

SATURDAY

The Star

ST. JOHN, N. B., SATURDAY, SEPTEMBER 28, 1907.

SUPPLEMENT.

HAS INVENTED A TURBINE WHICH WORKS BOTH WAYS

Austrian Engineer's Idea a Great Improvement in Modern Marine Engineering—Economy in Power is Also Claimed.

LONDON, Sept. 28.—The enormous advance in marine engineering which was marked by the introduction of the steam turbine does not represent the final phase in that branch of mechanical science. Great though the advantage of this system of propulsion undoubtedly is, the turbine so far in use suffers from the disadvantage of revolving only in one direction, and additional turbines have to be fitted in order to enable a vessel to go astern. As going astern is little more than an incident in a vessel's voyage compared with the whole transit, the supplementary turbines for this purpose are necessarily idle during the greater portion of the ship's career.

The great desideratum is thus a turbine which combines within itself the power of revolving in either direction at the will of the engineer, and in propelling the ship forward or backward by the mere manipulation of a valve. Such a turbine has, it is claimed, been evolved by an Austro-American engineer, Mr. Charles Otto Deutschmann, who has patented his invention in England, Germany, the United States and elsewhere.

Mr. Deutschmann, who lives at Hampstead, explained the details of his invention, in the course of an interview this week. He claims that his invention consists not only in the application of the reversing principle, but in such other improvements as make his turbine remarkably economical. By the adoption of an adjustable power chest he causes his turbine to be completely steam-tight, and thus averts the loss of steam common to other forms. He gains in power also by causing the steam to pass into the cavities at right angles to the motor drum, thus imparting a straight blow, instead of impinging upon it as an oblique direction, with consequent loss of power; and he makes the motor in one piece, instead of in the form of detachable parts.

Mr. Deutschmann claims as an entirely new and very vital feature of his invention the regulation of the setting of the power chests in such a fashion as to keep them in sufficiently close touch with the rotating body as to be absolutely steam-tight; and this without requiring the exertion of any more pressure than is the case in the ordinary turbine. This close adjustment is achieved by means of bolts and nuts of very fine thread, and by another ingenious contrivance he reduces friction to a minimum.

The reversing motion is obtained by the use of a winged valve fitted to the inside of the power chest, and provided with a projection, which alternately closed one of the two high-pressure steam-inlet channels. According to which of the two channels is open, the rotating body runs in either a right or left-handed direction. For marine engines, the turbine consists of a series of power chests, through which steam

is expanded, these chests being of increasing size, according to the decreasing pressure of the steam. The casings of the power chests are connected by means of flanges, on which bearings are arranged to support the propeller shaft. Each of the power chests is provided with a reversing valve, and all are connected with a lever, by means of which the reversing apparatus is actuated simultaneously in each power chest. The method of operation is simplicity itself, and the inventor claims that the motion of the turbine can be arrested and reversed with greater ease, and in a shorter period of time, than in the case with existing marine engines of any type.

By an ingenious adaptation of his invention Mr. Deutschmann claims that the turbine engine, for use with either steam or gas—preferably the latter—can be applied to the propulsion of motor-cars, the turbine of 18 h. p. to 20 h. p. being capable of construction in large quantities at \$150 per engine. But the great feature of his discovery is, of course, in regard to marine engines, for whereas the battleship *Dradnought*, for instance, has been equipped with six turbines, four for going ahead and two for going astern, it would only be necessary to fit a vessel of this size with a Deutschmann turbine, and the supplementary turbines for reversing the ship's motion. A demonstration of the new turbine in the presence of a number of well-known engineers is now being arranged.

Until Mr. Deutschmann's invention, however, has been shown to be very different from the many others that have preceded it, it is not likely to gain the serious attention of practical engineers.

