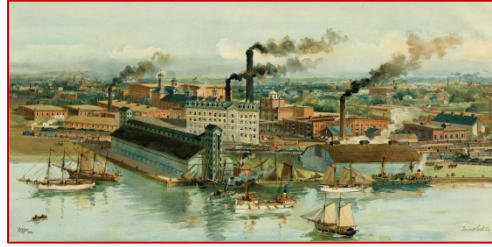




Control panel



Gooderham & Worts by A.H. Hilder, 1896 DHD



Distilling column

## Industrial Heritage Artifacts at the Distillery District

What's a bung flogger ... high roller mill ... tail box ... scale tank ... or forming anvil? How about a rectifying column ... hoop bender ... mash cooker ... or fermenting tun? Visit our Industrial Heritage Artifacts Displays to find out about these and dozens of other rare – even unique – pieces of distillery history.

The Gooderham & Worts Distillery that forms the heritage heart of today's Distillery District was designated as a National Historic Site because of the high quality and large amount of Victorian industrial architecture still on the site. As you wander among these splendid buildings, however, remember that they were all *industrial* buildings that worked together, like a well-oiled machine, to produce vast quantities of alcohol, first whisky, then rum and industrial alcohols. Their purpose was utilitarian, not aesthetic.

The contents of the buildings – the specialized tools and machinery required to produce alcohol - were of prime importance. In order to celebrate the distillery's industrial past and explain some of the strange-looking objects on view, we have created seven Heritage Artifacts Displays in public lobbies around the site. (See map on back page.)

Wherever possible, the displays of artifacts, texts and images are located near where the actual equipment was used. For example, a segment of a distilling column is located in the 1860s Stone Distillery; cooper's tools are in the old Cooperage; and canning equipment is in the Cannery. In some cases, especially in "modern" spaces, we have grouped artifacts thematically or in such a way as to tell the story of the distillery.

Because both the site and the manufacture of alcohol are complicated, we have developed a "process line" that identifies the main stages involved, from milling and distilling through to bottling and canning final products. At each location, the relevant process is treated in greater detail and placed within the context of the whole.

Gooderham & Worts' active industrial life lasted for 158 years, from 1832 until 1990. During that period, G & W evolved from a windmill in the wilderness into the largest distillery in the British Empire and, for a time, in the world. In later years, it gradually reduced activity ... until reaching a full stop in 1990. Sadly, very little remains from earliest times. So be sure to look for the **1830s millstone** on the west side of Trinity Street.

We suggest that you start at 33 Mill Street and follow the sequence in this guide until you return to 51 Mill Street. And stroll where the spirit takes you. There are many other heritage artifacts located throughout the site.

### 33 Mill Street (Pure Spirit Condominium Corridor): Milling, Distilling & Aging



Barrels, holst & racking

The large, modern space created by the corridor from Mill Street to Gristmill Lane provides an opportunity to display some of the bigger artifacts. If you enter from Mill Street, be sure to look at the images of what used to be on the site – both residential and industrial – as well as the copper **flavouring tanks**. If you enter from the south, pause to compare today's vista with the view in 1863 and admire the old wooden **hand barrow** ... on the wall.



High roller mill

Two of the strangest artifacts on display are the 1880s *High Roller Mills*. Looking like robots, these machines revolutionized milling, which was the first stage in whisky-making. Using pairs of steel rollers, rather than traditional millstones, these machines ground grain faster, more precisely, and with fewer workers.

Distilling is here represented by a 1940s *control panel*, a *steam regulator* and four *tail boxes* that measured the strength of alcohol flowing through the distilling columns. Barrel handling and aging – critical, but unheralded, tasks – are explained by a section of timber *racking* – of the sort found throughout the distillery rack houses – and a portable *barrel hoist* that enabled workers to manoeuvre 550-pound barrels into place. The largest Victorian rack house – Rack House D or Building 42 - stored about 15,000 barrels on six storeys of racking.

Weighing was an extremely important function at the distillery, especially since the most accurate way to measure alcohol is by weight, not volume. Some of the most distinctive and beautiful industrial artifacts found on site are scales of various sizes, designs, and purposes. On display here is a classically elegant 1909 *Fairbanks tank scale* ... used to measure stinky fusel oil, a byproduct of the distilling process. The large *copper tank* was probably made on site by G & W coppersmiths.

#### 44 Gristmill Lane (Cooperage): Coopering, Office & Laboratories



*Hoop-bender*

During their working lives, the buildings now comprising the Cooperage complex, included offices, laboratories, and barrel-making workshops, or cooperages. In the 1860s, offices were located near Trinity Street and coopers plied their skills in today's display area. Coopers moved off-site in the 1870s and were replaced by more offices. Laboratories were added to upper floors and were especially significant during the First World War.

