

A NEW BEETLING MACHINE.

The accompanying engraving represents an improved beetling machine, invented by Mr. J. Patterson, of Belfast, Ireland, and exhibited in Paris at the late Exhibition by Messrs. Mather & Platt, of Manchester. It is designed to impart to linen, cotton, and woolen goods the necessary degree of finish by means of a series of weights or hammers beating rapidly and with equal force on the material, as it passes over a cylinder of wood and metal. The hammers are moved by eccentrics on a common shaft revolving in the upper portion of the machine.

There are three cylinders for carrying the goods. They revolve slowly in journals formed on two large wheels, one cylinder only being exposed to the action of the hammers at a time. The goods may be removed from or adjusted on two of the cylinders while the fabric is being treated on the third, without stopping the machine, thus rendering the action of the machine continuous. The destructive effects of the shocks on the machine itself are materially lessened by the springs which support the weights. In the old machines, in which a series of weights were lifted by as many cam wheels, and then allowed to drop, the highest number of blows obtainable per minute from one hammer was 80. In the improved machine, when running at full speed, each hammer strikes about 420 equally effective blows.

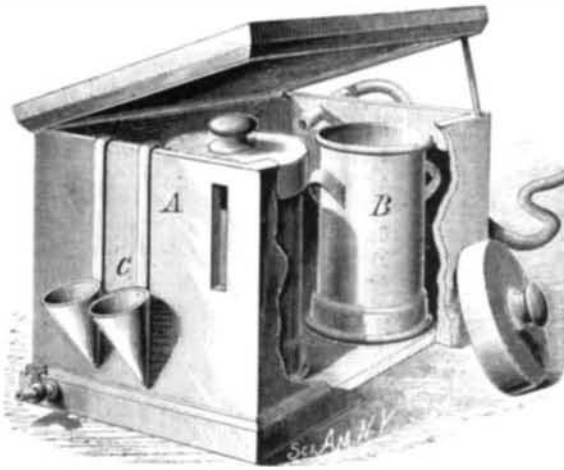
The peculiar construction of the machine allows a perfect regulation of the number as well as the force of the blows. In Paris a machine with 14 hammers did the work of 7 of the old machines in the same length of time, furnishing goods of superior finish.

[This machine has been patented in England, and was recently patented in this country.]

A NEW CREAM-RAISING APPARATUS.

The inventor of the cream-raising apparatus shown in the accompanying engraving has endeavored to produce a creamer which should possess all of the good features of the more expensive apparatus with the advantage of cheapness. The tank in which are placed the milk cans is made of

plank, and has at one end, near the top, a water inlet pipe, and at the other end an opening partly closed by a gate which regulates the height of the water. The milk cans which set in the water have perforated foot rims, which admit of a free circulation of water under the cans, and weighted covers are provided which fit loosely and extend downward sufficiently to dip in the water and thus hermetically seal the cans.

**WELDON'S CREAM-RAISING APPARATUS.**

A conical skimmer is used to remove the cream from the milk. It is carefully dipped, apex downward, into the milk until the cream flows over its edges; it is then removed and emptied, and the operation is repeated until all of the cream is removed.

This apparatus is designed principally for dairy use, and is particularly applicable where natural flowing springs are available.

MISCELLANEOUS INVENTIONS.

A novel nail extractor for removing nails from packing cases without injuring the cover of the case, is the invention of Mr. C. F. Knauer, of Urach, Württemberg, Germany.

Mr. Otto Stark, of New York city, has invented an improvement in bellows for accordions and other instruments of the same character. The improvement consists in strengthening the folds by means of wooden strips.

An improved lamp for burning paraffine or mineral oils has been patented by Mr. W. C. Hughes, of London, England. This lamp has three distinct wicks, operated by separate racks and pinions. The wicks are arranged with a view to perfect combustion and the production of a strong light. The lamp is intended for magic lanterns, public streets, halls, etc.