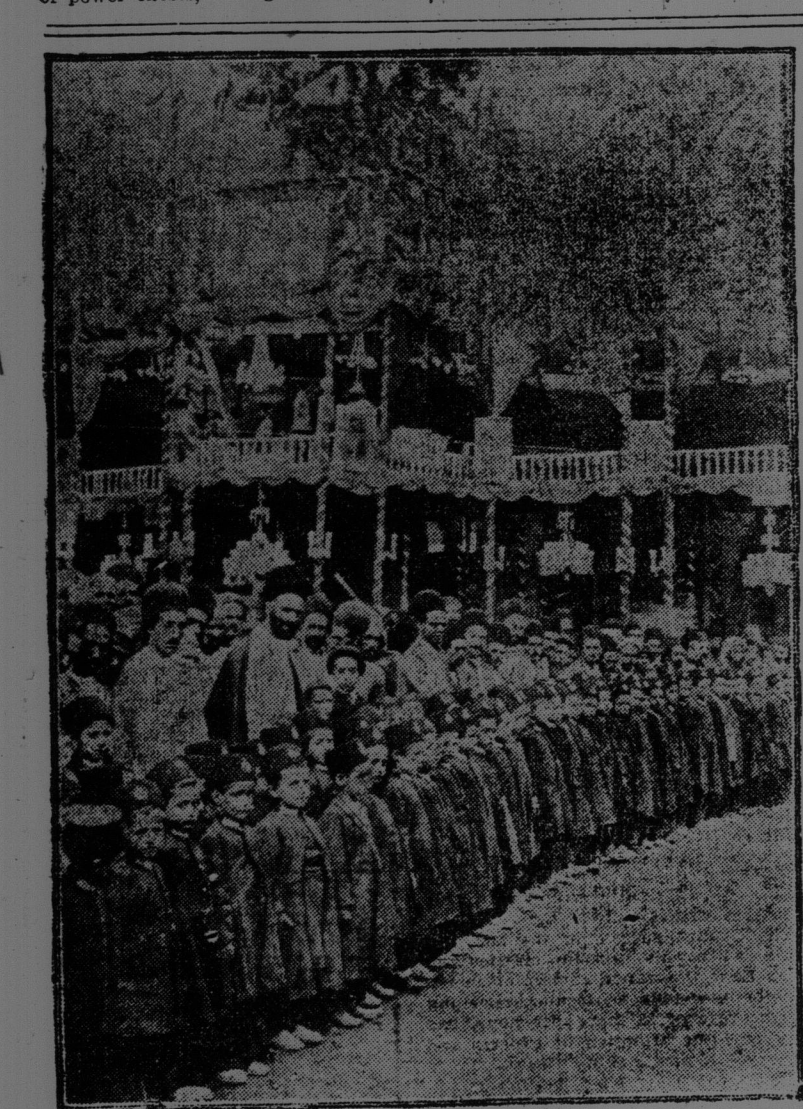
Any engineer can make a reversible turbine," the chief of a notable engineering firm said, "and we have perfect working models submitted to us week after week, but we have yet to see one that will work satisfactory and economical when it is made full size and tested. As a matter of fact, though I should be glad to see a reversible turbine that would fill the inventor's expectations, we do not anticipate anything of the kind in the immediate future."

MANY WERE DROWNED BY FLOODS IN SPAIN

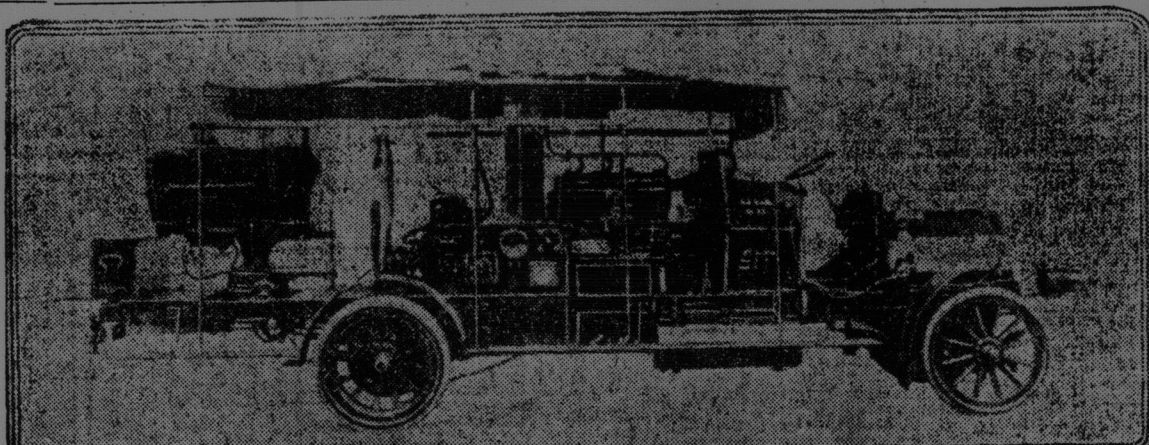
MALAGA, Spain, Sept. 27.—A renewal of the rain today is causing fresh inundations and a suspension of the rescue work. A bread famine is feared. The bodies of about 100 drowned persons have been recovered near here.

