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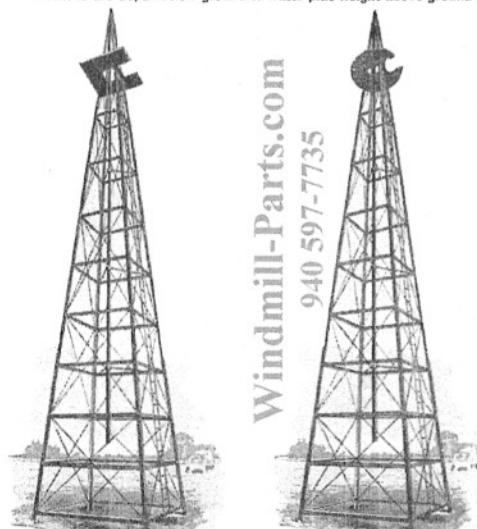
# \*CAPACITY OF 8-Ft., 10-Ft. and 12-Ft. STEEL ECLIPSE WINDMILL

SIZE	Actual Useful Horse Power	Approx. R.P.M.	Length of Stroke in inches	25' Head or 10.8 lbs. Pressure	50' Head or 21.7 lbs. Pressure	75' Head or 32.5 lbs. Pressure	100' Head or 43.4 lbs. Pressure	125' Head or 54.2 lbs. Pressure	150' Head or 65.1 lbs. Pressure	200' Head or 86.7 lbs. Pressure	250' Head or 108.25 lbs. Pressure
				Inside Diam. of Cylind-der in inches	Gals. pumped per hour	Inside Diam. of Cylind-der in inches	Gals. pumped per hour	Inside Diam. of Cylind-der in inches	Gals. pumped per hour	Inside Diam. of Cylind-der in inches	Gals. pumped per hour
8 ft.	.08	30	6	3 3/4	516	2 3/4	276	2 1/4	156	2 1/4	147
10 ft.	.12	24	7 1/2	4 1/2	743	3 3/4	388	2 3/4	278	2 1/4	186
12 ft.	.18	20	9	5 1/2	1306	4	692	3 3/4	457	2 3/4	326

\*Based on a wind velocity of 15 miles per hour.

\*\*This is the depth below ground to water plus height above ground at which water is discharged.

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No. 1—50-ft. Tower, Girts 5 ft. apart. 2 inch by 2 inch angle corner post.

No. 2—50 ft. Tower, Girts 5 ft. apart. 2 1/2-inch by 2 1/2-inch angle corner post.

## CAPACITY

The stroke of the 8-ft. type Steel Eclipse windmill is 6 inches long, therefore a well cylinder at least 12 inches long should be used so that there will be ample clearance at the top and bottom of the stroke. On the 10-ft. windmill the stroke is 7 1/2 inches and well cylinder should be 16 inches long; on the 12-ft. windmill the stroke is 9 inches and well cylinder should be 18 inches long.

## Galvanized Steel Towers

In keeping with the ruggedness of the windmill construction, Fairbanks-Morse galvanized steel towers are built to withstand the severe strains of windmill service. Cross girts at 5-ft. intervals and galvanized steel wire braces with adjustable tension bolts permit of an exceptionally rigid structure as well as greater flexibility in the matter of erection. They can be furnished in a variety of heights.

### TABLE OF TOWER WEIGHTS

No. 1 Tower for 8-ft. mill			No. 2 Tower for 8-ft. or 10-ft. mill			No. 3 Tower for 12-ft. mill		
Nom-inal Ht., Ft.	Apprx. Wght. Lbs.	Code Word	Apprx. Wght. Lbs.	Code Word	Apprx. Wght. Lbs.	Code Word	Apprx. Wght. Lbs.	Code Word
20	280	Beck	340	Beast	410	Boagel		
30	420	Becker	500	Beaby	650	Boar		
40	600	Beckon	700	Beacon	950	Boarded		
50	900	Becket	1000	Beada	1200	Boards		
60	1180	Becked	1350	Beadle	1600	Boarish		
70			1880	Beaham	2150	Boast		
80			2500	Beak	2745	Boasted		

## Fairbanks, Morse & Co.

Manufacturers

Executive Offices:—Chicago

Atlanta, Ga.  
Baltimore, Md.  
Boston, Mass.  
Charlotte, N. C.  
Chicago, Ill.  
Cincinnati, Ohio.  
Cleveland, Ohio.  
Dallas, Texas.  
Denver, Colo.  
Des Moines, Iowa.  
Detroit, Mich.  
Fresno, Cal.  
Indianapolis, Ind.  
Jacksonville, Fla.  
Kansas City, Mo.  
Los Angeles, Cal.

