Scientific American.

NEW-YORK, SEPTEMBER 27, 1856.

The Inventor of Purifying Molten Crude Iron Without Fuel an American.

In the two preceding numbers of the SCIENTIFIC AMERICAN we have described and commented on the process claimed by H. Bessemer, of London, for rendering crude pig iron malleable without fuel—using only a blast of cold air in a close chamber to make the molten pig metal purify itself. We have good reasons for believing that this discovery is not Bessemer's, but J. G. Martien's, one of our own countrymen, formerly of Newark, N. J., who is a practical metal-worker; and who has been residing for some two years in Europe, engaged in introducing new improvements in the manufacture of malleable iron direct from the ore. He informs us that he worked the invention in the presence of a number of witnesses, long prior to the date of Bessemer's provisional specification; one of these witnesses—John Christopher, of Newark, N. J.,—now resides in Pittsburgh, Pa. He operated upon 2000 pounds of crude molten iron in a chamber constructed like the one described by us two weeks ago, and tapped it off in six minutes after it was let in. The result was a refined carburet of iron, some of which was very malleable. The process was exactly the same as that described and claimed by Mr. Bessemer. He told his patent attorney in London of this, and requested him to include the discovery in his application for a patent. The principle he claimed was "the application of air in a natural or heated state under pressure, to fluid iron, from a blast or melting furnace, and in such a manner as to penetrate and *search* every part thereof, not confining himself to the kind of receiver in which the operation may be performed."

His attorney in London did not describe the invention in the manner desired by Mr. M., but the reason why he could not then divine. It now appears that this attorney is greatly interested in Mr. Bessemer's success, and hence the reason for not strictly complying with Mr. M's. wishes becomes evident.

Mr. Martien obtained his patent in England Sept. 5th, 1855, for improving the manufacture of iron and steel, "consisting of the application of atmospheric air by mechanical pressure, or steam for the better purification of the liquid metal below the surface of the said metal as it comes from the smelting furnace, or refinery, the air and steam to be applied separately or together, as may be desired, and in such manner as to completely penetrate and search every part of the said metal as it comes, or after it has flowed from a blast or smelting furnace, and prior to the congelation of the melted metal." This is an extract from his provisional specification, and it embraces the same process as that claimed by Mr. Bessemer, whose patent in England bears date 7th December, 1855—three months after Martien's was issued. This proves conclusively who is the original inventor.

Some persons may attribute these remarks to prejudice in favor of an American citizen, but we ask them to look at the dates of these patents; and if they go to the legal documents themselves, as we have done, they will become convinced that Mr. Martien's process is the same as that claimed by Mr. Bessemer, and that the former is the first inventor. We hope that all the attempts made to deprive him of the benefits of his invention in England and elsewhere will end in failure.

Long articles have appeared in quite a number of the English newspapers flattering Mr. Bessemer highly, and praising his discovery. From the tone of these, and the peculiar sameness of ideas contained in them, it is evident to us that he far surpasses Mr. Martien, our countryman, in his knowledge of the properties of the *hot and cold blast*, in its application to the British Press.

Mr. Martien is supported in his claims by some powerful English iron manufacturers, and they will be pressed and secured in the United States at a proper time, the papers having been lodged by us for that purpose some time since in the Patent Office.

In the last number of the London *Mechanic's Magazine*, August 30th, received by us, C. Sanderson, of Sheffield, Eng., an old and experienced practical metallurgist, while he admits that the decarbonizing of pig metal without fuel is an improvement, he positively asserts that iron so manufactured will not admit of being drawn under a hammer, or rolled into a bar. He also asserts that the steel so made is not cast-steel; that it cannot be made into a boring tool, or fashioned under the workman's hammer.

In our next number we will illustrate the invention, and present some other interesting information concerning this alleged wonderful discovery.

Resignation of the Commissioner of Patents.

