Catalogue No. 104

1931

U. S. Wind Engine and Pump Co.

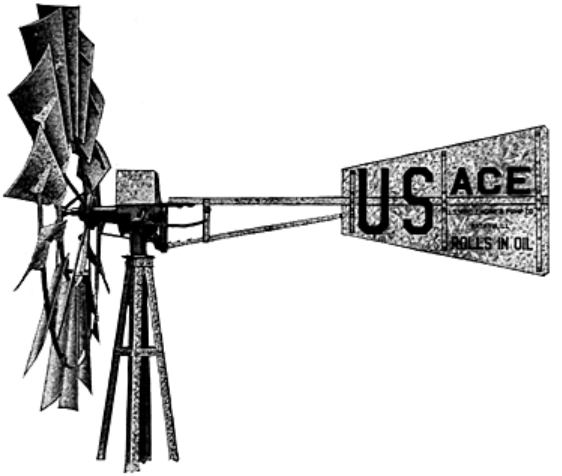
Omaha, Neb.

A Cut From Our First Catalogue, 1854

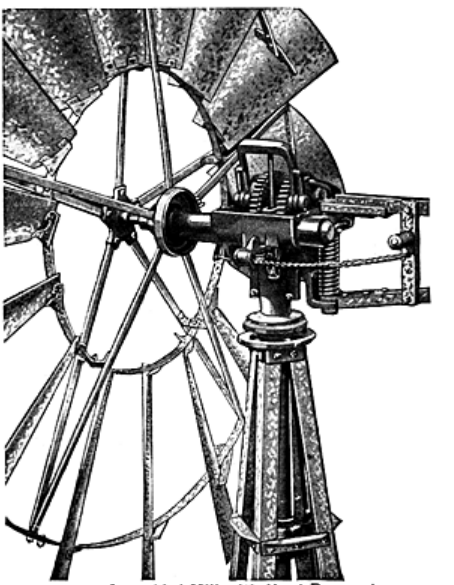
U.S. Ace Windmills

The U.S. Ace Windmill is fully described in the following pages.

Look it over in detail. Note the construction of the arms and that they form a perfect A frame. Note the attachment of the sails to the bands. Examine the gearing and see how the construction eliminates binding and friction. Remember that the power stroke requires nearly twice the wheel rotation that the return takes giving power when it is needed. Look at the simple and effective oiling system. Note that the mill can be furnished with Timken bearings on the main shaft if desired. Note the perfect balance of the mill.



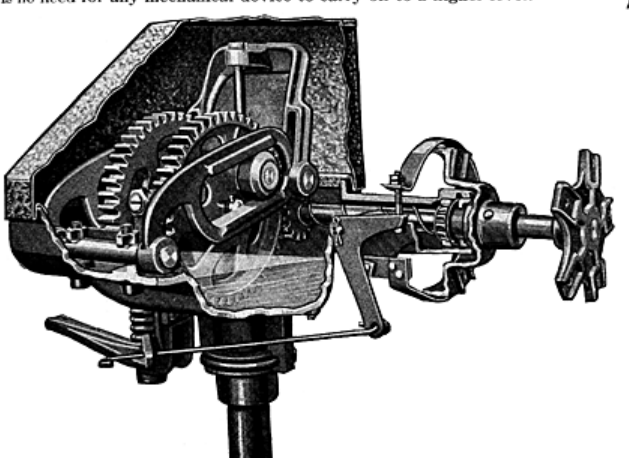
Remember that this Ace Windmill is the product of a company rated at over three quarters of a million dollars who have been manufacturing windmills for over 75 years and who present the Ace Mills as the best windmills made.



Assembled Mill with Hood Removed

The fact that it is necessary to locate a windmill in an exposed position and at an elevation above the ground created a demand for a mill requiring the least possible attention. With all the old style windmills it was necessary for someone to climb a tower occasionally to keep them oiled. With the Ace Windmill this is unnecessary as it constantly operates in a bath of oil which lubricates all working parts.

The main casting is in one piece and provides for two reservoirs of oil. A portion of the gears is submerged in the larger reservoir and in turning, the gears carry oil up to the pinions, main shaft, and crank gear shaft bearings. At every revolution the front ends of the rocker arms (with the yoke bearing pins) dip completely under the oil. In the smaller reservior, the oil covers the fulcrum ends of the rocker arms. Thus all bearings are flooded with oil and there is no need for any mechanical device to carry oil to a higher level.



Cut Away View of Motor

There is no pitman used on the Ace Windmill, an unusual feature and a long step in advance in windmill construction. Power is conveyed through the gears direct to the rocker arms and plunger with increased leverage on the up stroke and a faster movement on the down stroke while the load is relieved. The parts are arranged so that the load is perfectly balanced between the two rocker arms.

The crank gear bearing box is supported on two trunnions so that it will align itself with the gear shaft, balance the drive of the pinions equally between the gears, and equalize the load of the pump rod on the two rocker arms. Two steel rolls turning on the crank pins connect directly with the rocker arms.

The main shaft is cold rolled steel 1⅛ inches in diameter and 26 inches long in the 8-foot Ace and larger and longer in the larger sizes. The advantage of a long and strong main shaft with large bearing surface is easily apparent.

U. S. Ace Windmills

The main shaft bearings are regularly supplied with long grease impregnated wood bushings but can be furnished with Timken bearings at a small additional cost.

The crank pins are not separate parts secured to the gears but are part of the gear castings. This eliminates any possibility of their coming loose because of an improper fit, a point which will be fully appreciated by those who have been called upon to replace a loose crank pin.

The rolls have spherical faces and they roll in smooth cylindrical grooves in the rocker arms. The rolls are self aligning and are always freely supplied with oil so that they will last indefinitely.

