Hagley’s Fifth Annual Gingerbread House Contest

November 25 • Holidays at Hagley Begins
February 11 • National Inventors’ Day
February 12 • Victorine’s Valentine’s Day
I don’t think the term “waiting with bated breath” adequately describes this past year and the opening of the Nation of Inventors exhibition. There was so much work to be done to recover from the September 2021 flood and ready the exhibition space for the reinstalation of the patent models. Finally in early October we welcomed friends and visitors to see for themselves the culmination of six years of planning and preparation. When you visit the exhibition, please take a few moments in the reception area to listen to the comments of other visitors. You’ll be certain to hear “WOW” and “this looks amazing.” The exhibition is a major part of our mission to inspire people to be innovative in their own lives. If you have been inspired by something you saw or participated in at Hagley, please let me know!

As we head into the holiday season, we have a full slate of programs and decorations on tap to inspire the artist in you. Our holiday theme this year is “All Creatures Great and Small,” to celebrate the many animals who enrich our lives and our natural world. Inspired by one of the winning entries in last year’s Gingerbread House contest that featured an animal shelter, we decided to make animals a property-wide focus in 2022. Please sign up to make a Gingerbread House creation for our contest! Having submitted a house last year I know that no artistic skills are necessary, just a love of bright candies, some patience, and the satisfaction of knowing others in our community will appreciate your efforts.

In our ongoing program to feature Black STEM Pioneers in Delaware, we highlight an oral history done with Rosetta McKinley Henderson, who joined the DuPont Company in 1965. In her candid interview she recounts the challenges and opportunities she faced as she pursued an education in the sciences. She became the first African American woman to work on the research staff at the Experimental Station, eventually earning two patents in analgesics research.

Our holiday theme this year is “All Creatures Great and Small” to celebrate the many animals who enrich our lives and our natural world.

Inventors and the patent system are a cornerstone of our democracy. To note their achievements, Hagley joins our nation in celebrating National Inventors’ Day on February 11. Spend the day with us to create your own invention and then receive a Hagley patent.

Please enjoy this issue of the Hagley Magazine and I hope to see you soon at Hagley.
THE 2022 HAGLEY CAR SHOW on September 18 had fantastic, sunny weather and hundreds of cars on display for visitors to enjoy.
VISIT ELEUTHERIAN MILLS beginning November 25 and encounter the holiday decorations and traditions of multiple generations of the du Pont family. This year, step back in time to explore the importance of animals at Eleutherian Mills. Whether companions, wild, or raised on the farm, the animals at Eleutherian Mills were central to the lives of the du Pont family.

The du Pont family held a special place in their hearts for the animals in and surrounding their home on the banks of the Brandywine River. As young women, E.I. du Pont’s daughters sketched scenes of their favorite fauna and even pursued entomological studies. Later in life, E.I.’s son Henry du Pont would sit on the piazza of Eleutherian Mills and share a breakfast of “pieces of bread broken in a bowl of milk” with his steadfast feline companion named Minette.

Could you imagine celebrating the holiday season without your furry, loyal companion? Louise du Pont Crowninshield, the last resident of Eleutherian Mills, would certainly hear of no such thing. She traveled with her beloved dogs, and their devoted faces were never far from her side at any time of the year. Louise loved to entertain, and you can be sure that her precious pups had a nibble or two of the festive holiday turkey, lamb, or even plum pudding served at her dinner party.

Join us at Hagley this holiday season for “All Creatures Great and Small” – a celebration of the animals that impact peoples’ lives so greatly.

On certain December weekdays you can enjoy an evening tour of Eleutherian Mills and take in the festive decorations and animal-themed displays. These tours often sell out quickly, so be sure to book early!

On December 3 and 10, enjoy a visit and take a holiday photo with Santa! After your visit with Santa, see the colorful creature-featuring entries in Hagley’s fifth annual Gingerbread House Contest.

All activities are included with admission and free for Hagley members.

