

CIHC

CANADIAN INDUSTRIAL HERITAGE CENTRE

LEARNING FROM OUR PAST,
BUILDING A STRONG FUTURE

NEWSLETTER MARCH 2018

News and Notes from the Newsletter Editor: Welcome back! This newsletter will catch you up on all the recent events of the CIHC from the last few years. We hope you appreciate the hard work done by your executive and directors and will continue your support by renewing your membership, attending our events and volunteering. We appreciate feedback and contributions.



We are saddened to announce the passing of Bill Cockshutt in London, Ontario, on February 14, 2018. His contribution to Brantford, its history, the Cockshutt family history and CIHC has been remarkable. He was highly respected and well-loved by family and friends. See John's tribute to him in a Letter to the Editor of *The Expositor* of February 27th. He was the Honourary Patron of CIHC, and it is hoped that we will carry on our Society to fulfill his hopes and dreams. His contribution has been enormous. We are further saddened to announce the passing of our President, John Kneale's mother, Janice Ashton Cockshutt Kneale, the last Cockshutt to live in Brantford, on March 2nd, 2018, in her 98th year. She will be interred in Farrington Burial Ground with her brother Bill and many other Cockshutts. Our sympathy goes to John.

Rob Adlam has been working hard in the background with new projects: an artwork for the new Brantford City Hall, and the acquisition of a special experimental model of a Cockshutt tractor. Read all about it! Mark your Calendar for the afternoon of Saturday June 16 for the Grand Opening in Waterford!

Bill Darfler has prepared a report on the Cockshutt Moulded Aircraft Factory and a history of Wooden Aircraft. He is also planning a student project. More details later.

Our President has a report of these and other activities. We have just received a notice from the City of Brantford of the **Mohawk Lake District Plan Design Workshop** on March 29th, including the brownfield site, the CIHC and war museum. Public are welcome. See www.brantford.ca/MohawkLakeDistrict for details. The AGM will be held on May 30th. We hope to keep you updated with another newsletter before that.

Your new editor, Jean Farquharson

Bill Cockshutt was advocate for city

William H. (Bill) Cockshutt, who died on Feb. 14, was an outstanding advocate for Brantford and its heritage. Bill worked for the family company, both in Brantford and subsequently in western Canada as a sales representative.

In his later life, he became a historian of the company and of the family. His second book, *Merchants Exchange*, described how the Cockshutt family came to Canada from Lancashire in 1827, and how young Ignatius grew up to become a prominent business and civic leader in Brantford.

Together with his sons and grandsons, Bill contributed enormously to the economic development of the city while also donating generously to numerous public institutions.

Bill argued eloquently for the preservation of some of the great factories at Mohawk-Greenwich that attracted people from around the world to work here and laid the foundation for Brantford's prosperity.

Bill was also instrumental in creating the Canadian Industrial Heritage Centre, based in Brantford, which keeps alive the story of our city's contribution to the opening of the West, the immense industrial effort during two world wars, and Canada's emergence as an international trading nation.

We, in the CIHC, will continue to honour Bill's vision of a community that embraces and builds on the best in its past.

*John Kneale, President
Canadian Industrial Heritage Centre*

Members and Friends of the CIHC:

The board of directors met in late January to plan our activities for the year. One of these, which was proposed by former president Rob Adlam, is to use some of the signs and wooden moulds that were saved from the demolished factories at Mohawk-Greenwich to create an artwork. We are consulting the art experts at Glenhyrst on this with the aim of producing a piece of public art for the new City Hall commemorating the innovative companies that contributed so much to Brantford.

Our plan to create an **Industrial Heritage Park** at 66 Mohawk Street is still on hold because of the remediation process and re-zoning issues. We hope to make some progress this year, but in the meantime we are also looking at the former **Cockshutt Moulded Aircraft Plant** at 148 Mohawk Street. It was built during the Second World War to produce parts of the famed Mosquito fighter-bomber. We are at the research stage with respect to this plant since little is known of it now, but the significant contribution of this and other Brantford companies to winning the war in Europe deserves to be documented.

We continue to actively market a number of publications about local heritage. The full list is available on our website (canadianindustrialheritage.ca), but they include a number of books by Mike Hand about well-known Brantford enterprises; two volumes of the (really fascinating!) *Cockshutt Plant Newsletters* from the war years; and *Merchants Exchange*, the story of Ignatius Cockshutt's extraordinary contributions to civic life during the 1800s.

We will keep you up to date with further issues of this bulletin. Please remember that membership fees for 2018 were due as of January 1st. An application form is attached. The **Annual General Meeting** will be held on May 30th.

