

# Keeping the Chimney Cap's Screen Clean

By Jim Gillam  
Illustrations by Laura Zerzan

Chimney caps are desirable for nearly all metal chimneys and most masonry chimneys for the purpose of keeping precipitation out of the chimney.

Many chimney caps come equipped with a wire mesh screen around the outside. The mesh screen serves two functions. First, it keeps leaves, birds, squirrels and raccoons from entering the chimney while still allowing the chimney to exhaust properly. Secondly, it serves as a spark arrestor, blocking sparks and embers above a minimum size from escaping the chimney onto the roof or into the environment where they could potentially cause a fire.

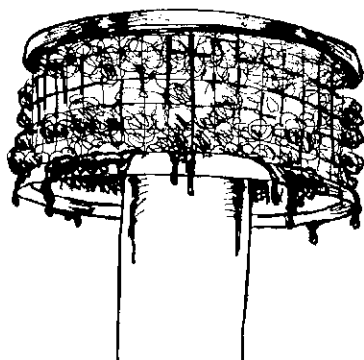
If the screen becomes clogged with soot or creosote, your combustion appliance venting into that chimney flue – whether it is a fireplace, woodstove, furnace, boiler or water heater – will not perform well. It may become more difficult to ignite a fire and when you do get it going it may burn sluggishly and not throw off as much heat. Carbon monoxide fumes and/or smoke may spill into your living area.

## SIZES of SCREEN

Chimney caps are sold with a wide variety of mesh types and sizes. It is important to choose a mesh type and size that will perform the desired functions of keeping leaves, birds and animals out of the flue and functioning as a spark arrestor – while at the same time allowing the free passage of smoke.

If a mesh is too small it will be prone to clogging, particularly in very cold weather or under sluggish burning conditions. If the mesh is too large, birds or other animals may be able to find their way in.

Commercially manufactured chimney caps usually have mesh with openings from 1/2 to one inch across. Mesh larger than one-inch square may not keep critters out. As a rule of thumb, if you are having clogging problems with a 1" square mesh screen, there is likely to be some other problem causing the deposit of excess creosote. Mesh smaller than 1/2 inch across, window screen for example, is prone to clogging under the best of circumstances.



Mesh attributes are typically spelled out in building codes or local ordinances.

## BURNING TECHNIQUES

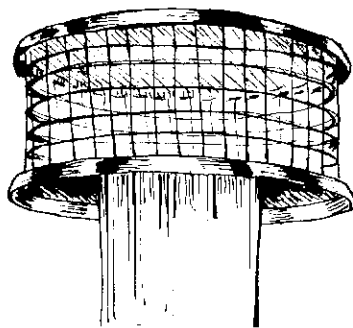
Burning wood creates heat. The portion of the wood that does not turn into heat energy is transformed into ash and mostly smoke, which includes hydrocarbon particles and gases such as carbon monoxide. When hydrocarbon particles from smoke condense in the chimney system, they are known as creosote.

Factors that result in less complete combustion lead to more smoke and more creosote in your chimney and on your chimney cap. These include air-starved fires and burning wood with high moisture content.

Burning a lot of paper generates fly ash that may stick to the cap screen.

## HOW TO TELL IF THE CAP IS CLOGGED

Step outside during the daylight hours and take a look at the top of your chimney. If you can see your chimney cap from the



ground and can see daylight through the screen, then air flow through the cap may not be too restricted.

However, if you look up at top of the chimney and the cap appears opaque, it is likely that creosote has collected on the cap screen and the flow of smoke is restricted.

## IF YOUR CAP IS CLOGGED

If you can safely get to your cap, you may be able to brush off the screen with a wire brush. At the same time, it's a good idea to take a look at the conditions inside the flue. If there is a buildup of creosote, or if the walls of the chimney are coated with a shiny black substance (no matter how thick the buildup is), it is time to call a professional chimney sweep.

But if you do not have safe access to your chimney cap, call your local professional chimney sweep for service. A competent professional chimney sweep will have the equipment needed to get to the top of your chimney without unduly risking life and limb.

## FINDING A CAPABLE CHIMNEY PROFESSIONAL

Because proper chimney maintenance can help protect people from the dangers of house fires and carbon monoxide poisonings, it is important to choose your chimney professional wisely. Before you hire a chimney sweep, find out whether chimney sweeps are required to have a license in the community where you live. If they are, then your first step is to verify that any companies you're considering have valid licenses.

Ask around in your community for a chimney sweep with a good reputation. A well-earned good reputation is the public's "seal of approval."

Chimney professionals also demonstrate their competency through certification by the Chimney Safety Institute of America (CSIA), the Wood Energy Technology Transfer program in Canada, and some state chimney sweep organizations. A list of CSIA Certified Chimney Sweeps is available at [www.csia.org](http://www.csia.org).