

**THE PORT PERRY**  
**GRAIN**  
**ELEVATOR**

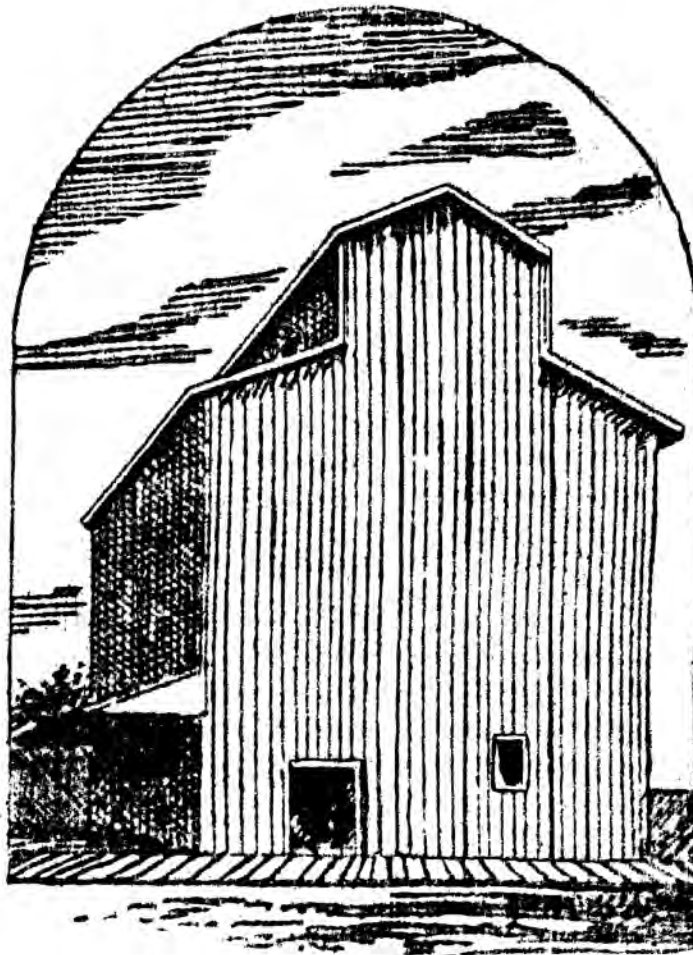
**CANADA'S OLDEST  
WOOD CRIB ELEVATOR**



Constructed in 1874



# George Currie's Grain Elevator



This sketch of the Aaron Ross Elevator (constructed by George Currie in 1874), was published in the Toronto Mail newspaper on October 2, 1886. It was part of a large feature article about the rebuilding of commercial sector of Port Perry, following the fire of July 3, 1884. The grain elevator was the only building to escape the inferno.

## George Currie's Grain Elevator

Researched and published by J. Peter Hvidsten

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### COVER PICTURE

The grain elevator, thought to be taken shortly after construction, in 1874.

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To contact publisher: 905-985-3089 Cell: 905-449-6690  
email: [jpeterhvidsten@gmail.com](mailto:jpeterhvidsten@gmail.com) or [peter.hvidsten@mail.com](mailto:peter.hvidsten@mail.com)

## Port Perry has the oldest and largest wood crib elevator in Canada

In 2006 the Fleming Grain Elevator, located in Fleming, Saskatchewan, was recognized by Canada's Historic Places as the oldest standing grain elevator on its original site. Unfortunately, while in the process of restoring the elevator in 2010, the historic structure was burned to the ground by an arsonist, who was convicted for destroying the mill.

Not long after the destruction of the Fleming elevator, the small town of Elva, Manitoba stepped up to claim the title. The small grain elevator in Elva was estimated to have been constructed somewhere between 1892 and 1899.

Fact is - both of the those western town's were mistaken.

Quite simply and correctly, Port Perry can lay claim to having "Canada's Oldest Grain Elevator".

Extensive research uncovered no information that would dispute the fact, that the Currie Elevator is the granddaddy of Canada's grain elevators. Built in 1874, George Currie's Port Perry elevator is 20 years older than any similar structure remaining that we have been able to locate and document.

This fact alone should strengthen the resolve of the local residents and government to get behind saving this cultural prize. George Currie's elevator should be designated as a building of historical significance, or perhaps even be protected as a National Historical Site.

To put these suggestions in perspective, all we need to do is look west to Inglis, Manitoba, where a row of five grain elevators have already been designated as a National Historical Site in Canada. Recognizing how quickly grain elevators were disappearing from the prairies, a decision was made to have them protected. The Inglis elevators were built in 1922, making them 47 years the junior of Port Perry's elevator, but they have been saved.

Not unlike the western provinces, Ontario's grain elevators are disappearing. With the recent demolition of the Stouffville grain elevator (May 2015), there are few wood crib grain elevators to be found in the province. Estimates range from as few as four, to a maximum of dozen elevators are all that remain. Some of these are located in Unionville, Gormley, Nashville, Pontypool, and Claremont.

Of all these, it appears to be undisputable, the Port Perry elevator is the largest, oldest and most significant wood crib elevator left standing in Canada.

# Introduction

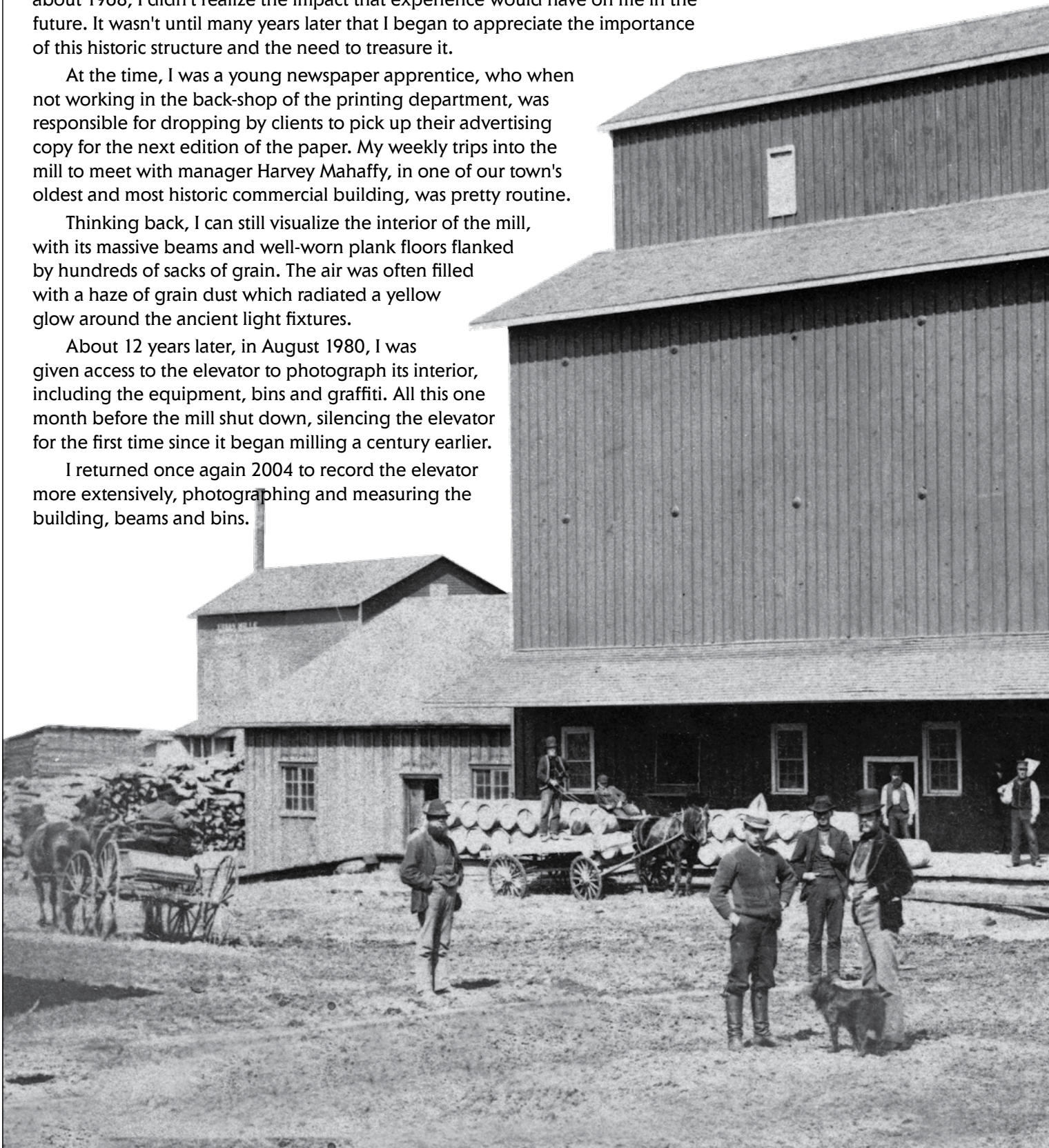
When I first stepped onto the worn plank floors of the old Master Feeds mill about 1968, I didn't realize the impact that experience would have on me in the future. It wasn't until many years later that I began to appreciate the importance of this historic structure and the need to treasure it.

