

The Garbage Disposal: Environmental and Cultural Impacts

The [garbage disposal](#) is a relatively inconspicuous part of most kitchens. Installed below the sink and incorporated into the home's plumbing system, it gives us the freedom to quickly get the kitchen clean after a big meal without the unpleasant side effects of a trash can full of food scraps. It doesn't take much time traveling abroad, however, to realize that the garbage disposal is a primarily US feature. While most homeowners around the world make do without this modern convenience (in Canada, only about 3% of homes own one), about half of us in the United States rely on it every day and would find our household chores much more difficult without it.

In this white paper, we present the development of the garbage disposal, the way it has transformed the process of discarding organic waste in the US, and the surprisingly powerful environmental benefits that it provides for society. The next time you flip that switch and empty the kitchen sink, we hope you will view this special appliance with a renewed sense of appreciation.

Invention of the Garbage Disposal

As with many inventions that earn a central role in society at large, the credit for the first ever garbage disposal is hotly disputed. What is clear is that the idea was conceived and implemented successfully in the 1930s, with the first disposals making their way into American homes through the 1940s. The two companies that worked on separate disposal designs concurrently and introduced their products at nearly the same time in the mid-1930s continue to produce units today and have become synonymous with the garbage disposal itself: InSinkErator and GE's Disposall.

While these two companies may have to settle for shared recognition as developers of the garbage disposal, they can both take comfort in the revenue that their creations have generated over nearly a century, as the two most trusted manufacturers sell millions of new disposals every year. Other manufacturers have entered the market as well throughout the years, including popular kitchen brands such as KitchenAid and Moen.

Garbage Disposal Mechanism

The concept of the [kitchen sink garbage disposal](#) is simple, as with many of the best ideas. It was developed to solve a multifaceted set of problems, which begin in the kitchen and ultimately end up in the country's landfills. Any homeowner who has gone a week without a disposal due to a broken unit knows the unpleasant experience of having food scraps discarded in the trash can, where they rot and create foul odors within a matter of hours—not to mention attracting insects and arousing the curiosity of any pets living in the home! Keeping the kitchen sanitary without a functioning garbage disposal often necessitates sealing bags of trash or making frequent trips outdoors to dispose of food waste.

While many of us are accustomed to the idea of rinsing food scraps down the sink, this is impossible without the presence of a disposal between the drain and the home's plumbing system. Even relatively small pieces of organic waste, or significant quantities of hard materials like eggshells or uncooked grains, quickly clog pipes and stop water from flowing through. A garbage disposal uses a powerful motor and blades to break up organic waste into extremely small pieces that can be carried by flowing water through the residential plumbing system and into the local sanitary system's larger pipe network.

As powerful and effective as a garbage disposal is, it is still important to use it within its listed capabilities to avoid damage and extend its life of use. Running large amounts of debris at once through a disposal, particularly without water running at the same time, can still create a clog in the pipes on the other side or even jam the unit itself, risking damage to the motor. In addition, if non-organic items get stuck in the disposal, they can damage the blades and motor beyond repair.

Most common damage to garbage disposals:

- Animal bones
- Cutlery
- Seeds and pits
- Seafood shells
- Thick, fibrous vegetable matter (potato peels, corn husks, onion skins)
- Large quantities of oatmeal, pasta, and other foods that expand in water
- Paint (hardens on disposal blades and other parts)

Controversies

You may love your garbage disposal and the convenience it provides, but not everyone has felt the same way about this appliance. During its early development, public health officials and infrastructure engineers worried about the effects of millions of pounds of ground organic matter traveling through the plumbing systems and wastewater treatment facilities. New York City, for instance, banned disposals for decades. Finally, officials launched a study that took over a year and a half to analyze the benefits and risks of garbage disposal usage on a large scale before finally lifting the ban in 1997. Even as recently as 2008, officials in various municipalities have taken measures to ban the use of garbage disposals connected to the public water systems, although such efforts inevitably fail due to the great environmental benefits described a little later.

Environmental Benefits

Filling the plumbing systems with organic food waste, no matter how small the particles are ground, is an understandable cause for concern. Conventional wisdom would suggest that of all types of waste deposited in landfills, food waste should be the least troublesome, as it is quickly consumed by animals and insects, degrades into the ecosystem, and effectively disappears. However, the reality is that as organic matter biodegrades in a landfill, it releases large amounts of methane gas, one of the byproducts classified as greenhouse gases which pose the most concern to scientists studying the phenomenon of human-caused climate change.

Alternate methods of processing organic matter, most notably converting waste into fuel, have not yet achieved sustainable results, requiring the burning of more energy than current technologies can produce. Given these disposal challenges and the development of highly effective waste water treatment procedures, it turns out that the use of garbage disposals on a widespread scale is today's most environmentally beneficial option in which to deal with the massive amounts of food waste generated every day in the United States.

The waste water treatment plants that lie at the end of the public sewer route are structured to not only filter out large particles of organic waste materials from the water, but also to harness the carbon contained in the organic waste to help the natural process of breaking down the other contaminants in the waste water. This process in turn produces biogas, an environmentally friendly energy source that can be captured and used in place of less "green" fuel sources.

Back To the Kitchen

While the benefits to society and the environment at large are significant and not to be overlooked, most families are more focused on the immediate advantages that a garbage disposal provides for their own homes. As mentioned at the outset of this paper, the disposal is seldom fully appreciated until something happens to damage, block, or otherwise hinder it from functioning properly. While many homeowners assume that repairing a garbage disposal is an easy DIY project, the reality is that, as an electrical appliance linked to the plumbing of your home, a broken garbage disposal is most safely and effectively repaired by a professional. There are a number of negative outcomes possible with a repair attempt by someone without the requisite training and experience.

The least serious yet very common negative effect of a “do-it-yourself” garbage disposal repair is leaking at the connection points between the sink drain, the disposal unit, and the pipes leading out of the house. Since this leaking is below the sink, usually hidden by cabinet doors, it can go unnoticed until it has caused significant mold/mildew damage that is very costly to remediate.

Another obvious danger is injury during attempted repairs. A garbage disposal motor is strong enough to power sharp blades and grind up even small animal bones, and that means it is extremely hazardous for human fingers that come in contact with the mechanism.

Finally, attempting a repair to a garbage disposal unit without a thorough working knowledge of its construction and features comes with a high risk of damaging the unit permanently. A repair job that would take a professional plumber just a few minutes, if mishandled by a homeowner, could quickly cause irreparable damage and require the purchase and installation of a new unit.

Rooter-Man of SC: Garbage Disposal Repair and Installation

Professionals

At [Rooter-Man](#) of South Carolina, we specialize in repairs to garbage disposals, the installation of new disposals, and other [kitchen drain/plumbing services](#). Our technicians are fully insured, trained, and capable of servicing your disposal unit and giving you an honest, understandable assessment of what’s going wrong and how it can be fixed. In no time, our technicians will have your kitchen back to its original clean, smoothly functioning condition, and you can again enjoy the benefits of your

garbage disposal—one of the most important components of our organic food waste processing system.