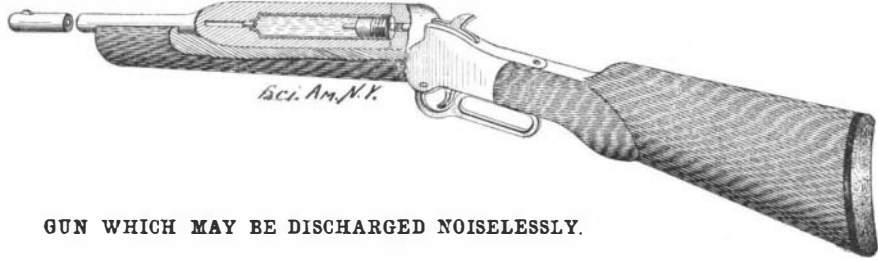




ODDITIES IN INVENTION.

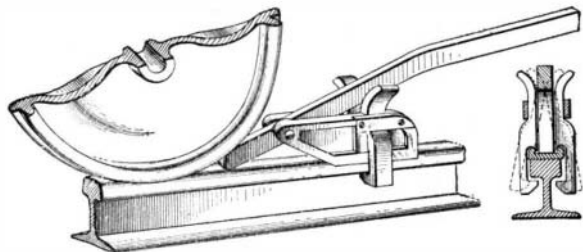
MEANS FOR EFFECTING NOISELESS DISCHARGE OF GUNS.—In the gun here illustrated a sudden expansion of the gases at the muzzle is prevented, thereby insuring a noiseless discharge. This is accomplished by interposing a liquid between the projectile and the powder charge. The liquid will serve to prevent or retard the escape of the gases, and thereby avoid the violent and sudden displacement of air. The gun barrel is provided with a piston chamber in which a piston is adapted to slide. Back of the piston is a shell which contains the powder charge. Between the piston and the projectile is sufficient liquid to at least fill the barrel of the gun, so that the projectile will be subjected constantly to a propulsive force until it passes from the barrel. All the parts may be contained in the cartridge, which will be handled in the usual manner. When the charge has been fired, the liquid serves first as a packing to prevent the escape of the gases generated. When the piston has reached the end of the cartridge the escape of the gases is controlled by a teat on the piston, which projects into the barrel. The gases are thus checked, and permitted but a slow flow through the barrel.



GUN WHICH MAY BE DISCHARGED NOISELESSLY.

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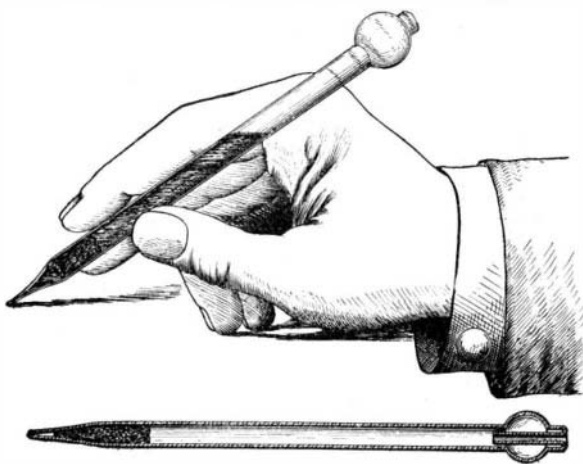
CAR MOVER.—A new device for moving cars has been invented by Messrs. H. C. Harrington and W. M. Towers, of Rome, Ga. It comprises a body portion between the arms of which the car moving lever is mounted. Two clamping devices are hinged to the side walls of the body portion. The upper ends of the clamping devices are turned outwardly from each other and at their lower ends they are provided with jaws. In operation the car mover is arranged on a track rail by moving the lever



CAR MOVER.

upwardly out of contact with the upper ends of the clamping devices as shown in dotted lines in the detail illustration. In this position with the flat base of the body portion resting on the rail the device is slid along until the forward end of the lever is moved well under the car wheel. Downward pressure is now exerted on outer end of the lever which serves to spread apart the upper ends of the clamping devices, thus causing the jaws to grip the head of the rail. With the car mover locked against rearward movement and the forward end of the lever under the wheel, continued downward movement of the free end of the lever will push the car wheel forward until the lever reaches the end of its stroke. The jaws are then released by raising the lever and the device may be moved forward to repeat the operation if desired.

