

Midget Yard-Dozer You Can Build

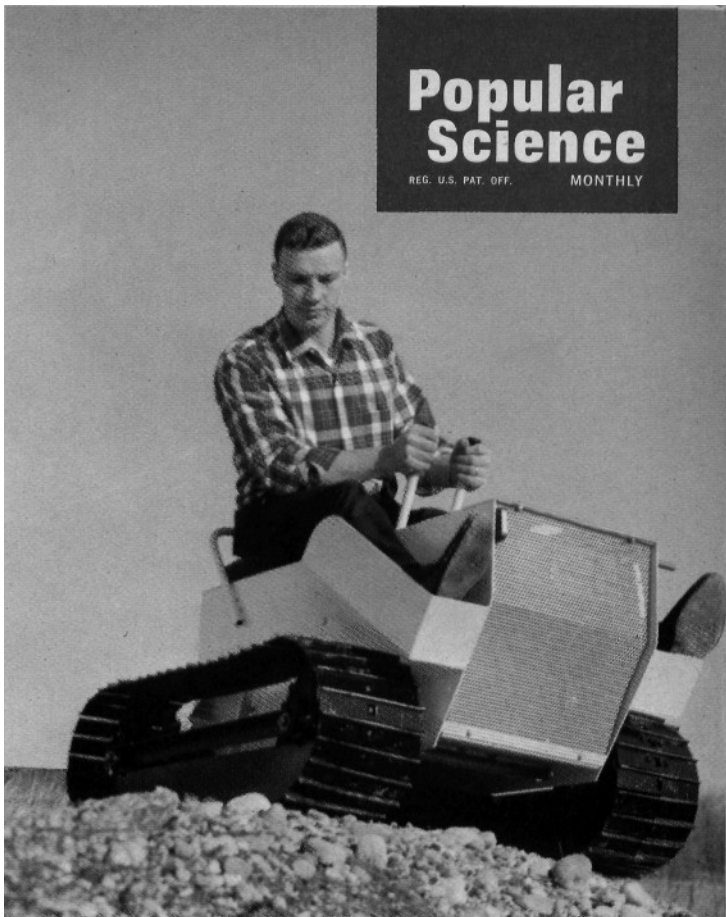
It comes as a \$350 kit you can assemble with no machining. You can also build it yourself from a \$5 set of plans

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PS Home Workshop *Editor*

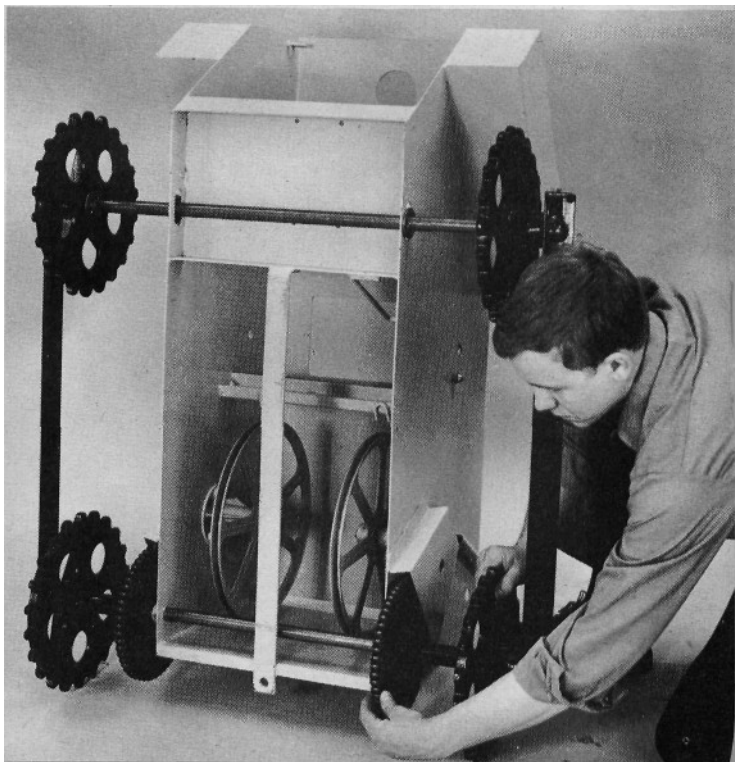
Here's the first low-cost yard tractor that works just like a big construction bulldozer. Its wide steel crawler tracks grip the ground over more than 500 square inches—traction you can't get with a wheel-driven rig. This makes it an ideal tractor for handling tough yard jobs like snow plowing, bulldozing, towing, and tilling. It also runs a lawn mower and provides a power-takeoff source. But it's a fun machine, too; it's great for snowmobiling and for off-road travel.