Vane Support

The governing spring is an upright coil of specially tempered steel and is provided with a screw adjustment.

The Ace Windmill is the only windmill that lubricates the vane support.

The vane hinges on a cold rolled steel shaft in oil soaked wood bearings which prevent the possibility of squeaking.

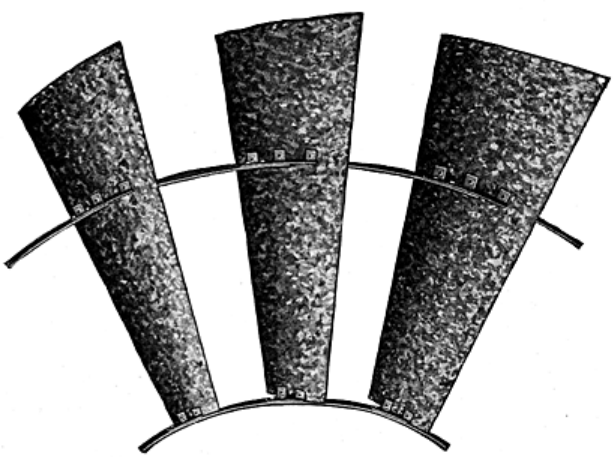
Spring Steel Brake

The brake is a band of spring steel circling a hub on the wheel spider. Its application is gradual as the mill is pulled out of sail and positive in action when fully applied. When released it springs away from any contact and is noiseless.

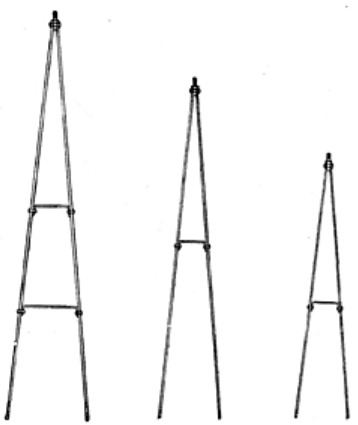
A double pump rod is used just below the plunger to which it is attached by a swivel connection. A guide for the pullout wire is located between the rods and secured to the platform. This provides a direct pull when the mill is drawn out of sail, doing away with any binding or side strain.

The mill is drawn out of sail by a pullout reel or windlass that is attached to a corner post of the tower. By releasing the ratchet or dog the mill goes into sail automatically.

Pullout Reel or Windlass



Wheel Section



12-Foot Wheel Arm

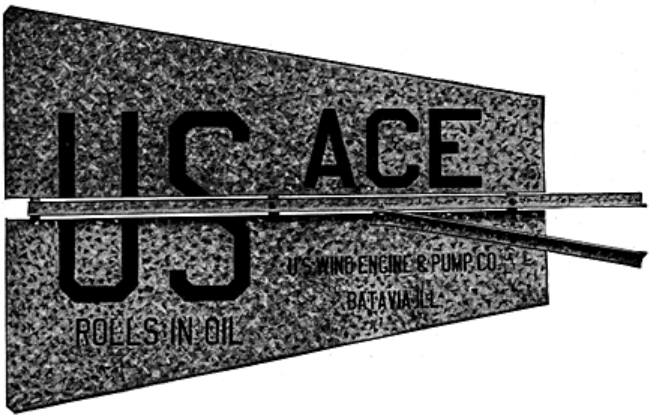
10-Foot Wheel Arm

8-Foot Wheel Arm

One of the most important features of windmill construction is the wheel itself and this is sometimes lost sight of because other less important features are made unduly prominent. The proper curve of blades, their distance from each other and the correct angle at which they should be placed can only be determined by long and patient study and experiment.

The Ace Windmill uses three blades in each section. There are five sections of fans in an 8-foot mill, six in a 10-foot mill and seven in a 12-foot mill. They are correctly placed and firmly held in position by substantial clips. The wheel is strong, produces the maximum of power from the wind, and is easy to assemble. Spring lock washers are used on all bolts effectively preventing the nuts from working loose. The blades are made of specially tempered stiff steel, heavily galvanized.

U. S. Ace Windmills



Galvanized Steel Vane

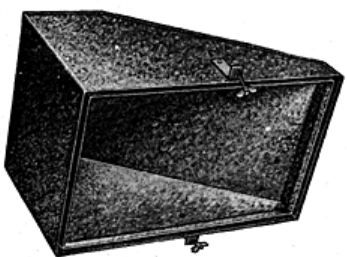
Ball-Bearing Turntable

The vane is substantially made of galvanized steel. Two large cushion springs relieve any jar that may be occasioned by putting the mill in or out of sail.

The vane balances the wheel and the motor is evenly balanced on either side of the mast so that the whole mill turns easily and freely on the bearing washers and chilled surface of the bedplate. The wind surfaces of wheel and vane are accurately calculated so that the mill handles itself perfectly in high winds, and reaches its maximum speed in a wind velocity of about 18 miles per hour. A stronger wind merely turns the mill partially out of sail allowing it to maintain its most efficient speed. It is unnecessary to pull the mill out of sail in case of a storm.

If desired a ball bearing turntable can be supplied at a small additional charge.

This turntable rests between the bedplate and the main casting and enables the mill to turn on the tower in the lightest breeze. There are twenty-seven hardened steel balls in the race way. The cover is so arranged as to make it water-tight. Oiling annually is sufficient.



Galvanized Steel Hood

The motor is completely covered by a galvanized steel hood so arranged as to positively exclude rain or dust and can be easily removed if desired.