FOUNTAIN PEN.—The simple form of fountain pen,



A SIMPLE FOUNTAIN PEN.

here illustrated, was designed with a view of producing an effective yet inexpensive instrument which could be readily filled with ink and which, when in inverted position in the pocket, would prevent leakage of the ink. The pen consists of an ink-holding barrel pointed at one end and provided at the other with a bulb into which a capillary tube projects. This tube forms an opening into the pen through which air can enter the chamber when the pen is in use and permit an even flow of the writing fluid through the small opening at the writing point. To fill the pen the point is inserted into the ink and suction is applied to the opposite end of the barrel. To prevent too rapid feed of the ink through the channel a packing of hygroscopic material, such as absorbent cotton, is placed in the barrel near the writing point. This packing, while permitting the barrel to be filled on the application of a vacuum, will also retard and control the flow of ink through the channel in the writing point.

ELECTRIC SWEATING-ROBE.—Among the recent inventions in medical apparatus is a sweating-robe heated by electricity for the treatment of such diseases as are susceptible to the influence of electricity applied



ELECTRIC SWEATING ROBE.

in the form of heat. The robe is made of two layers sewed together. A resistance wire arranged in zigzag folds is interposed between these layers. When in use the patient is wrapped in this robe, and a current of proper strength is passed through the resistance wire to generate heat. The arrangement of the wire poles is such as to evenly distribute the heat throughout the robe. By regulating the current varying degrees of heat may be obtained. On account of the zigzag disposition of the resistance wire, the robe may be readily rolled up into a small bundle.

PORTABLE POWER DEVICE FOR FARM WORK

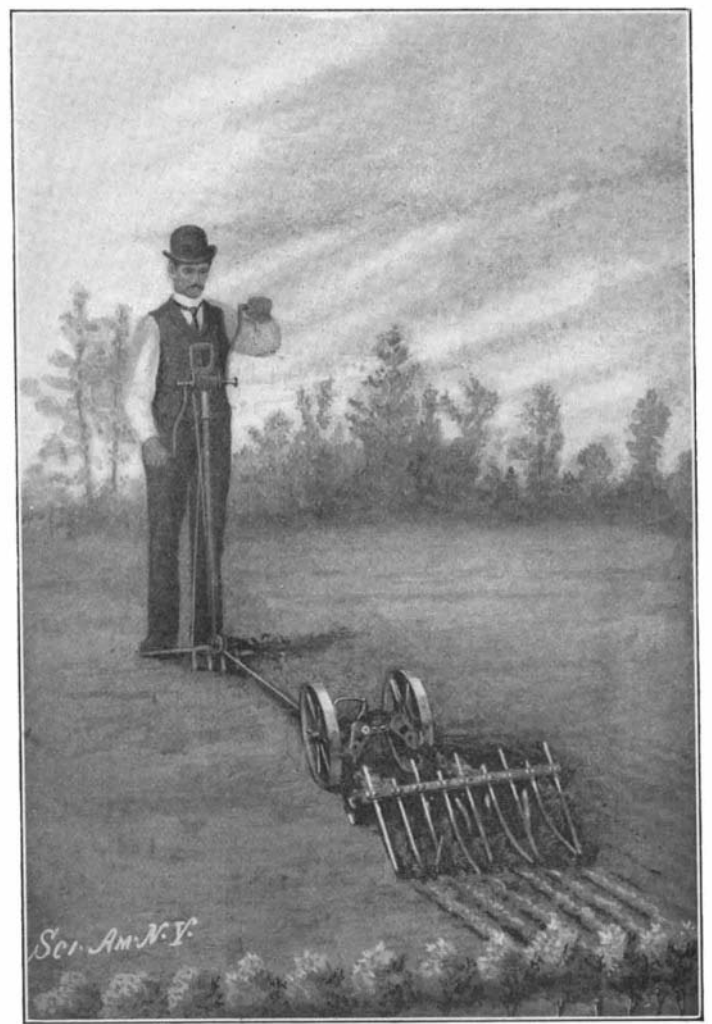
Notwithstanding the great advances already made in agricultural machinery, it is a fact that a great deal of the work on a farm, more particularly a truck farm, can be done only by the use of hand implements. The hand cultivator is particularly racking to the muscles because requiring, as it does, more than a single man's strength to force it steadily forward through the ground, the only way of operating it at all is by a series of intermittent forward pushes or blows, in which sufficient momentum is obtained at each push to hammer the hoe blades along through the ground. Obviously, then, more work could be done if the device were drawn steadily forward by means of a power-multiplying device. In order to be of practical value this device must be light, so that it can be easily carried about, and it must also be provided with an anchoring means by which it may be readily and quickly made fast. We illustrate an ingenious implement invented by Mr. David Lubin, of 278 West 113th Street, New York city, which was designed to meet the conditions above laid down. It consists of a winding drum and crank mounted on the upper end of a common fork. The tines of the fork, when buried in the ground, serve as an anchor, and the stability of the implement is further insured by a brace, which extends downward from the back of the fork handle and terminates in a light platform on which the operator stands. The weight of the opera-

