

SATURDAY

The Star

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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 maritime 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 advance of this system of propulsion undoubtedly are, 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 fitted 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 Deutchmann, who has patented his invention in England, Germany, the United States and elsewhere.



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is expanded, these chests being of increasing size, according to the decreasing pressure of the steam. The castings 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 invention 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.

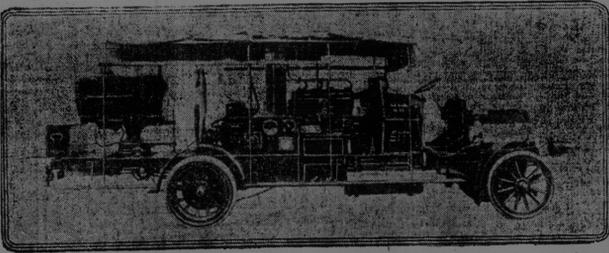
By an ingenious adaptation of his invention Mr. Deutchmann claims that the turbine engine, for use with either steam or gas—preferably the latter—can be applied to the propulsion of motor-cars, the turbine of 18 h. p. to 20 h. p. being capable of construction in large quantities at \$150 per engine. 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 turbine of the type of the Deutchmann turbine to provide for both motions. In a similar way the equipment for a Channel or other vessel only cost two-thirds of the amount now expended on turbines, as it would be unnecessary to fit the supplementary engines 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. Deutchmann's invention, however, has been shown to be very different from the many others that have proceeded to 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 satisfactorily and economically. 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 its inventor's expectations, we do not anticipate anything of the kind in the immediate future."

Mr. Deutchmann 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 winded 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



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 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. It is pointed out that the government are already deeply pledged. Mr. Burns has a big unemployment scheme to be produced at the first opportune moment; 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 consultation they will propose any pension scheme worth accepting.

Some extraordinary statements were made at Dulford Park, in the course of a evening in regard to the drinking habits of the Polish immigrants who are in such numbers in Lanarkshire. 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 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-one 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, report adds, the crop of the hops have de-

veloped very 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 supremacy 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 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 Hodgkiss, of the 14th Hussars, stationed at the School of Musketry, 31st St. He obtained 290 votes, against sixty-two for the second prize winner, Bernard Richard Page, of Elm-street, Canstantine Road, Hampstead, and Herbert Sudell, of Long-street, Pimlico. 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 since the death of the Duke of Norfolk, who are both nuns—the one belonging to the ancient Carmelite Order, and 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 Beville is in a convent at Harlow, Lady Leopoldina Kappel, sister to Lord Althorpe, the Hon. Ellen and Marie French, sisters of Lord French, are nuns.

Diablo, the game which is played everywhere in Paris, has crossed the Channel at last, and is being sold by the band 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, 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, is published. The commissioners express satisfaction 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, 49 similar awards were secured. At the hunter shows held in London in March, 1906, and March, 1907, twenty-five awards were given by the former and twenty-two to 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 hither to Eton. There he told a policeman that he had interviewed 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 railroads are blamed for not carrying the coal promptly. Hundreds of vessels are waiting for cargoes of coal.

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 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' ride 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 so majestic and impressive. The two promontories are styled respectively Barren Jack and Black Andrew, and from the former of these the unflattering has taken its name.



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

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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.

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 as a 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 traveling fast he could not pull up in the short distance.

POVERTY AND LOVE DRIVE SISTERS MAD

PARIS, Sept. 28.—Driven mad by poverty, a woman named Josephine Lamboloz attempted to drown herself and her three-year-old son in the Moselle today. A young sister of the woman, distracted 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 to the stream the two women set about rescuing the child's life.

"Now," said Tommy's mother, "I hope you'll profit by that spanking, and not be such a little savage hereafter." "Goodness!" his mother, Tommy, "I wish I wuz a little savage. Little savages' mothers don't wear slippers."