Events of great importance

The year 1927 brought events of great importance at Purdue. One was that the Trustees elected Dave Ross as their President. He moved his office from the Ross Gear factory to the narrow three-story Ross Building on the courthouse square. On January 4, 1927, the Trustees at last, after nine months, named a committee to review questions Ross had raised about research. Ross hoped that this would help make research more of a teaching tool at Purdue (Kelly, Ross, 108-109).

On March 26, Dr. Arett C. Arnett, a forward-thinking physician who had founded a medical clinic in Lafayette, took office as Chamber of Commerce President. Dr. Arnett, like Dave Ross and a few others, had been intrigued by the fast growth and acceptance of aviation. Lafayette native Henry Boonstra, a World War I flight instructor, had become an important pioneer in the U.S. Air Mail Service in the American West. Another teacher of wartime pilots, Lawrence I. “Cap” Aretz, an Indiana National Guard captain, was gaining renown at the Guard airfield in Kokomo, Indiana. People also were following via radio and newspaper reports the flying exploits of Charles A. Lindbergh as he prepared for an attempt to fly across the Atlantic Ocean. Still another engaging personality in aviation was an intrepid woman from Kansas named Amelia Earhart.
Dave Ross now divided his efforts between Purdue, Ross Gear, and Fairfield affairs. On March 15, 1927, the close family of Ross Gear stockholders voted to raise the number of Directors from three to seven. Management changes soon followed. David Linn Ross resigned as President so as to function as Board Chairman. Edward A. Ross rose from Secretary to President. Dave Ross resigned both as Vice President and General Manager. He desired to spend more time at Purdue as President of the Board of Trustees. He also had in mind forming yet another private corporation.

Supporting Ross’s insistence on Purdue research for industry, some exciting work came to light in April. Henry Marshall’s Journal and Courier on April 8 reported the role of Frank Gray (Purdue Class of 1911) in perfecting “television”—technology compared by some to “visual radio”—in New York City.

On Thursday, April 14, the humorist, entertainer, and syndicated newspaper columnist Will Rogers appeared in Lafayette. He was guest of the Lafayette Armory board and visitor to a friend’s livestock farm a few miles away. At Lafayette’s Jefferson High School, Rogers spoke at a student assembly. In a half hour, Rogers kept 900 boys and girls laughing until he turned serious:

I never had the advantage of an education, but it’s a great thing, especially for children, to go to high school and college.

You know, you are just at the arguing age now, and in a year or two you will be more of an arguer. I know how you look at dad at home and imagine he doesn’t know anything, then you go away to college and come back after four years and look at him again. And you wonder how he ever lived so long without knowing any more than he does.

Rogers said half the students in that audience should go on to college and half should go to work instead. That way those who finish college will have someone to work for when they complete their education. Later, Rogers visited Purdue, addressed a Lafayette Advertising Club banquet in the Lahr House, and then headed
for the Purdue Armory. There, the *Journal and Courier* reported, he delighted about 1,200 people “with his wit and philosophy”:

Mr. Rogers talked about everything of interest and about everybody of international importance, and he kept on talking and talking, and his hearers seemed to enjoy it more and more, until, finally, Will began to grow sleepy and he called it a night.

Politicians including President Coolidge...came in for their share of attention, as did Hollywood, China, Europe, England’s national game, grouse shooting in Scotland, Indiana politics, Chicago, international relations, aviation, preparedness, education, the touring habit, the agricultural crisis and many other topics that have found their way to the first pages of the newspaper. In the exhibition with the lariat, Mr. Rogers proved himself a master of the lasso in all its intricacies. He made the rope dance and leap in the air and describe circles in all directions and finally he danced in two loops, both rotating at dizzy speed.

Several owners were turning their Tippecanoe County farm fields into makeshift aircraft landing strips as early as 1919. In 1927, another came into use on McCarty Lane near what is now County Road 500 East. This was level, wooded, and pastured farmland owned by Lafayette businessman Julius Berlovitz. Barnstorming pilots touring as the “Gates Flying Circus” performed on and in the sky over Berlovitz’s land on May 7-9 in 1927. Excitement, pathos, tales of courage, and foolhardiness all played roles in the accumulating lore of American aviation.

Most American pilots, including the ones in the Gates show, had learned to fly in a Curtiss JN4D designed as a World War I primary pilot trainer. The Curtiss series of “JN”-lettered biplanes led fliers to call them “Jennies.” These planes had a top wing forty-three feet long and a fuselage twenty-seven feet long. A Curtiss OX-5 engine developed ninety horsepower, enough to allow war
surplus Jennies to cruise at about seventy miles per hour. The planes weighed a little more than 1,900 pounds.

