The top people drew up the Purdue Research Foundation to include several classes of members. The members were variously known as Founders, National Counselors, Purdue Trustees, Researchers, Alumni Research Counselors, and so on. At the first meeting on January 24, 1931, for “seed money” Ross gave PRF $25,000 worth of Ross Gear stock, but stock values slid rapidly owing to the Depression. To make up for the shortfall, Ross also gave PRF a 420-acre farm in Wea Township south of Lafayette.

Ross, in those days, used to chide Purdue’s Agriculture staff because it so often begged the Trustees for extra budget money for operations. Ross thought that if he could make money by farming, then Purdue should, too. When Ross turned the Wea Township acreage over to Stewart to manage he said, “We’ll show those boys in Agriculture how to make money on a farm.” However, Stewart found the farm nearly stripped bare. A tenant had made off with so much, Ross said no more about farm profits for a while (Freehafer, 55-58).

Purdue Trustee J. K. Lilly also gave PRF $25,000 in start-up money, but PRF caught on so fast that it never needed to use even the interest on the Ross or Lilly “seed money” in order to grow. Early on a client company asked PRF to study chlorination. With this customer’s grant of $5,000 per year for three years, a Purdue graduate student and his mentoring professor developed 12 Rules for Chlorination.

More than half a century later, a Purdue history would state:
Ross’s involvement in the establishment of the Research Foundation may be his most significant contribution to the university... His interest and contributions...and his relationship with Elliott were legendary...

Not many needs large or small escaped Ross’ attention. Once when he learned of a student who needed surgery but had no money for it (there was no emergency university fund to meet such needs) Ross gave Purdue $7,500 worth of shares of his Ross Gear company to establish a fund to meet exceptional student needs...

Some promises of big-time giving [to PRF] fell through, in part because of the national Depression. But Ross was optimistic. “With [a lot of easy money] we’d have been busy planning great laboratories and not giving enough thought to picking the right men to do research,” he said. “Besides, starting in a modest way gives us a better chance for sane, healthy growth.” (Topping, 214)

PRF retained the services of Stanley Meikle when it organized. For rather a test case of PRF’s effectiveness in handling patents, Ross in late January applied for one. Meikle has recorded that “several years ago Ross was requested by the Indiana State Highway Commission to interest himself in the problem of lighting the Indiana highway system.” He continued:

A preliminary survey conducted with the Electrical Engineering School at Purdue made him realize that the cost [would be] prohibitive. Further study led Ross to conclude that the public was most interested in some means of positive indication of the lanes of traffic under all conditions of weather and during all hours of the day.
[A cat’s eyes] gave him the idea for a way to mark the traffic lanes. If these perfect reflectors could be placed at frequent intervals along the centerline of paved highways the problem would be solved. This was the basis for the David E. Ross Traffic Marker of the Purdue Research Foundation and the many patent applications which have grown out of this concept. (Meikle)

During this period Ross found even more channels for giving to Purdue. He bought land and offered lots for sale to Purdue staff members for building summer homes. R. B. Stewart bought one of the first lots. He and Ross, working on weekends, built a cabin on the land. If the bachelor Ross at times became lonely he would find out when Stewart was going out and would show up ready for work, too. Although nearing age sixty, Ross still seemed to enjoy driving nails and sawing boards while he visited.

During the 1920s, Fairfield’s business grew steadily under George Kumming’s leadership, but the onset of the Depression spelled his downfall. Just after the crash of 1929 Kumming had taken all of the company’s capital and purchased gear castings from recently liquidated manufacturers. Before he realized it his financial commitment to the procurement of gear castings had left the company without the capital to meet payroll and pay debts. Dave Ross was forced to reorganize Fairfield. He set up his cousin, Edward Ross, and himself as executive vice presidents, but then he astonished his associates by appointing A. J. McAllister, a recent Purdue graduate, as the general manager. Ross’s reason for placing such a young man in such a high position was “his mind won’t be all set. He’ll still be open to new ideas, to seeing new ways of doing things” (Kelly, Ross, 57). McAllister proved to be a huge success.

The depressed economy aside, the Ross Gear and Tool Company managed to record one-third-of-a-million-dollar profit for 1930,
and Ross received patents on a steering gear and a steering gear control lever assembly.

Next, Ross gave PRF more than 4,400 shares of Ross Gear stock. PRF sold this stock for $380,000 and invested the proceeds in a four percent certificate of deposit. Ross had taken the action after finding that Purdue could not supplement retirement funds for any of its faculty. Now there could be money to benefit the president, deans of the schools, and heads of departments when they had been with Purdue ten years and turned seventy or were disabled earlier. Ross insisted he get no publicity about the donation. So, Elliott named this hush-hush gift the “XR Fund” (Freehafer, 17).

Ross had concluded that aviation was going to be important in American life and world affairs, so he felt that Purdue needed to be a leader in aeronautical education. “And it should go farther than teaching theory from textbooks,” he said. “Purdue should have an airport” (Kelly, Ross, 129).

Thus, in late January 1931, for yet another gift Ross paid $37,000 for 157 level acres southwest of the campus along the south side of New York Central Railroad tracks. The tract was nearly triple the size of Shambaugh Field in Lafayette. Ross meant for the purchase to be at least the start of a University-owned airport and be a basis for more aviation courses. The seller of the land was Maurice Neville, president of Western Indiana Gravel, a company like many others struggling in the Depression. Neville’s men had been extracting, screening, and washing good quality sand and gravel from pits just east of the airport site. By trucks and railroad cars they had shipped the gravel off to buyers. The deal with Ross kept Western Indiana Gravel in business, and as a result the federal government soon chose Purdue and five other U.S. colleges for aeronautical instruction and research.