tor is thus used to good advantage, and an anchorage may be readily obtained which will stand up under a considerable pull, especially since the rope, which draws the cultivator, runs under a pulley close to the ground, before passing up to the winding drum. Our illustration shows the device in operation, drawing a small cultivator along the ground. In a recent test it was found that a hand cultivator of this make broke up an area of 28 square feet to a depth of 3 inches in 11½ seconds, figures that indicate the waste of energy due to the chopping operation of a hoe or the hammering motion of an ordinary hand cultivator. With the improved method the cut follows a straight line and is of a uniform depth and width; and as the operator precedes instead of following the machine, there is no treading on and repacking the earth just broken. No experience is required to operate the device, and a farmer need have no apprehension lest his plants be hacked to pieces through the carelessness of some green hand. The implement can, of course, be so geared as to operate with but slight effort on the part of the operator, and should prove useful even for women in the care of their flower gardens.

Extensions of Manufacturing Time on Canadian Patents.

It has been the practice of the Canadian Patent Office to grant extensions of manufacturing time on Canadian patents from year to year under section 37, subsec. (a) of the Canadian Patent Act, which reads: "That such patent and all the rights and privileges thereby granted shall cease and determine, and that the patent shall be null and void at the end of two years from the date thereof, unless the patentee or his legal representatives, or his assignee, within that period or any authorized extension thereof, commence, and after such commencement, continuously carry on in Canada, the construction or manufacture of the invention patented, in such a manner that any person desiring to use it may obtain it, or cause it to be made for him at a reasonable price, at some manufactory or establishment for making or constructing it in Canada." But in the decision in the recent case of Power vs. Griffin it was held that the Canadian Commissioner of Patents exceeds his authority in granting a second extension of manufacturing time; for, having granted one extension, he has reached the limit of his authority, and is without power to grant further extensions.

In the case at bar, the facts show that the Canadian patent was granted on August 11, 1899, and that on June 8, 1901, an extension of one year was granted from August 11, 1901, in which to commence the manufacture in Canada. This extension was held to be valid and within the powers vested in the Commissioner. In May, 1902, a second extension of manufacturing time was granted, but the Chief Justice held that having once exercised the power given to him by the statute, the Commissioner was *functus officio*. The Commissioner might have extended the time for more than one year, but he could not twice exercise



PORTABLE POWER DEVICE FOR FARM WORK.