Prices of U.S. Ace Galvanized Steel Windmills

Size Feet	Stroke Inches	Weight Pounds	Windmills, Each With Wood Bushings	With Timken Bearings	Add for Ball Bearing Turntable
6	6	315	$45.33	$48.66	$2.67
8	6	370	51.33	54.66	2.67
10	7½	590	73.33	77.66	2.67
12	9	900	120.00	125.33	4.00

All Ace Windmills are back-geared to 3⅛ revolutions of the wheel to one stroke of the pump. Unless otherwise specified, wood bearings are furnished.

When towers are ordered with windmills sufficient wood rod will be furnished to operate the pump without added charge.

When windmills only are ordered the following added charges will be made if wood is furnished:

For 6, 8 or 10-foot mills 1⅝ inch rod, 12, 14 or 16-foot lengths, 4.7 cents per lineal foot.

Splice irons with bolts per pair, 20 cents.

For 12-foot mills 1⅞ inch rod, 12 and 14-foot lengths, 6.7 cents per lineal foot.

Splice irons per pair, 33 cents.

Table of Capacities of the Ace Windmills Giving Size of Pump Cylinders Which Are Recommended for Varying Elevations

		Elevation, Feet																					
		10		20		30		40		50		75		100		125		150		175		200		250	
Mill	Cyl.	Diam.	Gal. per	Diam.	Gal. per	Diam.	Gal. per	Diam.	Gal. per	Diam.	Gal. per	Diam.	Gal. per	Diam.	Gal. per	Diam.	Gal. per	Diam.	Gal. per	Diam.	Gal. per	Diam.	Gal. per	Diam.	Gal. per
Feet	In.	Cyl. In.	Hr.	Cyl. In.	Hr.	Cyl. In.	Hr.	Cyl. In.	Hr.	Cyl. In.	Hr.	Cyl. In.	Hr.	Cyl. In.	Hr.	Cyl. In.	Hr.	Cyl. In.	Hr.	Cyl. In.	Hr.	Cyl. In.	Hr.	Cyl. In.	Hr.
8	6	1500	5	1050	4	680	3½	475	3	380	2¾	320	2½	270	2	170	...	...	...	...	...	...	...	...	...
10	8	2600	6	1450	5	1000	4½	825	4	650	3½	500	3	360	2¾	300	2½	250	2¼	200	2	160	...	...	...
12	8	2700	6	1550	6	1525	5½	1200	5	1050	4½	850	3½	520	3	400	3	385	2¾	325	2¾	310	2½	260	

The capacities given above are from actual experience and repeated tests and are conservative. They are based on continuous operation in a wind velocity of 18 miles per hour at which point their maximum speed is reached when loaded as above. The Ace Windmills will operate in lower wind velocity to equal the maximum capacity 8 hours of the average day. Multiplying the capacities by 8 will give the approximate daily capacity.

