

the tractor tires. I welded a steel plate vertically onto each end of the toolbar and bolted a pair of steel rods on between the plates and the drill to reinforce the hitch. A chain connects the top link on the drill with the tractor's 3-pt. hitch, allowing the drill to flex up or down.

I bought the drill in 1956 for \$125 and spent about \$100 for scrap iron to build the hitch. The drill is equipped with seed cups instead of gears so it handles seed gently. I use it a lot for replanting wet spots in the field because I can raise the drill and turn without destroying the crop. Another advantage is that the drill's narrow width makes it easy to fit through gates. However, it's too small to plant big fields - I use a 12-row planter to plant most of my beans.

Originally the operator had to reach back and pull on a rope to disengage the seed drive system. Now the drill automatically disengages when it's lifted. The drill is quite heavy when full so it takes a tractor with a good hydraulic system to lift it. I use an Allis-Chalmers 6080. (Lloyd Robertson, Rt. 2, Box 68, Worthington, Minn. 56187 ph 507 376-4033)

Our new fifth wheel round bale hauler with its own self-contained engine and hydraulic system lets one person load and unload



up to 17 bales individually or in stacks right from the cab and transport them at highway speeds. It's 34 ft. long and equipped with a 16 hp Briggs & Stratton V-twin, electric-start gas engine and a hydraulic pump in front. Hydraulic cylinders are used to raise or lower the chain-driven trailer bed and also to operate the loading arm. The loading arm clamps bales from both sides and holds them until they're placed on the bed.

It lets one person load and unload bales fast and works much faster than a tractor and front-end loader. You can unload an entire load of bales in the time it would take to unload one bale with a front-end loader. Because of the loading arm's squeezing action, it can handle soft core bales, cone-shaped bales, and bales with bad or broken twine without any problem. I recommend using a heavy-duty 3/4 ton or bigger 4-WD pickup to pull the bale hauler.

Sells for \$23,400. Also available is a 34-ft. drawbar model for tractors that sells for \$20,255. (Larry Rollson, Richardton Mfg. Co., Box 290, Richardton, N. Dak. 58652 (ph 701 974-3356))



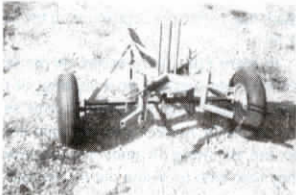
Using a length of channel iron and a pair of steel plates I built a bolt-on front bumper for my father's Deere 210 riding mower. The bumper bolts onto each side of the tractor

frame and extends ahead of the fiberglass hood, protecting it from damage if the operator drives too close to a building, tree, grain auger, etc. The tractor doesn't come equipped with a front bumper so it's easy to damage the hood, which costs about \$140 to replace.

The bumper bolts to existing holes in the tractor's frame.

I won a blue ribbon at the local 4-H county fair for my efforts. (Dale Ellingson, 5341 Reamer Rd., Walker, Iowa 52352 ph 319 438-1300)

You can unroll high tensile or barbed wire by yourself with our new two-wheeled



unroller. The 5-ft. long by 32-in. wide unit works great behind ATV's, pickups or small tractors. Adjustable hold downs keep wire from expanding as it's unrolled. Arms are adjustable as well and you don't have to readjust them to load another roll. Spring tension keeps the unrolling spoke from free-wheeling. You can change from high tensile to barbed wire in a second without tools. Will handle up to a 4,000-ft. roll of high tensile wire or 1/4 mile roll of barbed wire.

Sells for \$115 plus S&H; 3 pt. model sells for \$85. (Benson Enterprises, RR1 Box 94, Sterling, Neb. 68443 (ph 402 866-2391))

When I sold my conventional tractors and bought a pair of Caterpillar Challenger 65 rubber-tracked tractors seven years ago, I used a 16-row 30-in. Kinze pull-type planter at first. Two years ago I built a 3-pt., 13-row planter with two 38-in. wide skip rows to accommodate the Challenger's 28-in.



wide tracks. The single toolbar planter has three 24-in. rows in the middle with five 24-in. spaced rows on each side.

The skip rows allow us to come back and sidedress anhydrous ammonia, which is important because our soil is often too wet in the spring to apply ammonia without losing a lot of it. By sidedressing we don't lose as much nitrogen and we get it to the crop when it needs it. We set the applicator knives to go 10 to 12 in. deep to help break up any soil compaction. The Challenger's 28-in. wide tracks clear crop rows by 5 in., which is adequate even when sidedressing. We set the ammonia applicator so that two knives run in each skip row. The 3-pt. mounted planter turns better than a pull-type planter and also works better in soft ground conditions.

The planter's rigid toolbar doesn't fold or flex, but our land is fairly level and we don't have to go on the road much so it's no problem. The planter is ground-driven by a rubber drive wheel mounted in front of each end of the planter. The drive wheels ride on springs so the planter doesn't skip, even

on uneven ground.

We use a Deere 750 no-till drill to plant soybeans and a Challenger 85 to do tillage work.

