

HOW THE TURBINES WORK

DESCRIPTION OF THE LUSITANIA'S MIGHTY ENGINES.

An Ordinary Windmill May be Taken to Illustrate the Principles on Which Turbine Works.

The speed and general performance of the great Cunard steamship Lusitania and the still better promise of her sister ship the Mauretania have lifted the Marine Parsons Steam Turbine into world-wide prominence.

Yet few people really have any clear idea of the mode of action of the steam turbine. It is not, however, a difficult subject to understand in an elementary sense.

The modern scientific view of steam and of all other gases is that they consist of an aggregate of invisible spherical or flattened spherical bodies enveloped by heat with the power of rapid movement.

LIFE A WINDMILL.

The small atoms of steam have this automatic heat movement to the extent of some 2,000 feet per second, and, for their size, are endowed with proportionately as much force or energy as a cannon ball.

In a windmill there are a few broad arms or sails set fast in a boss on a rotating shaft. The face of the wind-wheel is held square to the moving air, but each arm is twisted at a small angle so that the air flows which strike the arms are deflected in course.

Now a turbine may not properly be likened to a large number of windmills closely spaced on the same shaft and with an equal number of fixed windmills placed between the moving blades and with their blades oppositely slanted somewhat.

The wind would be compelled to travel from one mill to the other in a zig-zag path, and at each deflection as it struck a fresh set of moving blades it would lose some of its forward velocity. The energy represented by this forward velocity is not lost, but is converted into motion for the mill. Now in a steam turbine the working gas has a pressure of perhaps fifteen atmospheres, and it is very dense and heavy in consequence.

STEAM IN PLACE OF WIND.

Because of this, much of it can pass through a narrow space, and our crude and clumsy wind sails are shortened down into narrow stiff blades of steel or copper alloy set closely upon a cylindrical body of steel. This cylindrical body rotates inside a hollow cylinder of iron somewhat larger than itself.

The annular space between the two is occupied by the little blades or hot low-faced vanes. Numerous sets of these project from the rotatory cylinder, and between each ring of these projecting blades similar rings of blades, with their faces inclined the opposite way, project from the inside of the hollow cylinder and nearly touch the rotating cylinder or rotor, as it is termed.

High pressure steam from the boiler enters the annular space which is so nearly full of these two sets of blades and vanes from end to end of the long cylinder.

GAVE HER \$3 MONTH EACH.

It passes to a second enlarged portion where the blades are longer, and so on to a third and fourth or more, the diameter of the rotor growing greater and the blades becoming longer and longer, so that there is a constantly increasing space through which the steam has to pass as it loses its energy and velocity and pressure and occupies more space.

There are many thousands of blades in the turbines for such a great ship as the Lusitania, and each little blade takes a little bit of energy out of the flowing steam and does its little share for turning the great rotor on which it is fixed.

The combined push of all the blades on the several turbine rotors of each of the great propeller shafts amounts to the 68,000 horse-power which is necessary to drive the great ship at 15 knots.

SURE AND SAFE.

Baby's Own Tablets is the best medicine in the world for the minor ailments of little ones, and the safest. We do not ask you to take our word for this—we give you the guarantee of a Government analyst that this medicine contains no opiate or harmful drug. It is equally good for the new born babe or the well grown child. It is a certain cure for all the minor ailments of childhood. Mrs. Andre Tremblay, Sayce, que, says: "I have proved the value of Baby's Own Tablets as a cure for several of the troubles that afflict young children, including skin disease, indigestion and teething troubles. Sold by medicine dealers or by mail at 25 cents a box from the Dr. Wilson's Medicine Co., Brockville, Ont."

AIDS TO MATRIMONY.

A committee of ladies at Vryburg, British Columbia, publishes periodically a list of all the bachelors and eligible young women in the town, and invites correspondence, which is treated confidentially, from those who desire husbands and wives.

Most people know that if they have been sick they need Scott's Emulsion to bring back health and strength.

But the strongest point about Scott's Emulsion is that you don't have to be sick to get results from it.

