

This should be free to all. A patent for an invention, on the other hand, is the exclusive grant to enjoy and *practice publicly* for a limited term of years, a *new property not known before*, and which property has been created by the patentee. This patented property consists of new and useful ideas carried out in a practical form. It never existed before; it never was public property; hence the granting of a patent takes away no man's right, and alienates no man's goods and chattels. The object of the patent law in granting a patent, is to encourage invention for the benefit of the public, and not simply individuals such as patentees. A patent, therefore, is not a monopoly in the odious sense of the term. It is simply a contract between the people (through the government their servant) and an inventor, the conditions being that the latter shall have the exclusive use of a new species of property which is his own, and which he himself created, for fourteen, seventeen, or any other term of years agreed upon, and that after this term has expired this property shall be given to the public to be freely used by all and for all time. This contract, we assert, should not be called a monopoly according to the very common meaning of the term.

A patent being a guarantee of protection in the exclusive enjoyment for a few years of rightful property, in return for which protection the patentee gives up this property to the public at the end of the term for which the patent was granted, the benefactor in this case is the inventor; and stupid must that man be who thinks that patents confer any favor or benefits upon patentees which do not rightfully belong to them. The public should know that a patent for an invention is not a favored monopoly, and that the public is the benefited party in the contract embraced in a patent.

Out, therefore, on such muddle-headed philosophers as Sir William Armstrong and his co-adjutors in their attempt to mislead the public mind on this important subject.

OUR WORKSHOPS AND THE WAR.

One of the leading papers of this city takes the ground that the war is not supported by the people, but by the government; the money which the people pay out coming back again into their own pockets. This is a somewhat common notion, but it is simple nonsense. A man who has laid up \$100 and invested it in Treasury notes, will not, through any operations of the government, have that \$100 to buy another \$100 Treasury note with. If some government contractor makes a profit beyond his own expenses that he wishes to invest, then that profit is ready to be loaned again to the government. Or if an officer with high pay saves a portion of his salary, and chooses to invest it in government funds, then that portion of the first loan will be ready to be reinvested in the second loan. Traders, too, who are selling supplies to the army may invest a portion of their profits in subsequent loans. In short, the only portion of one loan to government that will be invested in a second loan is a part of the profits made by individuals out of the operations of the war. This is a very small fraction of the whole sum expended in the military operations.

Where, then, is the money to come from to carry on the war? It is to come from the profits of our industrial operations—agricultural, manufacturing, commercial, &c. There are considerable numbers of persons in the community who are even now in receipt of large incomes, either from their business or from their investments, and it is mainly from the surplus of these revenues that loans to the government will be made. There is a good deal of derangement in many kinds of business, but if we examine the matter thoroughly we shall be surprised to find how small the proportion of the derangement is compared with the whole extent of our industrial operations. The unprecedented quantities of wheat, corn, pork, beef, &c., that are loading our canals and railroads show conclusively that our largest interest—the agricultural—is moving right on in its accustomed course. Our sawmills are turning out lumber as usual, and many of our manufactories are as busy as ever; the woolen, especially, is more prosperous than ever before. Even the cotton mills are generally running, and those manufacturers who bought large stocks of cotton before the rise, are just at the present time making immense profits.

Trade is more badly deranged than any other department of business, but this is principally owing to the general refusal of those holding goods to sell on the usual time. Trade is disturbed by one of those panics that occur periodically, and that are inherent in the credit system. But even the trade of the country is not destroyed. The foreign and domestic commerce of this nation at this time is larger than was ever carried on by any country in the world before the present century.

The derangement of business is mainly temporary, owing to industry being thrown out of its accustomed channels, and especially to the complete suspension of the credit system in trade. It requires an accumulation of capital in new hands, a saving on the part of consumers and country dealers, for the same amount of trade to be done on cash as was formerly done on six and eight months' credit. But as soon as our industry can settle itself in its new channels it will resume its wonted flow, and with scarcely perceptible diminution in consequence of the war.

The power of a nation to produce wealth is in proportion to the quality and quantity of the tools which it has to work with; its steam engines, water wheels, machinery, sawmills, gristmills, ships, horses, oxen, railroads, canals, &c., and the Northern States of this Union have more of these than any other nation excepting England, and far more than England had at the beginning of the present century, when she waged her twenty years' wars with Napoleon. At that time she had just begun to build her steam engines and her cotton and woolen machinery, and even her commerce, agriculture and mining were very small compared with those of this country at the present time.

Our power of creating wealth is such that we could easily carry on two or three wars like the present. A million dollars a day is but five cents apiece for our people. But in order to reap the benefit of this great productive power, we must keep it in operation. Let, then, our manufacturers and masters of industry arrange their operations as speedily as possible in accordance with the actual condition of affairs, and let all of our machinery resume its accustomed hum. Trade is adjusting itself with surprising rapidity to the cash and short time system. The largest dealer in this city says that he has sold more goods this year than he did last. If manufacturers produce almost any article of value it is very sure to be wanted. If our workshops are only put in operation, they will enable the nation to support the war.

