

## IMPROVED HAND DRILL SEED PLANTER.

A considerable number of hand seed drills have been patented, but for some kinds of seed, or in some circumstances, or in the opinion of some farmers, they have none of them proved to be just what was wanted; we here illustrate another attempt to produce a planter which will give satisfaction under all circumstances, or at least in some conditions where others have failed.

The seed is placed in the hopper, A, the bottom of which is closed by a slide, b, which is pressed inward by a flat spring extending down through the middle of the hopper from the top. The slide reaches through the hopper, and its forward end is perforated with a hole for the seed to fall through when the slide is drawn backward so that the hole may come within the hopper. A vibratory motion back and forth is given to the slide by means of the arm, c, which is connected rigidly with the rocking bar, d. The two levers or hooks, e e, are firmly secured at one end to the rocking bar, d, while their opposite ends rest upon the ratchet wheels, f f, which are fastened upon the shaft of the driving wheel, G. One of the wheels, f, has twice as many teeth as the other, and the hooks, e e, are made to turn in the rocking bar, d, so as to bring either one or both of them upon its ratchet wheel, thus varying the frequency of the vibrations of the slide, b, and consequently the quantity of the seed planted. It will be seen that the plow which opens the furrow, and the two scrapers which follow and cover the seed, are all so connected with the frame that their height may be adjusted, and the angle of the scrapers may also be varied at pleasure.

This is a very simple planter, compact and not liable to get out of order, and the vibrating spring in the middle of the hopper stirs the seed so constantly that it cannot choke in the delivery.

The patent for this invention was granted, through the Scientific American Patent Agency, on Sept. 4, 1860, and further information in relation to it may be obtained by addressing the inventor, W. H. Barber, at Wolcottville, Conn.

## APPLICATION FOR THE EXTENSION OF A PATENT.

*Circular Shears.*—William Bulkley and Philip Norton of New Berlin, Conn., have applied for the extension of a patent granted to them on the 28th of November, 1846, for an improvement in the above-named class of inventions. The testimony will close on the 9th of October next; and the petition will be heard at the Patent Office on the 12th of November, 1860.

*WOMAN'S ENTERPRISE AND PERSEVERANCE.*—In the first volume of the new series of the SCIENTIFIC AMERICAN, page 201, we gave an illustration of an improved steam engine, patented by C. A. Schultz, of this city. This engine was afterwards exhibited at the Fair of the American Institute, where it attracted a great deal of attention and was generally regarded by engineers as a good thing. The valve is connected with the governor so as to regulate the speed by changing the point of cut-off, as in the Corliss & Nightingale engine. Last February, while Mr. Schultz was starting one of his engines at West Cummington, Mass., he carelessly stepped upon the main driving belt and was instantly killed, leaving his widow with no property except the patent right. Mr. Schultz has not despaired under these sad circumstances, but has persevered to carry the enterprise through, and now has a 10-horse power engine in operation at the Neptune Iron Works, in this

city. Being short of funds, she would like to sell a portion of the patent right—either an undivided interest, or the whole for some of the States. Communica-

tion of cylinder, piston and valve, by which a suction-lifting and force pump is produced. This case affords a striking proof of the unlimited field which is open for new combinations in mechanism.

In the pump here illustrated, a solid piston, A, and movable valve box, B, are attached to the same piston rod, C, which works through a stationary valve box, D. Both of the valve boxes have passages through them, which are closed by flap valves opening upward. The water enters at the bottom of the cylinder, and passes out at the pipe, E. It will be seen that by placing the pump in the well and allowing a trifling leak in the boxes, it will not freeze; while by packing the boxes tight, and placing the pump in the house, it will act as a suction, lifting and force pump. The cup, F, at the bottom enables the pump to be placed to the very bottom of the well, for the water, all passing over the upper edge of the cup, is not mixed with the sand and other solid substances by which the pump would be



BARBER'S IMPROVED HAND DRILL SEED PLANTER.

tions on the subject, addressed to the Neptune Iron Works, New York, will receive attention.