One of its great points is its stability on hills. The Mini-Dozer will climb and maneuver on 45-degree grades. A low center of gravity and a wide track-spread make it safe.

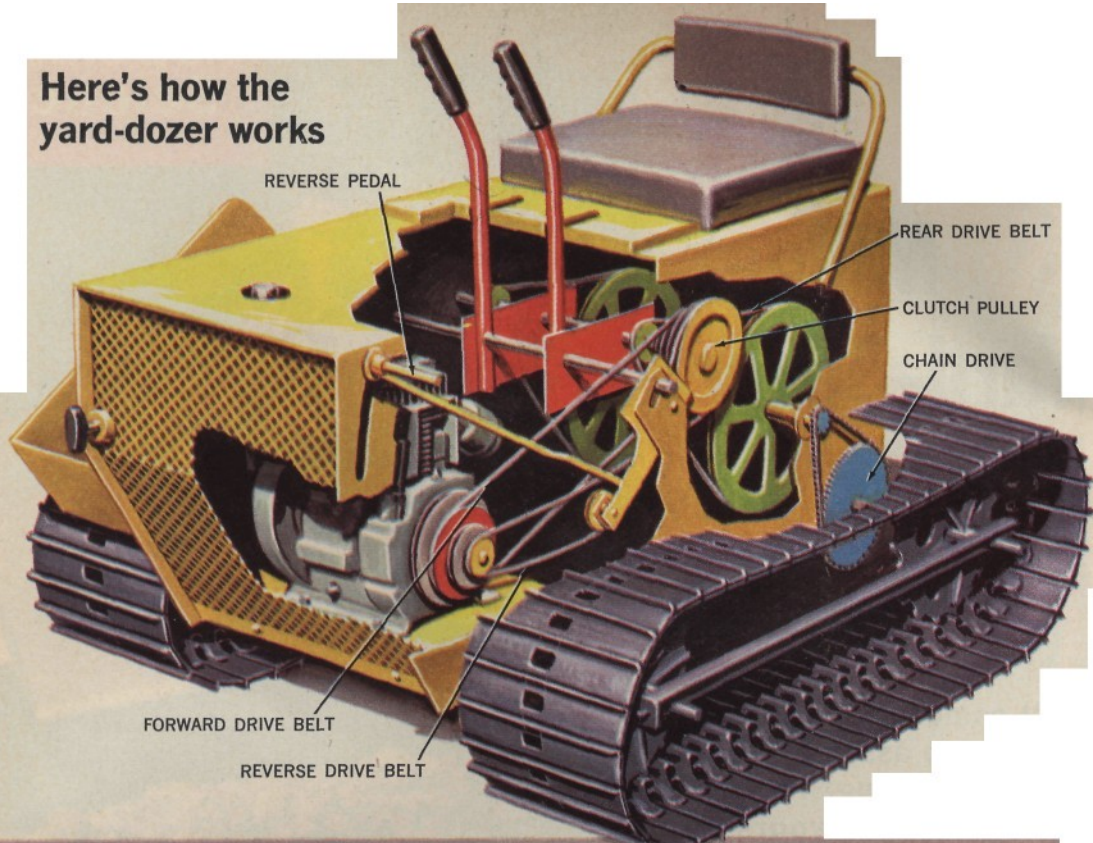
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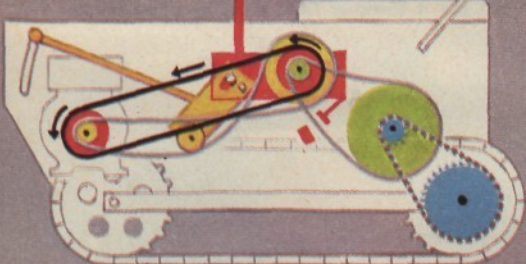
New idea in yard tractors — a small, crawler-tread dozer that's so simple you can put it together from a kit in a few hours.