I salvaged row units off an old Kinze planter and mounted them on a 7 by 7, 1/2-in. thick toolbar. The toolbar is also used to carry two 200-gal. tanks of liquid fertilizer. We modified the corn heads on our Deere 9600 combines to come up with 13-row heads that match the planter's row spacings. The skip rows make it easy to harvest because we don't have to count rows when we turn at the end of the field. (David Steritz, 3970 Roush Rd., Hillsboro, Ohio 45133 ph 513 288-2343)

My new "circle trip" device for traveling irrigation systems automatically changes the gun's spray pattern from a full circle to a



half circle to keep water off highways, rows of trees, fences, etc.

The "circle trip" device on the irrigator gun is tripped by a stake driven into the ground at the appropriate spot. It changes the gun's spray pattern to a half circle. The gun continues to make a half circle until the irrigator is pulled back far enough that it's tripped by the same stake and again makes a full circle without shooting any water out the end of the field.

It lets you put the same amount of water on corners as on the rest of the field without wasting water. It can save about 30,000 gallons of water per gun every night. In some states irrigation water falling on highways can result in fines of up to \$10,000 or having your permit pulled for pumping water.

I've built four units so far for a local farmer. I've used them for three years with no problems. I sold them for \$150 each.

I'm looking for a manufacturer. (Galen T. Watson, Rt. 3, Box 476-A, Trenton, Fla. 32693 ph 904 463-7039)

For my custom wood splitting business I built this giant wood splitter that can be lowered to split 3-ft. dia. logs at ground level,



saving my back. It can be fitted with a "cross wedge" to split logs up to 16 in. in dia. into four pieces at a time.

The trailer-mounted splitter is powered by a Ford Pinto 4-cyl. 70 hp engine that shaft-drives a hydraulic pump. A 24-in. hydraulic cylinder is used to raise the splitter to its vertical working position. Another cylinder raises and lowers the splitter table from ground level up to 24 in. off the ground. The big 6-in. dia., 32-in. stroke splitting cylinder mounts on a 7-ft. long, 8-in. wide steel H-beam and is equipped with a 14-in. wedge.

I used two lengths of 7-ft. long, 8-in. sq. steel tubing to build the splitter trailer from scratch. I capped the ends of each beam to use them as tanks, with one holding hydraulic oil and the other gas.

The engine never runs at more than high idle. I built it this way because I have back trouble. I can set the splitter table on the ground and roll big pieces of wood onto it without having to do any lifting. I split them in half, then raise the splitter table 24 in. and split the smaller pieces. The cross wedge simply slips into a slot I cut into the wedge. It cuts splitting time in half and can be used on about 75% of the wood I split.

I spent only about \$1,000 to build the splitter. I paid \$250 for the engine which was salvaged from a wrecked car. I paid \$150 for the splitter cylinder which is off a bulldozer. The two 24-in. cylinders are off an old garbage truck. I paid \$40 each for them and rebuilt them. I bought the steel tubing for the trailer for \$100 from a company that erects big billboard signs. The axle and wheels are off an old house trailer. The hydraulic pump is off a Hyster forklift. (Marvin A. Webb, Rt. 1, Box 256, Callaway, Va. 24067 ph 703 483-1385)

Here's an inexpensive - if unusual - way to haul as much as 1,350 bu. of wheat at one time. I converted a truck designed to haul Minuteman Missiles into a 650-bu. grain



truck that I use to pull a 700-bu. bottom-unload grain trailer.

I bought the Minuteman Missile carrier truck from a local Air Force base for \$2,400. The 5-axle truck was equipped with a flatbed and fifth wheel hitch. The missile extended out over the top of the cab which is only 6 ft. off the ground. I cut off part of the frame and replaced it with an aluminum truck box.

The truck and trailer together are 93 1/2 ft. long. It looks a little different, but it's a cheap way to haul grain. The bottom of the cab is only 1 ft. off the ground so when I drive I sit at about the level I'd sit in a car. I bought \$3,600 worth of new tires and paid \$3,000 for a hoist to dump the box, \$900 for roll tarps, and \$1,200 for the flatbed. I paid \$300 for the trailer, but I had to buy new front and rear axles and new brake hubs for it. My total cost was less than \$15,000. A new comparable capacity tandem axle grain truck sells for about \$40,000. It has so much capacity that with my 4,000 acres I really don't have enough use for it unless I ever decide to do custom grain hauling.

The missile trucks were built in 1960 for \$150,000 apiece. Only 14 of them still exist. The Air Force used them for 30 years, then put them up for sale when they came out with new trucks. The V-12, 702 cu. in., 270-hp GM gas engine is original and has two carburetors and two intake manifolds. It has a top speed of 55 mph.

The truck has two drive axles in back and a tag axle. The two front axles are used for steering. (Rudy DeBruycker, Rt. 2, Box 6265, Dutton, Mont. 59433 ph 406 476-3406)