MADRID, Sept. 27.—The government today announced that the vine crop in the valley of Andalus has been ruined by the floods. Seventeen persons were drowned and 68 injured.

PARIS, Sept. 27.—Despatches from the flooded southern provinces report that the troops are still actively engaged in rescue work. Many persons have sought refuge in the tops of trees and on the roofs of houses. The life loss is small. The vine crop in many places is ruined.



TEHERAN, Persia, Sept. 27.—This unique snapshot was taken at the opening of the First Persian Parliament, and shows a number of schoolboys who formed spallier along the road the delegates had to pass on their way to the opening of the House.



LONDON, Sept. 27.—The automobile searchlight shown here is one of the latest additions to the British Army. It is constructed to run between twenty-two and twenty-five miles an hour even across plowed ground and very rough country. The motor has forty-five-horsepower, and the searchlight, which may be seen at a distance of four miles, has 4,000 candle-power.

BRITAIN'S POLICY OF FREE TRADE IS PROVING FATAL TO SOME INDUSTRIES

A Male Beauty Show at Folkstone Created Much Amusement—Labor Members, Programme for the Next Session

LONDON, Sept. 28.—Ministerialists profess to be amused over the revelation of the Labor Party's tactics in regard to unemployment legislation and old age pensions. According to the Labor Whip, Parliament is to ring with the demands the people will authorize the party to make on these subjects, and, presumably, if anything is done, all the credit will be claimed. But it is pointed out that the government is already deeply pledged. Mr. Burns has a big unemployment scheme to be produced at the first opportunity; and Mr. Asquith stated in his budget speech that it is his intention, before the close of next session to deal with the old age pension problem. In the eyes of the labor men Mr. Burns and all his works are suspected and as the Chancellor of the Exchequer, they do not believe that, without compulsion he will propose any pension scheme worth accepting.

Some extraordinary statements were made at Dulard Paris Council on the evening in regard to the drinking habits of the Polish immigrants who are in such numbers in Lancashire. It seems that an abominable mixture of methylated spirits, paraffin, and ether is being hawked about and sold without the possibility of legal interference, with naturally the most disastrous results among those who drink it. The difficulty is that the liquor is not excisable, the Legislature having never imagined the possibility of human beings drinking such stuff. So that the authorities have no power to interfere with the sale of the liquor of which it has been said that one thimbleful is more injurious than a whole bottle of brandy. Apparently there is urgent need of some alteration in the law which will enable the authorities to prevent the sale of this kind of poison.

"Free imports are killing the hop industry of England as they have many other industries." This significant statement is made by Messrs. Le May in their annual report on the English hop crop. The report says that there are 1784 acres less in cultivation than there were last year. Thirty-nine years ago the acreage was more than 72,000; now there are only 41,938 acres. As far back as 1819, when the consumption of beer was not more than one-fifth of what it is today, the acreage was 61,014. Owing to the low temperature of the summer, the report adds, the cones of the hops have de-

veloped slowly. The consequence is that they are very small, but they are full of lupulin, and the quality generally will be the richest in brewing purposes that has been dealt with for many years.