It keeps up the athlete's strength, puts fat on thin people, makes a fretful baby happy, brings color to a pale girl's cheeks, and prevents coughs, colds and consumption.

Food in concentrated form for sick and well, young and old, rich and poor.

And it contains no drugs and no alcohol.

ALL DRUGGISTS: 50c. AND \$1.00.

SUFFERING WOMEN.

Made Well and Strong by Dr. Williams' Pink Pills.

Every dose of Dr. Williams' Pink Pills makes new blood. Every drop of pure blood brings the ill-harrowed woman nearer to health and happiness. Dr. Williams' Pink Pills have brought the glow of health to thousands of sufferers who gladly bear testimony to that effect. One of these is Mrs. Elizabeth Dunham, of Welland, Ont., who says: "For more than a year I was greatly run down. I had sickening headaches and my heart would palpitate so violently that at times I feared death was near. I was under the care of a doctor, but instead of improving I lost strength and my weight decreased from one hundred and forty to ninety pounds. I was discouraged, but finally decided to give up the doctors' treatment and try Dr. Williams' Pink Pills. I am glad I did so, for after using the Pills a few weeks I could see marked improvement in my condition. The headaches left me; I regained strength; the distressing heart palpitation ceased and at the end of two months I was fully restored to health and felt better than I had for the past twenty years. Dr. Williams' Pink Pills are truly wonderful medicine and I cannot praise them enough."

Scottish exhibitors were among the prize winners at the London dairy show. Greenock Parish Council proposes extending £20,000 in extending the poor-house, etc.

The Sunday evening concerts and lectures were resumed on the 6th inst. at Edinburgh.

After kicking the ball in a game of football at Bridgeton youth fell dead in his sleep.

The shepherd in Ellrickenhead found the skeleton of a body believed to have been buried centuries ago.

While two excursionists wrestled for amusement at Oban railway station they fell, and one broke a leg.

No fewer than nine stowaways were discovered on a steamer at Greenock prior to its departure for Galveston, U.S.A.

A Dumfries gentleman, Mr. J. Hunter, Lochfoot, some time ago had a 15-month-old Glasgow ch. sent to him.

A 15-months-old Glasgow ch. was fatally burned by the upsetting of a pot of stewed meat through two men quarrelling.

An elderly man who had been given cakes and milk in a dairy in Stirling road, Townhead, fell dead while eating the cakes.

The question as to who is to pay the paper for the damage done at Kilwinning during the "religious" riots is now

When the United Free Presbytery at Glasgow were discussing Sabbath desecration one speaker described ice cream shops as normal appetites and healthy digestion.

A lady named Smith, who got a 10-day's sentence at the Edinburgh Police Court for being drunk, has made 22 appearances before the magistrates.

At Haddington, where a number of young trees were planted to beautify the town, a lot of smashing and breaking has been done. One of the trees was specially planted on Coronation Day.

The old Black Bull Tavern at Parkhead, Glasgow, is now represented by a small section of the old building, boxed in to hold the license while a new tenement is being constructed overhead and around it.

The Govan Parish Council have decreed that on their quarterly visit to Hawkhead Asylum there shall be no cigars, nor cigarettes, nor wrapped walnuts on tap, but that the necessary luncheon shall be eaten dry.

A drayer by profession, who got 60 days at Edinburgh for assaulting a policeman, reminded the magistrate that the victim of the assault was the biggest policeman in Edinburgh, and that he couldn't do him much harm.

Possibly a thorough search might disclose the fact that Burns was made a Freeman of as many towns as Dr. Carnegie has been. Only a few days ago it was announced that he was discovered to be a Freeman of Sanquhar, and now it is announced that he was also a Burgess of Dumfries.

BEST EVER WRITTEN.

PRESCRIPTION WHICH ANYONE CAN EASILY MIX AT HOME.

Said to Overcome Kidney and Bladder Afflictions — Shake Simple Ingredients Well in Bottle.

Mix the following by shaking well in a bottle, and take 10-12 spoonfuls doses after meals and at bed-time.

