

AUTOMATIC INDICATOR FOR MAGAZINE GUNS.

Mr. Wm. R. Miller, No. 30 Hopkins Place, Baltimore, Md., has invented an attachment for repeating guns and rifles, having an automatic adjustment for indicating at any time the condition of the magazine as regards the number of cartridges contained therein. None of the repeating firearms as now offered to the public, whether Winchester, Colt's, Marlin, Spencer, Bullard, or Hotchkiss, has any device for registering the number of cartridges contained in the gun.

The automatic register, which has been patented in this country and abroad, consists of a small brass cylinder placed within the magazine of the rifle. The magazine spring is in two unequal lengths, instead of in one piece, as usual, the small cylinder referred to being placed between these two sections. The cylinder is of brass, having a star or indicating mark placed upon it, and sliding within the magazine. There is a slot or opening near the end of the magazine, and the star or mark on the sliding cylinder will appear through this opening, indicating the number of charges in the magazine. When the magazine is filled with cartridges and the springs are compressed, the cylinder is forced toward the outer end of the magazine. As each cartridge is discharged the cylinder or indicator moves toward the stock of the gun a distance which bears the same proportion to the length of a cartridge as the length of the short spring does to that of both springs. The shape of the opening makes it unnecessary to

double-hold hammer, specially intended for semi-hammerless guns, by the same inventor.

The indicating device illustrated in this article is new, simple, and inexpensive, and when in use will remove one of the grave objections to this class of arm, namely, the total inability of the user of repeating guns to know or even approximate the contents of the magazine without actually emptying out all the cartridges, counting them and then reloading the magazine as at first.

One of the special advantages of this indicator is that, while it can be made as a part of the arm, it can also be made as a separate piece. It will be put upon the market as an indicating magazine, and will be so constructed that it will interchange with the magazine of any of the guns that it is arranged for, which will allow the indicator to be put upon the many rifles now in use, the purchaser of an indicating magazine removing the regular one from the gun and putting the new one in its place.

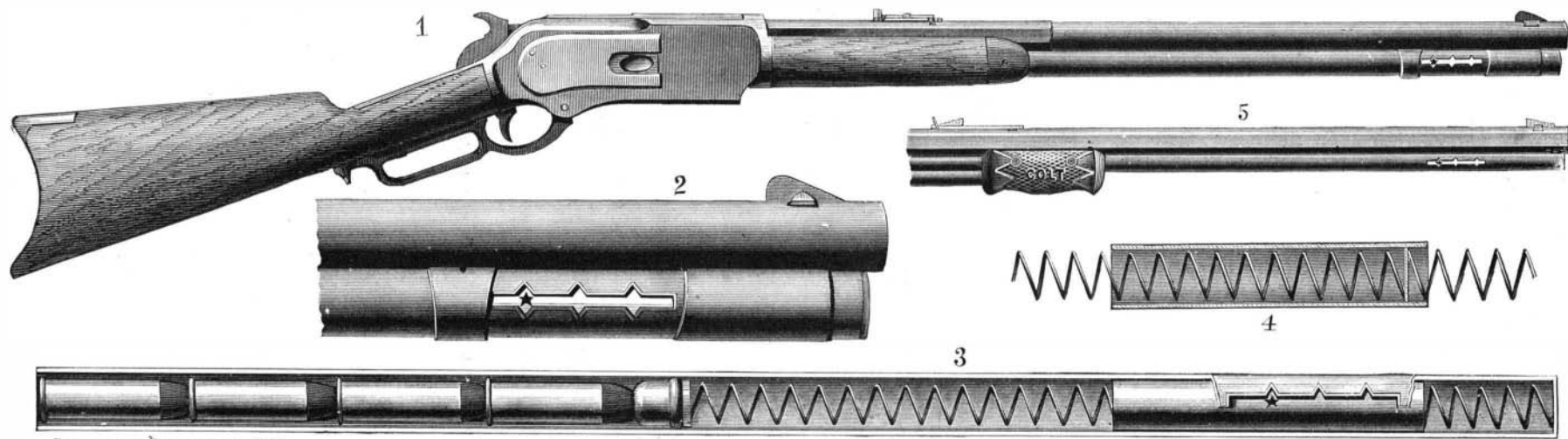
For further information regarding this invention, address Mr. Miller, at Baltimore.

The Real Value of Money.

Did you ever consider this subject? There is some philosophy in the hard-hearted answer which a Boston millionaire is said to have made to a request from a lady of that city, who had appealed to him in behalf

second is to so manage an investment as to establish, if possible, a surplus, as a rear guard, if you please, to the original capital. The value of this original capital will thus be increased, and if there be a demand for it, it is then possible to spread out one's business, being ever mindful that whatever amount is set aside as a working capital, the first object of success is in preserving it intact.

