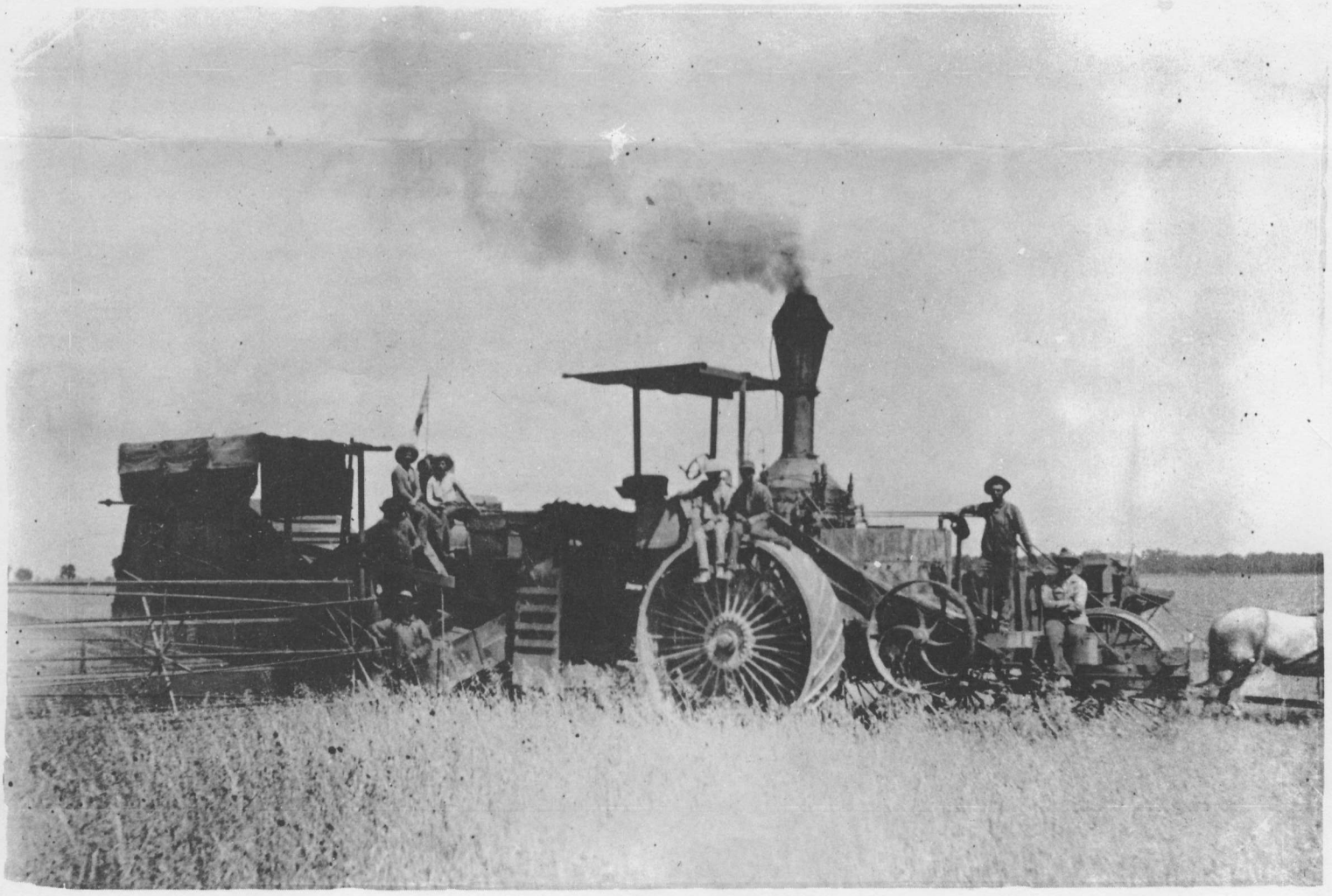
SUTTER COUNTY HISTORICAL SOCIETY

NEWS BULLETIN

VOL. 3 NO. 6 YUBA CITY, CALIFORNIA JULY 1963



Harold Baldson's Best steam harvester. On wheel, Clarence Arvedson, fireman. He was 16 years old.

Margaret E. Robinson
(Student at University of California, Davis.)

FROM LUMBER AND GRAIN TO TRACKS

(The history of the Caterpillar Tractor Company)

By Margaret E. Robinson.

SUTTER COUNTY HISTORICAL SOCIETY

SUMMER PICNIC

BRANNON PARK, YUBA CITY
July 16, 1963 — 7 P.M. for Lunch

Bring a picnic lunch and we will all have a good time sharing our food as well as experiences of an earlier day.

PROGRAM: Mr. Frank Van Zant, Curator of the Sacramento Valley Museum, Williams, California. Former member of Sutter County Historical Society.

TOPIC: Problems Encountered in Establishing and Operating a Museum. Speaker at 8:30 P.M.

Brannon Park is located on Gray Avenue next to the Yuba City Swimming Pool, near the Gray Avenue School. If any one feels like a swim come a little early and enjoy a dip before the picnic.

The pool will be open from 6:30 until 9:00 P.M. Bring the family. If you want to be seated comfortably, bring your patio chairs for you and yours. Light folding chairs will easily go in the trunk of your car.

The city will furnish combination picnic tables and benches for our pleasure. They will be placed on the cement slab under the Eucalyptus trees.

A UCD STUDENT DOES HER TERM PAPER IN HISTORY 101

F. Hal Higgins, Librarian
Agricultural and Industrial Engineering
Research Library
University of California at Davis

Sutter County historians might like to know how Miss Robinson came to my collection in the University of California Davis Library and how this collection was gathered over the past 37 years, the "papers" on the roots of the Caterpillar Tractor Company.

