THE SAVAGE HAMMERLESS RIFLE—MODEL 1895.

The illustration represents a six shot repeater rifle of light weight, having all the latest improvements, the highest type of the modern gun, after every test has been applied, both to the mechanism and ammunition. It is the production of the Savage Repeating Arms Company, manufacturers of military and sporting rifles and carbines, metallic ammunition, smokeless powder, etc., Utica, N. Y. The sectional view shows the action closed, with reference letters referring to the following parts: A, the guard lever; B, the catch on the automatic cut-off; C, the automatic cut-off; E, the breech bolt; F, the extractor; G, the automatic carrier; H, the shoulder in the receiver for engaging the end of the guard lever for locking the guard lever when the gun is fired; K, the sear; N, the hammer or firing pin; O, the main spring; P, the sear screw; R, the trigger; S, the trigger safety; U, the breeching up shoulder; V, the bolt for locking the action; Y, the indicator hole for showing the position of the firing mechanism, to show whether the rifle is cocked or uncocked.

The projecting hammer has been entirely eliminated from the gun, in which either black or smokeless powder can be used, although the gun is specially designed to use smokeless powder without dilution. Four different kinds of ammunition are provided, ranging from the expanding bullet, for large game, to the miniature lead bullet cartridge. The action is easily dismounted and assembled, a new feature being the concentric arm of the finger lever, which at all times protects the trigger from being accidentally operated. The movement of this lever is short and requires but little power. The arm is a rapid firing magazine and single loading rifle, an automatic cut-off retaining the magazine cartridge in reserve when the arm is used as a single loader, and allowing a cartridge to be fed up into the chamber when one has not been placed in the breech opening. The change from a single loader to a magazine gun is always automatic.

The Savage smokeless powder is manufactured without the use of nitroglycerine in any form, and with this powder and the small caliber metal jacketed bullet an initial velocity of over 2,000 feet a second is obtained, giving a flat trajectory and affording a point blank range up to 250 yards. The barrel is also non-fouling, and hundreds of shots may be fired without it being necessary to clear the bore.

The Savage hammerless safety guard lever repeating military rifle has been selected and recommended after

THE SAVAGE HAMMERLESS MAGAZINE RIFLE—MODEL 1895.

exhaustive competitive tests at Creedmoor by the New York State Board of Examiners appointed by the Governor of the State to select and recommend the best type of magazine breech loading rifle for re-arming the National Guard of the State. The board, in making its report to the Governor, says: "We have also very critically examined a number of military magazine rifles in use in this country and in Europe of foreign invention, and are free to say that, in our opinion, all points considered, the Savage magazine rifle herein recommended is far superior in simplicity of construction, safety, durability, effectiveness, accuracy, beauty of outline, ease and certainty of manipulation, and for the double and ready use as a single loader or as a magazine gun, to any foreign magazine gun we have inspected."

Testing Quicksand.

Suppose we take a certain quantity of quicksand, dry it artificially, and then try to make it into quicksand again. Put it into a box and pour water on it carefully. Instantly the water is soaked up, and if we measure the volume, or better, the weight, of the sand, we shall see that it takes up a quantity of water that measures 30 per cent of its own volume, or 20 per cent by weight. The rest stays above the layer of sand. If we now pierce a little hole in the bottom of the box, we shall see pure water run out; the sand forms a kind of immovable filter. Also by turning the box upside down to see the sand keep its form like a stopper. It follows from this experiment that we cannot obtain quicksand in this way. We must reverse the condition of the experiment. Let us put the water into a vessel and sift in the dry sand in a thin stream, while shaking the vessel lightly. Then we shall get the thick but easily flowing compound known as quicksand. That the mixture may keep its mobility, two conditions are necessary: (1) The quantity of water contained must not be less than 21 per cent by weight. (2) The whole must be continually though lightly shaken. If we increase the proportion or interrupt the agitation for an instant, the mass settles down, retaining about 20 per cent of water, while the surplus, if it exists, rises to the top.—La Nature (Paris).

AN EXTENSION ELECTRIC LAMP HOLDER.

