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if yod wish to be happy, be reasonable. Morally, we have no more right to cheat ourselve than we have to practice deception on others. In great extent on how one's own status in his profes sion or business is appreciated by himself. He "must not think more highly of himself than he ought to think," nor go to the opposite extreme by underrating his abilities, and while these remarks apply to men in every occupation, they are now directed more particularly to those who devise new things for the use and benefit of others.
Some inventors are apt to be over-sanguine, and with reason; since no other honorable business yields so large a profit with the same outlay and with as little risk. By some peculiar mental process they induce themselves to believe that an invention is worth thousands or millions of dollars when the real value may be only hundreds or thou sands.
A notion of this kind when adhered to is damag ing, and may prevent the inventor from satisfactorily realizing from his labor, whereas by taking a ational view of the case he might gain handsomely.
Two points should be candidly considered by in-
ventors ; first, the possible value of an invention, and second, the actual value of capital and influence.
Often, very often, the money invested in promoting an invention, and the business tact and energy which put the invention in commercial shape, are worth far more than the invention itself, and even a first class invention is greatly increased in value if backed by money and business talent
Inventors who realize this, and are willing to make reasonable concessions, are most likely to obtain the best returns from their inventions.
Let the inventor for the moment imagine himsel to be the other man, the capitalist; would he invest a half million, a hundred thousand, or ten, or even five thousand dollars in such an invention as his own ? Let him be honest with himself.
Capital is not invested in patents without the expectation of large returns. Inventors who sell out their interests should not expect all the profits of their invention. This would be like a jobber trying to sell goods at retail prices.
Our advice then to inventors is, "If you wish to be happy, be reasonable."

## FARM CHANGES IN ILLINOIS.

An anomalous state of affairs is reported in the farming communities of the State of Illinois. Prospects are encouraging, crops have been comparatively satisfactory of late, and farming lands are steadily increasing in value ; yet thrifty and well-to-do land owners, as well as tenant farmers, are moving by scores to Iowa, Nebraska, Kansas and other Western States. The movement, which has been steadily growing for years, is looked upon with some anxiety because of the uncertainty as to what the ultimate result will be.
Theintroduction of improved methods of farming by the use of machinery of various kinds has made it possible for a man with means and energy to cultivate large tracts-acres by the hundred. Alongside this is another acre-monopolizing tendency on the part of moneyed men to buy up desirable lands and rent them out. These landlords are always ready to add to their holdings, but seldom willing to sell at a reasonable figure. These two tendencies make the lot of the small land owner less desirable than was the case in former years. If the small holder wishes to add to his acres, he finds it quite impossible from lack of means to do so from adjoining farms, and oftentimes from any other land within reasonable distance, at a price within his reach. If, however, he goes to Iowa, Kansas, Nebraska, or other Western States, he finds that he can probably buy five acres for the same amount of money that one would cost in Illinois, and with as many acres at his
command as he wishes for, and he finds further that command as he wishes for, and he finds further that these new acres are as productive as his old ones, that it costs no more to grow his crops, and that transportation rates to market are not appreciably greater. From this point of view the farmer, especially if he has some means, is better off if he leaves Illinois and goes to a State farther west than he would be were he to remain on his old farm.
The cause of the movement westward is evidently not local to Illinois, is not due to worked-out lands, oppressive laws. or other such causes, as much to the improved methods of transportation which practically annihilate distance. But while this westward tendency may be a beneficial thing to those farmers who participate in it, what will be the result in the State of Mlinois, which they leave? In the case of a tenant farmer the probability is that another tenant farmer will take his place, although this latter in all probability will be of foreign birth, while the former is more likely of American birth. Land owners who leave Illinois to push westward sell their holdings largely to adjoining farmers who have the means to extend their acreage and who propose to do farming on a more extensive scale, or to landed proprietors who succeed the independent farmer with the tenant farmer.

The question is an old one in Illinois and has had public attention drawn to it at several periods since the organization of the State, but is now assuming a serious phase. The situation is quite different from what it is in New England, where farms have been abandoned for lack of fertility.

## IMPROVED TRANSPORTATION.

The inanguration of cable traction on the great thoroughfare of this city, involving the transfer of a line of cars distributed over many miles of the most important artery of the city, shows a new condition of things brought about by the new demands of our increased population. It is but a few years since horse cars were introduced upon Broadway. The storm of protest which they raised and the questionable methods used to obtain possession of the street are in the minds of all. The property owners objected, but the road was put down. It proved of the greates benefit to all. Now, with larger cars propelled by steam power, in place of the overburdened horses, the Broadway Railroad appears in a better light than ever. In other streets of our city the devotion of two thoroughfares to steam transit will soon be seen. A cable line will run on the natural surface directly un der an elevated road. Some day may yet see a threestoried transportation established-tunnel, surface, and elevated.
While this and other cities have been progressing, the country has not been idle. The centralization of power and its distribution by the trolley system have inaugurated a cheap and rapid transportation system for suburban and even rural districts. The country roads have been invaded by the trolley. The vigor of the movement of the day in favor of cheap transpor tation is here emphasized. In spite of the effects upon horses in frightening them, the country roads on all sides are presented to electric traction companies if hey will only put down electric roads.
The cause of the extensive introduction of this class of road is not only to be found in the advantage of entralized generation and power. It is not only the wonderful adaptability of electricity for distributing power that has made the trolley road a winner in com petition with the old established steam roads. A single car run at frequent intervals, independent of a published time table, in point of convenience far sur passes the fewer scheduled trains of steam roads. But the free gift to these companies of streets and roads ready graded and prepared for their use is the reason of their existence. Having no extensive right of way to acquire and exempt from the necessity of filling, ex cavating and bridge building on their line, they possess an enormous advantage in capitalization over the steam railroad.
Simultaneously with the above the movement for good roads has mounted into a national issue. All over the country are heard the calls for better roads. The State of New Jersey, many districts of which are famous for their macadamized ways, is admitting the trolley cars upon these expensive roads. In this there is a measure of inconsistency, unless an adequate breadth of macadamized surface be preserved for the use of teams. The ideal road has been claimed to be a Telford or macadam strip with a trolley line on each side. This provides for those who wish to pay fare, while the farmer can transport his product by the old-fashioned way. It is a self-evident fact that horses must become accustomed to the trolley car. Already local steam roads have been most seriously affected by the competition with trolley roads.. A few years will see the suburbs of all our cities gridironed with these roads. The local business will leave the team roads. The old mud and sand roads will be soon replaced in these districts by improved Telford and macadamized surfaces. In the cities horse cars will soon be as much a thing of the past as are the omnibuses now. The next generation will only be able to wonder how its ancestors continued to exist under the regime of slow horse cars in the cities, infrequent and expensive train service in the suburbs, with unridable roads as connecting links throughout the country districts.

The Largest Lake steamer.
The steamship S. S. Curry, which recently has been launched at Bay City, Mich., is to be the largest steamer on the great lakes, but unlike the type of lake steamers which has become so familiar, she will have her machinery amidships instead of well aft. Recent experiences have quite conclusively demonstrated the fact that in vessels of large size constructed on the socalled lake lines, sufficient stability has not been secured. Immense carrying capacity is quite invaluable, from a shipper's standpoint. but lake construction has gone to the extreme of sacrificing stability to carrying capacity. This new vessel is 378 feet 6 inches over all, 45 feet in breadth, and of light enough draught to enable her to pass through the "Soo "canal. The engines will be triple expansion and steam will be used at a pressure of 170 pounds. She is of steel and was built by F. W. Wheeler \& Co., West Bay City, Mich.