Due to the popularity and quantity produced (about 6,000) the Jenny became the surplus machine of choice for pilots home from war. They bought Jennies from the military and flew them to earn a living.

Mississippi River floods had ravaged parts of Mississippi, Arkansas, and Louisiana early in 1927. This caused members of Lafayette’s postwar American Legion Post 11 to decide to split proceeds from an “air meet” with a Red Cross flood relief fund. The Gates people offered a collection of aerial entertainers comparable to others crisscrossing the nation. They stunted at airports, less-sophisticated “landing fields,” or on any safe and level stretch of land to which the public had reasonable access and places to park horses, wagons, buggies, or cars.

In this instance, the Legionnaires arranged to use Berlovitz’s field a few miles east of Lafayette. The Gates Flying Circus at the time featured “Diavalo, Chief of the Dare-Devils.” The Legionnaires charged no admission but levied a parking fee for those who rode or motored out from Lafayette and surrounding towns. In the course of the meet, pilots flew to 2,000 feet, purposely shut off the motor, and then glided to safety in front of the spectators. Parachute jumpers leaped from planes half a mile in the air and guided their ‘chutes to landings near the crowd. The Gates pilots arranged to drop twenty small parachutes during the three days. Each carried a prize offered by a Lafayette merchant sponsoring part of a double-page advertisement in the Journal and Courier. The newspaper’s news editor, Herb Heimlich, rode in one of the Gates planes from Frankfort, Indiana, to the Berlovitz farm. Heimlich’s rhapsodic first-person account of the forty-mile morning round-trip appeared on the front page the afternoon the air show opened:

The sight, on a bright May morning from a plane, is beautiful beyond description. Freshly plowed fields, with their graduated shades, beautifully blended, a contrast with nature which is breaking forth into a brilliant green, furnishing a vivid panorama.
Roads, stretching out for miles, afford another contrast as do winding creeks and streams. There is a sort of checkerboard effect, and everything appears in miniature, even the whole city of Lafayette, looking like a small spot, as seen from the clouds.

The Gates Flying Circus near their father’s neighboring dairy farm, just up the dirt road from the Berlovitz field, provided enough wonders for three young brothers who caught the flying “bug” that day. They were Joseph, John, and Francis Halsmer—eventual founders of Halsmer Flying Service (1931-1988).

Then, during May 20 and 21, listeners in Lafayette, the state, the nation, and the world followed by radio news and read in their newspapers about the flight made across the Atlantic Ocean by Charles Lindbergh. The twenty-five-year-old native Detroiter flew alone in the single-engine airplane called Spirit of St. Louis from New York to Paris, France. The flight covered more than 3,600 miles and took about thirty-three and one-half hours. Lindbergh’s plane left Roosevelt Field near New York City on May 20 and landed at Le Bourget Field outside Paris, France. “Lucky Lindy” became a household word and an aviation icon for the ages.

Lafayette and Indiana pride reached another level shortly after the Lindbergh epic when on May 30 twenty-seven-year-old George Souders won the 500-mile Memorial Day automobile race at Indianapolis. Souders—a Lafayette native—drove a Duesenberg racer built in Indianapolis, steered by a Ross gear made in Lafayette, at an average speed of ninety-seven and a half miles per hour.
In mid-June, after some brisk debate, Frank Cary gave Purdue $50,000 for a men’s dormitory. The dorm would be named for Cary’s son, Franklin Levering Cary. The boy had died of appendicitis at age eighteen in 1912. The Cary-Purdue debate had centered on a site for the dorm. Cary wished for the high-visibility southeast corner of State and Marstellar, a block or so west of the new Union Building. Purdue historian Robert W. Topping explained:

One of [President] Elliott’s highest priorities in 1927 was developing adequate student housing operated by Purdue. The 1927 Indiana General Assembly passed a law permitting state-supported colleges and universities to issue revenue bonds to build and furnish dorms. At the time it seemed rather an ordinary piece of legislation; actually it was a landmark statute that made possible many cultural and living improvements most state schools would not have seriously contemplated otherwise.

Within a year Purdue was attempting to put together the finances for the first new dorms built since Ladies Hall and Purdue Hall between 1869 and 1874. The system Purdue [eventually built] began with a proposal by Frank C. Cary, a Lafayette industrialist and entrepreneur, to make a $50,000 gift to Purdue to honor the memory of his son. When Mrs. Cary died in 1927 Frank Cary pursued the idea of the gift to honor both his wife and son. Cary had retired from the presidency of Barbee Wire and Iron Works, and was sometimes credited with crafting padding and heavy wire into the sport of baseball’s first catcher’s mask.