No event which has occurred recently at Folkestone has attracted so much attention as the male beauty show, which took place there last week. Long before the time for the opening crowd began to assemble at the Victoria pier, and 1,200 people were turned away. The entries passed all expectation, fifty-eight men offering themselves as rivals of Adonis. Types of male beauty from all parts of England were represented, and Britain's claim to superiority in manly beauty was not left unchallenged, for a Frenchman, a Swiss, a Hungarian, a Greek, a Turk, a Japanese, and a negro were among the competitors. As it was thought that dress should not enter into the question, the competitors had to come forward and look through a frame. Additional interest was lent to the event by the announcement that a young woman who competed in the recent beauty show had offered to marry the first prize winner. There was a great majority for the first prize winner, Sergeant Hoggett, of the 14th Hussars, stationed at the School of Musketry, Aldrich. He obtained 290 votes, against sixty-two and forty-one for the second and third respectively. These were Bernard Richard Faure, of Elm-terrace, Constantine Road, Hampstead, and Herbert Sudell, of Lopus street, Fimble. All three had curly hair, but the first prize winner was dark and the others fair.

An English newspaper calls attention to the number of ladies of high birth who have entered on the religious life in a Catholic Medical School in China. The Ladies Minna and Etheldreda Howard, sisters of the Duke of Norfolk, are both nuns—the one belonging to the ancient Carmelite Order, the other being a Sister of Charity. Lady Edith Fielding, sister of Lord Denbigh, is also a Sister of Charity, and works in a Catholic Medical School in China. Four sisters of Lord Herries are nuns, while three sisters of Lord Petrie are nuns. Lady Francis Bertie is in a convent at Harrow, Lady Leopoldina Keppel, sister to Lord Albemarle, the Hon. Ellen and Marie French, sisters of Lord French, are nuns.

Diabolo, the game which is played everywhere in Paris, has crossed the Channel and is being sold by the thousands in London. The game is centuries old, and the revival has been brought about by an improvement in the diabolo. It consists of twirling the

diabolo—which is made of two cones joined together on a cord between two sticks, hurling it into the air, and catching it on the cord. "We are selling thousands," said Mr. Hemley, of Regent street the other day. "It was known before as the 'devil on two sticks.' I have 100,000 sets on order, and the Paris factories cannot turn them out fast enough. I am arranging for two professional diabolists to come from Paris to give lessons in the art, for, in a way, the throwing the diabolo is an art. Some of the feats which can be performed with the diabolo are marvelous. It can be thrown up to a height of fifty feet, caught behind the back, and jerked up to another fifty feet."

The eleventh report of the Royal Commission appointed to dispose of the money granted by Parliament for the encouragement of horse-breeding, which the Earl of Sefton is president, is published. The commissioners estimate that the owners of stallions are realizing that in order to secure the twenty-eight King's premiums of \$750 each the animals exhibited must be of very good quality. That the young stock is turning out well is proved by the fact that during 1906, 446 awards were gained by animals sired by premium stallions, while in 1905, 429 similar awards were gained. At the hunter shows held in London in March, 1906, and March, 1907, twenty-five awards were gained by young stock of premium stallions at the former and twenty-two at the latter. The present method of awarding premiums, say the commissioners, is the best way of dealing with the small sum granted by Parliament for horse-breeding in Great Britain but the grant is quite insufficient.

Liberation under the Home Secretary's new order has been too much for Patrick Donovan, a man of fifty, who was remanded at Slough this week preparatory to being sent to a lunatic asylum. Donovan's first action on his release from prison was to go to Windsor Castle and claim the castle as his property. An unsympathetic sentry turned him away, and he proceeded hatless to Eton. There he told a policeman that he was interviewed by King Edward in the Long Walk, and his Majesty had instructed him to come to the castle to receive the keys. The constable took him to Slough police station, where he twice tried to hang himself.

A coal famine prevails in Great Britain with abnormally high prices. The railways are blamed for not carrying the coal promptly, but they deny responsibility. Hundreds of vessels are waiting for cargoes of coal.