Louisville, Ky.  
Milwaukee, Wis.  
Minneapolis, Minn.  
New Orleans, La.  
New York, N. Y.  
Omaha, Neb.  
Pittsburgh, Pa.  
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Salt Lake City, Utah  
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Seattle, Wash.  
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St. Louis, Mo.  
St. Paul, Minn.  
Stuttgart, Ark.

Foreign Department, New York

FOREIGN BRANCHES

London, Eng., Sydney, Aus., Buenos Aires, Arg.

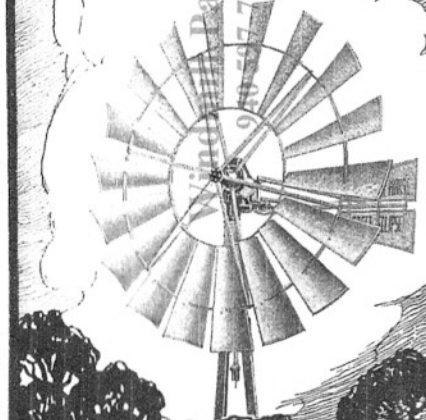
The  
Canadian Fairbanks-Morse Co.  
(Limited)

St. John  
Quebec  
Montreal  
Ottawa  
Toronto



Windsor  
Winnipeg  
Regina  
Calgary  
Vancouver  
Victoria

# STEEL ECLIPSE



## Self Oiling Windmill

## Fairbanks, Morse & Co.

## Power from even a light breeze

The Steel Eclipse combines in a commendable way the two chief requirements of good windmill construction—lightness and durability. Every sail in the wheel is carefully curved to get the full benefit of the wind. They are made of hard stiff steel with a re-inforcing corrugation across the outer end. They are riveted to the girts in such a way that they cannot lose their curvature. When bent, they spring back into shape.

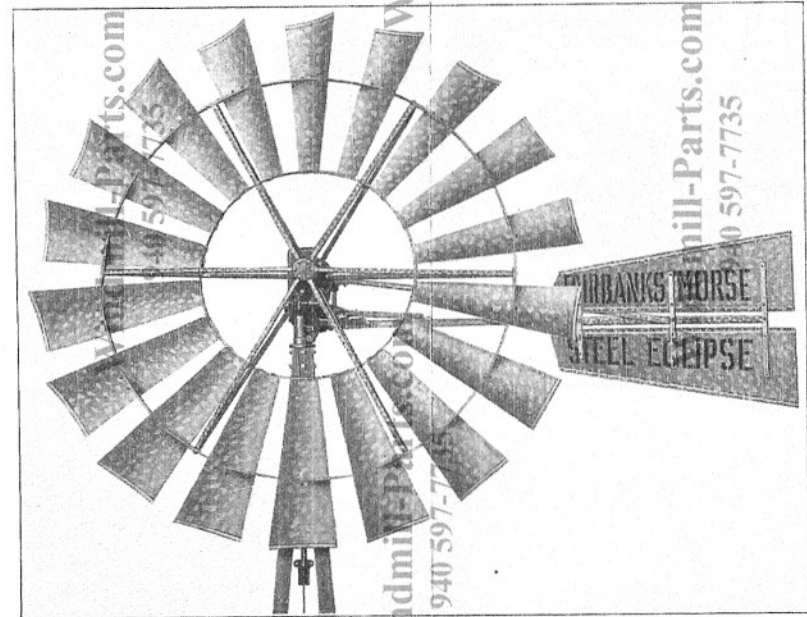
The motor or mechanism is accurately machined and thoroughly lubricated so that very little of the wind power is used in overcoming friction of the working parts. The wheel will pump in a light wind when more cumbersome and less carefully built mills would remain at a standstill.

## Strength to withstand the storm

And in the storm, when every windmill gets its real test for dependability, the Steel Eclipse operates with its usual ease and steadiness. When the wind reaches a velocity of approximately 15 miles an hour, the governing mechanism comes into play, gradually turning the wheel on its pivot and deflecting the wind more and more until finally when the wind reaches a dangerous velocity, the edge of the wheel only is presented to the wind—in other words, the wheel is “out of gear.”

And all during this action the brake grips the drum on the wheel spider. The harder the wind blows, the tighter the brake holds.

There is a life-time of service built into the Steel Eclipse.