Cary first approached President Elliott and Trustee Henry Marshall about the possibilities and proposed purchase of the southeast corner of Marstellar and State Street for a dorm for forty men. But the Trustees had already adopted in their Master Plan a dorm for up to one hundred fifty men. The Trustees, Elliott and other staff members tried to divert Cary’s attention to other possible dorm sites without success until R. B. Stewart...finally convinced him.
Cary was not impressed with the idea of building a dorm between Ross-Ade Stadium and Stadium Avenue. Stewart remembered that he probably drove Cary by that location “at least a hundred times” in his attempt to convince Cary that this was where Purdue had planned to build its men’s dorms. The site was even in Scholer’s 1922 Master Plan. “But you can’t see it” Cary protested. “People will drive through the campus and no one will ever see it.”

“Give us the $50,000,” Stewart replied. “I’ll use the university’s bonding power and give you a $150,000 building that will be the first thing that anyone going to football games on a Saturday afternoon will see.”

After Scholer had shown Cary many sketches and blueprints, Cary became persuaded and gave Purdue the money for Franklin Levering Cary Hall, known also as Cary East. (Topping, 230-231)

George Ade, at age sixty-one, pocketed an honorary doctor of laws degree from Indiana University in June 1927. IU cited most of the same “life achievements” Purdue had mentioned when giving Ade his degree the year before. “But,” Ade still quipped, “I’ll bet no one ever calls me ‘Doctor’” (Kelly, Ade, 241).

Ade continued to write and mail off magazine articles from Hazelden during 1927. The February Hearst’s printed “When Good Fellows Got Together.” In August, Ade’s essay “The Perfect Play Is One Which Entertains the Audience Without Poisoning It” showed up in The Theatre Magazine. During 1927, cartoonist Art Helfant drew for the Bell Syndicate a short-lived cartoon strip titled “Fables In Slang by George Ade.” Ade also wrote motion picture screenplays adapted from two of his stage plays for the 1927 silent movies, The Fair Co-Ed and The College Widow.
Dave Ross remained obsessed with the idea of “educational research.” He told Engineering Dean Potter to “let our students know that if anyone here ever has an idea worth patenting, I’ll gladly bear all the expense of getting the patent and give whatever help or advice I can.” Ross was convinced that more scientific investigation should be used as a method of teaching and that there should be greater effort to uncover superior students and give them a chance to develop their talents. He cleared the top two floors of his Ross Building for work areas and informed another of his friends, Professor Harry C. Peffer, Head of the School of Chemical Engineering, to “look for gifted students, send them to me and I’ll put them to work.” The Ross Building soon became one of the most active research centers in the Midwest.

Peffer, whose daughter worked for Ross as a secretary, sent Ross a young chemical engineering graduate student, Richard Harrison. Harrison helped start Ross’s third industry. Ross convinced Harrison to follow up certain phenomena that he and Peffer had noticed in nature, which might lead to making artificial stone from common earthen materials. Harrison discovered a definite, if somewhat unstable, reaction at relatively low temperatures, between the alumino-silicic acid found in slate or shale and hydrate of lime. Ross saw his chance to show the Purdue Trustees the value of research to education. He convinced Peffer and Harrison that the three of them should start a research company devoted to the development of a synthetic stone for building material.

They founded Rostone Incorporated on July 11, 1927, with Ross President, Peffer Vice President, and Harrison Secretary and Treasurer. The articles of incorporation stated:

The object and purpose of the corporation shall be to carry on a general manufacturing business and to manufacture building material from mineral substances. The buying and mining of mineral substances to be used in the manufacturing of said materials
and to acquire by purchase, lease, grant, or otherwise real estate that is necessary to carry on the business of said company, and to sell, lease or otherwise dispose of real estate that can no longer be used in said business. Also, to acquire by purchase or otherwise letters patent covering any of said articles to be manufactured and to buy and sell merchandise to be manufactured, and for the sale of such merchandise when manufactured; and to do any and all acts that are necessary to carry on said business.

The company purchased 120 acres near the facing Wabash River towns of Independence and Riverside, in neighboring Warren and Fountain counties, for $9,863. The men deposited another $25,000 for buildings and materials. The capital stock of the corporation was $100,000 divided into 1,000 of $100 each. On July 20, Rostone hired recent Purdue graduates Paul Jones, a chemical engineer, and Floyd Wymer, mechanical engineer, to work with Harrison at a new pilot plant.

They chose the plant site at a large outcropping of shale. Harrison, Jones, and Wymer spent many days traveling between there and Lafayette before they moved into a garage that was to become their home for several years. Jones and Wymer wrote in a diary:

July 23, 1927 (Saturday) was the biggest of all days. After a strenuous night of packing, we loaded the truck up with trunks, bags, tables, chairs, bushel baskets, etc. We hustled about town to every grocery store, hardware and other merchants of household necessities. The ground was broken for the factory today, and we all rejoiced over that.

