

# How I Made a Barrel Cart Out of Odds and Ends

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**S**OME OF US handling the smaller clubs where budget allowances are so small that the purchase of equipment is difficult are seriously handicapped and often have to spend more on labor than the equipment would cost. One way of keeping the cost down and making the skimpy budget balance is to use some of the odds and ends lying around to build some maintenance machinery.

Herewith is an illustration showing how I made a barrel cart out of an old iron lawn roller, an old gasoline barrel, some pipe, and scraps of plank.

I believe the illustration shows very plainly how it is made, but I will elaborate on a few of the details.

In this type of lawn roller the weight is generally obtained by suspending a heavy iron weight from the shaft in the

center of the rollers. Such was the case here. I removed the handle and the center weight. The bearings which fastened the handle to the roller shaft were separate from the handle and bolted to it. These I removed and used, bolting them to two short pieces of 2x12 in. plank about 24 ins. long. If you will examine the picture closely you can see the bolts.

I made a little platform over the top of the roller of two inch plank of a size to hold the barrel—a 12 in. piece in the center and a 2x4 at front and at back.

Two-by-fours were bolted to the sides and a 1 in. pipe run thru them for a handle to pull the cart. Shorter 2x4's were dropped from the handle to the ground for supports to prevent the barrel from tipping too far forward when standing. The barrel must set well forward so there is some weight on the handle at all times other-



Here's the home-made barrel cart in operation. Not a thing of beauty, but it works, which is all that matters, and the cost was negligible.

wise there is too great a tendency to tip backwards.

We cut the top out of the gas barrel, cut a hole large enough to admit a 1 in. pipe close to the bottom of the barrel, and set it on the improvised cart. The lower rim of the hole in the barrel should be at least  $\frac{1}{2}$  inch above the bottom of the barrel to allow for the locknuts that hold the pipe in place.

Blocks cut to fit the shape of the barrel were nailed to the platform on both sides of the barrel to prevent it from sliding off the platform. A wire run thru a hole at the top of the barrel and fastened to the platform prevented the barrel from tipping toward the back, and a piece of sheet metal bent into a clamp and fastened over the pipe held it from tipping forward.

For pipe, control valve, etc., I used the following: A short nipple with a long thread on one end and provided with two locknuts and a rubber gasket, a 1 in. gate valve, a close nipple, a tee, and two pieces of 1 in. pipe each 40 ins. long; and two pipe caps.

The locknuts and gasket made a tight connection with the barrel and also afforded some support to the distribution pipe. However, as the nipple projects out from the barrel and is a slight distance above the bottom, I placed a small block under it which supports the distribution pipe, rather than have it supported by the thin side wall of the barrel. The clamp that keeps the barrel from tipping forward, mentioned above, holds the pipe down tight against the block and to the platform. If a wooden barrel is used this probably would not be necessary as the sides of a wooden barrel are of sufficient strength to support the pipe.

The distribution, the tee plus the two 40 in. lengths is approximately 7 ft. long. I screwed the three pieces together, and laid the assembly on the work bench. Driving a nail into the bench at each end of the pipe, I stretched a string between the nails and directly above the center of the pipe. With a crayon I made a straight line the entire length of the pipe and tee. With a pair of dividers, I made scratches every  $\frac{3}{8}$  in. the entire length of the pipe. I followed this with center punch marks and took the assembly to the local machinist to drill the holes— $\frac{1}{8}$  in. in diameter.

I happened to have on hand a 1 in. steam throttle valve and I used it in place of a regular gate valve. This valve is exactly like an ordinary gate valve except that it

opens and closes by simply pushing and pulling a lever instead of turning the handle. It makes a very handy outfit, but the cost is about double that of an ordinary gate valve, and I don't believe it necessary. I had the valve on hand and no other use for it.

I made a circular cover for the top of the barrel from scraps of 1 in. material, double thickness, cutting the lower thickness so that it just fit inside the barrel and the top about 2 inches greater diameter than the diameter of the barrel. This cover prevents any splashing over the sides of the barrel.

