Improved Ratchet Drill.

This ratchet drill is the most novel one we have ever seen. It is self-feeding, and has the details of the ratchet portion arranged in a very ingenious and durable manner. Every mechanic knows what trouble the springs on the pawls usually give; they are forever getting out of order, either breaking or "setting" so that they have to be continually repaired. This wrench has not a single spring employed in its construction. The movements are all positive, and the wrench is much stronger from the absence of delicate screws or other parts to be subjected to a heavy strain.

In Fig. 1 the wrench is shown in perspective, with the feeding arrangement. This detail is merely a clamp, A, falling in a recess on the socket, B, and having its other end sliding over a standing pin, D. When it is desired to work with the wrench, the socket is run down to its place, and the clamp screwed up by the screw, C. When the drill turns so as to cut, all parts move together, and there is no action; but when the drill is stationary, on the back stroke of the handle, the socket is held by the clamp, and screwed out so as to increase the pressure of the drill, and, of course, feed it down. This arrangement can be made to feed fine or coarse by simply making the pin, D, movable over the top of the wrench, at E. In this way it would suit large or small drills, for the latter require finer feed than the former.

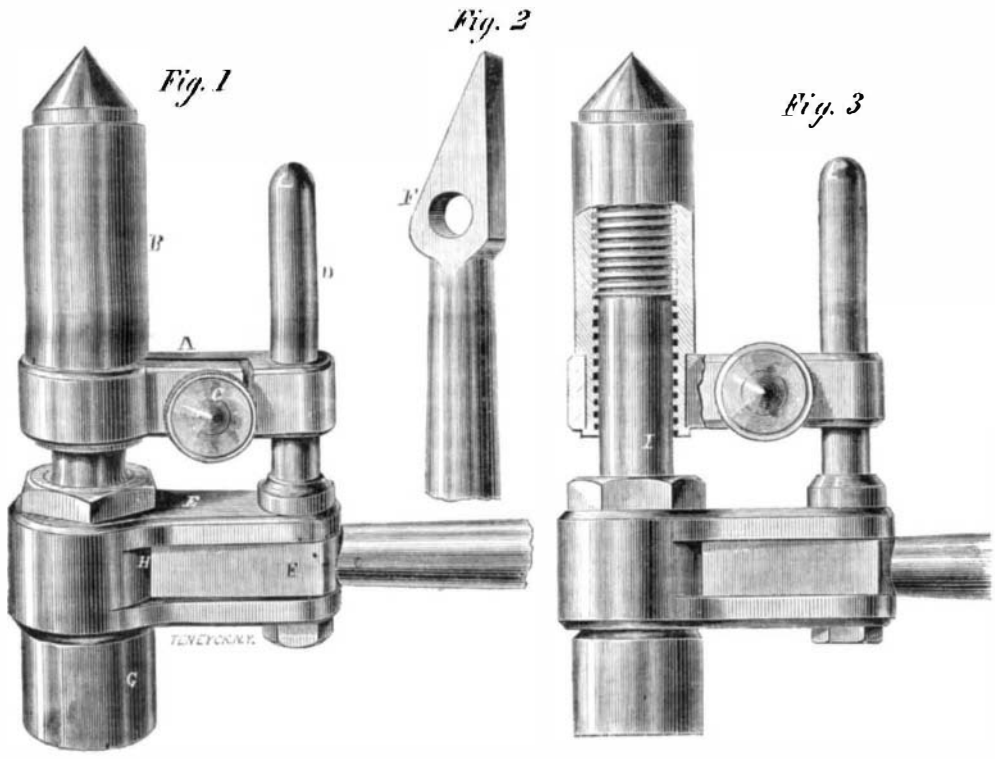
In Fig. 2 the pawl end of the handle is shown. The pawl and handle are all in one piece, and by being movable on the center, F, the pawl naturally pitches into the ratchet on the drill socket, G, inside the case, H. By this action no spring is required, and the pawl is much stronger than common ones.

In Fig. 3 the socket is shown partly in section. The spindle, I, has only a portion of its length cut with a thread, the lower part being turned true, and made to fit the inside diameter of the socket. As a consequence, the drill and wrench always stand straight, and a better hole can be drilled, to say nothing of the mechanical completeness of the arrangement for protecting the screw thread from injury. Sockets and spindles not so made invariably become loose and shaky, so that the drill and wrench stand at all angles.

The thumb screw, C, adjusts the feed at the pleasure of the operator, for, when the friction caused by a maximum pressure upon the screw is greater than that between the clamp and the socket nut, the feed ceases, and only begins again when this pressure is reduced by the cutting of the drill. By this means a perfectly regular feed is kept up, and liability to break tools done away with.

These are the chief features of this excellent tool, but we wish to say one word in favor of its construction. It is made of the very best wrought iron and steel. The drill socket, G, is of cast steel, and it and the spindle are, of course, one piece. The fits are perfect, the threads accurately cut, the cone center of the socket true with the spindle below, and the several parts are as handsomely finished as a prize wrench. It is by far the handsomest tool of the kind that has ever come into this office, and the most efficient one, also. The proprietors inform us that they intend making them better than this in future, and that they are determined to make the best wrench in the market, as they doubtless will. A hole can be drilled much quicker and truer with this wrench, because the feed is always on, and is regular from beginning to end. For running fluted rimmers down in large holes on marine engine work it is a most useful tool.

