



# *Dirigo Flyer*

Newsletter of the Maine Aviation Historical Society  
PO Box 2641, Bangor, Maine 04402 • 207-941-6757 • 1-877-280-MAHS (in state)  
[www.maineairmuseum.org](http://www.maineairmuseum.org) [mam@maineairmuseum.org](mailto:mam@maineairmuseum.org)

Volume XIV No. 2

March – April 2006

Welcome to the second issue of 2006 for our now bimonthly newsletter. The article that follows was written by Ron Kley of East Winthrop and first appeared in Discover Maine in 2005. Ron has given us permission to reproduce it here and we hope you will enjoy it.

## **It was Wright, Right? Wrong!**

It had not been very long since the world observed the one hundredth anniversary of the Wright Brothers pioneering achievements in aviation. Their famous “Wright Flyer” airplane occupies a place of honor in the Smithsonian’s Air and Space Museum on the National Mall in Washington, D.C., and the drama of its “first flight” in December, 1903, is captured on the back of the North Carolina commemorative quarter.

When we think about the first engine-powered, heavier-than-air, man-carrying machine to leave the ground under its own power we’ve been conditioned by our history books to acknowledge the Wrights – and such credit is well deserved. Still, there ought to be at least a footnote in any account of the Wrights achievements – acknowledging the fact that an inventor from Maine had taken to the air in an engine-powered, heavier-than-air, crew carrying machine nearly a full decade prior to the Wrights’ “first flight” at Kitty Hawk!

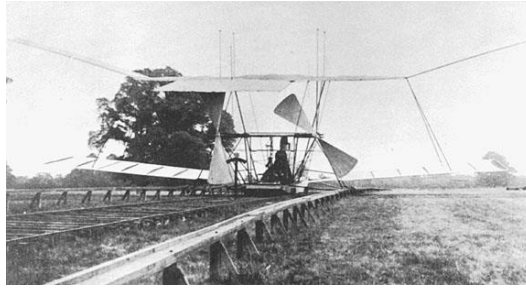
Hiram Stevens Maxim (1840 – 1916), a native of Sangerville, had established a well-earned reputation in the 19<sup>th</sup> century as an inventor of practical devices ranging from a mousetrap to a coffee percolator to one of the earliest and most widely used machine guns. He would eventually be credited with over one hundred U.S. patents, and nearly one hundred and fifty additional British patents. In 1894, while working in England, he turned his considerable talents (along with much of the profit from his earlier inventions) to the long-sought but elusive goal of powered flight by a heavier-than-air machine. And he succeeded! Well., sort of.

Maxim fashioned an enormous contraption which he christened the “Test Rig” although others bestowed the more dramatic name of “Leviathan.” Its wings, which Maxim called “aeroplanes,” (quite possibly the first use of that term), spanned one hundred and four feet. To put that into a more familiar frame of reference, it might be noted that the wingspan of a Boeing 737 (one of the most widely used passenger aircraft in the skies today) is just ninety-three feet.

Propulsion power for the test rig was provided by a pair of huge two-bladed propellers, each nearly eighteen feet in length, and each driven by a remarkably lightweight and efficient one hundred and eighty horsepower steam (yes, steam!) engine. The propulsion system, including engines, boiler, water, and fuel weighed just eleven pounds for each horsepower of output – a remarkable achievement in its own right!

The test rig weighted nearly eight thousand pounds (including its three man crew, and with Maxim himself at the controls), and Maxim had carefully calculated that, if it could be driven forward at a speed of forty miles

per hour, its aeroplanes would generate a lift of 2.5 pounds per square foot – more than enough to raise its ponderous weight off the ground.



The machine was mounted on rails, and a second set of rails was mounted above the first, so that a successful “flight” would be limited, for experimental purposes, to an altitude of about two feet.

