

A REAL SELF-OILING WINDMILL

With Duplicate Gears Running in Oil

The Auto-Oiled Aermotor

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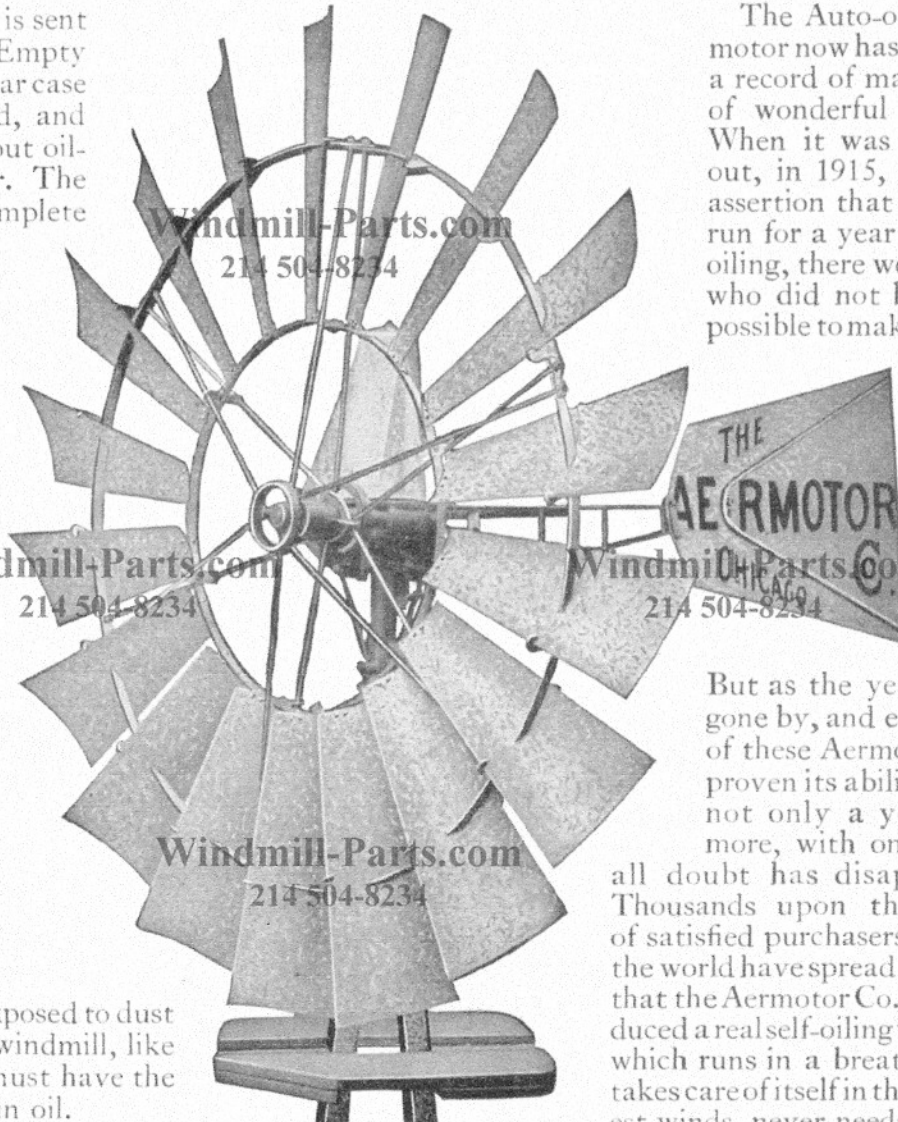
Every Working Part is Constantly and Completely Oiled

A year's supply of oil is sent with every Aermotor. Empty this can of oil into the gear case when the mill is erected, and you need not think about oiling again for a full year. The oiling arrangement is complete in every detail and perfectly automatic.

The Auto-oiled Aermotor now has behind it a record of many years of wonderful success. When it was first put out, in 1915, with the assertion that it would run for a year with one oiling, there were many who did not believe it possible to make a wind-

mill which would run that long without attention.