Fluid Extract Dandelion, one-half ounce; Compound Karsion, one ounce; Compound Syrup Sarsaparilla, three ounces. A prominent physician is the authority that these simple harmless ingredients can be obtained at nominal cost from any druggist, even in the smaller towns.

The mixture is said to cleanse and strengthen the clogged and inactive kidneys, overcoming Backache, Bladder weakness and Urinary trouble of all kinds, if taken before the stage of Bright's disease.

Those who have tried this say it positively cures pain in the back, clears the urine of sediment and regulates urination, especially at night, curing even the worst forms of bladder weakness.

Every man or woman here who feels that the kidneys are not strong or active in a healthy manner should mix this prescription at home and give it a trial, as it is said to do wonders for many persons.

HOW MONARCHS LEARN THE NEWS.

Majority of European Rulers Have Cuttings Made for Them.

The Emperor of Austria saves his valuable time by having a book of cuttings prepared for him every morning by his secretary. These cuttings represent all the principal news of the day, and the Emperor is thus able to acquaint himself with all the most important news of the world by reading page after page of the Emperor's secretaries, to slip the columns of cuttings into a tiny bound leather case, and the Emperor peruses this little volume at his breakfast-table.

In the event of any of the articles being very long, however, the secretary has to condense them, and present them to his Majesty in typewritten form.

The Princess of Wales possesses a unique scrap album, in which all sorts of cuttings from the society papers relating to herself and her Royal relatives are preserved. The title of this book is suggestive for her witty Royal Highness, her label reads: "Words We Never Spoke; Things We Never Did."

"The majority of European rulers subscribe to Press-cutting services, and so great is their desire for information that they insist on reading everything which is written about them, whether favorable or otherwise."

FROM BONNIE SCOTLAND

NOTES OF INTEREST FROM HER BANKS AND BRAES.

What Is Going On In the Highlands and Lowlands of Auld Scotia.

Kilmalcolm had 23 dry days in September.

There is a great reduction in drunkenness in Port Glasgow.

During last year 129 villas have been erected in Cardonald district.

The diphtheria outbreak at Paisley has assumed serious proportions.

Glasgow sewage purification works were to be opened on the 15th inst.

The other day a Paisley motor car took fire and was entirely destroyed.

Sections of Auchentiber colliery are to be closed. This will throw 150 men idle.

Scottish exhibitors were among the prize winners at the London dairy show.

Greenock Parish Council proposes extending £20,000 in extending the poor-house, etc.

The Sunday evening concerts and lectures were resumed on the 6th inst. at Edinburgh.

After kicking the ball in a game of football at Bridgeton youth fell dead in his sleep.

The shepherd in Ellrickenhead found the skeleton of a body believed to have been buried centuries ago.

While two excursionists wrestled for amusement at Oban railway station they fell, and one broke a leg.

No fewer than nine stowaways were discovered on a steamer at Greenock prior to its departure for Galveston, U.S.A.

A Dumfries gentleman, Mr. J. Hunter, Lochfoot, some time ago had a 15-month-old Glasgow ch. sent to him.

A 15-months-old Glasgow ch. was fatally burned by the upsetting of a pot of stewed meat through two men quarrelling.

An elderly man who had been given cakes and milk in a dairy in Stirling road, Townhead, fell dead while eating the cakes.

The question as to who is to pay the paper for the damage done at Kilwinning during the "religious" riots is now

When the United Free Presbytery at Glasgow were discussing Sabbath desecration one speaker described ice cream shops as normal appetites and healthy digestion.

A lady named Smith, who got a 10-day's sentence at the Edinburgh Police Court for being drunk, has made 22 appearances before the magistrates.

At Haddington, where a number of young trees were planted to beautify the town, a lot of smashing and breaking has been done. One of the trees was specially planted on Coronation Day.

The old Black Bull Tavern at Parkhead, Glasgow, is now represented by a small section of the old building, boxed in to hold the license while a new tenement is being constructed overhead and around it.