When I came out from the old National Association of Farm Equipment Manufacturers with headquarters in Chicago in 1927, it was as news editor for the Caterpillar Tractor Company. The two lines of products being built at that date were combined harvesters and crawler tractors. To get the facts and all the facts on each, I immediately began digging out the history of each machine from all the literature in companies and libraries while visiting dealers, company officials and owners. Every group that touches a tractor or machine has his special viewpoint. From the bankers who finance a tractor or a farm machine to the operator, owner, dealer, service man, tax—collector, each sees that machine in a different light. Consequently this collection has gathered all viewpoints while collecting photos, catalogs, annual reports, letters and interviews.

Best and Holt, the two famous branches of the modern Caterpillar Company were merged in 1925 after epic years of rugged competition that gave farmer, logger, road—builder and irrigation contractor the machines to whip their problems. From the early days of this research and collecting, there was always the aim of having the research work done, for the day when there would have to be at least four books on Bests, Holts, Combined Harvesters, California Mechanization History. They stimulated our leadership in farm income that adds up to more than three million dollars a year. The whole world tries to copy our farm mechanization and usually starts at the wrong end trying to do it from the top via Government instead of from the grass roots farming system in the United States. However, we set the styles in farm machines for the world and have been lifting labor off its hands and knees for 108 years since the first combine came in to harvest 600 acres of wheat near Mission San Jose in 1854.

When Professor Kelly of Agriculture Engineering Department sent Miss Robinson over to my collection in search of material on Best, Holt and Caterpillar, I couldn’t have picked a student out of the 4000 or so who would have hit my collection's bullseye better. I hope Mrs. Gibson, a grand—daughter of the Sutter County Henry Best won't have to cut Miss Robinson's paper too deeply to eliminate any of the Best history. This No. 1 branch of the modern Caterpillar Tractor Company got its start on that Henry Best farm in Sutter County. The first Best grain cleaners, combines and steam tractors got their inspirations and try outs on that farm.

As I have many old friends in rice, grain, seed crops, not only in Sutter County but the whole Sacramento Valley, I assure them I welcome any one with historical material on agriculture, farm and industrial machines, for visits with me in my office at the University of California. I will be glad to call at the ranches or homes for interviews. Not only does this collection attempt to go back to the start of every machine and manufacturer of these machines, but it has just been given a widening by the addition of Technology to Agricultural Engineering.

This collection is backed by the manufacturing industry, IHC and Deere. Cash is ready for backing of plans to complete the gathering of history of farm and industrial mechanization. As a result, the UCD Library has been chosen by USDA's National Agricultural Library to cooperate with it and the other 49 Land Grant College Libraries. We welcome and appreciate the cooperation of both local historical societies and individual families.

P R E F A C E

The following research paper for the History course 101 has been prepared with the gracious help of Mr. F. Hal Higgins and his agricultural and industrial engineering research library.

It was through Mr. Higgins and with his aid that I was able to go through the records of the Best and Holt Companies. I was able to use Mr. Higgin's interviews and his files, collections of bulletins, catalogs and histories of the companies and men involved in the history of the Caterpillar Company.

I must acknowledge help from my family regarding my grandfather, Mr. C. L. Best. I personally did not remember my grandfather. My mother and my uncle gave me much valuable information regarding him.

--Margaret E. Robinson

CHAPTER I

THE CALIFORNIA SCENE

California's history features variety and sharp contrast. One finds that this territory has experienced four different and contrasting landlords, Indians, Spaniards, Mexicans and Americans.

The discovery of gold set in motion a train of forces which quickly altered the northern part of the state. Southern California continued to be predominantly pastoral for almost a generation later, but with the building of the transcontinental railroad, the rose of new agriculture centered around the orange and the striking of oil, rapid transformation began. Today, California is one of the first ranking states of the Union in population, finance, agriculture, mining, commerce, industry and cultural leadership.

California is unusual and her growth has been marvelous. Her climate is not duplicated in any other state, nor is the range of her natural flora and fauna. Agricultural products range from prosaic wheat and cotton to avocados and dates.

This research paper deals with California's expanding agricultural history and the handful of inventive men who enabled it to expand as easily and as fast as it did. This particular history of California's early inventors begins in the middle 1800's.

At this time California witnessed a "back—to—the—farm" movement in the 50's created by the hungry gold diggers. California's soil, isolation, and climate accented wheat production. Barley became a close second crop.

California's suitability for a wide variety of other crops was thoroughly proven in the 50's and 60's. Such fruits as grapes, apricots, quinces, walnut were produced as well as all kinds and types of vegetables.

This is the immediate background for two remarkable early pioneers, Daniel Best and Charles Holt and their sons and brothers.

CHAPTER II
EARLY PIONEERING

Daniel Best came from a family of nine brothers and five sisters living on a farm near Keokuk, Iowa. The family was descended from that noted ancestry that settled in Ohio after moving west from Pennsylvania. Dan was a native of Ohio but moved from Ohio to Missouri and then to Iowa.

