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FOR THE AMERICAN PIPE ORGAN

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THE 1968 M.P. MÖLLER PIPE ORGAN

On 11 April 2023, I visited First Unitarian to survey the Möller pipe organ. The goal was to review the organ's condition and make recommendations for its care, rehabilitation, or replacement. Joan Richards met me first thing, and over the course of the morning we had useful conversations regarding the building's remarkable architecture, the space around the console, those locations at which musicians and preachers gather, and the particular acoustical properties of the ceiling dome. The morning saw further conversations with Beth Armstrong on similar topics. After lunch, I met with Rev. Liz to review all this and more.

The organ's recent failure has drawn attention to the organ's condition, which is showing its 55 years of age. Such failures beg questions about not only the instrument's future but also the role any organ should assume at First Church — the space it occupies, both physically and aesthetically — within congregational life. My visit and this letter will hopefully stimulate the beginnings of a useful discussion around the topic.

EXECUTIVE SUMMARY

Value: The organ should be insured for about **$2.5 million market replacement value**, as it would likely take that much to replace this organ from the ground up.

Maintenance: First Parish should aim toward budgeting $15,000 annually on the instrument's behalf, half for actual maintenance, and the balance set into a sinking fund against future work.

Condition: The organ seems to have received adequate care over its 55 years, but less so recently, and none over the past several years in Covid. Coupled to normal age and wear, these factors mean that the organ now has many dead notes and other malfunction, making playing and preparation undependable.

Historicity: Möllers are commonly considered serviceable instruments rather than great artworks. The organ's complex visual and physical layout suggest the company aimed to make a statement here. Musically, the organ is typical of its period without real distinction, while containing a number of appealing flute and string sounds.

Urgency: I logged 55 dead notes and several mechanical malfunctions. These stem equally from wear, age, and lack of use. A greater urgency is that most of the organ's 19 bellows show either partial or advanced wear, including the primary attic bellows that supplies all of the organ's wind. If that unit were to fail (like the rubbercloth sleeve failure recently repaired by Ortloff Organ Co.), the organ would once again be inoperable. Failure of any other bellows would affect some small portion of the instrument.

Floor space: The organ takes up a surprising amount of room in the choir loft. Having the singers off to the side surely poses challenges. More to the point, the lack of room and large non-mobile console limit how the space might be used for all musicians: singers of all ages and instrumentalists of all kinds.

Recommendation:

As proposals from Foley-Baker and Ortloff show, overhauling this organ would cost a lot while solving none of the core limitations. Dollar for dollar, it seems more prudent to pursue a new, smaller instrument, which can achieve several goals

- be housed in a case whose design and ornament harmonize with the building's distinctive style
- be physically smaller, increasing space for all musicians, in the location where sound is best made
- have a compact mobile console, placed wherever a Sunday might best suggest while taking less room
- be far simpler mechanically, reducing both maintenance and eventual rebuilding costs
- have a musical scheme just as flexible but with fewer pipes, perhaps including the most distinctive Möller pipes, which would provide continuity with a half-century of musical leadership

I — SOME CONTEXT

M.P. Möller is often derided as a "factory" builder, mostly on account of their prodigious output. Founded in 1875, Möller built more than 12,000 instruments and rebuilt several additional thousand before closing in 1992 — staggering figures for any organ builder. By comparison, the acknowledged leader in roughly the same period, Aeolian-Skinner, produced around 1,400 organs between 1901 and 1971. Like Möller, Aeolian-Skinner also rebuilt many organs, though hundreds instead of thousands. At Möller, quality varied over the decades; artistically, the company followed trends more than establishing any. But they were reliable, and honorable, and on occasion turned out a distinguished product.

The effort for First Parish clearly had an architectural vision, using up almost all the available space and attempting to make the organ's appearance one of bold Modern Movement ideas in a clearly traditional space. Such was the mode of the times, when current ideas of architectural preservation were in their infancy, and it was thought perfectly sympathetic to introduce an example of current stylistic thinking, and not something self-consciously retrospective and blending into a building's core style. (It bears mention that this approach has been the norm through centuries of European architectural development, hence Baroque organ cases in Gothic churches, or today, highly modern organs in ancient settings.)

The functional display of organ pipes — hundreds of pipes openly visible in some manner — was the Modern Movement's contribution to organ visual design, breaking with a centuries-long tradition of enclosing almost all of an organ's pipes within a large wooden case, and having only display façade pipes. The "functional display" approach has its roots in 1930s modernism, and increasingly became the style for new organs from the mid 1950s through 1980s. Every prior organ at First Parish fits the traditional mode, as archival photographs reveal.

Contemporary installations in other Providence churches show both the functional approach (1965 Aeolian-Skinner at Central Congregational) and the first glimmers of a return to the traditional encased style, though expressed in a modern idiom (1968 Casavant Frères at the Cathedral of Saints Peter and Paul). Today, and especially within U.S. preservation ideology, in a building as distinguished as First Parish's, the inclination would be toward a traditional case echoing the building's Federalist core and early Gothic revival touches.

II — VALUE

In many churches, the pipe organ is the largest and costliest item, apart from the building itself. Perhaps your archives retain the contract, as I would imagine this organ cost something north of $100,000 when new. The instrument contains 40 individual stops (actual sounds), 53 separate sets of pipes (called "ranks," usually greater than the number of stops, as some stops play more than one pipe per note), and 3,185 individual pipes. Some comments regarding value:

The organ should be insured for its market replacement value. If this instrument were destroyed and had to be recreated afresh, one could not return to Möller, either for a replacement price or a new organ. One would want an insurance policy to fund the creation of a new organ equivalent in scope, furnished by a modern builder. I estimate that cost at somewhere between $1.9 and $2.4 million. To that sum one might add 5% for the attendant costs any church usually incurs upon an organ's installation: physical preparation of the chamber spaces, any structural reinforcement, electrical connections, any hoisting and

rigging. In whatever manner the Church insures the property and its contents, the policy should reflect the organ's market replacement value ($2.5 million), not its cash value as a depreciated asset, which in this case might approach $100,000 but not realistically more.

Pipe organs require tuning and maintenance, and the funding to support both. In organ circles, we generally recommend that institutions budget ¾ to 1¼ percent of the organ's replacement value for maintenance and sinking fund purposes. Here, I suggest the church set aside $15,000 annually: $7,500 for regular maintenance, the other $7,500 into a sinking fund for future care.

This is a guide to best practice, understanding that it may be a goal requiring some time to achieve.

III — LOCATION and ACOUSTICS

The Church's architecture has logically dictated the location of pipe organs. Having singers and a pipe organ in the rear gallery is a constant for pre-Civil War New England church-building, and before the Oxford Movement influenced the design of even the most non-liturgical of religious edifices. Having choirs and organs in an elevated position almost always holds an acoustical advantage, as, generally speaking in such rooms, the closer any sound is to the ceiling, the more likely it is to be heard clearly throughout the room in a natural manner without need for amplification. This is why we encounter so many 18th century churches with elevated pulpits, sometimes elaborately so (Trinity Church, Newport comes to mind), and quite so here.

