

A Look at Mechanical Principles

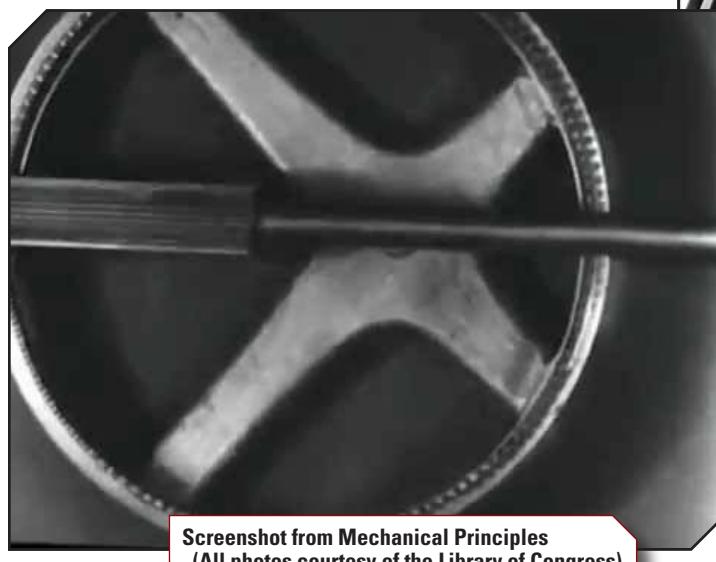
Photographer/filmmaker Ralph Steiner made poetry out of a simple short film on machine components in the 1930s

Matthew Jaster, Senior Editor

Ralph Steiner (1899–1986) had a vision. It was unlike other photographers and filmmakers of his time. Browsing through some of his work, it's easy to see that the man had an eye for patterns, abstract compositions, odd shapes and the engineering behind ordinary household items.

A documentary filmmaker, photographer and pioneer of the avant-garde film movement in the 1930s, Steiner originally studied chemistry at Dartmouth, but changed his career path by entering the Clarence H. White School of Modern Photography in 1921. He first worked as a freelance photographer in advertising and for publications like the *Ladies Home Journal*.

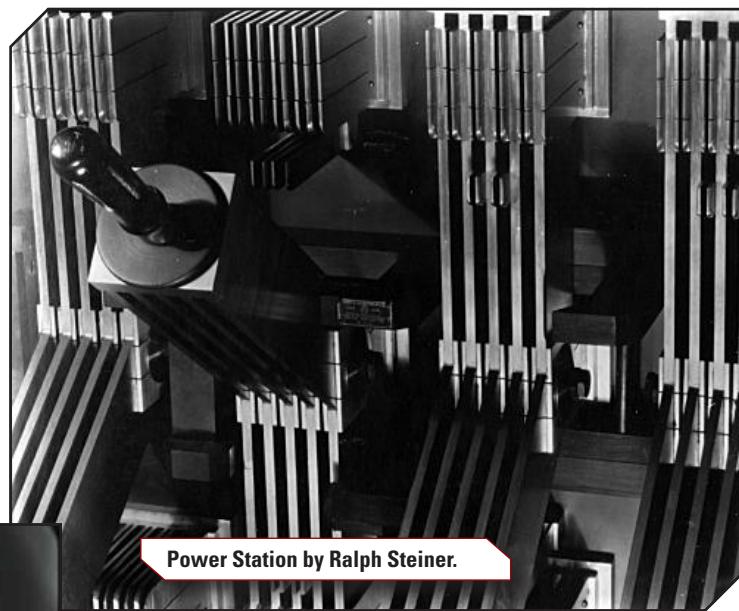
In 1929, Steiner made the documentary film *H2O*, a silent film showing water in many different forms—from flowing naturally down a river to zipping through a pipe in the city. Steiner went on to create the famous documentary film *The City* with Willard Van Dyke for the New York World's Fair of 1939. The film examined the problems of the contemporary urban environment due to industrialization, pollution and overcrowding. Later in life, Steiner would produce and direct experimental films like the *Joy of Seeing* which focused on an incredibly diverse range of themes focusing on everything from seaweed to laundry.



**Screenshot from Mechanical Principles
(All photos courtesy of the Library of Congress)**

Gear Tech readers will be interested to learn that he created a short abstract film in 1930 called *Mechanical Principles*, a documentary based entirely on the movement of mechanical elements. An excerpt on the film from www.faena.com described it like this:

"Cogs and pistons move with graceful fluidity, making their geometric forms become living and functioning organs. The hypnotic dance of the gears is masterfully captured by Steiner and effectively underscored by the music of Eric Beheim. Before our eyes, the camera performs the conjuring act of giving real life to artificially created movement. As if cinema itself saw itself in a mirror for self-validation."



Power Station by Ralph Steiner.

Yes, it's artsy. It's avant-garde. But you can't argue that there's not something hypnotic about the way mechanical machines move. Several filmmakers/engineers/designers have posted excerpts from the film online accompanied by everything from classical to electronic and industrial music. Some prefer watching the gears move to the music of Claude Debussy, others to Duke Ellington or David Bowie.

One example can be found here: www.youtube.com/watch?v=mkQ2pXkYjRM.

Whether shooting images of old Camel cigarette billboards or a black and white maze of ham and eggs, Steiner certainly had his own point of view and transformed rudimentary objects like typewriter keys, clotheslines, rocking chairs and fire escapes into compelling, historic slices of urban and rural Americana. *Mechanical Principles* was his vision of the future, a vision of motion, machines, movement and uncertainty—as relevant in 2019 as it was back in 1930.

Steiner's work has appeared in the J. Paul Getty Museum in Los Angeles, the Museum of Modern Art in New York and most recently at a photography exhibition at the Haggerty Museum of Art in Milwaukee. (April 2019). 