



Triangle-shaped steel bracket is welded to back side of loader bucket for 3-pt. hookup. A hydraulic cylinder is used to tilt bucket up or down.

## Loader Bucket Converted To 3-Pt. Mounted Dumper

"I needed to move 30 to 40 cubic yards of topsoil and recycled concrete with my new Kubota 50 hp tractor. I didn't want to spend the money for a front-end loader, so I bought a new 6-ft. wide bucket and converted it into a 3-pt. mounted dump bucket. It's really handy to use," says Stanley Golbow, Austin, Texas.

The bucket came equipped with a pair of quick-tach mounting brackets designed for a front-end loader. Golbow modified the brackets so they can be hooked up to the lower lift arms on the tractor 3-pt. hitch. Then he made a triangle-shaped steel bracket and welded it to the back side of the bucket. The bracket supports a 33-in. long, 3-in. dia. double action hydraulic cylinder that's used to tilt the bucket up or down. The cylinder is operated by a 2-way, 12-volt electric-hydraulic pump that operates off the tractor's battery. A handheld remote control that hooks up to the pump controls it.

There are four different holes in the top part of the cylinder mounting bracket that allow Golbow to adjust the dumping angle of the bucket by simply changing the position of a pin.

"It took a week of welding, burning, grinding, plumbing and drilling, but it was worth it," says Golbow. "I spent about \$1,500 to put it together, including \$450 for the bucket and \$1,050 for the pump, cylinder,

hydraulic hoses, and quick connect fittings. A new front-end loader would have cost about \$2,800. I would also have had to buy a new pump kit for \$1,000.

"The bucket is as wide as the tractor's rear tires and holds about 1 cubic yard of material. The only front-end loaders I've seen for this tractor have slip buckets that are 2 1/2 ft. wide and hold only about a wheelbarrow load of dirt. I didn't want to spend all day making small 30-in. wide cuts at a time, and I didn't want to leave an uneven digging surface every time I moved over and made a new cut, with one tractor tire higher than the other."

The pump Golbow used was originally designed to operate lift gates on back of trucks. It's operated by a single control but is double pressurized for power up, power down. He made mounting brackets to fasten the pump on back of the tractor.

"When driving on rough ground I had a problem with oil sloshing around in the pump's hydraulic reservoir and spilling onto the back of the tractor. So I made a small tank to catch the overflow oil. As the oil in the reservoir settles back down, the overflow oil eventually runs back down into the reservoir," says Golbow.

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Hand-pulled, self-powered, 3-wheeled machine is designed to bring fresh, dry litter to the top. Chain-type flails dig deep into the litter and kick it backward.



## Turkey Litter "Slinger"

Daniel Bender decided there had to be a better way to manage the litter in his turkey brood house. So he built a hand-pulled, self-powered, 3-wheeled machine that's designed to bring fresh, dry litter to the top.

The patented "Slinger" machine measures 4 ft. wide and rides on three 16-in. wheels – a single spindle-type steering wheel on front and 2 rigid wheels on back. Tilling is accomplished by a series of chain-type flails, which dig deep into the litter and kick it backward 2 to 3 ft.

Turning a crank located on top of the machine controls tilling depth.

"It's convenient to use and easy to maneuver, and it works fast. I wouldn't raise turkeys without it," says the Garfield, Ark., farmer. "The machine is continually

stirring and mixing dry litter in with the wet and leaves everything dry and fluffy on top.

"We had been using a small 15 hp Kubota tractor and a 3-pt. mounted tiller, but it worked too slow and required too much labor. It took 3 people 1 1/2 hrs. to till the litter in our 50 by 550-ft. brooder house. One person had to walk ahead and push turkeys out of the way to keep from accidentally running over the birds. With the Slinger one person can do the job, and it takes only about half an hour. The machine turns on a dime so there's no wasted time."

The Slinger sells for \$1,985 plus S&H.

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## Mini "Sub" Generates Power From Moving Water

It resembles a toy submarine, but the Am-pair® submersible generator powers a battery bank to provide energy in the most remote regions. All you need is a river or stream that flows at 4.5 mph or more.

Its beauty is its simplicity and endurance, says Larry Liesner, North American dealer for the British product. Made of powder-coated, cast aluminum that's triple sealed, it was originally designed in the 1970's to power barges in the North Atlantic exploring for oil. It had to be durable to last in salt water.

Unlike other submersible generators, it doesn't require piping to direct water to spin the turbine. It just needs to be mounted in fast-moving water as shallow as 13 in. It can be submerged in an open-ended 55-gal. drum or even mounted on a log laying across the water, Liesner says.

His customers tend to live off the grid and are very resourceful. Many use the small generator to provide minimal electricity to remote cabins using invertors to convert the battery-stored direct current (DC) to alternating current (AC). One customer powers an arts and crafts building at a Canadian camp.

The \$1,195 unit comes in 12, 24 or 48-volt sizes, depending on the distance to the battery bank. It comes with a 2-year warranty and a 30-ft., 4-wire copper cable with a rectifier that has two open terminals to connect to positive and negative terminals on the battery. The rectifier converts the generator's AC output to DC to charge the batteries.

Cable can be added in lengths up to 300 ft. with the 48-volt model.

The hydro generator (14 in. long and 12 in. tall) produces up to 2.4 kwh/day – enough



Submersible generator powers a battery bank to provide energy in remote regions. All you need is fast flowing water.

for a refrigerator, lights and other electrical appliances.

Since it has triple seals in the front, twin O-ring static seals at the rear, and an oil-filled body to eliminate corrosion and pressure changes, it requires very little maintenance. However, the front shaft seal needs to be replaced every year or two, and the propeller can be replaced if it becomes damaged. An optional cage to protect the propeller from large debris is also available, as well as a mounting pole option.

Liesner says he has customers from a variety of states and Canada – especially British Columbia.

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Don Bogardus uses an electric winch to tow this home-built firewood sled up to his house. Hand-cranked winch on sled serves as a backup.

## Winch-Towed Sled Brings Wood To The House

"My home-built firewood sled makes hauling firewood up to the house as simple as pressing a button," says Don Bogardus, Sloansville, N.Y.

The sled carries a load of firewood between a wood shed and his house, a distance of about 70 ft. and all of it uphill.

The firewood sled rides on a pair of 5-ft. long metal skids made by welding old snowmobile runners together, back to back. The runners support a 2-ft. wide, U-shaped metal frame made from 3/4-in. dia. pipe. It holds about 1/3 cord of wood.

"I couldn't be happier with it," says Bogardus. "Originally, I mounted a hand-cranked winch on front of the sled and ran the cable up to the house. That way I could hand crank the winch and 'walk' the sled up

to the back of our house. Later, I installed the electric winch on a ledge in the basement and ran the cable down to the sled. I keep the hand-cranked winch on the sled as a backup in case our power ever goes off.

"I bought the 110-volt electric hoist from Harbor Freight for \$98."

The runners are turned up at both ends so the sled can go back downhill without having to be turned around. The cable runs through a small pulley at the bottom of the frame, which keeps the center of gravity low so the sled won't tip over.

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