First Church is a special form of such architecture. Here the core style of the Federal Meeting House has been developed with magnificent and lofty Gothic-arched glazing, giving an unusual sense of light and spaciousness, and surmounted by a magnificent coffered dome. Domes are famous (sometimes infamous) for their acoustical properties, as the shell-like form tends to transmit tones with startling efficiency. (Think of the "whispering" gallery of Saint Paul's Cathedral, London, or many state house capital buildings.) As Joan and I were walking about the room conversing, we each noted that when I was standing within the dome, my normal speaking voice was conveyed downstairs with all ease and clarity. Such is surely true with choral tone, and absolutely so with the organ. As an experiment later in the day, I listened downstairs first to the pipes located within the dome circumference (vividly clear, even though gentle in power) and those behind it (still clear, from being high in the room, but without the same sort of immediacy and presence).

What this indicates is that the organ has about the best location in the building, and that music wants to be made from that place. What I find curious, however, is that the 1968 organ was allowed to consume so much space, at the expense of having choir in front of it. Combined with the not-exactly-compact console, and its lack of mobility, I have to imagine that having the choir off to the side has been a challenge. I would also imagine that with the choir so located, balancing organ accompaniment to choral tone is equally challenging: if the choir hears the organ in balance from the stalls, then the organ is almost certainly covering their voices as heard from the pews. Using less organ, however, means organists may not really be able to hear what they're doing.

On first impression, the organ gives a fatigued account. Most but not all of the stops play, the console works well enough, and one soon encounters dead notes. A sense of borrowed time prevails.

a. *BLOWER*

Rare among U.S. organ-builders, Möller manufactured their own blowing machinery. This one seems to be working well, and could easily be retained either in some version of this instrument or for a different instrument. It would want a generational overhaul, however; complete disassembly, cleaning, re-balancing of the fans, and proper attention to the motor, its bearings, and its windings.

b. *WIND SYSTEM*

From the blowers, pressurized wind runs through metal ducts to the organ chambers and the individual bellows in each department. In a restoration, ducts are cleaned, rubber-cloth connection sleeves renewed, and the whole checked through for cleanliness, wind tightness, and silence.

The 1968 bellows all appear to be on original leather, another of the ways in which this organ has aged admirably while absolutely showing that age. The photograph appendix shows the decay, even to the untrained eye. These units will all need complete rehabilitation, with new hinges, leather corners ("gussets"), woodwork cleaned, internal wind-tightness renewed.

"Tremolos" are the final element in the wind system, devices that impart a vibrato effect. In this instrument, the tremolos are additional small bellows at each windchest. Of the three here (Positive, Swell, Choir), only the Swell's works properly, and quite well.

c. *WINDCHESTS*

The windchests are the structures on which all the pipes sit. Most of the pipes of a given department will stand on a "main" chest. Larger bass pipes stand on what are called "offset" chests.

Beneath each pipe is a circle of leather (pouch), atop which is a felt-and-leather valve. Even in the simplest act of playing, these pouches flex up and down hundreds and thousands of times. The leather itself is thin and supple, like the most elegant of old-style ladies' gloves. All that flexing, over decades, couples with the natural aging and drying out of the leather, and eventual failure.

This describes only the note pouches, as leather appears profusely right through the mechanism. Beyond these individual pipe pouches are master keying mechanisms, called **primaries**, which engage each common note on a windchest: all the middle C pipes, all the middle C#s, and so on — 61 in all. Because these mechanisms work regardless of how many stops are drawn, the primaries are worked often, and thus tend to fail the soonest.

Even my limited survey disclosed considerable malfunction:

Great	8 Gemshorn	borrow from Choir mechanical, probable relay malfunction
	4 Octave	stop slow to engage; A58 dead
	Chimes	Note that this knob is a mechanical preparation; no chimes exist
Positiv	4 Koppelflöte	D#52 dead
	Tremolo	If working, ineffectual
Choir	8 Gemshorn Celeste	

	24 dead notes: 10, 13, 19, 21, 22, 24-30, 32-34,38, 39, 41, 45, 48-50, 52	
	4 Nachthorn	All the same dead notes as Gemshorn Celeste (either switch or primary)
	2-2/3 Nazard, 2 Blockflöte, 1-3/5 Tierce: all dead on F6 and G#9 (switch or primary)	
	Tremolo	works, but poorly
Swell	16-8 Gambe	2ft C dead (C37 on 16ft, C25 on 8ft)
	8-4 Principal	D3, F6 – and on the 4ft, F42
	8 Bourdon	A46
	8 Viole Celeste	E5, F#7, D#52
	4 Flûte harm.	F66
	III-V Plein Jeu	A#47, A58, B60, C61
	Tremolo	This one works very well, to give an example
Pedal	16-8 Principal	D#16 reluctant but works; G44 dead
	16-8 Bourdon	CCC stopper fail
	4 Choralbass	all dead: 2, 4, 6, 7, 12, 15, 17, 18, 20, 22

d. *PIPES*

The pipes are all in admirable condition, and now require cleaning and overhaul typical of any instrument this age.

e. *EXPRESSION*

Change of volume in organ tone is brought about in two ways. Either more stops are brought on, building up blocks of sound. Or, certain stops are placed inside of louvered enclosures: opening or closing the louvers causes the tone to swell or recede. In this instrument, all of the Swell and Choir pipes are enclosed behind such louvers, or swell shutters, which are controlled by the rubber-coated pedals on the console.

Every shutter was designed to operate with a pneumatic motor directly to each shutter — typical of Möller practice, and designed for speedy operation and the possibility of providing musical 'snap' accents. Whether originally in 1968, or later on, the Swell system was modified. The lowest shutters were permanently closed, and those remaining operational were ganged together to be moved by a common pneumatic motor.

f. *CONSOLE*

Probably the greatest degradation in the console is cosmetic. The console contains several forms of plastic. That used for the knobs has held up well, but the variety employed for name plates and other indicators has dried, curled up, and failed, in some cases falling off entirely.

Some kinds of mechanism need to be used to work their best. Think of a car that has sat for three months: it will complain for the first 20 or 30 miles. This console seems to have some of that, clearly suffering from age but also somewhat from lack of use — and, like the organ as a whole, from regular maintenance. Otherwise, its internal pneumatic mechanisms work surprisingly well given their age, and in general many more things function properly than do not.

VI — OPTIONS

1. **Renovate the organ per one of the current proposals.** This maintains the status quo, and puts the organ back into first-class condition as when it was new. The renovation could replace the present console with a new, smaller mobile one, to increase floor space and flexibility in the loft.

   Pros: maintains status quo, visually and musically, keeps conditions as they are, although with a mobile console and a bit more loft flexibility

   Cons: perpetuates a mechanically complex instrument, committing future generations to costly rebuilding, and lack of space for musicians in the loft

2. **Devote money to concentrated maintenance,** making the organ more functional and buying some time while the situation can be further discussed and decided.