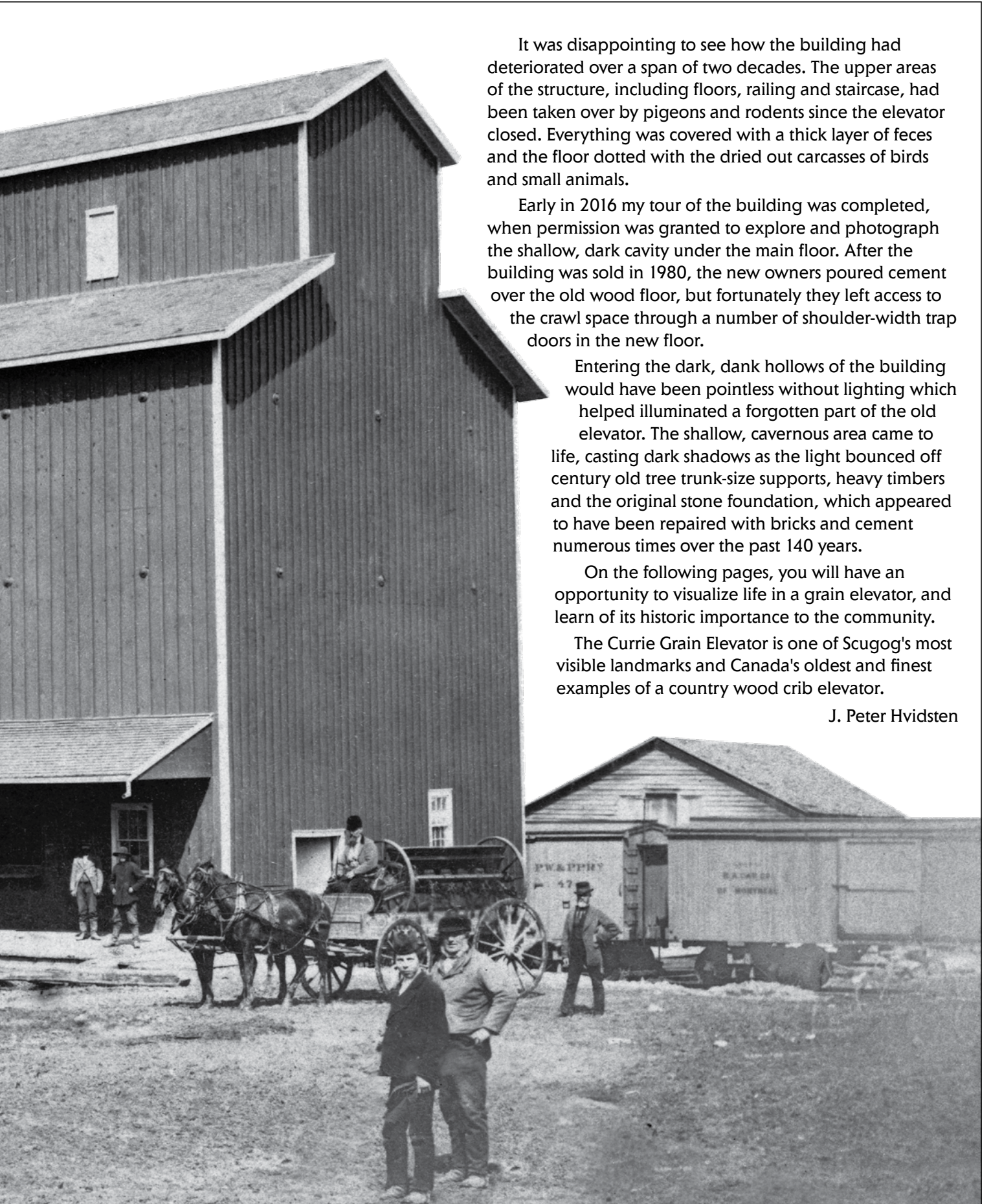
At the time, I was a young newspaper apprentice, who when not working in the back-shop of the printing department, was responsible for dropping by clients to pick up their advertising copy for the next edition of the paper. My weekly trips into the mill to meet with manager Harvey Mahaffy, in one of our town's oldest and most historic commercial building, was pretty routine.

Thinking back, I can still visualize the interior of the mill, with its massive beams and well-worn plank floors flanked by hundreds of sacks of grain. The air was often filled with a haze of grain dust which radiated a yellow glow around the ancient light fixtures.

About 12 years later, in August 1980, I was given access to the elevator to photograph its interior, including the equipment, bins and graffiti. All this one month before the mill shut down, silencing the elevator for the first time since it began milling a century earlier.

I returned once again 2004 to record the elevator more extensively, photographing and measuring the building, beams and bins.





It was disappointing to see how the building had deteriorated over a span of two decades. The upper areas of the structure, including floors, railing and staircase, had been taken over by pigeons and rodents since the elevator closed. Everything was covered with a thick layer of feces and the floor dotted with the dried out carcasses of birds and small animals.

Early in 2016 my tour of the building was completed, when permission was granted to explore and photograph the shallow, dark cavity under the main floor. After the building was sold in 1980, the new owners poured cement over the old wood floor, but fortunately they left access to the crawl space through a number of shoulder-width trap doors in the new floor.

Entering the dark, dank hollows of the building would have been pointless without lighting which helped illuminate a forgotten part of the old elevator. The shallow, cavernous area came to life, casting dark shadows as the light bounced off century old tree trunk-size supports, heavy timbers and the original stone foundation, which appeared to have been repaired with bricks and cement numerous times over the past 140 years.

On the following pages, you will have an opportunity to visualize life in a grain elevator, and learn of its historic importance to the community.

The Currie Grain Elevator is one of Scugog's most visible landmarks and Canada's oldest and finest examples of a country wood crib elevator.

J. Peter Hvidsten

# In the beginning

During 1860s and 1870s, one of the areas most prominent and successful grain buyers, George Currie, began construction on what would become a landmark on the waterfront for generations. In fact, the building still stands today, more than 129 years later, as a monument to the vision of Mr. Currie and his colleagues.

Before beginning the story of one of Port Perry's most visible and historic buildings, Currie's Grain Elevator, a little should be known about the man who erected this impressive structure more than a century years ago.

## WHO WAS GEORGE CURRIE?

After working a number of years as a grain merchant in Oshawa, George Currie arrived in Prince Albert, Ont., where he began a grain buying business in 1844. He and his brother Mark also opened a general merchandising business consisting of drygoods, liquors, wines and children's wear in the village.

Throughout the 1850s, the Curries operated one of the principal grain purchasing businesses in the area, and it was during this time that George tried out his hand at politics. In 1857 he was elected reeve of Reach Township. He later held the position of treasurer of Reach for a number of years, before moving to Port Perry.

The Currie brothers dissolved their partnership as general merchants in September 1861 with George continuing the business. He formed another partnership with Aaron Ross and together they became one of the princi-

pal grain companies in the County of Ontario, as well as respected clothing, hardware and grocery merchants.

During the early 1870s, business began to trickle out of Prince Albert and Manchester and take up location in neighboring Port Perry. Currie, realizing that the tide of business was on the move, purchased a property on the north-east corner of Queen & Perry St. in 1870 and erected a wooden building to house a general store. By the time he was ready to move to Port Perry, in 1872, he had removed the wooden structure and constructed an attractive two-storey brick building into which he moved his new business.

Now settled into his attractive Port Perry building, he began construction of a large new grain elevator near the busy railway station at Port Perry's lakefront, on Lake Scugog.

## IN THE BEGINNING

Detailed information about the Port Perry grain elevator is limited, but it is known that Mr. Currie began work on the massive structure in April 1874.

The local Ontario Observer newspaper, in an story describing the progress of the village, made mention that work was underway on a large grain elevator. The article reported, *"George Currie is laying down cedar and other timbers in preparation of the erection of a large grain store-house and elevator, capable of holding 50-60 thousand bushels of grain."*



Master Feed's grain elevator during the summer of 1910, with railway cars lined along the east side of the building.



A little more than two months later, the *Observer* once again reported on the progress of the building: *“Mr. Currie’s Elevator and grain store house in course of erection at the railway terminus at Port Perry has advanced its first stage. The size of the timbers and the plan on which it is constructed will secure uncommon strength, in fact it appears as if no amount of weight could effect it.”*

The elevator was reported to be built on a stone foundation measuring 24 inches thick and above the foundation the entire structure was made of wood. The 58’ high frame was constructed of huge pine beams and the exterior was covered with 2x8 inch lumber to a height of 26 feet. The remaining height was covered with 2x6 inch lumber, and the joints of the boards were covered with one inch thick vertical boards. When completed the massive structure was painted Grand Trunk Railway red.

The *Observer* editor commented, *“When completed, the erection will be one of the most valuable and important buildings in town and will form a very important addition to the grain storage for the area.”*

#### OWNERSHIP CHANGES

While undoubtedly one of the most important buildings in the village of Port Perry at the time, George Currie didn’t retain ownership for more than a couple of years after it was completed. It’s estimated he sold the elevator to his partner Aaron Ross sometime during 1876. Mr. Ross operated the grain business alone, as the A. Ross Elevator, for a number of years before his son William became a partner. At this time the name was changed to Ross & Son Elevator.

In 1886, William Ross built a separate office at the southwest edge of the elevator, near the intersection of Queen and Water Streets.

Aaron Ross died in July 1896 and his son continued with the business. The elevator originally had 14 bins, but by 1900, the mill had been extended south increasing the number of bins to 18, each of which could hold 2,000 bushels of grain.

In 1909 William Ross decided to retire from the grain business, selling the elevator to James Lucas.

Mr. Lucas began his business career in 1893 as an office manager in the Paxton-Tate Foundry, Port Perry. He later moved to Woodstock, Ont., but following the death of Aaron Ross, in 1896, he returned to Port Perry as bookkeeper and associate member of the firm of A. Ross & Sons.

In 1911 he purchased the grain elevator and business from William Ross and operated the business independently until 1919 when he joined up with Hogg & Lytle Limited.

Mr. Lucas sold his elevator business to Hogg & Lytle in 1927, but stayed on with the company until



Hogg & Lytle Elevator during the 1930s.



Master Feed's grain elevator June 1949



Master Feed's grain elevator July 1971

1933, when he finally retired. Hogg & Lytle were not strangers to the grain business, having operated mills at Oshawa, Oakwood and Sunderland before purchasing the Port Perry elevator.

While under the ownership of Hogg & Lytle, a fire destroyed the offices in August 1919. Within a month of the fire, new offices and a storehouse were built to replace the burned out offices.

Hogg & Lytle sold the elevator to Toronto Elevators Limited in 1949 and began operating under the Master Feeds name. In 1956 a large 21' x 36' addition was extended to the north creating six smaller bins to store more ground grain. At the same time, a garage was added to the north end of the new addition.



Hogg & Lytle elevator, Oshawa circa 1920.

In 1961, Toronto Elevators Limited, amalgamated with Maple Leaf Milling Company Limited forming a new company. Maple Leaf Mills as it became known, was the last company to operate the building as a grain elevator. Harvey Mahaffy served as its manager until the mid-1970s. Mike Doyle was the final manager of the mill, operating it until the company closed the Port Perry site in September 1980.

In December 1980, Scugog Township council considered purchasing the mill which was listed at \$135,000, feeling they shouldn't pass up an opportunity to purchase the lakefront property.

A week later, Fred Burghgraef, of Whitby, purchased the building for an undisclosed price, although it was rumoured the building sold in the range of \$65,000. Mr. Burghgraef said he would renovate and rent the building to tenants, but that it would not be torn down. His son Jim opened Port Perry Auto Supply in the building in 1981.

The Burghgraef family sold the old mill to Scugog Township in 2009 for a price of \$1.1 million. Three years later they began a purge of the small retailers leasing space in the building, with hopes of developing the property in the near future. It's largest tenant, Port Perry Auto Supply moved out in October 2012 and the remainder followed in the spring of 2013.



A 1918 fire in the grain elevator's office.

## Elevator Fires

The old feed mill has escaped destruction from fire on many occasions since it was built in 1874. The most miraculous of these came in 1883 and 1884 when two major fires in less than a year, destroyed Port Perry's entire commercial core. Only Currie's elevator, located feet away from the burning buildings on Water St., escaped unscathed.

