

The Line Shaft

The Official Newsletter of the

NORTH JERSEY ANTIQUE ENGINE & MACHINE CLUB INC.

April 2022

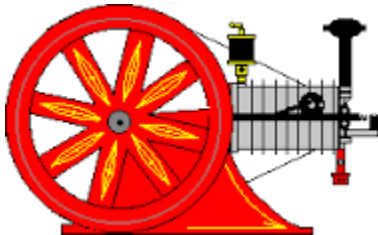


President: Albert (Chuck) Klim
973/903-3583

Vice Pres: Brian Kardos
973/756-7772

Treasurer: Linda Klim
973/948-0693

Sec/acting: Sandra Betts
973/600-3425



Founded on October 15th, 1979 by: Arthur Goble, Fred W. Westbrook, John Snook, Roy Bischoff & Lewis Quince

The March 8th meeting was held at the Administration Building!

President, Chuck Klim, called the meeting to order, followed by the flag salute.

There were no minutes to be read from the previous meeting...as there was no previous meetings.

Treasurer, Linda Klim, reported the general account and raffle account balances. Bills to be paid were then reviewed for payment. Two expenses submitted by Bob Triebel, were approved for payment and...the Quilt "donated" by Barbara Thompson last year will cost us \$200 this year; plus additional Christmas expenses to Blace Flatt and a voice recorder that was purchased to aid in club meetings, were also approved for payment.

Linda talked about the toy tractor, American doll and the quilt to be raffled at the State Fair...including costs and shipping. Also, Linda informed us that we now have a NJ State License and can sell tickets "off premise" until August 13th (last day of the FAIR). She suggests we could also bundle-sell tickets and increase the quantity of tickets printed and sold!

We had a discussion on the possibility of purchasing peanuts and metal cans for storage to get a jump start on purchasing and to allow us to sell them at earlier events...Blace and Chuck offered to pick them up. Brooms and clothing were also discussed, as was the fact "Inc." should be included on all paperwork, whenever the club name is used.

Chuck mentioned a meeting with the architect about the possibility of constructing a 40' shed on the front of our building and that perhaps the Fair would subsidize the use of the addition. Chuck also talked to Mike Richards about taking down the tree. He agreed but needs approval. It was also noted there is a drainage pipe in the front of the building and water lines under it.

Linda brought up insurance. There had been a discussion with the Jacktown folks as to how they handled theirs. The premiums are too costly for us to insure the SHED display items as it would require appraisals of anything over \$100. It was voted to pay our liability insurance due in April.

Mention was made that outside events are starting and we should begin thinking what to participate in. Sterling Hill Mines is having a "Big Dig" believed to be in April and we may want to display some engines. Foster Fields was also mentioned and they would like our help as to what needs to be done. The possibility of a Plow Day is coming soon and we need to contact our local farmer members and see if any want their fields plowed.

Chuck announced Mary Hendershot was stepping down as acting Secretary and...her many years of service to the club is greatly appreciated in a job well done. Chuck appointed Sandy Betts as Acting Secretary, until our next election.

All future meetings will be held on TUESDAY at 7 p.m.

Motion was made by Blace Flatt to adjourn the meeting and 2nd by Andy Mackey.

Our next meeting will be on TUESDAY April 12th at the Shed!

Our Web Address: njaemc.org

67 Branchville Lawson Rd., Newton NJ 07860

The Lindeman-John Deere BO Crawler

This tractor was built by Jesse G. Lindeman, a self-taught, agricultural-equipment "practical" engineer who was noted for designing dependable crawler tractors and other agricultural implements. Born in Iowa in 1899, he attended school thru the 8th grade. The Lindeman brothers, Jesse, Harry and later Ross and Joe, established the *Lindeman Power Equipment Company* in the early 1920's, with an original investment of \$300.00. It was a retail farm implement business, based in the Yakima, Washington area, with a small machine shop and forge and included the Holt Crawler Tractor franchise. In the 1925 Holt-Best merger (Caterpillar) they were canceled. They immediately



signed with Cletrac, also a crawler manufacturer, and by the late 20's they were a Cletrac Top 10 dealer. In the early 30's they signed on with John Deere, whose wheeled tractors complemented the Cletrac crawler line. They also "hand-built" orchard trailers, land rollers, brush rakes, planters, transplanters and sprayers...all sold under their name. And...they build over 8,000 single bottom rolover plows for Harry Ferguson (February's newsletter).

Soon Jesse realized that western agriculture, particularly the fruit-growing and logging industries, needed "crawler tractors" more than their wheeled counterparts and the Deere line could be converted to a very "cost-effective" crawler. In the mid-1930's he installed a highly home-made will-fit undercarriage on a Deere Model D and he was on his way to becoming a crawler manufacturer. They built several dozen conversions for both the Deere D and GPO series tractors. At about this time Deere and Company and their Oregon & Washington dealer network, became very interested in what the Lindeman's were doing. Unfortunately, so did Cletrac and canceled them. Now they "had to" make the most of the Deere franchise they still had.