But as the years have gone by, and every one of these Aermotors has proven its ability to run not only a year, but more, with one oiling, all doubt has disappeared. Thousands upon thousands of satisfied purchasers all over the world have spread the news that the Aermotor Co. has produced a real self-oiling windmill which runs in a breath of air, takes care of itself in the strongest winds, never needs repairs



A constant stream of oil flows on every bearing. The shafts run in oil. Every cog is covered with oil. There is oil everywhere, yet none escapes, because all surplus oil flows back into the gear case to be used over and over again.

Any windmill which does not have the gears running in oil is only half oiled. Cogs which are filled with oil run smoothly and quietly and last indefinitely. Dry gears, exposed to dust, wear rapidly. You would not think of buying an automobile with the transmission gears exposed to dust and mud. A modern windmill, like a modern automobile, must have the gears enclosed and run in oil.

Do not be deceived by chains which may be made for bearings and wire no oil. Automobiles are not made to run without oil, and yet the wheel of an Aermotor makes from three to five times as many revolutions in a week as the average automobile wheel. You do not try to run your wagon, your mower, or even your wheelbarrow without oil. Every maker of machinery knows that a well oiled bearing is the best bearing and that ample provision must be made for frequent and thorough oiling. Why, then, should anyone expect you to believe that a windmill will run well, month after month, without oil.

and never makes a squeak. Dealers who have been selling other makes of windmills have been obliged to change over to the Aermotor as the only means for meeting the popular demand for a real self-oiling windmill. Wherever you go now, you will see large numbers of Aermotors on towers of other makes. Every one of these tells the story of an owner who had become tired of trying to keep an ordinary windmill oiled and in repair. With the Auto-oiled Aermotor oiling need be thought of only once a year, and the possibility of requiring repairs is so remote that it need not be given consideration.

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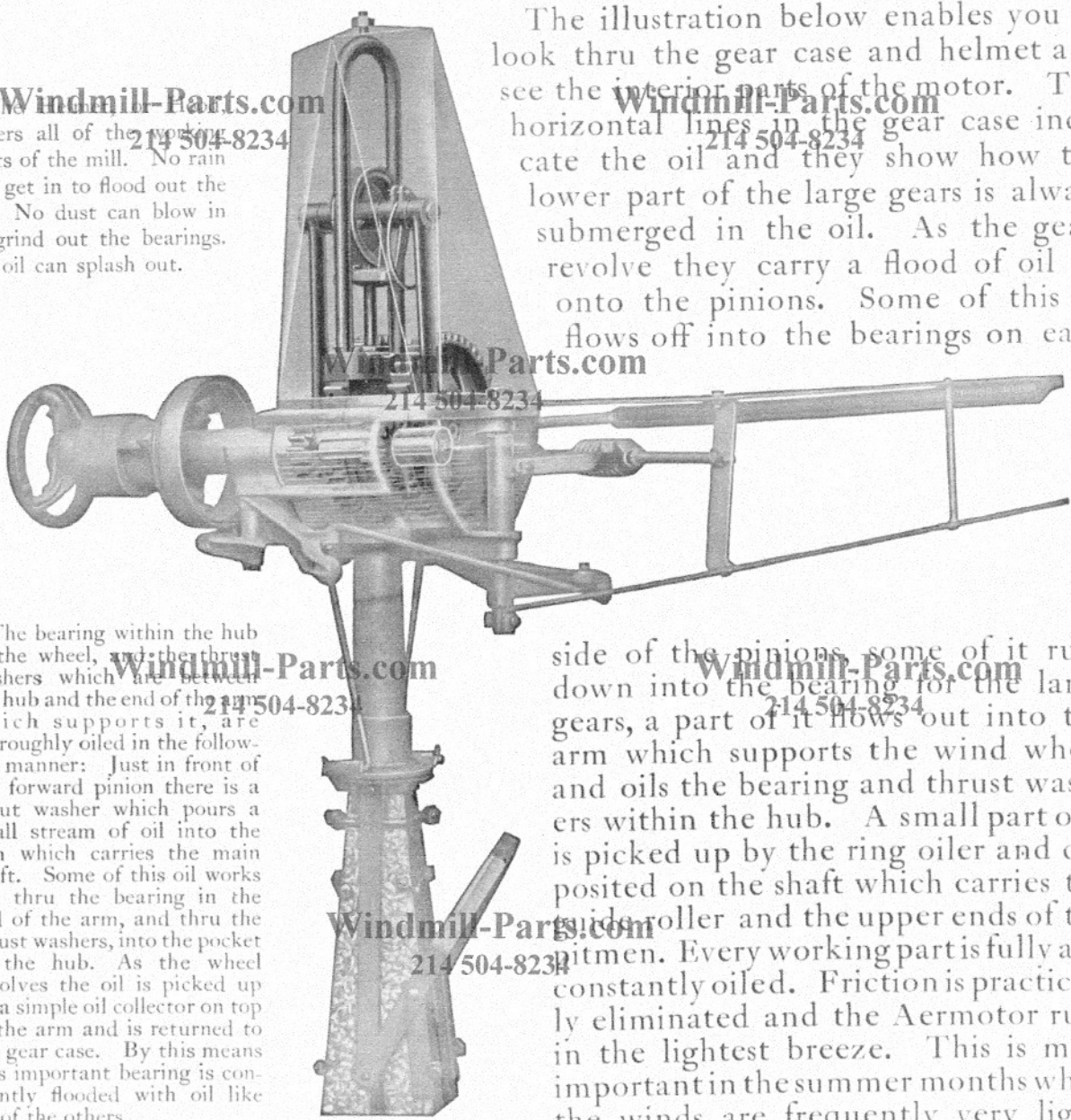
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PHANTOM VIEW OF ASSEMBLED MOTOR

