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Contents.

Table listing various articles such as 'Ants, do they talk?', 'Bridge, highest in Germany', 'Clock, a beautiful', etc., with corresponding page numbers.

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Table listing sections I through XV, including Agriculture, Biology, Chronology, Civil Engineering, Electricity, Fine Arts, Geography, Mechanical Engineering, Medical, Metallurgy, and Miscellaneous.

IF YOU WISH TO BE HAPPY, BE REASONABLE. Morally, we have no more right to cheat ourselves than we have to practice deception on 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.

A notion of this kind when adhered to is damaging, and may prevent the inventor from satisfactorily realizing from his labor, whereas by taking a rational view of the case he might gain handsomely.

Two points should be candidly considered by inventors; 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.

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 himself 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?

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.

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.

The introduction 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.

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.

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.

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.

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.

IMPROVED TRANSPORTATION.

The inauguration 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.

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 cause of the extensive introduction of this class of road is not only to be found in the advantage of centralized generation and power. It is not only the wonderful adaptability of electricity for distributing power that has made the trolley road a winner in competition with the old established steam roads.

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.

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 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.