Repair Parts for U. S. Ace Windmills

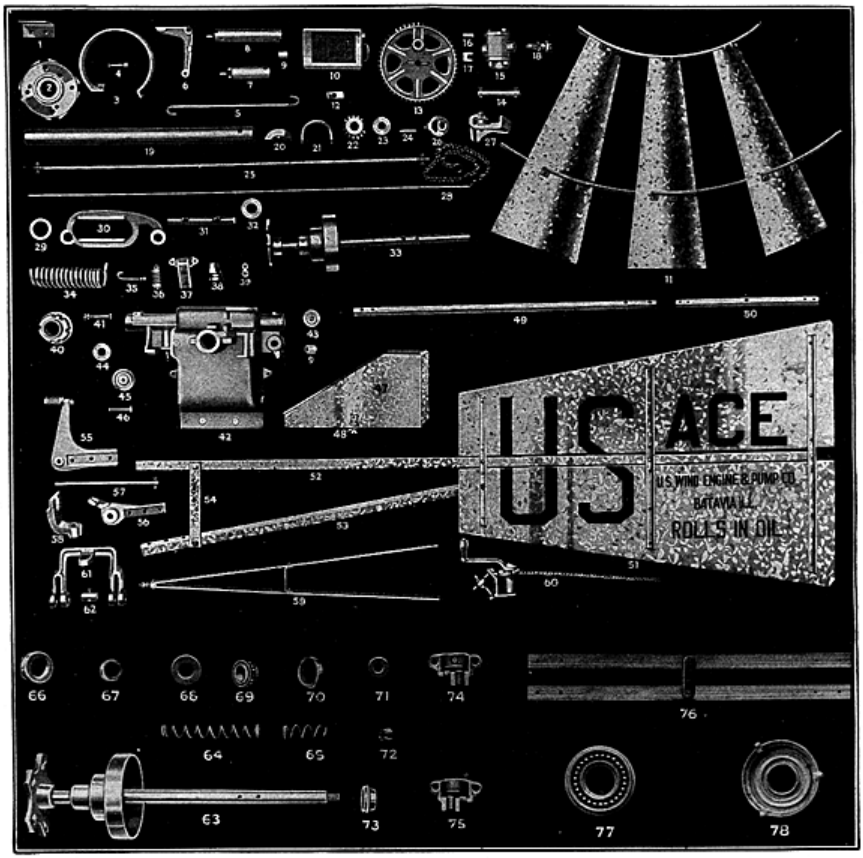


Chart No.	Description	8-Foot Mill Casting No.	8-Foot Mill Each	10-Foot Mill Casting No.	10-Foot Mill Each	12-Foot Mill Casting No.	12-Foot Mill Each
1	Angle Clip for Bedplate	.....	$.15	.....	$.15	.....	$.20
2	Bedplate	BC-323	1.25	BC-323	1.25	D-323	1.85
3	Brake Band	.....	.95	.....	1.00	.....	1.00
4	Brake Band Adjusting Bolt with Nuts	.....	.10	.....	.10	.....	.10
5	Brake Rod Hook	.....	.15	.....	.15	.....	.30
6	Brake Lever	T-811	.30	T-1011	.35	T-1211	.55
†7	Bushing, Wood, Short for Main Shaft	.....	.40	.....	.55	.....	.90
†8	Bushing, Wood, Long for Main Shaft	.....	.50	.....	.70	.....	1.00
9	Bushing for Vane Hinge Shaft, Wood	.....	.10	.....	.10	.....	.20
10	Can with Oil	3 Qt.	1.00	6 Qt.	1.85	8 Qt.	2.30
11	Fan Section, Complete	.....	2.80	.....	3.25	.....	3.85
..	Extra for Crating 1 Section	.....	.70	.....	.75	.....	.90
..	Extra for Crating 2 or More Sections	.....	1.00	.....	1.20	.....	1.40
	Crating charges not subject to discount.						
..	Fan Slat Complete with Clips	.....	.85	.....	.95	.....	1.15
..	Fan Slat Only	.....	.60	.....	.75	.....	.90
..	Fan Clip, Large	.....	.15	.....	.15	.....	.15
..	Fan Clip, Small	.....	.10	.....	.10	.....	.10
..	Fan or Wheel Band, Short	.....	.25	.....	.30	.....	.35
..	Fan or Wheel Band, Long	.....	.50	.....	.65	.....	.80
12	Filler for Wood Tower	N-206	.10	N-206	.10	P-224	.15
13	Gear, Prior to June 1929	T-801	2.85	T-1001	3.70	T-1201	5.10
..	Gear	T-801★	2.85	T-1001★	3.70	T-1201★	5.10
14	Gear Coupling Shaft with Cotter Pins for T-801	.....	.30	.....	.35	.....	.45
..	Gear Coupling Shaft with Washers for T-801★	.....	.40	.....	.45	.....	.60

†For wood bearing mills only.