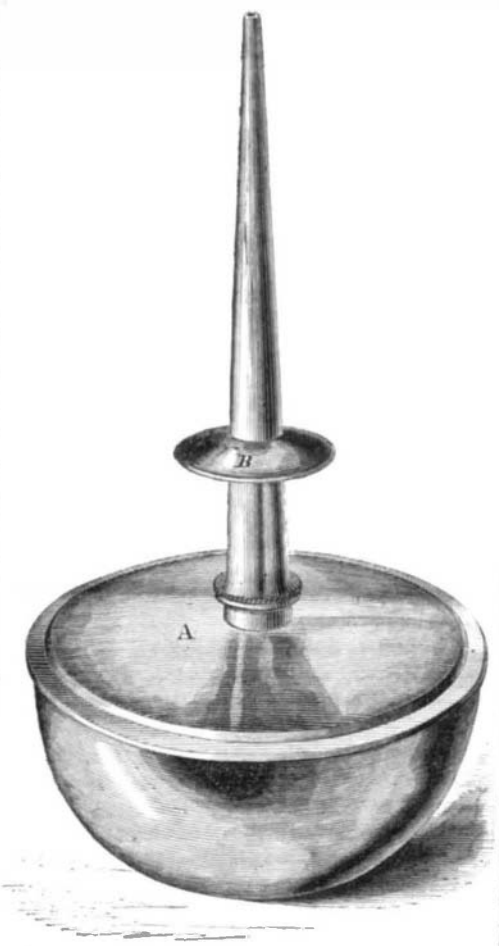
It was patented by L. H. Olmstead, through the Scientific American Patent Agency, March 24, 1863, and is manufactured by Messrs. Davenport & Betts, of Stamford, Conn., to whom all orders must be addressed.



OLMSTEAD'S RATCHET DRILL.

OLMSTEAD'S OIL CAN.

This novel oil can is one of much utility. From its form it is impossible to upset it, so that oil which is wasted from this cause in flat bottomed cans is preserved in the one here shown. It has another advantage, also, which is in the position of the bottom. To use a Hibernicism—the bottom is at the top. The thin metallic part, which is spun up in the lathe, serves as a spring, impinging, when pressure is applied, upon the oil, and forcing it out of the tip. This spring-bottom is brazed in the upper part of the can, at A, and is much more durable than when in the obverse position. When used on metal-planing machines oil cans are often punctured in the bottom by the ends and angles of sharp chips, and in machine shops, generally, they are frequently injured in the way designated.



The body of this can is in one piece, so that there are no seams or joints to become leaky. The washer, B, is fast on the tip, and serves as a shoulder to slip the fingers over so as to spring the top in when oiling. This can was patented Nov. 18th, 1861, by L. H. Olmstead. Manufactured by Davenport & Betts, Stamford, Conn., to whom all orders should be addressed.

Winter Flowering Bulbs.

Henry A. Dreer, florist, of Phila., gives the following method to grow hyacinths and other bulbs in the winter season, in pots and glasses:—

"For this purpose single hyacinths, and such as are designated earliest among the double, are to be preferred. Single hyacinths are generally held in less estimation than double ones; their colors, however, are more vivid, and their bells, though smaller, are more numerous; some of the sorts are exquisitely beautiful; they are preferable for flowering in winter to most of the double ones, as they bloom two or three weeks earlier, and are very sweet-scented. Roman Narcissus, Double Jonquilles, Polyanthus Narcissus, Persian Cyclamens, Double Narcissus Early Tulips and Crocus, also make a fine appearance in the parlor during winter.

"Hyacinths intended for glasses should be placed in them during October and November, the glasses being previously filled with pure water, so that the bottom of the bulb may just touch the water; then place them for the first three or four weeks in a dark closet, box, or cellar, to promote the shooting of the fibers, which should fill the glasses before exposing them to the sun, after which expose them to the light and sun gradually. If kept too light and warm at first, and before there is sufficient fiber, they will rarely flower well. They will blow without any sun, but the colors of the flowers will be inferior. The water should be changed as it becomes impure; draw the roots entirely out of the glasses, rinse off the fibers in clean water, and wash the inside of the glass well. Care should be taken that the water does not freeze, as it would not only burst the glass but cause the fibers to decay. Whether the water is hard or soft, is not a matter of much consequence—soft is preferable—but it must be perfectly clear, to show the fibers to advantage.

"Bulbs intended for blooming in pots during the winter season should be planted during the months of October and November, and be left exposed to the open air until they begin to freeze, and then be placed in the greenhouse or a room where fire is usually made. They will need moderate occasional watering until they begin to grow, when they should have an abundance of air in mild weather, and plenty of water from the saucers, whilst in a growing state; and should be exposed as much as possible to the sun, air, and light, to prevent the leaves from growing too long, or becoming yellow."