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STEREOSCOPE



Perkins v. Sperry and the Grand Rapids Attorney who Cross-examined General Billy Mitchell

I came upon the case of *Perkins v. Sperry*, 57 F. 2d 719 (E.D. NY 1932), as a young attorney, doing legal research on an issue which I have long since forgotten. The *Perkins* case caught my eye and my imagination, however, because it was tried by a Grand Rapids attorney whom I had never met, but whose name was familiar to me. Over the years, I gradually learned more about him and finally became inspired to write of his one-time encounter with General Billy Mitchell, whose 1925 court-martial had been the sensation of the nation.

Our distinguished practitioner began his legal career in Grand Rapids in 1912. He tried numerous cases in federal courts around the United States. In 1929, he successfully appealed one of his cases to the United States Supreme Court. In 1932, he proposed in a national journal the creation of a special federal court, which was indeed later created. Also in 1932, he had occasion to cross-examine General Billy Mitchell, at that time America's leading proponent of the importance of military airpower and aircraft carriers.

Who was this prestigious member of the Grand Rapids Bar? David Warner? Laurent Varnum? No, the prestigious subject of this saga was Grand Rapids patent attorney Frank E. Liverance.

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Frank E. Liverance

Frank Liverance practiced patent law in Grand Rapids, Michigan for the better part of 50 years. He lived and raised his four children in Grandville, Michigan. Frank was a good friend of Grandville mayor and service station owner, Harold Becker. Harold once found a \$100 bill in Frank's car, serious money in the 1930s.

Frank enjoyed travel but spent much of his spare time manually digging a swimming hole in "Buck Creek" where it passed near or through his property. Harold asked him why he bothered with such a laborious project. Frank's response was that he thought someday young people would appreciate the fact that he provided them with a swimming hole. Attorney Gene Alkema of Varnum was raised in Grandville and does indeed remember enjoying the fruits of Frank's labor.

One of Frank's clients was Winters & Crampton, the only major industry then located in Grandville. Winters & Crampton made a patented latch used in the manufacture of refrigerators. When the Sanitary Refrigerator Company of Wisconsin installed an infringing latch in their refrigerators, Frank Liverance successfully prosecuted a suit against them in the Eastern District of Wisconsin. After the Seventh Circuit affirmed, Winters & Crampton had Frank sue the manufacturer of the latch, Dent Hardware Company, in the Eastern District of Pennsylvania. The Eastern District of Pennsylvania and the Third Circuit Court of Appeals did not agree with the Eastern District of Wisconsin and the Seventh Circuit Court of Appeals, and accordingly, Frank Liverance was on his way to the United States Supreme Court. We've had very few Grand Rapids attorneys who've had the privilege of arguing a case before the United States Supreme Court. In 1929, Frank Liverance was one of them, and he was successful.¹

In 1932, disgruntled no doubt with his split decision from the Third and Seventh Circuit Courts, Frank Liverance published an article in the *Journal of the Patent Office Society* advocating the formation of a single circuit court of appeals for hearing all patent appeals from all federal district courts and from the United States Patent Office. In the same year, Frank's longtime client, Willis J. Perkins, led Frank to his encounter with the renowned General Billy Mitchell.

Willis J. Perkins

Willis J. Perkins had been a regular client of Frank Liverance since 1912, soon after Frank "hung out his shingle." By that time, Perkins was already a leading citizen and well-known figure in the Grand Rapids community.

In 1873, Willis J. Perkins had joined his father, Harford J. Perkins, in founding a shingle machine manufacturing company. In 1880, they moved into the Old Stone Wagon factory located on Front Street, doubling in size in 1882 and again in 1888, until they had nearly 40,000 square feet of manufacturing space and employed about 100 men. Perkins & Company made about half of the most improved shingle machines in the United States. By 1891, Perkins & Company had nearly 50 patents on shingle machines.