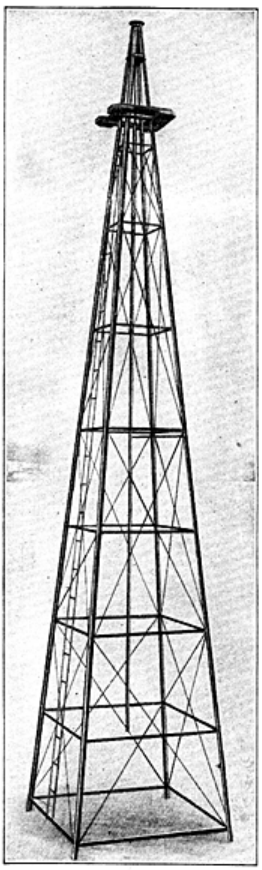
Repair Parts for U.S. Ace Windmills

Chart No.	Description	8-Foot Mill: Casting No.	8-Foot Mill: Each	10-Foot Mill: Casting No.	10-Foot Mill: Each	12-Foot Mill: Casting No.	12-Foot Mill: Each
15	Gear Bearing	T-803	$2.10	T-1003	$3.05	T-1203	$5.20
16	Gear Bearing Pin	.....	.10	.....	.10	.....	.15
17	Gear Bearing Shim	.....	.10	.....	.10	.....	.10
18	Gear Adjusting Screw Only	.....	.40	.....	.50	.....	1.10
..	Gear Adjusting Screw Lock Washer Only	.....	.10	.....	.10	.....	.10
..	Gear Adjusting Screw Grip Nut Only	.....	.10	.....	.10	.....	.10
19	Mast Pipe	.....	1.60	.....	1.60	.....	2.35
20	Mast Pipe Clamp	T-1017	.20	T-1017	.20	T-1217	.30
21	Mast Pipe Clamp U Bolt with Nuts and Lock Washer	.....	.35	.....	.35	.....	.60
22	Pinion with Pin	T-802	.75	T-1002	.90	T-1202	1.60
23	†Pinion Thrust Washer Only	.....	.10	.....	.10	.....	.10
24	Pinion Pin Only	.....	.10	.....	.10	.....	.15
25	Plunger Rod with Cotter Pins	.....	.80	.....	.90	.....	1.15
26	Plunger Rod Guide, One Piece (Prior to 1930). (See 74 and 76 for Two Piece)	T-812	.40	T-812	.40	T-1212	.65
27	Pulley Extension Bracket with Pulley and Pin	.....	.90	.....	1.00	.....	1.00
..	Pulley Extension Bracket Only	T-816	.70	T-1016	.75	T-1016	.75
..	Pulley Extension Bracket Pulley Only	BC-315	.10	BC-315	.10	BC-315	.10
..	Pulley Extension Bracket Pin Only	.....	.10	.....	.10	.....	.10
28	Pullout Wire with Chain and Split Ring	.....	.85	.....	.95	.....	1.00
..	Pullout Wire Split Ring Only	.....	.10	.....	.10	.....	.10
29	Ring or Bearing Washer for Duplate	.....	.10	.....	.10	.....	.35
30	Rocker Arm	T-804	.95	T-1004	1.65	T-1204	2.20
31	Rocker Arm Bearing Shaft	.....	.70	.....	.80	.....	1.10
32	Roller for Rocker Arm	.....	.65	.....	.90	.....	1.96
33	†Shaft with Spider and Nose Piece	.....	4.10	.....	5.25	.....	9.00
34	Spring, Governing	.....	1.35	.....	2.50	.....	3.60
35	Spring, Adjusting Bolt with Nuts	.....	.30	.....	.30	.....	.30
36	Spring, Relief with Washer and Bolt	.....	.30	.....	.40	.....	.50
..	Relief Spring Only	.....	.20	.....	.30	.....	.30
..	Relief Spring Washer Only	A-335	.10	D-335	.10	D-335	.10
..	Relief Spring Bolt Only	.....	.10	.....	.10	.....	.10
37	Swivel Casting, Female, Half Plain	T-814	.20	T-1014	.30	T-1214	.55
..	Swivel Casting, Female, Half Tapped for Grease Cup	T-814	.25	T-1014	.40	T-1214	.65
..	Grease Cup for Swivel Casting	.....	.10	.....	.10	.....	.10
38	Swivel Casting, Male	T-813	.60	T-1013	.65	T-1213	.95
39	Swivel for Pullout Wire	.....	.10	.....	.10	.....	.10
40	Truing Spider	BC-320	.50	BC-320	.50	D-320	.60
41	Truing Spider Bolt with Nut, Lock Washer and Cotter	.....	.15	.....	.15	.....	.15
42	†Turntable with Wood Bushings and Pins	T-800	8.90	T-1000	14.00	T-1200	18.75
.	Turntable with Cups No. 70 for Timken Bearing, Not No. 69 for Bearing Cones	T-820	8.90	T-1020	14.00	T-1220	18.75
43	†Turntable Bearing Cover	.....	.10	.....	.10	.....	.25
44	†Turntable Felt Washer	.....	.10	.....	.10	.....	.20
45	Turntable Pulley	T-815	.25	T-1015	.25	T-1015	.25
46	Turntable Pulley Pin with Cotter Pin	.....	.10	.....	.10	.....	.10
47	Turntable Hood	.....	2.95	.....	3.60	.....	4.10
48	Turntable Hood Bolts with Wing Nuts	.....	.10	.....	.10	.....	.10
49	Twin Rod, per pair	.....	.60	.....	.70	.....	1.05
50	Twin Rod Guide, Replaced by No. 76	.....	.25	.....	.25	.....	.35
51	Vane Sheet with Braces	.....	3.25	.....	4.35	.....	4.65
52	Vane Rail, Upper	.....	1.35	.....	2.35	.....	3.25
53	Vane Rail, Lower	.....	.90	.....	1.25	.....	1.80
54	Vane Tie Bar with Bumper Spring	.....	.60	.....	.70	.....	.80
55	Vane Hinge, Upper	T-808	.95	T-1008	1.40	T-1208	1.85
56	Vane Hinge, Lower	T-809	.40	T-1009	.80	T-1209	1.10
57	Vane Hinge Shaft with Cotter Pin	.....	.35	.....	.80	.....	.90
58	Vane Support with Wood Bushing	T-810	.50	T-1010	.90	T-1210	1.25
59	Wheel Arm, Complete	.....	1.25	.....	1.45	.....	2.00
..	Wheel Arm Knee	.....	.10	.....	.10	.....	.....
..	Wheel Arm Knee, Inside	.....	.....	.....	.....	.....	.15
..	Wheel Arm Knee, Outside	.....	.....	.....	.....	.....	.10
..	Wheel Arm Flat	.....	.40	.....	.60	.....	.80
..	Wheel Arm Connector with Nut and Lock Washer	.....	.30	.....	.30	.....	.30
60	Windlass, Complete with Chain	.....	1.70	.....	1.70	.....	1.70
..	Windlass Bracket Only	U-238	.45	U-239	.45	U-239	.45
..	Windlass Handle Only	U-240	.55	U-240	.55	U-240	.55
..	Windlass Ratchet Gear Only	U-241	.10	U-241	.10	U-241	.10
..	Windlass Dog Only	U-242	.10	U-242	.10	U-242	.10
..	Windlass Angle Washer Only	U-243	.10	U-243	.10	U-243	.10
..	Windlass Carriage Bolt Only	.....	.10	.....	.10	.....	.10
..	Windlass Chain Only	.....	.45	.....	.45	.....	.45
61	Yoke	T-805	1.85	T-1005	2.50	T-1205	5.20
62	Yoke Bearing Pin with Cotter Pin	.....	.30	.....	.35	.....	.35
63	**Shaft, with Spider and Nose Piece	.....	5.75	.....	7.20	.....	11.75
64	**Oil Carrying Springs, Long	.....	.15	.....	.20	.....	.25
65	**Oil Carrying Springs, Short	.....	.10	.....	.15	.....	.20
66	**Turntable Bearing Cover, Front Brass	T-824	.65	T-1024	1.05	T-1224	1.15
67	**Bearing Thrust Collar	.....	.10	.....	.15	.....	.15
68	**Oil Throw-Off Washer	.....	.10	.....	.10	.....	.10
69	**Timken Bearing Cone, Only	1985	1.40	2786	1.85	3577	2.35
70	**Timken Bearing Cup, Only	1931	.80	2720	1.10	3525	1.40
71	**Take-Up Washer for Timken Bearing	.....	.10	.....	.10	.....	.10
72	**Take-Up Nut for Timken Bearing	.....	.10	.....	.10	.....	.10
73	**Turntable Bearing Cover, Rear	T-825	.45	T-1025	.50	T-1225	.60
74	Plunger Rod Guide, Half with Boss	T-821	.20	T-821	.20	T-1221	.30
75	Plunger Rod Guide, Plain Half, for Old Style One Piece See No. 26	T-822	.20	T-822	.20	T-1222	.30
76	Twin Rod Guide, Complete, Replacing No. 50	.....	.75	.....	.75	.....	.90
..	Twin Rod Guide Wire Casting Only	T-823	.10	T-823	.10	T-1223	.15
77	Ball-Bearing Turntable, Bottom Half Only, without Balls	T-817	.65	T-817	.65	T-1218	.80
77	Ball-Bearing Turntable, Top Half Only	T-818	.75	T-818	.75	T-1219	.95
..	Balls for Ball-Bearing Turntable, per set	.....	.75	.....	.75	.....	.80

†For wood bearing mills only. **For Timken bearing mills only.