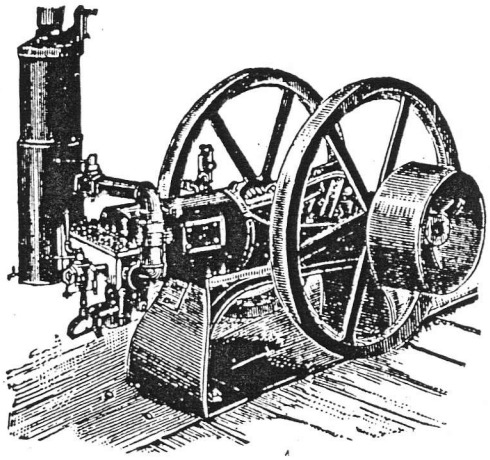
In 1852 he left for the west when he was nineteen years old. He and another man left the party at Fort Baker, Idaho. Daniel eventually arrived on foot at the town of Steptoville, (Walla Walla, Washington). Here he worked hewing lumber to grubstake for gold mining in the Snake River country.

At the age of twenty—one he commenced carrying slabs at a sawmill in Portland, Oregon. In less than six weeks he was foreman and manager. Here by careless mistake of another worker, he lost all the fingers on

CHEAP IRRIGATION!

UP TO DATE!

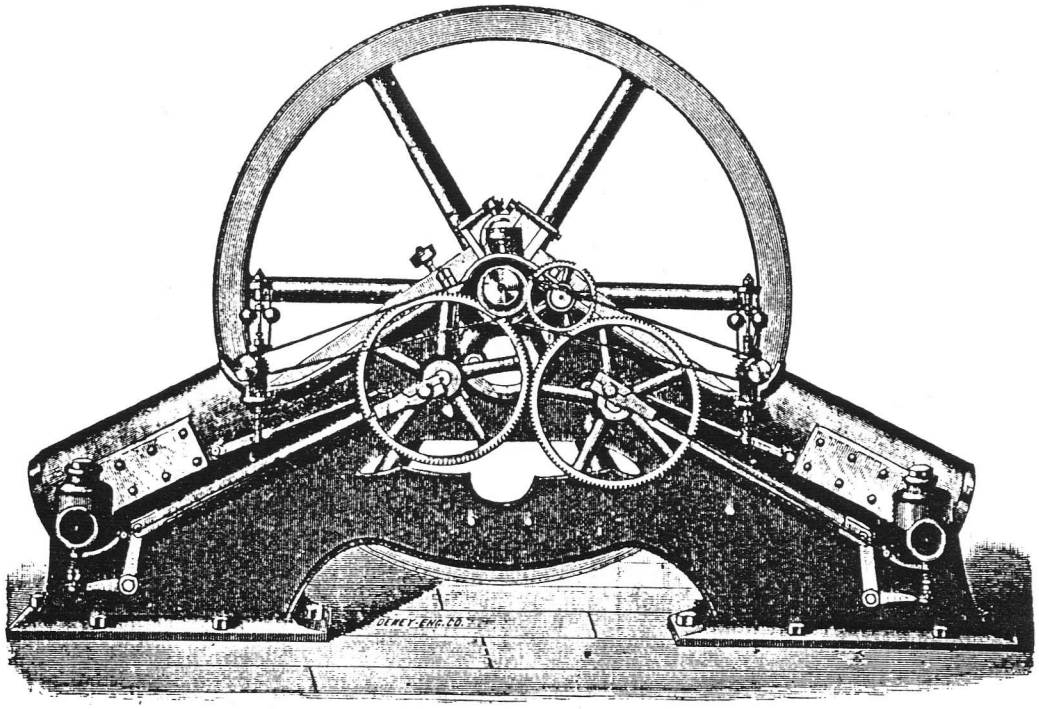
SAVE MONEY BY USING



THE "DANIEL BEST" CRUDE OIL ENGINE

FOR POWER.

THIS IS WHAT THEY CAN DO:



DANIEL BEST'S STREET CAR MOTOR, 16 HORSE POWER.

his left hand. At this sawmill he devised a plan to build a mill out of waste iron that had been scattered on the plains by emigrants. Old employees recall Dan Was always picking up any piece of iron he saw in the woods. He succeeded in building a sawmill that could turn out 1200 feet of lumber per day.

After the accident, the next job for two years before coming to California where he settled in Sutter County. Seeing a need for portable grain cleaners, he designed and invented one. This grain cleaner won first prize at the California State Fair. He sold a half interest in it for $5000 to Mr. L. D. Brown, the going interest of which was sold for $32,000 afterward. This patent was taken out through the Scientific Press Agency on April 25, 1871.[1]

Daniel returned to Oregon, settling in Albany around 1876, where he rigged up a fanning mill to clean wheat and where he also designed a grain cleaner for stationary threshing machines. His son, Clarence Leo was born in Albany in 1078. During this time Daniel was a pattern maker at the Cherry Iron Works. According to Nathaniel Slate for whom Dan worked at this time;

> "Dan Best was a pattern maker and a good one. I had him help me get up a combine in 1382. That was when we found out it would take a field full of horses and mules to pull it and we began talking steam traction engines."[2]

Dan was now thinking that if it was profitable to build grain cleaners as part of a harvester, then why wouldn't it be more profitable to build the entire combined harvester. This business he soon decided to enter.

In September of 1883 or 1885 he bought out the San Leandro Plow Works and began the manufacture of agricultural implements. This business was formerly owned by Jacob Price, Socrates Hough, L.C. Morehouse and Charles Gray. They had been building horse plows for the previous ten years.[3]

By 1889 Daniel Best wan manufacturing traction engines in San Leandro. These engines were used for pulling the large harvesters and were also used successfully in lumber and mining industries. This model engine weighed eleven tons and had drive wheels eight feet in diameter and two feet broad. It pulled sixty tons of gravel easily. At an exhibition where it pulled sixty tons without being under full steam, the engineer expressed his opinion that with the throttle open, she could take along one hundred tons about as easily on the same road.[4]

Many testimonials were paid this engine. A committee for the Directors of the State Agricultural Society praised the engine for its saving on wood for fuel and its ability to plow deep. John Roupe wrote Mr. Best on January 16, 1829 stating that the engine was the best steam burner he had ever tried, having more power than any other engine.[5]

During this early steam period, the Best and Holt Companies were almost exact parallel competitors. Both were building the same kind and the sane size machines for the same purposes. The Best Company was leaning a bit more toward the Steam Traction Engine while the Holt

SUTTER COUNTY FARMER.

