

THE GLATTFELDERS AND THEIR PATENTS PART 1

**The first in a series on
Glattfelders and their many
contributions.**





GLATTFELDERS AND THEIR PATENTS

- In doing some research on one of my patents, I put in a wrong letter and up came a patent by Wiltie I Gladfelter.
- Surprised and looking for more, I came across many patents by descendants of Casper Glattfelder.
- I contacted Phil Glatfelter, met him for lunch, showed him what I found, and here I am!
- The presentation is 48 slides long and growing.
- It's broken into three time periods: Early 1800s to 1920s, early modern 1930s to 1960s, and modern 1970s to present.





GLATTFELDERS AND THEIR PATENTS

- It contains 45 inventors, around 200 individual patents, over a span of 142 years, and all descendants of Casper Glattfelder. Amazing!
- It was decided that the presentation is too large to present at one reunion.
- I will touch on several inventors through each period.
- I'll tell you about myself and one of my inventions.
- I'll tell you about my dad. (Because I can)





GLATTFELDERS AND THEIR PATENTS

- And then turn it over to my colleagues, Pat Donaldson and John Glatfelter, who will tell you about their inventions, their accomplishments, and their dads.
- And then we'll wrap it up with a Q&A.
- There are copies of patents and plaques by us and various other Glattfelders on the table for you to review.
- We hope you will enjoy our presentations enough that you'll allow us to do it again next year with some of the other family inventors.



F. P. GLADFELTER.
Gate.

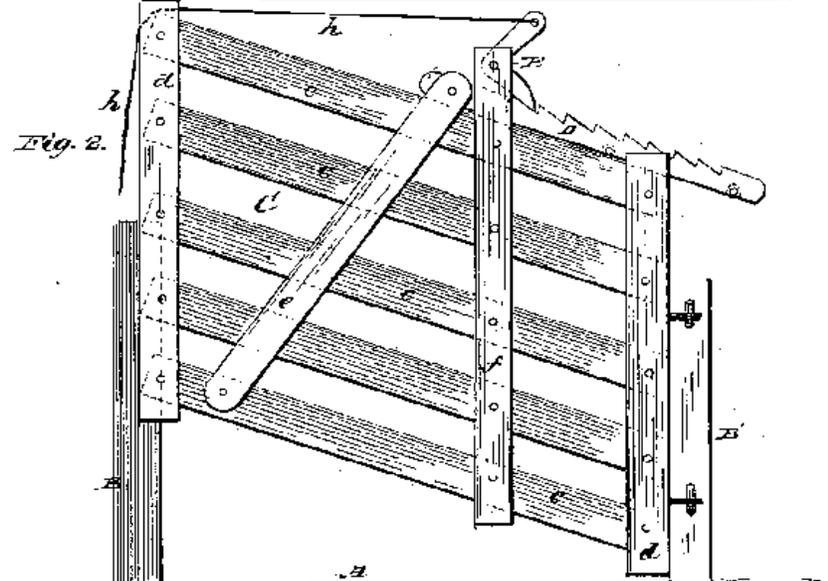
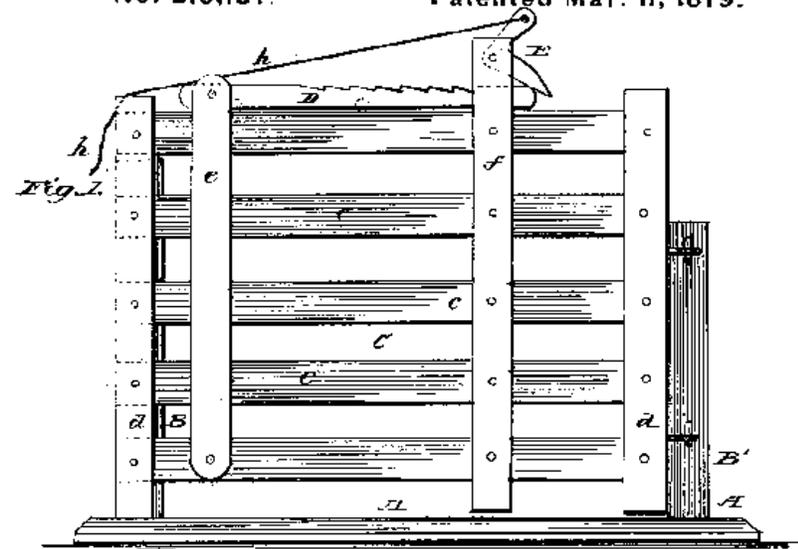
No. 213,187.

Patented Mar. 11, 1879.



FRANK P. GLADFELTER

- The first patent I came across was Frank P. Gladfelter's moveable gate that was granted in 1879.
- Patent US213187A



Witnesses
H. S. Ditzsch
George B. Kintzberg

Inventor
Frank P. Gladfelter
By Louis Chappart
Attorney



GLATTFELDERS AND THEIR PATENTS

Others in the Early Period were:

- George Gladfelter: 1894 -- Rail Car Coupler.
- Marion E. Gladfelter: 1897 -- Bicycle Support.
- John W. Clay Glotfelty: 1899 -- Washing Machine.
- Emerson C. Glatfelter: 1906 -- Machine for Forming Concrete Blocks



THE TYPICAL 1900 WASHING MACHINE





JOHN W. CLAY GLOTFELTY

Patent US686403

1899 – Washing Machine

- John Glotfelty and partner Charles Snow patented a washing machine design in 1899.
- Claims: simple, inexpensive, efficient, fast, low labor, with no damage to the fabric.
- The washing machine allowed agitation by rotating cones while plunging them up and down.



THE J.W.C. GLOTFELTY & C. P. SNOW

WASHING MACHINE



No. 636,403.

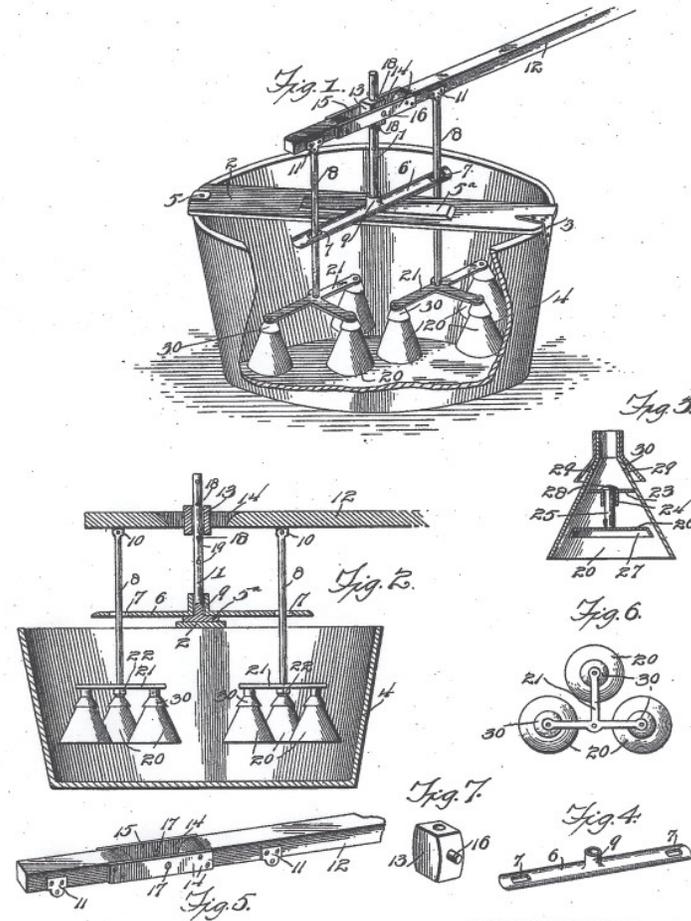
Patented Nov. 7, 1899.

J. W. C. GLOTFELTY & C. P. SNOW.

WASHING MACHINE.

(Application filed Mar. 30, 1898.)

(No Model.)



Witnesses
Ralph Shepard
H. J. Riley

J. W. C. Glotfelty, Inventors
 By *Their Attorneys*,
C. P. Snow

C. Snow & Co.



THE EARLY MODERN WORLD

- Clifford L. Gladfelter: 1930 -- Multisection Unit Shipping Bill.
- Wiltie I. Gladfelter: 1935 to 1958 -- Beverage Processing Equipment and Containers.
- Dr. Edwin Hay Glotfelty: 1945 -- Lubricating Mechanical Coupler.
- Mason J. Glotfelty: 1948 -- Automotive Repair Device.
- Bruce W. Glotfelty: 1927 -- Automatic Safety Appliance.
- George W. Kurtz: 1961 -- Deoxygenating membrane.
- Carl S. Glatfelter: 1964 -- Bus Emergency Steps.





WILTIE I. GLADFELTER

- Wiltie had 45 patents for the invention of beverage containers, bottle cap closing equipment and can making equipment.
- Wiltie worked for Crown Cork and Seal for many years and then Pangborn Corp.
- Wiltie's education is unknown but his mechanical engineering skills were highly evident in his inventions.
- Much of the technology that he invented in the 1930s to the 1950s is still used today in the can and bottling industry.





