

F BAD LEGS, AFTER ERING. iam Galpin, of 70, Saint ited May 15, 1851.

is now 61) caught a violent ince that time they have been is now 61) caught a violent ince that ime they have been Her agonies were distracting, rel entirely of rest and skepp, was treed, but without effect ; of het lege was terrible. I had reed her to try your Pills and revel wer to try your Pills and revel werk or try your Pills and revel werk or try your Pills and revel werk ago, and, Her lege are painless, without undisturbed. Could you have the last 45 years, and contrasts , you would indeed field delight-, alleviating the sufferings of a

WILLIAM GALPIN. JRED OF A BAD LEG, OF TANDING bus, Builder of Gas Ovens, , dated May 31, 1851.

years from a bad leg, the result Gas Works; acrompanied by to a variety of nontical advice, even told that the leg most be pinton, your Pills and Ointment s time, that few who had not wit-

WILLIAM ABBS. erified by Mr. W. P. England URED IN ONE MONTH. terick Turner, of Penshurst, ber 13, 1850.

from Bad Breasts for more than ind had the best medical attend-healed an awfol wound in my own mined again to use your Pills and ral in her case, and fortunate it a perfect cure was effected, and of my family have derived from strongly recommend them to all

## FREDRICK TURNER.

an Agriculturist, residing at , dated May 15, 1850.

ng on each side of the leg, rather which increased to a great size, geons here, and was an immate of r. After various modes of treat-is as incursable. Thating heard so determined to try them. s as incurable. shaving heard so determined to try them, and in ared. What is more remarkable the Hay Harvest, and although I an throughout the winter, I have int.

SIDE PERFECTLY CURED. Mancis Arnot, of Breakouse, lated April 29th, 1851.

s my wife has been subject, from ion in the side, for which she was ion in the side, for which are was still the pain could not be removed. papers, the wonder ful cures effect-hought she would give them a trial, pht, she got imarefuste relief from three weeks, the path in her side enjoyed the best of health for the enjoyed the

FRANCIS ARNOT. itly with the Omtmentin me

Fistulas	Sore throats
Gout	Skin diseases
Glandular	Seurvy
Swellings	Sore heads
Lumbago	Tumoúrs
Piles	Ulcers
Rheumatism	Wounds
Scalds	Yaws
Sore Nipples	
and (near Temp	le Bar) London, an
or P. E. Island.	in Buxes and Pots
is a very cur	siderable saving i

of Patients are affixed to each Pot

ENERATIVE DISEASES. uured Engravings, and containing SD PREVENTIVE LOTION.

5.D PREFERENCE of the second secon the Effects of Climate, or Infection, Youth, Manhood and Old Age; with maringe, its Duties and Disqualifi-c of Syphilis, Spermatornhors, and adopted in the new mode of Treat-and Ricord, Surgeons to the Hospi-



## VOL. 22.

## CHARLOTTETOWN, PRINCE EDWARD ISLAND, TUESDAY, OCTOBER 26, 1852.

NO. 1181.

ERICSSON'S CALORIC ENGINE.

(From the Newtownswick Courier, Oct. 1.) We have work promised to lay before our readers a description of this flow invention, which promises to supersade the use of steam with motive power. The articles descriptive of the Caloric Engine with motive power. The articles descriptive of the Caloric Engine with motive power. The articles descriptive of the Caloric Engine with motive power. The articles descriptive of the Caloric Engine with motive power. The articles descriptive of the Caloric Engine with motive power. The articles descriptive of the Caloric Engine with a start of the control of the control of the control of the the control of the control of the start of the start of the temperature of the start of

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tence of all animate life. We have endeavoured to explain the construction of the caloric engine. Its most striking feature consists in what is called by its inventor, the regenerator. Before describing this, we will present the grand idea upon which it is based. First let it be remembered, that the pewer of the steam-engine depends upon the heat em-ployed to produce steam within its boilers. It will be seen that from the very nature of steam the heat required to pro-duce it is about 1.200 deavress. is entirely toot by that from the very nature of iteam the heat required to pro-duce it, amounting to about 1,200 degrees, is entirely lost by condensation the moment it has once exerted its force upon the pis-ton. If, instead of being so lost, all the heat used in creating the steam employed could, at the moment of condensation, be recon-veyed to the furgace, there again its aki in producing steam in the boliers, but a very little fuel would be necessary; none, in fact, except just enough to annels the start but the term of the start o veyed to the farmace, there again is aid in preducing steam in the boller, but a very little fuel would be necessary; none, in fact, except just enough to supply the heat lost by relation. The reason is obvious. Let us suppose the steam has passed from the boiler, has entered the cylinder, has driven the pixton forward, and is about to pass into the condenser, there to change its form, and be again converted into water. This steam, yet in the cylinder, and uncondensed, passesses all the heat it contained before passing out of the boiler. It has driven the piston forward, but in that effort it has lost no heat. That source of power it still contains. Let it be supposed that the heat contained in the steam could, at the moment it is converted into water within the condenser, be saved, and by some device be again used to create steam from water within the boiler, with what exceeding cheapness could the power of the steam-engine be employed. But is aquic impossible thas to re-employ the heat of steam : it constants the so ward; and heapoe every effort to economize in this manner would be unavail-ing.