YUBA CITY, FRIDAY, JULY 5, 1889.

Local Intelligence.

The Best Engine — A n Impending Revolution

Early Tuesday morning we drove to the residence of Henry Best, about eight miles southwest of Yuba City, to see his traction engine at work in the harvest field. It was drawing on eighteen-foot cut Best & Driver combined harvester and managed it with the greatest of ease. The engine displaced at least thirty horses and the wear and tear can scarcely equal that of the horses or mules, harness and took and the feed, etc. The boiler is an upright, and the two great wheels between which it rides are eight feet in diameter, the other wheel is forward, about five feet in diameter, about fifteen inches wide with a rim around the middle about two inches high which holds the wheel steady in line. The large wheels ate about twenty-four inches wide, heavily ribbed on their outer face to prevent slipping as on them depends all the work to be performed by the entire outfit. The floor of the pilot house is about seven feet from the ground, thug raising the eye of the pilot or engineer from 12 to 13 feet high, giving him the most complete view of the surroundings. The pilot house is decked over with canvas, sheltering its occupant from then sun, but really all the workmen have the benefit of shade unless temporarily called from their position. It takes five men to manage the monster—two with the engine, a sack-sewer, one to manage the lever by which the cut is regulated, and one who is loose to oversee the machinery generally. One man and team are required to draw wood and water; the water wagon is driven alongside' and the huge roadster, like an elephant, drops his trunk (hose) into the tank and fills his own reservoir therefrom while moving at the rate of three miles an hour. The fireman told us that the wood-box needed to be replenished about every three miles; but it is small, seemingly requiring but little fuel. Cottonwood was being used for fuel. The smokestack is covered by wire gauze through which no sparks can penetrate, in fact we failed to see even smoke come from

Company specialized more on the combined harvester business.

The Molts and Bests built some 14,000 combines from 1886 to 1929. The two companies' business methods and modern farm mechanization service via local dealers who could give instant service to keep the combines rolling was worked out to meet the grain grower's demands. They laid the ground work for the modern farm machine service of the West which is the model and envy of the world, which is the fruit of this rugged competition of free enterprise sparked by the Gold Rush.

Daniel Best's traction engines were also being tested on ranches in 1889. The Red Bluff Sentinel for February 9, 1889 in an article on "Successful Steam Plowing", stated:

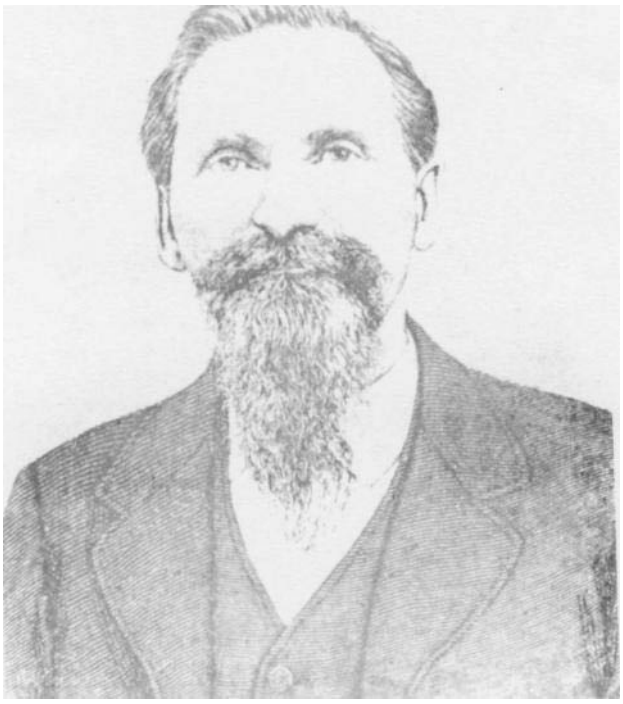
> "One of Daniel Best's traction power engines, manufactured at San Leandro, is on trial on W. W. Finnell's ranch as the motive-power to draw twelve 10-inch plows. The machine was purchased by John S. Butter at a cost of $4500, provided it is successful in plowing. We saw it in motion Monday and it appears to be a perfect piece of machinery. There is little doubt that it will work to the entire satisfaction of the manufacturer and the purchaser, "[12]

REMINGTON'S OREGON TRACTION ENGINE
("Shop Notes" of Daniel Best)

> "The traction engine, Marquis de La Fayette Remington's engine Rough and Ready, was tried at plowing at the big shop Thursday afternoon, in the presence of a large crowd, some of whom were interested as prospective purchasers. Two large platform gangs of six plows each were attached and lowered so as to cut eight inches deep and the machine walked off with them as if nothing was behind it, leaving at each passage across the field a plowed strip nearly twelve feet wide. The plows cut two or three inches below the former plowings and threw up the earth in immense lumps. To persons living at a distance we explained that the ground was a black firm loam, very dry, having had no rain on it for months. To show what the machine would do in loose summer fallow it was run the length of the field over the lumpy plowed ground drawing the twelve plows after it set as deep as they would run and with men riding on the beam. It looks as if the day of the locomotive steam plow has arrived."[13]

In 1891 the San Leandro plant was working to its fullest capacity with a full force of men. The principal work being done was on a line of grain cleaners. Best's grain cleaners had been on the market now for fifteen years and every year the company kept adding improvements.