HOLIDAYS AT HAGLEY
NOVEMBER 25 TO JANUARY 1
10 A.M. TO 4 P.M.
HAGLEY.ORG/HOLIDAYS
USE HAGLEY’S MAIN ENTRANCE

TWILIGHT TOURS
DECEMBER 13, 15, 20, 22, 27, & 29
4:30 TO 7 P.M. • EVERY 15 MINUTES
FREE FOR MEMBERS, $15 NONMEMBERS
ADVANCE TICKETS ENCOURAGED
HAGLEY.ORG/TWILIGHT
USE HAGLEY’S BUCK ROAD ENTRANCE
IT'S THAT SWEET, GINGERY TIME OF YEAR. Time to mix the icing, gather the candy, and decorate away for Hagley's fifth annual Gingerbread House Contest. All skill levels are welcome to join this popular event, with entries reflecting this year’s theme, “All Creatures Great and Small.”

Create a gingerbread house that includes at least one creature in the display, whether it be a household pet, a deer walking in the snow, or any other creature of your imagination.

Entries will be on display throughout the holiday season in the Hagley Barn, and can be viewed during Holidays at Hagley and Twilight Tours.

Want to enter? Visit hagley.org/gingerbread for details. The contest registration deadline is November 18.

GINGERBREAD HOUSE CONTEST
NOVEMBER 25 THROUGH JANUARY 1 • 10 A.M. TO 4 P.M.
FREE WITH ADMISSION
HAGLEY.ORG/GINGEBREAD
National Inventors’ Day

NATIONAL INVENTORS’ DAY celebrates the genius behind design. On January 13, 1983, President Ronald Reagan declared February 11 as National Inventors’ Day. This date was chosen in honor of the birthday of Thomas Alva Edison. Some of Edison’s inventions include the incandescent electric lamp, the phonograph, and the motion picture projector. He earned more than 1,000 patents during his lifetime. You can see one of his patent models, Carbonizer for the Filaments of Light Bulbs, in Nation of Inventors.

In President Reagan’s Proclamation 5103, he stated that “inventors are the keystone of the technological progress that is so vital to the economic, environmental, and social well-being of this country.” What better venue than Hagley’s Nation of Inventors to celebrate invention and satisfy your creative needs on this special day. Hagley will offer activities on all three floors of the Visitor Center. Come learn about the patent process and examples of early American ingenuity in our Nation of Inventors exhibit. Then visit the DuPont Discovery Loft on the third floor to “Tinker and Create.” You can take apart electronics, use everyday household “junk” to create your own patent model, and submit your patent application at Hagley’s Patent Office.

NATIONAL INVENTORS’ DAY
SATURDAY, FEBRUARY 11 • 10 A.M. TO 4 P.M.
INCLUDED WITH ADMISSION
FREE FOR MEMBERS
USE HAGLEY’S MAIN ENTRANCE
CELEBRATE VALENTINE’S DAY with Hagley on Sunday, February 12 at Victorine’s Valentine’s Day, a sweet family event that has something for everyone to enjoy.

Victorine’s Valentine’s Day honors the life and legacy of Victorine du Pont Bauduy (1792-1861), daughter of E.I. du Pont. Victorine taught and served as superintendent at the Brandywine Manufacturer’s Sunday School.

In the Wheelwright Shop, make a Valentine’s Day card using the scrap method popular in the Victorian era, wrap a candy bar with your own design to give as a gift to that special someone, and get creative at the hot cocoa bar with whipped cream, chocolate chips, and other tasty treats.

In the Gibbons House enjoy the smell and taste of sugar cookies freshly baked in the woodburning stove. Then continue to the Sunday School and meet “Victorine” and learn a bit about her life. Try your hand using a quill pen to write valentine verses.

A shuttle will run a continuous loop to assist you in your travels between the buildings. Visit Hagley and enjoy the sweetest of holidays.

**VICTORINE’S VALENTINE’S DAY**

**SUNDAY, FEBRUARY 12**

11 a.m. to 4 p.m.

