

# Snowblower Lawn Sweep Picks Up Grass, Leaves

"It keeps my lawn looking nice and virtually eliminates the need to do any raking by hand," says Marvin Hechel, Neshkoro, Wis., who converted an old walk-behind snowblower into a pull-type lawn sweeper.

The machine blows leaves and grass into a homemade trailer. It's equipped with a 4-ft. wide sweeper mounted in front of a 4-ft. wide auger and blower, which was made by welding together the augers off two different walk-behind snowblowers. Power is provided by a 6 1/2 hp Briggs & Stratton engine, which belt-drives both the sweeper and the auger. Hechel uses his 1974 Roper 16 hp garden tractor to pull it.

"The sweeper throws everything into the auger. The blower sucks the material out and blows it through a homemade, 6-in. dia.

curved metal spout into the trailer," says Hechel.

He bought the snowblower at a junkyard for \$10. The snowblower was 32 in. wide but the sweeper is 4 ft. wide so he bought a second snowblower for \$5, cut its auger to length, and welded the two augers together. He bought the sweeper at a hardware store for \$40. He mounted bearings on each end and ran a steel shaft through the middle.

The rig rides on an angle iron frame supported by a pair of swivel wheels on front and snowblower wheels, spaced farther apart, on back. A pipe with a steel shaft welded into each end forms the axle.

He used sheet metal and plywood to build the trailer, which measures 3 ft. wide by 4 ft. long and has 3-ft. high sides. It rides on



**Marvin Hechel converted an old walk-behind snowblower into this pull-type lawn sweeper. It blows leaves and grass into a homemade trailer.**

wheelbarrow tires.

"A metal rod extends from the blower pipe up and around the engine and then hooks onto the trailer, so whenever I turn a corner the spout turns, too," says Hechel. "It always keeps the leaves blowing right into the trailer no matter which way I turn."

He screwed together 2-ft. sections of stove pipe to make the blower spout.

"It makes quite a sight. When they see me

operating it my neighbors ask me if I'm going into farming again," says Hechel. "But it makes my lawn work fast and easy. I dump the leaves in a pile and grind them in a home-built grinder. I also use it to do work for three or four neighbors."

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## Trailer-Mounted Garbage Can Collects Shredded Leaves, Grass

"As a retired 82-year-old engineer, I enjoy designing and building things in my shop just about every day," says Wes Cagle, Clear Lake, Iowa. He recently sent photos of a 3-wheeled trailer he attached to the discharge side of his Deere 318 riding mower.

A 40-gal. plastic garbage can that lays on its side is used to collect grass and shredded tree leaves. A mesh-covered opening in the can, along with an opening in a bulkhead that hooks up to the mower's discharge chute, allows air to escape as leaves and grass are blown into the can from the mower.

"We have a large, hilly lot with a lot of oak trees and their leaves and acorns start falling early and continue for 3 or 4 months. I wanted to keep my yard looking nice and didn't want the leaves to accumulate," says Cagle.

The trailer is held in place by 3 metal bars and rides on 6-in. dia. caster wheels, which allows it to float over uneven ground and to go forward and back. On the trailer frame

he mounted a rigid bulkhead with 2 rectangular openings. The top opening is covered with 1/4-in. opening wire mesh. A curved metal chute connects the mower discharge with the lower opening.

The garbage can lays on its side with the top against the bulkhead. The can is held in place by a hinged bracket at the rear of the trailer. A mesh-covered opening in the can, along with the top opening in the bulkhead, allows air to escape as shredded leaves and grass are blown into the can from the mower.

The mower's discharge chute and the entrance to the trailer chute are covered by Nulon-impregnated polyethylene fabric. The fabric is permanently attached to the trailer and is held tight around the discharge chute by a bungee cord. This provides a flexible cover that allows the mower to be raised and lowered while still guiding the airflow to the trailer.



**Cagle's 3-wheeled trailer attaches to discharge side of riding mower, where a 40-gal. plastic garbage can laid on its side (below) collects grass and shredded tree leaves.**

"To add lift and airflow from the mower I welded wing tips onto each end of the mower's 3 blades. I was careful to make the wing tips and welds identical and symmetrical so the need to balance was minimal," says Cagle.

