

# FANNING THE SAILS

No Amount of Wind Raised Aboard a Ship Can Propel It.

CONTRARY TO NATURAL LAW.

As a Matter of Fact, the Force of the Air Driven Against the Canvas Would Have a Tendency to Send the Vessel Backward Instead of Forward.

"If an electric fan could be made large enough to throw a sufficient amount of wind to move a small sail-boat and such a fan was placed on the end of a boat with the wind from the fan blowing against the sail on the very boat the fan is on, is it possible that it could move the boat? The argument is that the fan, being on the same boat as the sail, cannot move itself. But as the air detaches itself from the fan and hits the sail, my idea is that it can, provided it has the strength to move the boat. Please give an answer."

This question is worth answering because it involves a principle of physics that ought to be universally understood and ignorance of which may lead to the waste of both time and money upon inventions that will not work.

The writer of the question thinks that because the air, as she expresses it, is "detached from" the fan when it starts off to strike the sail, it ought to act like an ordinary wind and push the boat before it. But she would not think so if she reflected that the particles of air driven from the fan resemble a swarm of bullets shot from a gun.

The air particles get their force from the fan as the bullets get theirs from the gun, and just as the gun recoils with a force equal to that which it imparts to the bullets, so the fan, whether driven by electricity or steam or turned by hand, inevitably recoils with the same amount of force that it imparts to the air.

To make clearer the comparison between a stream of bullets from a gun and a stream of wind from an electric fan, imagine a Maxim gun placed at the rear of a boat and an impenetrable target at the front, and then suppose that the gun should hurl a continuous current of bullets against the target. Anybody can see that the boat would not be driven forward, because the recoil of the gun would constantly force it backward with the same energy with which the bullets, striking the target, forced it ahead.

But if the gun were placed on shore or on another support its stream of bullets striking the target would drive the boat forward, because then their effect would be like that of a wind blowing freely across the water and

having no connection with anything on the boat.

An ordinary wind is able to drive a boat whose sail it strikes because its reaction (that of the wind) is not upon the boat, but upon the great mass of the atmosphere or upon the earth.

The principle to be remembered, and ignorance or forgetfulness of which has cost the happiness of more than one uneducated inventor's life, is that no mechanical force can be produced without an expenditure of energy precisely equivalent. Never forget that there can be no action with out equal reaction and that if the action takes its origin within the limits of the thing that is acted upon the reaction will also be felt within those same limits.

Your electric fan would drive a toy vessel placed on the deck of your boat, although it would not drive the boat itself, because, with regard to the toy vessel, the breeze from the fan would have an independent origin, like an ordinary wind blowing over a lake, and its reaction would not be upon the toy, but upon the boat over whose deck the toy glided.

If you are inside a car and push upon the car you cannot move it as you could if you stood upon the ground outside and pushed. In the first case your action and reaction are both upon the car, but in the second case the action is upon the car and the reaction upon the ground outside. The same thing happens if you suspend a bar above your head and lift yourself by pulling down on it, and afterward put the bar under your feet and try to lift yourself by pulling up on it. You succeed in lifting yourself in the first case, but you fall in the second, because when the bar is under your feet the force of your pull reacts upon your own body and urges it down just as much as up.

There is one effect of the electric fan which might surprise you—it would tend to drive your boat backward instead of forward. It would push against air like the propeller of an aeroplane, and to make it drive your boat forward you would have to face the fan around, so that its reaction would be upon the atmosphere behind instead of ahead of the boat, and in either case your sail would be not only useless but an encumbrance.—Garrett P. Serries in New York Journal.

Correcting the Judge.  
"Do I understand you to say," asked the judge, "that his remarks were acrimonious?"  
"No, judge, your honor; I didn't say that. I said he just swore at me. I ain't agoin' to claim that he done what he didn't do."—Birmingham Age-Herald.

There are people who do not know how to waste their time alone, and hence become the scourge of busy people.—De Bonald.

Let Wyse do your cleaning.—Adv.

### Wheels in a Watch.

The main wheel in an ordinary American watch makes four revolutions a day of twenty-four hours, or 1,440 in a year; next, the center wheel, 24 revolutions in a day, or 8,700 in a year; the third wheel, 192 in a day, or 59,040 in a year; the fourth wheel, 2,440 in a day, or 545,000 in a year; the fifth, or scape wheel, 12,900 in a day, or 4,728,000 in a year. The ticks or beats are 388,800 in a day, or 141,882,000 in a year.—Milwaukee Free Press.