coming those practical difficulties which are ever stamblingblocks in the way leading to the encoessful development of a great prin-ciple in new machinery. This he has now achieved. The prin-ciple of his invention, as stated by Sir Richard Phillips, is still re-tained, embodied in that practical and complete form, which rea-ders this engine economical, absolutely safe, durable, simple in con-struction, and in action effective.

In the Vay leading to the successful development of a green prac-ciple in now machinery. This has now achieved. The prin-dept of his invention, as stated by Sir Richard Philips, is still re-tined, embodied in that practical and complete form, which rea-ders this engine economical, absolutely, and, durable, simple in con-struction, and in action effective. Let us now attempt to describe the regenerator, to which we have referred. Without this, the machine we examined would possess, in point of economy, no advantages are incalculable. We have also fully illustrated the leading idea conceived by Captain Eriesson, of em-ploying heat over and over again. To attain this, is the object of the regenerator. For the parpose of anderstanding this instrument, our readers will have before stated, that atmospheric air in first drawn into the sup-ploying heat over and over again. The statis this, is the object of the regenerator. This the process of suderstanding this instrument, our readers will have before stated, that atmospheric air in first drawn in too the sup-ploying heat over and over again. The statis that not have proper stated, that atmospheric air in first drawn into the sup-pose, placed side by side, until the series statin a thickness, as of twelve inches. Through the almost innumerable cells, form-d of sives, placed side by side, until the series statin a thickness as of twelve inches. Through the almost innumerable cells, form-ed by the intersection of these wires. Now let us sup-pose, what actually takes place, that the side of the regenerator. Through this heated substance the air stut pass blore entering the syndivided, that the particles composing it are brought into close contact with the metal which forms the wires. Now let us sup-pose, what actually takes place, that the side of the regenerator. Through this heated substance the air stut pass blore entering the syndiver. The air has thus become expanded; it forces the piston graverd; it has done its work—valves open—and the impri-sond are,

apperation, will cause to create wonter, although it causes in to excite profound admiration. We will state the causes of its effi-ciency. The regenerator, contained in the sixty-horse engine we have examined, measures twenty-six inches influents for superficial su-perficial inches, and the net has ten meshes to the inch. Each superficial inch, therefore, contains 100 meshes, which, multiplied by 676, gives 77,600 meshes in each disc; and as 200 disces are employed, it follows, that the regenerator contains 13,520,000 meshes, and consequently, as there are as many small spaces be-tween the discs as there are meshes, we find that the sir within is distributed in about 27,000,000 minute cells. Hence, it is evident, that nearly every particle of the whole volume of air, in passing through the regenerator, is brought into very close conflict with a surface of metal, which heats and cools alternately. The extent of this surface, when accurately estimated, actually surpasses belief. The wire contained in each disc, is 1,140 feet long, and that contained in the regenerator, is consequently 228,000 feet, or 414 miles in length, the superficial measurement of which is equal to the entire surface of four steam-boilers, each forty feet long, and four feet in diameter: and yet the regenerator, presenting this great amount of heating surface, is only about two feet cube-less than 1-1920 of the bulk of these four boilers.

Involved in the mather is only universe the test of the test of the balk of these four boilers. Involved in this wonderful process, of the transfer and re-transfer of heat, is a discovery which justly ranks as one of the most romarkable ever made in physical science. Its author, Captain Ericsen, long since ascertained, and upon this is based the sublimest feature of his calorie-engine, that atmospheric air and other permanent gases, in passing through a distance of only six inches, in the fiftieth part of a second of time, are capable of acquiring, or parting with, upwards of four handred degrees of heat. He has been the first to discover this marellous property of caloric, without which atmospheric air could not be effectively employed as a motive power. The reason is obvious. Until espanded by heat, it can exert no force upon the piston. If much time were required to effect the piston would necessarily be as slow as to render the machine inefficient. Captain Ericsion has demonstrated, however, that heat may be commanicated to and expansion effected in atmospheric air with almost electric speed; and that it is therefore, eminently adapted to give the graatest desirable rapidity of motion to all kinds of machiney. <text><text>

