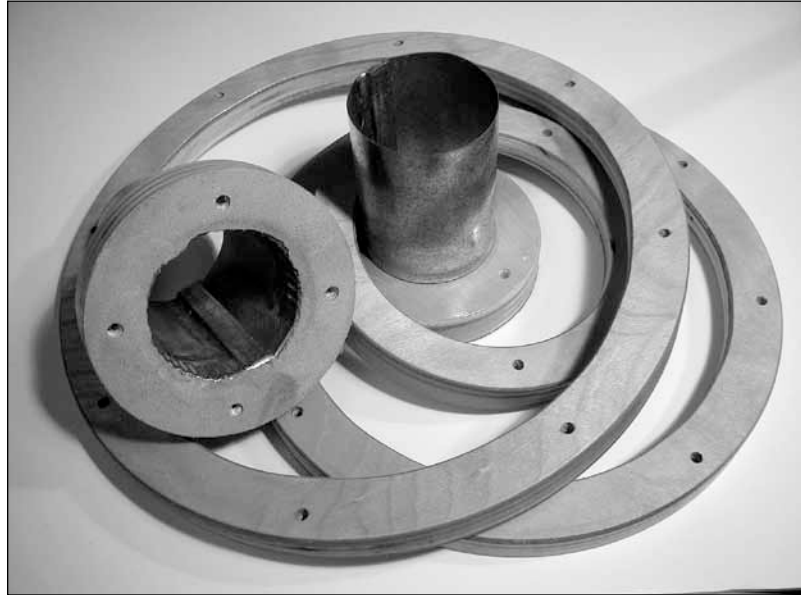


DUCT FLANGES

Patterned after Aeolian-Skinner, our flanges are made of one-inch voidless plywood. Wicking is sized and let into a relief against 26-gauge galvanized steel duct, with a gasket of thick packing leather.

We stock flanges in the most common sizes, but can provide custom diameters upon request.

Unless requested otherwise, flanges come with 6" of nipple length.



3" — 4" — 6"

8" — 10"

12" — 16"

PRE-SOLDERED LENGTHS OF GALVANIZED STEEL DUCT

To facilitate the running of new metal windlines, we provide convenient ready-to-use lengths and fittings of 26-gauge galvanized steel. All sections are riveted together, seams and rivets soldered tight, and any rough joints sanded smooth for comfortable handling.

ON-SITE INSTALLATION OF GALVANIZED STEEL DUCT

One of our on-site specialty services is the running of new metal windlines. As with our ready-to-use lengths, all duct and fittings are 26-gauge galvanized steel, sections are riveted together, seams and rivets soldered tight, and rough joints sanded smooth.

INDIVIDUAL SWELL-SHADE ACTIONS

A design similar to the Wurlitzer “studio”-type shade action, utilizing a large pneumatic actuating shades through twills and double primaries for quick action. Made of poplar, pine or maple, and finished as requested.

SKINNER-STYLE DOG-LEG BENCH

Can be made in walnut or oak, with or without back-rest.



Spencer Blower Overhaul



WHILE WE'RE NOT THE OLD HARTFORD COMPANY that made Spencer blowers, we do love rebuilding them. Beautifully and sturdily constructed, the Spencer Orgoblo blowers exude all the confidence of the late industrial age. With proper rebuilding and balancing, they run cool and smooth, giving every indication of indefinite lifespan.



*newly-installed Spencer blower
for Orchestra Hall, Chicago*

Motors are sent to a Boston colleague for bearing work, balancing and re-winding as applicable. Housings are cleaned, sandblasted and repainted. Fans are checked for stability, and shaft-balanced. New jute padding is provided on base blocks.

We gladly work on any size of Orgoblo, even down to the smallest $\frac{1}{4}$ -horsepower Orgoblo Junior used for voicing jacks, vacuum-action consoles or practice instruments. Generally, we prefer machines fitted with three-phase motors. Single-phase Century motors with centrifugally disengaging commutators are treated on a case-by-case basis.