John G. Kneale

Back in Brantford

Tales of Cockshutt's Past

Compiled by Rob Adlam

To commemorate the 60th Anniversary of the introduction of the 500 Series Tractors, this issue of Back in Brantford will revisit various Cockshutt Newsletters from the period.



May 12, 1959

As we write this letter today there are 1465 on our Brantford payroll. 1100 in the factory, 177 in factory offices, and 188 in the main office.

We will still be on "422" pull type combines until the first week in June and then back to the "428" when the production schedule calls for 600 units.

"540" tractors are on line until near the end of May then an assortment of "560's" and "570's" followed by a run of "540's" about the first week in August.

On Wednesday of this week the production run of 1800⁰ rakes will be completed. Mowers are about half way through our total production of 1150. After rakes we will produce #2 swathers. Things seem to be clicking well throughout the factory.



And the following report from U.S. Sales: -- "On April 22, a very successful Pennsylvania Dealers' Meeting was held at the dealership of Central Penn Farm and Industrial Supply Company, at New Kingstown, PA. A total of twenty-five dealers, salesmen, mechanics, and prospective dealers were present. The meeting was addressed by A. D. McLean, U.S. Sales Manager, Milt Walker, U.S. Service Manager, Ken J. Horan, Territory Manager for Pennsylvania and K. M. Armstrong. The main purpose of this meeting was to build up confidence and goodwill in the Pennsylvania Dealer organization. The entire Dealer setup in Pennsylvania is all new. Twenty-five new Cockshutt Dealers were recently appointed after we cancelled out the Pennsylvania Farm Bureau. Product knowledge on the new "500" series tractors, combines, and other machines was conveyed to those attending and each was very much impressed with the Cockshutt line of tractors and other machines. As a transfer point is being operated at New Kingstown, several dealers brought trucks and took back to their Agency tractors, plows, rakes, and other machines. Organization of the Pennsylvania territory is continuing in a satisfactory way."

December 1961



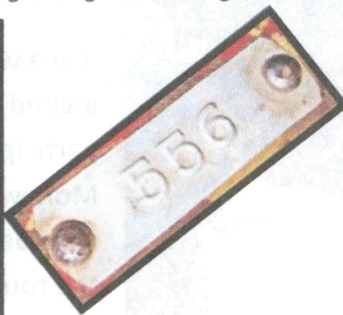
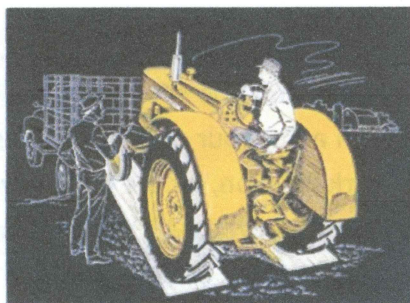
Norman Moore, right, presenting the Cockshutt World Championship in Hay Trophy at the Royal Agricultural Winter Fair, Toronto. The winner was Rolling Rock Farms, Ligonier, Pennsylvania, represented by Mr. Lester Ray, farm manager, shown receiving the trophy along with a watch and cheque. This is the first time the trophy has left Canada. We congratulate Mr. Ray and Rolling Rock farms for this achievement. Their farms, totalling 18,000 acres, are located on Route 30 about fifty miles east of Pittsburgh, PA. Several hundred people were in attendance during the presentation, including Ministers of Agriculture representing several Canadian provinces.



Photo by John Hoover – Bill Cockshutt Archives

Exhibit Grand Opening Gala

A Rare Model Cockshutt 550 Experimental Tractor
Identified only by its Engineering Field Trial Tags



A new interpretive display to honour this one-of-a-kind tractor and its creators

In Celebration of the
60th Anniversary of the Debut of the 500 Series Cockshutt Tractor Line

Saturday, June 16, 2018 - 1:00 PM

at Waterford Heritage & Agricultural Museum

159 Nichol St., Waterford, Ontario

519-443-4211

www.waterfordmuseum.ca

www.canadianindustrialheritage.com



Sponsored by the Canadian Industrial Heritage Centre and the
Waterford Heritage & Agricultural Museum

- Cockshutt 3pt and PTO Shield
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REPORT ON PROJECTS AND EVENTS OF 2017:



Annual Mohawk Lake and Canal District Heritage Bus Tour

On a very hot Sunday, June 11th, 2017, the public was invited by **CIHC** and **The Mohawk Lake Working Group** to participate in a bus tour of historic sites, beginning at the Mohawk Park Pavilion, where a display was set up by CIHC members; Dave Levac, MPP, spoke and led the group into the tour bus that took the group to the Greenwich-Mohawk brownfield site where the Time Office of the Cockshutt Plow Co. is

still standing; Watts generating station and the locks along the Grand River, Mohawk Lake and Canal, Canadian Military Heritage Museum, Mohawk Chapel, Brant's Crossing near the Lorne Bridge, the TH&B Station. At each site a person gave a talk about its importance in the history of Brantford. Upon returning to the pavilion, politicians promoted the concept of a Heritage District built around the sites the group had toured.