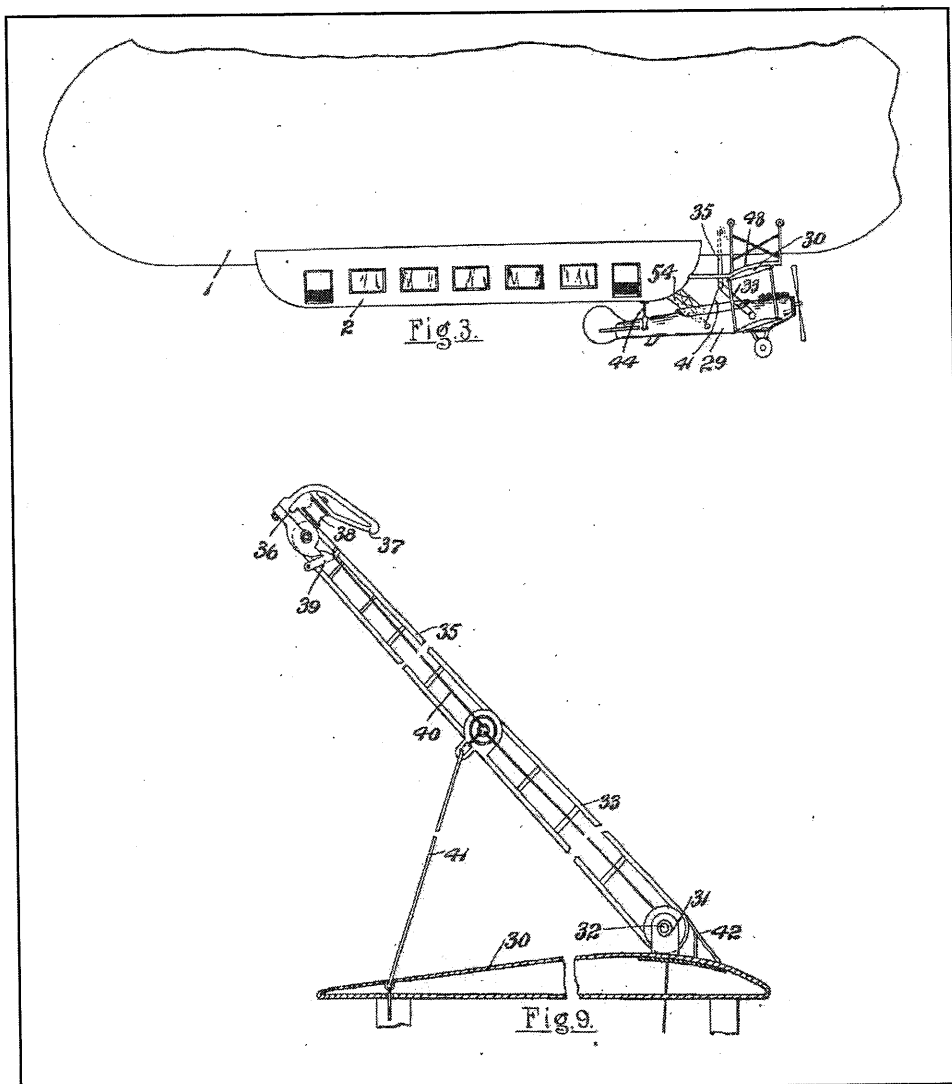
In 1885, Perkins employee William R. Fox left the company to found Fox Machine Company to manufacture a universal trimmer machine he invented. In 1889 (in a game of "what goes around, comes around"), a disgruntled Joseph W. Oliver left the Fox Machine Company and joined forces with Fox's former boss, Willis J. Perkins. The two formed the Grand Rapids Machinery Company, of which Perkins was the owner and Oliver served as manager. They applied for a patent on a new trimmer and began production almost immediately.