WILTIE I. GLADFELTER

PATENT US2081809A

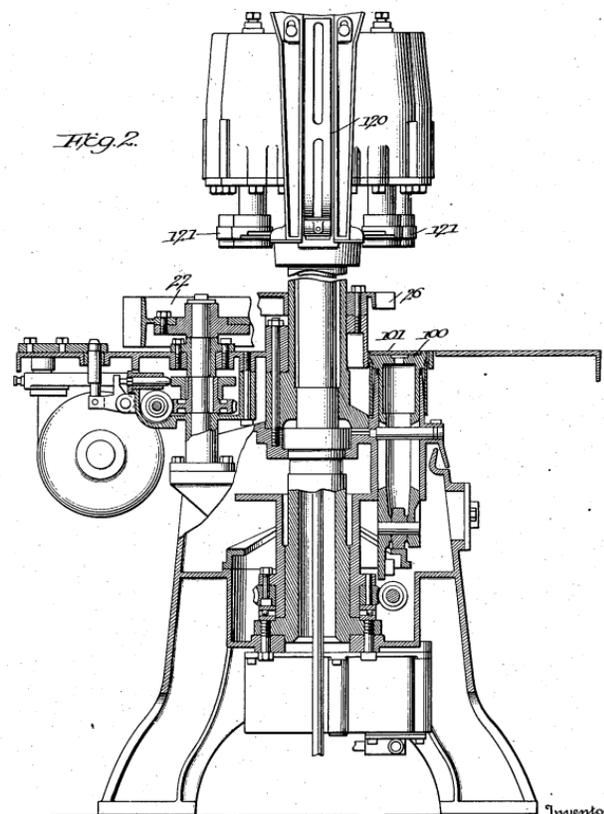
1937 - BOTTLE CAPPING MACHINE

May 25, 1937.

W. I. GLADFELTER
BOTTLE CAPPING MACHINE

2,081,809

Original Filed July 29, 1932 4 Sheets-Sheet 2



Inventor

Wiltie I. Gladfelter.

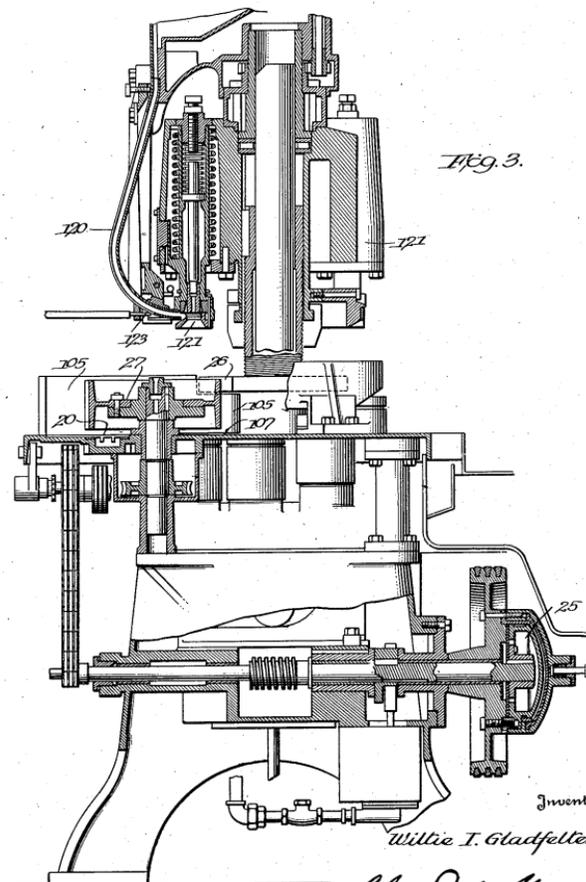
334 *Cushman, Dwyer & Cushman*
Attorneys

May 25, 1937.

W. I. GLADFELTER
BOTTLE CAPPING MACHINE

2,081,809

Original Filed July 29, 1932 4 Sheets-Sheet 3



Inventor

Wiltie I. Gladfelter.

334 *Cushman, Dwyer & Cushman*
Attorneys



WILTIE I. GLADFELTER

- Wiltie was born December 7, 1898 and died July 2, 1976. He was 77.
- He was married to Blanche V. (Gibbs) Gladfelter and they had a son Donald G. Gladfelter.
- They lived on Cherry Tree Lane, Williamsport, MD
- He is buried in the Zion Lutheran Cemetery, Glen Rock, PA
- We continue to search for more information about Wiltie's career, education, and life.
- If anyone here has information about Wiltie, please see me after this presentation.





THE MODERN ERA

- Dr. Joseph F. Myers: 1981– Chemistry, Lithographic Printing Improvements.
- Dr. Elizabeth J. Gladfelter: 1983 to 2009 --Chemistry, Packaging and Aerosols.
- Harry F. Gladfelter: 1987 to 2016 -- High Tech Textiles, Automotive.
- John W. Glatfelter: 1987 to the present -- Aerospace Applications from Airport Security Devices to Antiglare Windshields.
- Craig A. Glatfelter: 1991 to 1995 -- Chemistry, Floor Coverings.
- Dr. Wayne L. Gladfelter: 1990 to 1994 -- Chemistry, Metal Deposition.
- William Glatfelter: 2001 -- Magnetic Tape Manufacture.





THE MODERN ERA

- David M. Glatfelter: 2004 -- Integrated Quick Wall Building System.
- David K. Gladfelter: 2005 -- Instrument Communication Devices.
- Patricia J. Donaldson: 2005 to present -- Printing equipment.
- Thomas L. Glatfelter Jr.: 2007– Bag Dispenser at a Workstation.
- Troy L. Glatfelter: 1993 to 2002 -- Solar Power Photovoltaic Devices.
- Dr. Heather J. Gladfelter: 2002 to 2015 --Biology, Embryogenic Tissue of Pine Trees.
- Michael J. Glatfelter: 2013 -- Refrigerant Recovery and Charge System.
- Kyle Glatfelter: 2013 -- Cable Grounding System.





THE MODERN ERA

- Scott D. Glatfelter: 2016 -- Electrical Connector.
- Bryan J. Glatfelter: 2017 -- Utility Table.
- Jacob Gladfelter: 2017 -- Detection and Separation of Laundry with Foreign Items Comingled.
- Nicolas Roth: 2019 to Present -- Computer Programs and Devices.
- Keith L. Glatfelter: 2020 -- Freezestat Assembly.



HARRY F. GLADFELTER



- Harry has 16 U.S. patents in industrial textiles that include protective sleeveings, acoustic abatement, electronic EMI/RFI shielding, and flexible reflective heat shields.
- Applications include products for automotive, aerospace, and electrical insulation.
- Companies he worked for include Asten Johnson, Bentley Harris, and Federal Mogul.
- Harry's first patented EMI/RFI shielding fabric was inspired by his electronic training he gained as a radar repairman in the U.S. Marine Corps.



HARRY F. GLADFELTER



Featured Patent **US7744143**

Nonwoven Panel and Method of Construction Thereof - 2010

- This invention takes synthetic fibers and ground Asian cardboard to form an acoustic nonwoven panel for automobiles.
- The Asian cardboard comes from auto part boxes from China used in U.S. cars.
- The Asian cardboard isn't able to be recycled because of fiber length and was filling up landfills.
- This invention put the cardboard waste into the vehicle and helped save the environment.



HARRY F. GLADFELTER



History



- Partnership with GM - 2006
 - Asian cardboard waste stream
- Obtained nonwovens technology - 2007
- Launched  GRN in 2009
 - Acoustic absorber



HARRY F. GLADFELTER



- Harry holds a BS in chemistry from the Philadelphia College of Textiles and Science (Now Jefferson) and a Certificate in chemical engineering from Temple University.
- Harry lives in Kimberton, PA, with his wife Vivian J. Gladfelter.
- They have three children, Harry A. Gladfelter, Bret Kyler, and Jason Kyler.
- Two of Harry's children are deceased: Christian F. and Heather G. Gladfelter.



HARRY ALBERT GLADFELTER (MY DAD)



- Born February 9, 1921
- He graduated from Audubon HS, Class of '39, where he played football as a guard.
- He worked at the New York Shipbuilding Corp. and when the war broke out, he married my Mom and joined the Navy.
- He served 3 years. I was born in '43 when he was away.
- After the war, he went back to the "yard" and worked there for 28 years until it closed in '67.
- After, he worked at the JJ Henry Co., a marine engineering, navel architect firm as a sales engineer.



HARRY ALBERT GLADFELTER



- He was active in local politics and served as mayor of Hi-Nella, NJ for two terms in the early '60s.
- He was also elected President of the Camden County Mayors Association.
- Dad loved to read and loved science fiction.
- He also had a good voice and sang at various venues.
- He loved the Jersey shore and Mom and Dad had a trailer at Lake & Shore Campground near Sea Isle City for years where he would fish and clam.
- He passed away on December 17, 1993 at 72.





NOTABLES IN THE MODERN ERA

- Troy L. Glatfelter - a scientist who has 10 patents on solar panel technology while working for United Solar Systems Corp. of Troy, MI and Sky Solar LLC, a worldwide solar technology company.
- Dr. Heather Gladfelter a research professional at the University of Georgia whose patent tells of an enhanced transformation and regeneration of embryogenic pine tree tissue.
- Dr. Elizabeth (Jedziniak) Gladfelter who has 26 U.S. patents while working as an R&D chemist for Henkle Inc. and Ecolab Corporation.
- Dr. Wayne Gladfelter a chemistry professor at the University of Wisconsin who has a patent on metal disposition.
- Nicolas Roth who has 7 patents on computer programs and devices while working for Groupon Inc.



DR. PATRICIA J. DONALDSON



- Pat is a biophysicist who has worked for Xerox for 30 years in various engineering functions in the design of printing machines.
- Pat's name is on 43 US patents centered on Xerox technology of printing in all forms.
- This included the design process controls system for color printing presses, including sensor calibration, machine setup, runtime controls and image processing algorithms.