Since they were already selling and orchard operators were already using the new John Deere Model "BO" tractors (the rubber tired orchard version of the Model "B" tractor), Jesse engineered a track design to fit this tractor. As he exclaimed: "It just looked as though Deere had deliberately built a chassis to take crawler tracks!" He designed the "total system, including: track frame, final drives, steering clutches, tracks and rollers. He then cast the needed parts in his small foundry and along with his brothers, machined all the parts in their own shop. The first tractor was manufactured in 1939. After several design changes and ironing out the bugs, they were in the crawler manufacturing business.

The basic John Deere Model "BO" was shipped "new" from the John Deere factory as a power unit and transmission assembly only. The Yakima built Lindeman crawler components were then installed on it. The steering clutches and final drives were mounted to the side of the transmission case and driven off the drives of the John Deere transmission case. The final unit weighted in at 4,420 lbs. with 16.44 drawbar horsepower. The BO-Lindeman tractor was such a success that the small factory could barely keep up with orders. Not only did the crawler become a hit in the mountainous orchards of the northwest but also in the logging industry...nationally!



Jesse also developed the BO-Lindeman with an eye toward the US Navy, and in particular with the intent to bid on several major government contracts, but failed to get an order...it going to Clark (CA-1) and now archival Cletrac (M-1). However, the Navy and the War Production Board continued to express interest in his crawler innovations, allowing production of the small crawlers to continue throughout the war, and authorizing both Deere and Lindeman to act as sub-contractors and produce transmissions and final drives respectively for the Cletrac M-1 towing tractor project. Jesse got a piece of the contract he had so badly wanted.

The BO-Lindeman was built from 1939 to 1947. Between these years, the small Lindeman company produced 1,675 machines, mostly BO tractors, selling for slightly over \$1,300.00 each. Since the main structure of the tractor was the John Deere power unit and bore the John Deere name on the hood and radiator, it was generally known as the BO-Lindeman or BO-crawler, however its real name was the Linderman-John Deere BO Crawler. It generally (but not always) had the Lindeman name cast into the side of each track frame. Also, a will-fit kit was developed and sold for conversion of rubber tired BO tractors by the end-user. No record was kept of the kits sold, but they may have higher than the complete unit sales.

In 1947 Deere stopped production on the BO and introduced the Model M and on January 1st 1947 "bought" the Lindeman Company. Deere paid \$1,250,000.00 (approximately \$15,760,000.00 in 2022 \$) and, as part of the purchase, Jesse went along with the deal. He was hired to help with the development of the MC...the M Crawler. Originally transferred to Moline Illinois, Jesse hated the mid-west and returned to Yakima and continued to run Deere's crawler engineer department until the plant closed in 1954. He left Deere and returned to the farm implement side of the business...building new and better rotary tillers, special equipment for fruit handling, orchard disc harrows, land slopers, two-way plows, hydraulic hitches and tool carriers.

Jesse Lindeman, his brothers and the Lindeman-John Deere BO Crawler became the "foundation" of the *John Deere Construction Equipment Division*. Jesse Lindeman, a pioneer of early crawler equipment, passed away in 1992...one month before his 92nd birthday.

Most people do not realize that steel & rubber crawler equipment, with better traction and lower ground pressure, were (and still are in some locations) a major player in the farming industry...it should also be noted that the *Lindeman Power Equipment Company* was only one of several independent manufacturers of crawler undercarriage and crawler track "conversions" for wheeled equipment in the 1920s thru the 1940s.

***Bates Manufacturing* produced both 1/2 track & full track conversions for McCormick-Deering tractors, *Hadfield/Penfield* and *Roadless* produced 1/2 track & full track conversions for Fordson tractors, *WARCO (W.A. Riddell)* produced 1/2 track & full track conversions for "all-brands" of tractors, *Bell City Manufacturing & Electric Wheel Co.* produced full track conversions for Fordson tractors, *Mandt-Friel* produced full track conversions for McCormick-Deering tractors and *Trackson* produced full track conversions for both International Harvester and Allis-Chalmers wheeled tractors.**



The difference between the above manufacturers and Lindeman is the close, near partnership relationship between the *Deere* and *Lindeman* companies. Their product, the *Lindeman-John Deere BO Crawler* was a first market (Original Equipment Manufacturer-New) purpose built machine. The other independent manufactures sold aftermarket conversions direct to dealers and end-users for "field installation" on mostly used tractors.

The picture just above and to the right is of a WARCO undercarriage installed on a 1929 McCormick-Deering 15-30 tractor.

The above article has been slightly modified, but was developed by the late Bob Eckes & Bob Triebel for the August 2013 newsletter!

NOTE: when this article was originally written in 2013, we had (3) crawlers in the club: a CLETRAC E65 and an ALLIS CHALMERS M owned by club-member Jeff Brooks...and a LINDEMAN BO owned by former-member Bruce Gordon.

These units were regularly displayed in the SHED and attended most plow-day events...we now have NO crawlers!

See page 4 for a picture of Bruce and his Lindeman BO!

NJAE&MC—Upcoming Events

Next meeting:

April 12th at the Shed!

This is a TUESDAY and will start at 7PM

Future Events:

Memorial Day Parade

Monday May 30th at 10AM....see below!

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2011

**Bruce Gordon with his
Lindeman BO Crawler**

Memorial Day Parade

Monday May 30th

American Legion Branchville Post 157

We need to line-up at 9:30 AM at the Frankford Twp. School

Event coordinator Chuck Klim!

973/903-3583

*Dues are over-due
for 2022!*

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