Hon. Chas. Mason, who has so long and faithfully presided over the Patent Office as Commissioner, has, we regret to state, sent to the President his resignation. The Executive, we understand, is reluctant to accept it, and up to the time of our going to press had not done so, and we hope will persist in declining, until Mr. Mason shall be induced to withdraw his petition. It would be a calamity to our inventors to have Judge Mason withdraw from the post of Commissioner, and we trust the causes, whatever they may be, which have induced this step on his part, may be removed, and that he may continue in the Office at least through the present administration.

The causes which have led to this sudden step, on the part of Mr. Mason, have not been made public, but if rumor is correct, it is attributable to the unjustifiable interference of the Secretary of the Interior with the duties of the Commissioner.

The appointment of Mr. Mason was universally regarded as an excellent one, and events have fully justified that opinion. Under his admirable guidance, the Patent Office has risen to a prosperity and efficiency never known before.

The Scientific American Prizes.

We continue to receive from every quarter the most gratifying evidences of the popularity of the SCIENTIFIC AMERICAN. From the long lists of subscribers that we are daily receiving, it would almost seem that the enthusiasm, in some localities, for our paper, has thrown all forms of political excitement into the shade. Our liberal offer of $1000 in cash prizes, to those who would exert themselves to make up clubs of subscribers to the SCIENTIFIC AMERICAN, is having its due effect. An honorable competition has sprung up, and the results thus far are highly satisfactory. Some towns which gave us last year large numbers of adherents, have already doubled their former strength.

It may be interesting to those who are engaged, or propose to engage, in the noble strife, to be posted up as to who were the successful competitors last year, and how large their rolls of subscribers were. We accordingly subjoin the list as given by us in January, 1856.

LIST OF COMPETITORS FOR THE SCIENTIFIC AMERICAN PRIZES, JANUARY, 1856, SHOWING THE AMOUNT PAID TO EACH, AND THE NUMBER OF SUBSCRIBERS ON THEIR RESPECTIVE LISTS.

No.	*Name.*	*Residence.*	*Prize.*	*List*
I.	J. CANT,	Hamilton, C.W.	$100	172
II.	M. M. GREEN,	Louisville, Ky.	$75	132
III.	J.F. LONECRAFT,	Rochester, N. Y.	$65	94
IV.	W. C. GRANT,	Detroit, Mich.	$55	82
V.	J. L. MITCHELL,	Jackson, Mich.	$50	75
VI.	J. L. DICKINSON,	Dubuque, Iowa.	$45	71
VII.	G. C. HYATT,	Adrian, Mich.	$40	66
VIII.	J. S. BARBER,	Waukegan, Ill.	$35	61
IX.	JNO. GARST,	Dayton, Ohio.	$30	55
X.	H. S. BABBITT,	Newark, Ohio.	$25	46
XI.	C. BIERSTADT,	So' Dedham, Mass.	$20	45
XII.	L. LYMAN,	Quincy, Ill.	$15	45
XIII.	B. RANKIN,	Louisville, Ky.	$10	45
XIV.	R. SKINNER,	Princeton, Ind.	$5	45

It will be observed that some of the competitors sent the same number of subscribers. In these cases the amounts of the prizes their due, were, by consent, equally divided.

Our friends should bear in mind that the sum total of the prizes last year was only $450, while this year it is increased to $1000. To one and all we say, work hard! Let the list of honor, to be published in January, 1857, show a great increase of effort over 1856.

Franklin.

The good people of Boston have erected a statue to Franklin, who is acknowledged to have been one of the greatest philosophers that ever lived; the inauguration took place on the 17th inst.—Franklin's birthday. There was a very large procession on the occasion, and a highly appropriate one in many respects. There were exhibited a new and beautiful locomotive and tender named Benjamin Franklin, mounted on trucks, and drawn by eighteen horses; the House and Morse telegraph instruments; the electric fire-alarm; Franklin's old printing press, on which was struck off and scattered to the crowd a *fac similie* of his newspaper, dated 1723; immense structures on wheels, representing school-rooms, filled with scholars at the desks; and a vast number of other novel and interesting features, made up one of the grandest displays ever witnessed. The Mechanics' Charitable Association, and numerous other charitable societies of Boston, and mechanics and other societies from the adjoining cities and towns were out in full force. Also, the Franklin Medal Scholars, children of the public schools, &c.