But fire plagued the building throughout its entire existence, as recorded in the following articles:

- March 1916 - Fire broke out in the engine room of the James Lucas Grain Elevator, but damage was slight.
- August 1919 - A serious fire broke out at J.C. Brown's implement shed and spread to the part of the building used as an office by Hogg & Lytle, destroying the offices at the front of the building. Quick work by the fire brigade prevented its spreading to the big grain elevator.
- August 1947 - The Hogg & Lytle Elevator was struck by lightning. Loss by fire was small, but 10,000 bushels of wheat were soaked.
- In 1958 a section at the rear was destroyed by fire along with the grinder and roller. It cost more than \$60,000 to repair the damage from the fire.
- February 1959 - A fire discovered by manager Harvey Mahaffy in the ceiling of the engine room at Master Feeds caused \$30,000 damage to the building before being extinguished. Fire Chief Guy Raines sized up the scene quickly and called in trucks from Uxbridge and Oshawa to help control the blaze.

# Construction of a wood bin elevator

George Currie's Port Perry grain elevator, while similar to elevators constructed in Canada's western provinces, had a distinct difference. Its style was referred to as an Eastern Grain Elevator. The primary difference between "eastern" and "western" grain elevators was in their proportions. Western elevators typically were tall but essentially square, rather than rectangular.

Eastern elevators, like the one in Port Perry were usually shorter, with the length being two or three times the width. This holds true with the Port Perry elevator which originally measured 36' x 72'. Since the original elevator was constructed, two extensions have been added to the original building, one to the south and the other to the north. There have also been smaller additions to the east and north.

There is very little information available about the actual construction of the Port Perry Elevator, aside from reports in the local newspaper, but research into similar structures built in eastern Canada and the U.S.A. provide a reliable source of information about how these unique structures were built.

Through the use of actual details and information from similar structures, we have been able to describe a reasonable description of the methods used to construction the local elevator.



This grain elevator, under construction at Redwood County, Minnesota, in 1910, illustrates the framing of the structure.



The Western Grain Elevator was more square in shape.



Eastern Grain Elevators were constructed in a more rectangular in shape.

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George Currie began work on the foundation during the spring of 1874 and the elevator was in operation by September the same year.

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Huge wood support beams now rest on the dirt floor, beside the original stone foundation, having been replaced by concrete piers.

George Currie began work on the foundation of the massive elevator, near the lakefront of Lake Scugog, during the spring of 1874 and incredibly the mill was operational by September the same year. A major accomplishment for such a large and complex structure.

After laying a 24" thick stone foundation in April 1874, he brought in huge pine timbers to begin construction of the framework and work on the enormous cribs, also known as grain bins. The uprights were placed near the intersections of the crib work on centers that coincided with the principal bin units. The structural beams were individually 10" x 10" of solid pine, but were usually grouped into series of two or four to create massive columns of 20" x 10" and 20" x 20" in size.



The stone foundation in the "pit" under the main floor shows there have been many repairs over the past 140 years.

#### THE BINS

A total of 18 grain bins rose directly from the foundations and were constructed of hundreds of courses of 2" x 8" planks spiked together for form a laminated structure. The nails were usually six or more inches long that would allow for three or four courses of two inch lumber to be spiked together with one nail.

They were then tied together with heavy iron rods through the centres of the bins to prevent them from pulling apart. Bolts from these rods are still visible on the outside of the building today. The walls of the bins contained more than 200 layers of solid two inch planks, which make a wall almost impossible to shift, even with the tons of weight they held.



This heavy motor powered the auger which raised grain from the main floor to the turnheads in the cupola at the top of the elevator.

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Walls of the bins contain more than 200 layers of solid two inch planks, stacked flat and spiked together, creating a wall almost impossible to shift, even with the tons of weight they held.

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Large hand hewn posts were often assembled into groups of two or four to create one massive support column.

Rather than breaking joint at the corners of individual bins, the timbers extended beyond the corners to form a continuous interlocking network within which the grain is contained. In the bottom of the bin, hopping is provided by an inclined timber slab supported by 12" x 3" beams inserted within the crib work at the appropriate height and spanning the width of the bin. There was also a ladder inside the bin to be used whenever the bins required cleaning.

Immediately above the basement is the bagging floor, into which the shallower shipping bins spout. Doors opens into the bagging room, on the south side of the building, where farmers would unload the wagons of grain. Here it would be weighed and augered or lifted by a lofting leg to the appropriate bins.

The Port Perry elevator's total original capacity was estimated between 50,000 and 60,000 bushels which was accommodated in 18 bins of varying sizes. The basic division of space is into two rows of large bins under the main cupola, with more bins added to the north and south of the building at a later date. The largest bins in the elevator are 7' x 17' x 30' deep and smaller bins start at 7' x 9' by the same depth.



Huge posts and beams, some as large as 10"x 10" in size, helped provide the strength of the structure.



Stacked 2"x 8" bin boards.



The "headhouse" or "cupola" at the top of the Port Perry elevator.



The grain auger, or screw conveyor, in the elevator.

### THE HEADHOUSE

The peak of the elevator is the 'headhouse', often referred to as a cupola. This is the area on top of the structure where the grain is directed and where the 'turnheads' are located.

Port Perry's cupola has a pitched roof that rises 13 feet above the bin floor to bring the total building height to approximately 71 feet above the ground. The cupola extends the entire 62' of the original building, along the central north/south direction of the building and measures 16' in width. Mono-pitched roofs are placed to either side of the cupola to cover the bins, and rise directly from the outer edge of the bin floor to form the cupola.

The 'headhouse' is framed with 8" x 8" beams and braced by diagonals of the same widths. The exterior boards consist of 2" x 8" boards nailed vertically to 5" x 2" supports. The uprights are placed about the intersections of the crib work on centers that coincide with the principal bin units.

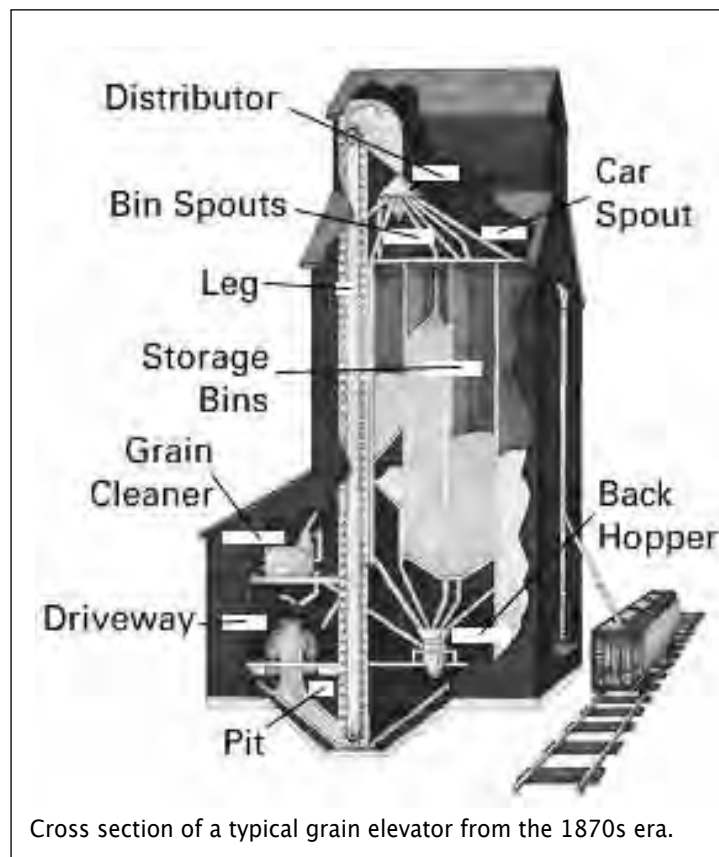
Inside the headhouse/cupola a walkway leads from north to south over the huge grain bins. At each end of the structure are raised platforms called a 'turnheads' which direct grain to the appropriate bin. The south turnhead is fed by a grain auger from the main floor, and grain is directed into one of 11 bin spouts for distribution to the proper bin. At the north end, another turnhead with 18 spouts, is fed by the lofting leg and directed to its final storage bin.

Along the east side of the building is a small escape door in case of fire. Above the doorway is a small wooden box which contains a rope. Anyone needing an emergency exit would open the box, grab the rope, climb out the window and lower themselves to the ground.

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The Port Perry elevator's total capacity was estimated between 50,000 and 60,000 bushels which was stored in 18 bins of varying sizes.

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Cross section of a typical grain elevator from the 1870s era.

# Elevator Materials

- STONE FOUNDATION: 24" thick
- MAIN BUILDING FRAME: 58' high
- CUPOLA SIZE: 16' x 62'
- ORIGINAL BUILDINGS SIZE: 36' x 62' x 71' high
- MAIN FLOOR BEAMS:  
Structural beams are primarily 10"x 10" cedar usually grouped together in twos or fours to make 20"x 10" or 20"x 20" columns for support.  
Cross pieces and braces generally made of 4"x 4" cedar.
- SOUTH ADDITION (pre 1901) 12' x 36' in size contained 12 small bins, 1 large bin.
- NORTH ADDITION (1956): 21' x 36' - 6 small bins.
- EAST ADDITION (19??) 24' x 33'
- OFFICE ADDITION (19??) (irregular)
- GARAGE (North Side) to be determined
- TOTAL BUILDING SIZE: 36' x 95' x 71' high  
Not counting office or east addition
- EXTERIOR LUMBER: 2"x 8" and 2"x 6" boards.
- JOINTS COVERED: 1" thick vertical battens.
- OUTER COVER: Metal sheeting (approx. 1956).
  
- CUPOLA EXTERIOR: 16' wide x 62' long.  
Side walls 8 feet with 5 feet peaked roof (approx).  
Vertical and horizontal structural beams - 8" x 8" cedar.  
Exterior 2"x 8" boards nailed to 5"x 2" stringers.
  
- STAIRCASE:  
Stairwell constructed of 2"x 8" boards,  
(approximately 200 layers of 2" boards laid flat and spiked to a height of approximately 30 feet).  
Stairs - four levels with a total of 44 risers.  
Staircase - 30" wide including stringers - actual steps are 26" wide and constructed of 2"x 10" cedar.
  
- NUMBER OF BINS: original building had 18 bins.
- BIN CAPACITY: 2,000 bushels per bin.



These pictures, from Pullman, Washington, USA are good examples of the construction of wood bin elevators throughout Canada and the USA in the late 1800s. The Port Perry elevator would have used similar construction methods.

# Master Feeds opens new office space

September 1966

The new addition to the Master Feeds Port Perry branch was officially opened on September 30, 1966.