PRISON WARDENS THRIVE ON BRIBERY

BERLIN, Sept. 28.—Sixteen persons have just been tried at Cologne, charged with bribing and corrupting a number of wardens and other officials of the city jail.

The evidence revealed an extraordinary state of affairs. As soon as a well-dressed prisoner appeared in jail he was beset with attentions from the wardens, all eager for his patronage.

Their object was to act as middlemen between him and his relatives. They would convey letters, money, food, etc., and for these services they received their reward from the relatives of the prisoners.

They placed food and letters in their boots or under the mattress, but it was in money matters that they developed those practices which finally got them into trouble. The money given to them for the prisoners found its way not to those for whom it was intended, but into the wardens' pockets.

One poor girl, whose lover was in jail, they evicted out of her last mark. They were in the habit of having jollifications with the prisoners, carried then by the familiar "Thou." One warden was so friendly with a prisoner that he used to occupy his cell at night, and send the prisoner out to mount guard dressed in his (the warden's) uniform.

The case came to the conclusion that, although the wardens were brib-

ITALIAN TROOPS IN REAR-END COLLISION

ROME, Sept. 28.—A remarkable accident to a train containing 700 discharged conscripts occurred at a station about two miles from Rome last evening.

The train, seventeen carriages long, was brought to a halt owing to a breakdown of the engine. While repairs were being made a goods train was suddenly seen approaching from the rear upon the same track. A guard, realizing the danger and the impossibility of avoiding a collision, fired a gun warning, and shouted to the soldiers to jump from the carriages. Many did so. The driver of the goods train attempted to stop, but as he was travelling fast he could not pull up in the short distance.

His engine crashed through the last carriage of the soldiers' train. A dramatic scene followed. The men, seized with panic, began to run in all directions, while the officers tried to calm them and to keep order. Assistance was rendered with great difficulty. Thirty-one persons, chiefly soldiers, were severely injured, and at midnight a long procession of men carrying their wounded comrades passed through the deserted streets of Rome to the hospitals.

The prisoners ought not to be considered guilty, and acquitted them. The wardens, of course, will be tried for dereliction of duty.

POVERTY AND LOVE DRIVE SISTERS MAD

PARIS, Sept. 28.—Driven mad by poverty, a woman named Josephine Lamboloez attempted to drown herself and her three-year-old son in the Moselle today. A young sister of the Moselle, through an unfortunate love affair, had promised to die with her. Proceeding to the bank of the river at a secluded part, the sister tightly bound the child with a cord, and then attached it with a second cord to the mother's body. Wading into the stream the two women set about ending the child's life.

The child's terrified screams were heard by a man fishing near by. He at once plunged into the water, and after a desperate struggle succeeded in getting the child from his demoted mother. Both women attacked him with savage fury, and sought to take the boy from him.

The child has been taken to the hospital, where he is recovering from the effects of his immersion. The two women, however, have been arrested.

"Now," said Tommy's mother, "I hope you'll profit by that spanking, and not be such a little savage hereafter."

"Good-bye," huddled Tommy. "I wish I wuz a little savage. Little savages' mothers don't wear shippers."

NEW SOUTH WALES GOES IN FOR IRRIGATION

The Government is Spending \$7,500,000 in Reclaiming a Great Area of Land Which is Required for Settlement.

SYDNEY, N. S. W., Sept. 28.—In order to provide land not only for the immigrant but also for the many Australians who are seeking and finding not, the Government of New South Wales has entered upon a spirited policy of water conservation and irrigation. According, work has been started in connection with the construction of a huge dam on Murrumbidgee River at a place which bears the quaint name of Barren Jack, and from this source irrigation canals will serve, approximately, a million and a half acres of country. The work, with canals, land reclamation, and other extras—incidentally, two small copper mines will have to be purchased from their owners and drowned under 236,000,000 gallons of water—will involve, it is estimated, an expenditure of \$7,500,000 at the rate of about \$5 for every acre rescued and turned to account. So, on the face of it, it will be money well spent.