INCLUDED WITH ADMISSION, FREE FOR MEMBERS

USE HAGLEY’S MAIN ENTRANCE
Hagley has added another installment to its Black STEM Pioneers in Delaware oral history project, documenting the lives and careers of African American pioneers in Delaware’s STEM professions. The newest addition is Rosetta McKinley Henderson, who joined the DuPont Company research staff at the Experimental Station in 1965, the first African American woman with advanced scientific training to do so. During her career, she earned two patents in analgesics research. She co-authored three research papers appearing in the *Journal of the American Chemical Society*.

The interview, conducted by prize-winning oral historian Jeanne Nutter and filmed by former CBS and CNN cameraman Ron Dean, traces Henderson’s early life in Fairhope, Alabama, as one of sixteen children of an interracial marriage, and explores her notable accomplishments in the sciences at Alabama State College, leading to a master’s degree in chemistry at Fisk University, a historically Black university in Nashville, Tennessee. After completing doctoral course work at Ohio University, Henderson found her progress blocked by 1965 when faculty attitudes led her to conclude that she would not be able to finish her dissertation. At that point, DuPont offered her a research position at the Experimental Station to work on analgesics, which Henderson accepted, leading to a lifelong career in pharmaceutical research and administration, first for the DuPont Company, and then DuPont Merck Pharmaceutical Company. After retirement, Henderson taught science at Delaware Technical Community College and Neumann University.

During the interview, Henderson relates life in Wilmington from the late 1960s from the perspective of a successful Black woman scientist and the assistance she received from DuPont coworkers in navigating segregated Wilmington housing. After marrying architect James L. Henderson and starting a family, she describes balancing her career and family life.

She recounts her early years in Alabama. Her oldest sister, Edith, helped pay for Rosetta’s education at Alabama State, where Rosetta excelled in the sciences and became a key member of the university debate team, which defeated the all-white teams from Emory and Tulane universities. Her team also competed with Texas Southern University, whose team featured the future Congresswoman Barbara Jordan. During her time at Fisk, Henderson was trained by noted chemist Samuel P. Massie, Jr., who had worked on the Manhattan Project and became the first African American chairman of the chemistry department at the U.S. Naval Academy. In 1998, Massie was also named one of the seventy-five most distinguished chemists of the twentieth century by *Chemical & Engineering News*.

Henderson’s life is punctuated by significant individuals and trends in African American history during and since the Civil Rights Era. As a college student, she participated in the Montgomery bus boycotts and attended sermons by Dr. Martin Luther King, Jr. Sister Edith, perhaps the first Black bail bonds person in Michigan, was married to Ted Rasberry, who played in and owned several baseball teams in the Negro Leagues. Brother Harry was an early African American pilot for United Airlines, while another sister became a noted surgeon in Atlanta.

The digital exhibit and oral history are available at hagley.org/henderson.
During the Winter Months, Hagley’s newest exhibition, *Nation of Inventors*, will be open daily to members and other visitors. To tackle other important projects throughout the property, the rest of the museum will be closed all of January, and Tuesdays through Thursdays in February. The closed areas will include the Powder Yard and the du Pont Residence and gardens.

“Hagley usually closes portions of the museum for different amounts of time in January for maintenance projects and important conservation work for our on-view collections,” said Museum & Audience Engagement Director Mike Adams. “The additional closures in 2023 will allow various teams at Hagley to tackle projects that would impact the visitor experience—including ongoing restoration work from 2021’s flooding. *Nation of Inventors*, in the Hagley Visitor Center, will be open all year long. The rest of the museum will return to seven-day-a-week operations in March 2023.”

Hagley will offer special events during those months, including National Inventors’ Day and Victorine’s Valentine’s Day. Check the Hagley website and follow us on social media to stay up to date about hours of operation.
What’s in a Label?

Hagley has thousands of patent models, used to demonstrate the utility of new inventions when applying for a patent in the nineteenth century. Most people wouldn’t put much thought into the labels attached to such artifacts, but labels have their own significance worthy of preservation. For instance, most of the information on patent tags is handwritten in ink. At the time the labels were created, typewriters had yet to catch on.