Franklin took a deep interest in the education of the people of his native city, and left one hundred pounds to be invested, and the interest applied to purchasing silver medals—Franklin Medals—as honorary annual rewards for the encouragement of scholarship in the free schools. Who can estimate the amount of good these have accomplished in stimulating the genius of Boston youth?

Franklin was a noble representative of the American mechanic, inventor, and philosopher. He invented a number of improvements in the printing press; he invented the stoves which still bear his name; and made one of the most important discoveries in electricity—he proved its identity with lightning. From his youth to the closing years of his eventful life he thirsted after knowledge, and he lost no opportunity of acquiring it. He was 40 years of age before he saw a single electrical experiment performed—this was while on a visit to Boston in 1746, by Dr. Spence, who had recently arrived from Scotland—and soon afterwards he distanced all others by new discoveries in this science. He had a most happy tact in planning experiments and conducting them. He was distinguished for great *common sense*—not such a common commodity, but we know well what it means, namely, a sound judgment, great powers of observation and reflection. He was of a very cheerful temper, and loved his business, in which he was diligent, and stood before kings, the greatest of them all. His life presents a strong example to our mechanics for imitation.—Franklin left no male descendants to perpetuate his name; but on his grandson, Prof. Bache, has fallen his scientific mantle.

The statue is a beautiful bronze casting, above the life size, designed by R. S. Greenough, of Boston, and cast at Ames' celebrated works at Chicopee. It stands upon a pedestal of verde antique marble, set upon a base of granite. It represents Franklin standing in an easy attitude, with a cane in his right hand, and his old-fashioned cocked hat under his left arm, and is stated to be an admirable likeness of the mechanic philosopher.

Our Great Ships.

The *Great Republic*, the largest ship ever built in our country for the commercial marine, by Donald McKay, of Boston, was burned to the water's edge during a great fire in this city in the winter of 1853, when loaded and ready for sea on her first trip. Her hull was saved, however, and sold by auction; she was rigged anew, and sent to Europe, where she was employed by the French Government as a store-ship during the Crimean war, in which service she surpassed all others for her sailing qualities and great capacity, having carried 3000 soldiers and 400 horses, during one trip, besides heavy cannon and ammunition. Having completed her engagements with the French Government, she arrived at this port, last week, and was the object of much attention.

On the 15th inst., a new and magnificent Liverpool packet-ship, the *Ocean Monarch*, was successfully launched from the foot of Tenth street, East River, in the presence of an assemblage of 5000 persons. Her length is 240 feet on deck; breadth 46 feet depth of hold 30 feet. She can carry 7,000 bales of cotton. Her frame is of live and white oak, and she is bound from stem to stern with angle-crossed iron straps four and a-half by 3-4 inches. She is not only the largest but the strongest merchant ship ever built in New York. A great change has taken place in the form and character of our merchant ships during the past six years. In appearance, they are entirely different from the old ships: they are larger, sharper, and more graceful in their proportions.

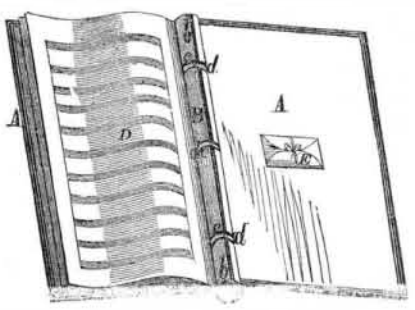
Recent American Patents.