   Pros: the organ functions better, improving the experience for musician and congregation alike

   Cons: kicks the organ can down the road

3. **Pursue a new organ,** smaller than the present one, and more physically compact, toward the following desirable goals:

   - a new organ could be housed in a case whose design and ornament might harmonize with the building's distinctive style, looking as if it belongs in this building rather than being set down from the World's Fair of 1964
   - a new instrument could be physically smaller, increasing space for all musicians in this prime location, where music sounds its best as conveyed to everyone else gathered
   - a new organ would be far simpler mechanically (almost any type of organ would be mechanically simpler than a Möller), reducing cost not just of regular maintenance but eventual rebuilding too
   - a new instrument could feature a compact, mobile console, taking less room and being placed wherever a Sunday might best suggest
   - in a new organ, the musical scheme would likely be just as flexible as the present organ, but with fewer pipes. Certainly some of the most distinctive Möller pipes could be retained, providing continuity with it and a half-century of its musical leadership.

VII — NEXT STEPS

1. **Address overdue maintenance.**

Whatever happens, you'll be playing this organ for the duration, and the present troubles are too annoying to live with.

Now that Potter-Rathbun are no longer available, you'll need to identify a new organ technician,

Two obvious choices are Foley-Baker and Ortloff Organ Company. With a firm chosen, they can address items above and put the organ into better tune.

2. **Before contacting any organ builders about renovation or a new instrument, acquaint yourself thoroughly with their work.**

More than ever, custom-built pipe organs are not commercial products, like boilers or roofs. They are finely-engineered, hand-crafted musical works of art, like a font or a stained-glass window.

Therefore, I urge that you contact an organ builder ***only*** if you are truly interested in engaging them for work. Commissioning a work of art is the antithesis of "getting three bids." Not only does it waste the resources of small shops with less of it to spare, but it may tend to incline a Committee, perhaps already feeling the subject arcane, to compare on cost only, when cost alone says little about what you aim to commission.

Thus, instead of having firms come to give proposals, first see recent work by appropriate firms. The more you know about the instruments you're seeing, the more you will get out of the exercise.

a. Before you visit, discover as much as you can about the instrument in question, so that you know whether it is entirely new or incorporates pre-existing material (mechanical and tonal) — much as your own organ might.

b. It is a sad truth that almost every organ is best heard from somewhere other than its console. Having two organists will allow each to hear the organ where it matters most: the pews.

c. When you do visit, arrange to talk to those responsible for the project: not just the organist, but a committee member if possible. Would that church hire the company again? What might they do differently? Are there matters, *as customers*, they now realize they could have handled better?

d. If you don't like any organs from one builder, then you've done your research without wasting that builder's time or raising their hopes — an excellent outcome for all concerned. If you like the work of several builders, you can extend that research by seeing even more examples of their work, and thus further narrow the choice. The goal here is to observe consistency of *excellence*, even where there is a difference in *style* or *concept* — much as you might in hiring an architect who works in different forms — and strike on that one builder that seems truly suited to this place: to its worship, its sensibilities, and its people.

3. **Ideally, one firm rises to the top.**

In that case, engage that firm in a proper design phase in which they will:

- observe Sunday worship
- discuss specifics with you and your Committee
- consider basic visual ideas
- examine and measure the spaces
- review the blower to see if they wish to reuse it together with its tower space

Once they return to their shop, they will work out a proposal that is realistic as far as what can fit, sketch out a preliminary visual design, and devise an actual cost, not merely a rough estimate. As this work entails dozens of hours, plus the expenses of coming to Providence, a design contract would probably run $15,000 to $20,000. Because it also reflects advance work on any potential organ project, the Church should expect such funds to be deducted from any eventual contract.

4. **If several builders are equally intriguing …**

   … let's talk further. I'm convinced there is a way to engage multiple builders in dialogue while still being fully considerate of their time and resources.

5. **Meanwhile, tackle the big question — money — from the other side.**

   One of the best things First Unitarian can offer any potential builder is crystal clarity about the total available budget: not just what the organ proper may cost, but the surrounding 'soft' costs: chamber and blower room renovation, any lighting or circulation adjustments, and so on. Being candid about budget further telegraphs sincerity and trust.

   In our various meetings, we discussed a potential budget. Over 30 years of consulting, I have observed (highly unscientifically, it must be said) that most churches purchasing new organs end up spending the equivalent of one year's annual budget. You indicated an annual budget of about $850,000. In new pipe organ terms, this is not a great deal. $1 million will be more adequate to providing a case that matches the church, and sufficient musical resources. That same budget must also include soft costs (building preparations, removing the old organ, electrical work, and so on). Finally, one should not forget the costs of your Committee's research phase, if traveling outside of New England to see representative work.

Often we think of a pipe organ as its console and pipes. And yet, a critical component is the device that generates the pressurized air, or “wind.”

Organ blowers are like giant turbine vacuum machines operating in reverse. The motor is external, so that it can be inspected and regularly lubricated.

Given the noise of the blower, its enclosing room is lined with cork to absorb sound.

Multiple fans within the turbine generate the wind, which is then conveyed to the pipes and wind-operated mechanisms.

A sleeve of rubber-cloth, similar to the material used in automobile convertible tops, connects the blower to the wind distribution system. When that sleeve fails, as it did several months ago, the organ hemorrhages wind and nothing works or sounds properly.

Seen here is the new rubber-cloth sleeve Jonathan Ortloff fitted several months ago. It is affixed with friction tape, and additionally secured with metal band-clamps, to guard against failure.

Above the blower, a large preliminary bellows performs preliminary regulation before the wind moves on to the many other bellows. On all the bellows, the hinges and corners (called “gussets”) are made from leather, which after 55 years is fatiguing. If this bellows were to fail, the organ would be rendered inoperable, since all the wind flows through it.

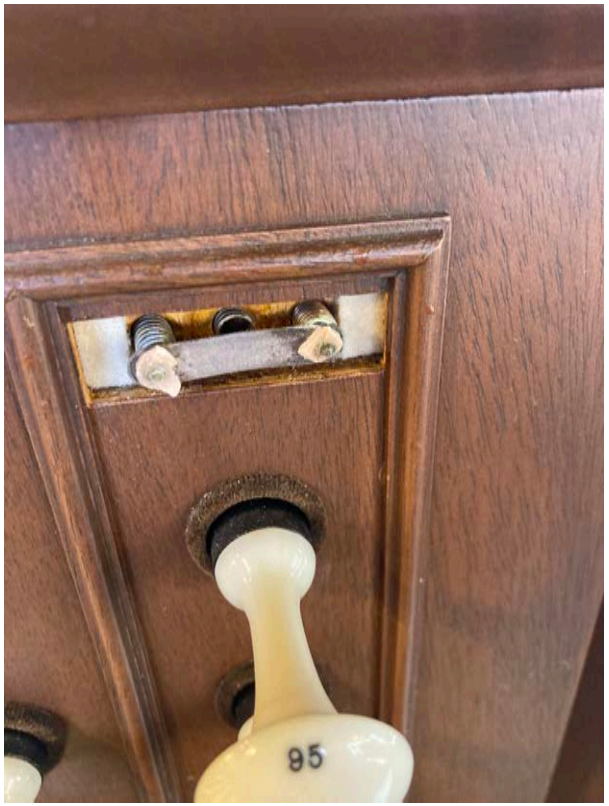
Outside the blower room are cabinets containing various electro-mechanical switching units. In effect, this is large mechanical memory bank for the preset buttons in between the keys. Today, solid-state electronics would accomplish all this in something the size of a wallet.