Here's how the yard-dozer works

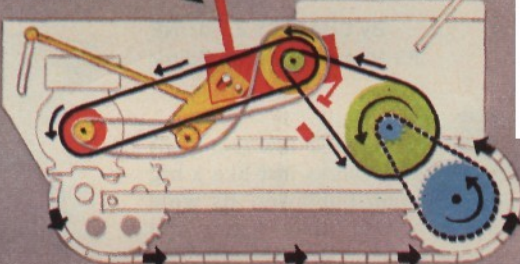


NEUTRAL



With no hand pressure on the lever, it stays in the center, or neutral, position. The rear drive belt is slack, so no power is transmitted to the track.

FORWARD

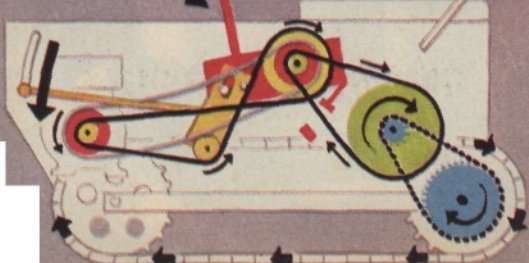


Pushing the control lever forward tightens the constantly rotating drive pulley against the rear drive belt, putting the track in forward motion.

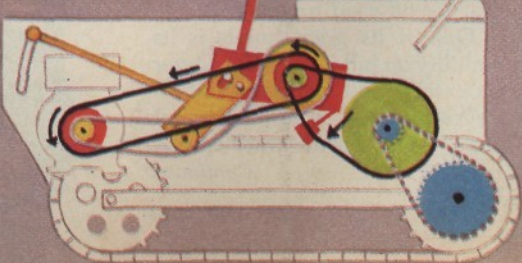
Pushing the pedal down with the left foot pulls the pivot shaft down in its slot to slacken the forward drive belt and engage the reverse drive belt.

Pulling back on the control lever slackens the rear drive belt and brings the brake arm to bear on the belt so that it prevents track movement.

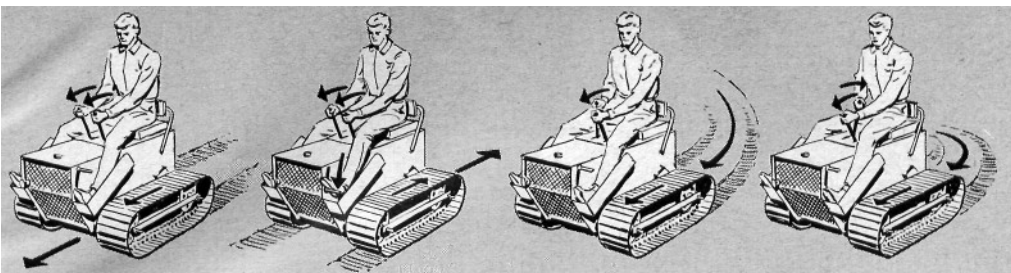
REVERSE



BRAKE



You drive the yard-dozer with two levers and a foot pedal



Forward. Push both control levers forward. Only light pressure is needed.

Reverse. Push reversing pedal down with foot; both levers forward.

Wide turn. Center inside track lever; push forward outside track lever.

Sharp turn. Brake inside track lever; push outside track lever forward.