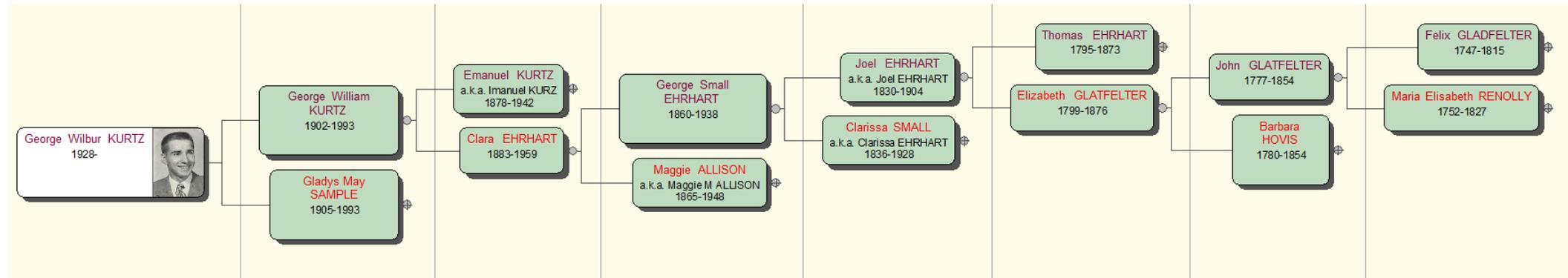
DR. PATRICIA J. DONALDSON



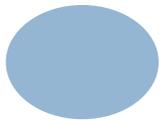
- Pat has a BA in physics from Oberlin College and a PhD in biophysics from Cornell University.
- She did post-doctoral work at the University of Rochester Medical Center where she designed experiments and analyzed the data.
- Pat lives in Rochester, NY with her husband William Donaldson and they raised two adopted children.
- I present to you Dr. Pat Donaldson.



MY GLADFELTER TREE

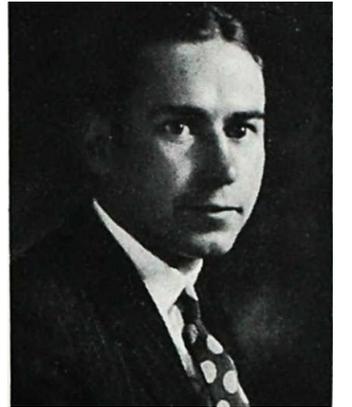
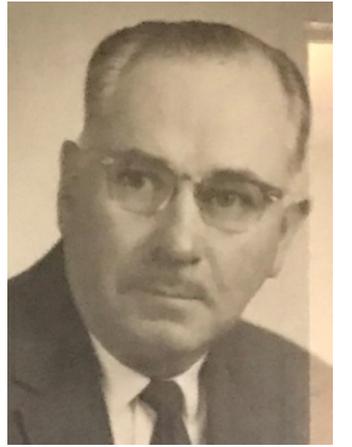


- My Dad, George Wilbur Kurtz, is descended from Felix Glattfelder, through Elizabeth, who married into the Ehrhart family.
- George Small Ehrhart's 3 daughters: Clara, Lizzie, and Lillian were missing from the Glatfelter tree, lost with the 1890 census and young marriages. I found the Glatfelters moving upwards from George Ehrhart's family bible, when I decided to subscribe to Ancestry during the Covid lockdown. That led to the Casper Glattfelder Association website, and Harry's Glattfelder patent project



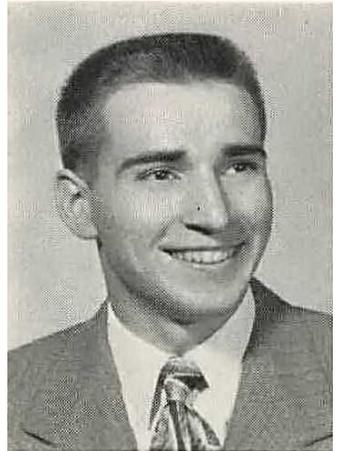
GEORGE WILLIAM KURTZ

- My Grandfather, George William Kurtz, went to Gettysburg College, and became an Electrical Engineer, at a time when the EE building needed to maintain an electrical generator in the basement to ensure a steady supply of electricity.
- He went on to work for AT&T long-lines in Harrisburg and Philadelphia. The electrical engineering he'd learned was soon obsolete, but the mechanical engineering wasn't, and he ended up helping to build the microwave tower network that delivered long distance phone calls prior to cell phones.



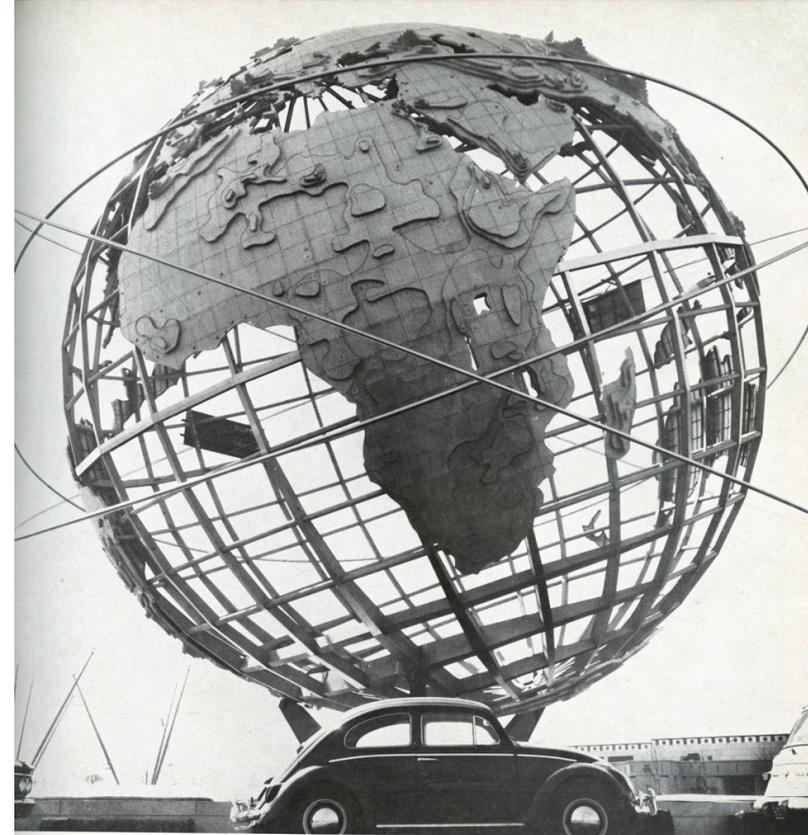
GEORGE WILBUR KURTZ

- My Dad went to Penn State. He started out in Chemical Engineering, but transferred to Dairy Chemistry, where he specialized in making ice cream. With Stu Patton, he developed a patent to determine whether dairy products were starting to go rancid, the TBA assay, which is still widely used.
- Dad was drafted into the quartermaster corps, where his job was developing new ice cream flavors which could be made out of K-rations. The base commander would stop by at the end of each day to give his thumbs up or down on the latest scoop. Dad's favorite was rum raisin. Later, at Miles Laboratory he was issued a patent for a packet you could put into a food container to scavenge oxygen and keep foods fresh for longer.
- He went on to work for R.P. Scherer Pharmaceutical Co. in Detroit, North Carolina and Florida.



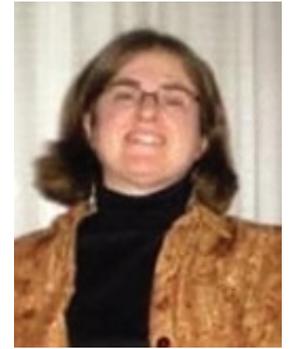
ERNST BUDKE III

- Dad's cousin, Ernst Budke, is another Gladfelter descendant. He's the son of Lillian Ehrhart, the youngest of George Small Ehrhart's three daughters.
- As an architect (and later Vice-President) with Peter Muller-Munk Associates in Pittsburgh, Ernst Budke helped to design the Unisphere for the New York Worlds Fair in 1964



PATRICIA JOANNE DONALDSON

- I have a Ph.D in Physics from Cornell University (something that never fails to astound me).
- After graduation I went to work for Xerox Corporation. Xerox was founded by a patent attorney, and they are very focused on getting patents to protect critical technologies, and also as trading chips to acquire other company's patents. I once asked a patent lawyer why they were bothering to patent one fairly small idea of mine, and he said that when you want to trade for some other company's deuce you don't want to be holding a hand full of Aces.
- Last year the Intellectual Property office sent a note congratulating me on obtaining my 50th patent. I retired at the end of June (2021), but I'm still in the middle of writing a patent, and have another idea that's under review, so my final total will probably be 51 or 52. Most of those patents describe how to design or control a digital printer. (image-to-paper or image-to-3D object). Some of those are deuces, a couple may turn out to be significant.



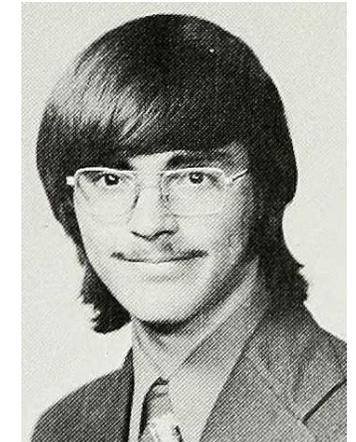
MY FAVORITE PATENTS

- I hold multiple patents for controlling image quality on Xerox's iGen color printers, which print 4-5 color images at over 100 pages per minute.
- I hold two patents for the design of 3D printers, using rotation (either on a turntable, or onto a rotating core), to increase productivity. The materials and methods for 3D printing are slowly catching up to these designs, and I believe they'll someday be manufacturable.
- I hold one patent on using a 3D printer to manufacture chemical "pills" (mostly pharmaceuticals, but possibly fertilizer sticks) to give a controlled concentration profile when they dissolve. This patent includes methods for combining multiple chemicals (drugs) so that the concentrations of each drug changes as the pill dissolves.