The building has been modernized with large windows and a clean looking front, making a great improvement to the corner of Queen and Water St.

The expanded store and office space is designed to make work easier and service better for its customers.

Master Feeds started its Port Perry operation in 1949 when the company purchased the Hogg & Lytle grain elevator. Harvey Mahaffy, the present manager, was employed by the former firm and continued as a truck driver for Master Feeds. He was promoted to manager in 1955.



Picture left, shows the office space of the grain elevator in the 1930s, and right, and during the 1940s and 1950s.



# Master Feeds closes local grain elevator

September 10, 1980

Master Feeds is closing!

After more than 110 years of operation as a mill on the shore of Lake Scugog, the familiar Port Perry landmark will close its doors and cease operation as of September 30.

The surprise announcement was given to the mill's nine employees last week, after being called together by manager Mike Doyle. "Their reaction was of surprise. They had not expect it, but accepted the fact very well," said Mr. Doyle.

The closing of the mill stems back to July of this year when Maple Leaf Mills, of which Master Feeds is a division, was purchased by C.P. Investments. The new owners are reported to have reviewed the structure of the agricultural division and

made the decision to close all outdated, non-profit and no-growth operations. The closest of these in addition to Port Perry are Lindsay, Peterborough and Stouffville.

Of the staff in the local mill, only Mr. Doyle will retain a job, being moved to the mill in Cavan. Other staff members were guaranteed a generous severance payout.



## Council will inspect premises

# Show interest in Master Feeds building

Is Scugog Township council interested in buying the former Master Feeds building at the intersection of Queen and Water Streets? Well, sort of.

Two members of council, Robert Espey and John Williams, suggested Monday that the municipality should at very least look into the property, and they have

lined up a meeting for this Saturday morning with a local real estate agent to tour the building which is over 100 years old and ceased to be a mill earlier this fall.

"I don't think a municipality should ever pass up an opportunity to explore the benefits of buying property which could have long term benefits," said councillor

Espey who represents Ward 2.

"It doesn't hurt to take a look and get the facts, and it doesn't cost anything to do that," he said.

Ward 3 councillor Williams agreed, stating that he too would be willing to at least inspect the building.

During the discussion,

Mayor Jerry Taylor cautioned that money is going to be tight in the next year or so for the municipality.

Scugog was sent an information letter from Bowes and Cocks Realtor in Lindsay which has the building and property listed for the owners Maple Leaf Mills. The asking price is \$135,000.

Port Perry Star  
December 10,  
1980

# Master Feeds building sold

The former Master Feeds building on the corner of Queen and Water Streets in Port Perry was sold last week to a buyer from Whitby.

Fred Burghgraef, a building contractor, told the Star he plans to do some renovations and rent the building for retail stores. One local business will be moving to the building early in the spring, and Mr. Burghgraef said other possible tenants have expressed an interest in renting space.

"The building will not be torn down," he stated. The building has been sitting vacant since October

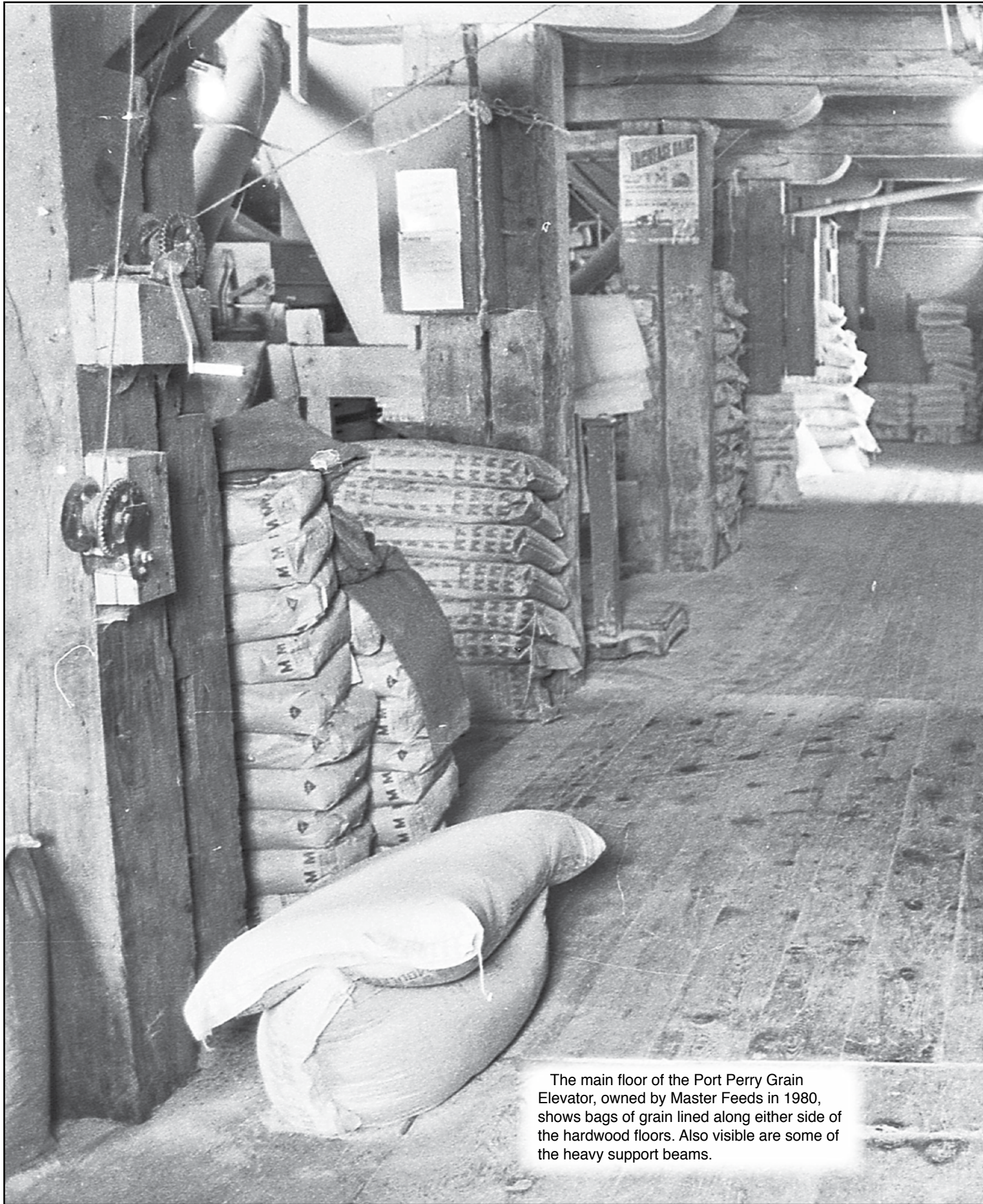
when Master Feeds was purchased by Maple Leaf Mills. It had been a mill for more than a century, and the building is a familiar landmark in downtown Port Perry.

Since October, there has been several parties expressing an interest in the building, including Scugog Township. Just about a week ago, two members of Scugog council inspected the building.

The initial asking price had been \$135,000, and although Mr. Burghgraef declined to disclose the exact price he paid, it was considerably less than the initial price.



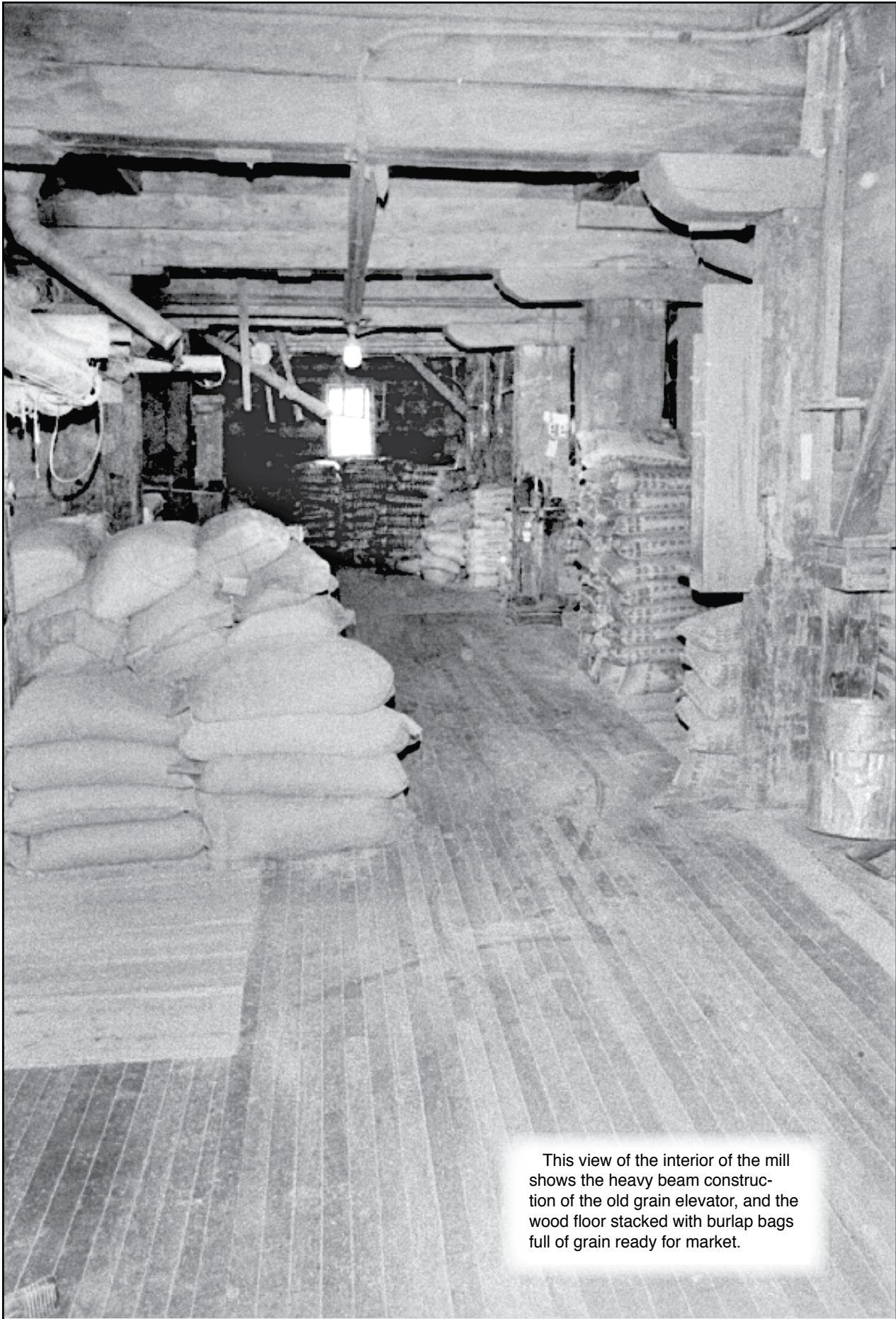
Port Perry Star  
December 22, 1980



The main floor of the Port Perry Grain Elevator, owned by Master Feeds in 1980, shows bags of grain lined along either side of the hardwood floors. Also visible are some of the heavy support beams.