By simply switching the forward drive belt on the step pulleys, you can get three maximum forward speeds—2.4, 3.8, and 6.1 m.p.h. The maximum reverse speed is 1.5 m.p.h. The engine comes with a recoil rope starter, but electric-start engines are available.

Standard yard-tractor attachments, such as those sold by Sears, can easily be adapted to fit the Mini-Dozer. Attachments designed especially for it are sold by the manufacturer. They include a lawn mower, dozer blade, V3-ton trailer, lawn aerator, lawn roller, and fertilizer spreader.

The beauty of this tractor is that you can build it yourself from a kit of parts that go together with screwdrivers, pliers, and wrenches. All parts are machined; the body and subassemblies are welded. A good six-hp., four-cycle engine comes with it, too. The kit costs \$350 with engine, \$300 without. You can also buy it factory-assembled and ready to drive for \$400. You get a choice of either cleated or smooth tracks. A second set of tracks of either style is available for \$80.

But for the man who's handy at building things, a complete set of plans is available for only \$5. The plans show you how to make all the parts and put them together.

You can buy a lot of the parts—standard rod, pulleys, belts, chains, and bearings—at a local hardware store or mill-supply outfit. If there are any parts you don't want to make or can't buy locally, you can get them from the manufacturer. A catalogue and price list of all parts come with the plans.

The plans also show you how to make a very low-cost version using plywood for the body and hardwood strips for the tracks.

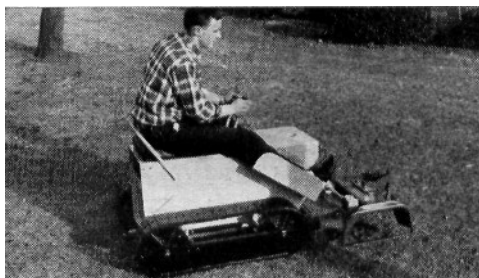
How it's built. Simple is the word for

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It's powerful and versatile



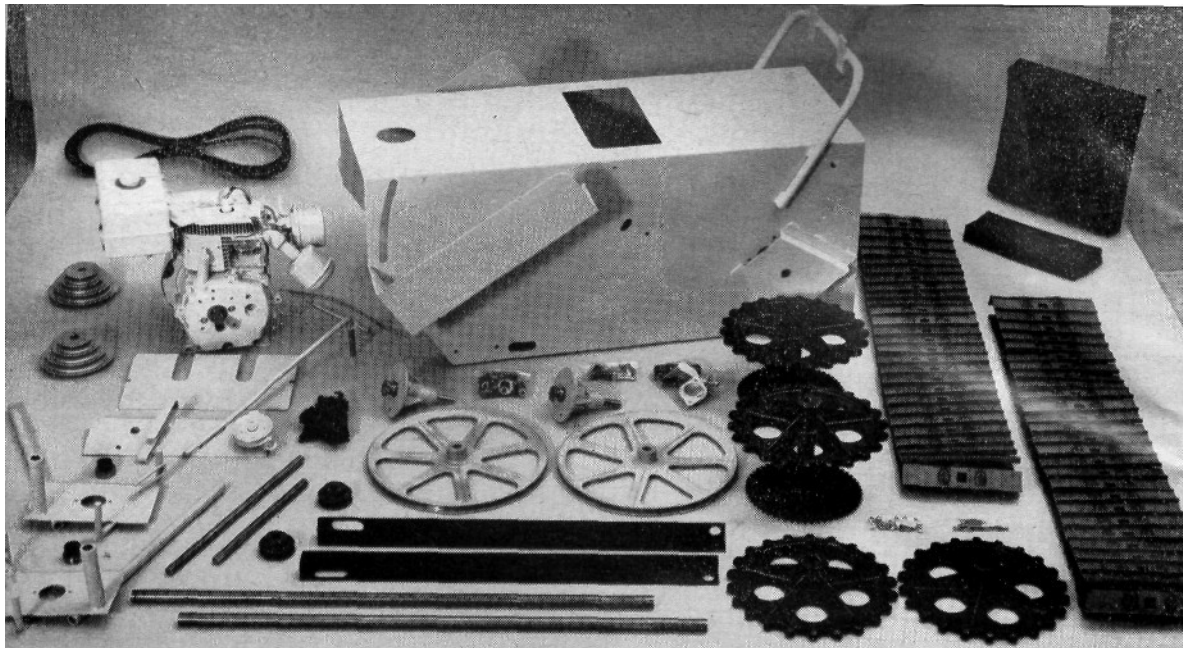
Lots of towing power comes from ground-gripping tracks and a high-torque transmission ratio.



