



Controlled by 40 ft. of cord wrapped around a spool, mower cuts 80-ft. dia. circle.

"Riderless" Mowers Cut His Lawn

"My riderless riding mowers cut my grass while I sit in the shade," says Darwin Carlile, Perry, Iowa, who uses a pair of riding mowers controlled by rubber bands and 40 ft. of cord wrapped around a spool to automatically cut his lawn.

Carlile bought a pair of old 3-wheeled riding mowers. He bolted a 1-ft. long angle iron "tongue" to the front steering fork and ran a large rubber band made from a discarded inner tube from the back end of the angle iron tongue up to the steering yoke. It keeps the front wheel from moving back and forth. He ties one end of the lightweight cord to the front of the tongue, and the other end to a 5 3/4-in. dia. spool mounted on top of an old planter wheel lying flat on the ground. The mower circles around the spool, starting next to it and working its way outward as the cord unwinds off the spool.



Carlile bolted an angle iron "tongue" to mower's front steering fork and runs a large rubber band from the tongue up to the steering yoke to keep the front wheel from moving back and forth.

they're done I mow between the circles. The pivot spool is sized so that the mower overlaps slightly on each pass."

One mower cuts 24-in. wide and is powered by a 5 hp engine. The other cuts 26 in. wide and is powered by an 8 hp engine. Both were rope-pull models when Carlile bought them, but the 8 hp model was hard to start so he converted it to electric start by installing a new engine equipped with a starter motor and using an automobile dimmer switch as the starter switch. He mounted a small battery just ahead of the seat.

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Simple Double Mower Hitch

After seeing stories in FARM SHOW about double mower hitches built by other farmers, Kirk Deardorff, Hale, Mo., decided to send in his uncomplicated method of pulling a push mower behind his riding mower.

"There's not much to it. I make a hook on each end of a 3/8-in. steel rod and drill a hole in the front right corner of a push mower. One end of the rod hooks in that hole and the other attaches to the back of the riding mower. Pulling the rear mower from the right front corner makes it track out to the left of the big mower. It gets the yard done 40 percent faster. The only drawback of this hookup is that you can only turn right. That's not a problem on big open areas. When you don't need it or can't use it, it quickly detaches," says Deardorff, noting that you could also position the mower on the right side of the tractor by pulling from the front left corner of the push mower.

He also has an idea for modifying mower decks. "Some time ago a farmer listed his Snapper mower as worst buy in FARM SHOW because of scalping problems. I solved the problem with my Snapper by putting a skid runner - made out of 1-in. channel iron - under the deck. It clears the ground most of the time but when going



A 3/8-in. steel rod connects the back of Deardorff's riding mower to the front right corner of a trailing push mower. Over bumps raises the deck smoothly. One problem at first was that as it raised the deck it also moved the depth lever up a notch or two. I stopped that by installing a slotted yoke on the linkage rod that lets it float."

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Andrew sits and watches while his mower automatically mows his airplane runway.

"Pull-Along" Mower Doesn't Need A Driver

Frank Andrew uses a small riding lawn mower to automatically mow his half-mile long, 36 ft. wide airplane runway while he takes a nap, works in the garden or goes to town for a cup of coffee.

Andrew, a retired University of Illinois agricultural engineer, flies airplanes from his own runway. Keeping the long grassy strip mowed became a big chore, so he decided he had to find an easier way to mow it.

A bicycle wheel mounts 3 ft. ahead of the mower. A side arm runs from the wheel to a 9-in. dia. metal reel drum that lays on the ground. The mower circles around the drum as it mows, turning the metal drum which is connected to a half mile of electric fence wire running the length of the runway. Each time the mower completes a trip around the drum, a length of wire is wound up, pulling the whole system forward.

"The mathematical term for the path cut by the mower is a 'prolate helicoid,'" says Andrew. "The circumference of the drum equals the width of the mower, so it moves down the runway for a new swath each time the mower makes a complete circle (a circle whose diameter is the width of the runway). It requires very little attention, except putting gas in the small engine about every two

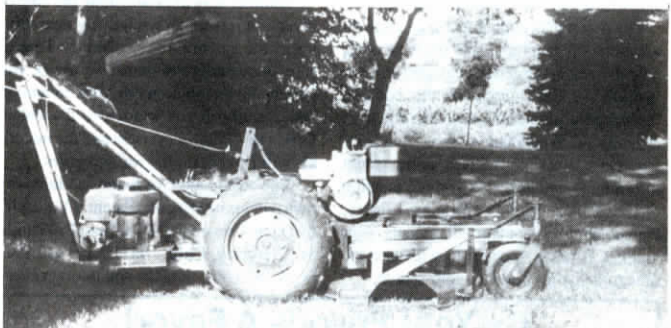
hours. It takes about 6 hours to mow the entire runway. I had been using a tractor-drawn mower to cut most of the runway, and a lawn mower only to cut a narrow strip the length of the runway for the airplane's nose wheel. But even that took a couple of hours to do.

"Neighbors don't need to worry about the mower getting away. If the guide wire should break, the mower will simply circle around and around in one spot."

To make the mower more visible from his house, as well as to aircraft, Andrew tied red flags to a 10-ft. tall fishing pole that he mounted on the rear. He also installed a rotating anti-collision beacon on the hood that makes the mower visible both day and night.

The end of the wire is anchored by an iron rod pushed into the ground at the end of the runway. "It doesn't take much to hold the wire in place because the tractor doesn't pull against anything," says Andrew. "The only resistance is the weight of the side arm assembly, and the drum and wire sliding along the ground."

Andrew says he can remove the bicycle wheel and side arm assembly from the mower in about 10 seconds to drive the mower manually.



Wenkel built this mower by combining the mower deck and 5 hp engine from a 26-in. walk-behind self-propelled lawn mower with a 1950's Bolens garden tractor.

Homebuilt Lawn Mower

When the rear wheels and gearbox failed on Richard Wenkel's 26-in. walk-behind self-propelled lawn mower, he combined the mower deck and 5 hp engine with a 1950's Bolens garden tractor to build his own mower.

"It seemed like I had to make a choice between buying half the mower again in parts or an entire new mower," says Wenkel. "Combining the mower and garden tractor turned out to be a less expensive solution. Although a bit long and heavy, the mower is well balanced and handles easily. I can adjust ground speed according to mowing conditions by varying the throttle settings on the two engines. For a total investment of \$12 for the mower belt, it's hard to beat."

Wenkel left the tractor basically unchanged except to replace the over-center belt tightener clutch with a deadman type clutch. He made an angle iron frame to suspend the original mower engine under the handle bars. He made another angle iron frame, using caster wheels from a Bolens sprayer, to hold the mower deck. He bolted the sprayer's mounting bracket to the frame which allows the mower deck to oscillate independently of the tractor. He also added a set of belt guides and a slack side belt tightener to the tractor underframe for the mower deck drive belt.

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