Photos by J. Peter Hvidsten  
April 1980.



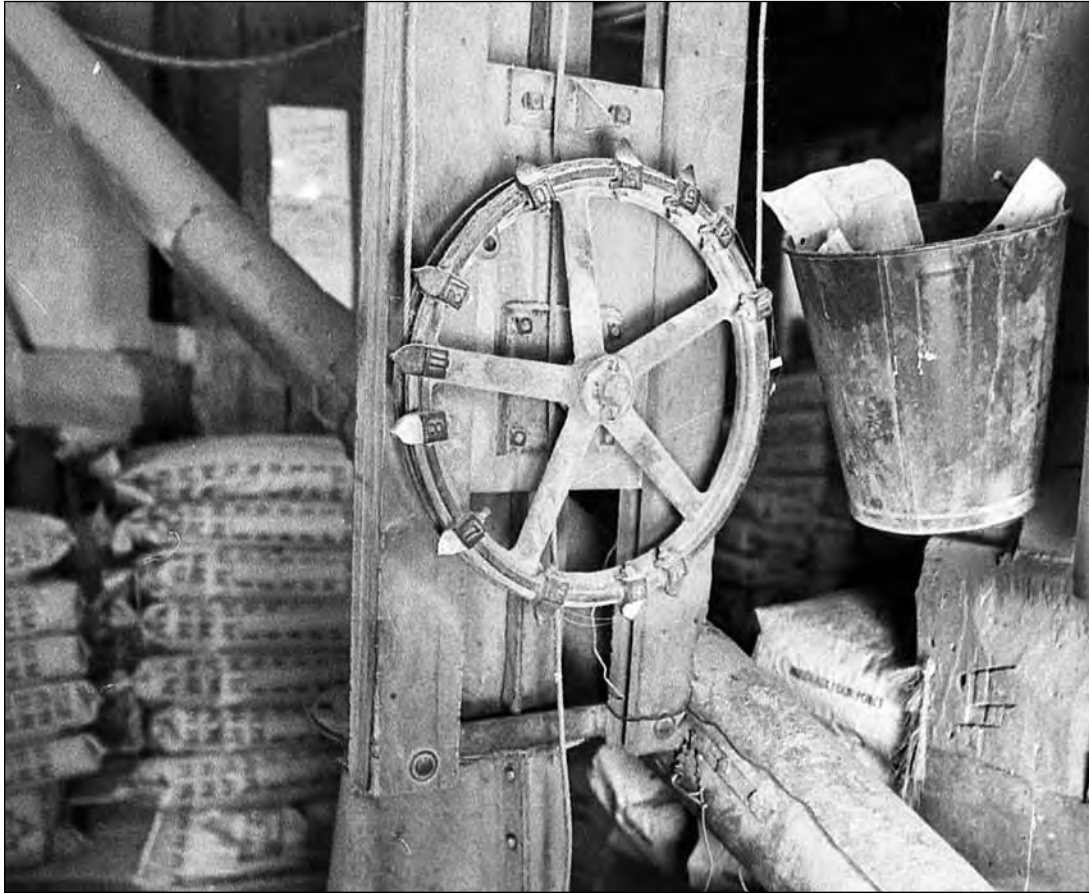
This view of the interior of the mill shows the heavy beam construction of the old grain elevator, and the wood floor stacked with burlap bags full of grain ready for market.



This old grain wagon was used to collect grain as it was emptied from the bins, and then weighed on a floor scale (square in the floor) before being bagged or shipped out in bulk to a customer.



Signs of the times. These three posts show the marking of people who worked at the old grain elevator over the past century. At far left, R. Walker left his name on November 4th, 1875. Centre, A.J.T. noted that a new pit boot was installed in the mill on July 22, 1913 and at far left, Harvey Mahaffy, who was then manager, took time to pound his name into the beam with nails on May 16, 1934. It must have been a slow day.



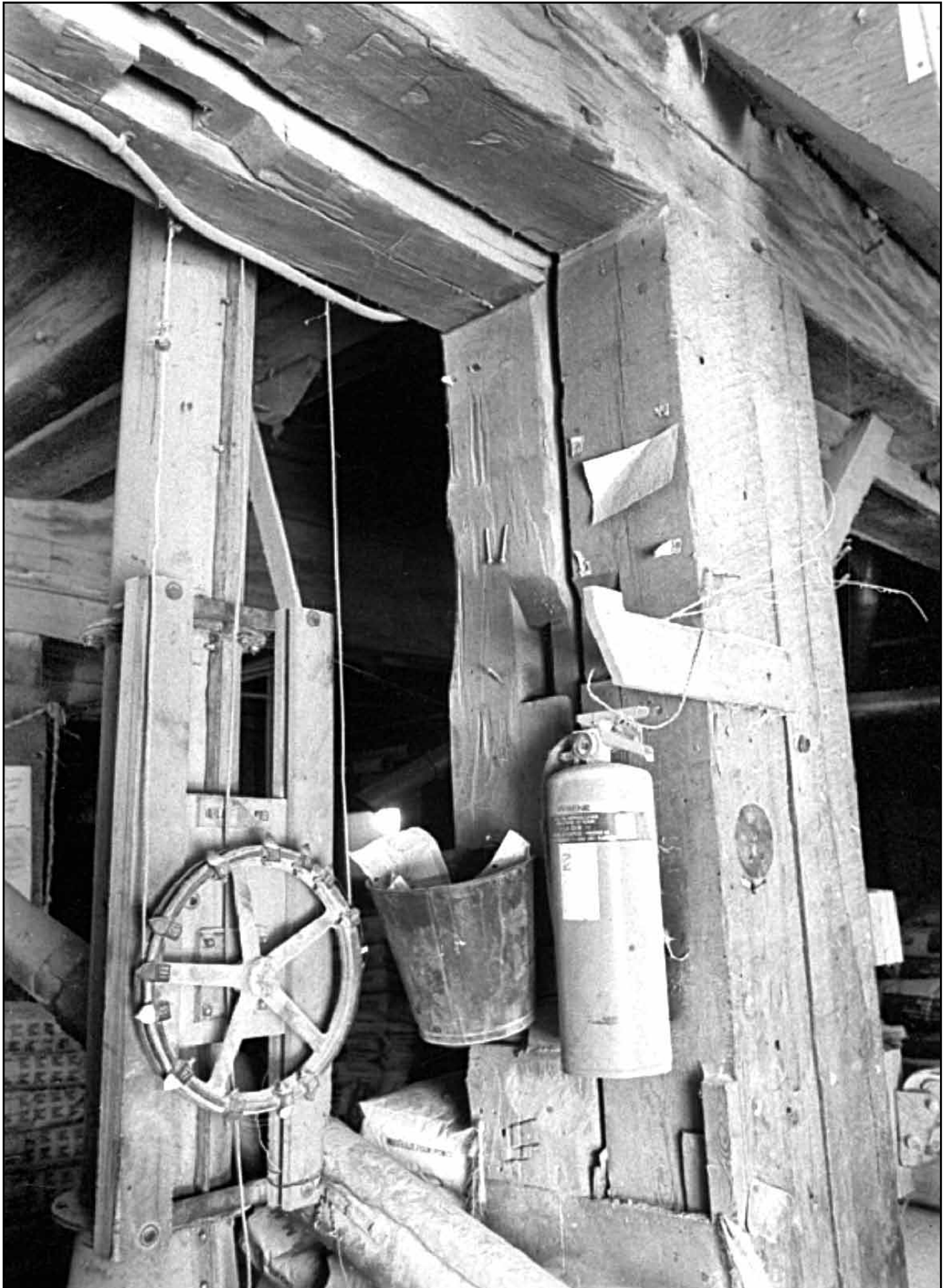
The bin selector wheel, located on the main floor of the mill.



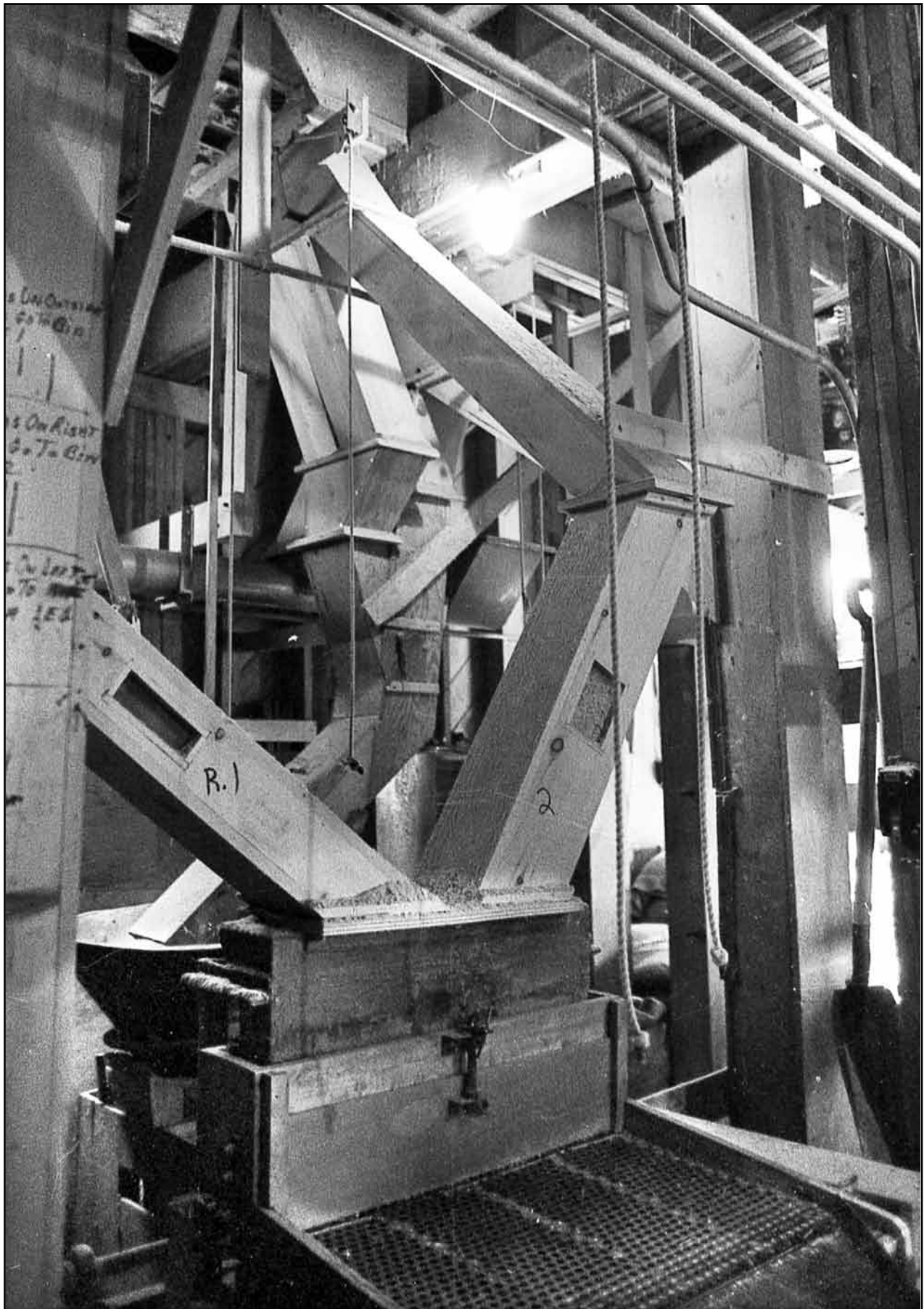
The weigh scale on the main floor.