### Looks Clumsy But Works Well.

The entire outfit looks clumsy, but it is not clumsy to handle and it is surprising how easy it is to handle on a green. It can be turned any place on the putting surface without injury to the turf and because of the width of the roller there are no wheel tracks left. I have used it on greens too soft to use an ordinary barrel cart on. The roller is made in three sections, hence the easy turning.

While I realize that a wooden barrel is probably better, there was none available. We have used this for two years and while it is rusted somewhat on the inside, it is still good for several more seasons. We always wash it out well after using.

If we had purchased everything we used the cost would have been as follows:

Roller (purchased 2nd hand) ..	\$ 3.00
Barrel (purchased 2nd hand) ..	1.00
Lumber .....	3.00
Pipe, inc. cutting, threading, etc. ....	3.00
Drilling holes in pipe ..	.75
Valve—1 in. gate.....	1.50
Labor (estimated) .....	5.00
Bolts, nails, paint, etc.....	1.00

Total .....\$18.25

We had the lumber, pipe, barrel, nails, paint, and valve on hand and our cost of building over the cost of labor was:

Roller .....	\$ 3.00
Cutting and threading pipe..	1.00
Drilling holes in pipe.....	.75
Bolt .....	.25

Total .....\$ 5.00

Ten dollars was complete cost including labor. As all the work on this was done at odd moments when nothing else could have been done, the labor became simply

overhead chargeable to, "Repairs and general maintenance."

A greenkeeper friend of mine, from whom I conceived the idea of using the roller used the roller from a Roseman fairway mower. I think it is even better than mine as the roller is not quite so high or so heavy, and the entire unit sets closer to the ground making it less topheavy.

The only fault I have to find with the cart is that it is inclined to tip over backwards going upgrade. Setting the barrel forward so that some weight is on the handle does away with most of this danger and only ordinary care is necessary to prevent an accident.

The picture shows three men pulling it. Two of us pull it most of the time, though three are better.

A barrel full of water with the pipe drilled as this one was drilled will cover approximately 5,000 sq. ft. of putting surface if pulled at a normal walk.

I am writing this just as a suggestion: There are many other types of wheels, rollers, etc., that could be used for the same thing and probably with much better results than I have secured. I hate the sight of a barrel cart and do not use it when I can find some other way of making an application; but unless you have power spray facilities I don't think any greenkeeper should be without one.

#### A Topdressing Mat.

The first few times we topdressed the greens at Rochelle, we matted the topdressing in, using the back of a rake. This was too slow; so the next time I got ready to topdress, I went to the local hardware man and asked him if he had any steel door mats. He produced a small one, 18x36 ins. I believe it was. I bought two of them at a bargain, took them back to the club and wired them together, using small wire. I wired a broomstick across the ends for a drawbar, tied a small rope to this and I have as fine a mat for brushing in dressing as can be bought anywhere. The finished mat is 36x36 in., probably not as large as I'd like to have it, but it works fine.

I wired the two mats together in such a way that the flexibility of the mat is not impaired and the wire does not scratch the green.

Another little tool I find very handy is a common table fork with the tines bent in the form of a hook. I carry one in a loop formed by a leather strap on the handle of my putting green mower at all times. You



See the fork hanging from the mower handle. It does many useful jobs for the mower man.

can see it in the picture. I use it to "comb out" the dirt thrown up by an ant hill or worm cast, or to remove clover, crab grass and chickweed. Try it once and you'll be surprised to see how handy a tool it is.

### Jap Beetle Quarantine May Be Extended

**J**APANESE beetles have spread so rapidly beyond the limits of the present zone of quarantine, which comprises the states of Connecticut, Delaware, New Jersey, Rhode Island and District of Columbia and portions of Maryland, Massachusetts, New York, Pennsylvania and Virginia, that Sec'y of Agriculture Hyde is recommending the extension of the quarantine to include several additional states. From within this area, certain agricultural products may not be shipped, among which the following are of interest to golf clubs: Nursery stock, ornamental trees and shrubs, sand, soil, earth, peat, compost and manure.

While arsenate of lead has been most effective in preserving the turf of golf courses from damage by the Japanese beetle, clubs everywhere should be interested in preventing the spread of the pest to areas not as yet affected, since once the beetle gets a foothold, much money must be spent fighting the ravages of the grubs on greens and fairways.