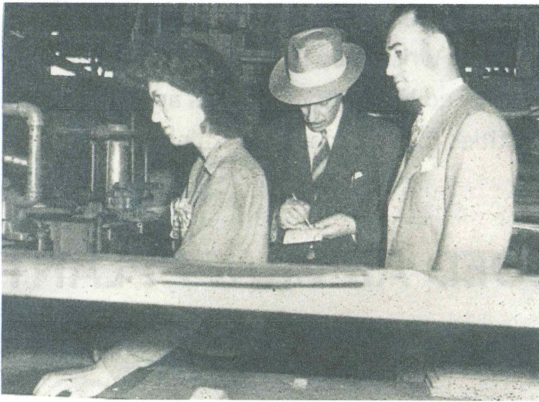
The Cockshutt Plant News

One of the projects completed in 2017 was the 1944 edition of the *Cockshutt Plant News*. It was hot off the press in time for introduction at the Annual International **Cockshutt Club Show** in Forest Ontario on August 14-16, 2017. Ray Wright and Rob Adlam had collected into one volume the monthly issues of 1944. This large book became volume 3 of a series covering the War years at Cockshutt. They are still looking for issues missing from 1942 and 1945. If you have any, please contact us. CIHC has published a beautifully produced facsimile of the original monthly newsletters in 11 x 15 inch format.

What has become a valuable wonderful reference source was under the editorship of Leslie J. Blenkinsop, who created news stories about the employees in the various divisions of the Cockshutt industry, making parts for the war effort as well as producing, developing and selling farm implements, and planning and preparing Cockshutt for the post-war world.

A page was included each month dedicated to former employees serving overseas, with announcements of those who had died, were prisoners of war, or returned home. Letters were printed from soldiers thanking employees for sending them Care packages often containing prized cigarettes. The editor included stories of the employees as they boosted the home front effort with War Bond drives using competing "squadrons" with such names as Lancaster, Anson and Mosquito.

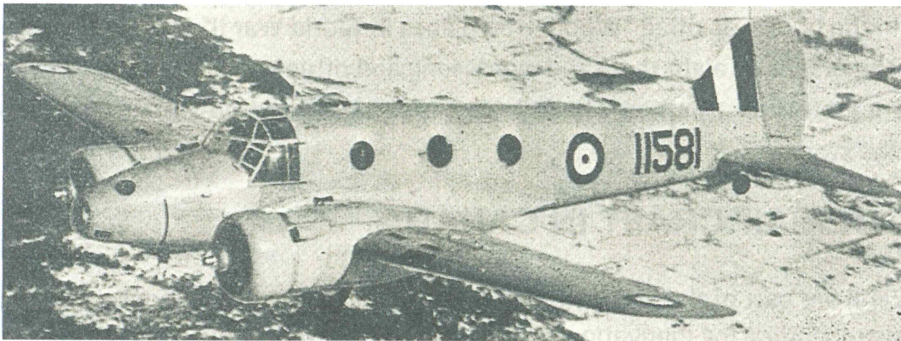
A regular Sports Page outlined many of the activities the workers participated in – with hockey teams also given such names as the Avros, the Ansons, the Manifolds, Shear & Smithys.



“NOTHING LIKE THIS IN ENGLAND,” says W. Hardy, Head of British Aircraft Mission (British Ministry of Aircraft Production) During Recent Visit. Len Poole, of Cockshutt Moulded Aircraft describes a phase in the manufacture of plywood fuselages.”

The female employee is not identified. (From *Cockshutt Plant News*, 1944, p. 96)

The **Moulded Aircraft Division** had its own page in the *News*, where we can read about the development of the wooden airplane industry, from the hiring of Aircraft Production Planning officer, W.G. Snyder, to the building of a million dollar plant, and with pictures of the employees and the various planes for which they contributed moulded plywood fuselage and wings as contracted by various airplane manufacturers. A description of the process of moulding and gluing the layers of wood is included. Parts were built for the Avro Anson V, [see photo] the Lancaster, the Bolingbroke, the Mosquito, P.B.Y., Noorduyt Norseman. Cockshutt employees in other divisions made various metal parts for these planes, and later worked on assembling them.