Novel Sewing Machine.—By C. R. Gardner Detroit, Mich.—This is the cheapest and most compact contrivance of the sort that we have seen. It throws all of the cheap sewing machines that we hear of, in these latter days, into the shade. This new comer is not much larger than a pair of scissors, can be made for a dollar or so, and the inventor thinks, will compete, in quality of work, with many of the best machines now in use. Ere long we hope to present an engraving of the bantling.

Shaft Shifter for Sleighs.—By George Kenny, of Milford, N. H.—This is a contrivance connected with the forward part of sleighs, for the purpose of shifting the shafts or thills, so as to bring the horse directly in front of the vehicle, or on one side, at pleasure. It consists of a couple of small spring catches and a rod, the arrangement being such as to permit a convenient change either way, as desired. Mr. Kenny is the inventor of a number of excellent improvements relating to vehicles.

Paper Cutter.—By Hervey Law, of New York City.—This improvement is intended to assist bookbinders and others in cutting the edges of books and masses of paper. It consists of a novel combination of parts, whereby the power which operates the knife also clamps and feeds the paper. Heretofore it has been necessary to operate the clamping device separately. The invention is in use at Messrs. Harper's establishment in this city, and is said to work well.

Improved Portfolio.—By James Shaw, of Providence, R. I.—In this portfolio sheets of music, letter sheets, newspapers, engravings, manuscripts, and other papers may be successively inserted, and as substantially secured as if bound in the usual manner.



A are the covers of the Portfolio, constructed in the usual manner; B is a roller of wood; this roller is permanently attached to the back of the portfolio. Roller B has a longitudinal groove, *b*, cut in its entire length, also grooves, *c*, cut in it circumferentially. In the grooves, *c*, metallic rings, *d*, are fitted; these rings are not fitted tightly in the grooves, *c*, that is, the grooves on the exposed side of the roller are wider and deeper than the thickness of the rings, so that threads may be passed around the rings; at the back or unseen point of the roller the rings are fitted tightly in the grooves, *c*, and are attached to the roller so that they cannot turn therein.

The music sheets and other articles designated by D are secured within the portfolio by sewing them to the metal rings, *d*. A needle which is slightly curved, carrying the thread, is passed under the rings, *d*, through the longitudinal groove, *b*. then through the sheets, so as to secure the sheets to the several rings. Single sheets are inserted by folding a narrow strip on the inner edge, and then securing them the same as double sheets. E is a pocket attached to the cover, in which the needle and thread may conveniently be kept.

An important feature of this portfolio is, that in its action it is superior to the spring

back bound book when filled or partially filled with sheets, and placed in nearly an upright position (upon the rack of a piano for instance) there is no disposition in the leaves to turn over of themselves, as is the case with books bound in the usual manner, particularly when newly bound. Contrivances for keeping the book open may, therefore, be dispensed with.

This portfolio is simple in construction, and the roller back with the rings complete, and in readiness to attach to the covers, is of small cost. The expense of the article complete will depend upon the style and finish of the cover. Address the inventor as above for further information. Patented June 11, 1856.

New Printing Press.—By A. Newbury and B. Newbury, of Windham Center, N. Y.—Consists in the employment of a rotating and reciprocating printing cylinder, and also in a peculiar inking device, and fly, which catches the sheets as they issue from the press. The machine is extremely simple, and it is believed, will work rapidly and well. It may be constructed at a small cost, and is not liable to get out of repair.

Machine for Heading Bolts.—By E. Coleman and P. Coleman, of Philadelphia, Pa.—Consists of a rotating device attached to the bolt machine, whereby the bolt is turned intermittently within the jaws during the process of heading. The usual burr which is now formed on bolts below the heads is thus avoided.

Shingle Machine.—By John Broughton, of Chicago, Ill.—Consists of a disk wheel with knives, face guide, and cam attached, and used in connection with a vibrating bed. This machine is designed for cutting shingles from blocks that have been previously steamed. It is very simple, both in construction and operation. The only parts requiring any adjustment are the face guide, to give the thickness of the shingle, and the face cam, to give the taper.