STUART ALLEN KURTZ

- My brother, Stuart Allen Kurtz is a mathematician and computer scientist, and the bright one in our family.
- Stu got his Ph.D in mathematics from the University of Illinois 6 years after graduating from high school and went on to become one of the youngest tenured professors at the University of Chicago. He served for twelve years as the Chairman of the Computer Science Department, and in addition to his significant body of published research, he's received the Quantrell Award for Excellence in Undergraduate Teaching. He currently holds a named professorship at the University and is Master of the Physical Sciences.



JOHN W. GLATFELTER



- Working for the Boeing Co., John has 30 patents, with 30 additional pending.
- John is a software engineer but his patents are of varied subjects pertaining to aircraft and their logistics.
- His patents include a security device, an antiglare windshield, and mathematical approaches to air traffic control, to name a few.
- John holds a MS in Engineering from Widener University and an MS in IT from Virginia Tech University.
- John and his wife Bridget Ann live in Kennett Square, PA.

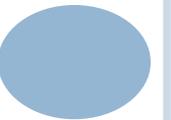


JOHN W. GLATFELTER



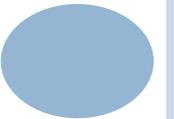
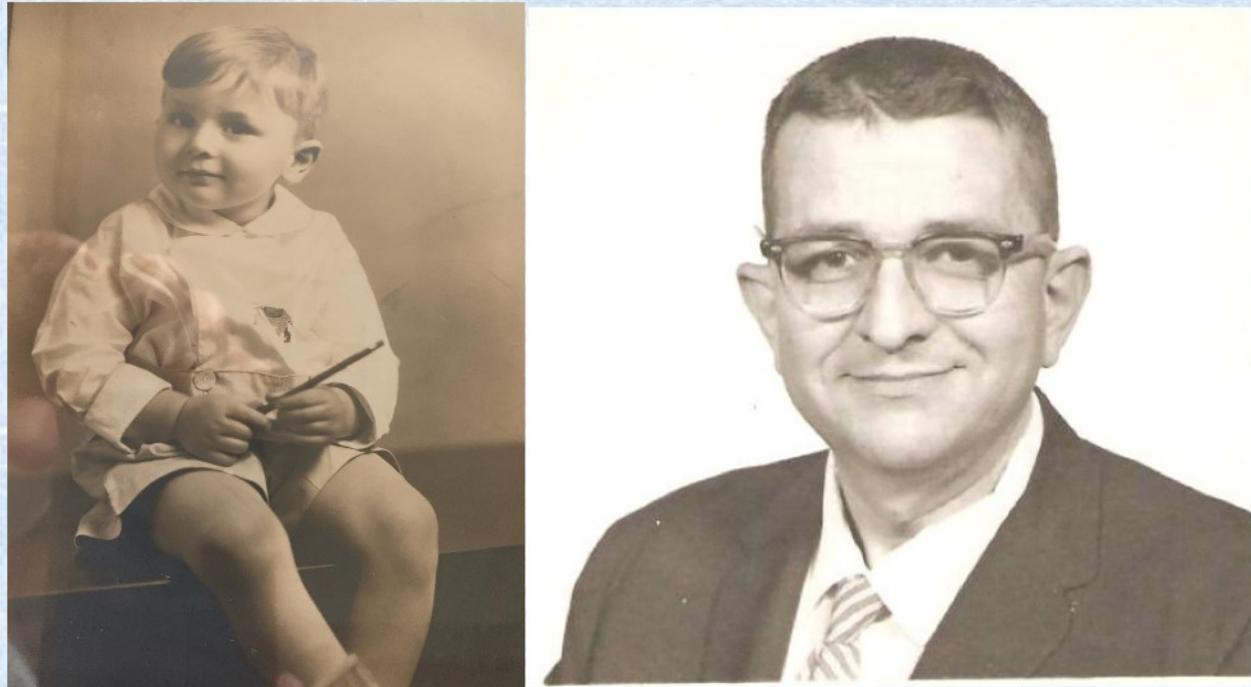
- They have five children: Amanda, Steven, Julia, Jonathan, and David Glatfelter.
- Son David Glatfelter served in the Marines and flew combat missions on the V-22. He now works at Boeing and has a patent pending with his dad.
- I present to you John W. Glatfelter who will first tell you about his Dad, Edward W. Glatfelter and then about his own distinguished career.





Edward W. Glatfelter

an inventor and rotorcraft pioneer



Edward W. Glatfelter

1929-1999

- Born in April 21, 1929 in York, Pennsylvania
- Family lineage traced to Glattfelden, Switzerland, near Zurich , Lutheran church background. Most settled in York County, PA
- Father: PhD in Chemistry and Education and HS Principal of York High School.
- ***“Ed used to take everything apart and put it back together to learn how it worked”***
 - Grew up on one of the 1st farms to have electric power in York. His father said, ***“He wired and rewired the barn and we lost power a lot.”***
 - Was fascinated with mechanisms, gear-design, lift, drag, and rotors
 - Built a rototiller and a tractor to help speed up gardening and work in the fields



Ed's father,
Edward Abraham Glatfelter



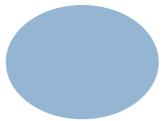
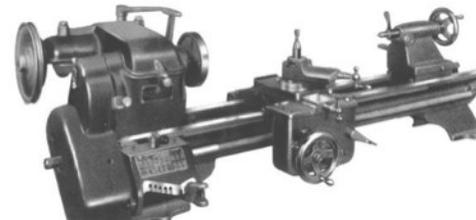
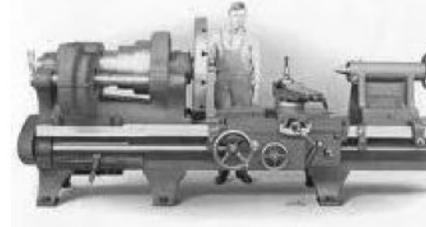
Edward W. Glatfelter

- BS Mech Engineering at Penn State in 1950
 - As a freshman, built a motorcycle to get him around the PSU campus
- Was the 1st in his family to “leave York for the big city” and follow his interest in aerospace to Stratford, Connecticut. His father was very supportive of him pursuing his dream.
- Married in 1955, 4 children, 2 sons, 2 daughters, 11 grandchildren



The Machinist Guild

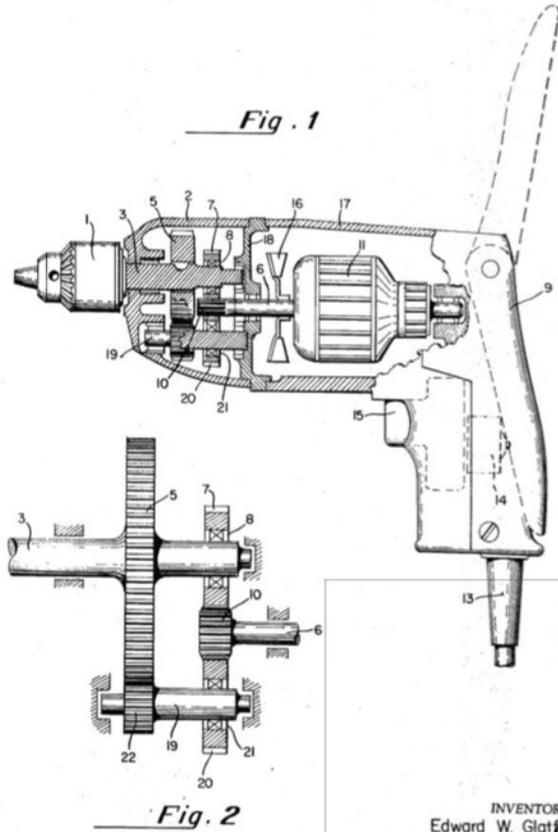
- The “Hobby” Shop
 - Over 3 decades, he assembled a machine shop in his basement and garage that included drafting tables, milling machines, lathes, drill presses, tapping machines, hydraulic presses, belt sanders, cutoff saws, welders, and CNC equipment. In addition to his personal interest he taught his sons the trades of drafting, metal working, and engineering project management.



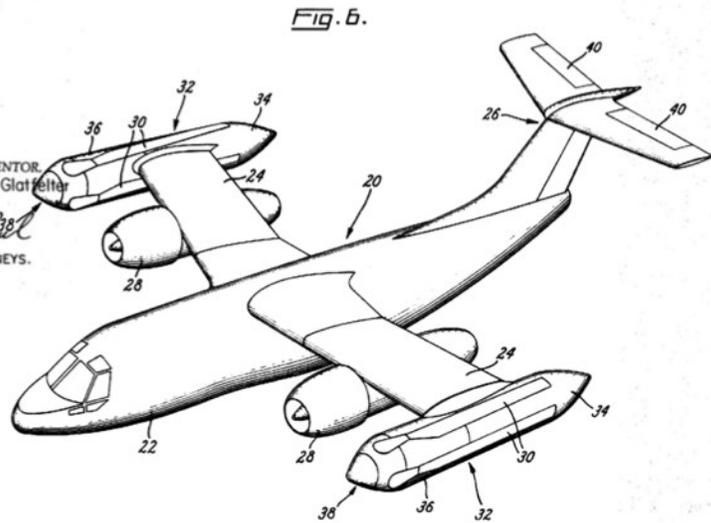
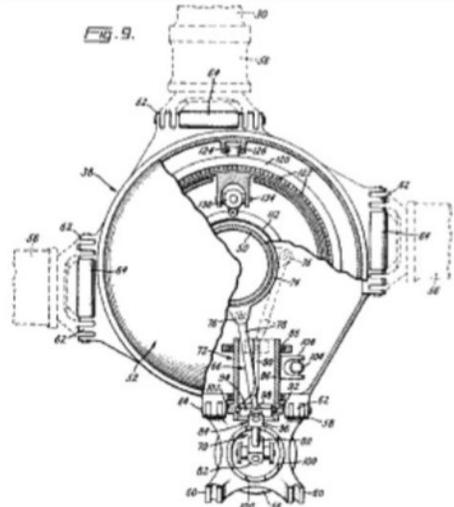