> A description of the machine and one of its features were, "The wheel weighs nearly twenty tons but on trial it was a success in covering the light and soft sediment soil where in the summer time it is so badly cracked that it is unsafe to work horses and the dust so fine and light that in the dry season neither man nor beast can stand it. An added feature on the engine is the dust-proof cab and the engineer can breathe and see what he is doing."[18]



Daniel Best, farm machine manufacturer.

Clarence Leo Best. His combines and tractors set the pace on the Pacific Coast from 1916 to the 1925 merger with Holt.

Daniel Best had built up his business through his inventive mind and hard work. After he had established his reputation, he stood on his former achievements and his ability to keep up the fervor of newer inventions to aid the California farmer.

By the turn of the century his business enterprise had changed from the 1883 description of his factory by W. H. Morgan of Oakland. He reported:

> "The pioneer Black Gangs that manufactured the early tractors and combines were bicycle—riding local blacksmiths, wheelrights carpenters, pattern—makers and machinists whose loyalty to their shop and product was traditional and whose joys and sorrows were shared by owners and bosses. Many a payday was postponed until tractors could be sold and collections made."[19]

The Pacific Rural Press of August 24, 1090 describes Mr. Best as a:

> "genial, modest and reliable citizen, prosperous in business and enjoying a high reputation as a man of veracity and integrity. He has been blessed in his domestic relations, and his hospitable home is surrounded by a most estimable wife and six promising children. He is an honored member of the Ancient Order of United Workmen. He is possessed of a high mechanical talent and may be properly termed as inventive genius."[20]

Daniel Best and his son, C. L. Best took active part in the San Leandro community affairs. Both were made officers of the new First National Bank when it was organized in July of 1909. Daniel was a director and prominent stockholder when the new San Leandro State Bank was opened for business in September of 1911. Later in the 1900's C.L. was on the ways and means committee for the new ;330,000 Presbyterian Church in San Leandro.[21]

Taking a backward glance at Daniel Best's achievements from 1886 to the turn of the century we see that his engines improved with the years. A year later, 1892, the Pacific Rural Press viewed that a large force of men was engaged principally manufacturing Best's Model Combined Harvester, traction engines and gasoline engines. The paper went on to say, "The notable triumphs achieved by Mr. Best in the traction engine, combined harvester and grain—cleaners as an inventor of our own State, is a matter of pride to Californians."[14]

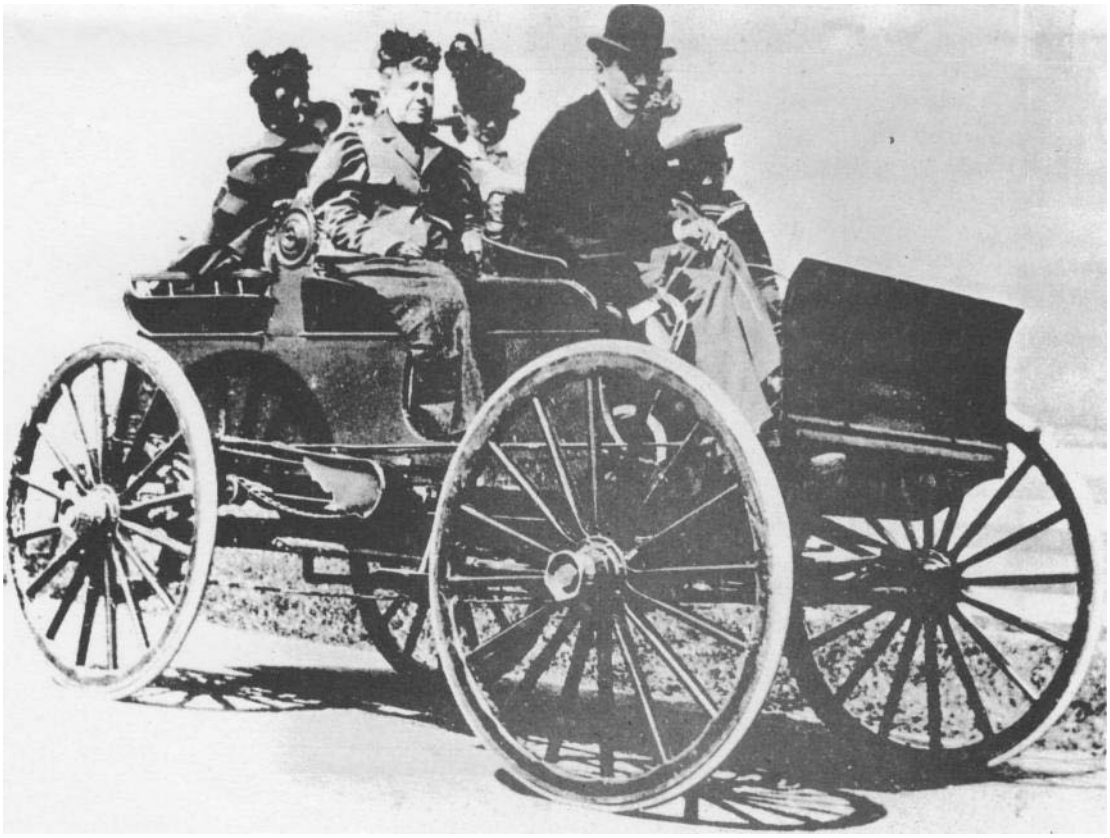
STREET CAR POWERED BY BEST GAS ENGINE

In 1892 and 1893 Daniel Best was engaged in producing gas street car motors. One was built for use on a line from San Jose to Alum Rock Park, a distance of eight miles. It had a speed of twelve miles per hour and was successful in keeping the noise and the smell from the motor, from being disagreeable.[15]

Another vapor motor was designed for a street railway line between

BEST BROTHERS

Standing: Richard and Darb.
Seated: Daniel, Henry and Samuel.