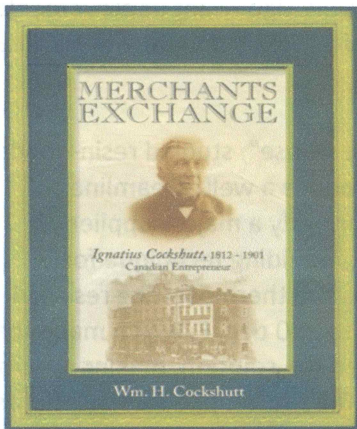


The Avro Anson Mark V as shown in the 1944 Plant News

The information in the Cockshutt Plant News complements what Bill Darfler has contributed in this newsletter about the Moulded

Aircraft Plant and Cockshutt's effort in developing safe and dependable aircraft, giving the social side of the story as well as some technology.

The price of this book is \$ 85 and it may be ordered from the website – www.canadianindustrialheritage.com



BILL COCKSHUTT'S BOOK LAUNCH OF *THE MERCHANTS EXCHANGE AT GLENHYRST*

On October 26th, 2017, Glenhyrst Gallery and CIHC sponsored the launch of Bill Cockshutt's book about Ignatius Cockshutt and his family, and the remarkable contributions he and his descendants made to the City of Brantford. People came in droves to purchase copies of this valuable book which fills gaps in the history of Brantford. As well as John Kneale, the President of Canadian Industrial Heritage

Centre, many other members of the Cockshutt family attended.

Rob Adlam set up a display of artifacts and archival items, some which had never been on display before. Highlighting the display was a copybook of the personal and business letters written by Ignatius Cockshutt dated from September 15, 1888. It is volume 5 of a set of letter books, and was used by Bill Cockshutt as an invaluable source of information to write the book. Copies of the book and other titles for sale may be obtained from our website.

TOUR OF THE COCKSHUTT MOULDED AIRCRAFT PLANT

By Bill Darfler

One of the more interesting stories that the *Cockshutt Plant News* covered was that of the Cockshutt Moulded Aircraft. A little research found the contact information for the manager of the industry that now calls 148 Mohawk its home. **Dan Black at Nexxsource Recycling** gave a small group a tour of the former aircraft plant. Among us were a reporter with the Brantford Expositor, a City Counselor, and representatives of the CIHC Board. The building is 75 years old as of last December and is still in pretty good condition. The main assembly area is a cavernous space with huge timber trusses on concrete pillars. The building needs to be plaqued and interpreted.

When trying to research the story of the CMA, my searches often circled back to a particular book on Google Books, *Atmospheric Flight in the Twentieth Century*, an academic press volume collecting a series of papers on the subject. The most tantalizing paper in the book was titled "Wooden Airplanes in World War II" by Eric Schatzberg, who is a professor at Georgia Tech. The original is eight thousand words long and often strays from the CMA's role in this story. We thank Eric Schatzberg for this contribution. The following is an eight hundred-word condensation that I hope captures the essence of the story:

WOODEN AIRCRAFT IN CANADA

The wooden airplanes of World War II are part of the lost history of failed technologies. The modernist ideology of technology looks resolutely forward, embracing innovation and novelty while disparaging unsuccessful alternatives supposedly mired in tradition. Like most failed technologies, the history of the wooden airplane remains largely buried. Wood was the dominant structural material for airplanes from the pre-history of flight until the early 1930s. Nevertheless, in the late 1930s, wood was poised for a significant revival in aircraft structures. A few aviation researchers and airplane designers began exploring new construction techniques during the 1930s using synthetic resin adhesives. These new adhesives, which were based on common phenol-formaldehyde thermosetting plastics, eliminated the worst problems of traditional wood glues, especially the tendency to deteriorate when damp. In addition, the synthetic resins made possible significant improvements in the strength properties of laminated wood products, while permitting the use of various moulding techniques that promised substantial savings in labor.

Virginius Clark of Fairchild, Aircraft, who later designed Howard Hughes' "Spruce Goose", studied resin-bonded wood veneers, which he found could be moulded into large curved panels to produce a well-streamlined airframe. Clark began working with the Haskelite Manufacturing Corporation, formerly a major supplier of aircraft plywood. The Fairchild and Haskelite companies jointly developed a bag-moulding technique for producing airplane parts of resin-bonded plywood, termed "Duramold" by Clark. the thermosetting resins in Duramold required moulding pressures as high as 100 psi and temperatures up to 280 deg. F, which made the moulding equipment much more complicated and expensive. Duramold provided the solution, making possible "a practically unlimited supply of stout, cheap, fast airplanes. In the late 1930s, the RAF stepped up purchases of

wooden training aircraft, and by 1943 all British-made training aircraft in production used all-wood or wooden-winged construction.