The label pictured here belongs to a hydraulic engine patent model submitted in 1879. On the surface, this looks like a simple tag, requiring little intervention. Seemingly less active preservation would be warranted compared to its companion patent model, with multiple parts. In reality, it is a complex mix of materials with interactions that have implications for longevity. The label has definitely seen better days! At first inspection, it looks as if half of the handwriting ink was gouged away, along with some of the label underneath. The back side is also damaged, but more extensively. The patent description and diagram – paper, ink, and all – have largely been consumed. On the front, the areas without ink are more or less intact.

Good lighting and magnification were used to examine this tag, which revealed that it is a layered structure with a paper sheet in the middle and coated cloth laminated to the front and back. Yet another layer, a patent diagram, was likely attached with a protein or starch adhesive. The coating on the cloth likely contains starch as a stiffener, filling voids in the weave. Unfortunately, the adhesive and starch are both attractive to pests, including silverfish. Silverfish thrive in moist warm conditions and graze on exposed edges and surfaces of paper. It depends on the ink formulation, but they often will eat around heavily applied ink.

So, if not insects, what caused the losses of the ink on the front of the label? One clue is in the type of ink that was used. The damaged ink is probably iron gall ink, which was the most common type used in the nineteenth century. Historic writing inks were commonly home made with the available colorants from plant dyes or pigments, including carbon. When it comes to indelible inks, iron gall ink is the one that was used for centuries, on artworks, correspondence, and legal documents.

Gallo tannic acid, iron sulfate (known as vitriol or copperas) water, and gum arabic binder are the key ingredients of iron gall ink. Oak galls are bulbous growths that form on trees that have been attacked by wasps or other insects. Gallo tannic acid is highly concentrated in Aleppo galls, which America imported in quantities from Syria. Unfortunately, the presence of iron and acids make this ink susceptible to moisture, causing ink corrosion. The chemical changes in the iron-based ink cause brittleness in paper underneath, and then losses occur. Physical movement and bending during handling are especially risky for these fragile documents. Paper records suffering from ink corrosion are often left in a seriously weakened state after decades of use.

Both the insect and the ink damage point to former storage in a damp area. Current storage conditions below 60 percent humidity will reduce further paper damage from ink corrosion. Patent labels in the museum are now kept in plastic sleeves. These practices prevent munching and snacking by insect pests.
This side of the tag is missing a significant part of its label because insects found the materials appetizing.

A patent model tag written with iron gall ink. The ink has degraded much of the paper, leaving holes where the writing once was.

RE-CREATING A PATENT MODEL TAG - Patent model tags are especially fragile due to their age and material. Hagley creates reproduction tags for exhibitions outside of Hagley Museum, and in cases where the original tag is deemed too damaged or fragile to display.

1) The original tag is digitally scanned while in its protective plastic UV sleeve.

2) The scan is edited, color-corrected to grayscale, and some—but not all—damage is removed.

3) The corrected scan is laser printed onto heavy parchment paper, then trimmed to size.
THANKS TO OUR CORPORATE PARTNERS!
It is with their support that Hagley is able to offer events such as Science Saturdays, Bike & Hike & Brews, Fireworks at Hagley, Hagley Car Show, and more. Visit hagley.org for the current events schedule.
Holiday Entertaining Essentials

HOLIDAY JAM - $14.00/$12.60 members
A unique mix of figs, dried apricots, raisins, candied oranges, crushed almonds, and a splash of rum, this gourmet, seasonal French preserve brings together the main ingredients of the 13 desserts of Christmas in Provence.

BAYBERRY CANDLES - $21.95/$19.76 members
True bayberry candles have been burned to bring good luck on Christmas Eve and New Year's Eve since the tradition started more than three centuries ago. These old-fashioned, hand-dipped 8” taper candles are made using a carousel dipping wheel from 1850. The first twenty-five dips of each candle are in 100 percent pure bayberry wax and the last three dips are in 80 percent pure bayberry and 20 percent beeswax.