EDWARD W. GLATFELTER'S PATENTS



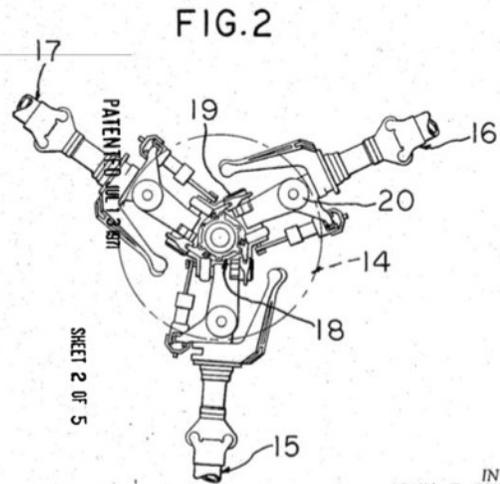
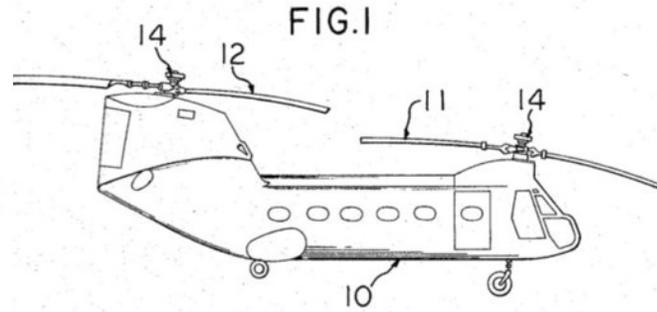


INVENTOR:
EDWARD W. GLATFELTER,
BY *Arthur W. Kelly*
ATTORNEY



INVENTOR:
Edward W. Glatfelter
BY *Paul + Zell*
ATTORNEYS.

INVENTOR:
EDWARD W. GLATFELTER,
BY *Arthur W. Kelly*
ATTORNEY



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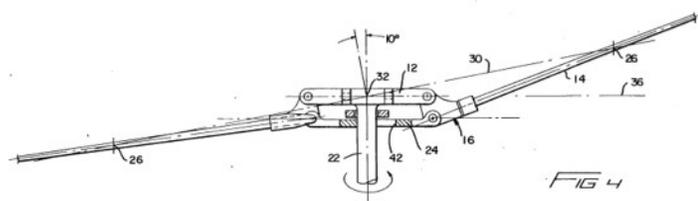
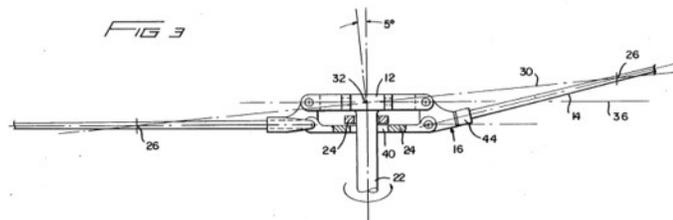
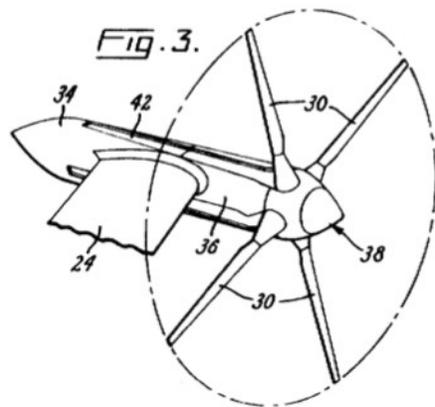
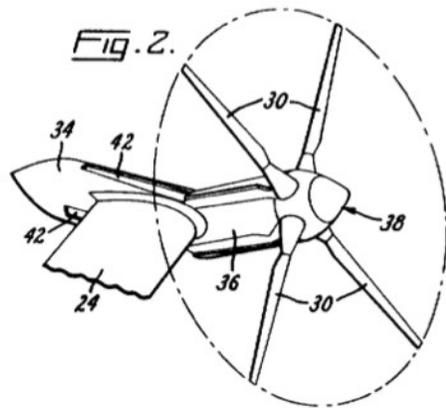
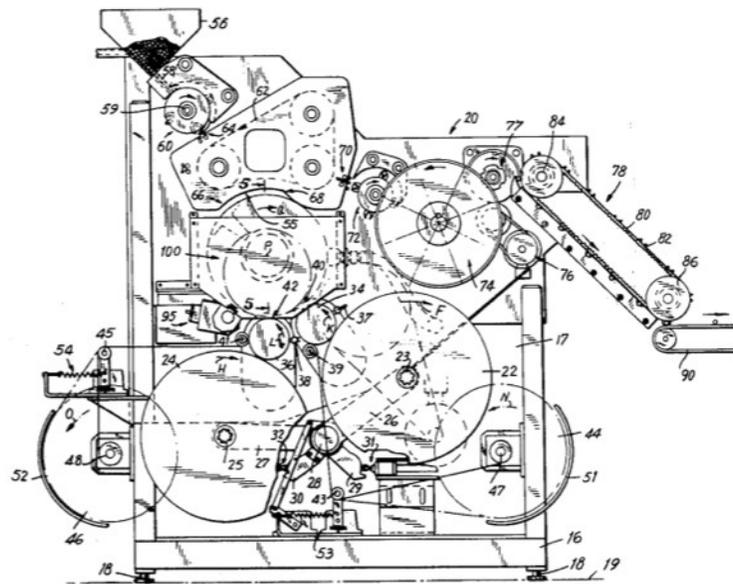
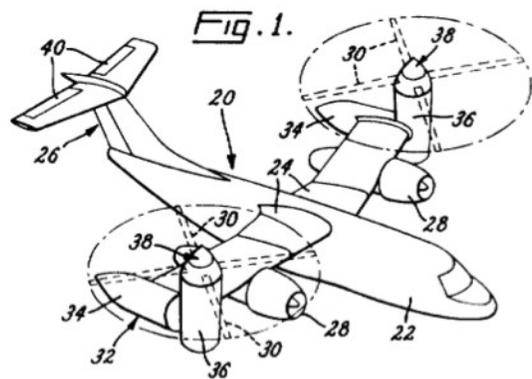
3,592,412

INVENTORS
JOHN E. BURKAM
& EDWARD W. GLATFELTER
BY *Vick & McDonnell*
THEIR ATTORNEYS

PATENTED JUL 13 1971

3,592,412

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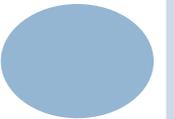


U.S. Patent Jul 21, 1987

Sheet 2 of 3

4,681,511

The “Glaticopter”

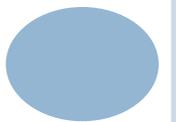


Glaticopter 1.0

- ***First flight in Aug of 1958*** in Phoenixville, PA
- Steel structure, Aluminum blades
- Continental Engine, 610 lbs.
- He wasn't a pilot, but did not want to surrender the controls to anyone until he was sure it was safe



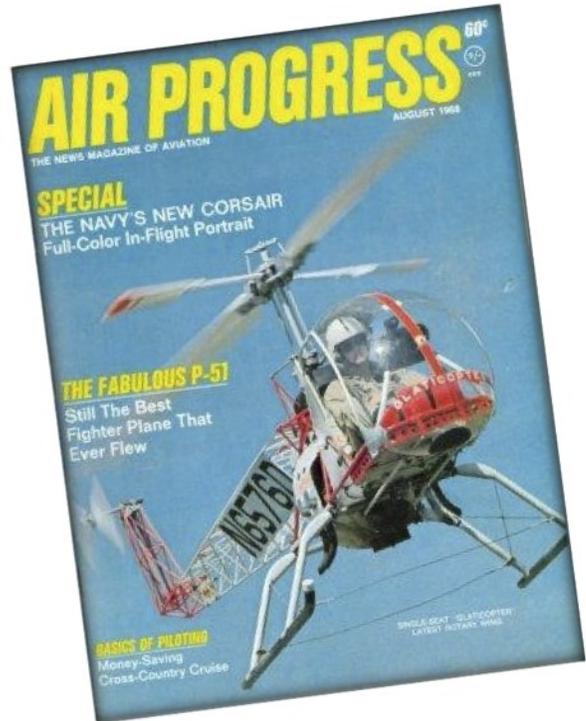
Glaticopter 2.0



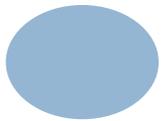
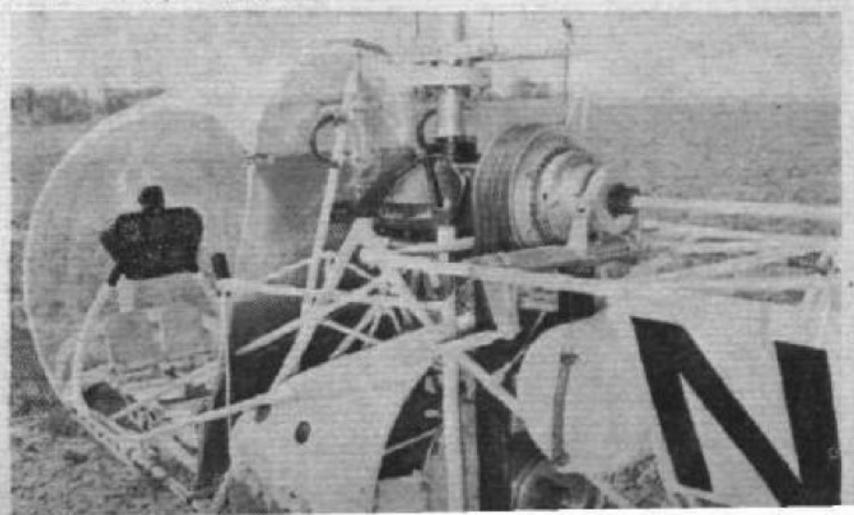
Glaticopter 2.0