Note.—To avoid delay and annoyance, all repair orders must have Chart No. and Casting No., also diameter of wind wheel.

U.S. Galvanized Steel Towers

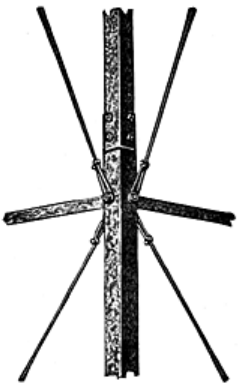


In buying a tower for a windmill, get one high enough to locate the windmill well above nearby trees and buildings. A windmill blocked by obstructions cannot give its best service.

All our windmill towers are built in multiples of ten feet with cross girts every five feet and round steel brace rods covering a panel of ten feet. Experience has shown this to be the most satisfactory method of construction and to make the towers more convenient for transportation and handling.

If a tower does not buckle it cannot go over unless it pulls up the anchorage, hence the importance of an adequate number of girts to keep the corner posts in perfect alignment.

In an actual test a 40-foot four-post tower with 2½x2½x⅛-inch corner posts girted every ten feet buckled with a pull of 1200 pounds, while the same height four-post tower with 2¼x2¼x⅛-inch corner posts and girts every five feet did not buckle until a strain of 1688 pounds was placed upon it, demonstrating clearly the advantage in placing the girts not more than five feet apart.



Brace Rods

The brace rods are round steel utilizing the full strength of the rod. They are cut to exact length and formed by machines especially designed for the purpose and when assembled in accordance with directions, will draw tight and stay that way. Side ladders are furnished with all windmill towers.

Anchor Post and Round Anchor Plate

There are two decided advantages in building towers in ten-foot sections. One is that they may be erected readily by building them up from the ground. The other is that a mill found to be too low due to the growth of trees or the erection of new buildings can be raised by any multiple of ten feet by adding new sections to the bottom of the tower.

Anchor posts and round cast iron anchor plates to be buried in the ground are furnished for anchorage.

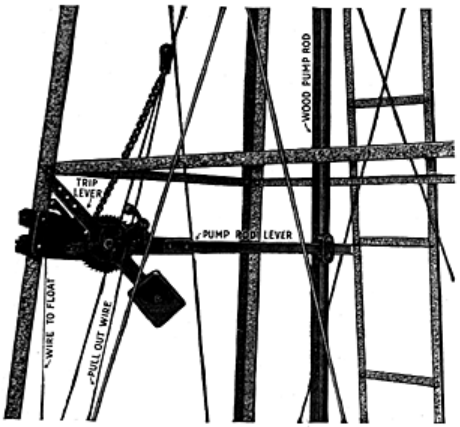
Towers for 6 and 8-foot mills are built of 2x2x⅛-inch angle corner posts for the top 30 feet. Below this they are increased to 2¼x2¼x⅛-inch angles to 60 feet. Seventy-foot towers for 8-foot mills are the same as for 10-foot mills.

Towers for 10-foot mills are built of 2¼x2¼x⅛-inch angles for the top 30 feet and of 2½x2½x⅛-inch below this. Towers for 12-foot mills are built of 2½x2½x⅜-inch angles for all heights. All towers have girts every five feet. Anchor posts for the 8 and 10-foot mills are 2½x2½x⅛-inch angle, and for the 12-foot mills are 2¾x2¾x⅜-inch angles.

4-Post for Mills Feet	Size, Feet 20 Each	20 Weight Pounds	30 Each	30 Weight Pounds	40 Each	40 Weight Pounds	50 Each	50 Weight Pounds	60 Each	60 Weight Pounds	70 Each	70 Weight Pounds
6 and 8	$34.66	365	$49.33	517	$66.66	702	$86.66	917	$112.00	1181	$146.66	1533
10	37.33	387	52.00	548	70.33	741	91.33	966	117.33	1236	146.66	1533
12	50.00	567	70.66	778	93.33	1012	116.00	1278	144.00	1589	176.00	1926
14	75.00	832	97.00	1079	119.00	1349	146.00	1670	175.00	2043	218.00	2541
16	83.00	933	104.00	1199	131.00	1493	164.00	1890	200.00	2353	262.00	3118

Above prices on towers include anchor posts and plates, or anchor lugs.

No. 1463 U.S. Windmill Regulators

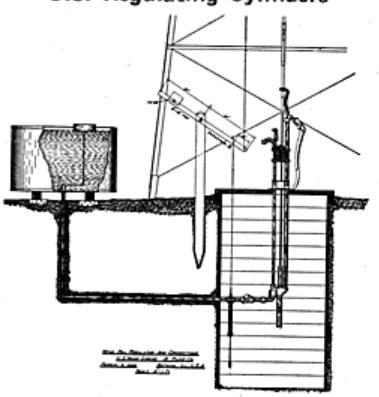


The regulator is controlled by a wood float in the tank. As the tank fills, the float rises and releases the ratchet which is in turn governed by a counter balance weight, thus placing the device in operation and pulling the mill out of sail. When the water in the tank recedes to a point where the wood float overcomes the counter balance weight the operation is reversed allowing the mill to come into sail.

It is well proportioned and all parts are of ample strength.

