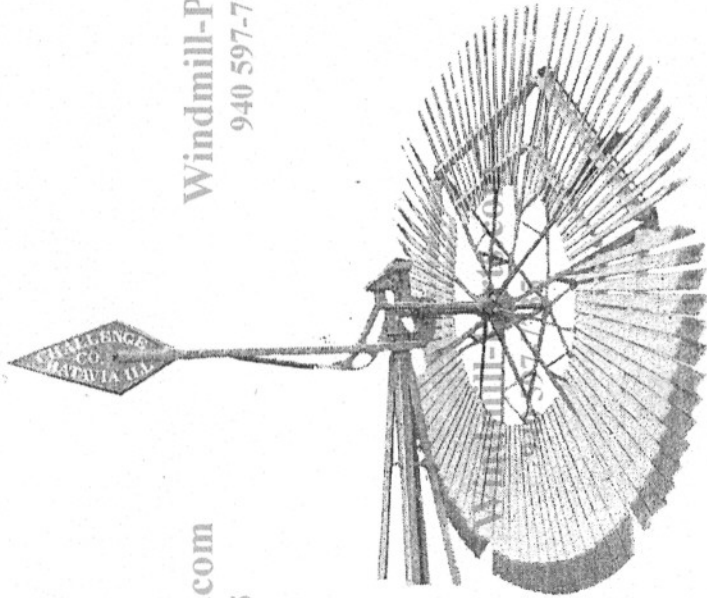


# Farmers Have Been Waiting For This

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A direct stroke Vaneless Wind Mill with the famous Self-Oiling Hyatt Roller Bearings, same as used on your Automobile and Tractor. Now obtainable from

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## Challenge Self-Oiling Vaneless Mill

**T**HE CHALLENGE Vaneless Wind Mill, equipped with the famous self-oiling Hyatt Roller Bearings is the lightest running, best governed, most durable and simplest direct stroke mill made. It will pump water for your stock and home in a lighter wind than any other mill and having but few working parts is not liable to get out of order.

It is a direct stroke mill which makes one stroke of the pump to every revolution of the wheel. It has no gears, therefore the power of the wheel is concentrated direct on the pumping rod without friction.

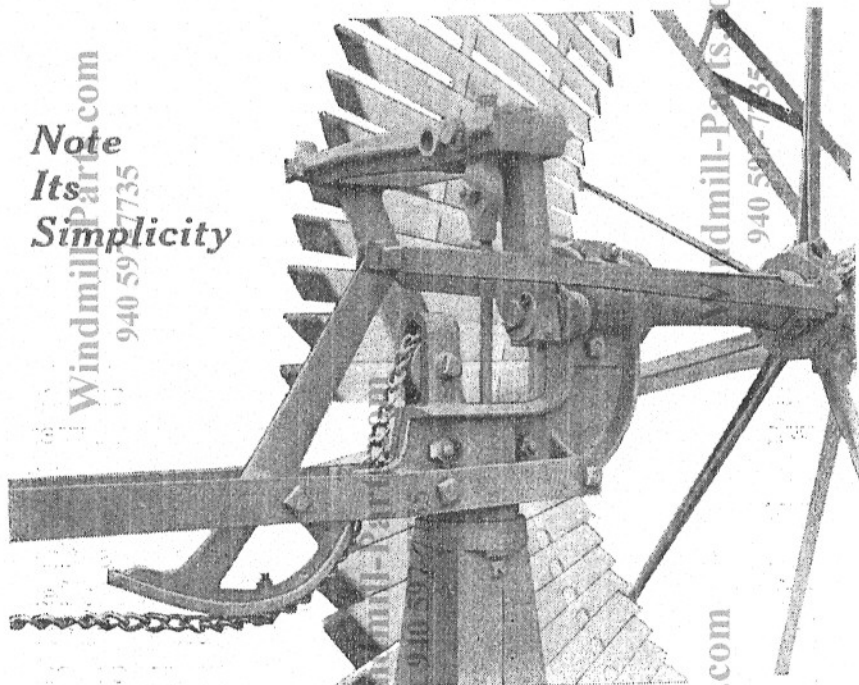
There is but one shaft. This supports the wheel and runs in two large Hyatt Roller Bearings, provided with oil reservoirs which hold from one to two years' supply of oil. You won't have to climb the tower every little while to oil the mill.

