

A NEW WRITING INSTRUMENT.

No one using an ordinary pen constantly, or even for any considerable portion of the time, can fail to feel the want of something better adapted to ordinary writing than steel or gold pens. The constant dipping, which not only takes time, but is fatiguing; the liability to blotting, and in the case of steel pens, their failure soon after they get into good condition for use, are all serious objections which existed from the first days of pens and ink until the invention of the complete little instrument shown in the annexed engravings. Fig. 1 shows the MacKinnon fountain pen in actual use; Fig. 2 is a sectional view showing the internal construction; and Fig. 3 shows the pen about to be closed to be carried in the pocket or laid upon the desk. In general outline it resembles many of the penholders or pencils now in use. The handle is a tube which holds ordinary writing or copying ink. The writing point is conical and terminates in a graceful tube of gold, tipped with iridium, polished smooth as glass. Through a fine aperture drilled through the iridium on the point, the ink flows at the slightest touch on any surface, and it is so constructed that as soon as the pressure of writing is removed, the ink instantly ceases to flow.

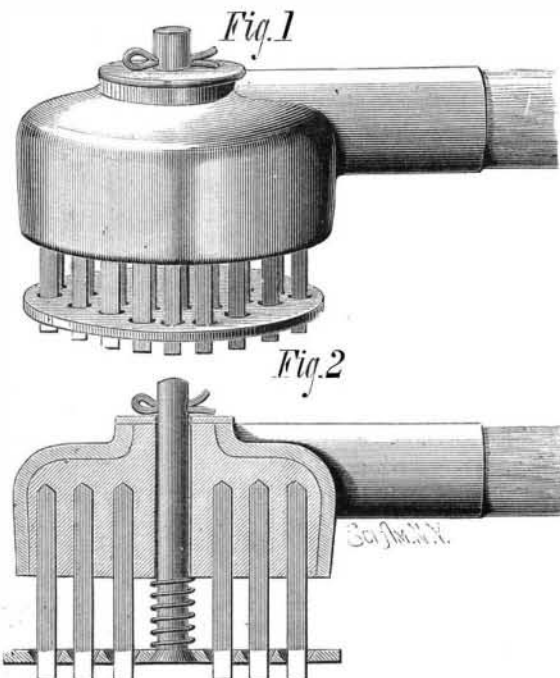
With one filling this pen is capable of writing from seventy to eighty pages of foolscap. It can never blot, and when not in use it is closed perfectly tight, so that the ink cannot thicken or dry. Any good ink may be used, and the ink reservoir is readily filled by means of a small glass filler accompanying each pen. The MacKinnon pen is not only of the greatest service to those who write continuously, but it is a very necessary article for canvassers and others who desire to make a permanent record, and to whom it is a serious inconvenience to carry the ordinary writing materials.

This pen has several advantages over its competitors, the most important of which are: The improved valve, which is operated by a weight instead of spring, making its action more reliable and rendering it less likely to get out of order. The writing point is a circle of iridium, one of the hardest of substances known, and is perforated with a fine tapering hole, through which the ink flows in writing. The patent for perforating iridium is controlled by the MacKinnon Pen Company, 210 Broadway, New York, and is applied exclusively to their make of pens.

These pens have been in use in the SCIENTIFIC AMERICAN office for over a year, and have given good satisfaction.

NEW STEAK-TENDERING MALLET.

The engraving represents an implement that will be appreciated by our readers, all of whom, without doubt, are



STEPHENS' STEAK-TENDERING MALLET.

lovers of wholesome and nutritious food. The palatableness of food lies not altogether in the cooking although cooking is often justly blamed for a poor dish. This is especially true of steaks. Good cookery can never make a tough steak tender, but it is possible, by the proper treat-

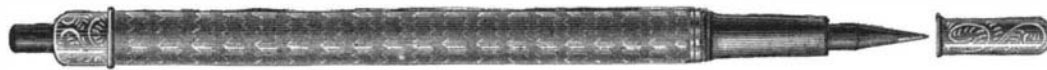


Fig. 3.—THE MACKINNON PEN.



Fig. 2.—SECTIONAL VIEW OF THE MACKINNON PEN.

1. Reversible Point Cover on Air Cap.—2. Walls of Ink Tube.—3. Ink Tube.—4. Air Chamber.—5. Air Vent.—6. Ink Joint.—7 and 8. Valve and Swivel Needle.—9. Diamond Writing Point.—The Point Section includes the whole Section from 6 to 9.



THE MACKINNON PEN OR FLUID PENCIL.

ment, to prepare a steak of medium quality so that it may be served up as tender and juicy as the best cuts. This cannot be done by pounding it with rough or serrated hammers, but it may be accomplished by making innumerable

incisions with a sharp instrument, which will sever the fibers without affecting the general appearance of the steak. Such an instrument is shown in the engraving, Fig. 1 being a perspective view, and Fig. 2 a central section showing the details of construction. Thirty-six chisel-edged steel teeth or knives are inserted in the head, and a perforated plate sliding on the knives and forced outward by a spiral spring serves as a cleaner, preventing the meat from adhering to the knives as the blow is given.