Lawn mower is powered by the dozer engine. Tracks maneuver easily, give balance and traction.



With a blade on front, the tractor bulldozes, grades, plows snow. Standard attachments fit it.



This is what you get for \$350: welded-steel body, engine, tracks, pulleys, shafts, axles, bearings, belts,

bolts and nuts. No machining, welding, drilling, or tapping—you just assemble the parts.

the Mini-Dozer. There are no gears; an ingenious arrangement of V belts, pulleys, and levers gives forward and reverse power, and clutching and braking action to each track separately. Everything is controlled by two hand levers and a foot pedal. You can learn to drive it with a few minutes practice.

The tractor body is made of 12-gauge steel, and all internal braces and supports are 3/16" steel welded in place. The wheels are cast iron with self-lubricating bearings and ride on 7/8" steel axles. The treads are steel plates welded to heavy-duty conveyor chain. The power train is a series of V belts and pulleys that reduce r.p.m. and provide clutching action. The final drive to the rear wheels is a chain-driven sprocket with a 6.75:1 ratio.

As the illustrations show, the parts are few and simple. This makes it easy to build and maintain. There's little to go

wrong. About the only parts that might wear are the belts; these you can replace at a hardware store or garage. They can be changed in a few minutes. A complete lubrication job consists of greasing four wheels and three bearings.

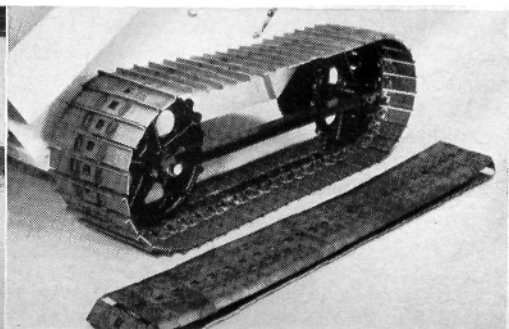
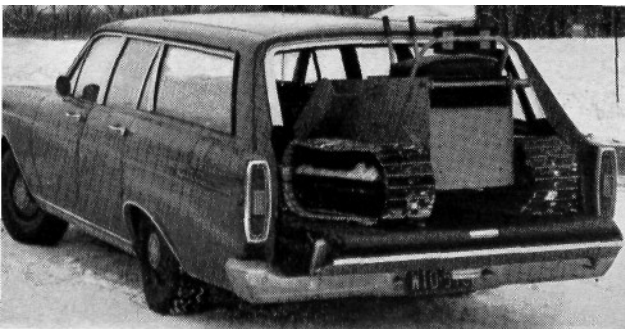
The engine is a well-known brand, and takes the care usually given to gas engines of this size and type.