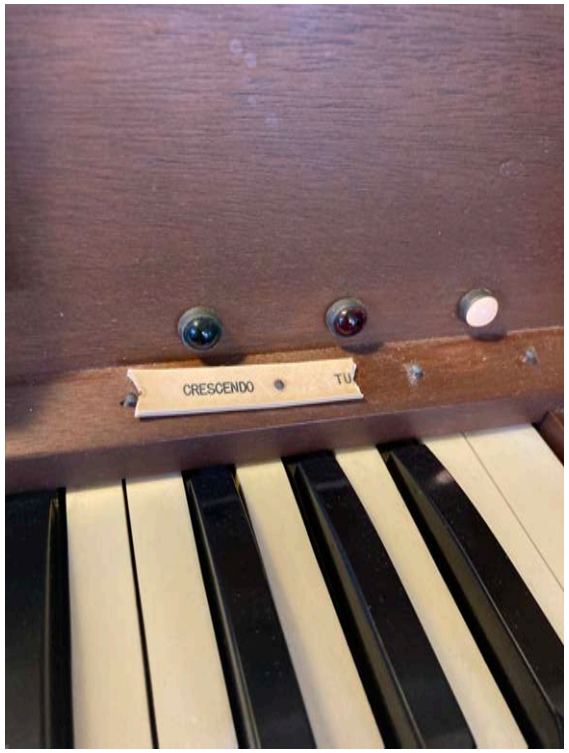
The black box here is a low-voltage power supply, superseding the original. The organ's electric action works on 12 volts direct current, like an automobile.

Moving downstairs to the organ loft, we see the console showing signs both of resilience and age.

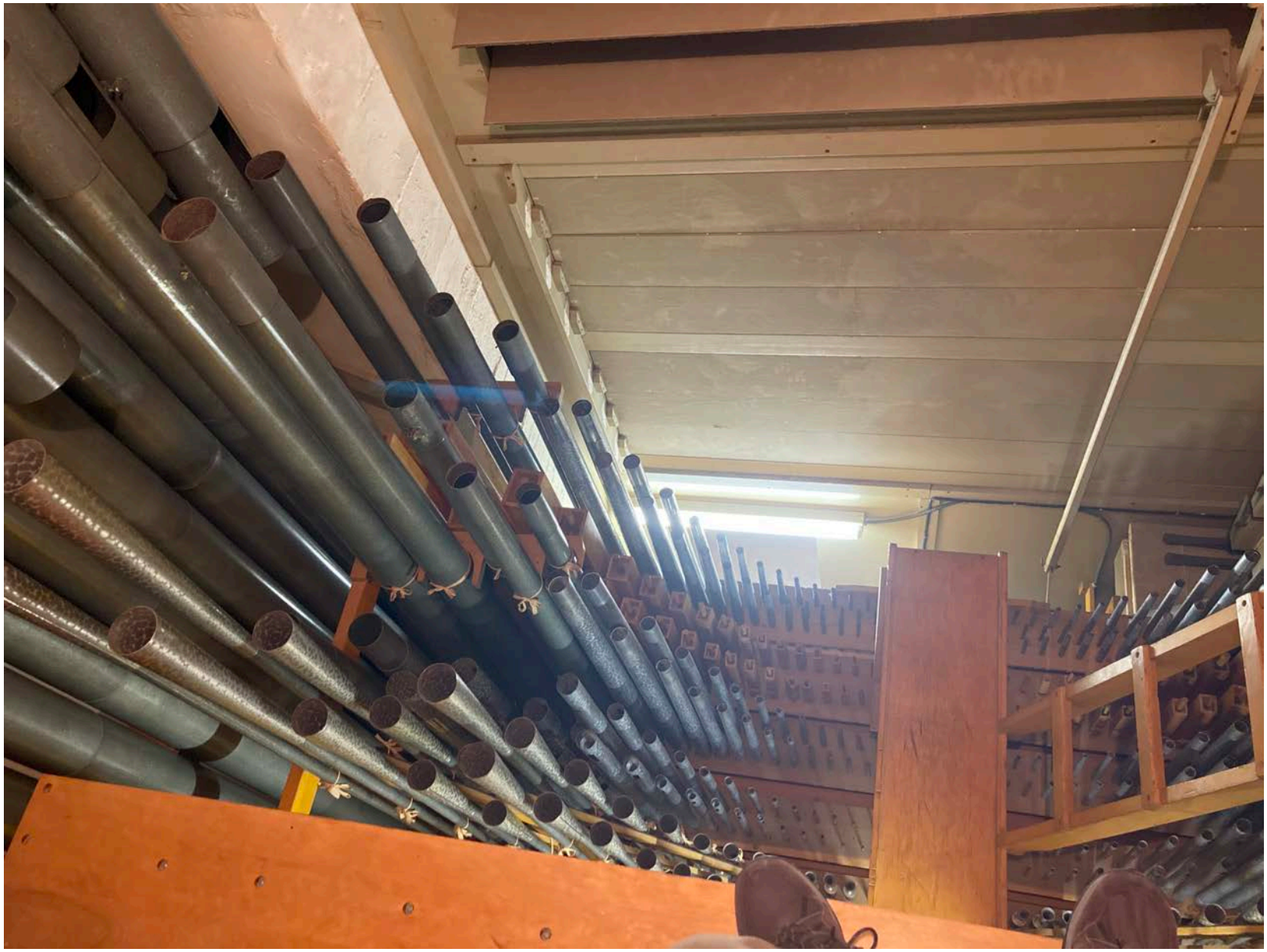
Möller consoles from this period use two different kinds of plastic. The variety used for drawknobs and tilting tablets has aged well…

… but those used for labels, less so. The labels above the knob groupings have a secondary function: pressing them cancels all that group's knobs to facilitate quick changes to get, for example, a new solo sound. The entirely failed Positiv label (middle photo) reveals the canceling mechanism behind the now-broken-off label.