### Music and Medicine.

A reporter asked an opera manager one day if he believed in the new therapeutic idea that music was a medicine. "Believe in it? Of course I do," the impresario replied. "I know at least three operas that are a drug on the market, while as for popular songs there isn't one of them that doesn't make me ill."

### His Luck.

"Don't you know that your husband is walking the floor because of his debts?"

"Isn't it fortunate?" replied young Mrs. Turkins sweetly. "You know the doctor said that Charlie simply must take more exercise."—Washington Star

### Perhaps It Would.

Gibbs—I believe in early rising, don't you? Dibbs—Well, there's no abstract excellence in early rising. It all depends on what you do after you rise. It would be much better for the world if some people never got up.—Boston Transcript.

Get Wise, Let Wyse do it.—Adv.

### CHURCH NOTICES

First Presbyterian.  
Sunday, June 7, at 10 a. m., Sunday school. Subject "The Coming of the Kingdom." Morning service at 11 a. m. Subject, "The Broken Abanaster Box." Evening service at 7:45. Subject, "The Wedding and Who were there." G. H. Wilkins, minister.

A special luncheon and a special announcement at the Commercial Club, Wright Hotel, Saturday. Everybody come.

SULPHUR OR POLLEN?  
The rain on Monday night precipitated a yellow dust that had been prevalent in the air for a day or two and on Tuesday a yellow sediment was to be seen around spots where water had stood the night before. Various theories have been put forward to explain the yellow dust, some claiming it to be pollen from the flowers now in blossom around town and others that it is sulphur from the volcano reported to be now active in California. It may be that a debate will be arranged between the geologists and the botanists in an effort to decide the question.

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C. H. SHAFER, Manager

### ROAD CREW MOVES.

The road crew that has been employed on the Laidlaw road under W. H. May moved camp last week to Buckhorn Canyon, 15 miles north-west of Redmond, near Lower Bridge. There is a short piece of road to be improved at this point.

### MANY AT HEISINGS.

During the past week, according to people who have been there, 30 vacationists have been guests at Dan Heising's Midway Ranch on the Metolius river. The people who have been fishing at the popular resort hall from the following towns: Bend, Condon, Hood River, Carlton, McMinnville, Sisters, Spokane, Laidlaw, Prineville and Redmond. With the improved roads and enlarged housing facilities at Heising's a very popular summer is expected.

Let Wyse do your cleaning.—Adv.

### NOTICE OF CONTEST.

Department of the Interior, United States Land Office, Lakeview, Oregon, May 12, 1914.

To the heirs of Lewis L. Martin, deceased, Contestee:  
You are hereby notified that Charles F. Sturmer, who gives c-o C. S. Benson, Bend, Ore., as his post office address, did on April 22, 1914, file in this office his duly corroborated application to contest and secure the cancellation of Homestead Entry No. Serial No. 02773, made December 11, 1909, for lots 3 and 4 and E 1/4 SW 1/4 Section 7; lots 1 and 2, E 1/4 NW 1/4 Section 18, Township 22 S., Range 23 E., Willamette Meridian, and as grounds for his contest he alleges that said Lewis L. Martin died about 3 years ago, leaving no heirs so far as known to this applicant; that the entryman never established residence upon said tract nor did he or his heirs ever maintain residence thereon or

cultivate the same and said entryman and his heirs have wholly abandoned said tract and said entry for more than one year last past.

You are, therefore, further notified that the said allegations will be taken by this office as having been confessed by you, and your said entry will be canceled thereunder without your further right to be heard therein, either before this office or on appeal, if you fail to file in this office within twenty days after the FOURTH publication of this notice, as shown below, your answer, under oath, specifically meeting and responding to these allegations of contest or if you fail within that time to file in this office due proof that you have served a copy of your answer on the said contestant either in person or by registered mail. If this service is made by the delivery of a copy of your answer to the contestant in person, proof of such service must be either the said contestant's written acknowledgment of his receipt of the copy, showing the date of its receipt, or the affidavit of the person by whom delivered; if made by registered mail, proof of such service must consist of the affidavit of the person by whom the copy was mailed stating when and the postoffice to which it was mailed, and this affidavit must be accompanied by the postmaster's receipt for the letter.

You should state in your answer the name of the postoffice to which you desire future notices to be sent to you.

JAS. F. BURGESS, Register.  
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