Saw Set.—By A. Casey, New York City.—The main object of this invention is to save the saw blade from being strained or bent and rendered untrue, by the operation of setting the teeth to cut a broader kerf. The arrangement could not be easily explained without drawings.

Improvement in Steam Engines.—By Charles H. Reynolds, of Lewiston, Me.—This invention is applicable directly to the induction valves of a steam engine, when separate induction and eduction valves are used for each end of the cylinder; or to a separate cut-off valve arranged in the induction pipe, to act independently of the valve or valves which regulate the induction and eduction of the steam. It consists in a novel arrangement of mechanism connecting the valves with the governor, for the purpose of varying the closing movement of the valves, and thus to regulate the engine.

The Plow.—An Improvement Wanted.

"In our volumes of last year, under the above heading, will be found an article in which we called attention to a defect in the action of plows, a remedy or preventive of which would certainly be a great improvement. The defect to which the attention of our readers was called in that article, seems the *necessary* result of the present form and mode of action of the plow, which is, in reality, a *wedge*, forcibly dragged through the soil, lifting up that portion which is above it, at the expense of hardening or making more compact that portion which is below it. This mode of action has a tendency to harden and glaze over the subsoil, or that part of the soil on which the sole of the plow rests in its passage, and is productive of several injurious effects; as, for example: 1. It makes a compact surface very hard to break through or get under in subsequent plowings. 2. It makes the lower surface so dense that the roots of plants must often find it impossible, or very difficult to penetrate it; and 3. It forms a groove in which surface-water must sometimes be retained long enough to injure the growing crops.

The above is the defect which it is desirable to get rid of. The improvement wanted is some contrivance by which this defect could be prevented or remedied. Nothing of the kind has been as yet proposed, so far as we can remember, by any of our ingenious countrymen. The following proposal was lately made at an agricultural meeting in Great Britain. The object, let it be remembered, is to preserve the bottom of the furrow in a pervious condition, and to get rid of that compactness, which, in addition to the evils already named, must be a great obstacle to the perfect drainage of a clay soil. The remedy proposed consisted in the adaptation of rollers to the sole shoe, or in adding a hind wheel, notched or teethed, so that when following in the track of the sole shoe the notches or teeth may break up the smooth track formed by its action. The proposer of these two modes of improving the plow seems to think most favorably of the idea of rollers—whose mode of action, however, he does not specify—as they would not only prevent the glazing and hardening, but would, in his opinion, lessen the draft.

We submit these suggestions to our ingenious inventors and mechanics, and to our agricultural brethren of a mechanical genius, in the hope that they may prove a germ of a much-needed discovery or invention."

[We copy the above from the *Albany Cultivator*, which is one of the most practical and reliable agricultural papers in the country. The subject is one of importance. We have no doubt that inventors will respond to the call made upon them in the proper manner. The invention of a plow that will meet the requisites above described, would be a lasting benefit to the agricultural world, and bring a large fortune to the patentee. Come forward inventors, and help the farmers to a new plow.

Prevention of Smoke.

In all our Atlantic cities and villages where wood and anthracite coal are used for fuel, no smoke fills the atmosphere, and the houses have that clean and fresh appearance which excites the surprise of persons arriving here from England, where bituminous coal is employed for fuel. In various parts of our country, however, bituminous coal is now used for fuel, and it will yet become the great fuel for manufacturing and domestic purposes, owing to the magnitude of our bituminous coal fields, in comparison with which the anthracite beds are mere specks. Where bituminous coal is used (as in Pittsburg, and the cities and villages on the Ohio river) the atmosphere is redolent with smoke, and the houses have a sooty, chimney-sweep appearance. If the smoke from such fuel could be prevented, it would be a very desirable thing to all those who use it. Two inquiries, therefore, arise in regard to it, namely: what is the cause of the smoke; and can it be prevented.

