

COSMOPOLITAN CHRONICLE

True tales from the annals of history, archaeology, construction, and restoration of the Casa de Bandini and Cosmopolitan Hotel.
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Electricity, Part 3

William F. Mennell

**San Diego Coast District
Services Manager**

Electrical wiring today is far more complicated than in either 1910, or 1930. There are far more things needing electricity that were simply not available at the time. No one checking into the hotel in the 1930s would have been using a hand held hair dryer for example, because it wasn't readily available until 1951. There was no room air conditioner - 1947, no television - 1939 at the earliest, no microwave - 1967, and drip coffee maker - 1972. Many of the things we now take for granted in a stay at a hotel. The National Electric Code has changed and improved several times in response to the increase, complexity, and safety considerations.

The National Electric Code changed in two main ways to accommodate the ever increasing need for available electricity. One, more outlets--in 1935, residential wiring required only one outlet per room. Today, there has to be one every 6 feet, to prevent

the use of extension cords as permanent wiring. Two, more circuits required, those using better protection against shorts, and overloading.

The entire electrical system in the earliest days was protected from over-current, or short circuits using screw-in fuses. The entire system for a house could have been a single circuit. The fuses in the 1930 wiring would have had a new window, which was first developed by Bussman in 1921. Before that the fuse was completely closed, and had a replaceable part. One of the major drawbacks of this fuse type, with the window or before, was that a penny could be inserted to replace a fuse --a very dangerous practice as it would not protect from overload or short circuit. This type of fusing was replaced in 1941 when new codes were in place, and pennies would no longer fit.

Today code requires the use of circuit breakers, first developed by Westinghouse in the 1930s as the "No-Fuse Load Center." It wasn't until the post WWII housing boom that the

circuit breakers were put into common use, but by the 1960s they were in almost universal use in new construction.

Several other improvements have also been made: insulating materials, better grounding, dedicated circuits, GFCIs, conduit in commercial buildings, even color coding the wires. Wire connection now must all be in an enclosed box, unlike the knob and tube system. The connections no longer are soldered and taped, they are attached with "spinlocks" or "wire nuts®".

In addition to the standard electrical wiring, today other systems are also installed to accommodate computers, telephones, cable, electronic locks, music systems, security and smoke alarms, and exit signs.



Cosmopolitan Wiring 2009.

