

Barn Find

ENEM Master Clock

“Eerste (First) Nederlandsche (Dutch) Electro-Magnetische (electromagnetic) Uurwerkfabriek (clock factory)

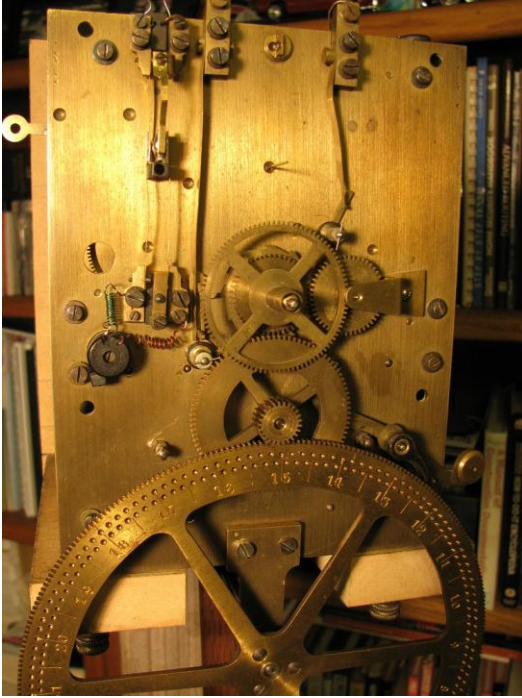
By Ernie Jenson



Usually the subject of a “Barn Find” is an old car. But in this case it is an old rare Dutch Master Clock found in a barn in Iowa. The clock was made in 1915 in Utrecht, Holland. About twenty years ago Neil Kuns acquired this clock while visiting relatives on a trip to Iowa. The condition of the clock indicates that it had been stored in the barn many years earlier after the owner tried to repair the clock with available farm tools and parts. The suspension spring was made from steel strapping. When the pivot had been broken off the rural mechanic had sharpened the remaining shaft on a grindstone, awled a hole into a piece of leather and affixed it to the inside of the plate. Needless to say, the clock was not working.

This is an electric winding master clock which runs on 24vdc. This clock had two trains. The time train drives a one second pendulum and trips

the second train each minute. It also rotates a program wheel to ring bells. Pins can be set into the program wheel for bell ringing. The program wheel



is divided into twenty-four hours and there are enough spaces to ring a bell during any five minute period. The second train delivers a \pm pulse to the slave clock. This \pm pulse is also sent to the two magnetic coils for the two armatures that wind the spring in both trains to keep the master clock running.

The two trains are kept running by a rather ingenious winding mechanism which is the subject of the Dutch Patent No. 4604. The armature as shown in the picture rocks back and forth, similar

to a permanent magnet electric motor. The armature moves one direction when given a plus dc current and move in the opposite direction when given a negative dc current. The ingenious pawl mechanism winds the spring, that provides the motive force to maintain the time train and the \pm -train, when moving in either direction. A clever lot, those Dutch!

Our thanks go to a number of people in the Netherlands who are helping us research the history of the ENEM Company. In short, they started the business in 1914 and went bankrupt by 1926. During the years of their success, they provided the clocks for the Utrecht rail system. They built a beautiful master clock but, no doubt they incurred bad times because of being right in the cross roads of all the participants of World War I, which ran from 1914 to 1919.

