

# Deck the Halls With Vows of Safety

AVOIDING COMMON PROPERTY RISKS  
THAT COULD RUIN THE HOLIDAYS

BY TIMOTHY N. TRESIERRAS

For many, the holiday season is the greatest time of the year. But it can quickly become the worst time if policyholders aren't conscious of the potential dangers that may be lurking in some of their holiday gifts and traditions.

The Consumer Product Safety Commission (CPSC) has documented a category of injuries related just to holiday decorations and lights during November and December. Reports estimate as many as 15,000 injuries are treated in hospital emergency rooms nationwide, with averages ranging from 200 to 250 injuries per day during the holiday season. The most common injuries are falls, lacerations, and back strains. And this example of CPSC-tracked injuries is only a fraction of the total injuries and damages that can occur.



Let's take a look at some classic and modern hazards related to seasonal decorating and gift giving, with an emphasis on how consumers can keep their families and homes safe and free from claims.

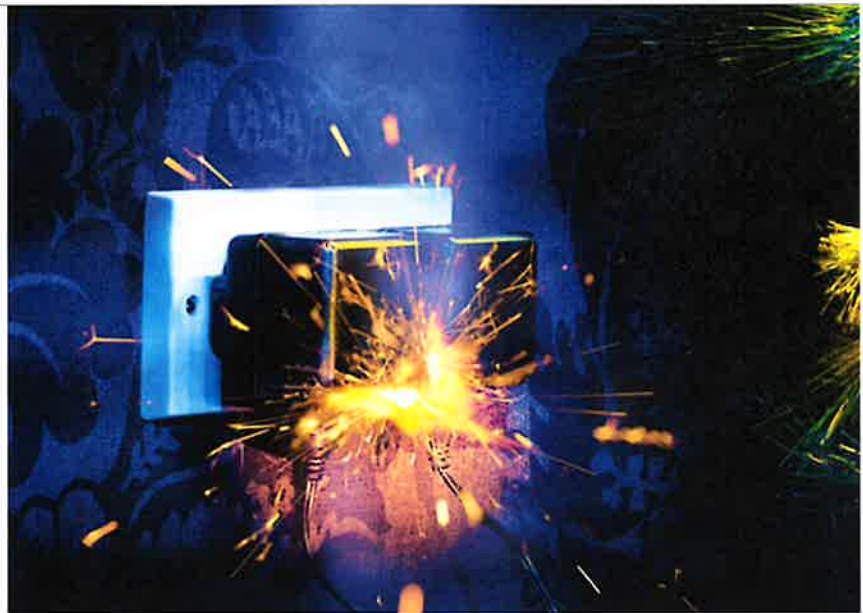
### **GFCI PROTECTION IS NOT A FUSE**

The holiday season generally means that electrical devices—ranging from decorative lights to newly gifted appliances and devices—are going to get plugged in, so it's important to understand the basic electrical safety features of circuit breaker/fuses and ground fault circuit interrupter (GFCI) protection within a home. GFCI electrical outlets are typically seen in bathroom outlets and have "test" and "reset" buttons. Many people (and even some experts) treat GFCI protection like a fuse and, thus, truly misinterpret its safety function. This misinterpretation itself can be a hazard.

What is the difference between the standard circuit breaker/fuse and GFCI protection? A circuit breaker/fuse limits the amount of electrical current flow. It's like the current flow of a river. If the river flows too fast, a dam wall slams down to stop it. Limiting the level of electrical current is an important safety feature that ensures the wiring within a home does not overheat and become a potential fire hazard.

GFCI protection, however, does not limit current flow, and it can be triggered under low-current flow conditions. To understand what is going on, again imagine electrical current flowing like a river. A river can be routed into a woodmill to turn a water wheel, and then the river water flows back out of the woodmill into the river. The amount of water coming in should equal the amount of water coming out. If it is not equal, then there must be a leak or path within the mill that is allowing water to flow somewhere other than back into the river.

The same type of flow pattern is true for electrical current. The amount of electricity flowing out of the wall into your electrical device should equal the amount of electricity flowing from your electrical device back into the wall. If it is not equal, then there



## **IF A GFCI OUTLET IS TRIGGERED AND THE OUTLET IS SHUT DOWN WHEN DEVICES LIKE HOLIDAY LIGHTS ARE PLUGGED IN, THE DEVICES SHOULD BE IMMEDIATELY UNPLUGGED AND CONSIDERED AN ELECTRO-SHOCK HAZARD.**

is an electrical leak, which creates the potential for an electro-shock. The classic example of this would be a hair dryer dropped into a bathtub of water. Some of the electricity may flow back into the wall, while another path may flow through the water—possibly through a person—and into the electrical ground of the tub drain. A GFCI simply monitors whether the current out of the wall outlet equals the electricity flowing back. If it is not equal, then the outlet is shut down.