No. **1463**.....each **$6.67**

U.S. Regulating Cylinders



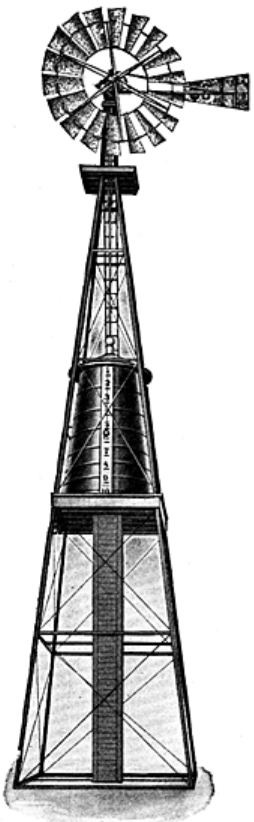
This regulating cylinder may be used with U.S. or other underground force pumps to pull the windmill out of sail when the tank is full. The illustration shows how the cylinder is connected.

The weight near the outer end of the lever must be placed so it will hold the plunger in the regulating cylinder at the top of the cylinder when pumping into the tank. The float closes valve when tank is full, and back pressure forces down the plunger in the regulating cylinder, throwing the mill out of sail. When water is used from the tank, the pressure is relieved and the cylinder allows the mill to come into sail. It will work even though the tank is several hundred feet from the well.

Size	inches	1½x16
Without Lever and Weight	each	$6.50
With Lever and Weight	each	9.11

U.S. Combination Tank and Windmill Outfits

4-Post Galvanized Steel Tower for 21 and 62-Barrel Special Taper Tanks and 8, 10 or 12-Foot Windmills



A liberal supply of running water adds more to the comfort of the farm or suburban home than any other convenience.

This may be easily obtained at a very reasonable cost by using an outfit as shown and outlined above.

The sections of the tower below the tank are made of heavy steel properly proportioned to support both the tank and the windmill. Above the tank a regular windmill tower is used. This makes a very compact and economical arrangement. The sizes listed are our regular stock sizes but special designs for larger outfits of the same type can be supplied. We can furnish the complete installation, tower, tank, windmill, frost box, roof, indicator and other accessories.

For 21-Barrel Tank

Height of Tower	feet	40	50
Elevation of Tank	feet	20	30

For 62-Barrel Tank

Height of Tower	feet	50	60
Elevation of Tank	feet	20	30

Special Taper Tower Tanks

Tank Stave	feet	7	8
Bottom Diameter of Tank		5′5″	8′0″
Capacity Barrels		21	62

Prices on application.

U.S. Tanks and Towers

We manufacture at our plant at Batavia, Illinois, wood tanks and vats for all purposes and can supply any requirements promptly. Wood tanks should be made of the best quality of lumber. Poor tank lumber means short life and unsatisfactory service.

We carry in our yards at Batavia, Illinois, a large stock of 2 and 3 inch redwood, cypress and fir, suitable for tanks up to and including 100,000 gallons capacity.

A wood tank is the best container for water and many other liquids and we are prepared to furnish wood tanks of any shape or size designed to meet your requirements.

We can furnish any size tank up to 100,000 gallon capacity in fir, redwood or cypress with round, flat or half round hoops as desired. Roofs and frost boxes for the protection of tank riser pipes can be supplied to meet practically any requirements. We are prepared to furnish either tanks alone or entire installations including tank, tank tower or support, tank piping, frost box, roof, float indicator and other accessories erected complete.

Redwood

Our redwood is all clear, heart redwood. Redwood trees are the oldest living things. The lumber contains a natural preservative which protects it from rot and decay; is practically free from warping and shrinking, difficult to ignite and slow burning.

After a redwood tank has been filled and emptied several times, no discoloration, odor or taste is given off and it makes one of the sweetest and best containers for almost any liquid.

Cypress

Our cypress is all tank-grade Louisiana red cypress, the best quality obtainable, more expensive and better suited to tank purposes than any other grade.

A tank should be well made and of the best quality of cypress such as we use exclusively. Too often a buyer uses the general term "cypress tank" in his inquiry and then buys on the low bid. The word "cypress" is then found to cover a multitude of sins.

Cypress is called "the wood everlasting" and there is no better wood known from which to build tanks and vats.

Fir

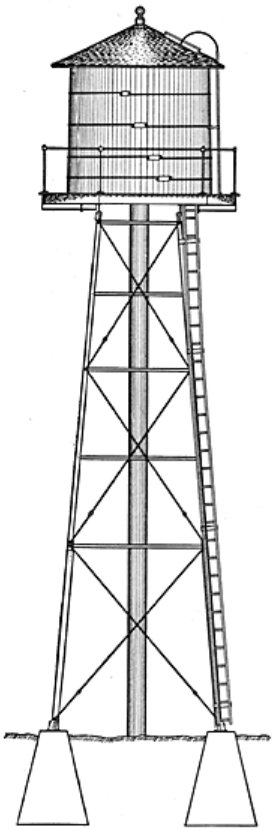
Tank-grade fir is used in our tanks. This is the best quality of fir possible to procure for tank purposes.

Fir is a very strong, fine looking lumber and probably more commonly used for making tanks than any other lumber.

Tank Towers

Steel tank towers for the support of tanks are made in any height required; properly designed and accurately fabricated. Our structural shop has built thousands of tank towers and is especially equipped to handle such work.

U.S. Tank Towers

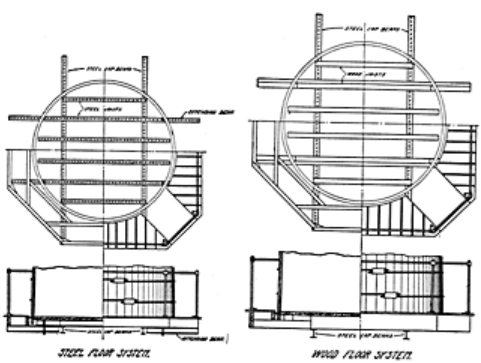


A wood tank supported on a steel tower gives the most reliable water storage. The force of gravity does not fail and as long as there is any water in the tank, practically full pressure is assured. A wood tank protects its contents from the heat of summer and from freezing in winter. Water from a wood tank is cool and sweet.

