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#### NEW YORK, SATURDAY, APRIL 16, 1887.

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## Scientific American.

### THE NEW COMMISSIONER OF PATENTS.

The President has appointed the Hon. Benton J. Hall, of Burlington, Iowa, to the Commissionership of Patents. The office recently became vacant by the resignation of the Hon. Martin V. Montgomery. The new official is a lawyer of standing and promigraduated at Miami University in 1855. His law prac-Burlington. This gentleman, in his day, was regarded as one of the leading and best lawyers of the State. His son is the second Commissioner from the State of Iowa. His predecessor from that State, Charles Mason, was appointed in 1852, his commission dating from the manufacture of glass, in which he is extensively en-24th of March of that year, and his term lasting five years.

as well represented now as it was by Mr. Mason, over thirty years ago, The position of Commissioner of down" at that point, geologically speaking. He was Patents yields in importance to few government offices. |finally convinced that his labor would be fruitless, and In times of peace especially, when the inventive arts are exercising so many minds, and when the true abroad, and others repeated them in different localities conquests over nature are being won, the arbitrament with varying success. 1 have taken some pains to of interests of the greatest magnitude rests in the collect the facts from authentic sources. hands of this official. The products of the thought and labor of some thirty thousand inventors have the Ohioline and about forty miles north of Richmond. annually to be examined, and their claims adjudicated. The result was a small flow of gas, but not in quantity To carry out this work systematically, the influence of the head of the department should be felt in every bureau. Consistency in his rulings will reduce the practice of the office to a uniform standard.

The industries of the country, on which its wealth and position among nations depend, pass in continual review through the Patent Office. Every modification of its practice, as dictated by court decisions or as inspired by the personal convictions of the Commissioner, is felt far and wide. Patent after patent could be cited whose value has gone up into the millions; and were it possible to arrive at the aggregate value of all patents issued, the interests represented would be enormous. The finances of the other departments of government, even of the Treasury itself, would yield in true importtents affects the personal interests of the people individually and directly.

Besides this aspect of the case, the influence of patents and the mode of granting them upon the prosperity of the country, not only in peace but in war, illustrates the importance of rightly filling the office of Commissioner of Patents. The recentlegislation in the direction of building up a navy for this country will have a successful issue largely dependent upon patents. The successful gun, its powder, its projectiles, will probably involve many patents, while the ships of war will include in their construction still more. The industries of the nation, by which it lives, are based upon patents, and the defense of these interests in case of war will depend upon the same. It is only by American genius, fostered by our patent laws, that the manufacturers of America are able to compete with the lowpriced labor of other countries, and this genius will be called on, if war occurs, to invent methods of defense. The effect of patents is felt upon the arts both of war and peace. The administrator of the office, in one sense, holds in his hands, or has a strong influence upon, the destinies of the country.

The Western judges have rendered some of the best and most enlightened decisions in patent cases. In receiving from one of these States a new Commissioner of Patents, we venture to augur good from the selection. The past record of Mr. Hall entitles us to hold this conviction. If he will continue the work of his predecessor, and gradually bring business up to date, so that now flowing, and until these are completed there is no less delay will intervene before the consideration of a means of knowing positively whether gas will be found case, he will be entitled to the thanks of the community of inventors, and he will do the entire country a great service. The coming year may see the delays done away with; and the work of the Patent Office on a regular business basis.

### JUDGE MONTGOMERY.

struck are laying systems of mains for supplying de ate Justice of the Supreme Court of omery an Asso the District of Columbia, to succeed Justice MacArthur, mestic and manufacturing demands, and the supply who has retired. The new incumbent is a resident of promises to be as constant as it has proved to be else-Lansing, Mich. He was born in 1840, in Eaton Rapids, where. Eaton County, Mich. He was admitted to the bar in the circuit court for that county in October, 1865. Since Artificial Whetstones, that time he has been admitted to practice in all the The Guide Scientifique describes the following Federal courts, including the Supreme Court. His private practice in the State of Michigan was very exmethod of making artificial whetstones. Gelatine of good quality is dissolved in its own weight of water. tensive. His first active participation in politics dates back to 1870, when he was elected by the Democrats to the operation being conducted in a dark room. To the solution 1½ per cent of bichromate of potash is added, the State Legislature. In 1876 he was a delegate to the which has previously been dissolved in a little water: National Convention at St. Louis. He was appointed A quantity of very fine emery, equal to nine times Commissioner of Patents in the beginning of President Cleveland's administration, this being one of his the weight of the gelatine, is intimately mixed with the gelatine solution. Pulverized flint may be substifirst important appointments. The experience of his tuted for emery. The mass is moulded into any deoffice as Commissioner should render him a peculiarly sired shape, and is then consolidated by heavy presvaluable addition to the benchof the court in question, sure. It is dried by exposure to strong sunlight for before which so many patent cases are brought on apseveral hours. peal from the Commissioner of Patent's decisions.