C.L. BEST DRIVING HIS 9 PASSENGER AUTO OF HIS OWN MAKE, 1889. THIS AUTO WAS NEVER MANUFACTURED IN A COMMERCIAL WAY, BUT IT WAS ONE OF THE HORSELESS CARRIAGES IN WHICH CONSIDERABLE INTEREST CENTERED IN THE SAN FRANCISCO BAY REGION

Yuba City and Marysville, a total of four miles. One feature of this motor was, "The system by which it can be thrown in and out of gear without causing a jerk or jar. It is easily handled by one person and its simplicity of construction makes it inexpensive to keep in repair. The speed is eight miles per hour and the car can go forward, reverse, and stop or start at the will of the operator."[16]

In the late 90's and around the turn of the century the Best Company was busily engaged in devising engines to work on the peat soils of the Delta, where everything including horses and mules bogged down when trying to work the soil. One such machine was built for Mr. H.F. Pearch of Victoria Island, San Joaquin County. The unique part of the engines were the size of the wheels. The tires were ten feet wide and had a twenty foot tread.

Another machine was built for the Middle River Company of Stockton. The drive wheels were eight feet in diameter and had a five foot face. The front on steering wheel was fifty inches wide and sixty four inches in diameter. Oil fuel was used and the cost of the machine was $6500. In 1889 he was manufacturing a 50 horse power steam tractor. In 1897 lie came out with a 110 horse power steam tractor. This jump from 50 to 110 H.P. came when lie had to sue to collect on a 55 H.P. engine, bought by some mine owner. Dan demanded and got a demonstration before the judge-and jury and made the engine test 110 H.P. After that he sold that same model as a 110 H.P.

Best exhibited his products at the California State Fair throughout the years. As far back as 1871 his grain cleaner was awarded first place. In 1890 his field locomotive was awarded first premium at the Fair. His Remington traction engine or "steam plow", was also awarded a first prize in 1888-89.

TESTIMONIALS --"ASK THE MAN WHO OWNS ONE!"

At this time in the early tractor business testimonials were often used in advertising media for the highly competitive business. When in 1905 the Rural Californian, a Southern Californian farm magazine, was asked what make of steam harvester was best adapted for harvesting grain on all kinds of land, it heartily recommended the Best "New Combined Harvester". The magazine stated that the machine was simple yet had duran durable construction and could be used equally well on hill side or valley acreage. One of Best's harvesters was able at this point to harvest on the average 1,000 sacks of grain or 65 to 100 acres, threshed, recleaned and sacked in one day. The actual operating expense was not exceeding fifty cents per acre and would perform as much work as would one hundred men and fifty horses.

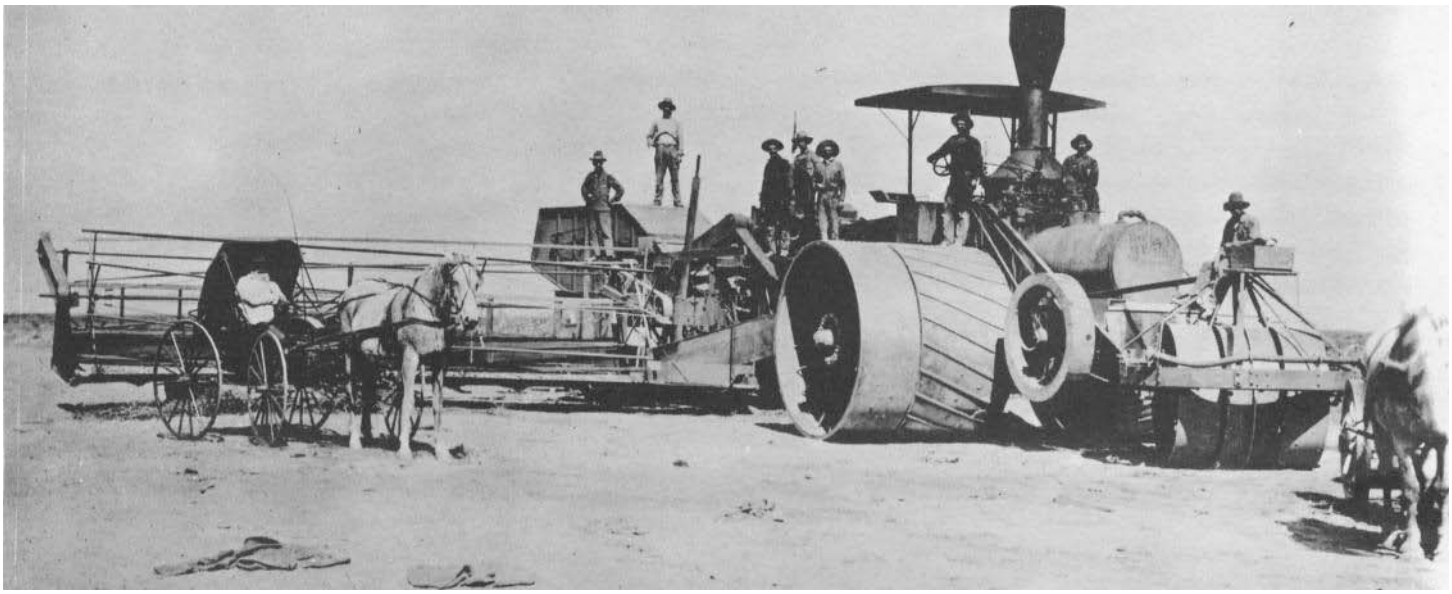
The same magazine also praised the "Best Traction Engine" which it believed stood unequaled and unsurpassed in design, in make or work actually performed. At that time none equal to it was known. It would plow, harrow and seed from thirty—five to seventy acres per day, or with a seventy five foot harrow would work from one hundred to one hundred and twenty—five acres per day.