The GFCI function should not be misinterpreted as protection from all modes of electro-shock. If one were to hold two exposed wires and stick them into a GFCI outlet, the electricity flowing into your body would equal the electricity flowing out of your body and the GFCI would not trigger. The circuit breaker/fuse may trip, but not until after potentially lethal consequences.

The holiday safety tip here comes down to this warning: If a GFCI outlet is triggered and the outlet is shut down when devices like holiday lights are plugged in, the devices should be

immediately unplugged and considered an electro-shock hazard.

### **WIRELESS CHARGERS**

One of the most in-demand gift trends these days are wireless chargers for phones and tablets. Unfortunately, the demand brings about the rise of cheap knock-offs and poor design. Although chargers may look benign, consumers must remember that inherent in all products that transfer electrical power is the potential to do harm. Chargers made of cheap material and poor circuit design can cause injury, electric shocks, and fires.

Induction charging technology is a close cousin to an induction stove or oven. While not intended by design, the same heating phenomenon for an induction stove can also occur in wireless charging. Some consumers have thin steel plates on the backs of their smartphones to attach the phone to a magnetic vehicle phone holder. When this metal plate is between the phone and the charging pad, an electric current will be induced in the metal plate, causing it to heat up quickly. This has led to burns, fires, and

even exploding phones. In one lab test, a wireless charger raised the phone/charger interface to over 200 degrees Fahrenheit in less than a minute.

There are safety standards, such as the Qi standard for wireless charging, which mandate the implementation of safety features. These features prevent hazards by detecting foreign objects, such as the aforementioned metal plate between the phone and charger; precluding a device from overheating the charger or device, which, at minimum, can degrade battery life; and detecting uncertified or incompatible devices, such as a cheap phone.

While certified products carry the Qi logo, you must also be aware of counterfeit Qi markings. Most Qi-certified products come with a scannable URL code that verifies the product via a web link. There is also an online database of Qi-certified products.

#### VIDEO DOORBELLS

Video doorbells are becoming a huge trend and are a popular gift item at holiday time. But they come with a lot of online support forums for do-it-yourself (DIY) installations. While doorbells are safe under nominal conditions, an installer must always treat the components as a live electrical system with the potential for electro-shock or death.

In general, doorbells operate on very low voltage, thus being a relatively safe system to work on under nominal conditions. Older models typically require just 8-20 volts of electricity, while 16-24 volts are often required for newer models. Higher voltage output is required to accommodate longer runs of wire in large homes. The essential powered component of any doorbell consists of a transformer that converts voltages.

Household current is typically 120 volts. A few circuits, such as those for large appliances, require 240 volts. Since doorbells have a low-voltage requirement, they need a step-down transformer to convert 120 volts down to the 16-24 volts necessary to operate the doorbell. However, a failed transformer does not

step down voltage, so the output could be the same 120 volts that enters the transformer, posing the potential hazard of electro-shock or death. If policyholders decide to do the installation themselves, they should always check the old device with a volt meter before proceeding.

#### BUILT-IN APPLIANCES

In many households, holiday gifts might include a major household appliance, such as a new refrigerator or washer/dryer. But there is a particular subset of major household appliances that carries an extra precaution often lost on policyholders. These are the appliances that do not have full housing enclosures, some of which might include ovens, dishwashers, and microwave ovens. They lack full enclosures because they are known as “built-in” appliances, in which home cabinetry, counters or walls act as the stand-in enclosure.

While manufacturers try to mitigate open exposure to sharp edges, pinch hazards, and electrical components, it is often the case that these unenclosed sections are necessary for proper installation. Manufacturers lay out strict warnings that typically call for installation by a qualified technician

and the use of specialty tools and safety wear. In fact, in some locations, local codes mandate that certain appliances must be installed or uninstalled by qualified professionals.

Too often, policyholders view these installations as an easy DIY, forgo the warnings, and ignore the barest minimum of safety precautions, such as wearing protective gloves. As an example, the framework for larger appliances utilizes sheet metal, which has very sharp edges when it is first cut. A manufacturer will often employ a smoothing operation to dull the edges, but since the frame is not intended to be exposed to the consumer after proper installation, those metal edges may still retain the cutting quality of a butter knife—safe enough to handle with proper safety wear, but still able to cause lacerations if one is not properly protected.

The holidays are meant to be spent with family at home—not in the emergency room. If you plan to hang some lights, charge up some new devices, or install a new appliance, you may want to think twice before jumping in. ■

Dr. Timothy N. Tresieras, P.E., CXLT, is a senior engineer with ARCCA. [ttresieras@arcca.com](mailto:ttresieras@arcca.com)

We defend trucking. **PERIOD.**

Perkins  
&  
Associates  
ATTORNEYS AT LAW  
NORTH LOUISIANA EAST TEXAS  
WWW.PERKINSFIRM.COM

401 MARKET STREET, SUITE 900 | SHREVEPORT, LOUISIANA 71101 | TEL 318.222.2426