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## the position of inventors.

An accurate conception of the meaning of a patent and of the true status of an inventor is far from common. The fact that inventors are the possessors of a iimited monopoly, that is frequently of great value, weighs against them in the estimation of the less enlightened class. To form such a
conception, regard should be paid to the opinions of those most familiar with the subjects of inventious, with patent laws, and with the structures themselves. The most enlightened source for an opinion leading to such conception will patent rights have been decided. Some of these judges have acquired great eminence in this field. In preparing their decisions they had to study the patents, their scope, utility, and in many cases their commercial importance. Besides having the judicial mind, developed by years of experience upon the bench, they were familiar with the practical aspect of the subject from the studies alluded to.
Of the older judges none attained bigher reputation than Judge Story. It, is be who gave to Patent Law its famous appellation, "the Metaphysics of the Law." His opinion of the dignity of inventors and the value of their services to the country at large is worthy of record. In one of his early decisions, given over fifty years agn, he says that "p patents are not to be treated as mere monopolies, odiousin the eyes of the law, and therefore not to be favored." It appears from this that the monopoly part of the question had been even then agitated. But this judge was always opposed to such views as those referred to. In another place he says that the Constitution of the United States, in giving authority to Con gress to grant such patents for a limiter period, declares the object to be to promote the progress of science and the useful arts, an object as truly national and meritorious and well founded in public policy as any which can possibly be within the scope of national protection. It seems a pity that our Representatives, before considering the bills for the limitation of the rights of inventors, did not study and apply hese principles to their actions.
Judge Story declares the protection of patents to be a matter of public policy. How impolitic, then, does the recent action of the House of Representatives appear. But he is not alone in his ideas of the rights of inventors. Other judges at more recent periods reaffirm these views. One, i speaking in 1847, says that the true rule of construction in respect to patents is to apply to them plain and ordinary principles, and not to yield to subtleties and technicalities
likely to prove ruinous to a class of the community so inconsiderate and unskilled in business as men of genius and inventors usually are. A little earlier Judge McLean nothing from the community at large, but secures to them the greatest benefit." The same judge, later on, speaks of the patent right as a compensation awarded the inventor. Following these judicial utterances to a later period, we find patents declared not to be odious monopolies or restrictions on the rights of the public. To still further define the monopoly side of the question, we may quote from Judge McLean again. In 1855 he said: "A monopoly takes from the public what belongs to it, and gives it to the grantee, whereas the right of a patentee rests entrely on his ow was not known before." Thus we find the monopoly of a patent declared proper compensation, and a politic one ou the part of society. There should be no reason for disturbing it.
If patent lawyers be consulted, they will be found gen erally of the opinion that a patent is a contract between the inventor and the Government. The case of Ransom vs. New York is cited in support of this view. Accepting this as the correct doctrine, the Government would play a poor part in changing the status of patents already granted.

But there is another point of view that may be found in dicated in the judicial opinions we have cited. The rea policy of the Pateut Law is a selfish one on the part of the Government. Vastly greater benefits have been reaped from it by society at large than by the inventors themselves. It has evolved the enormous amount of ingenuity represented by a quarter of a million of inventions. All this work is . 0 By the to the manufacturing industries of the country By the law only human inventions can be protected, so that
no natural principle can be monopolized. It would be hard to imagine where we would stand in the industrial world unbacked by these inventions. If aninventor seems in some instances to receive an undue reward, this is only the exception. It is because of their unselfishness and devotion to the arts that inventors are apt to lose the reward due to their in dustry and talents. The public often reaps the benefit of inventions long before the patent has expired.
Every American prides bimself on his country's progress , in this path. With the abrogation of the patent laws inven tion would cease almost entirely, and we should have to look to other countries for new devices in machinery and processes. The national position would be a humiliating one in place of a proud one. Every such measure as those recently passed in the House of Representatives aims a blow at these laws. We can only hope that it will prove as ineffectual as it is ill-judged and impolitic.
It will be noticed that the views given on the position of inventors favor them and their rights. They are given by eminent judges, who were especially dispassionate and impartial in the decisions cited, becanse no appeal to favor from them is discernible in the history of such cases. Their
were any needed. But the statute now in force is the fruit of many additions and amendments. It has done well in the past, and is good for some time to come, as it seems reasonably near the goal of adaptability and efficiency. It is aot only inventors, but the public at large, that should resist any change in it that will affect its efficiency and range of action. The public are more interested in it than are the inventors. This is no paradox, for inventors are the servants of the public, and protected inventions are the property of the world of industry, withbeld from common use for a short term of years.