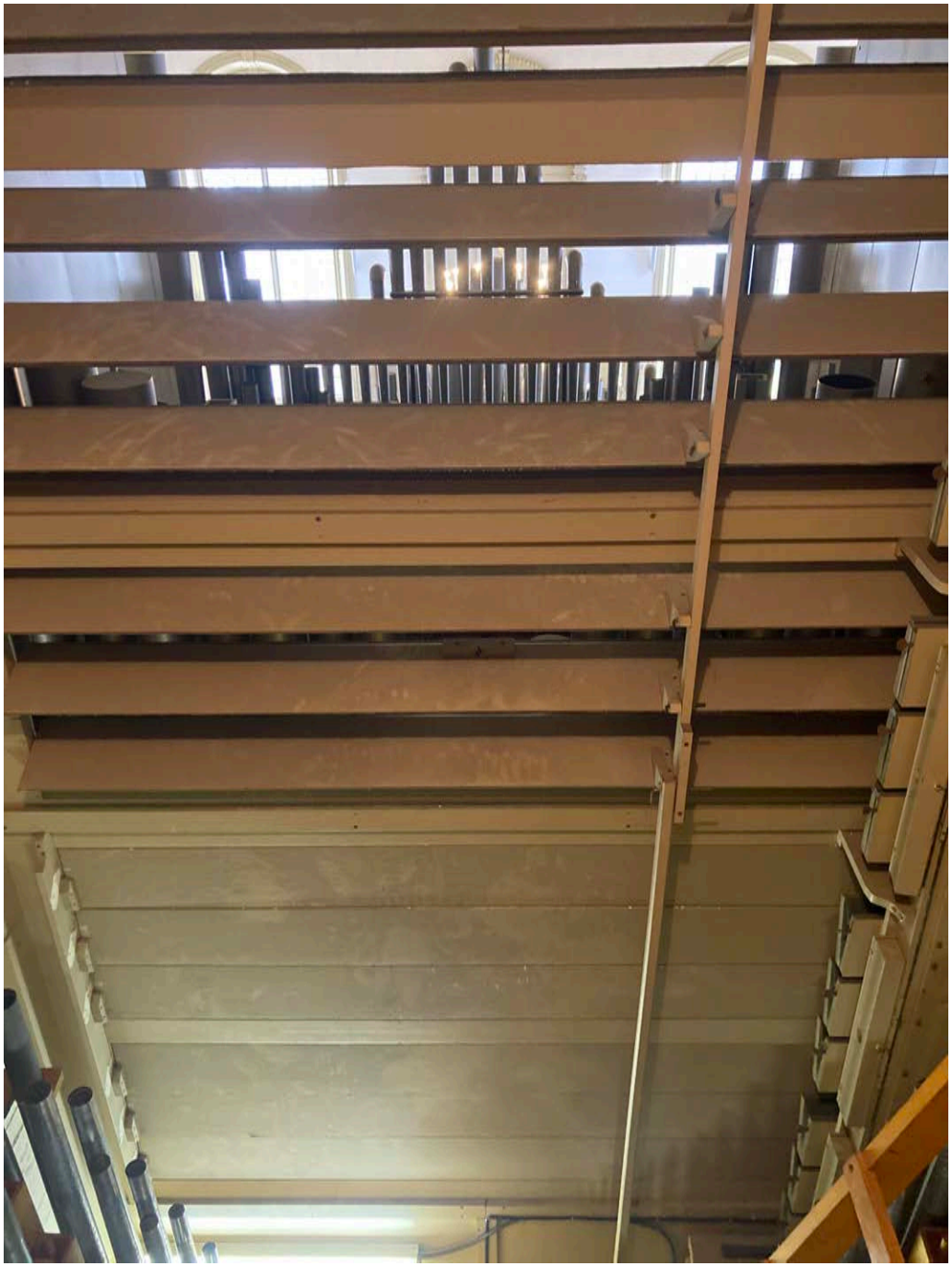




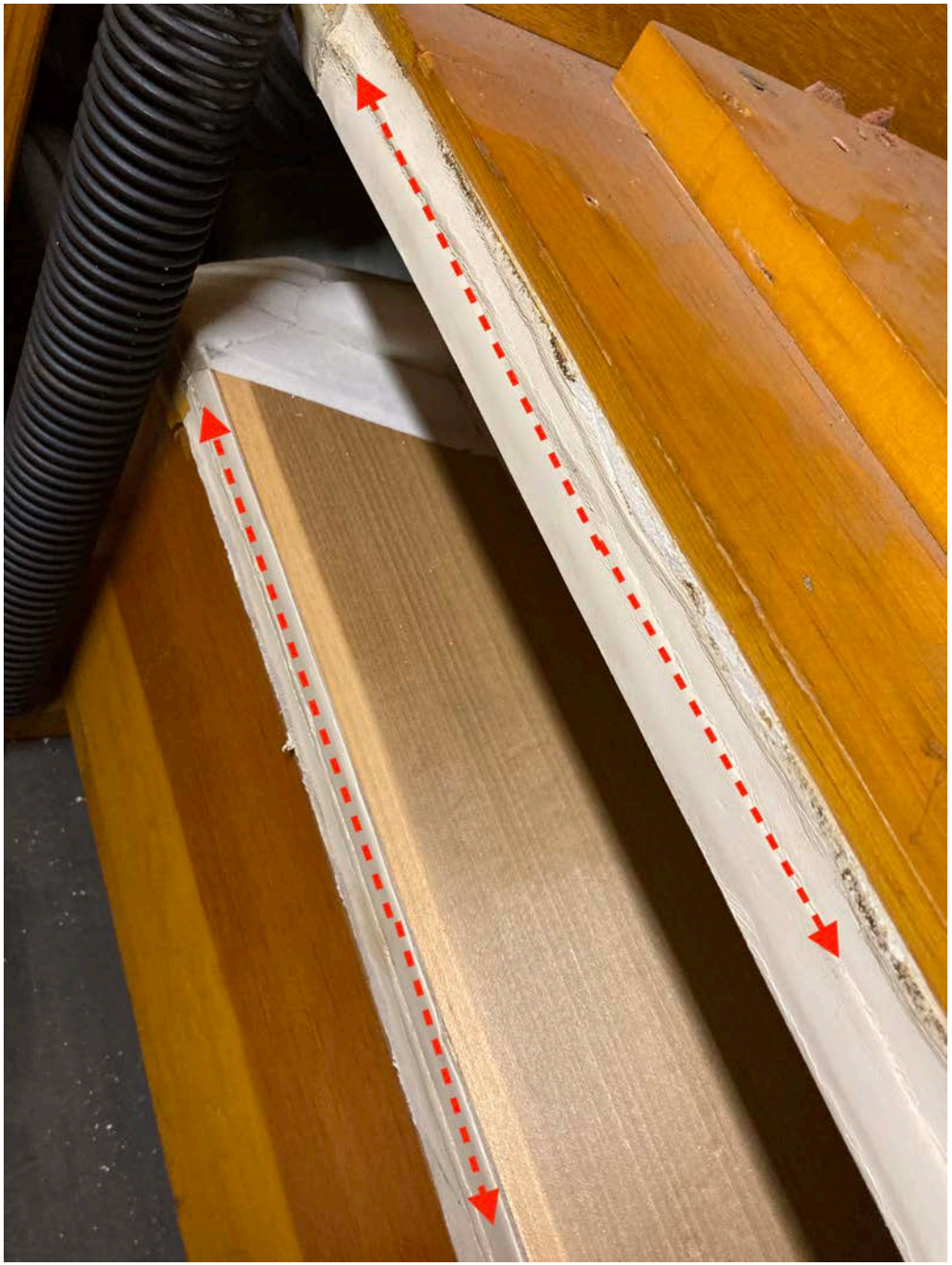
Inside the console are dozens of leather-covered pneumatic motors. Their action against the metal rods moves the knobs in and out, the tablets on and off. For their age, these motors are in surprisingly good condition, and work well. Where knobs aren't working is probably more related to lack of use, and want of exercising the mechanical memory banks up in the tower.