Speaking of aviation, Amelia Earhart left Ludington Airlines over some sort of policy dispute, and on February 7, 1931, she married George Palmer Putnam. With his help she acquired a Pitcairn
autogiro made by a company in Pennsylvania. An autogiro was a type of heavier-than-air craft supported aloft by a whirling rotor instead of fixed wings. A nose propeller pulled it through the air like an airplane, and like a helicopter it had a rotor instead of wings, but air pressure drove the rotor instead of an engine. “With virtually every prestigious flying record already captured or broken by one of the dozen or so top women pilots,” one of Earhart’s biographers later wrote, “Amelia and George were looking for something that would keep her name a headliner, and the autogiro, they hoped, was just the vehicle” (Lovell, 169).

In April 1931, with her Pitcairn, Earhart achieved an autogiro record altitude of more than 8,000 feet. On May 22 she bought an improved Pitcairn PCA-2, saying she wanted to be the first person to fly an autogiro from coast to coast. Putnam, the adept promoter, sold the autogiro to the Beech-Nut chewing gum makers. Beech-Nut then leased the machine back to Amelia and retained her to be a flying ambassador. Starting in late May Earhart became the first woman to make a transcontinental flight in an autogiro. Some newspapers nicknamed the Pitcairn “the flying windmill” in their accounts of her much-publicized feat.

Early in 1931, Ross Gear Directors heard the numbers they had feared but expected. Company profit for 1930 after taxes had fallen to $336,000—down from $565,000 in 1929. But it was profit, and the company assets and liabilities still balanced at more than $2.5 million.

The Ross-Aitkenhead team that worked to design a better plow met with success in March 1931. The government patent office issued in Ross’s name “U.S. No. 1795182” for a “Cornstalk and Clod-cutter Attachment for Tractors.” And more ideas kept on flowing Ross’s way. The first time he saw a 1930s engine-powered airship, commonly called a “dirigible,” he considered, then designed, one that contained a light, rigid, hollow cylinder from front to rear. This made an airship stronger and let air flow through it to relieve
pressure on the front end when it was flying. This spur-of-the-moment idea for a hollow or tubular dirigible frame brought Ross a patent on June 13, 1931.

On June 15, because of business uncertainty, Ross Gear cut weekly and monthly salaries by ten percent. David Linn Ross remained chairman of the board and Edward A. Ross presided. However, when Edward died on July 9 Dave Ross agreed to assume the presidency without pay until the term expired in March 1932. Running the wobbling company in the Depression might have absorbed all his time. He did preside for the next six years, but Purdue affairs remained a high priority for him.

By comparison, George Ade was less active and less visible. By the time he had finished with Broadway in 1910 he had become wealthy. The book value of his investments in Indiana farmland had gained until he was offered nearly a million dollars for them. Now in the 1930s, with farm prices and property values falling, he was still syndicating fables and drifting into the good-money world of slick magazines. However, he did make one more literary effort. This was when New York City publishers Ray Long and Richard Smith brought out *The Old-Time Saloon* in November. Based on an idea from a former *Cosmopolitan* magazine editor, the nonfiction volume contained amusing chapters with titles such as “What Was a Saloon—and Why,” “The Free Lunch,” “What They Drank,” “Why People Behave So,” “The Bar-Keep,” “Song and Story,” and “The Talk.” *The Old-time Saloon* bore the subtitle *Not Wet—Not Dry—Just History.* In the book, Ade told of a vaudevillian being chased out of an Irish saloon on St. Patrick’s Day. The Son of Erin had eaten shamrock bar decorations thinking they were watercress.

Although he did still oppose Prohibition, in the book Ade did not lament the passing of saloons. His chapters about barkeepers, barroom talk, songs and stories, the art of bouncing, favorite drinks, and free lunches hit home with his older readers. Ade’s biographer
Fred Kelly later speculated, “not long after publication of The Old-Time Saloon national Prohibition was on its way out. Perhaps the book played its part” (Kelly, Ade, 249).

Hard put to focus on anything much else that really interested him, Ade began taking orders for writing jobs. Cosmopolitan inspired him to compose a new series of “Fables” with drawings by McCutcheon. Hollywood still called, too. One 1931 movie, Young as You Feel, came from Ade’s 1908 play Father and the Boys.

After 1931 Ade finished only eleven more contributions to The Purdue Alumnus. One in June 1934 was the transcript of a radio program he had broadcast over WBAA. The last article appeared in February 1941.

Coach Kizer’s 1931 football team won nine games and lost one. In Ross-Ade Stadium, however, crowds and income fell short of hopes, probably owing to the Depression times. On October 3, Boilermaker fans could buy one ticket and watch two games in the stadium on the same afternoon. In the games Purdue beat Western Reserve twenty-eight to nothing and Coe College nineteen to nothing. But the 10,000 fans who paid stared at more than 13,000 empty seats. Purdue beat Centenary that season forty-nine to six and topped Iowa twenty-two to nothing before the highest Ross-Ade Stadium attendance of the year, 18,000. The ’31 Boilers won the Old Oaken Bucket nineteen to nothing in front of 22,000 at Bloomington. The lone 1931 loss, twenty-one to fourteen to Wisconsin, took place before 30,000 in Madison, Wisconsin.