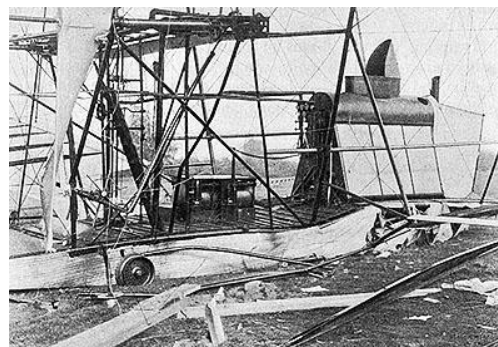
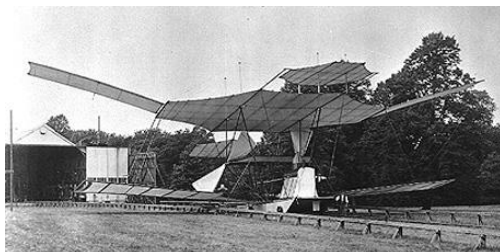
Well, it worked. In fact, it worked just a bit too well. On July 31, 1894 the test rig's boiler was fired; its steam engines came to life and the propellers turned. The massive machine moved forward, rapidly gained momentum as it thundered down the rails and then rose to ride along the underside of the restraining rails. It was flying!

But then disaster struck. Either the power of Maxim's steam engines or the efficiency of his aeroplanes must have been greater than anticipated. The lifting force became so great the upper rail broke, and a fragment hit and disabled one of the giant propellers. Nevertheless, the flight continued for several hundred feet beyond the point where that crippling damage occurred, and Maxim was able to decrease the engine power gradually enough so that the Test Rig landed with only minor damage. Maxim and his three-man crew were able to walk away with no more than minor injuries.

The ponderous machine had flown under its own power, proving the validity of Maxim's vision, his calculations, his engines and his aeroplanes. But further refinement never took place. Perhaps Maxim believed that he had accomplished his objective, proving that powered flight was feasible, and put off further development until such time as investors might be willing to risk their capital on such an initiative.

That willingness never came. As the Wright Brothers were to re-discover nearly a decade later, it was one thing to demonstrate the possibility of powered flight in a heavier-than-air machine. It was quite another thing to convince prospective investors that this novel achievement had a pragmatic and marketable value. It would be a number of years after the Wrights' “first flight” at Kitty Hawk before their airplanes would be seen as anything more than a source of novel aerial entertainment for earth-bound spectators.

As a final note regarding Hiram Maxim's 1894 experiment, it may be worth noting that the flight of the Test Rig covered nineteen hundred and twenty-four feet from lift-off to landing, nearly half of that distance being flown after it tore loose from its restraining rails and suffered damage from the resulting debris. In contrast, the Wright Brothers' longest flight on their “first flight” day (December 17, 1903) covered just eight hundred and fifty-two feet. Their total distance covered in four separate flights on that day was about thirteen hundred and fifty feet, still almost two football fields shy of the distance covered by Maxim and his Test Rig. Even the final cripple phase of the Test Rig's flight exceeded the distance covered by the most successful for the Wrights' “first flights.”



Dirigo Flyer is published bi-monthly by the Maine Aviation Historical Society, a non-profit (501c3) corp. PO Box 2641, Bangor, ME 04402-2641.

www.maineairmuseum.org  
mam@maineairmuseum.org  
1-877-280-MAHS (Maine)  
207-941-6757

#### ASSOCIATION OFFICERS

##### President

Les Shaw  
Brewer, Maine 04413  
les\_shaw@umit.maine.edu

##### Vice President

Norm Houle  
PO Box 563  
Barrington, NH 03825-0563  
Livefreeandfly@aol.com

##### Recording Secretary

William Townsend  
12 Spring St.  
Bar Harbor, ME 04609  
townsend10@verizon.net

##### Treasurer

Joe Quinn  
Levant, Maine 04456  
jwquinn@adelphia.net

#### DIRECTORS

Dan See  
Dick Johnson  
Stan Smith  
Leo Boyle  
Al Cormier  
Jim Nelligan  
Michael Cornett  
Scott Grant

## PRESIDENT'S MESSAGE

Well, summer is getting closer and that means we need to be ready to open. We will be opening on May 20<sup>th</sup> this year. We have also committed to having a float in the Memorial Day Parade and Fourth of July Parade. We will also try to be in the Labor Day Parade as well. We have also committed to having a table at the Portland Air Show, the Seaplane Fly-in at Greenville, and at one of the shows at Owls Head this year/ We need a lot of help to make these things happen and keep the Museum open as well. Please do your best to work a few days this summer if you can.

We had meetings at Wiscasset, Augusta, and the Pittsfield Airports. It is wonderful to get out and see the people who work at these sites and meet new people. We didn't have big crowds but a least we were warm for the winter meetings. I wish to thank each of the sites for allowing us to meet there.

I will be updating the Calendar of Events on the home page link with the names of those workers who have committed to work on the weekends. We need your help!! Please sign up for a shift or two and help us keep the Museum open. Without your help this will not be possible.

