

EA When Doodlebugs Ruled the Earth: Pseudo-Geophysical Devices in Oil Exploration*

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Abstract

Since the early 20th century, “doodlebug” has been American oil-industry slang for a pseudogeophysical device used in oil and gas exploration. For decades before it was adopted by the oil industry, doodlebug referred to certain insect larvae, foolish things, and small locomotives. It was no doubt an extension of the centuries-old English term “doodle,” meaning a foolish person. “Yankee doodle” was not a compliment (Simpson and Weiner, 1989).

Introduction

The earliest known reference to doodlebug as an oil-finding device is the Wichita, Kansas Beacon of July 13, 1914, where it is applied to the invention of Wilbur McCleary, an undertaker from Altus, Oklahoma. This was when doodlebugs were becoming common, and when a thing becomes common, it demands a name. The word quickly caught on ([Figure 1](#)). Although the term was coined to describe a pseudo-geophysical instrument, it soon spread to dowsing devices. And when genuine effective geophysical methods arrived in the early 1920s, they were called doodlebugs as well, a habit that persists in informal usage. But this paper uses doodlebug in its original and restricted sense of a pseudo-geophysical instrument (Wichita Beacon, 1914).

Nature of Doodlebugs

Doodlebugs generally operate on one of three principles:

- 1) Conscious manipulation. These are frauds by the operator.
- 2) Ideomotor effect. The operator unconsciously manipulates the device. The same principle controls reactions of dowsing devices.
- 3) Random indication. The device responds either randomly, or in response to a signal that is unrelated to the presence of hydrocarbons.

What the doodlebugs were and how they worked is usually lost to history (Figure 2). The doodlebug operators, who were often also the inventors, guarded the devices from prying eyes. Descriptions in journals and newspapers are usually brief. Some would not even use their doodlebug unless they were alone. Few doodlebugs have been preserved; most seem to have been thrown out with the trash. Many doodlebugs appear to have been adapted from dowsing devices: rods or pendulums. Wilbur McCleary's original doodlebug was a V-shaped rod, with each end of the V connected to an electric battery, and a sample of crude oil at the apex of the V (Wichita Daily Eagle, 1914).

Another class of doodlebugs were radionic devices. These are based on the quack medical devices built circa 1920 by San Francisco physician Albert Abrams, who claimed that his machines could both diagnose and cure disease by radio waves. Radionic devices are still being made, and are widely available through the internet (Lescarbourea, 1921). Some simple magnetotelluric detectors were manufactured and sold as water and oil finders. The most widely advertised of these was the Mansfield Patented Automatic Water and Oil Finder (Figure 3). It was based on an earlier version by Swiss inventor Adolf Schmid. Prominent French dowser Henri Mager also created one which he used to search for oil. They all had in common hundreds of wire coils and a sensitive compass needle (Figure 4). They operated on the assumption that magnetotelluric currents were strongest over water or oil (Ellis, 1938).

Prevalence

Assuming that mentions in journals and newspapers are representative, the number of doodlebugs increased greatly in the early part of the 20th century. The wave of doodlebugs peaked in the 1920s. A literature search identified 155 doodlebugs in the US, introduced from 1863 to 2003. Based on contemporary reports, this appears to be only a fraction of the actual total. Of the 155, 53 were introduced in the 1920s. In the 1920s, doodlebugs ruled the earth. Doodlebugs also came to prominence in the 1920s in Canada, France, and Germany. Canada and the US had similar patterns in doodlebug use. But unlike the US, and Canada, French and German oil booms of the 1920s seem to have had far fewer doodlebugs than there were traditional oil-dowsers. In addition, European doodlebug inventors were almost all from the educated class, whereas in the US and Canada, doodlebug inventors were widely spread across occupations and education levels.

Twilight of the Doodlebugs

The number of active doodlebuggers rose rapidly 1900-1920, peaked in the 1920s, then declined slowly over the next 40 years. The decline seems to have been caused by the introduction of real geophysical methods in the 1920s, and by the increasing influence of professional geophysicists within oil companies, making the companies more sophisticated judges of questionable geophysics. Most modern doodlebugs have adopted the protective coloration and jargon of genuine geophysicists. Yet some unsophisticated doodlebug swindles in the mid and late 20th century were surprisingly successful (Figure 5). A Denver oil promoter made minor modifications to a \$3 army-surplus radio tuner and claimed that it contained an oil-detector salvaged from a crashed flying saucer from Venus (Cahn, 1956). An eccentric Belgian count and an Italian TV repairman took huge sums from the French company Elf for two amazing geophysical instruments that turned out to be essentially disguised photocopiers (Pean, 1984). Do not mourn the extinction of the doodlebugs. They are still with us.