*The Wind Wheel* is made in six sections, each composed of wood slats made of carefully selected material and set in hard wood cross bars at an angle to obtain the greatest amount of power from the wind. The sections are hinged to heavy steel arms in such a manner that the force of the wheel's rotary motion permits the sections to incline themselves so as to shorten the exposed surface as the velocity of the wind increases. When the maxi-

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imum speed is reached it will go no faster, no matter how hard the wind blows. This is undeniably the best governed type of mill made and is *absolutely storm proof*.

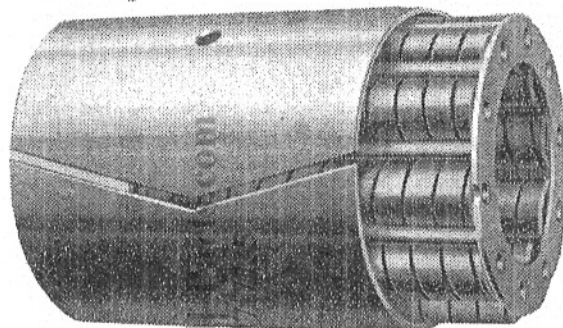


**Note  
Its  
Simplicity**

### Lubrication

**Hyatt Roller Bearings**—All main bearings of the mill are fitted with the famous Hyatt Roller Bearings (same as used on your tractor or automobile) and oil reservoirs that will hold at least one year's supply of oil, which assures complete lubrication, easy running and perfect operation under all conditions. Actual tests have demonstrated that wind mills fitted with these bearings will pump 23%

more water in the same breeze than those fitted with the ordinary bearings.



Hyatt Roller Bearings as used in wind mills shown with roller assembly pulled partly out of the raceway so roller construction may be seen.

**Hard Wood Self-Oiling Bearings**—This mill can also be furnished with Self-Oiling Wood Bearings. They are made of wood that has been chemically treated so as to require no lubrication whatever. They cost less than the Roller Bearings, but the mill will not run as easily. These wood bearings are interchangeable with the Hyatt Roller Bearings; that is, if you order a mill with the wood bearings and later on want it fitted with the Hyatt Roller Bearings the change can be made by simply removing the wood bearings and putting the roller bearings in their place.

Even the small working joints, such as pitmans, rocker arm, and pitman rod have the self-oiling wood bearings. **No other wind mill has these.**

### Specifications of Mill

Size of wheel .....	10 feet
Strokes, adjustable .....	4½ and 5½ inches
Weight .....	415 pounds