The common barrel may appear to be a fairly simple object. But take a closer look. Among other things, it bulges. Imagine the skill required to shape each stave and carve each groove ... by hand ... in the pre-power-tool era. It's not surprising that some of the oddest artifacts on display include such cooper's tools as a *hoop-bender*, *draw knives*, *crozes*, and *riveting anvil*.

Gooderham & Worts was a big business, requiring extensive record-keeping and intelligent administration. From the 1860s until 1990, offices were located in this general area. The early period is spectacularly represented by a solid-but-ornate *office safe*, made in 1875 by J. & J Taylor on nearby Front Street East. Laboratories were essential to cultivating yeast for fermentation and ensuring quality control at all stages of the distilling and maturing processes. In addition to the *glass beakers and tubes* found in most labs, take a look at the *hydrometer*, the specialized instrument used to measure alcohol strength at various times during the fermenting, distilling, aging, and excise processes.

#### 8 Distillery Lane: Firefighting, Pumps & Pipes



*Northey Fire Pump*

Fire was an ever-present threat at Gooderham & Worts, as demonstrated by the Great Fire of October 1869 that nearly destroyed the Stone Distillery. In 1895, G & W created its own fire department. This \$25,000 system relied on two massive, ultra-modern *Northey duplex pumps* (one is on display), fire-alarm boxes, fire hydrants, *tin-clad fire doors* (one is on display) and a brigade of specially trained distillery workers. Also on display is a later gas-powered *Waukesha fire pump* and its *control box*.

Duplex steam pumps – double-chambered liquid pumps – are the unsung heroes of moving alcohol, water and other liquids around the distillery through pipes located both below and above ground. (Be sure to look for the network of overhead pipes as you move around the site.) On display are not only two huge fire pumps, but also the *smallest duplex pump* still used in the twentieth century, as well as lengths of *hose* and four-foot tall *fire hose nozzles*. And look up to see the extremely rare *wooden pipes* that drew water from the lake to the distillery in the 1860s.

### 36 Distillery Lane (Stone Distillery): Milling, Mashing & Distilling



Looking down 3 storeys

When it opened in 1861, the great Stone Distillery transformed Gooderham & Worts from a regional operator turning out 80,000 barrels of whisky per year into an international player capable of producing two million gallons. Architect David Roberts, Sr. ensured that the building was solidly built, functional, and filled with up-to-date machinery. Initially, the Stone Distillery was *the distillery*. It therefore housed several key processes, including milling, mashing, and distilling, as well as providing all-important support services, notably power to run the operation.

The artifacts displays filling the dramatic, four-storey stairwell running through the former Power House of the building, pay tribute to both the early days and later periods. None of the original machinery survives, but traces of earlier times are on and embedded in the massive walls (look for the *gas pipe*), and 1860s images convey an impression of the pre-Confederation industrial set-up.

As you move through the displays – either taking the elevator to the top floor and descending, or climbing the stairs with suitable pauses at various points – imagine the sheer scale of the operation. The 20-foot section of a copper *distilling column* provides a good hint, as do the *artifact assembly* of distilling elements rising through the centre and the *control panel* on the first landing. A *model* of a six-column 1930s distilling apparatus, on display near the elevator, gives an excellent idea of how the complex system actually worked. See if you can spot other unusual artifacts: *grain chutes ... grain ploughs ... bucket elevator... steam regulator ... duplex pump*.

### 9 Trinity Street and 8 Case Goods Lane (The Cannery): Bottling & Canning

Initially, whisky was sold by the barrel. In the mid-1880s, distillers were authorized to bottle their own products so Gooderham & Worts opened a Bottling Room on the top floor of these buildings. When industrial alcohol – especially antifreeze – became popular in the 1930s, G & W added canning lines that continued for 50 years. There are three artifacts displays: West, South, and East Cannery.

**West Cannery:** Entered from Trinity Street, this display celebrates bottling with an extremely rare *manual foil crimper* that secured lead foil after the bottle had been corked, and several artifacts from the canning era, including *hand canners and crimpers* to manually attach lids to cans, original *antifreeze cans*, and a revolutionary 1910 *anti-freeze gear pump* to automatically weigh cans.



Hand Crimper (West Cannery)

**South Cannery:** Photographs and plans document the transformation of the Cannery from industrial to post-industrial uses, which required lowering the entire ground floor about two-and-a-half feet. Also on display are a *Burnham simplex pump* and a *portable barrel scale* with *original tongs* and *barrel* on the second floor.

**East Cannery:** On display is a sampling of *bottles* filled, corked and labeled by Gooderham & Worts between the mid-1880s and the mid-twentieth century at this location. Also displayed are other alcohol products distributed by G & W. See also the *explosion-proof lights*, *roller conveyor*, *portable plate filter*, *platform scale*, and *World War II Honour Roll*.

### 24 Tank House Lane (Denaturing Room): Denaturing, Coppersmithing & Maintenance

Three important distillery functions are celebrated in this building: denaturing, coppersmithing, and maintenance.