- Self described as a flying research platform:
 - ***“The XRG-65 Glaticopter is a one-of-a-kind research helicopter intended to evaluate new ideas in rotor control and drive systems.”*** The fuselage is of welded steel tube construction with an aluminum bucket seat forward of the main rotor shaft.
 - Used to aid in the participation of destructive testing of fiberglass and composite structures.
 - became the 1st helicopter on record to fly with composite blades in the summer of 1968
- This 2nd generation helicopter was the result of 2 Pennsylvania innovators and helped to launch 2 companies:
 - Fiberdyne – led by Dave Thompson
 - Galaxie Corp – led by Ed Glatfelter
- The Glaticopter received some notoriety from:
 - Sep 1968 SPORT AVIATION, “The Rise of the Glaticopter”
 - August 1968, Air Progress, The Glaticopter





The XRG-165A Glatcopter is a single-seat R&D aircraft built in the USA by Galaxie Engineering to test ideas in rotor, control and drive systems. With a maximum weight of 880lb, the helicopter has glass-fibre rotor blades of 25ft 8in diameter. The transmission (right) incorporates multiple Goodyear V-belts and spiral bevel gears. The engine is a 65 h.p. Continental



Summary

- A father who was a **throwback to the artisan/apprenticeship** foundations of the 18th century where he taught his 2 sons the trade of metal working and machine shop operations.
- A significant contributor and leader in the Rotorcraft industry as affirmed by his peers.
- Creator of **2 flying helicopter test labs enabling advancements** in Composite Rotor Blade technology and alternative rotor system controls.
- Affirmed that ***“being an engineer means you must never design something that can’t be made.”*** Used his fabrication experience to change the way he designed.
- He was known by many as a work-a-holic. His famous quote was: ***“When they take me apart – they are going to find that my gears are worn, on the drive-side”***

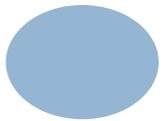




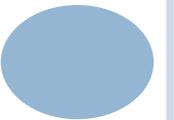
Phot



One of his last efforts was to restore the airframe and he did. It was donated to the American Helicopter Museum in 1999 where it remains today. His desire in the restoration was that it might inspire youth to dream.



GLATICOPTER 1ST FLIGHT VIDEO



THE HISTORY OF THE PATENT OFFICE

- In 1790, President George Washington saw the importance of creating a patent system. On January 8, 1790, during his first State of the Union, he called on Congress to establish a system and it was signed into law on January 10th. During this early time, Washington personally signed every patent application.
- Since its formation, the descendants of Casper Glattfelder have amassed over 200 patents registered at the US Patent Office.



PATENT #1 MACHINE TOOL SIMULATION
VIDEO



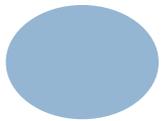
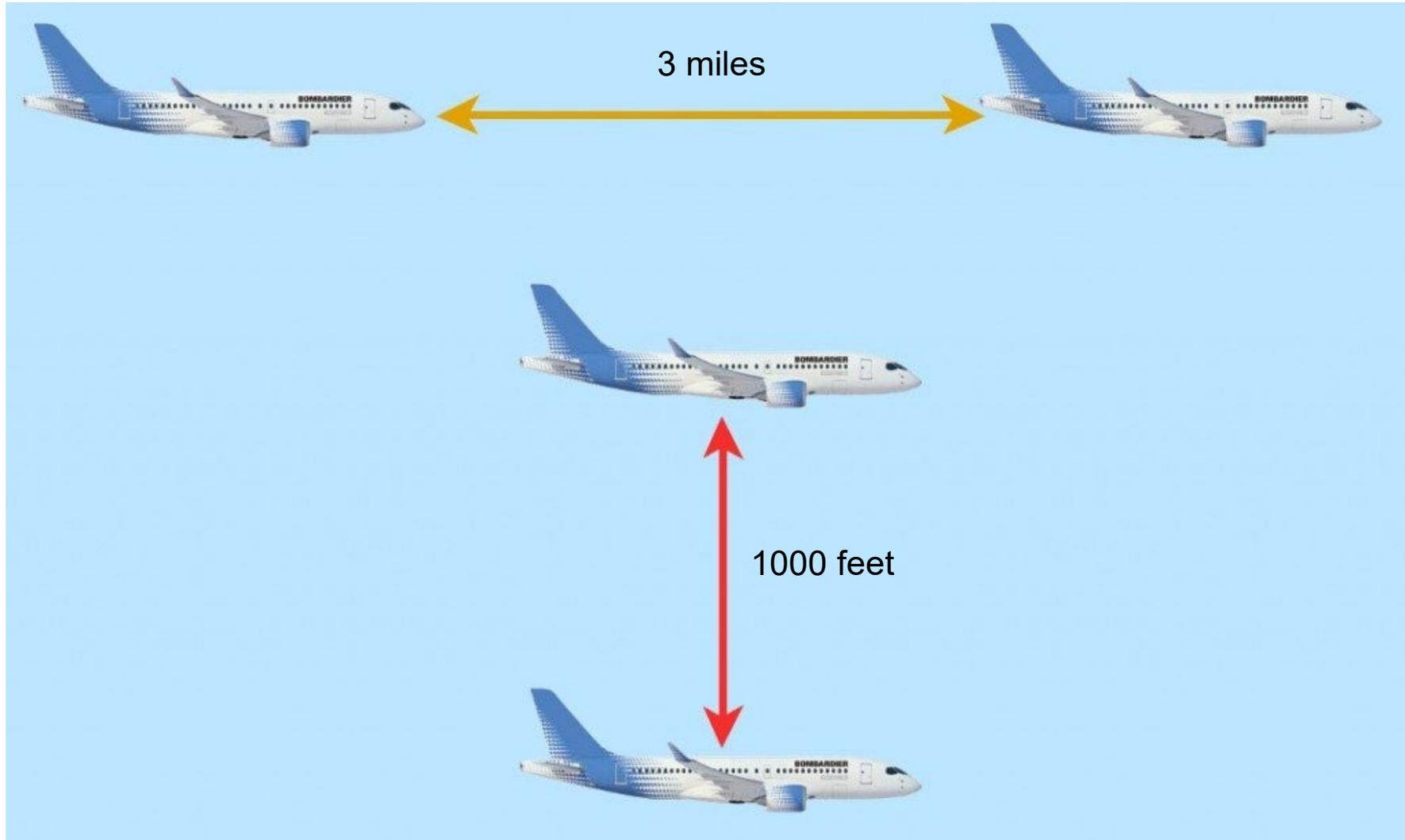
PATENT #2 US AIR TRAFFIC CHALLENGE
VIDEO