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## Portable Leaf "Grinder-Blower"

"It works twice as fast as most commercial leaf grinders, and grinds material into tiny pieces that make great compost," says Marvin Hechel, Neshkoro, Wis., about the portable leaf grinder-blower he built from scratch.

A 10 hp engine that belt-drives 2 different home-built cutting mechanisms, as well as a blower fan, powers the machine. The first cutting mechanism is a chopper and the second a hammermill-type grinder.

"The leaves come out of this machine in pieces about the size of oatmeal," says Hechel.

He uses a home-built trailer to dump leaves into a big pile next to the leaf grinder, and then shovels them into an opening at the top. The leaves fall onto a 3-ft. long, 8-in. wide conveyor belt, which drops them into a chopper equipped with a series of steel blades that rotate on a shaft. "The chopper fractures the leaves and also smashes any garden waste that I put in, such as sweet corn stalks, before they reach the grinder," says Hechel.

The chopper delivers the leaves into the grinder, which consists of a series of 2-in. wide steel plates off an old hay disc mower mounted on another shaft. Hechel drilled 100 1-in. dia. holes into the plates and also welded small metal discs onto them. "The plates rotate on the shaft at about 3,000 rpm's, and keep shaving the leaves down until the ground-up pieces are small enough to fit through the holes," says Hechel.

A blower fan then delivers the ground-up leaves through a metal pipe equipped with an adjustable blower spout on top.



**White sign with red lettering on top serves as a "back-stop" when shoveling leaves into opening on top of machine. Other sign serves as a shield over belts and pulleys.**

"I built it from stuff I already had, and couldn't be happier with it," says Hechel. "I spent only about \$100. The fan is off an old walk-behind snowblower."

"I built it because I wasn't happy with what was on the market. I had already tried using two different leaf grinders but they were light-duty units and worked too slow. It took about 10 min. to grind a bushel basket of leaves, whereas it now takes me only about 2 min. Also, sometimes chunks 3 or 4 in. long would come through whereas with my machine everything comes out looking like oatmeal."

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## This Leaf Vac Really Sucks

Mike Nowak's homebuilt street vacuum can do something expensive manufactured models can't do – suck up wet leaves. He built it about 10 years ago for less than \$10,000 for the city of Elmore, Minn., where he works as street and maintenance operator. Other cities have expressed interest in using the vacuum.

The secret of its power and versatility is its pto system. Purchased self-propelled vacuums use 1,000 pto systems. Nowak's vacuum has two ptos on a two-piece drive shaft – a 1,000 pto on the Deere tractor that pulls it, and a 540 pto on a 65 Deere silage blower. The purpose is to be able to add the 540 pto's extra power where needed like picking up wet leaves, for example.

Nowak designed and built the chassis and box from scratch. He removed the auger, the wheels and the hopper from the silage blower, covered the hopper opening with a plate, and cut an 8-in. hole into it. He sealed it, so air could not be sucked in around the band and the cover plate. The chassis is 6-in. channel iron with 3-in. square tubing cross members on two 15-in. implement tires. The 8 by 10-ft. box with 4-ft. sides holds about 6 yards. The top has a 2 by 8-ft. screen for air release, and Nowak mounted a ladder on the outside of the box for access to the hatch for cleanout, etc.

He purchased a hoist from a local manufacturer and mounted it to the chassis and the box. He built a spring-loaded boom to carry an 8-in. vacuum tube coming off the blower with an 8-in., 90-degree pvc elbow



**Mike Nowak's home-built street vacuum is designed to suck up both wet and dry leaves in city streets. He built the chassis and box from scratch.**

with a handle to vacuum leaves.

One of Nowak's favorite features is the auto-locking end gate, so the operator doesn't have to get off when dumping leaves. The locking mechanism is mounted on the chassis so when the box raises, the arms fall down and the end gate opens. When the box is empty, it drops back down and the arms automatically go up and relock.

"Someone drives the tractor, I just ride on the vac and guide the hose," Nowak says. Before it was built, workers used a loader with brooms and shovels to clean the gutters. Now city workers use the vacuum for 4 to 5 weeks in the fall, and the street sweeper can keep the streets clean after that.

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