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Wichita (Kansas) Daily Eagle, 1914, "Switches point to oil pool": July 31, 1914, p.5 c.2.

The number of new doodlebugs introduced in the US in each decade, out of a total of 155 identified in a literature search. Note that some fall outside the range of the graph.

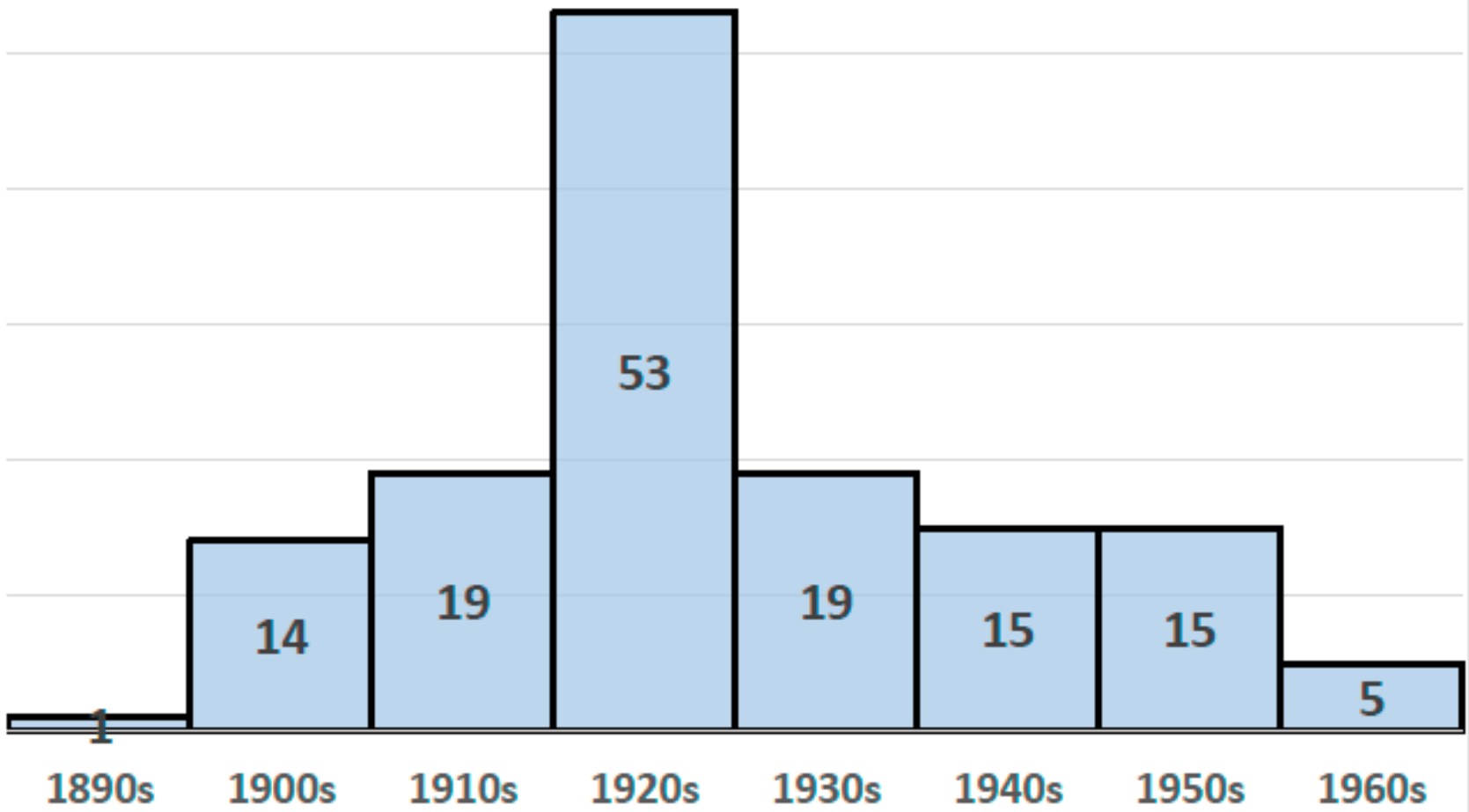


Figure 1. The number of new doodlebugs introduced in the US in each decade.