Among some of Best/s satisfied customers in Southern California who vouched for his products were such operators as, the Griffith Brothers of Covina; I. N. Van Nuys of the Los Angeles Farming and Milling Co.,; "Lucky" Baldwin; Culver and Kellogg of Newhall; the Schoe Brothers of Santa Monica; Kerr Farming Co.; Samuel Alexander of Fernando; and Walter Carter of Wisburn. Besides these local customers, Best had successful machines working in Russia, France, Italy, Spain, China, Central America, British Columbia and Mexico.

FOOTNOTES

Chapter 2

1. Pacific Rural Press, Volume 2 (Dec. 23, 1871.)p. 25
2. The Iron Man Album, Column 6, No. 3, (Jan.—Feb. 1952) P.3
3. Pacific Rural Press (Aug. 24, 1890)
4. Ibid.
5. Loc. cit.
6. C. Parker Holt, Early Development of the Holt Manufacturing Company (June 26, 1935), p.l.
7. Ibid
8. Loc. cit.
9. Loc. cit.
10. Pacific Rural Press, (May 18, 1878) p. 313
11. F. Hal Higgins Collection, University of California Davis Library
12. "Successful Steam Plowing", Red Bluff Sentinel, (Feb. 9, 1889)
13. Best Shop Notes, (Nov. 3, 1888
14. Pacific Rural Press, (Oct. 31, 1891), p. 385
15. Pacific Rural Press, (Nov. 12, 1892). p. 409
16. Pacific Rural Press, (April 8, 1893), p. 312.
17. San Leandro Reporter, (Oct. 8, 1898)
18. Pacific Rural Press, (March 7, 1903)
19. W. H. Morgan donator of photo to F. Hal Higgins
20. Pacific Rural Press, (Aug. 24, 1890)
21. R. R. Stuart, "San Leandro in the 90's", San Leandro News Observer. (July 5, 1951)
22. Rural Californian, (May 1905)
23. E. E. Wickershan, "History of Daniel Best", (Feb. 1940)
24. F. Hal Higgins, "An Interview with Gordon Webster", Grandson of Daniel Best.



Best's steam tractor which was developed with broad wheels for use in peet soils around Rio Vista.

CHAPTER III

CLARENCE LEO BEST

The year 1908 marked the acquisition of the Daniel Best Company by the Holt Manufacturing Company. When his father sold out, C. L. Best retained a substantial interest in the company. He continued with the Holt Company until 1910 when he withdrew and formed the C. L. Best Gas Traction Company.

Both the Best and Holt Companies had trouble finding machines that were heavy and rugged enough to team with their tractors. So companies were engaged in the business of building and selling equipment to be used with the heavy engines.

As far back as 1858, forty seven years before we hear of Holt's track—layer at Stockton, Warren P. Miller appears at Marysville with a steam traction engine on tracks. He was awarded a $400 prize along with a silver medal for this machine "suitable for agriculture". His machine built in 1858 and patented the following year had features that all present day builders of crawler tractors are still using.[12]

Hal Higgins has dug out the background of tracks in Europe. He found literature on an Englishman who admitted that after spending some twenty years "perfecting" the crawler idea he later found some Frenchman was fifty seven years earlier with the same thing. Mr. Higgins, with the help of Joe Sabatier, who translated the French, found a text in the French Academy of Sciences entitled, "Machines and Invention Approved by the Royal Academy of Sciences from 1713 to 1719", including sketches and text of an invention by d'Hermand. He had invented a crawler machine similar to Edgworth's that was steam powered fifty—seven years later in England.

C. L. Best in his Best Traction Engine Company in San Leandro had (ranched out very much since the start of his company in 1910. He had dropped out of the Holt Corporation after it had bought out his father's business in 1908. By 1919 C. L. had offices in San Francisco, Stockton, Los Angeles, Walla Walla, New York and had a factory branch and warehouse in St. Louis. He had Best "Tracklayers" in production up to 90 horse-power.