Fairbairn, C. E. and M. E., of Manchester, Eng., in his lectures to engineers, presents some very useful information relating to these two questions. He says:—

"Perfect combustion is the prevention of smoke, and whenever smoke makes its appearance we may reasonably infer that there is imperfect combustion, and probably the want of attention to a few simple rules is the cause. From well-known chemical facts, 1 atom of coal gas requires 8 atoms of atmospheric air for its complete combustion; when that quantity is at its maximum, or in excess, there is no smoke; when this condition is not fulfilled, smoke is invariably present. In order to render the residue of the products of combustion transparent or smokeless, a supply of air, amounting to fifteen times that of the gases evolved, must be admitted. Should it exceed that quantity, the effect will not be smoke, but an additional expenditure of fuel to supply the loss of heat which this excess of air would require for absorption, rarefaction, &c. Hence the necessity which exists for power to regulate the admission, if not the exact, at least of an approximate quantity of air. On the other hand, should the supply be deficient in quantity (which is often the case) a dense volume of smoke is then visible, accompanied with all the defects and annoyances of imperfect combustion.

The variable changes which accompany perfect and imperfect combustion are not only visible, but may be proved by experiment.—Let any person apply his hand to the tube of an Argand gas-burner, and he will find that the instant the aperture is partially closed, the flame immediately becomes elongated, and instead of a clear brilliant light, a dull red flame with a dark volume of smoke, is the result. This shows the effect of a diminished supply of air; and the same may be applied to a steam engine furnace when imperfectly supplied with oxygen, when the gases pass off in opake volumes unconsumed, and where a considerable portion of heat is entirely lost from that cause. It has been stated that we cannot have fire without smoke, but this is not the case in steam boilers, as a well-constructed furnace, properly managed, furnishes many examples where bituminous coal is consumed in large quantities, and with little, if any, appearance of smoke. In attempting the total suppression of this nuisance two important considerations require to be attended to as essential, the first of which is, an abundance of boiler space, and the second a sufficient supply of air."

The reason why wood emits but little smoke is that it contains within itself a great amount of oxygen, to produce perfect combustion.—The reason why anthracite coal emits no smoke is that it contains no hydrogen, like bituminous coal; it is mostly composed of carbon, which is not volatile, and only becomes so when it unites with its combining proportions (C. O.²) of oxygen in perfect combustion, producing carbonic acid gas. Bituminous coal is a hydro-carbon, that is, it contains hydrogen, a very volatile gas, which at a comparatively moderate heat escapes, and lifts up some of the carbon with it, thus producing carbonic oxyd (smoke). The addition of more oxygen to it at a high heat will produce perfect combustion, prevent smoke, and increase the quantity of heat. The prevention of smoke, therefore, not only involves the removal of a disagreeable evil, but the saving of fuel also.

Great Exhibition of the American Institute at the Crystal Palace, New York.

The Exhibition opened agreeable to announcement, on the 22nd inst., but at the time of our going to press had not assumed a very orderly appearance. Indeed, the Palace was by no means in readiness for the public. A few days, however, will suffice to work a marvellous change in the face of things. The Exhibition will then become interesting, and spectators will begin to flock in by thousands.

The indications are, that the Fair this year will surpass those of previous years. The display of working machinery promises to be very large. The arrangements for motive power are on the amplest scale.

Among the mechanical novelties already on hand is a splendid steam fire engine from the Island Works, Seneca Falls, N. Y., and an air engine from the Neptune Works, of this city. We shall describe them at another time.

Next week we shall commence our more formal reports, and devote considerable space each week, during the continuance of the Exhibition, to descriptions of the principal novelties in each department.

Thrashing by Steam Power.