We are now inside the organ's central rear section, called "Swell." In this section, pipes are contained behind a wall of louvers, called "swell shutters." They open and close to control the volume of the pipes within.

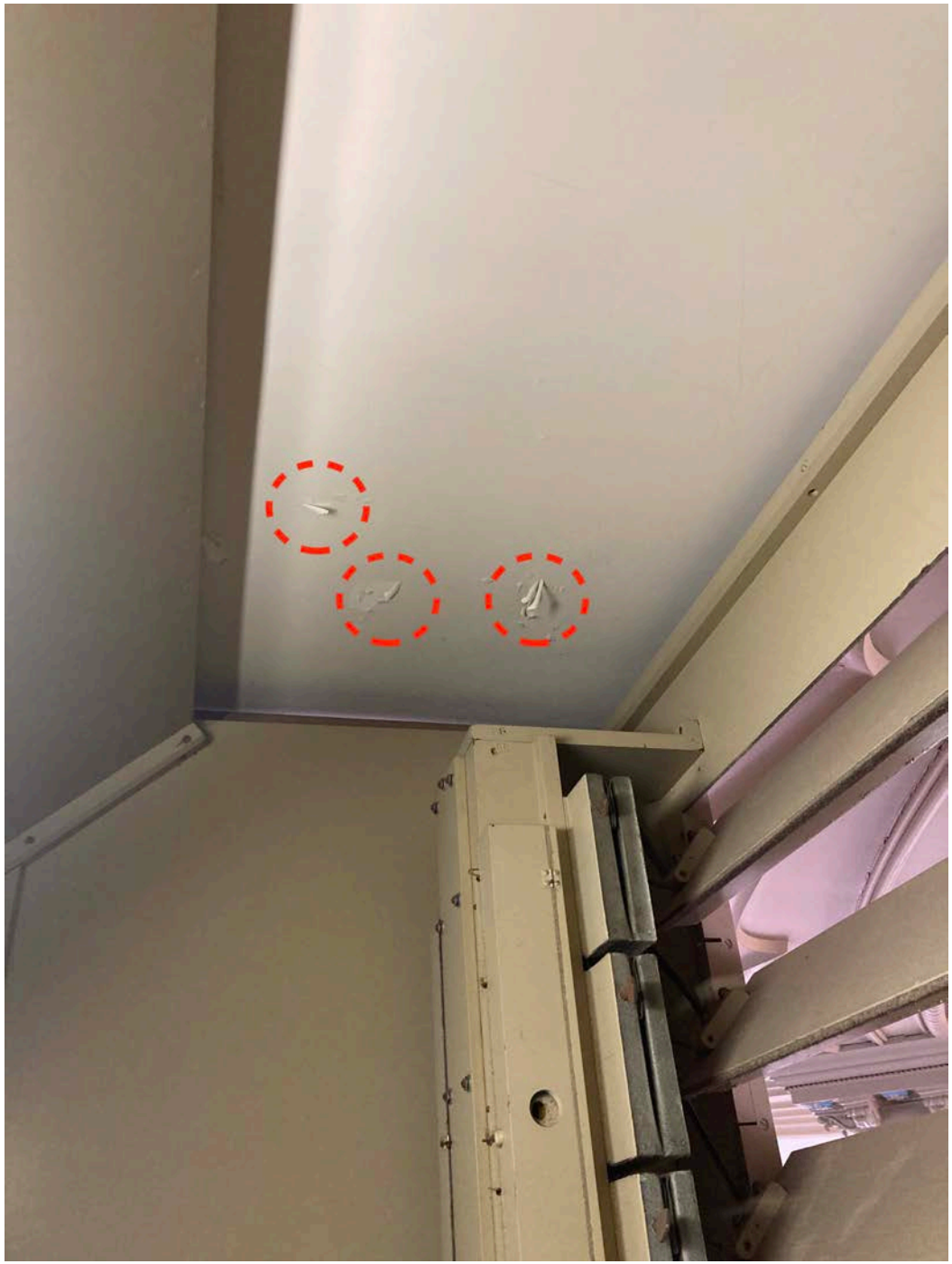


At some point, the lower shutters were de-activated and left permanently closed, while the upper set were made no longer operated individually (one shutter opening at time) and instead ganged together for simultaneous operation.