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The helmet covers all of the working parts of the mill. No rain can get in to flood out the oil. No dust can blow in to grind out the bearings. No oil can splash out.

The illustration below enables you to look thru the gear case and helmet and see the interior parts of the motor. The horizontal lines in the gear case indicate the oil and they show how the lower part of the large gears is always submerged in the oil. As the gears revolve they carry a flood of oil up onto the pinions. Some of this oil flows off into the bearings on each



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The bearing within the hub of the wheel, and the thrust washers which are between the hub and the end of the shaft which supports it, are thoroughly oiled in the following manner: Just in front of the forward pinion there is a spout washer which pours a small stream of oil into the arm which carries the main shaft. Some of this oil works out thru the bearing in the end of the arm, and thru the thrust washers, into the pocket in the hub. As the wheel revolves the oil is picked up by a simple oil collector on top of the arm and is returned to the gear case. By this means this important bearing is constantly flooded with oil like all of the others.

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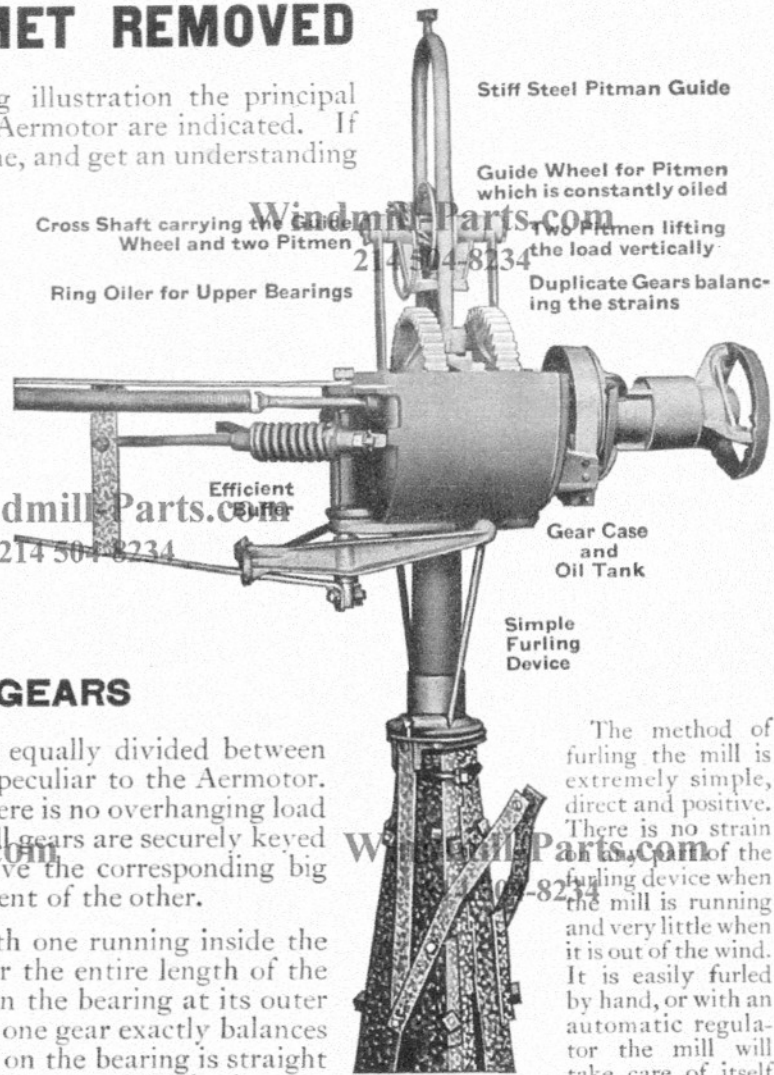
side of the pinions, some of it runs down into the bearing for the large gears, a part of it flows out into the arm which supports the wind wheel and oils the bearing and thrust washers within the hub. A small part of it is picked up by the ring oiler and deposited on the shaft which carries the guide roller and the upper ends of the pitmen. Every working part is fully and constantly oiled. Friction is practically eliminated and the Aermotor runs in the lightest breeze. This is most important in the summer months when the winds are frequently very light.