Some of the pulleys and straps.

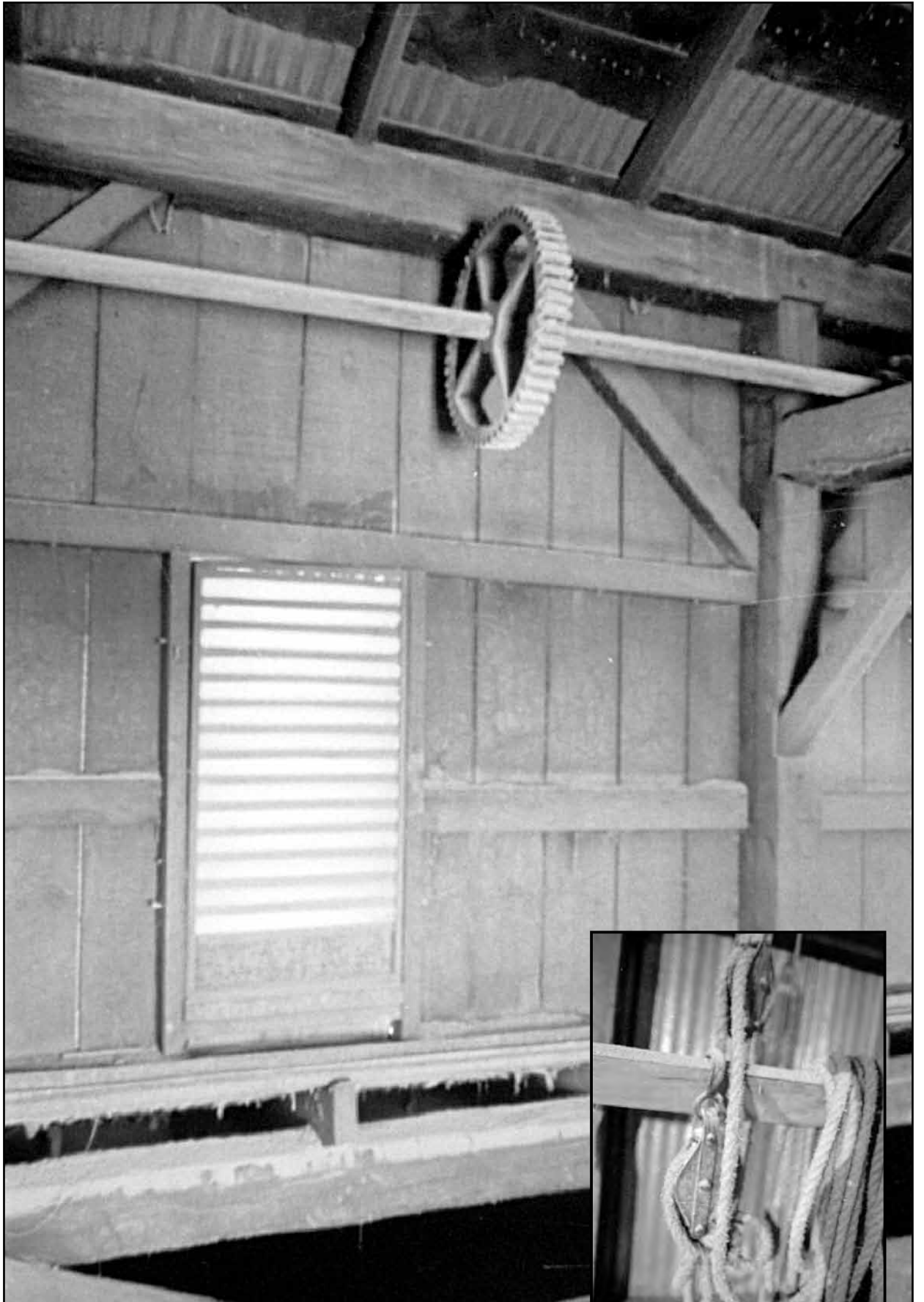


This picture shows the bin selector wheel, which was used to direct grain up to the top of the tower where it would be distributed into one of the many bins. A number on each of the cogs, which indicated the number of each bin. Note the heavy beam construction.



Grain cleaner at the Master Feeds mill, 1980.





A cogged wheel high on a wall in the cupola and pulleys and rope hanging from the beams.



Above: The narrow staircase winds up four storeys to get to the top of the elevator and the cupola.



Upper right: One of the two turnheads in the cupola, controlled by a dial on the main floor, for directing grain to the proper bins.



Right: One of the crude handrails high in the cupola, covered with grain dust which has only been disturbed by insects making trails through the powdered grain dust.



The headhouse (cupola) at the top of the elevator stretched over a series of about 18 grain bins, which were 30 feet deep. Upper picture shows an elevated view looking down through the beams to the "bin deck" walkways which are the same level as the top of the bins. Bottom picture shows the walkways and handrails in the "bin deck" which allowed access to equipment located over top of the bins.



# Operation of a grain elevator

Very little information has been found pertaining to the actual operation and equipment used in the Port Perry Elevator, but research into similar structures built in eastern Canada and the U.S.A. provide a reliable source of information about how these unique structures were built and operated.

In this particular case, we have called on technical information from the Wollenberg Grain and Seed Elevator in Buffalo, N.Y., which was of a similar shape and size. It has been used as the basis of information to describe the similar operation of the Port Perry Elevator.

A network of cribs, or bins consisting of horizontal layers of spiked 2"x 6" timbers rise from the concrete foundation to the bin floor, approximately four storeys high. The cupola, housing weighing and cleaning equipment, is built directly on top of the crib work, with post and beam framework supporting both machinery and roof trusses.

Grain would arrive at the elevator by railroad box cars, wagons or by truck in later years, where the local farmers would unloaded by shoveling, or dumping it into a dump-sink (hopper) on the west side of the building along Water Street.

This hopper feeds grain to the lofting leg, which ran in a continuous loop from the basement to the top of

the elevator. A 'lofting or distribution leg' consisted of a heavy leather belt on which 8" metal cups were attached. The grain was elevated to the top of the building by this device and distributed to either a grain roller (to flatten grain) or a grinder (to make flour). Following the process the processed grain would be returned to the basement receiving bin through a shoot.

Here the grain began another trip to the top of the elevator where it was delivered to a scale hopper, which weighed the grain. The next process involved the grain being directed into a mixer (for different blends) before returning to the basement, where it was elevated once again where it was spouted to the appropriate receiving or shipping bins.

Grain transferred to the mill was ground, elevated, sifted, cleaned and deposited in the mill. Milled products to be mixed, such as rolled oats were taken by hand cart to the elevator sacking floor. Special components such as sunflower seed and millet were hand-mixed into the milled ingredients. The mixture was then spouted to the shipping bins and drawn off as required to bag.

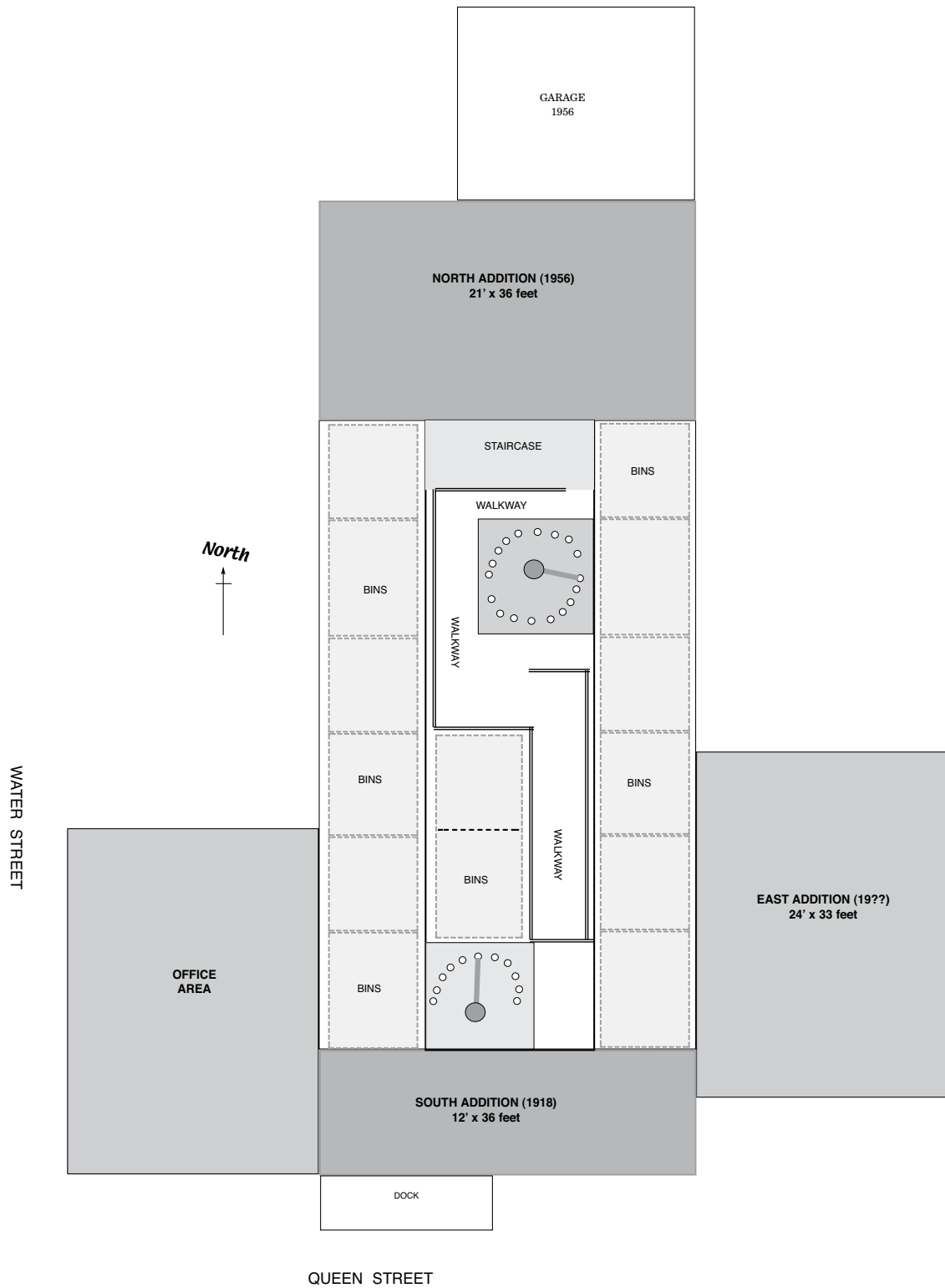
Bagging machines filled bags with a volume of feed, final adjustment taking place on a shipping balance. Most bagged products left the elevator by wagon or truck though railcars were also used during the 1800s.