# Challenge Self-Oiling Vaneless Mill

*Hyatt Roller Bearings*

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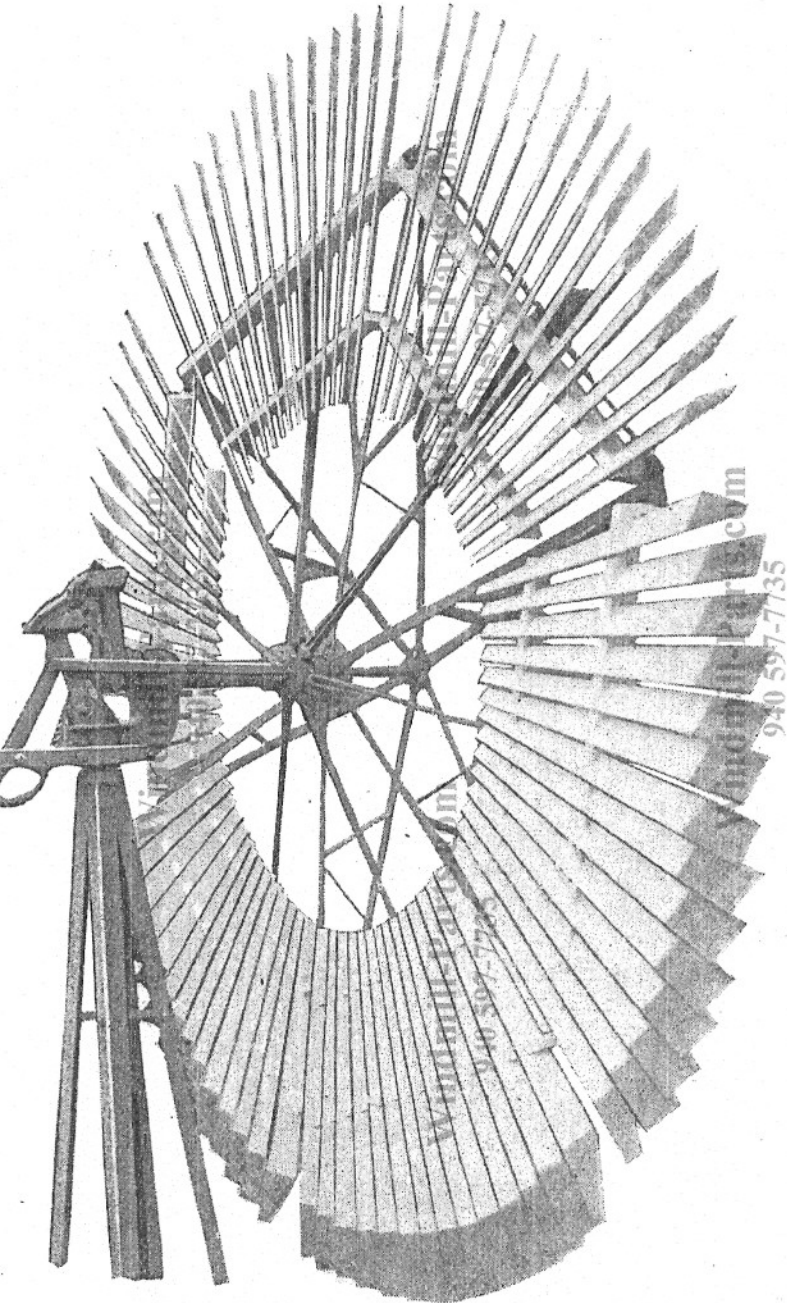
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*The lightest running,  
simplest and most durable  
Vaneless Mill made*

This wind mill can be easily erected on any  
Challenge or Dandy Tower now up and on  
other towers very easily.



## Challenge "Standard" Steel Towers

THE Challenge "Standard" Four-Post Steel Tower is another advance in modern wind mill building. It will stand the most severe strains that a wind mill is subjected to without buckling, one of the troubles most feared in towers. It is made in 12-foot sections with girts every six feet, which makes it very convenient and easy to build up from the ground, one section at a time.

The corner posts are two-inch by one-eighth inch galvanized angle steel, diagonally braced with heavy round braces and angle steel cross girts. The braces are made of heavy round steel rods with loop on each end and end twisted around the rod itself. They are fastened to the cross girts by a tightener which makes it possible to always keep the braces drawn up perfectly tight. Braces and cross girts are thus bound together, making the tower rigid and strong and overcoming the usual vibration and rattling. The material used in its construction is the best and of the proper size and weight to make a tower that is as near indestructible as possible.

All parts of the tower (except the platform) are thoroughly *galvanized* which prevents rust and makes a finish that will last a lifetime.

A regular ladder is furnished with each tower. It is made with angle steel sides and steps and is securely bolted to the cross girts

of tower. There is no danger in climbing a Challenge Tower.

Heavy galvanized steel anchor posts six feet long secure the tower to the ground so as to make it practically storm proof.

### Challenge No. 2 Heavy Steel Towers

The Challenge No. 2 Heavy Steel Tower is constructed same as the "Standard" except that it has 2½-inch corner posts.

Get a CHALLENGE Vaneless Mill and a CHALLENGE Steel Tower and you will have the best wind mill outfit made.

One good wind mill will outlast three poor ones and cost but little more, if any.

### Prices for Hyatt Roller Bearing Mills

10-ft. Mill with 12-ft. Standard Tower .....	\$ 80.00
10-ft. Mill with 24-ft. Standard Tower .....	93.75
10-ft. Mill with 36-ft. Standard Tower .....	111.25
10-ft. Mill with 48-ft. Standard Tower .....	128.75
10-ft. Mill with 60-ft. Standard Tower .....	153.75

Add 5% to above prices for CHALLENGE No. 2 Heavy Tower.

10-ft. Mill without Tower .....

Deduct \$5.00 from the above prices for Wind Mill equipped with wood self-oiling bearings.

# CHALLENGE COMPANY

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BRANCHES:

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Omaha, Nebraska — Dallas, Texas

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