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The ability of the Aermotor to run in light winds is due to some very important features which are most perfectly worked out in this windmill. First and most important is the correct design of the wheel. The proper size, shape, curvature and angle of the sails were determined by most exhaustive experiments. Added to the correct design of the wheel, is its ability to face up to the lightest winds. The turntable is small and well oiled so that the mill is very sensitive to the direction of the wind. When perfect lubrication is added to the best that is possible in design and construction, the result is a windmill which gives the best and the most service.

MOTOR WITH HELMET REMOVED

In connection with the adjoining illustration the principal distinctive features of the Auto-oiled Aermotor are indicated. If you will note these features, one by one, and get an understanding of their importance you will surely be impressed with the simplicity and perfection of this modern windmill. Nothing is lacking to make this a powerful and durable pumping machine, and yet it is wonderful for its simplicity. We call your attention to the absence of bolts, screws, nuts and other small parts which would be likely to work loose and need frequent attention. The extent to which these things have been eliminated in the Aermotor is worthy of more than passing notice. Everything has been designed with a view to simplicity, efficiency and durability.



THE DOUBLE GEARS

The method by which the load is equally divided between the two pairs of gears all the time is peculiar to the Aermotor. There is no twisting or cramping. There is no overhanging load on any of the bearings. The two small gears are securely keyed to the main shaft. They in turn drive the corresponding big gear with its long shaft each independent of the other.

The use of independent shafts, with one running inside the other, distributes the load equally over the entire length of the bearing. There is no more pressure on the bearing at its outer edge than at the center. The load on one gear exactly balances the load on the other and the pressure on the bearing is straight down. The outer shaft is unusually large so that the bearing surface is ample. As this bearing is constantly flooded with oil, there will be no perceptible wear for an indefinite length of time.

The method of furling the mill is extremely simple, direct and positive. There is no strain on any part of the furling device when the mill is running and very little when it is out of the wind. It is easily furled by hand, or with an automatic regulator the mill will take care of itself for months at a time without requiring a moment's attention.



More water is pumped by Aermotors, for stock and domestic purposes, than by any other kind of pumping machinery. They do their work silently, surely and satisfactorily. You cannot travel far today without seeing an Aermotor standing out as the most prominent object in the landscape. Go to any part of the inhabited world and you will find the Aermotor there ahead of you. They are used everywhere because they have been found to be the most economical and most reliable device for pumping water.

THIS NEW HEAD FOR OLD AERMOTORS

If you have an old Aermotor on which the wheel and vane are still good, you can make an up-to-date mill out of it by ordering one of these new assembled motors. The price for such an exchange is made very low. If you have an 8-ft., 10-ft. or 12-ft. Aermotor with the round wheel arms and the long regulating spring, you will need only the new assembled motor and tail-bone to make the change. New wheel arms are required with all 14-ft. or 16-ft. mills of the older types. It will pay you to fix up your old Aermotor and get the benefit of the latest improvements. See your dealer or write direct.

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