This picture is of the Wollenberg Grain and Seed Elevator, Buffalo, N.Y. Due to its similarity to the Port Perry Elevator, it was used as a reference for some of the technical information in this article.

# Port Perry Grain Elevator

(approximate layout of building)



## Stairway inside a bin leads to cupola

(interior pictures taken in January 2004)



**All steps  
lead to  
the  
headhouse**

This is a section of the stairway which leads, to and from, the headhouse at the top of the grain elevator. As can be seen, by 2004 the stairs and floors were covered by feces from pigeons and rats who roamed the building freely since the upper portions of the elevator were closed.

There are four sets of stairs rising almost 55' to get to the top of the elevator. The walls are formed of solid pine boards, 2" x 10" and 2"x8", which are all spiked together to form a heavy laminated wall.



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Bin walls are constructed of heavy 2"x10" pine boards which are spiked together to create a massive laminated wall.

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This picture illustrates the 30' solid wood walls, which make up the grain bins in the elevator. This section, at the rear of the building, was not used for grain because a series of stairways was installed in the section.

The walls are formed of solid pine boards, 2" x 10" in size and are spiked together to form a laminated wall. At left, is a cross section of the boards, showing the full eight inch width of the boards.



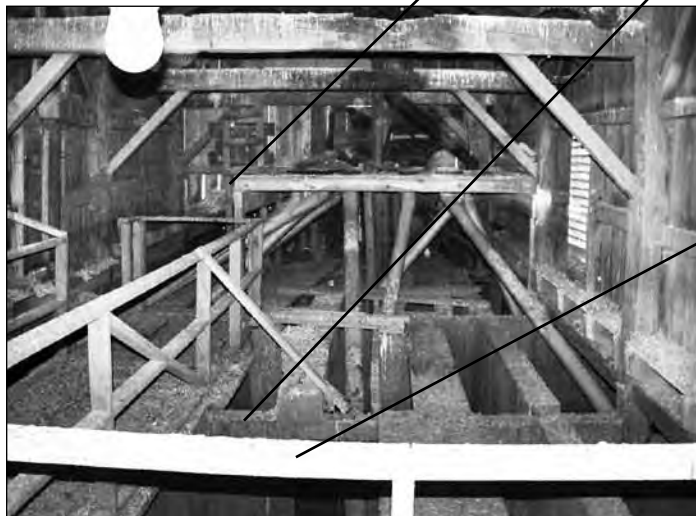
# Interior of the cupola



Grain Bin Selector

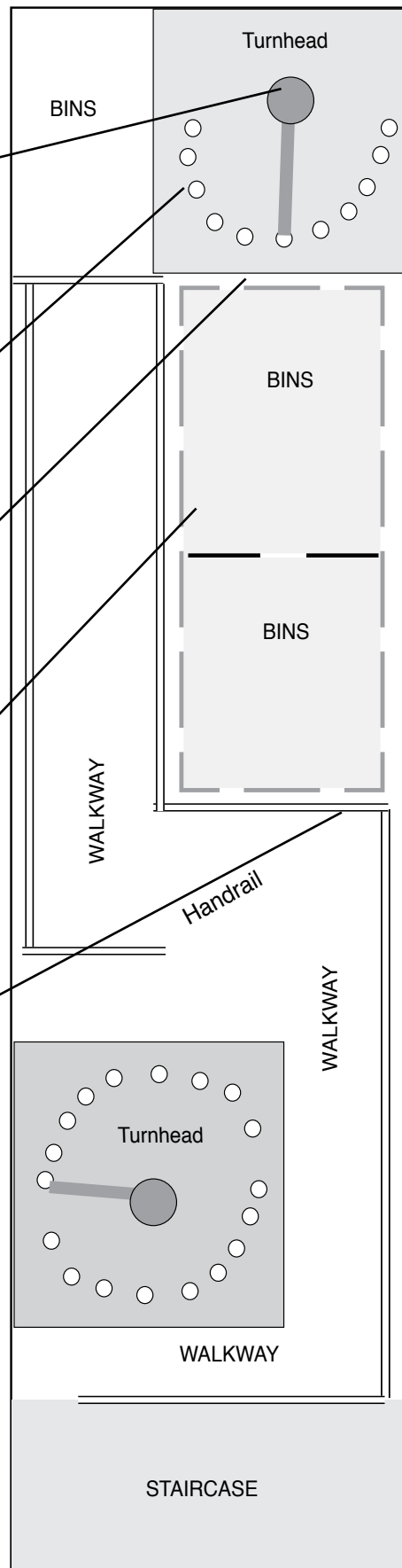
Bin Spouts

Turnhead



Large Bins

Handrail

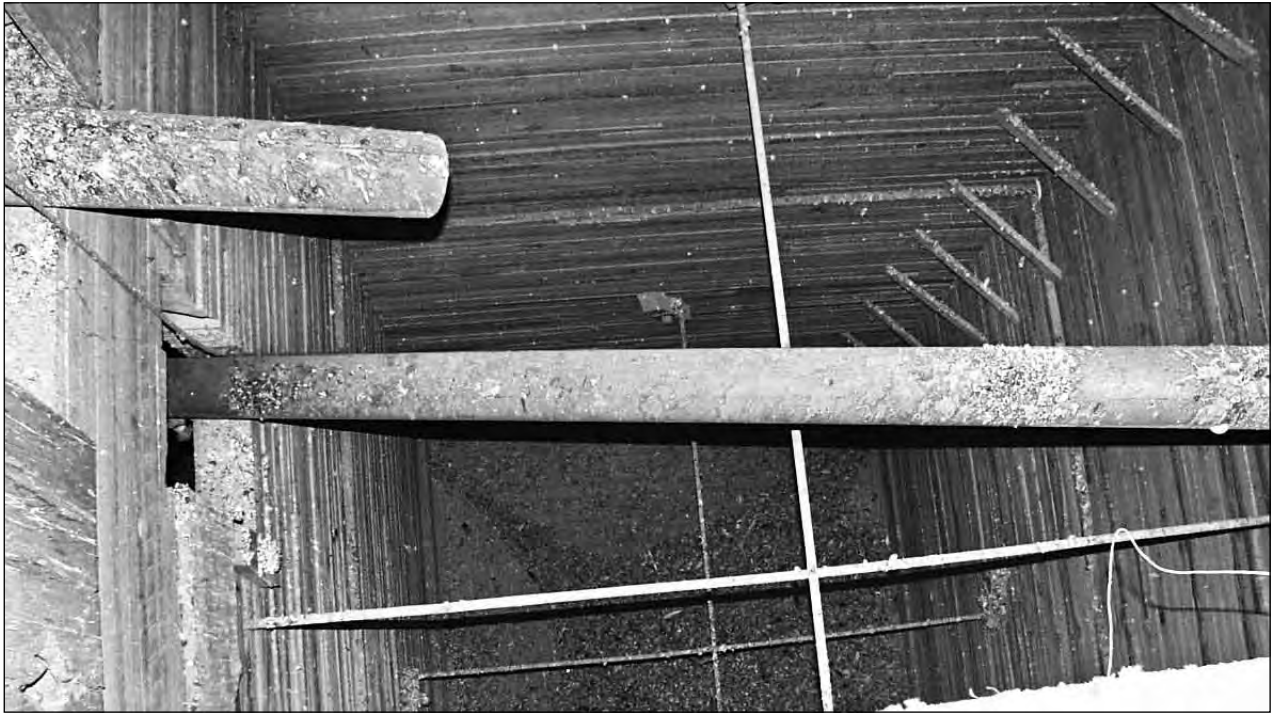


View from the Cupola looking south along the walkway. Grain bins on right or handrail all along the east side. Elevated platform (approx. 11' x 12' ) at far end (south) holds the equipment necessary to distribute grain arriving from main floor into the proper bins.

There are 11 'bin spouts' (upper picture) in the south platform. Some of the pipes leading to the bins can be seen coming from underneath the platform and extending into the bins.

South

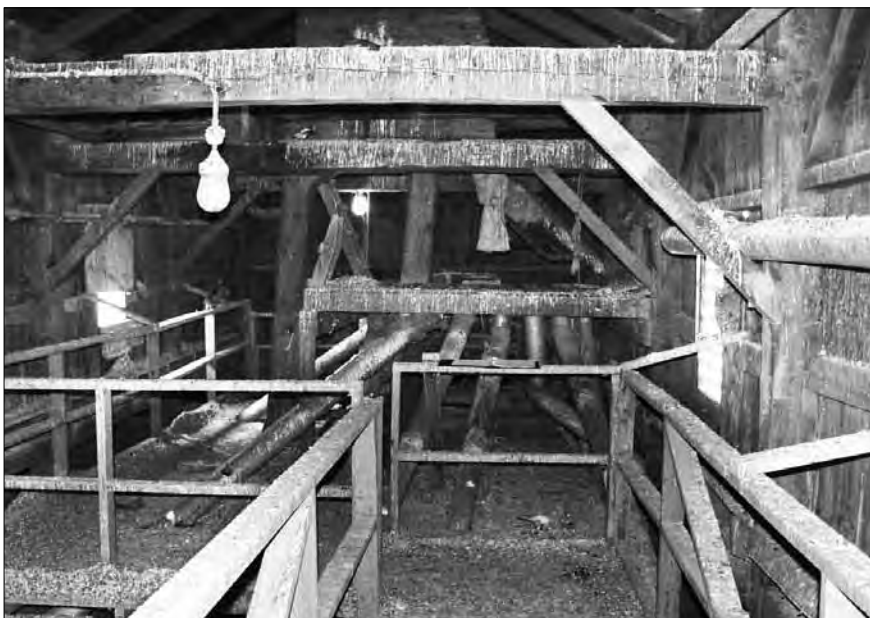




Above, the end of one distribution pipe sits over a bin in the Port Perry elevator, while the lower pipe passes through the bin directing grain to a different destination further along the building. The bins range in size, but this large one is about 10' x 17' x 30' deep.