Fox lost no time in serving process on the Grand Rapids Machinery Company for patent infringement. Perkins apparently decided he had too much to lose and handed over the Grand Rapids Machinery Company lock, stock, and barrel to Oliver. In 1891, the Grand Rapids Machinery Company trimmer patent, which was in Perkins' name, was granted, and in the same year, Fox lost the patent infringement lawsuit. Grand Rapids Machinery Company was one of several Oliver corporate iterations, which evolved into the Oliver Machinery Company we know today.

With the patent infringement suit by Fox out of the way, Perkins wanted back in on the action. He thus began manufacturing a new and improved trimmer at Perkins & Company. He manufactured woodworking machinery in competition with Oliver until around 1916, when he sold to the American Woodworking Machinery Company. They continued the production of Perkins machines until the Great Depression, when the Perkins name disappeared from the lists of woodworking machines.

Perkins, meantime, had become something of a renaissance man. From 1912-1933, Perkins received 15 patents, reflecting wide and varied interests. In 1912, when the Ford Motor Company was in its infancy, Willis Perkins patented an internal combustion engine (U.S. Patent 983,307). In 1914, he patented a "speed control for self-propelled vehicles" (U.S. Patent 1,083,701). Continuing his fascination with the automobile, he patented a light focus intercepting and dimmer shade for preventing a driver from being blinded by approaching artificial lights in the act of meeting, passing, or traveling toward such lights (U.S. Patents 1,109,013 and 1,109,014).

Also in 1914, he patented an automatic liquid fuel control for use in stoves or heaters using liquid fuel. He patented a rotating shaft guard in 1915 (U.S. Patent 1,139,441). He patented a safety starting device to prevent kickback from automobile starting cranks in 1915 (U.S. Patents 1,145,435 and 1,145,436).



Figures 3 and 9 from the Perkins patent application

In 1915, he patented an automatic temperature regulating device for incubators, making a contribution to West Michigan's then budding poultry industry (U.S. Patent 1,162,947). In 1920, he patented a sound detector and recorder for determining the position of ships at sea in low visibility conditions.

In 1928, he patented an automatic fire extinguishing apparatus (U.S. Patent 1,692,052). In 1929, he patented a fuel distribution system for internal combustion engines (U.S. Patent 1,707,566).

Most pertinent to this story is his interest in airplanes, which began with the filing of a patent application on aircraft handling devices in 1917. This patent application led ultimately to the issuance of three separate patents in 1929 and 1933 (U.S. Patents 1,738,261, 1,912,722, and 1,912,723). U.S. Patent 1,912,722 in particular led to Frank Liverance's encounter with the famous General William "Billy" Mitchell.

Dirigibles as Aircraft Carriers

Like General Mitchell, Willis Perkins was a visionary when it came to airplanes. Even before the United States had entered WW I, Perkins had a vision for ocean-going aircraft carriers. However, Perkins' vision did not extend to the large flattop aircraft carriers that dominated sea action in WW II. Rather, Perkins' vision was of smaller vessels that captured and launched aircraft from a trapeze device. He filed his first in a series of patent applications on such a trapeze device in 1917.

By 1922, Perkins' vision had expanded to include the use of dirigibles as aircraft carriers. Dirigibles had been invented by Count Ferdinand Von Zeppelin in 1900. Dirigibles made their debut as weapons of war during WW I, when they were used to bomb London. The far-sighted Perkins recognized the shortcomings of dirigibles as bombers. While they enjoyed a range far greater than that of airplanes of that day, they were rather large targets for defending aircraft and anti-aircraft guns.