SNOWMEN STACKING BOWLS - $59.95/$53.96 members
The lovely set of stacking bowls is perfect for use at any upcoming holiday gathering. This cute three-piece ceramic bowl set adorned with snowmen is designed with a vintage aesthetic and a hand-thrown appearance with natural textures.

WINTER GREENS NAPKIN SET - $40.00/$36.00 members
These sweet juniper, cedar, white pine, and fir sprigs add greenery to your place settings for the holidays, but are neutral enough to use all winter long. Screen printed on 100 percent flour sack cotton, these napkins are extremely soft and absorbent, meaning they work just like they should. These reversible napkins have two designs on one napkin. When folded, each side displays a different design.

WASSAIL & HOT TODDY KITS - $22.95/$20.66 members
Cure the winter blues with soothing wassail and hot toddy kit blends. Simmer down by the fire with a warm, spicy cider wassail, rich mulled wine wassail or enjoy bourbon infused toddies, sweetened with honey.

CHECK HAGLEY.ORG FOR STORE HOURS OR SHOP ONLINE AT STORE.HAGLEY.ORG
UNLESS OTHERWISE NOTED, ACTIVITIES LISTED ARE INCLUDED WITH ADMISSION, FREE FOR HAGLEY MEMBERS, AND FREE FOR CHILDREN FIVE AND UNDER.

Science Saturdays – hagley.org/scisat for schedule and topics
Experiment and innovate with Hagley’s series of science activities. Visitors use their creativity to make scientific discoveries. Use Hagley’s main entrance.

NOVEMBER 11 – FRIDAY – 1, 2, AND 3 P.M.
Cannon Firing
Have a blast during your visit to Hagley with a demonstration of our signal cannon! Be prepared, it may seem small, but really packs a punch! Cannon firings are weather-dependent. Use Hagley’s main entrance.

NOVEMBER 12 – SATURDAY – 12 TO 4 P.M.
Science Saturday presented by Young Conaway Stargatt & Taylor, LLP – Balloon-Powered Wagons
Hitch up your wagon to see how far it will roll, powered by the force of a balloon! Visitors of all ages are invited to discover solutions to science and engineering challenges at Science Saturday. This is a drop-in activity, feel free to join the fun at any time from 12 to 4 p.m. Use Hagley’s main entrance.

NOVEMBER 18 – FRIDAY
Gingerbread Contest Registration Deadline
It’s time to mix the icing, and buy the colorful candy! This year’s theme is “All Creatures Great and Small.” Register today at hagley.org/gingerbread.

NOVEMBER 25 TO JANUARY 1, 10 A.M. TO 4 P.M.
Holidays at Hagley
Celebrate the holiday season at Hagley with the theme, “All Creatures Great and Small.” See Eleutherian Mills, wonder at the Gingerbread House Contest entries, visit Santa, and more! The museum will close at 2 p.m. on Christmas Eve (December 24) and will be closed all day Christmas (December 25). Use Hagley’s main entrance.

DECEMBER 1 – THURSDAY – 7 P.M.
Author Talk: Thomas Zeller
Thomas Zeller will close the fall series with a talk based on his book, Consuming Landscapes: What We See When We Drive and Why It Matters. His book explains how what we see while driving reflects our view of societies and ourselves. The talk is free, registration required at hagley.org/zeller. Held in Hagley’s Soda House, use Hagley’s Buck Road entrance.

DECEMBER 10 – SATURDAY – 12 TO 4 P.M.
Science Saturday presented by Young Conaway Stargatt & Taylor, LLP – Turn Up The Heat!
Discover how thermal energy is transferred and use these concepts to free treasure trapped in ice! Use Hagley’s main entrance.

DECEMBER 13 15 20 22 27 29
TUESDAYS & THURSDAYS
4:30PM TO 7:15PM
Twilight Tours
Enjoy a Twilight Tour of Eleutherian Mills and enjoy the residence in a new light. Take in the festive decorations along the theme “All Creatures Great and Small” and discover what would be happening both upstairs and downstairs in the Residence as the family gathered for the holidays. Free for members, $15 for nonmembers. Advance tickets encouraged. Visit hagley.org/twilight for details. Use Hagley’s Buck Road entrance.