For 50 years, pure alcohol was “denatured” in this building, transforming highly taxed, drinkable alcohol, into untaxed industrial alcohol by adding chemicals to render it poisonous. Among the artifacts involved in this process are an 1890s *Worthington duplex pump*, a double-hulled *copper mixing kettle* made by G & W coppersmiths, and a *Fairbanks scale tank* in the overhead Mixing Penthouse.

For 100 years, G&W coppersmiths worked in specialized shops fashioning everything from small *copper ladles* and *sampling vessels* to copper piping and giant copper storage tanks. A selection of these objects is on display here, as is a rare *forming anvil*, a pinwheel-shaped object used for shaping metal.



Sheet metal hand brake

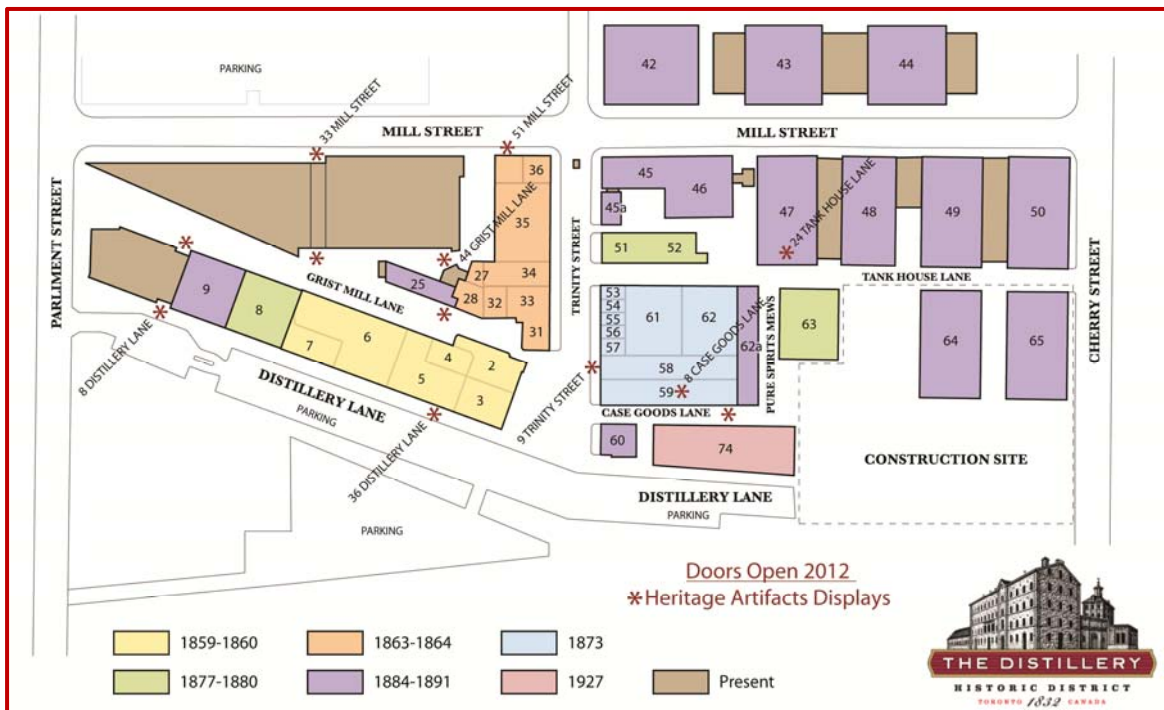
For the entire life of the distillery, maintenance was critical to its success. Gooderham & Worts employed a veritable army of carpenters, machinists, and other skilled workers capable of fabricating new parts for old machines, repairing damaged buildings, and otherwise taking care of the company's physical fabric. Among the tools and machines on display are a rare *1890s wood planer*, a *sheet metal roller* and a *sheet metal hand brake*, a belt-driven *drill press*, hand and motor-powered *grinders*, and a wide range of tools. Particularly unusual are wooden *foundry patterns* that were used to manufacture cast-iron *machine parts*, *tie plates* and even *12-foot columns*.

### 51 Mill Street (Kiln Building): Malting



Malt was the magic ingredient Victorian distillers used to convert starchy grain into a sugary liquid that could be fermented and distilled into whisky. Making malt was a two-stage process. First, barley was delivered to the Malt House (Building 35) where it was watered and sprouted on low-ceilinged malt floors. Then the sprouted "green malt" was transferred to the Kiln Building where it was heated and transformed into real malt. Of particular interest in this display is the reconstruction of a *low-ceilinged malt floor*, using original *stubby columns*, *iron hardware* and building techniques. Also note the *hand grain ploughs* that were used to spread grain on the waterproof floors.

Toward Malt House Column



\* Artifacts Displays: 33 Mill Street; 44 Gristmill Lane; 9 Distillery Lane; 36 Distillery Lane; 9 Trinity Street & 8 Case Goods Lane; 24 Tank House Lane; and 51 Mill Street.