Ross’s goal was to market the cheap “imitation stone” by blending shale, lime, alkaline, and soil. It could be made into slabs for outside veneer walls that, even up close, looked and felt like solid stone. But it would take more than four years to reach the patent, manufacture, and marketing stage.
Purdue President Elliott, in 1927, proposed an all-University Department of Research Relations with Industry. The Trustees approved the idea in October, but the University then began to find that modern industries were much more interested in Purdue’s ability to train thinkers capable of solving problems than to fix them. Like so many other little facts of life, this situation set Dave Ross to deeper thinking. He wondered why more Purdue students weren’t inventing. “We don’t give them enough incentive to be thinkers,” he decided. “Too many who could think get caught by the distractions—by athletics, fraternities and social activity. Maybe only a few are naturally interested in new solutions to problems, but we [Purdue] ought to try to find them and encourage them” (Kelly, Ross, 100).

Ross believed that the United States owed any greatness it might claim to its roster of inventors. “What a [great] thing it would be,” he said in one speech, “if universities could spur their alumni to [recruit] students with natural aptitudes for research, invention and creative thinking.” He continued:

It isn’t necessary for the professor of football to order his graduate scouts to look for good material, but that is the only field in which most colleges have encouraged their graduates to scout for recruits. A professor of football points with pride to the number of all-Americans he has produced. I wonder if a technology teacher ever stops to ask if he is producing distinguished graduates? It may be that the professor of technology should take a hint from the professor of football. He could then point to the number of his students starred in American Men of Science. (Kelly, Ross, 101)

Ross time and again urged Purdue to acquire more research space, more teachers, and more research-inclined students, but he came to see this as being different from the work of industrial labs. “The university’s main interest is in human beings” he concluded, “in developing human aptitudes and possibilities. Industrial research deals with things. University research should dig into new ideas that help to train the mind for objective thinking. Those who are trained may then go into the industrial labs that deal with
things and apply their clear thinking to problems at hand” (Kelly, Ross, 101).

In late October 1927, the Indiana State Highway Commission, in its campaign to build more than 900 miles of hard-surface highways, opened new pavement between Lafayette and Indianapolis and designated it as “Road 52.” This provided a new channel of thinking for Ross.

For Ross, a word of conversation or a look could spark an idea. The state highway people responsible for more and better roads (and higher speeds) were starting to worry about accidents. Someone suggested they ask Dave Ross what could be done to improve road lighting. One night as Ross drove out to The Hills he saw a few yards up the road the gleam of a stray cat’s eyes. He thought, if there were enough cats’ eyes along a road night driving would be safer.

At home, Ross sketched a small teardrop shaped piece of metal containing a bead of reflecting glass. A series of such teardrops fastened to pavement to reflect lights from vehicles could mark the edge or center of a road at night. Ross even designed a groove in the teardrop so rain could keep the glass beads clean. He tried a few of the markers along his familiar road and drove at them. He tried different distances and angles. He put the first markers he made to sell on a sharp curve at the edge of Lafayette. The idea proved effective but easy to copy. Rival designs came on the market. Ross disliked patent lawsuits, so he never made much money from this invention, but he did feel good about helping solve a safety problem (Kelly, Ross, 90-92).

Jimmy Phelan’s 1927 football team won six games and lost two. In Ross-Ade Stadium the team beat DePauw fifteen to nothing; topped Montana State thirty-nine to seven before 7,000 fans; de-
fated Northwestern eighteen to six before 15,000; and drubbed Franklin forty-six to nothing. Borrowing George Ade’s phrase, Purdue football had “left the Joke Division.”

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It was getting to be old business, but by November 1927, Dave Ross had obtained five more patents. Four dealt with his designs for compensating gearing, a steering post control lever assembly, and differential gearing. The fifth was for a sectional tunnel:

[Ross] was walking across the Purdue campus with a student who expressed the opinion that the great number of inventions already made had reduced inventors’ opportunities. Dave stopped. “There’s scarcely a thing we do,” he said, “that can’t be done better.”

The words were hardly spoken when he saw a large tunnel being dug from the power plant. “Now look at that!” he exclaimed. “They dig a tunnel; then in a few days a gang of men comes along with brick to wall it up. There should be a sectional wall to go in as rapidly as the tunnel is dug.”

That night he worked on a plan for a sectional tunnel. His plan provided for sections of concrete of parabolic shape, the opposite sides to support each other by fitting together at the top. He obtained a patent for it. (Kelly, Ross, 94-95)

Each year for thirty-four years Ross received at least one patent and sometimes six or seven. All told, he received eighty-eight, including thirty-two for automobile steering gears and fifteen for Rostone and other building materials and structures such as the sectional tunnel.