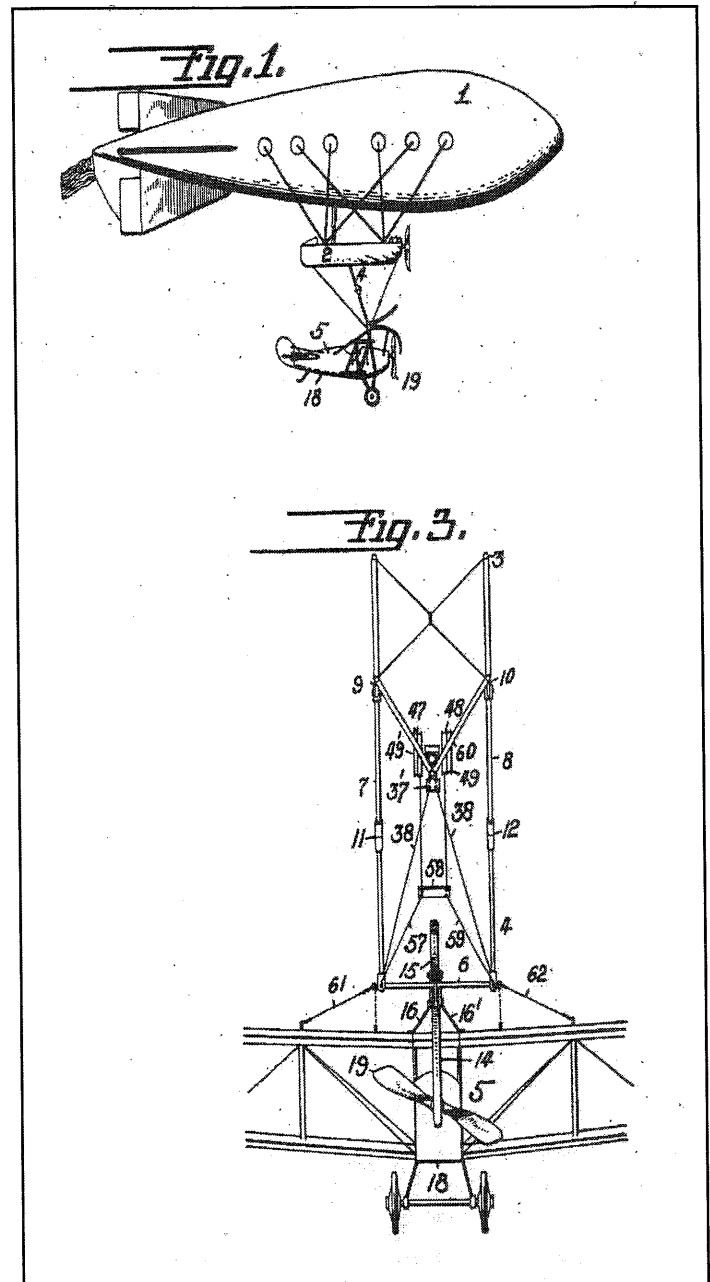
Perkins thought a much better use for dirigibles would be to convey airplanes over long distances and then launch them some distance from the target or scene of action for engaging the enemy in whatever capacity might be appropriate. To facilitate the dirigible as an aircraft carrier, Perkins adapted his trapeze device to dirigibles, as well as to larger airplanes, and filed his patent application on the invention on August 14, 1922.

Lawrence B. Sperry

Unfortunately for Perkins, but fortunately for our story, aviation pioneer, test pilot, and entrepreneur Lawrence B. Sperry shared the same vision as Perkins, at about the same time. Lawrence Sperry was a dashing figure. Much like Howard Hughes, Sperry was the son of a very successful entrepreneur and was a daring test pilot during the pioneer heyday of aviation.

Lawrence's father, Elmer Ambrose Sperry, graduated from Cornell University in about 1880, with a degree in electrical engineering. Elmer Sperry was a nimble businessman, starting numerous small companies in Chicago during the 1880s, including the Sperry Electric Illuminating Company and the Sperry Electric Light, Motor and Car Brake Company (railroad cars). In 1891, he pioneered the use of electricity and electric machinery in the coal mining industry, founding the Sperry Electric Mining Machine Company.

He sold his electric street car patents to the General Electric Company, developed an electric battery for automobiles, and pioneered a process for liberating sodium hydroxide and hydrogen from brine, which became



Figures 1 and 3 from the Sperry patent application

operational in Niagara, New York and was ultimately sold to Hooker Development and Funding Company. In 1907, Elmer Sperry turned his inquisitive mind to the gyroscope, and in 1910, founded the Sperry Gyroscope Company in Brooklyn, New York. Sperry Gyroscope pioneered the use of gyroscopes in marine and aviation applications. By 1955, it had morphed into Sperry Rand Corporation, and is now known as Unisys.