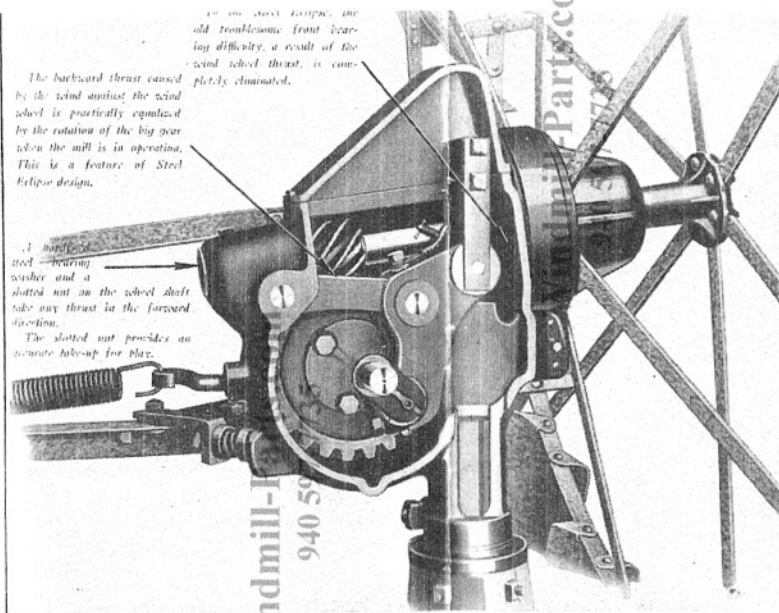


(2675M)

The Steel Eclipse "Out-of-gear"

**FAIRBANKS, MORSE & CO. Manufacturers CHICAGO**

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(2677M) The pivot with the housing cut away. Note the simplicity of the working mechanism.

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## Note These Added Features

### 1. Slow Lift, Quick Down Stroke

The design of the bell crank pitman is such that approximately two-thirds of every crank revolution is used in actually pumping water—the remaining third returns the plunger to the bottom of the well cylinder. Distributing the actual pumping load over this extended period of time means that less power is required to move the plunger on the up stroke; it means that when the wind dies down the plunger will travel a greater distance up the cylinder before it stops. This in turn means a quicker "get-a-way" for the wheel when the wind again commences to blow. You will appreciate the "slow lift" feature in light winds because it enables the Steel Eclipse to turn when the ordinary windmill is at rest.

### 2. Simplicity of Design

Simplicity is a keynote of Steel Eclipse design. The few working parts, the ruggedness of construction, the dependability of the lubrication system, all contribute to the satisfactory operation of the mill.

### 3. Self-governing

No chance for the wheel or mechanism to wreck itself. The wheel speed is almost constant in a wind of 15 miles up to the throw-out velocity of 25 miles per hour. You do not have to get out in the storm to throw the mill out of gear.

### 4. The Tilted Wheel

In the design of the Steel Eclipse advantage has been taken of the fact that the general direction of the wind is on a slight angle dipping toward the earth. The wheel of the Steel Eclipse is tilted upward slightly to get the full advantage of this dip. The Steel Eclipse will, therefore, get the maximum efficiency out of whatever wind there is blowing.

This tilting also permits of bringing the wheel in closer to the tower, thus eliminating the long overhanging shaft that would otherwise be necessary in order to make the wheel clear the tower.

### 5. Fully Enclosed Mechanism

The entire working mechanism is enclosed in a pivot housing—no frail ears that are apt to be broken, no sharp corners, no bolted-on lugs. Rain, snow, sleet or dirt cannot enter the oil chamber and contaminate the oil.

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## Self-Oiling—Easy Running—Self-Regulating

A windmill with a ruggedly designed motor—a drop forged crank with turned, ground and polished surfaces, finished worm and gear with machine cut teeth—in fact, regular high grade gas engine construction throughout. Is it any wonder the Steel Eclipse is acknowledged the most advanced windmill design of the day?

For three generations the name "Eclipse" has signified the best in windmill construction. The Eclipse mill has thousands and thousands of friends—owners who have secured 20, 30 or more years of satisfactory service. And they are generous in their praise. They will tell you the mill has lived up to all expectations—and more. They know from experience the material it is made of—the service it will give. And today the Steel Eclipse Windmill—with its high-grade workmanship, its advanced design, its ruggedness, its simplicity—capably fulfills all expectations.

### The Steel Eclipse is Self-Oiling

Oil it once a year, and the old troublesome difficulty of windmill lubrication is eliminated—No squeaking of bearings—no rattling of gears. In operation every bearing of the Steel Eclipse is flooded with oil. The large gear revolves in a bath of oil carrying an abundance of oil to the worm and rear wheel shaft bearing. It operates quietly—smoothly—easily. Notice the details of the lubrication system in the illustration opposite.