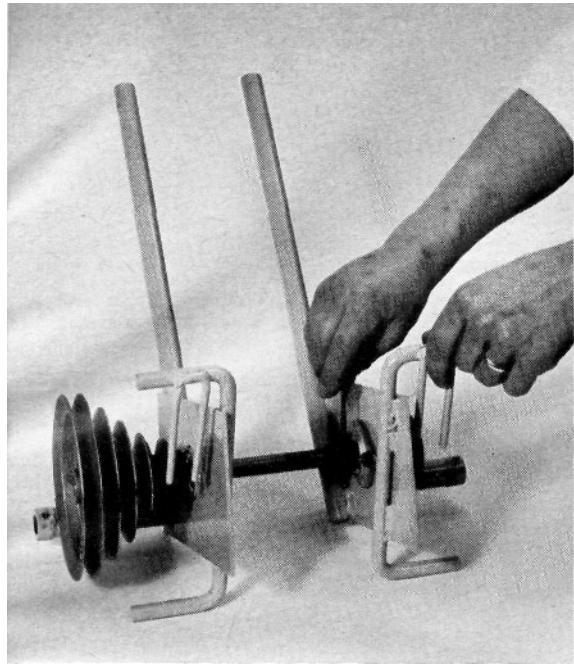
How it works. Each lever controls the movements of the track on its side. The levers are mounted on self-aligning bearings so they can pivot independently. With hands off the levers, they are in neutral. The rear drive belts are slack in their pulleys, so no power is transmitted to the tracks. This is also a safety feature, since whenever you let go of the levers, they return to neutral, and the tractor comes to an immediate stop.

Pushing forward on a control lever tight-

Small enough to haul in a station wagon, this yard-dozer is only 46" long, 33" high, and 37½" wide.

Two kinds of tracks—cleated for pulling power and smooth for lawn work—switch easily when needed.

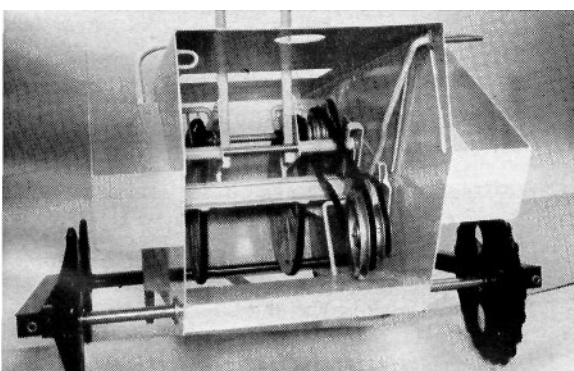




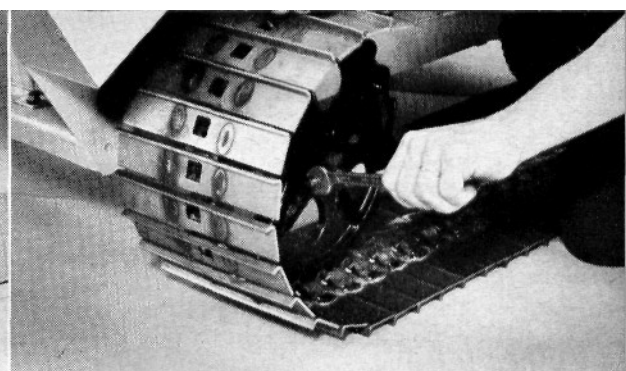
Control levers for clutching and braking mount on self-aligning bearings so they pivot independently.



Reversing mechanism comes preassembled; you just bolt it to the tractor body. Left foot operates it.



With everything inside now in place (except the engine), you can see how simple the drive train is.



Tracks go on over two cast-iron sprocket wheels, and are tightened by nuts on the track spreader bar.

ens the constantly rotating clutch pulley in the rear drive belt, putting the track on that side in forward motion. Pulling back on the control lever brings the brake arm to bear on the belt so that it is squeezed against a channel iron, braking the track it drives. Only slight movement and pressure are needed.

To go forward, you just push both levers forward. You reverse by pushing down the reversing pedal with your left foot, and pushing both levers forward. You make a wide turn by putting the lever controlling the inside track in neutral (center position) and pushing forward on the lever controlling the outside track. To make a sharp turn

(within the length of the tractor), you brake the inside track while you push forward on the outside track lever. You make turns while going in reverse the same way; the only difference is that you do it while you hold down the pedal.

How to buy a Mini-Dozer. You buy everything—completed machine, kit, plans, parts, attachments—from C. F. Struck Corp., Cedarburg, Wis. Struck is just starting production on the Mini-Dozer, so if you want to buy a completely assembled machine, it's best to check on delivery time. But there's no problem in getting plans. You just send \$5 with your request and you'll get them by return mail.