The simple and effective extension electric lamp holder shown in the picture has been patented by Eugene C. Kuenneth, Gustave Schreier and Charles Kuenneth, of Mount Olive, Ill. To the base plate on the wall is secured a strip with perforated angled ends to receive a pintle engaged by an arm formed in two parts, one of which is bent on itself to form a sleeve, the adjoining ends of the parts being perforated to receive a bolt by which the parts are clamped together by a wing nut. To the end of the other part of the arm is pivoted the first of a series of telescopic tubes, there being fillets between adjacent tubes, limiting their outward movement, and annular springs which hold the tubes in any position in which they may be placed. The holder may swing in any plane upon the pintle, and may be swung at right angles to this plane upon the bolt, being held at the desired inclination by the wing nut. The body of the holder is preferably of vulcanized fiber tubing, which is a non-conductor and about one-third the weight of metal, and the hinge, fillets and other trimmings are of brass, nickel plated, the fillets being threaded and screwed into the tubes. The rear portion of the holder is threaded where it enters the hinge cap, and the entire holder may be readily taken apart and quickly put together.

AN EXTENSION ELECTRIC LAMP HOLDER.

News from Peary.

A dispatch from St. John's, N. F., dated August 24, says that Lieut. Peary passed Turnavik Island, Labrador, early on July 20, in the steamship Hope, which was under steam and sail, ninety hours from Sydney. He reported everybody well and prospects hopeful. The vessel met considerable ice and numerous bergs along the coast. This news came by the Labrador mail steamship reaching St. John's August 24. Further news is expected by vessels returning from northern Labrador within the next fortnight.

Newspaper Censorship in Europe.

Those who enjoy the glorious privileges of freedom of speech, and freedom of thought and expression, within the realm of the States, will all the more readily understand and deplore the restrictions and censorship of the press in many of the countries of Europe, under autocratic and even constitutional government. Here is how things are managed in Austria, says the American Printer. In Austria every newspaper appearing more than twice a month has to deposit caution money if politics are treated or mentioned. For Vienna and surroundings this deposit is fixed at $9,000; for towns of 60,000 inhabitants, at $3,000; for towns of 30,000 inhabitants, at $2,000; and for all other places, at $1,000. By infringement of the press laws the caution money may be partly or wholly forfeited, and all fines are levied on the amount, which has again to be made up to the original sum if the papers are to go on. To facilitate governmental control, the printer of every paper has to forward copies of it to the local police, to the public prosecutor, to the chief of the local government, to the minister of state, to the supreme police department, besides supplying the imperial court library and the local court or national libraries. The publication of a paper can be stopped either by the police or by a court of law; but the transmission of foreign papers by the post can be prohibited by order of the minister of state. Moreover, the Austrian press has to submit to a stamp duty, abolished in Hungary, but not in the remainder of the empire, though many efforts have been made to obtain its total abolition, and this adds not only to the cost of the papers, but necessarily restricts the number of readers.

AN IMPROVED TELEMETER.

The illustration represents a simple, easily manipulated instrument for measuring distances, which has been patented by F. J. B. Cordeiro, Passed Assistant Surgeon of the United States Navy, of the United States steamship Constellation, Newport, R. I. Upon a handle so placed as to about balance the two ends of the instrument is an arm about three feet long, extended at right angles to a telescope, the end of the arm nearest the telescope having a graduation scale for either angles or distances. Rigidly mounted on the arm, coincident with the lower half of the field of the telescope, is a horizon glass, which is shown as a right angle prism, and pivoted to the outer end of the arm is a lever which extends under the horizon glass, and has an adjustable vernier coacting with the adjacent graduation on the arm. An index glass, shown in the engraving as a right angle prism, is rigidly connected to the pivoted end of the lever, its reflecting surface

CORDEIRO'S TELEMETER.

being at an angle of forty-five degrees to the axis of the lever. On looking through the telescope and horizon glass at an object when distance is to be measured, the lever is moved to cause the index glass to receive the image and reflect it to the horizon glass at a point coincident with the line of collimation. The angle will be determined by the vernier, and, the base line being known, the distance of the object may be readily computed or ascertained from prepared tables. If desired, the scale may be marked empirically for certain distances, which can then be read at once.