I have prepared the paperwork required for the City of Bangor and we are awaiting our chance to meet with the City. They are dealing with a lot of issue right now so we are small potatoes to them and it might be a while. However, I do feel confident that they have not plans for our site and are not looking to kick us out. The real issue is the repayment of the roof loan.

We have removed the insulation from the doors and windows at the Museum and we are opening it up whenever the weather is warm enough. As of last weekend it was 42 degrees inside. Still a little too cold for work, but it should warm up fairly quickly with a few 60 degree days.

I hope to see you at the May 13<sup>th</sup> meeting.

.....Les Shaw

## MAINE AIR MUSEUM WISH LIST

What follows is an updated "wish list" for the museum. Some items are large, some small, some involve man power, others money, artistic ability, and perhaps most of all, time.

We are seeking your assistance with obtaining or sponsoring the following items:

AIRCRAFT be it civil or military that flew or flies in the State of Maine

Help in making the following DISPLAYS:

AIRFIELDS AND SEAPLANE BASES

BANGOR INTERNATIONAL AIRPORT

CIVIL AIR PATROL...HELP IN RESTORING OUR WWII STINSON 10A AND WITH DISPLAY OF THE CAP ITEMS

WE CURRENTLY HAVE.

DOW AIR FORCE BASE

ENGINES: WE NEED TO CONSTRUCT A STAND FOR OUR WWII AIR COOLED RANGER AND WE WOULD

LIKE TO HAVE A RADIAL/ROUND ENGINE FOR DISPLAY

MAINE AIR GUARD ITEMS

MAINE ARMY AIR GUARD ITEMS

MAINE CIVIL AVIATION ITEMS

NAS BRUNSWICK ITEMS

PHYSICAL ITEMS WE NEED:

- 36" X 78" HOLLOW DOORS (TO BE USED FOR PICTURE DISPLAYS)
- 24 3" HINGES TO CONNECT THESE DOORS
- PICTURE TAKING STAND
- DIGITAL CAMERA
- DIGITAL OR TAKE RECORDERS OF EITHER MINI OR CASSETTE SIZE
- PAINTING SUPPLIES: BRUSHES, ROLLERS COVERS, DROP CLOTHES No paint at this time!
- A VINTAGE AVIATION GRAVITY FEED GLASS GAS PUMP
- 3 OVERHEAD DOORS WITH A PASSAGE DOOR IN THEM
- 4 ENTRANCE DOORS TO EXHIBIT ROOMS
- 4 WINDOWS FOR THE OFFICE, BREAK, AND BATH ROOMS

Contact the Maine Air Museum at 941-6757, mail us at PO Box 2641, or email us at mam@maineairmuseum.org

---



## 397<sup>th</sup> Bombardment Wing

Motto "Guardian of Freedom"

Based at Dow AFB, Maine. Aircraft: B-52, KC-135

Activation: Established as the 397<sup>th</sup> Bombardment Wing, Heavy, and activated November 15, 1962. Organized on February 1, 1963.

The 397<sup>th</sup> replaced the 4038<sup>th</sup> Strategic Wing when organized. It conducted bombardment training and air refueling operational commitments.

Status: discontinued and inactivated April 25, 1968

Squadrons:

596 BS: Assigned Feb. 1, 1963 – April 25, 1968. The 596<sup>th</sup> acquired the B-52Gs previously used by the 341 BS, 4038<sup>th</sup> Strategic Wing on February 1, 1963 and flew them until April 1, 1968 when detached to 2<sup>nd</sup> Bomb Wing control. Moved to Barksdale AFB and officially reassigned to the 2<sup>nd</sup> Bomb Wing on April 15, 1968.

19 AR: Assigned Feb. 1, 1963 – June 15, 1963

71 AR: Assigned Feb. 1, 1963 – April 25, 1968

341 AR: Assigned Feb. 1, 1963 – Sep. 1, 1963

---

Now available:

***Memoirs: With an Angel By My Side*** by member Alfred Cormier.

His flying life as told by Al and available exclusively from the Maine Air Museum.

\$16.00 at the museum, \$20.00 via mail. To order, call or email the museum.

"...a great story by a member of the Greatest Generation. Exceptionally good reading, riveting to the end." Bill Townsend  
Teacher-in-Space, STS51.

