COMPRESSED LIGNITE AS FUEL.

An important, if not a vital, question in Texas, especially with respect to the industrial development of the State, is panies would be actually getting their coal for nothing. how to utilize the extensive beds of lignite which abound there. Indeed, in the lack of true coal, the State can hardly accomplish much in the manufacturing line without first solving this problem.

We are informed that Mr E. T. Dumble, of Houston, has devised a process of coking the lignite, which works well on a small scale and is likely to prove valuable in larger operations, particularly in smelting iron, there being an abundance of iron ore in the neighborhood of the lignite deposits. For other than smelting purposes, however, it is desirable to retain in the fuel the volatile fuel elements which are wasted in coking, and which amount to about two-fifths of the total weight of the lignite.

A sample of this fossil fuel, from a seam ten feet thick, in Robertson County, Texas, may be taken as a representative specimen. Analyzed by Prof. E. T. Cox, of the Indiana Geological Survey, it showed-fixed carbon, 45 per cent; gas, 391/2 per cent; water, 11 per cent; white ash, 41/2 per cent. It furnished nearly 50 per cent of lusterless coke, closely resembling wood charcoal. As taken from the bed the lignite is dull brown in color, and is apt to shrink, crack, and fall to pieces on exposure to the air, a property unfitting it for transportation.

Judging from the success achieved in New England in compressing peat, and in Pennsylvania in compacting coal dust by pressure, Mr. N. A. Taylor, of Palestine, Texas, is confident that by similar mechanical treatment the soft and watery lignite might be converted into a fuel that would rival cannel coal The solidity and high specific gravity of true coal being due to the pressure to which it has been subjected by overlying rocks, mechanical pressure, he argues, would do the same for lignite. Such pressure would expel the water, and by compacting the fuel would make it more durable in combustion and add greatly to its heating power. "Nature does it: why can't we?"

It is purely a question of economy of power. If the lignite can be squeezed into true coal, or something like it, for less than it will cost to bring coal from the coal fields of the north, the advantage to Texas will be obvious and great. As the lignite beds are easily accessible, and can probably be made to furnish the power required for converting the lignite into a more useful fuel, there would seem to be no theoretical obstacle to the accomplishment of the end at which Mr. Taylor aims. At any rate it is a good opening for invention, and one that Texan inventors will probably follow to profitable solution as soon as they discover its importance, And the value of a successful process of compacting lignite so as to fit it for transportation and the ordinary uses of soft coal would not be confined to Texas. There are in many invention called for by Mr. Taylor.

SMOKELESS FUEL FROM COAL.

ing, but also for rendering commercially available the dense cants or those who have already received certificates of regcity of London, obscuring the light and rendering the atmoa semi-coke, resulting from a short distillation of coal, fur- any registered trade mark. nishes a fuel that is practically smokeless; and he has since renders it still more smokeless and makes it the most per- The question as to the applicant's legal claim to the mark so exterior is crystalline, with curious blackish, grayish, and fect fuel imaginable, as it has all the cheerfulness and heat-registered is left for decision where it properly belongs, that yellow reddish patches. Here and there metallic parts give disadvantages arising from its use. To produce this fuel in case of dispute. in quantities suitable for public use he proposes to take adthat they are amply sufficient for the purpose. Instead of limited. With its present force and the vast multitude of portion, and pass three times the quantity through the re- the average, to the determination of the questions of origin- tent of lines-namely, 12,000 miles-was traveled in one extraction, and in this way less and not more plant would courts before it has more than a presumptive value. he necessary to give the same quantity in a given time, while the gas itself would be of better quality. The author ing the broad seal of the United States, is a guarantee that claims, from his investigations and experiments, that the re- the owner's right to the invention claimed has been officially products, in the shape of tar and ammoniacal products, that | which could not stand legal investigation. The knowledge they have at present; the community would have 24 candle that the Patent Office simply registered and certified claims instead of 16 candle gas; the fuel resulting from the process to property rights, leaving them, as in the case of trade would be of a nature to ignite readily, make a cheerful fire marks, to be adjudicated by the courts, would in no wise dents: J. P. Kimball, Bethlehem, Pa.; W. H. Pettee, Ann that gives out 20 per cent more heat than common coal; and lessen the legal value of letters patent, while it would greatly Arbor. Mich.; C. O. Thompson, Worcester, Mass. Mana-London would become a smokeless city. The only extra simplify and expedite the work of the Office, and at the same expense to the companies would be that of the additional time put an end to a vast amount of expensive and vexatious workmen employed in charging the retorts and interest upon litigation, which, even when successful, merely establishes D. Rand, Philadelphia. Secretary: Thomas M. Drown, the additional capital required for transit appliances; but, as a claim. an offset, the companies would receive an increased quantity | For when an inventor has been subjected to a costly trial | It is probable that the next meeting of the Institute will

THE SILK INDUSTRY OF THE UNITED STATES.