Mathematical Solution to Aircraft Density Challenge



FAA REQUIRES HORIZONTAL & VERTICAL SEPARATION BETWEEN AIRCRAFT



MATHEMATICAL SOLUTION TO AIRCRAFT DENSITY CHALLENGE

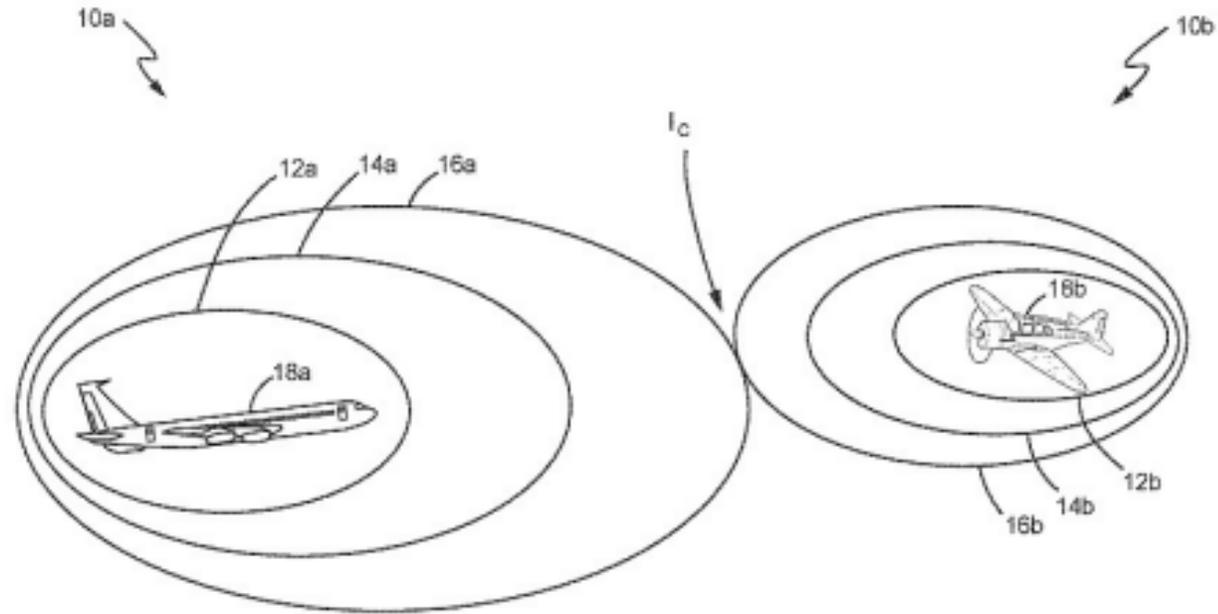


FIG. 4A

U.S. Patent

Jan. 7, 2020

Sheet 6 of 13

US 10,529,243 B2



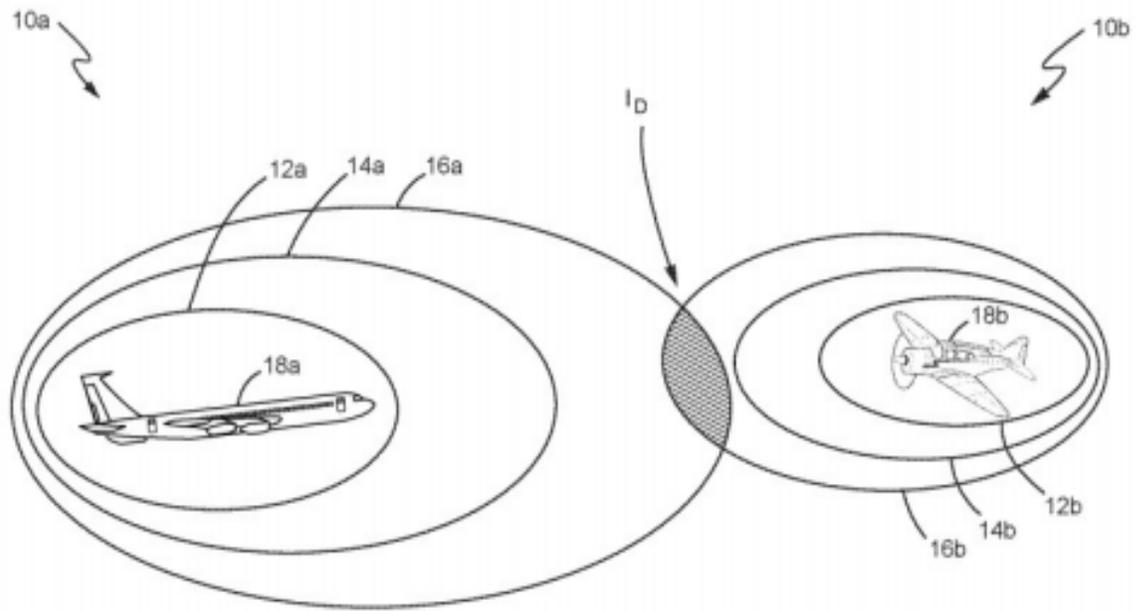


FIG. 4B



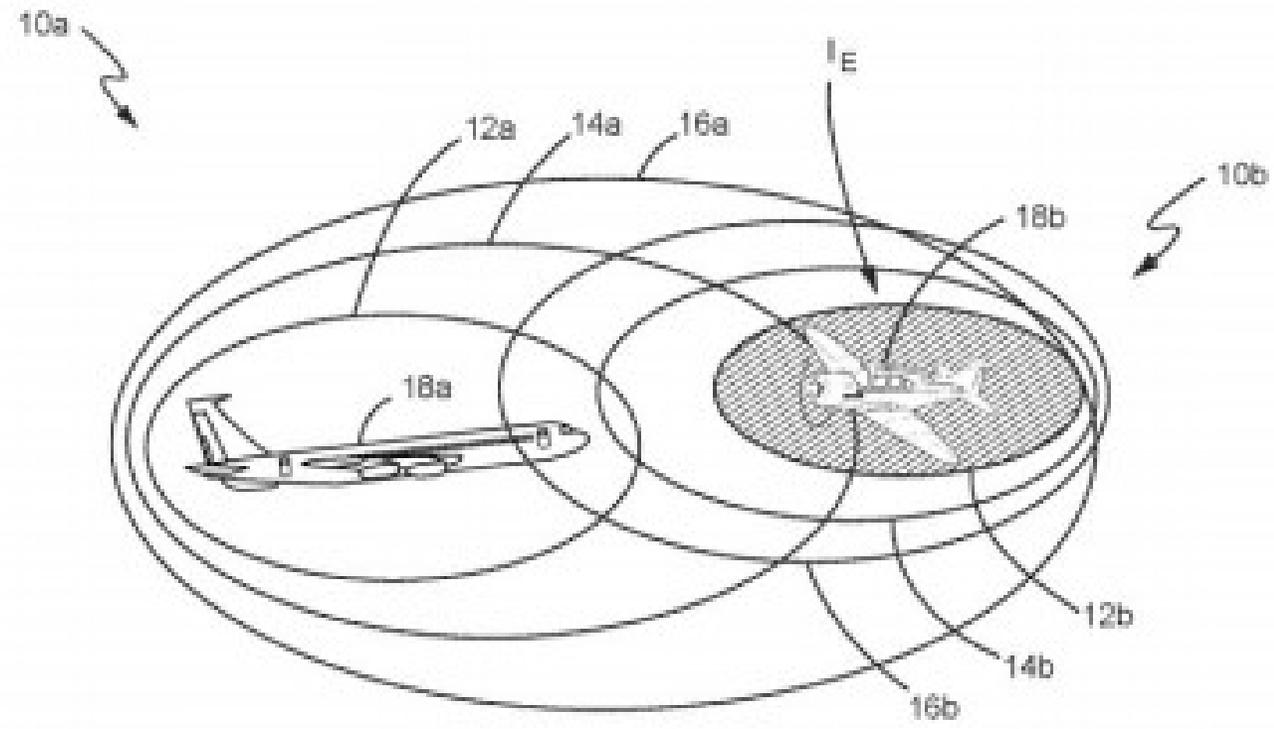
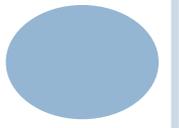
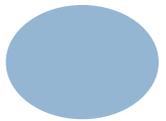


FIG. 4C



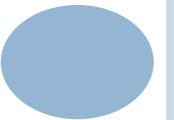
INTEGRATED INTO THE AIRCRAFT FLIGHT MANAGEMENT SYSTEMS (FMS) & THE AIR TRAFFIC CONTROL TOWERS

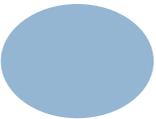


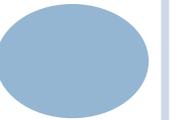
PATENT #3: THE AIRCRAFT BUILD PROCESS
CHALLENGE VIDEO



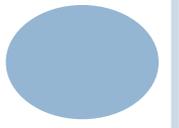
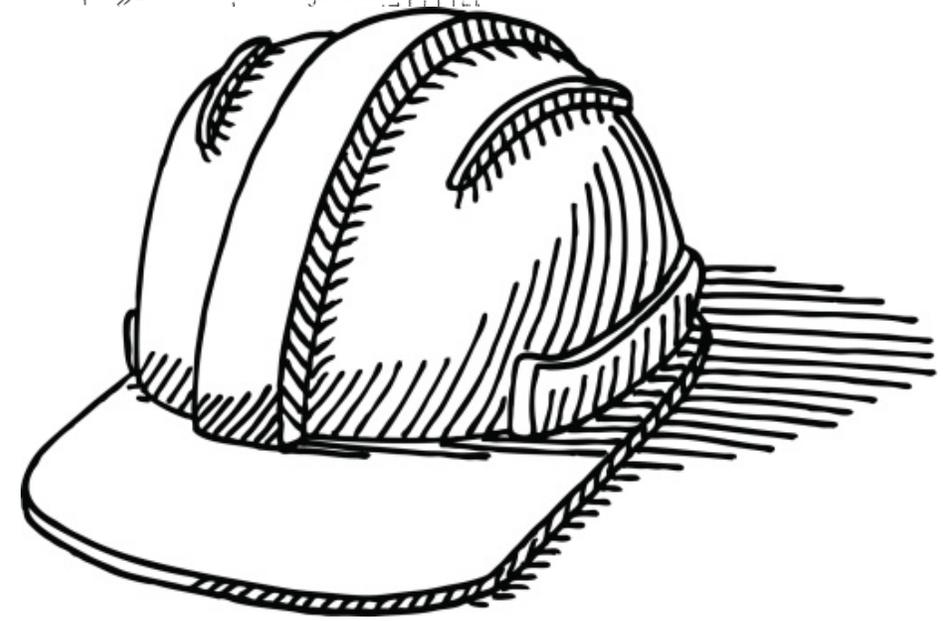
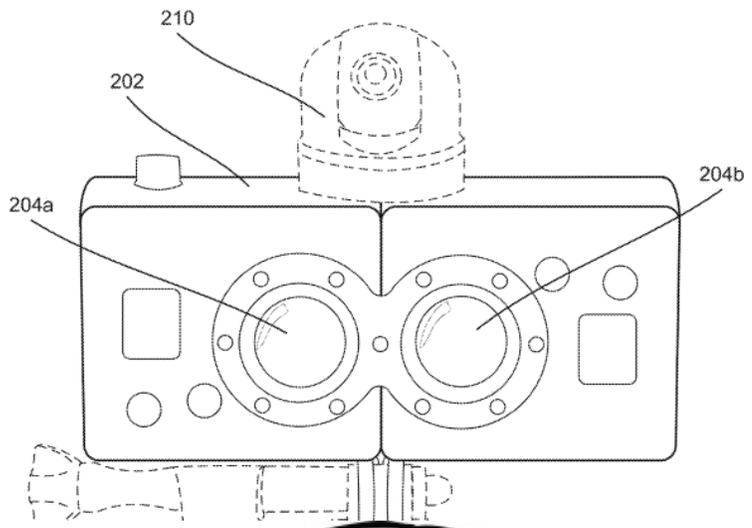
PATENT #3: STEREOGRAPHIC SOLUTION