E. S. Judd, of Stevens' Point, Wisconsin, informs us, that last spring he and his brother, H. A. Judd, purchased a four-horse power steam engine, of Hoard & Son, of Watertown, N. Y., which they have applied with much success to thrashing grain. They first tried it with a common thrasher and separator, usually driven by four horses, but finding it more powerful than they expected, they applied it to an eight-horse thrasher, which it worked with ease to the astonishment of those who first witnessed it, and who were so well pleased with its performance that they threw up their hats, and gave three cheers for steam. He informs us that competent judges assert, that their four-horse steam engine drives the thrasher and separator with greater ease than eight horses. The farmers all like it, as it is twelve per cent. cheaper than horse power for thrashing. It is mounted on wheels; the farmers furnish them with wood and water, and they go from place to place thrashing by steam. This portable steam thrasher is a great acquisition to agriculture, and he thinks that the farmers of Illinois should devote their attention to steam thrashing as well as steam plowing. With a four horse thrasher, they have thrashed 100 bushels of wheat per hour.

A Marine Locomotive.

Mr. William Lonsdell, a machinist of Memphis, Tenn., has invented what he terms a Marine Locomotive, and which is designed to be substituted for the present steam water craft, by making the base of the boat the propelling agent, instead of paddle wheels, as now used. The invention consists in using two huge parallel hollow screws in the place of the present keel, and revolving them by means of steam power, so that they will cut their way through the water as a common screw cuts into wood. The screws are constructed of iron, and, as before stated, are hollow, but are divided into compartments, as precaution against sinking, in case of an accident.—[Washington Star.

[The idea of this locomotive is obtained from that of H. A. Frost, illustrated on page 180, Vol. 9, Scientific American. The difference between the two is, that Frost's has only one revolving hollow screw, and contains the cabins in its interior.

Geographical Expeditions.

Exploring expeditions have become quite a mania at present. One is about to be fitted out by the Pacha of Egypt to explore the upper sources of the Nile, and another projected by some Englishmen with the same object in view, but taking a different route. The Nile is still a mystic river, and we know but little more about the countries through which it flows than that left us by the traveler Bruce, nearly a century ago.

Prof. Burmeister—the celebrated botanist—of Halle University, in Germany, is about to proceed on an exploring expedition up the La Platta region in South Amcrica.

An expedition is talked of in this city, for the purpose of exploring the mountainous regions behind the Colony of Liberia, in Africa. There is much of this world respecting which we are yet completely ignorant. We hope these expeditions will remove the clouds and shadows which still hover o'er those regions which they contemplate exploring.

Uses of Cypress Bark.

We have received from C. K. Marshall, Esq., of Vicksburg, Miss., a small package of the inner bark of the cypress tree, with a description of its uses, and he directs our attention to other purposes to which it may be applied.

This bark is very fibrous, of a dark tan color, and thousands of tuns of it can be furnished at the southern saw mills every year. He believes, and, we think, justly, that it would make excellent wrapping paper. It is employed in small quantities by some boatmen for caulking boats, and it possesses the quality of repelling the attacks of all water worms. It makes very good rope, and some of the raftsmen twist its fibers, and use it for this purpose. If any paper manufacturer desires to make some experiments with it, or any of our ship caulkers for caulking the seams of vessels, he will willingly furnish them with specimens.

We are convinced that the inner bark of the cypress tree—which is the common growth of the low lands in the South—might be used as a cheap material for making mats, coarse ropes, and a hundred other things. The natural resources of our country are not half developed. We send abroad for cocoa fiber for making coarse mats and rugs, while we have a superior article, thousands of tuns of which is annually thrown away at all our southern saw mills.

Death of a Celebrated Navigator.

Sir John Ross, the celebrated Arctic navigator, recently died in Scotland at the advanced age of 80 years. His expedition to the Arctic regions, ending in 1833, lasted four years, and he sailed over the exact northern pole of our globe: indicated by the compass whirling round on its pivot.

The U. S. propeller *Arctic*, which was dispatched by our Government to sound the ocean track for the telegraph cable between Newfoundland and Ireland, has arrived at the latter country, but no report of her ocean survey has yet been made public.