Bearing these things in mind, it will not be difficult in any enterprise to determine whether prosperity or the reverse has attended one's energies. This principle holds true throughout every sphere of life's work. Take, for instance, any one of the various trades. Consider the time and money expended in learning a trade; then one is only realizing the intrinsic value of money. But suppose after years of constant practice and endeavor, the apprentice becomes a skilled artisan, and just before he starts out in his life's work, he takes account of the money it has cost him and of the time, reduced to a money basis, he has spent in his apprenticeship, and sets that down as his capital, if he is then able to make for himself a comfortable living, and in time is able to lay up for future development, he is reinforcing very substantially the capital which he invested in his early training. He is realizing the earning value of his money. Otherwise he knows only of and has exhausted its intrinsic value. The true value of money, therefore, may be said to be measured by the benefits which may arise from a judicious invest-



AUTOMATIC INDICATOR FOR MAGAZINE RIFLES.



AUTOMATIC INDICATOR FOR MAGAZINE SHOT GUNS.

have either numerals or graduating marks stamped on the magazine of the rifles, the star at the first notch showing the magazine is about one-fourth full, at the second notch that it is half full, and so on. This construction, as will be seen by reference to the different figures, is applicable to all the usual forms of magazine rifles.

Figs. 1 and 2 represent either a Winchester, Marlin, or Bullard repeating rifle, with indicator. In this representation the magazine has an additional sleeve or cover on the outside, which can be slipped over the slot in the magazine and entirely conceal the indicator whenever desirable, while in Fig. 5 the indicator is shown in one of Colt's new lightning magazine rifles, and has no outside sleeve.

Fig. 3 represents magazine, showing the indicating cylinder.

Fig. 4, section of cylinder, showing springs.

In repeating shot guns the manner of registering is somewhat different, numerals being engraved or stamped on the cylinder. These numerals are observed through a small round opening in the magazine (see Fig. 6). In general, it may be said that the two springs are so proportioned that a movement of the length of a cartridge—say two inches—at one end of the magazine gives the cylinder the desired movement of from one-eighth to one-sixteenth of an inch. The opening in the magazine is always covered internally by the small brass cylinder working within, so that no part of the spring or interior of the magazine is exposed.

Fig. 6 represents repeating shot gun with indicator. Fig. 7, magazine and indicator. Fig. 8, enlarged view of indicator. Fig. 9, breech of shot gun, showing improved

of a charity. "Madam," said he, "I would be glad to help you, but I am utterly unable to do so at this moment. Why, madam, I have to-day one million and a quarter of money in the banks, and, believe me, this amount is not yielding me one cent of interest."

Money has both an intrinsic and an earning value. If you have a dollar in the morning, and at night find that it has cost you just that dollar to get through the day, you have only realized its intrinsic value; but suppose that, by a judicious investment, you find at night that you have been able to pay your day's expenses, and still have a dollar left from that investment, you realize something of its earning value. If that investment in the morning yielded you not only the dollar back, but seven cents in addition, and after paying the expenses of the day you found that you had the dollar left, the earning value of that one dollar was just seven cents, no more, no less. And so in the transactions of the year, if an investment be made at the beginning, and at the close, after deducting every expense of any kind or nature, including natural wear and tear, it be ascertained that the original amount is unimpaired, the earning value of that original investment may be summed up in the amount used to pay the above mentioned expenses. If a surplus remain, then the investment has increased in value; if a deficit exist, then the original investment is impaired.

Taking these propositions as truths, then, it may be assumed with safety, that the first object of importance, in any trade or occupation, is to preserve one's capital unimpaired. It is very clear that, when one's capital is exhausted, one's occupation is destroyed. A

ment thereof for a stated time, and without its impairment in any particular.

In this connection the *American Artisan*, from whom we copy, relates an instance taken from an English journal quoting from a chapter in the life of one of the greatest metallurgical and engineering kings of this century, as follows: "He made it a rule for many years to utilize his profits in the extension of his works." "This," says this English journal, "is the secret of building up a works from nothing, till the output, after twenty-five years, reached over \$20,000,000 annually. Such are the colossal enterprises of William Baird & Co., Krupp, Stewarts, Crossley Bros., and hundreds of others that will occur to the reader at once."

Dangers of Tree Sawing.

In California the saw has largely supplanted the ax in bringing down redwoods, but the change is severe upon the woodsmen. After being sawed partly through, a tree is forced over by inserting a number of steel wedges in the kerf, which are driven in with steel sledges. They are set in as close together as possible, and the driving of the wedges frequently requires three hours or more. The constant contact of the steel sledges with the steel wedges results in chipping off fragments which fly with great force, and in numerous instances become embedded in the flesh of the workmen, requiring surgical operations to remove them. Many eyes have been lost in this way, while arm and shoulder wounds are frequent. Some means of protection against the sharp missile is needed.—*Northwestern Lumberman.*