Like many successful fathers before and since, Elmer Sperry had an occasionally troubled relationship with his second son, Lawrence. In 1915, Sperry senior put Lawrence in charge of the Sperry Gyroscope Company's aviation department. At the 1916 Paris Air Show, Lawrence Sperry's

daring exploits as an aviator and test pilot won wide acclaim for himself and the Sperry Gyroscope Company.

However, in 1917, apparently not entirely without his father's blessing, Lawrence founded his own company, the Lawrence Sperry Aircraft Company. Among his many accomplishments, Lawrence Sperry was to develop and market the airplane stabilizer, aerial torpedo, and automatic pilot. On July 27, 1922, Lawrence Sperry filed his patent application for a "device for launching and landing aeroplanes from and upon suspended positions," namely positions suspended from dirigibles.

The Legal Proceedings

Finding that Sperry and Perkins had filed patent applications for the same invention within 48 days of each other, the United States Patent and Trademark Office declared an interference between the two visionaries. The first step in a patent interference is to define subject matter that is common to the competing inventors. This is done by crafting "interference counts." Count 2 of this interference is representative of the counts of the Perkins-Sperry interference:

In combination with a relatively large aircraft, a trapeze construction suspended therefrom, and means for elevating said construction to and housing it within the sides of said aircraft, substantially as described.

Being the junior party by 48 days, the burden was on Willis Perkins to prove that he was the prior inventor of the concept of capturing and launching airplanes from trapeze-like devices suspended from a larger aircraft, e.g. a dirigible. Perkins was unsuccessful in doing so to the satisfaction of the United States Patent Office. On October 27, 1927, priority was awarded to Sperry, which led to the issuance of Sperry's Patent 1,716,670 on June 11, 1929.

Before 1929, when the United States Court of Customs Appeals became the "Court of Customs and Patent Appeals," a party losing an interference in the Patent Office could either appeal to the Washington, D.C. Circuit Court of Appeals, or could sue the successful party in an appropriate United States district court. Perkins elected to sue Sperry in the United States District Court for the Eastern District of New York, in Brooklyn, New York, home of the Lawrence Sperry Aircraft Company.

During the course of the trial, the Sperry Company called as witness to the priority of Lawrence Sperry the distinguished air power visionary, General William "Billy" Mitchell. A letter written by the general to the chief of the air service dated October 17, 1921 revealed a conversation



General William "Billy" Mitchell

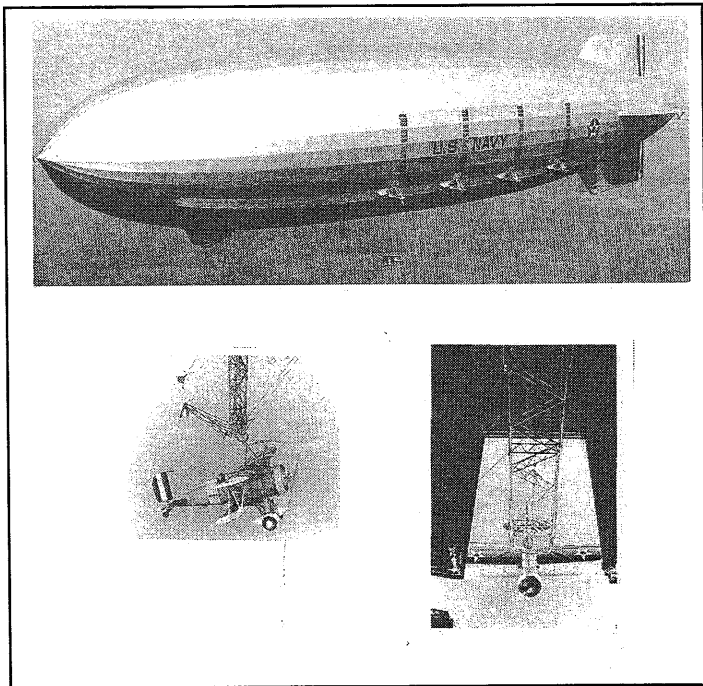
between the general and Sperry concerning the subject invention. The general testified:

Upon my return from the war in April, 1919, we took up the problem of carrying airplanes on airships. In this connection, Lawrence Sperry proposed to make landing devices by which an airplane could fly under an airship, hook onto a trapeze, and either remain in position or be hoisted up into the body of the airship or other airplane.

We have, of course, no record of the cross-examination that followed this testimony. We can imagine, however, the trepidation with which Frank Liverance must have approached this daunting task.

Before him on the stand sat one of the most famous men in America. Like others of his ancient and distinguished clan, General Mitchell was ruggedly handsome. He had just testified for Sperry about returning from a war in which he had been a genuine hero. In September 1918, he planned and led nearly 1,500 allied aircraft in the air phase of the SaintMihiel offensive. Recognized as the top American combat airman of the war, he was awarded the Distinguished Service Cross, the Distinguished Service Medal, and several foreign decorations. He had quickly risen from lieutenant colonel to brigadier general.

Further, the general was no stranger to cross-examination. During the Roaring '20s, he had done some roaring of his own, aggressively and publicly advocating for



a strong and independent military air corps. He had proven, to the dismay and embarrassment of the admirals, that even the rickety biplanes of the day could sink a battleship with a 500-pound bomb. In 1924, on his return from a visit to Japan, he boldly predicted that Japan was determined to increase its prestige through military airpower, and would one day attack the United States fleet at Pearl Harbor, coupled with a contemporaneous attack on the Philippines.

Visionaries are often unappreciated, especially when they are as frank and vocal as was General Billy Mitchell. When the Navy dirigible "Shenandoah" crashed in a storm with the loss of 14 of the crew, he finally went too far when he issued his famous statement accusing senior leaders in the army and navy of incompetence and "almost treasonable administration of the national defense." It is probable that he intended with this public criticism to provoke a court-martial, to give himself a highly visible forum for his views on the importance of military air power. The military did not disappoint him. General Mitchell was court-martialed in a sensational trial that captivated the nation's imagination in 1925. Apparently to his surprise, he was convicted of insubordination and suspended for five years. He resigned his commission in protest.

One wonders if Mr. Liverance broached the subject of his court-martial conviction during cross-examination. As the dashing general was quite a bit more popular than had been his court-martial conviction, this is unlikely.

Perhaps Mr. Liverance simply let the general's testimony pass without cross-examination, preferring instead to attempt to rely on Perkins' 1917 patent airplane handling trapeze applications as corroboration of Perkins' oral testimony of

invention before Sperry. That would have been somewhat risky, however, as Perkins' 1917 applications themselves were insufficient to prove prior invention. They did not disclose mounting the airplane capturing trapeze on a dirigible or other larger aircraft.

Personally, I would not have missed the opportunity to cross-examine General Billy Mitchell, if for no other purpose than being able to say that I had indeed cross-examined the great general. I like to think that the distinguished Mr. Liverance felt the same about the subject and did indeed cross-examine General Billy Mitchell in a Brooklyn courtroom in 1931.

The Rest of the Story

Lawrence Sperry won the case in the Eastern District of New York. His patent was vindicated, though he did not live to see the day. Indeed, he did not live to see the interference with Perkins declared in 1927 or his patent issue in 1929. As sometimes happens with daring test pilots, Lawrence B. Sperry was killed in a tragic airplane accident in 1924.