The preliminary report of Mr. Wm. C. Wyckoff, Special Census Agent on Silk Manufacture, shows that this industry gives employment to something over 34,400 hands, and that to copyright should relieve any apprehension that may exist the finished goods turned out are worth about \$34,400,000, or a thousand dollars net to each worker.

The product of the census year ending June 30, 1880, is divided as follows:

Sewing silk	\$776.120
Machine twist	6,000,265
Floss silk	219,250
Dress goods	4,115,205
Satins	1,101,875
Tie silks and scarfs	606,675
Millinery silks	891,955
Other broad goods	627,595
	3,862,550
Ribbons	5,955,005
Laces	437,000
Braids and bindings	999,685
Fringes and dress trimmings	4,950.275
Cords, tassels, passementeries, and millinery trimmings,	1,866,575
Upholstery and military trimmings	1,392,355
Coach laces and carriage trimmings	37,510
Undertakers', hatters', and fur trimmings	59,805
Mixed goods and silk values therein	510,763

10,484. The chief centers of the silk industry are Hartford any loss of life, owing to the vigilance of the railway author County, Conn., with 549 looms; Hudson County, N. J., with ities, who had watchmen stationed, who gave timely warning. 1,060 looms; Passaic County, N. J., with 3,238 looms; New had \$3,335,045, and New York city, \$2.190,660. The gross of 5 ft. value of materials and supplies was \$22,371,300, and the gross value of manufactured product was \$40,975,285, which from the narrative of the fishermen that for some days the includes the returns from those who do not make finished channel was covered with fields of ice acres in extent from goods-throwsters, makers of fringe silks, spoolers, winders, 6 ft. to 12 ft. in thickness. The crashing of the ice as it

SUPPRESSION OF ONE CLASS OF INTERFERENCES.

An important modification of the practice of the Patent Office in the matter of trade mark interferences has been ordered by the Secretary of the Interior.

Since the decision of the Supreme Court affirming the unconstitutionality of the United States statutes relating to trade marks, the Office has continued to register the applications parts of the West, and in other countries, extensive beds of of such persons only as, with knowledge of the decision, lignite, the utility of which would be vastly increased by the voluntarily paid the fee previously required. The Office has also continued the practice of deciding between conflicting or interfering applications for certificates of registration.

This practice is now discontinued, the Secretary of the Mr. W. D. Scott-Moncrieff, in a paper read before the Interior having decided, in the case of Braun & Co. vs. Society of Arts, has recently brought to the attention of that Blackwell, that it is not within the province of the Commisbody an important project for not only hereafter prevent- | sioner to decide questions of priority of right between applistratum of smoke that has so long hung like a pall over the istration. All interferences pending in trade mark cases have accordingly been dissolved. Hereafter, on receipt of an apsphere dangerous to the whole community. He proposes to plication for the registration of a trade mark, notice will be substitute for the bituminous coal now in universal use for given the applicant of the decision of the Supreme Court, as gravel covered road. The phenomenon was witnessed by domestic and industrial purposes, a modified form of this heretofore, and if the applicant still desires registration, and coal from which the gas has been partially extracted. Ex- the matter is proper therefor, the application will be conperiments made by him as long as ten years ago showed that sidered without reference to any pending application or to

discovered that, by treating this coke with water when hot, marks becomes purely one of registration and certification. School. It weighs 375 grammes, is triangular in shape, its giving properties of the unprepared coal with none of the is, with the courts, to which appeal must ultimately be made a brilliant luster. Its specific weight is very high, its hard-

vantage of the existing plant of the gas companies, finding Office with respect to patent rights should not be similarly taking 10,000 cubic feet of gas per ton from the coal, he applications to be considered it is physically and morally in- Trickett match was an extraordinary achievement in tele would take 3,333 cubic feet, or any other convenient pro- possible for the Office to give more than a few minutes, on graphy—in fact, it has never been excelled. The total extorts. In this manner the gas would be coming away from ality, novelty, and the rest. For this reason not only are hour and twenty minutes. The greater portion of this time the retorts all day long, just as formerly, with a slight loss improper applications granted—the existing practice of the was occupied in transmitting the message through India. of time to be allowed for the additional frequency of the Office only being considered—but worse, really proper and From Singapore to Sydney, 5,070 miles, the message occucharging. The supply at the end of the twenty-four hours deserving applications are denied. And yet, after all, the pied only thirty-five seconds in transmission. This meswould be in excess of that which is obtained from the long property right of the patentee must be passed upon by the sage was repeated fourteen times, from station to station,