A steak treated with this instrument is rendered very tender and may be quickly cooked. A round or a shoulder may be made as tender as a porterhouse steak. It is stated that its effect on a veal cutlet is remarkable. We understand that this useful invention is meeting with a large and increasing sale.

Further information may be obtained by addressing the patentee, Mr. C. T. Stephens, Ithaca, N. Y.

MECHANICAL INVENTIONS.

An improved spoke tenoning machine, patented by Mr. Tarrence Connor, of Leavenworth, Ind., is adapted for attachment to the spokes, and fitted with cutting devices for reducing the ends of the spokes to the required size for entering the mortises of the felloes. It is simple, light, and convenient.

Mr. Joshua W. Jones, of Harrisburg, Pa., has patented improved attachments for hydraulic presses, so constructed as to close the outlet valve automatically when the follower has been run back to a fixed point, and to sound an alarm when the desired pressure has been attained.

An improved harness pipe loop attachment for wax thread sewing machines, has been patented by Mr. David M. Lewis, of Memphis, Tenn. The sewing of pipe loops by hand is slow and tedious work, and greatly increases the cost of the harness; but with this attachment it is said that such work will cost less and be stronger. It can be used on lower grades of harness, and will improve their looks and increase their market value.

An improved feed and gig mechanism for the carriage of circular saw mills has been patented by Mr. James H. Watson, of Tawas City, Mich. The invention consists in a combination of mechanism which cannot be clearly described without engravings.

An apparatus for illustrating the rules of perspective drawing, so that a teacher by its use can prove to his pupils

the correctness of the diagrams made in accordance with the rules, has been patented by Mr. Frank O'Ryan, of New York city.

Mr. Isaac D. Beach, Jr., of Millersville, Mo., has lately patented a simple and efficient device for securing nuts upon bolts so that they cannot be jarred or shaken off.

Messrs. John Henderson, Jeremiah H. Henderson, and Justin Notson, of Leon, Iowa, have patented a churn by means of which large and small quantities of butter can be produced, as may be desired, and which is easily operated and is simple in its parts. It consists of the arrangement of two dashers, which are operated by means of two disks provided with pins that take in the slotted shafts of the dashers, these disks being fastened to the end of a horizontal shaft, which is rotated by means of a crank and bevel gearing.

Mr. Angus McKellar, of Fort Douglas, Utah Ter., has patented a simple device for drawing up the metallic skeins on an axle and holding them tightly in place as they become loose from the shrinkage of the wooden axle.

NEW OATMEAL MACHINE.

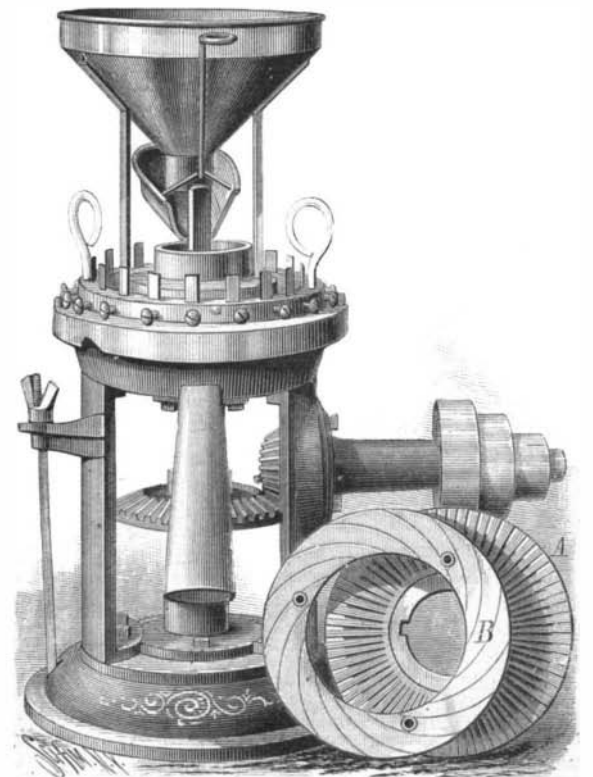
The mill shown in the annexed engraving is designed for granulating or cutting grain, such as oats, wheat, or barley. It is the invention of Mr. William Eberhard, of Akron, O., and is the outcome of practical experience in oatmeal milling. It is simple and efficient, and is giving good satisfaction where it has been introduced. The oats, which are fed in through the hopper, are carried outward by centrifugal force in the grooves in the rotating plate shown in detail at A, and are brought against a series of stationary knives arranged around the edge of the rotating disk. The outward motion of the grain is insured mainly by the radial grooves in the plate, A, but any tendency to clog is prevented by a

series of spiral grooves in the cap, shown in detail at B.

The knives can be removed from the machine while it is in motion. The plates which carry the grain are made of chilled iron nicely polished. The machine is capable of being adjusted to different kinds of grain by changing these plates, three sizes of which are furnished with each machine. The inventor informs us that an eight inch plate machine will cut from twenty to thirty barrels of meal per day.

This machine is built on correct principles and seems very simple and practical.

Further information will be furnished by the inventor, who may be addressed as above.



EBERHARD'S OATMEAL MACHINE.