Figure 2. This sketch is satirical, but it may have been inspired by the doodlebug of Houston oil pioneer Peyton Standifer Griffith (“Consider the doodlebug,” *Natural Gas*, Sept. 1922, v.3 n.9 p.18.).

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Figure 3. The Mansfield Automatic Water and Oil Finder was patented as a water finder in 1908, but by 1912 was advertised as also being an oil finder. It was still being manufactured in 1933. It was a simple detector of magnetotelluric currents, which the makers asserted were strongest over oil deposits. (Chamber's Journal, Dec. 1919, advertising sheet).

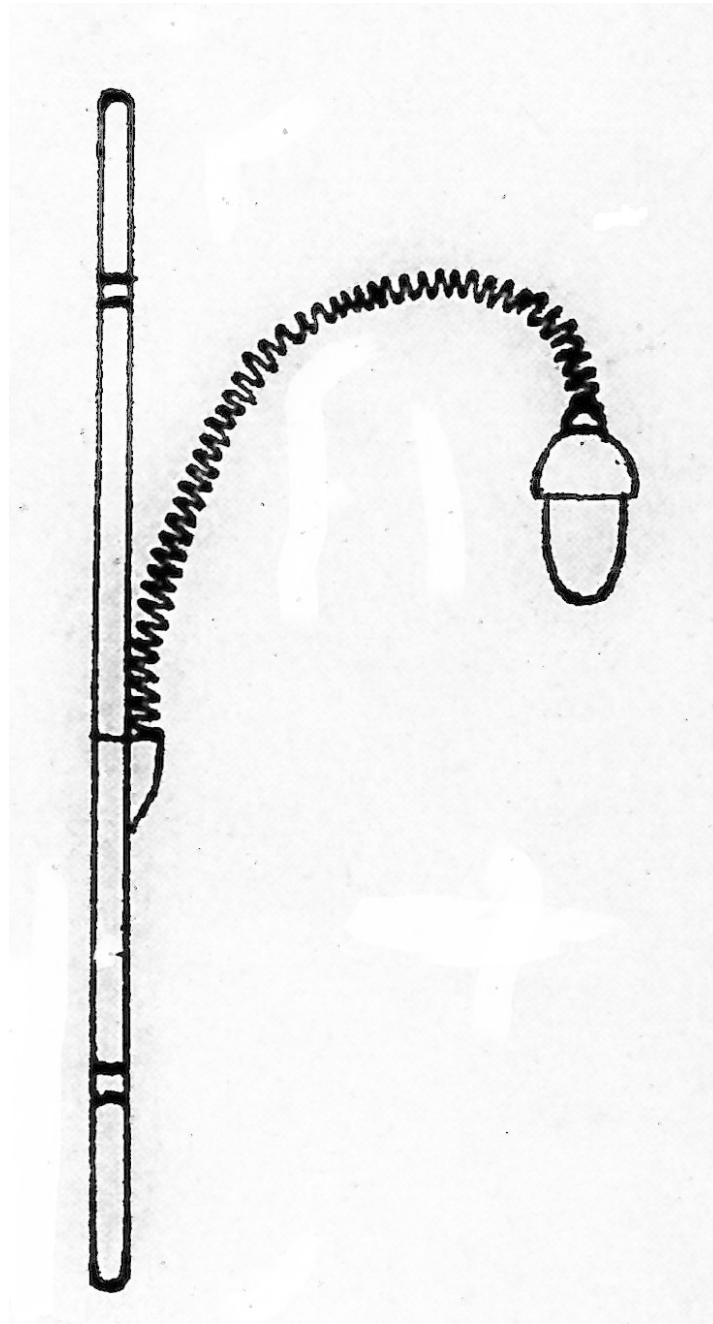


Figure 4. An early version of the Schermuly Polarizer, a highly popular doodlebug of the 1920s (K. Becker, "Vorführungen der Wünschelrute und des Polarisators," Metall und Erz, Mar. 22, 1923, v.20 n.6 p.103).



Figure 5. The classical “black box” doodlebug, from the collection of long-time Calgary landman Ned Gilbert. This radionics-type instrument was used to search for oil in Alberta in the 1950s. The box is filled with neatly wired electrical components of that era but has no way to connect to an electrical power source (Photo by the author).