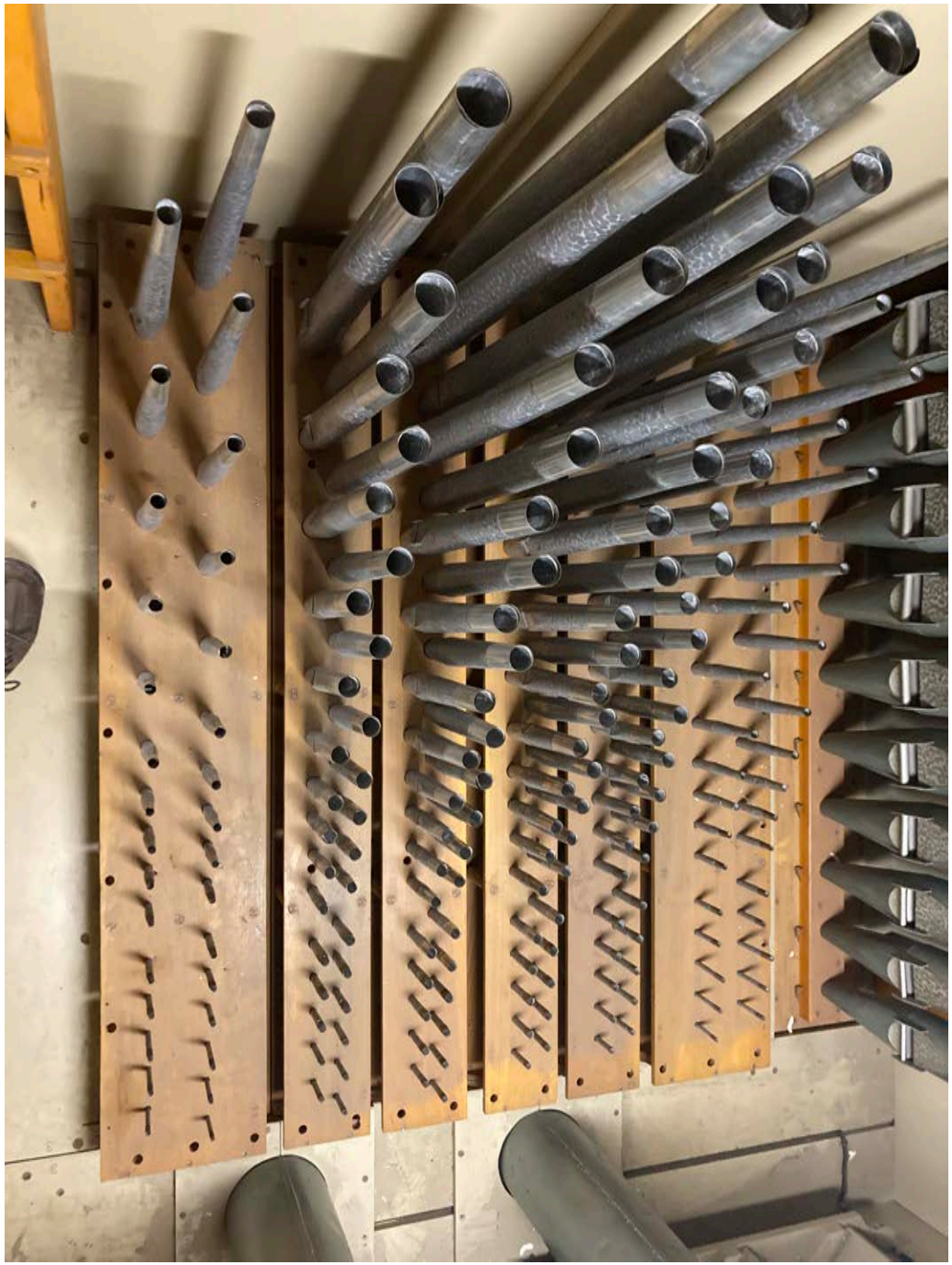


The Swell division alone contains five bellows, all in similar condition the blower's bellows in the tower: failing hinges and gussets.

The gussets on this bellows are particularly fatigued, with small holes already developing.



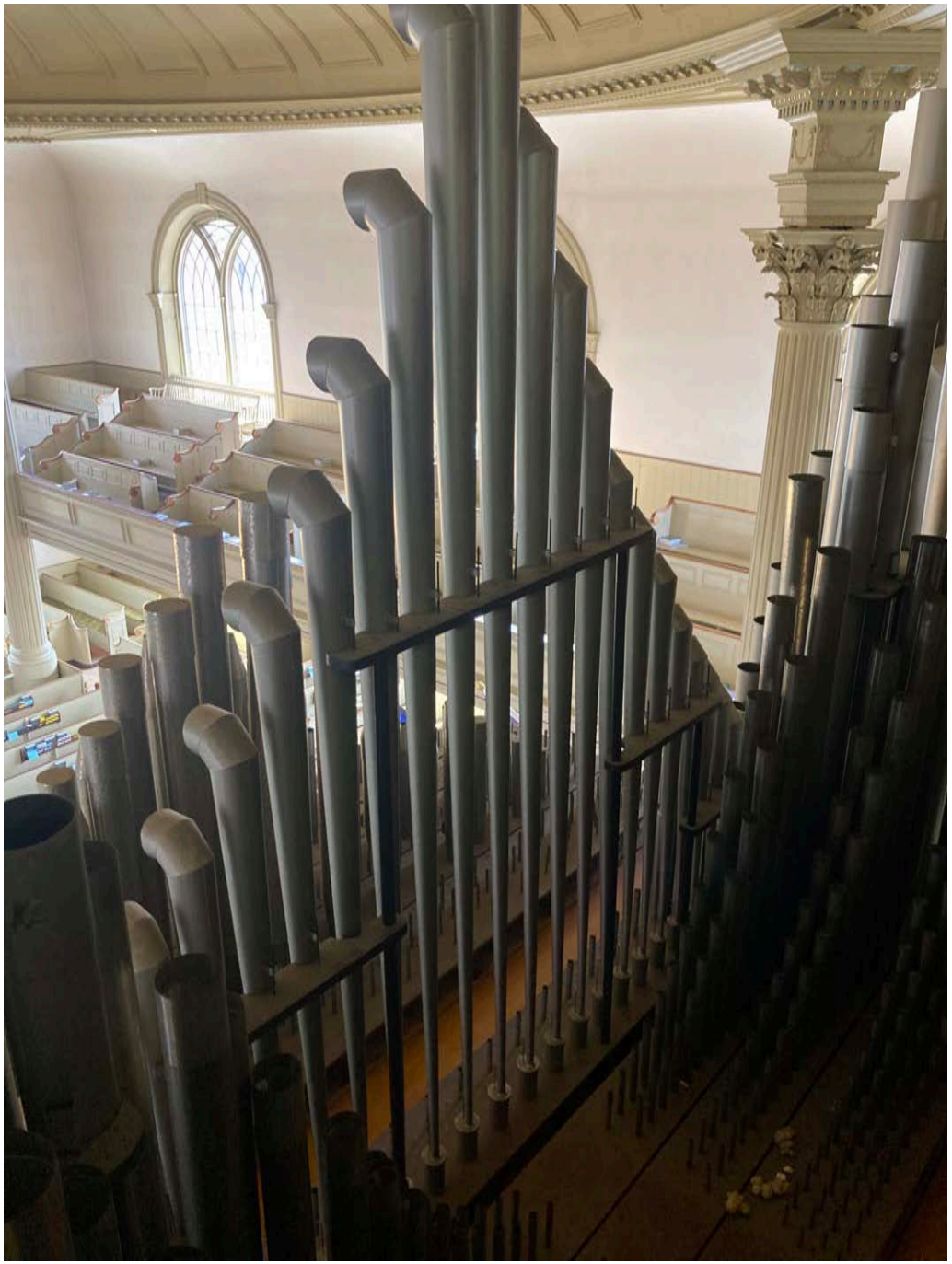
On the ceiling in the Swell, the paint is beginning to flake off. While it looks minor, any particulate matter at risk of falling into the pipes is a liability.



The Choir division is housed within two separate enclosures to either side of the Swell. The shutters here are vertical, unlike the horizontal ones of the Swell.