## APRIL 16, 1887

#### WATUBAL GAS IN INDIANA. H. C. HOVEY.

At New Albany, Ind., there is a thin seam of bituminous shale whence little rills of petroleum trickle down into the Ohio River. In former days, before the geology of the region was understood, it was supposed nence. He was born in Mt. Vernon, Ohio, in 1835, and that this indicated coal, but now it is known that the shale in question belongs to an older period than the tice began in the office of his father, Mr. J. C. Hall, of carboniferous. Attempts to use it for fuel were not successful. Last summer, however, the idea occurred to the capitalist, Washington De Pauw, that boring for natural gas might meet with a better reward. He tried the experiment, hoping thus to facilitate the gaged, so as to compete with Pittsburg and other points where fuel is cheaper than it is in southern Indi-We hope and believe that the State of Iowa will be ana. Mr. De Pauw was warned by Prof. Collett that in order to find gas he would have to "bore up instead of gave it up. But the rumor of his experiments went

> Early last fall a boring was drilled at Portland, near sufficient to be of commercial importance. After this failure matters stood still at Portland for a while, and then courage was revived by successes elsewhere, and now there are three good paying wells at Portland. Two years ago the Ft. Wayne, Cincinnati, and Louisville R.R. Co. prospected for coal at Eaton. a village ten miles north of the city of Muncie. They went down 600 feet, and then abandoned the works. Last October, in view of the experiments referred to above, they decided to sink their wells deeper in search of gas, and found it in a good, strong flow, which gradually increased, until now the discharge is known to be a million cubic feet in twenty-four hours.

The next well was drilled at Muncie (a city of 9,000 inhabitants) by the citizens of that place. Since then ance to such statistics, as the value and profit of pa<sup>-1</sup> there have been six other wells drilled there, making seven in all, varying in capacity from 300,000 up to 2,000,000 cubic feet per diem. These wells are controlled by the "Natural Gas Company of Indiana," to the courtesy of whose manager, Mr. C. N. Wilcoxon, the writer is indebted for much of his information. Since then, three good wells have been drilled in Kokomo, three at Marion; and two at Noblesville, smaller and of less pressure than those farther east. The gas is used now in all these places both for purposes of heating and illumination, supplanting everything else.

> All these gas wells are found in Trenton limestone, where the rock is porous and the strata have been free from disturbance. In localities where there have been upheavals, there are indications that gas once existed, but escaped through crevices, leaving the rocks barren. The strata vary in their depth below the surface from 850 to 950 feet. Their thickness varies from 30 to 75 feet, and with a very slight dip. The overlying formations are as follows : Soil and drift, varying from a few feet to 250 feet; Niagara limestone, about 250 feet more; then slates and shales till the Trenton limestone is reached.

> The field as now developed covers an area of 20 miles wide by 60 long from east to west, and the strata run in a direction from north west to southeast. The region has been prospected on all sides of this area, but thus far with no success. <sup>4</sup>Borings have failed at Richmond. Shelbyville, Fort Wayne, Union City, and other points. At least fifty wells are now being drilled, besides those outside the area already indicated.

Expensive experiments are in progress at Indianapolis. A well was drilled there last fall to the depth of 2,100 feet without indications of gas. A number of test wells are now being sunk at Brightwood, a suburb of Indianapolis, but are not yet down to the level of the gas-bearing strata. Of course this development in Indiana, mostly within the last six months, has stim-On April 1 the President appointed Martin V. Mont- ulated speculation. All the towns where gas has been

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