hat strength ail easy lines for passing through the water are appropriately combined. The lines of the ship at the estimate are insigning the rest; and yet a very jelicies application of the 'ware' leicies application of the ordinary central keelson, there are an engines, had present a constrained by a double parsing through the floor timbers. These bed-plates of the engines are secared by bolic passing through the floor timbers. These bed-plates of the engines and present a constraint keelson, the bed-plates of the engines and present a constraint of the 'ware' leicies' and 'ware applies' leicies' leicies and applies' leicies' leicies and applies' leicies' leicies and applies' leicies' leicies and applies' leicies' leicies applies' leicies' leicies' leicies' leicies' leicies' leicies' leicies' leicies and leicies' leicies' leicies and leicies' leic

THE FUTURE DESTINIES OF AMERICA.

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whatever race, without any perceptible modification of their pultical unity, and the desire of preserving the Confederation entire does really appear to have prevailed for the time over all other passions. If this feeling should still predominate, it is difficult to put any limits to the possibilities of the future; but it seems not a little singular, that visions of such unserpulsus conquest should be entertained at a moment when the disruption of the original fabric has been seriously threatened, and is still a matter of public declamation.—Londen Times.

AMERICAN INGENUITY .- An English par

15, Albemarle Street, Piecadilly,

ED EDITION of MANHOOD, which guages, will be given, the Author' otion for the prevention of all Secret

haily, from 10 till 3, and 6 to 8.

haily, from 10 tim 3, and 5 to 5 or THE WORK. Is—We agree with the Author, that reing objectionable in the hands of sed, every facility should be given to then our opinion, we need but refer at our Military and Scholastic Aca-wich."—Naval and Military Gazette,

ying, that there is no member of so-t be found useful-whether such per-t, preceptor, or a clergyman.-Sun,

Fortunate for a country would it be, the philanthropic and scientific max-of matrimonial misery might then be race of the enerate, be succeeded rous spirits of the olden time."---Chro-

who begs to inform patients in the diterranean and the British Colonies, uily treated by correspondence only, d the most inviolable secreey may be

**EAVED.** I White spotted Heifer, Durham has been on the Subscribers prem-last Three Months, the owner can by proving property, and paying

FRANCIS JAMES. e Hall Company. ectifuly requested to my the Balances in the anid Company to the Treasurer, the Secretary, forthwith. by Order of the Directors, IJAMES E. COOPER, Sec'y.

spann, at his Office, Queen Bqu

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Among the various fields of broad political speculation there is none more suggestive than that discoverable in the future destinies of America. We use the term as importing not sim-ply the thirty-three United States, but the entire western world --the two enormous continents of North and South. Of Eudestinies of America. We use the term as importing not simply the thirty-three United States, but the entire weatern world would be either Republican or Cossack, and we can at least conjecture, which of these two it will not be. But how is the fate of America to be defineated or conceived! In their present political condition these immense territories reasemble those of Europe in the days of Charlemagne. They are imperfectly stocked by a moley population, including barbarons tribes, degenerate races, raing communities, and powerful. States. From North to South, and East to West, everything appears in process only of formation, including barbarons tribes, degenerate races, raing communities, and powerful. States. From North to South, and East to West, everything appears in process only of formation, incomplete and undecided. If we except the boundary between the British colonies and the Union-and, perhapa, there is no great necessity for making oven this reserve—we shall find no frontier, demarcation, or limit likely to be stable between the Polar Sea and Cape Horn. It is as uncertain which or what will be the States of the American continest, as it was what would be the kingdoms of Europe ten centuries age. English, French, Russians, Spaniards, and Portuguese have each their representatives in the field, but besides there is a composite commanity more powerful than all.
If the reader will glance at a map of America he will observe that the two continents appear fairly and intelligently partitioned among greater and smaller States, but the truth is that few of these formations, incomise and weak of and so was that before its recet losses, its extent was more than five times that of the Spaniah Peningula. To this day it comprise immense provinces abounding in mineral and vegetable weakthity, rehains and costing in a morel and vegetable weakther in the two continents appear fairly and intelligently partitioned among greater and smaller States, but the greate and the glance at the present away of the functions in a

AMERICAN INGENUITY. — An English paper publishes a so-ries of lectures on American ingenuity, recently delivered in England by a Mr. M'Kinnon, of the British Navy. The fol-lowing is an extraction with the following is an extraction "He thought there was something original in the American mind, and that as far as invention went, they were the first in the world. This was to be attributed to various causes; and they were more inventive than the English for the follow-ing reasons.—If a man invented anything in this country, he <text><text><text><text>