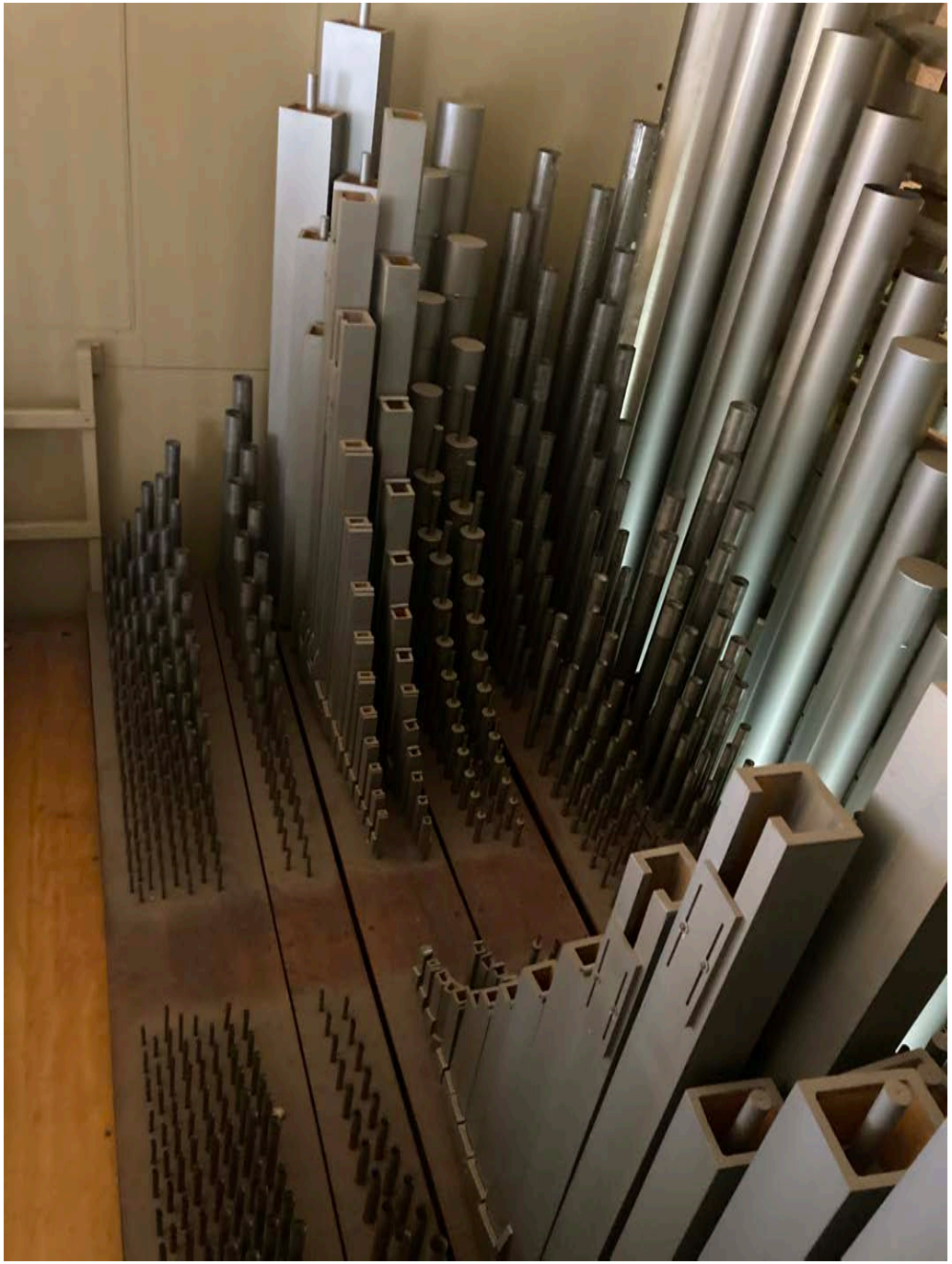
The accumulated dirt, here and elsewhere, tells us something about the organ's standard of care in recent years.

The Choir's four bellows are in a similar state to the others: crumbling leather close to failure.

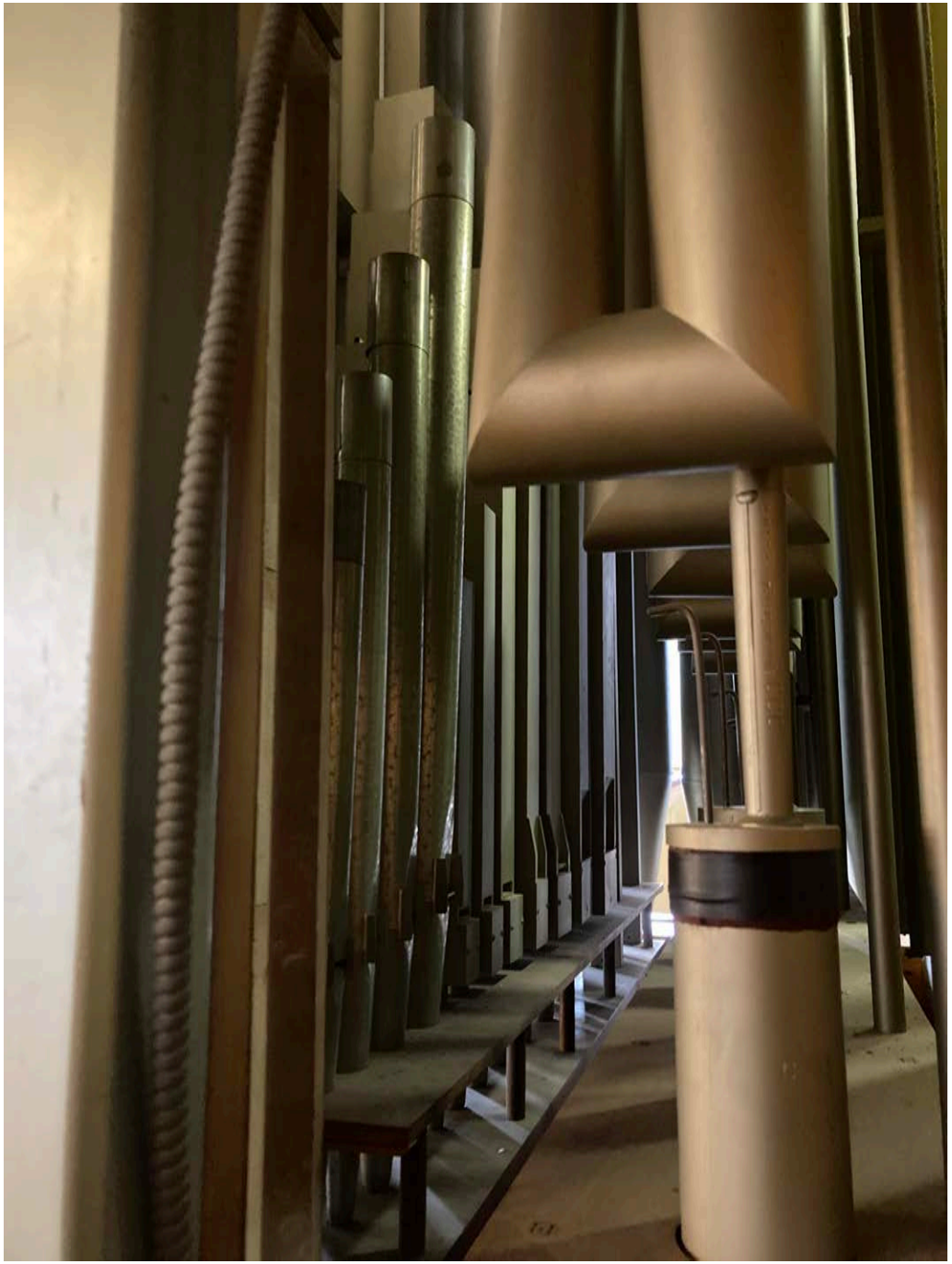


From the pews, one see these prominent central trumpet pipes, perhaps thinking of foghorns. In the case of this variety of pipe, the mitering over of the pipe tops directs tone forward, appropriate to the organ's loudest single set of pipes.

It also shows how close these exterior pipes are to the lip of the ceiling dome, with its many acoustical advantages for promoting tone directly and clearly.



Behind the trumpet pipes is the Great division, the instrument's musical center. Here the pipes are made of wood as well as metal.



Moving down a level, here we are inside the forest of bass pipes one feels closest to while in the organ loft area around the console.

A challenge here is access, as these smaller pipes within will want regular tuning, and yet the organ's engineering doesn't admit of ready reach.