200 →



TRUE VIEW

FISH-EYE VIEW

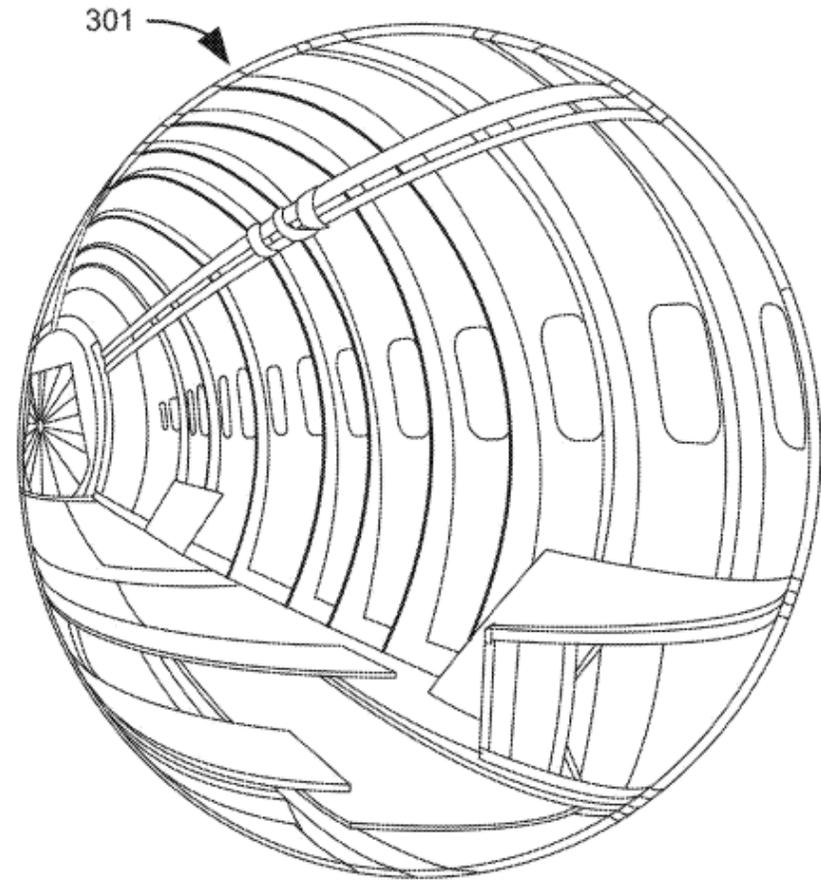
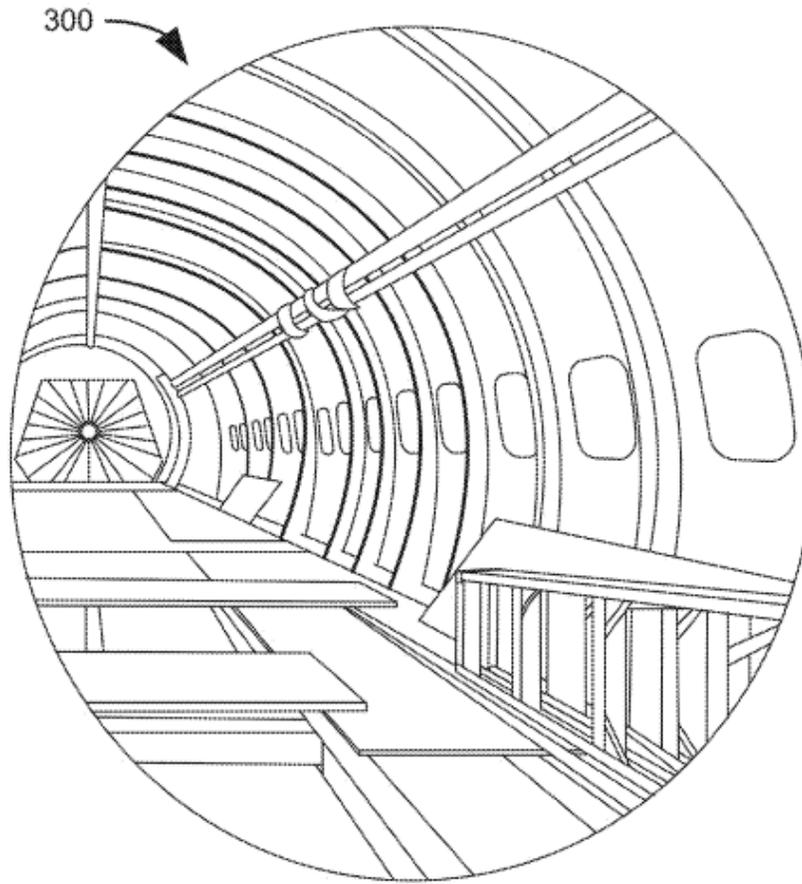
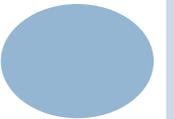


FIG. 3A

FIG. 3B



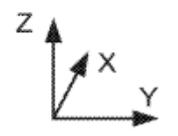
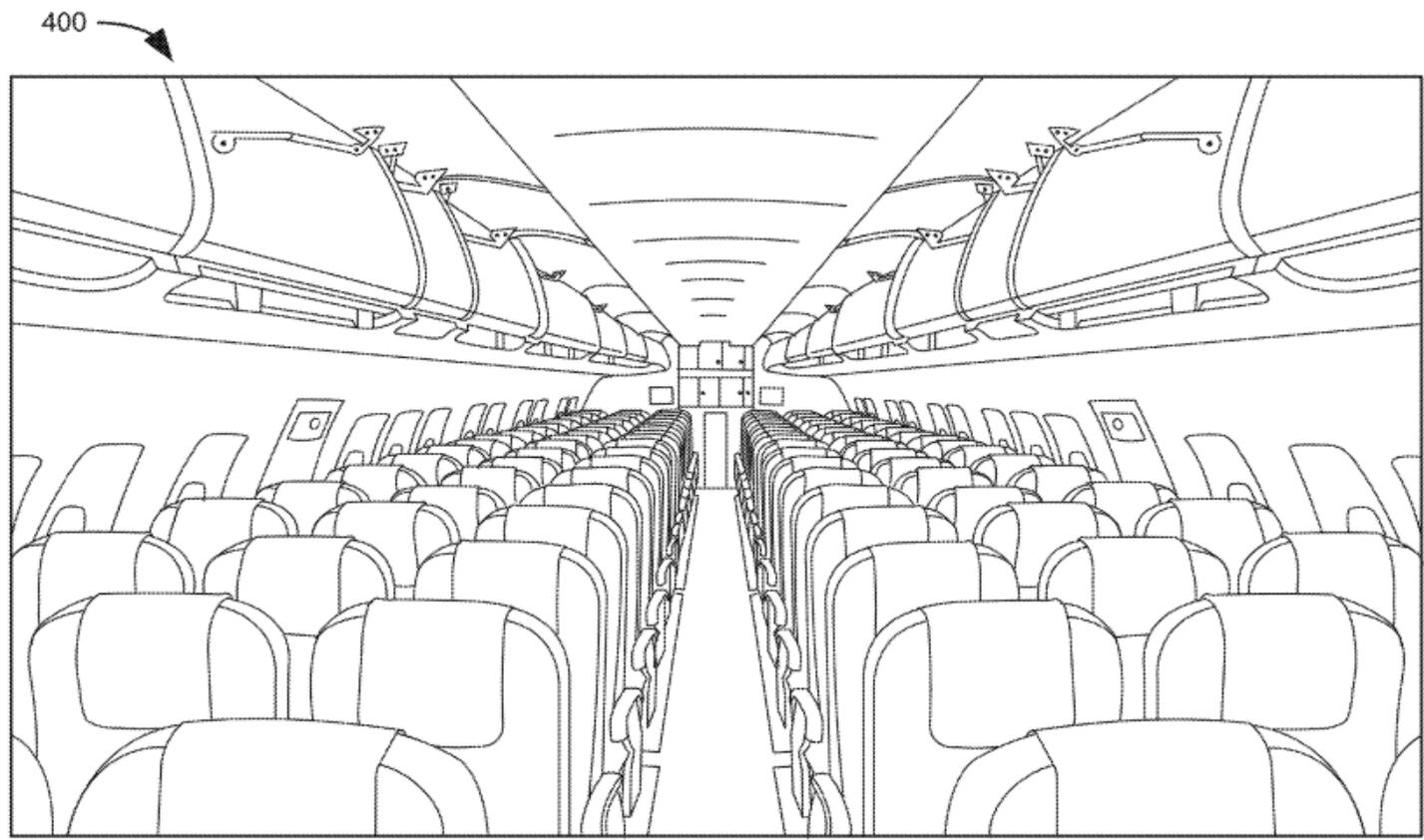
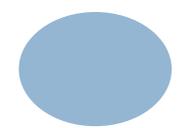


FIG. 4A



CONCLUSION

- The descendants of Casper Glatfelder have amassed over 200 patents since 1790.
- You've heard from three of many Glatfelters / Gladfelters who have contributed to this legacy. I want to thank Harry and Pat for sharing their passion and innovative work.
- I want to leave you with one more invention that was invented by a Glatfelder. He didn't take credit for it, but from my perspective he deserves all the credit.





GLATTFELDERS AND THEIR PATENTS

To be featured in the future:

- Glattfelders and their Patents Part 2
- Glattfelders in medicine
- Glattfelders in science education
- Glattfelders in engineering and science
- Glattfelders in the arts, sports and entertainment





GLATTFELDERS AND THEIR PATENTS

We hope you enjoyed this presentation!

Q&A