The design shown to the left is furnished either painted or hot galvanized for use with tanks 6x6 (1000 gallons), 7x7 (1700 gallons), 8x8 (2600 gallons) and 10x10 (5200 gallons).

These towers are regularly made in 10, 15, 20, 25, 30, 40, 50 and 60-foot heights and these elevations are ordinarily carried in stock.

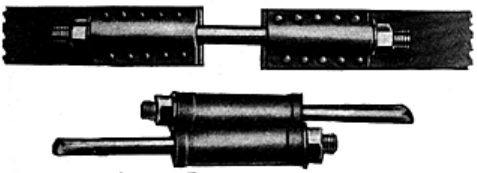
The tower as regularly furnished includes anchor rods, the steel cap beams, and the tower ladder. On these cap beams either wood or steel joists may be placed to support the tank bottom. A walkway and hand rail can be furnished if desired. A frost box should usually be used to protect the tank riser pipe and a tank ladder is advisable.



These installations are neat and attractive in appearance and require practically no attention.

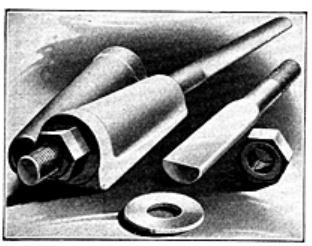
Prices on application.

U.S. Tank Hoops and Lugs



Lugs for Flat and Round Hoops

Tank hoops are regularly made of wrought iron instead of steel as a protection against corrosion and can be furnished either round, flat or half round for the larger sizes. For small tanks round hoops are used.



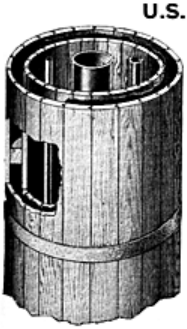
The illustration at the left shows the method of using half rounds for hoops. A half round hoop does not cut into the tank staves as much as a round hoop and does not form a pocket for dust and water on its upper side.

In addition to their use on tanks, hoops may be used for silos.

U.S. Steel Ladders

We manufacture steel ladders in a wide variety of designs and weights. They can be furnished either black or galvanized. If you want a steel ladder for any purpose we can fill your requirements.

U.S. Frost Boxes



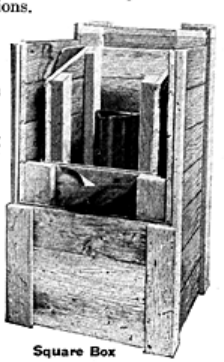
Round Box

In cold climates piping to an elevated tank must be protected from freezing. This piping is usually enclosed in a double, triple or quadruple box, made of boards and tarred paper and either square or round.

Round boxes (as shown in the illustration to the left) are regular equipment with us.

We make them in sections 10, 12 and 14 feet long. Each length is in halves, one end female and the other male and both vertical and horizontal joints dovetail to make perfect connections.

The square box (as shown in the illustration to the right) as regularly built consists of dressed and matched flooring laid horizontally, driven tightly together and nailed on upright studding. Building paper is used between the layers of boards. Corner boards give a neat appearance and increase the tightness of the box. The square box is assembled in the field.



Square Box

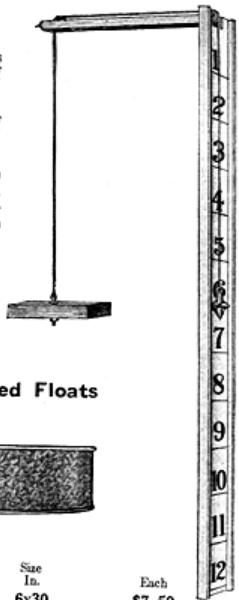
U.S. Indicator Boards

This indicator board is used to register the depth of water in tanks.

Made for all heights of wood or steel tanks.

Furnished complete with star marker, copper cable, pulleys and wooden, galvanized or copper float with eye bolt.

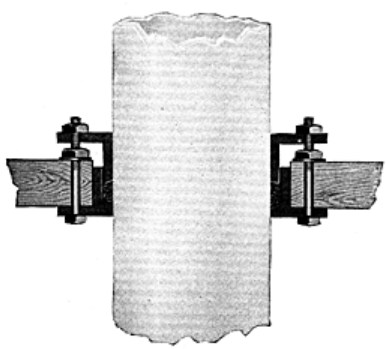
Prices on application.



U.S. Galvanized Floats

Size In.	Each	Size In.	Each
4x16	$4.00	6x30	$7.50
4x20	4.75	9x30	8.25
6x20	5.00	12x36	11.50
4x30	7.00	.....	.....

U.S. Tank Stuffing Boxes



The stuffing box shown in the above illustration will care for expansion and contraction and will make a water-tight joint where pipes go through the bottom of tank.

Packing is placed in the space between the two parts of the joint and pressed in place against the pipe by tightening the bolts.

These stuffing boxes are made for any size pipe and for use with 2 or 3-inch tank bottom.

	Each			Each			Each	
Size In.	For C. I. Pipe	For Wrt. Pipe	Size In.	For C. I Pipe	For Wrt. Pipe	Size In.	For C. I. Pipe	For Wrt. Pipe
2	....	$3.50	4	$5.00	$5.00	8	$10.00	$10.00
2½	....	3.85	5	....	6.50	10	13.25	13.25
3	....	4.25	6	7.00	7.00	12	16.50	16.50

In ordering specify whether for cast iron or wrought pipe.