Right: This picture of a grain bin from the Pullman, WA grain elevator as it was being dismantled, shows that the construction style was very similar, if not the same as the Port Perry elevator.



Left, In the cupola, looking north, the raised (turnhead) platform is visible at the far end of the cupola with metal pipes coming from under the turnhead and heading off to one of the more than 20 bins in the elevator.



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Turnheads, located high in the cupola distribute grains to their designated bins for storage.

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In the cupola, at the top of the Port Perry Grain Elevator are two raised platforms, referred to as turnheads. Grain is sent to the turnheads from the main floor where a spout can be rotated to one of 18 grain bin funnels.

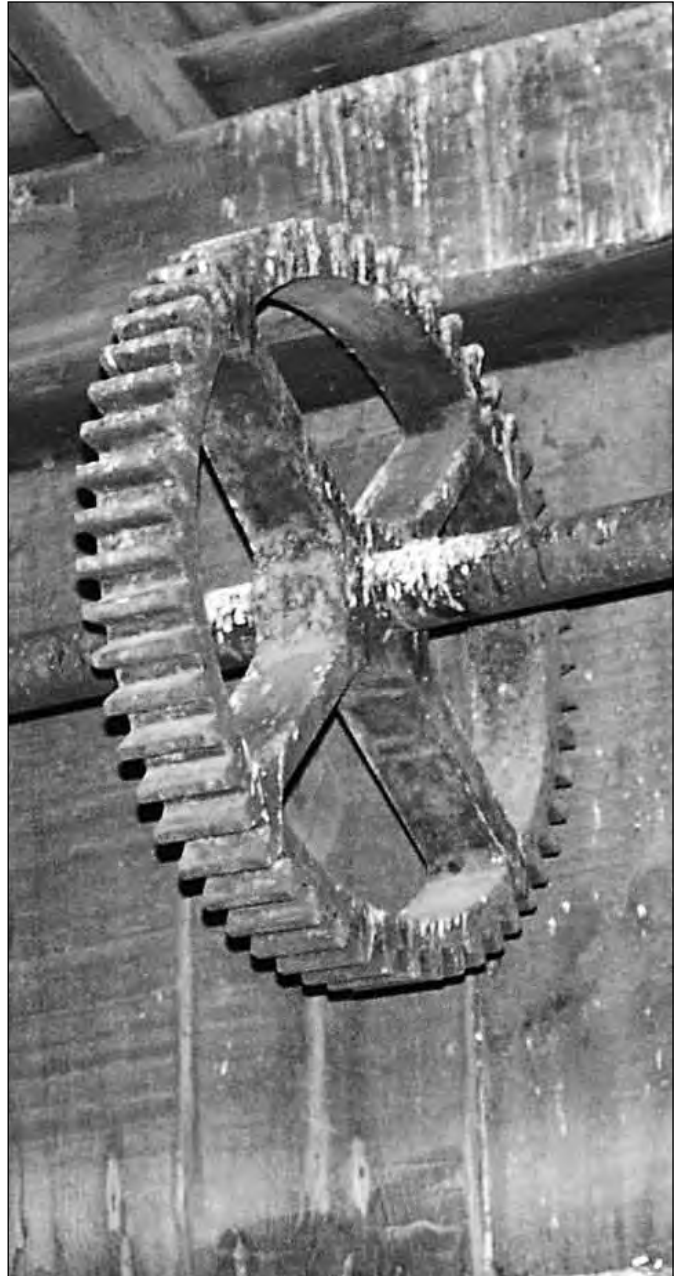
Once the proper bin is selected the grain is raised from the main floor and distributed through the spout into the appropriate bin.

## Relics of the past . . .

Lights out, gears grind to a halt,  
doors locked in September 1980.



One of the many old light fixtures found throughout the elevator.



This large wooden pulley, left, and cogged wheel, above, have been standing idle for almost a century. They were used during the early days of the elevators operation to bring grain to the top of the elevator.



A photographic look - May 2005

# Port Perry Grain Elevator



Elevator looking northwest from Palmer Park.



Elevator looking north from Palmer Park.



The elevator looking south from North St.



Elevator looking southwest from Palmer Park.

# Importance of country grain elevators

Simple, but elegant in design, country elevators stood as lonely sentinels over an otherwise flat landscape. Reaching skyward like church spires, they were poetically referred to as "prairie cathedrals." For nearly a century and a half they provided local farmers with grain storage along the railroads that moved their produce to distant markets.

Early railroad companies built towns along their lines, in part to assure they would always have a supply of fuel and water to keep their great steam engines running. The railroads knew the towns would thrive if crops produced there could be easily and quickly shipped to be sold in distant markets. So the railroads actually financed some of the first country elevators.

By the 1870s railroad companies were restricted by law from directly financing elevators. Instead, they offered incentives such as nominal lease rates, spur lines, no time limits for loading and unloading cars, and special rate arrangements. This encouraged the formation of new grain companies and grower cooperatives.

## IMPORTANT LOCAL STORAGE

Elevators quickly appeared in every small town that had a railroad. With an elevator nearby a farmer could deliver his harvest by team and wagon and return home the same day. His grain was in demand back East, and elevators were there to receive, weigh, store, and transfer it for him.

The basic structure of country elevators included storage bins for 25,000 to 30,000 bushels of grain, a drive shed to protect the unloading of grain in wet weather, and a scale room where weights and grades were recorded. A combined office and engine shed was connected to the elevator by a walkway, which also served as a cover for the drive shaft and belt that ran from the engine to the bucket elevator that both loaded and unloaded grain. These areas were separated intentionally to help prevent explosions and fires that could be ignited by the engines.

Country elevators were commonly constructed of wood. Some were

cribbed, a technique in which wood planks were arranged horizontally with corners that interlocked log cabin style. Beginning at the base with 2" x 8" or 2" x 6" boards and decreasing in size to 2" x 4" as the walls rose, the structure was held together with "20 penny" nails (equivalent to a 4" nail). This construction was widely used in the northern states and Canada where wood was more readily available.

## FIRE DANGER

Both types of elevators were usually sided with metal or asbestos to make them a bit more fireproof. Brick and tile elevators were also built as fireproof alternatives to wood. They were more expensive to build and lacked the strength necessary to withstand the pressure exerted by stored grain.

About the turn of the 20th century, the invention of the slip-form made practical the use of concrete which became the preferred alternative method of construction for elevators.

The country elevator was beautiful in its simplicity of function. A farm wagon arriving with a load of grain would be weighed bucket elevators lifted the grain to the top of the structure for cleaning and distribution to holding bins.

Local grain elevators constructed of wood were expected to last about 40 years, but fire was such a threat the average life of one was actually much less. Still, they served the marketing needs of local farmers for nearly 150 years. A casualty of change, the small elevators could not meet local storage needs as the green revolution of the 20th century produced massive amounts of grain that could be harvested quickly by high-volume self-propelled combines.



The foundation of the elevator was originally stone, but appears to have been repaired a number of times with brick and cement patching.

The Township of Scugog opened the town's historic elevator on Canada Day 2013 to give area residents an opportunity to see the inside of this landmark building, the oldest commercial structure in the town and the only building to have escaped the ravages of the great fire of July 1884 which destroyed the entire business sector.



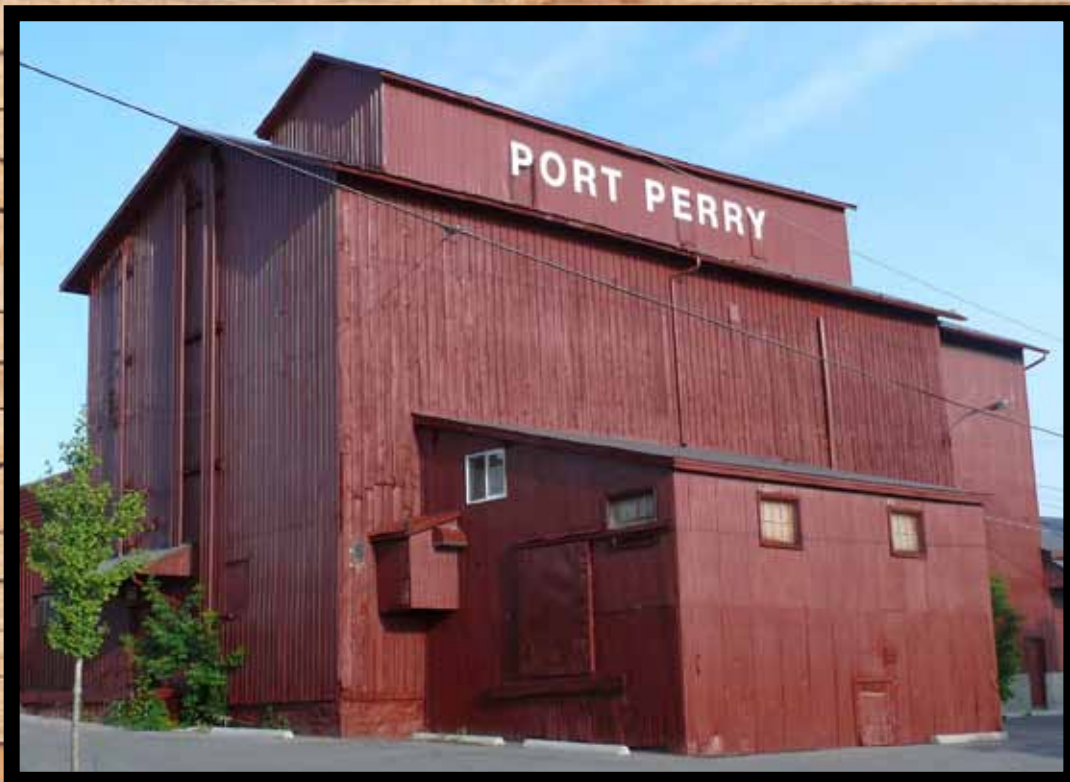
Photo January 8, 2014



The elevator, was occupied by Port Perry Auto Supply when this picture was taken during the summer of 2003.



# THE PORT PERRY GRAIN ELEVATOR



2015