

Dual angle attachment system is supported by a pair of horizontal pipes unequal in length. Scheibengraber can switch blade angle to the left or right by pulling 2 pins from receiver tubes mounted on front of vehicle, then swapping the pipes.



He used 2 by 4's and steel Unistrut sections to make the blade and added a rubber scraper at bottom. Blade hinges up and down on U-bolts, allowing it to slide on driveway when backing up.

"No Power" Snow Plow Has Dual Angle Attachment System

"My home-built, pickup-mounted snow plow has no electrical or hydraulic components to malfunction or wear out. It was easy to build using parts that I already had, and can be repaired inexpensively," says Karl Scheibengraber, Lisbon, Wis.

He made an 8-ft. wide, 2-ft. high snow blade with a dual-angle attachment system. "It uses a pair of horizontal pipe sections that are unequal in length. I can switch the blade angle to the left or right just by pulling a pair of pins from receiver tubes mounted on front of the vehicle and swapping the pipes," says Scheibengraber. "I leave the receiver tubes on the Blazer all year long because they only stick out about 1 ft. I don't know of anything else like it on the market."

He used 2 by 4's and steel Unistrut sections to make the blade. It's equipped with a heavy-duty, 3/4-in. thick rubber scraper and

is supported by a push frame that attaches 2 horizontal pipe sections of unequal length to the frame on his 2000 Chevrolet Blazer 4-WD SUV

"No power is needed to raise the blade. It hinges up and down on U-bolts and slides on the driveway when backing up," says Scheibengraber. "The rubber scraper doesn't damage my asphalt driveway or grass alongside the driveway."

He made the blade by sandwiching 2 by 4's on top of each other inside an angle iron frame and using Unistruts to fasten them together. He painted the 2 by 4's with a high gloss paint so snow will slip off them.

He fastened 2 large U-bolts to the top edge of the blade and bolted the rubber scraper along the bottom edge. The U-bolts ride freely on 2 upright pipe sections that brace the blade and attach it to the pickup's frame. To make the upright pipe sections, he fastened to a pair of "T" pipe connectors.

"The design allows the upright pipe sections to slide into horizontal receiver tubes, which bolt to the Blazer's frame in place of the vehicle's tow hooks," says Scheibengraber. "Hitch pins hold the pipe sections in the tubes and orient the openings of the T-pipe connectors vertically in order to hold the upright pipe sections. Two more shorter vertical sections that brace the blade are screwed into the bottom remaining holes of the T connectors."

The receiver tubes are reinforced by a length of angle iron that's held in place by the same hitch pins. "The horizontal pipe sections are unequal in length, which lets me switch blade angle to the left or right just by swapping them in the receiver tubes," says Scheibengraber.

To switch the blade to transport position, he can suspend the blade off the ground by inserting the U-bolts into notches on top of the uprights.

He built the blade about 6 years ago and has been improving on the design ever since. Last spring he traded the Blazer for a 2008 Ford Ranger and mounted the blade on it. "The tow hooks were spaced a little differently on the Ranger so I had to re-mount the U-bolts accordingly," says Scheibengraber.

He notes that his snow plow design could serve as a prototype for a heavier-duty, strength-tested version.

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Walk-Behind Rototiller **Mounted On Garden Tractor**

"I'm too old to operate a walk-behind rototiller but too stubborn to quit gardening. So I converted my walk-behind rototiller to a '4-pt.' mounted model that mounts on my old Massey Ferguson garden tractor. I use a hydraulic pump and valve to raise and lower the rototiller. Works great," says 82-year-old Harold Billings of Kenosha, Wis.

Billings stripped the rototiller down to the engine, drive system, and tines, then made an angle iron frame to support the drive system. Then he bolted a homemade hitch equipped with a single hydraulic cylinder on front of the frame. The hitch's lower lift arms bolt onto the back of the tractor and pivot freely as the cylinder is raised or lowered, which keeps the rototiller level at all times.

He added a 6-in wide set of tines on each side of the rototiller to increase the rototiller's tillage width to 3 ft., which is enough to dig up the tractor's rear wheel tracks. He also mounted a long handle on the rototiller's clutch

He borrowed the hydraulic pump from a log splitter and made a hydraulic reservoir from a can of lacquer thinner. Both mount on brackets alongside the tractor. A hose runs from the pump to an oil filter and valve mounted on the tractor's operator platform.

"It's easy to operate. I pull-start the rototiller in the lowered position and raise the tiller, then release the clutch to engage the tines. Then I climb on the tractor and lower the hitch," says Billings. "I call it a 4-pt. hitch because the hydraulic cylinder is connected to a pair of upright metal arms that bolt together at the top, which together with the original 3-pt. lower lift arms makes a 4-pt. hitch. If I want I can use a pair of turnbuckles to adjust the rototiller's angle.'

"Pigtail Hook" Keeps Gates Shut

By modifying a big 40-penny nail, Leonard Seltzer made a "pigtail hook" that he says works great to keep livestock gates shut.

He used a torch to heat the nail and bent it into a circle, then welded a small loop onto one end. The pigtail hooks onto a chain wrapped around the gate and post.

"It's easy to put on and take off, and it won't jump out of the chain. Animals can push against the chain all they want, but the pigtail won't come out," says Seltzer. "I've used this idea for years and have never had a pigtail come unhooked. The idea works on a lot of other things that you regularly have to hook and unhook, like a flagpole."

A big S-hook could be used instead of a nail and might bend easier after being heated up, says Seltzer. "Deciding what material to make the pigtail hook from will be determined mostly by the size of your chain and its application."

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Walk-behind rototiller's drive system mounts on an angle iron frame that attaches to a "4-pt." hitch equipped with a single hydraulic cylinder.

He says the rototiller's engine has plenty of power to operate the rototiller. "If the soil is too hard I can quickly remove the outside tines, but most of the time I leave them on," says Billings.

The hydraulic cylinder is off the tailgate of an old cotton wagon and was given to Billings by his son-in-law, who lives in Mississippi.



Billings uses a valve on tractor's operator platform to raise and lower rototiller. A hydraulic pump and valve mount on side of tractor

"If I want I can remount the cylinder on front of the tractor and use it to operate a dozer blade," says Billings.

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Homemade pigtail hooks onto a chain wrapped around gate and post to keep gate shut. "It's easy to put on and take off, and it won't jump out of the chain," says Seltzer.