A NEW MODE OF LOCOMOTION.

On another page will be found an illustration of the enlarged pneumatic tube for the transmission of packages recently tried in London with a length of one-quarter of a mile, and for the introduction of which into practical use in the British metropolis a company has been organized and a grant obtained.

We have watched the growth of this enterprise with much interest, anticipating the possibility of its developing into a practical mode of traveling which would surpass the railroad as much in speed as the latter surpasses the fleetness of horses. For several years a Pneumatic Dispatch Company has been in operation in London, pipes of a few inches in diameter being laid, through which small parcels were sent to various parts of the city. The company, finding the system to work well, have decided to enlarge the tubes to a height of two feet nine inches and to a width of two feet six inches, and ultimately extend their system throughout the whole metropolis. Trucks six or seven feet long are sent through these tubes with loads of one or two tons. But the most interesting incident is, that *two gentlemen have already ridden through the tube on one of the trucks*, thus perhaps inaugurating a new system of passenger traffic.

The speed attained in the experimental trial was only about twenty-five miles an hour; but as this includes the starting and stopping in the short space of a quarter of a mile, the company anticipate a speed ultimately of 30 or 40 miles an hour. By forcing air into one end of the tube and drawing it out at the other this speed may be multiplied several fold. More than twenty-five years ago, from some calculations that we made in regard to this mode of travel, we came to the conclusion that a velocity might be reached of four miles per minute, or 240 miles per hour. For this great speed it would be necessary to lay the pipes in straight

lines horizontally, though vertical undulations would be admissible; the pipes might indeed pass over very high and steep hills, so that little, if any, grading would be required.

The manifest objections to the system are:—

First, The darkness in which the passenger travels.

Second, The impossibility of having turnouts or way stations; though perhaps this objection might be overcome by some device.

Its advantages are very numerous.

First, The pipes could be brought into the very heart of a city. It takes passengers as long to come from Twenty-seventh street to the Astor House as it does to travel to the city from a distance of twenty miles; but with the pipes the passengers would be shot at full speed into the middle of the city.

Second, Each passenger would travel in his own car, and could start at any minute of the day or night.

Third, It would be the safest of all modes of travel yet devised.

If some plan could be invented for providing frequent turnouts, the system would supersede, to some extent, the use of street railroads. It would be especially suitable for the accommodation of citizens residing in suburban villages five, ten, twenty, or fifty miles away. If it took but ten minutes to travel forty miles, and there was no delay in changing cars at the suburbs, no man would need to pay a high rent for a dwelling house.

It is possible that the best plan for introducing the system would be to connect it with a speculation in lots at the outer terminus of the pipes. Buy farms and lay them out in lots to be sold at village prices, and lay the pipes for swift intercourse with the city.

If this system should develop into a practicable mode of traveling with the speed suggested, it would effect a very important revolution. A man might leave New York at ten o'clock at night, and after eight hours' sleep, find himself in New Orleans at six o'clock the next morning. It would take but one hour to go from this city to Washington, or to Boston, and but eleven or twelve hours to go to California! The difficulties are merely mechanical. Will they be conquered by the genius of our inventors?

Lubricating Grease.

Two patents have lately been taken out in England for lubricating compounds, the one by C. N. Leroy, of Paris, and the other by F. W. Perrott, of London. The first consists of tallow 252 parts; oil 333 parts; soda 14 parts; potash 12 parts; water 389 parts. The potash and soda are first dissolved in the water, and the grease and oil are then mixed and kneaded with it and form the lubricating grease. About 25 parts of black lead added to it render it well adapted for the axles of carts and carriages.

Perrott's grease is of a more complicated character. Micaceous ore, after it is dug out, is put into a vessel of water and stirred up, then it is made to descend an inclined plane at the foot of which is placed a sieve situated over a vessel. The ore which passes through the sieve is then dried and afterward boiled and stirred with oil, or tallow and oil combined, at the rate of three parts of ore to one of oil. The whole is then passed off into a cooler and is fit for use.

A SUBSTITUTE FOR LEAD PIPE.—It is a well substantiated fact that lead pipe, when used for conducting water for drinking and culinary purposes, is highly deleterious to health.

It has therefore been for many years a desideratum with scientific men to procure an article which should obviate this difficulty. One of the best, and a successful invention for this purpose, is an article patented by Charles McBurney, Esq., and manufactured by the Boston Belting Company. A specimen of this pipe, that has been in constant use and buried under ground for three years, shows no symptom of decay. Extreme degrees of heat and cold do not affect it; water may remain frozen in it for any length of time without injury to it, and it can only be destroyed by the direct application of fire.

There is nothing injurious in any of the material of which it is composed; indeed, it could be eaten without in the least affecting the system. It is made of any size, and furnished at a remarkably low rate, and possessing so many desirable qualities, is certainly a pipe that commends itself and must come into very general use.