C. L. was turning out tracklayer tractors under his direct personal supervision. His plant was modern and occupied more than ten acres. Two railway systems served it. He had made a thorough investigation into the tracklayer tractor and decided to start production of crawler tractors in his own plant to compete with the Holt Company. After a long series of experiments he perfected the spring mounted "oscillating" truck in place of the rigid frame truck design and was successful in eliminating the ordinary link pin as he developed and patented the Best "rocker—joint". This oscillating truck allowed each track to operate as an individual until, following the contours of the ground and bridge d depressions, thus minimizing the wear of the track, thereby lengthening its life.[20]

As we have already stated, the first tracklayer engine was patented by d'Hermand in 1713 and by Edgeworth with steam in 1770. A. 0. Lombard of Maine, was the first to introduce a tracklayer tractor embodying the spring mounted features of both resiliency and flexibility. He was the first to produce an operative commercial traction engine of the self-laying type. C. L. Jest acquired the two original Lombard patents; covering not only the two main features but the tracklaying tractor as a whole. C. L. himself, patented the "Oscillating Track" and the "Rocker-Joint" connection between the links of the track. Lombard patented his in 1901 and 1907. C. L. Jest's were dated 1914 and 1915.[21]

When C. L. followed the Holt trend to tracks and left wheels for his tractors, he said: "Wheels will always beat tracks IF and WHEN you give them traction."[22]

The recent National Road Show in Chicago proved C. L. Best's fundamental idea that a wheel would always beat a track. Caterpillar announced at the Road Show that two new big-tired diesel loaders and a heavy duty motor truck are to be placed on the market to meet the rising competition that has developed since LeTourneau introduced big air tires on the Bay Bridge approach in 1934.[23]

C. L. Jest was born on April 21, 1878 in Oregon while his father was in business there. After moving with his family to San Leandro he received an education in the public schools and attended the Oakland Business College, the Lick School of Mechanical Arts and Anderson University Academy at Irvington. He started active work in his father's company in 1897.[24]

Daniel Best had this to say about his active son:

> "Leo grew up in the tractor and farm machinery business. When he was thirteen lie showed great interest in the manufacturing end of the business and was constantly at it during the entire period that I was active. He felt he could not give up so interesting life when I sold out, and as a result formed what is now one of the leading factory concerns in America. Leo took several courses in engineering and also many special courses in his particular line of business. I made him superintendent of my plant at the age of twenty. Before the age of eighteen lie was buyer for the plant."[25]

C. L. Best had first settled his plant at Elmhurst but in 1919, $20,000 was subscribed to purchase the old Best plant on Davis Street of San Leandro then owned by the Holt Manufacturing Company. San Leandorans had learned what a Best plant meant to their city. By July 1st the old Best shops were being torn down and a month later the new Best Works was a "Hive of Industry".[26]

In 1917 Best tractors were being used in Russia by the Russian government in Vladivostok, Siberia, Nevada, California, Florida, Java, Honolulu, Mexico, Cuba, Georgia, Washington, Oregon, Utah, Texas, Japan, plus many other areas. The Best Company had exported steam tractors to Russia as early as 1903. The first one went to St. Petersburg and was then driven under its own power 500 miles over difficult terrain to Siberia.[27]

C. L. was very successful in expanding his business. A good example of how he did this would be Cuba and Joe Sabatier. lie sent Joe to Cuba in 1919 to See if there might be a place for his new Best Sixty. Joe got one sugar plantation owner to buy a Sixty if he would demonstrate it through the winter months to prove it could replace oxen at hauling cane from field to mill instead of halting work because of the soggy mud. For five and a half months Joe worked with the tractor. The next year Joe sold thirty Best Sixtys and Cuban sugar was on a new level of efficiency.

Cuba also had some 36 "Cats" in the period of 1929 to 1932 when this was the world's biggest highway construction job. They also had elevating graders and scrapers. This job and its machines and methods added several new words to the Cuban language.[28]

Sabatier is a prize example of the kind of Americans sent out over the world to carry our finest mechanized know-how to old and new nations. From Cuba he went to Mexico, Central America, South America, Japan and Manchuria.

Joe started as a $1.25 a day scrub boy at Best's plant, a job designed to get rid of farm boys who were always coming in from the ranches to become "tractor men". He wound up his tractor days as Caterpillar Paris manager over all Europe.

WORLD WAR I AND BUSINESS

The First World 'Jar affected the Best Company differently than it did the Holts. Although the Best engineers were asked to develop a fast war tractor, the project never got past the acceptance hurdle at Washington. So, C. L. obtained assurance from Washington that he would have all the necessary steel supplies to permit him to continue to build tractors for farmers during the war. By this action he had won his share of the agricultural markets and was pushing its advantages elsewhere. At the end of the war, C. L. Best had fifteen dealers. By 1925 he had forty-three dealers in the United States and seven in other parts of the world. C. L. had been able to re-tool his entire plant in 1921 and 1922. In the post-war depression that came, his business increased nearly 70%. The business depression that followed the war was much more serious for Holt Brothers.

FOOTNOTES

12. F. Hal Higgins, Oakland Tribune, Jan 1910, p. 2
13. Joe Sabatier, "The Cat a French Invention" translation of the French
14. Ibid.
15. Holt Bulletin, Vol. 32, No. 44, (March 1912) p. 1
16. Holt Bulletin, Vol. 31, No. 11, (Nov 1912) p. 1
17. F. Hal Higgins
18. "Stockton Fills War Orders." Stockton Daily Evening Record. Sept. 19, 1916, p. 1
19. California Cultivator, Vol. III, No. 18, (May 13, 1919) p. 1
20. Best Catalog. 367-1-22-10M, p. 2
21. Hal Higgins
22. Ibid.

23. "Farm Tractors." Oakland Tribune, Jan. 1919
24. Best Catalog, 1917, p. 4
25. F. Hal Higgins
26. Ibid.
27. Stockton Daily, Sept. 19, 1916.
28. "American Tractors Developed Cuba", Steam Engines, Fairfield, California (June, 1961) p. 12
29. Ibid
30. Stockton Daily, Sept. 19, 1916.

TO BE CONTINUED IN NEXT ISSUE (October)

The merger of Best and Holt Companies and the Development of the Caterpillar Tractor Company as it is known today will be in the October issue.