---

***The United States Air Force in Maine, Progeny of the Cold War*** by John Garbinski.

Another exclusive book from the Maine Aviation Historical Society. Softbound, 134 pages, 151 illustrations. \$20.00 (plus \$3.00 postage and handling). To order, call or email the museum.

---

# Buy a Brick and Support the Maine Air Museum

The Maine Air Museum is proud to announce the new Memorial Pathway Program. To successfully carry out and reach the museum vision, and to help refurbish Building 98, the Maine Air Museum needs the financial support of businesses and public community leaders and individual private citizens. To this end, the museum board has established the following plan for receiving your monetary donation and recognizing your gift permanently in the museum pathway and wall of honor. These donations are fully deductible.

## **Cirrus Member - \$2500 Donation**

Entitles the gift giver to a life membership status and a benefactor's engraved three foot white marble sitting bench with one line of commemorative text (27 characters, 2" high) in the name of the gift giver and his/her memorial to others. Bench to be installed in the museum or on the museum grounds

## **Altocumulus Member - \$250 Donation**

Entitles the gift giver to a five year membership and five-year museum pass and a benefactors engraved pearl gray marble brick with up to two lines of commemorative text (14 characters per line, 0.65 " high). Brick to be installed on the museum grounds, walkway, or building façade.

## **Alltostratus Member - \$150 Donation**

Entitles the gift giver to a two year membership and three-year museum pass, a copy of The United Air Force in Maine and a benefactors engraved red brick with up to two lines of commemorative text (14 characters per line, 0.65" high). Brick to be installed on the museum grounds, walkway, or building façade.

## **Stratocumulus Member - \$100 Donation**

Entitles the gift giver to a one year membership and a two-year museum pass and a benefactors red brick with up to two lines of commemorative text (14 characters per line, -.65" high). Brick to be installed on the museum grounds, walkway, or building façade.

---

### ORDER FORM FOR MEMORIAL BRICKS

Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Donation level:

Cirrus (\$2500)     Altocumulus (\$250)     Altostratus (\$150)     Stratocumulus (\$100)

I am interested in a \_\_\_grant or \_\_\_matching grant contribution of \$\_\_\_\_\_

Please submit this information with your tax-deductible 501(c)3 contribution to"

MAM Memorial Brick Fund

Maine Air Museum

PO Box 2641

Bangor, ME 04402-2641

You will be mailed an acknowledgment and a copy of the engraving text proof.

---

**The next meeting will be at the Museum on May 13<sup>th</sup>. This meeting will be followed by a work session as we clean up the Museum and get ready to open. We will be opening the weekend of May 20 as the Army has a reunion in town that weekend. Check the Calendar of Events on the home page for updates on who is working. We need two people for each shift. Remember that Saturdays we are open from 10-4 and Sundays from 12 - 4. Please let us know if you are willing to work any day during the summer. We need to fill the slots if we are to remain open.**



Maine Aviation Historical Society  
Maine Air Museum \* Membership Form

Name: \_\_\_\_\_

Address: \_\_\_\_\_

City, State, Zip: \_\_\_\_\_

Special Interests: \_\_\_\_\_

Phone: \_\_\_\_\_ Email: \_\_\_\_\_

Dues are for one year,  
and membership will  
expire in the month you  
joined.

Annual membership  
includes six newsletters!

Mail payment to:  
Maine Aviation  
Historical Society  
PO Box 2641  
Bangor, ME 04402-  
2641

Membership	Dues	Benefits
Regular	\$25 annual	Newsletter, Decal, Museum Admission
Family	\$35 annual	Newsletter, Decal, Museum Admission
Corporate	\$100 annual	Newsletter, Decal, Museum Admission
Supporting	\$100 annual	Newsletter, Decal, Museum Admission, 4 free passes
Lifetime	\$500*	Newsletter, Decal, Lifetime Membership
	* 2 annual \$250 payments	Number, Museum Admission, 10 free passes

We need volunteers-docents, mechanics, maintenance, librarians and exhibit specialists, etc.

\_\_\_ Please call me. I want to be active in the organization.

\_\_\_ I cannot join now, but would like to help. I am enclosing a check for \$\_\_\_\_\_.

Contributions over \$20 are tax deductible within the limits of the law.

\_\_\_ I wish to support and obtain membership by purchasing a memorial brick.

**DIRIGO FLYER**  
**MAINE AVIATION HISTORICAL SOCIETY**  
**PO BOX 2641**  
**BANGOR, ME 04402-2641**