To the popular mind the possession of letters patent bear-

of valuable by-products and a supply of fuel that would be to prove his freedom from interference, and has obtained the be held at Stauuton, Va., in June next.

in universal demand; and the profits from the sale of this at | patent applied for, he has gained nothing which the Patent prices much below that of coal would be such that the com- Office could not justly have given him at the outset, namely, a certificate that he claims the invention described. The decision of the Commissioner that there is no interference is worth nothing in the courts if the claim is contested there. The entire case must be retried on its merits.

The simple and efficient working of the law with respect as to a possible injury to patent rights in case the suggested change in the practice of the Patent Office should be made.

The value of copyright property is very great; yet the litigation with respect to copyrights is relatively small, though the government entertains registers and certifies claims to copyright, as it hereafter will trade-mark claims, without pretending to determine their legitimacy. That is the business of the courts. And the courts would probably have fewer patent cases to try if it were generally understood that the decision of the Patent Office in granting letters patent gives only a presumptive title to the invention claimed, and that the proper function of the office is clerical rather than iudicial.

Failure of Another Railway Viaduct.

Following the destruction of the Tay bridge now comes intelligence of the destruction, on Feb. 6, by ice, of a section of the Solway Viaduct, the most important part of the Solway Junction Railway, and until this week, a connecting Reports were received from 383 factories, with 8,467 looms, link between England and Scotland. In former years the representing an investment of \$18,899,500. Connecticut has thaw has been accompanied by high winds, breaking up 28 factories; Massachusetts, 22; Pennsylvania, 49; New the ice and saving the Viaduct; but this season no wind has Jersey, 108; and New York, 150. The Connecticut factories arisen, and the packs have been carried down in unbroken give employment to 3,766 hands; those of Massachusetts to masses, hurling themselves against the piers, carrying every-2,068; Pennsylvania, 3,360; New Jersey, 13,932; New York, thing before them. The accident has been unattended by

The structure is very similar to the 'Tay bridge in construc-York city, 1,820 looms; Philadelphia, Pa., 769. Nearly half tion and size. The viaduct is about a mile and a quarter in the silk operatives are women. The wages paid during the length, and about 40 ft. in height; the spans are in groups of census year footed up \$9,107,853, of which Paterson, N. J., seventeen of 30 ft., each group being connected by a span

Some idea of the force of the floating ice may be formed swept along, borne by the current at the rate of twelve knots an hour, was heard two or three miles off, they said, and even | half a mile away from the viaduct the noise was audible, although the wind was blowing in the opposite direction.

A New Electrical Society.

A new organization styled the New York Electrical Society has lately been organized in this city, having for its object the advancement of the knowledge and uses of elec-

The following officers were elected for the ensuing year: President, F. W. Jones; vice-presidents, George B. Scott, Professor Vander Weyde, Gerritt Smith, W. J. Dealey, George A. Hamilton, and G. G. Ward; secretary, John W. Moreland; treasurer, M. Brick. The membership is already quite large and comprises many of the foremost electricians residing in this vicinity.

A Meteoric Stone.

A meteoric stone fell at Wiener Neustadt, a few days ago, near the telegraph office, and penetrated deeply into the several persons, who all declare that the meteor showed a brilliant light. Upon inspection a triangular hole was discovered of five centimeters width; the ground was frozen at the time. The meteoric stone was excavated in the presence Thus the function of the Patent Office in relation to trade of Dr. Schober, director of the Wiener Neustadt High ness about 9. An analysis is now being made.

Fifteen Hundred Miles a Minute.

The cable message to Australia respecting the Hanlanbetween London and Sydney.—Sydney Mail.

The American Institute of Mining Engineers.

The annual meeting of the American Institute of Mining sults of the application of his scheme would prove startling. examined and decision rendered in his favor; and on this | Engineers was held in Philadelphia the third week in Feb The gas companies would have double the quantity of by- presumption not a little money has been paid for patents ruary. The attendance was unusually large, and many important papers were read and discussed. The following officers were elected:

> President: William Metcalf, Pittsburg, Pa. Vice-Presigers: J. S. Alexander, Philadelphia; H. S. Munroe, New York; J. C. F. Randolph, New York. Treasurer: Theodore