## SELFRIDGE'S IMPROVED PUMP.

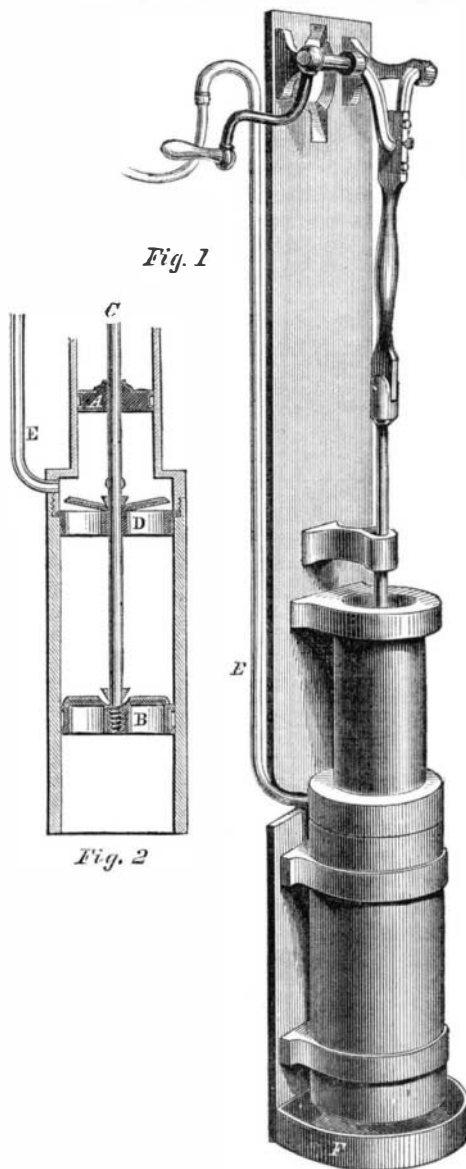


Fig. 1

Fig. 2

choked. It will be seen that the piston is operated by means of a crank and connection rod. The perfect simplicity and convenience of this pump, in combination with its varied action, are the qualities which commend it to the community.

The patent for this invention was granted through the Scientific American Patent Agency, on Sept. 4, 1860; and further information in relation to it may be obtained by addressing the inventor, George C. Selfridge, at North Greenfield, N. Y.

## DENTIFRICES.

Messrs. Editors:—Very few persons seem to understand that the teeth are among the most important organs of the human system; consequently, millions of people are cursed with bad teeth and disordered stomachs. Hence a thousand ills.

While the subject of dentifrices is being agitated through the kind influence of your valuable journal, you would confer an endless blessing by discovering and making known the proper dentifrice to be used under all circumstances.

The article written by "C. C. T." (page 148, present volume of the SCIENTIFIC AMERICAN), partakes of the general views of the best authors and leading dentists of the country. We may deduce from it that almost all dentifrices are either inefficient, or injurious, or both. I am certain, however, that "C. C. T." will find that "hot water and brush" are inefficient in a majority of cases. It needs a dissolvent to neutralize the calcareous sediment which is constantly collecting about the necks of, and between the teeth. The present styles of brushes cannot reach it; "chalk and stick" cannot do it; and it should not be left for the dentist to remove mechanically. A soft brush and gentle astringent wash used daily, chalk and stick when actually required, then consult an intelligent dentist at least twice a year, and there will be fewer false teeth required for the next generation. Every intelligent dentist knows better than to prescribe acid or alkali; soon they will know better than to recommend charcoal and soap.

A. H. T.

Lamberville, N. J., Sept. 1, 1850.

[Almost the only perfect set of natural teeth that we know of among our acquaintances, are those of a lady who has used charcoal regularly for the last thirty years.—Eds.]

After all the hundreds of pumps that have been invented, it is surprising to see a new and simple combin-

THE Great Eastern consumed 2,877 tons of coal during her voyage to this city.