The old Black Bull Tavern at Parkhead, Glasgow, is now represented by a small section of the old building, boxed in to hold the license while a new tenement is being constructed overhead and around it.

The old Black Bull Tavern at Parkhead, Glasgow, is now represented by a small section of the old building, boxed in to hold the license while a new tenement is being constructed overhead and around it.

The old Black Bull Tavern at Parkhead, Glasgow, is now represented by a small section of the old building, boxed in to hold the license while a new tenement is being constructed overhead and around it.

The old Black Bull Tavern at Parkhead, Glasgow, is now represented by a small section of the old building, boxed in to hold the license while a new tenement is being constructed overhead and around it.

The old Black Bull Tavern at Parkhead, Glasgow, is now represented by a small section of the old building, boxed in to hold the license while a new tenement is being constructed overhead and around it.

The old Black Bull Tavern at Parkhead, Glasgow, is now represented by a small section of the old building, boxed in to hold the license while a new tenement is being constructed overhead and around it.

The old Black Bull Tavern at Parkhead, Glasgow, is now represented by a small section of the old building, boxed in to hold the license while a new tenement is being constructed overhead and around it.

The old Black Bull Tavern at Parkhead, Glasgow, is now represented by a small section of the old building, boxed in to hold the license while a new tenement is being constructed overhead and around it.

The old Black Bull Tavern at Parkhead, Glasgow, is now represented by a small section of the old building, boxed in to hold the license while a new tenement is being constructed overhead and around it.

The old Black Bull Tavern at Parkhead, Glasgow, is now represented by a small section of the old building, boxed in to hold the license while a new tenement is being constructed overhead and around it.

The old Black Bull Tavern at Parkhead, Glasgow, is now represented by a small section of the old building, boxed in to hold the license while a new tenement is being constructed overhead and around it.

The old Black Bull Tavern at Parkhead, Glasgow, is now represented by a small section of the old building, boxed in to hold the license while a new tenement is being constructed overhead and around it.

The old Black Bull Tavern at Parkhead, Glasgow, is now represented by a small section of the old building, boxed in to hold the license while a new tenement is being constructed overhead and around it.

The old Black Bull Tavern at Parkhead, Glasgow, is now represented by a small section of the old building, boxed in to hold the license while a new tenement is being constructed overhead and around it.

The old Black Bull Tavern at Parkhead, Glasgow, is now represented by a small section of the old building, boxed in to hold the license while a new tenement is being constructed overhead and around it.

The old Black Bull Tavern at Parkhead, Glasgow, is now represented by a small section of the old building, boxed in to hold the license while a new tenement is being constructed overhead and around it.

The old Black Bull Tavern at Parkhead, Glasgow, is now represented by a small section of the old building, boxed in to hold the license while a new tenement is being constructed overhead and around it.

The old Black Bull Tavern at Parkhead, Glasgow, is now represented by a small section of the old building, boxed in to hold the license while a new tenement is being constructed overhead and around it.

The old Black Bull Tavern at Parkhead, Glasgow, is now represented by a small section of the old building, boxed in to hold the license while a new tenement is being constructed overhead and around it.

The old Black Bull Tavern at Parkhead, Glasgow, is now represented by a small section of the old building, boxed in to hold the license while a new tenement is being constructed overhead and around it.

The old Black Bull Tavern at Parkhead, Glasgow, is now represented by a small section of the old building, boxed in to hold the license while a new tenement is being constructed overhead and around it.

The old Black Bull Tavern at Parkhead, Glasgow, is now represented by a small section of the old building, boxed in to hold the license while a new tenement is being constructed overhead and around it.

The old Black Bull Tavern at Parkhead, Glasgow, is now represented by a small section of the old building, boxed in to hold the license while a new tenement is being constructed overhead and around it.

The old Black Bull Tavern at Parkhead, Glasgow, is now represented by a small section of the old building, boxed in to hold the license while a new tenement is being constructed overhead and around it.

The old Black Bull Tavern at Parkhead, Glasgow, is now represented by a small section of the old building, boxed in to hold the license while a new tenement is being constructed overhead and around it.