Meanwhile, although the practical work was entered upon only in January last, there is already in existence near the site a "city" of almost a thousand inhabitants, with shops, a sanitary system, streets well laid out, boarding houses, a police station, an official medical man, and hospital tents. But no public-houses are allowed, and anyone suspected of grog selling is liable to be unceremoniously turned out. For the moment the men are, for the most part, living under canvas, or in premises of saplings and jute bagging. This, however, is only a temporary expedient, for the government is building comfortable barracks for the accommodation of those engaged on the work.

That part of Southern New South Wales known as the Riverina includes much of the best country in Australia, and given a reliable water-supply it would be admirably adapted for closer settlement. It is only eighteen hours by rail from Sydney, and therefore within quick reach of a ready market. At present the land consists largely of sheep-walks but with water available there would be every opportunity for a prosperous yeomanry.

By the agency of the dam an inland sea of some twenty square miles, an area wide enough for the anchorage of all the fleets in the world, is to be brought into being around a spot which at the present time is merely a deep gorge with a feeble and intermittent stream wandering listlessly in its bed. The gorge is three hundred yards across, with cliffs a thousand feet high on each side. It is granite facing granite and the appearance is majestic and impressive. The two promontories are styled respectively Barren Jack and Black Andrew, and from the former of those the underlining has taken its name.

These hills are to be linked by the dam which, when completed, will be two hundred feet high by nine hundred feet long. The structure will be of Cyclopean rubble, the material for the concrete, as well as the huge blocks of tained from the granite in the sides of the gorge, being locally abundant. The dam will be impounded with water to 75,234 acre feet—an acre foot, as the names implies, being

the quantity of water required to cover an acre to a depth of twelve inches. In this inland sea which is situated about three miles below the confluence of the Murrumbidgee and the Macintyre Rivers, three streams will empty. Up the Murrumbidgee River the water will be backed up for forty miles, up the Goodridge River for thirty miles, and up the Yass River for nineteen miles as far as the Devil's Pass. Flats in the river levels within these distances will become broad lakes, and the imprisoned water will convert hill tops into islands. Relatively, it is as big a thing as the building of the Aswan Dam, if not bigger.

AN AUTO CAR FOR THE SANDS OF EGYPT

Has Recently Been Built in Scotland.

It is Low Geared and of High Power for Getting Out of Bad Spots on the Roads.

GLASGOW, Sept. 28.—Over a portion of the sands at Belhaven, near Dunbar, tests were made the other afternoon with a motor car of the Arrol-Johnston build, which had been constructed for this particular kind of work. It is composed of steel, has a vertical four-cylinder engine of thirty-eight to forty-five horse power, which at about 1,400 revolutions can be developed to seventy horse-power. One of its unique points is the wheels. They are of exceptional dimensions, are completely closed in with fine steel plates, and carry solid tyres. This arrangement will greatly facilitate progress in the sands. The engine unit, indeed, the whole of the mechanism is enclosed. It is seated for seven persons, but the body can be removed and another frame or two substituted. The car is very low geared to provide reserve power for getting out of eventually heavy sand. The operator took place in the presence of a. S. S. himself, who witnessed the work with the keenest interest. The car first of all travelled over a stretch of very heavy sand, into which it sank nine to twelve inches, and got along splendidly at a speed of about 4 miles an hour. Then it was tested over another course of the heaviest sand on the whole area which covers the many miles on the Belhaven coast. It had proceeded some distance, when it suddenly got caught. There was any amount of power, but the wheels simply skidded, and so three-quarters of an hour was occupied in excavating it. Again it got away beautifully, and covered all right another trail. In the final test slight difficulty again arose owing to its becoming embroiled in another very sticky sand bed, but in a few minutes it was on its course, and dancing over sand reefs in a manner that was simply amazing. The car had ample power, but the main difficulty which had to be contended with was the skidding of the wheels. The tests are regarded as much more severe than will be experienced in Egypt, where the sand is of a powdery nature.



WU TING-FANG
The news that this famous Chinese official returns to his country as China's minister has been received with delight throughout the country, as he is very popular.