## THE PONS-BROOKS COMET

We have received a communication from Adamsville, Michigan, in which the writer asks for information concern ing a comet be first " discovered about the 18th of Jan uary in the south west, about the same distance from Venus as Venus is from the sun, and a little south, with a tail extending east." He thinks the Scientific American was perhaps mistaken in stating that the comet was visible in the orthwest.
The comet seen by our correspondent in the southwest is the same comet that was, as we stated, seen in the northwest when first visible to the naked eye. It was faintly perceptible on the 27th of November, and looked like a small neb ulous star. About the 21st of December it became a plain though not a conspicuous object in the northwest, being then in the northern constellation Cygnus. It has been visible every clear, moonless night since that time, pursuing its course over the sky with a speed marvelous to behold, baving traveled from a position high in the northwest to its present locality low in the southwest. It will continue to move in the same direction till it is so far away as to become invisible in the largest telescopes. It will probably be visible in this latitude till the latter part of February.
The reason the comet could not be found in the northwest was because it was then a faint object almost impossible to pick up unless one knew just where to look for it. When een on the 18th of January, it was a little beyond its greatest brightuess and nearest point to the earth. This it reached about the 14th. On the 26th, it passed its peribelion, or nearest point to the sun, and, since that time, has been our departing guest. The comet's real course is southeast, as any observer who notes its position from night to night will readily perceive. It is carried westward by the motion of the earth, in the same way that Venus is, who, though moving eastward, seems to be moving westward like the tars.
This comet, known as the Pons-Brooks comet, was discovered in 1812 by M. Pons. It was predicted that it moved in an ellipse with a period of 71 years. Therefore, it might be expected to return in 1883 . Mr. Brooks discovered it in September of that year, and its identity was soon proved. It was called the Pons-Brooks confet from the two discoverers. The great interest it has excited all over the world is due ot to its size or brilliancy, but to the fact that after its long absence it. has returned to the clime of the sun at the ime predicted by astronomers.
Our correspondent desires information in regard to the est book that will "educate him in the revolution of our planet, also others as far as possible." We recommend Lockyer's " Elements of Astronomy" and Newcomb's Popular Astronomy" as reliable and comprehensible guides.

## PECULIAR WOOD WORKING.

The auger is intended primarily for making holes in ood, yet the only cutting or boring portion is the chisel pon its lower end; and if the implement could be kept at its work and guided in its course, the gimlet screw at its point and the spiral above its cutting portion might be dis. pensed with, as the screw merely pulls the custer into the work and the spiral guides the auger and elevates the chips. So the auger, deprived of these portions, becomes a rotary cutter by which straight or curved recesses of a definite width may be cut. Mortises for tenous are made with such an mplement, and it is used also for many other similar purposes.
An adaptation of the circular saw is more peculiar than this. It is the cutting of a wide kerf with a thin saw; thus a saw of one-fourth of an inch thickness, or "set," cuts a score, or slot, of three-quarters of an inch or more. In appearance the saw is anything but mechanical, and at first thought the method is "sloppy" and foolish. But the result of the work is good. The effect is produced by placing a circular saw on an arbor somewhat smaller than the hole through the saw, and canting the saw to an angle by means of convex faced glands or flanges. When rotated the saw's periphery has a "wabbling" motion, so that twice in its revolution the saw cuts out of its true kerf on either side. It will be seen that if the quarter inch saw is set one quarter of an inch out of truth on its side, it will cut one-quarter of an inch on each side, making, with the primary thickness of the saw itself, a cutting width of threequarters of an inch. This apparently crude method produces very satisfactory results. It might be supposed that such eccentricity of movement from side to side would leave very coarse score marks on each side of the cut, but the velocity of the saw's rotation compared with the feed insures perfectly clean work. The advantages of this method are that the oewer required to cut a wide kerf with a narrow aw by gradations is much less than to cut the full kerf at once with full wide cutters, and that while a saw caa be