DECEMBER 15, 17, 20, 22, 27, 29
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4:30PM TO 7:15PM - EVERY 15 MINUTES
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FEBRUARY 11 – SATURDAY
10 A.M. TO 4 P.M.
National Inventors’ Day
Enjoy three floors of activities in Hagley’s Visitor Center. Visit Nation of Inventors to inspire your imagination, then visit the DuPont Discovery Loft to tinker and create! Use Hagley’s main entrance.

FEBRUARY 12 – SUNDAY
11 A.M. TO 4 P.M.
Victorine’s Valentine’s Day
Celebrate the sweetest of holidays at Hagley with Victorine’s Valentine’s Day. Make Valentine cards, warm up with cookies and hot chocolate, and decorate a candy bar wrapper with a special message to share with your valentine. Use Hagley’s main entrance.
HAGLEY’S GINGERBREAD HOUSE CONTEST celebrates “All Creatures Great and Small.” Find the names of these small animals in the grid of letters below.

**WORD LIST**

- CAT
- CHICKADEE
- CHIHUAHUA
- COCKATOO
- FERRET
- FISH
- GERBIL
- GUINEA PIG
- HAMSTER
- HEDGEHOG
- LIZARD
- RABBIT
- RAT
- SALAMANDER
- SNAKE
- SQUIRREL
- TURTLE

| J | F | H | I | V | I | R | I | O | A | N | W | C | D | P | W | Q | K | E | G | T | A | R |
| X | N | H | C | Q | E | D | V | R | A | A | G | U | T | P | L | N | I | L | M | O | T | P | Z | M |
| G | D | A | H | P | M | O | F | D | R | K | R | I | B | I | C | M | E | U | I | H | A | R | T | S |
| S | C | E | L | X | Z | T | T | L | Y | E | Z | F | N | W | C | M | A | O | C | G | T | P | N | J |
| U | P | R | B | N | O | T | K | M | R | Y | L | Y | E | I | K | J | U | V | U | D | C | W | H | C |
| F | W | Z | G | R | A | E | B | Y | E | N | O | H | N | D | A | T | H | Y | T | E | X | S | L | M |
| G | D | J | R | N | D | M | U | E | T | E | R | R | E | F | T | N | A | J | T | H | I | C | Z | I |
| X | C | H | I | C | K | A | D | E | E | K | F | R | S | O | O | I | U | T | I | B | B | A | R | U |
| L | S | G | P | A | G | I | X | H | Q | Z | S | I | E | G | T | G | I | J | S | L | U | G | G | O |
| T | N | F | N | B | H | P | A | U | J | H | X | R | A | Y | I | H | V | Y | O | O | Q | W |
| R | A | R | C | G | R | X | B | M | I | Q | Z | J | A | Z | U | W | C | T | V | P | E | P | B | R |
| U | K | A | I | L | T | Y | D | S | R | R | V | A | K | A | E | N | I | U | G | O | F | R | B | Z |
| D | Y | Y | X | Y | U | S | E | E | T | L | U | M | P | S | A | L | A | M | A | N | D | E |
| C | U | E | Y | E | M | S | A | R | L | P | T | S | D | R | A | Z | I | L | D | E | C | Z | M | F |

**PHOTO PUZZLE ANSWERS:**

1) KISS ON ROOF SECOND FROM RIGHT IS DIFFERENT
2) REINDEER ARE MISSING
3) GUMDROP ON ROOF IS BLUE
4) WHITE ROOF ICING IS LARGER
5) CANDY CANE FRAMES ARE DOUBLE AROUND LEFT WINDOW
6) SNOWMAN WITH BLUE HAT IS DUPLICATED
7) GOLD DECORATIONS MISSING FROM TREE
8) GREEN CANDY MISSING FROM ROW

**SPOT THE DIFFERENCES!** Can you find eight differences between the two pictures above?