The Canadians also got involved in wooden aircraft production. The Canadian case is particularly instructive because of its similarity with the United States in technology and availability of materials. During the interwar period, Canada had built up a small aircraft industry, though its design capabilities remained limited. For armaments, Canada remained largely dependent on Britain, and the Canadian armed forces followed other Commonwealth countries in standardizing on British materiel. As the British rearmed in the late 1930s, they looked to Canada as a possible source of aircraft and munitions, in addition to Canada's traditional role as a supplier of raw materials. Canada agreed to host the British Commonwealth Air Training Plan, an ambitious program that eventually provided nearly 138,000 pilots and other air personnel for the war effort. This program would require an estimated 5,000 training airplanes.

One key Canadian resource was timber. In a report dated May 1940, J. H. Parkin proposed a program for developing wooden military airplanes in Canada. Parkin, director of the Aeronautical Laboratories at the National Research Council (NRC), presented strong technical arguments in favour of wood structures. Parkin also stressed Canada's large timber resources, which included large reserves of virgin Sitka spruce. Parkin proposed "the design and construction of military aircraft fabricated of wood should be initiated in Canada immediately". These proposals helped launch a major Canadian program for producing wooden airplanes. Air Vice-Marshal E. W. Stedman, the chief technical officer in the RCAF, strongly advocated the construction of wooden airplanes development of innovative wooden airplanes of Canadian design.

In coordination with the RCAF, the NRC launched a substantial research program to develop moulded plywood construction. In July 1940 RCAF and NRC staff travelled to the U. S. to investigate the latest techniques in wooden aircraft construction. They were especially impressed with Eugene Vidal's process. Vidal was former Director of Civil Aeronautics at the Commerce Department and an enthusiast of the "personal" airplane. Vidal had started research on moulded plywood after his unsuccessful attempt to develop a \$700 all-metal airplane while at the Commerce Department. By the fall of 1940, Vidal had become the leading American developer of plywood mouldings techniques, due to Clark's failure to secure military support for Duramold. The Canadian government asked Vidal's company to build an experimental fuselage for the Anson twin-engine training plane, a British design then being built in Canada. The fuselage was a success, and in 1943 a Canadian company Cockshutt Moulded Aircraft had begun manufacturing the fuselages under license to Vidal. From 1943 to 1945 over 1000 of the Vidal Ansons were built in Canada. A rugged, reliable airplane, the Vidal Ansons found wide use as civil aircraft after the war. The Vidal Ansons provided one of the largest and most successful applications of moulded plywood to airplane structures during the war.

This newsletter is published by Canadian Industrial Heritage Centre, P.O. Box 23055, Brantford Ontario, Canada N3T 6K4.

Keep up-to-date by checking our Website: www.canadianindustrialheritage.com

Facebook: Canadian Industrial Heritage Centre CIHC

Submissions to our newsletter are welcome, and are subject to editing. We are not responsible for errors.



CANADIAN INDUSTRIAL HERITAGE CENTRE

Membership Form

Benefits of Membership in the CIHC...

- Participation in the Annual General meeting, and the election of directors.
- Regular updates on our activities through the CIHC Newsletter
- 10% Discount on most Purchases
- Special invitation to all CIHC events

Your Membership Helps us All...

- Expand and conserve the CIHC collection
- Advocate for the preservation of our extensive industrial heritage
- Promote awareness of the industrial and innovation heritage and its importance to our future and quality of life
- Liase with other national and regional heritage groups

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Membership Fees category: Student \$10 ☐ Individual \$20 ☐ Family \$25 ☐

Family Member(s) at Same Address _____

I hereby consent to receive information by electronic-transmission from CIHC ☐

Yes ! I would like to make a donation to the CIHC of \$ _____

Donations of \$20 or more above membership fees are tax deductible.

Charitable number #861470623RR0001

Method of payment: - **Cheque** ☐ **Cash** ☐ **Paypal** ☐

Please Make cheques payable to the Canadian Industrial Heritage Centre.

Our mailing address is - P.O. Box 23055, Brantford, ON N3T 6K4

Membership Fees are for the Calendar Year. Those joining after October 1st will be entitled to membership through to the end of the following calendar year.

visit - www.canadianindustrialheritage.com/membership - To Pay on-line

Are you interested in volunteering with us ? ☐

Areas of interest/comments/suggestions: _____

Information collected on this form is for CIHC membership records only.