Even though he lost the interference, Perkins was issued Patent 1,912,722 in 1932, based on his application that had been in interference with Sperry. The '722 patent covered specific features and details of a trapeze mounted to a larger aircraft such as a dirigible for the purpose of capturing, storing, and launching smaller airplanes. We do not know whether Perkins ever received any royalties from his patent, but we do know that the dream that Perkins and Sperry had contemporaneously shared had become a reality at about the time the final act of their drama was being carried out in the Eastern District of New York.

The navy had commissioned the construction of two dirigibles equipped to carry, launch, and recover Sparrowhawk biplane fighters using the Sperry-Perkins trapeze concept. The Akron, launched in September of 1931, carried three, and the Macon, launched April 21, 1933, carried five.

After the Akron crashed at sea, the skipper of the Macon, Lieutenant Commander Herbert V. Wiley, was challenged to prove the naval value of the Macon. Wiley conceived a daring unauthorized mission designed to make a media splash. He had read that the newly-elected president, Franklin Roosevelt, was sailing from Panama to Hawaii aboard the heavy cruiser Houston. He calculated the president's probable route and speed and headed far out over the Pacific, navigating by dead reckoning and sun sightings. Just after 10 a.m. on the morning of July 19, 1934, Wiley launched two of his Sparrowhawks. The president and crew of the Houston were astonished to see the aircraft, and at first thought the fuselage tanks being carried by the plane were bombs. More

knowledgeable members of the crew, however, spotted the telltale skyhooks jutting above the upper wings. President Roosevelt was delighted by the stunt and radioed his compliments to the unseen Macon.

Unfortunately, the fate of all the great dirigibles lurked in the Macon's near future. Within seven months, on February 12, 1935, the Macon was caught in a surprise squall over the Pacific. Equipped with a full complement of lifejackets and life rafts and thanks to the proximity of the Macon to the shoreline, all hands were saved. However, the dream of Lawrence Sperry and Willis Perkins sadly sank that day into the waves of the Pacific Ocean.

While I have been unable to confirm the date of Willis Perkins' death, his 1932 patent on dirigible-carried airplanes was his last. Like his former company, he seems to have faded into the pages of history with the coming of the Great Depression.

General Billy Mitchell spent the last 10 years of his life seeking reinstatement and vindication. Reinstatement was denied him, as was a high-level military commission he had hoped for from newly-elected President Roosevelt. However, after his death in 1936, he received unwelcome vindication in spades, on December 7, 1941, when the Japanese attacked Pearl Harbor within 25 minutes of his 7:30 a.m. prediction, and Clark Field in the Philippines within two hours of his 10 a.m. prediction.

In 1946, Congress awarded Mitchell a special Congressional Medal of Honor, bearing the inscription: Award of the Congress August 8, 1946, for Outstanding Pioneer Service and Foresight in Field of American Military Aviation

Frank Liverance was, in a way, vindicated as well. The court he had proposed in 1932 was created as the Federal Circuit Court of Appeals on October 1, 1982, with the help of another Grand Rapids attorney, then Congressman Harold Sawyer. Congressman Sawyer was a member of the



Billy Mitchell's Special Congressional Medal of Honor

Judiciary Committee, and was instrumental in the creation of this court. Closing the circle back to Frank Liverance, he solicited advice on the subject of such a court from Grand Rapids patent attorney Peter P. Price, who, with Lloyd Heneveld, had purchased Frank Liverance's practice in 1959.

What has sustained my interest in Frank's encounter with General Mitchell for the past 30 years or more? From the outset, I was intrigued by the fact that he had lived in Grandville, where I was born and raised. I never knew anything of Frank Liverance until I joined Price Heneveld in 1967, well after he had passed on. Yet through the veil of time, he has in a way become a friend. It is perhaps appropriate that the chair that Frank occupied from 1912 until he sold his practice in 1959 found its way in 1971 to me, another patent attorney from Grandville, Michigan—and at that, another member of the Mitchell clan.

James A. Mitchell

Price, Heneveld, Cooper, DeWitt and Litton

Endnote

- 1 *Sanitary Refrigerator Co. v. Winters*, 280 U.S. 30 (1929).

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