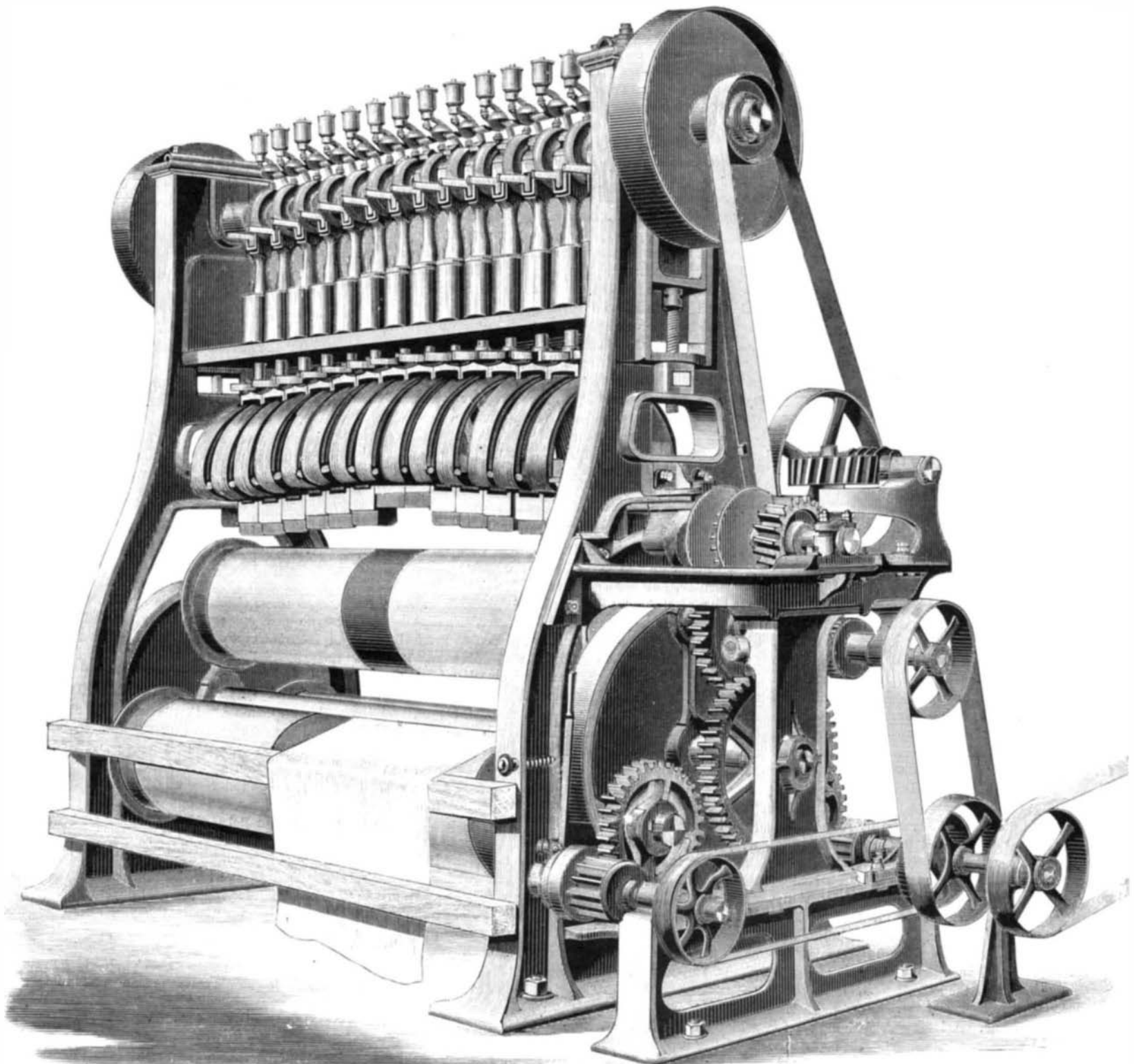
A wind motor for the heavier kinds of work, such as pumping large quantities of water, operating stamp mills, etc., is the invention of Mr. L. Brayman, of Gilbert Station, Ill. It consists of two series of wind wheels placed on horizontal shafts, which are arranged at right angles to each other and geared together so that either or both series may be employed in driving machinery.

Mr. C. J. B. Gaume, of Brooklyn (E. D.), N. Y., has devised an electro-magnetic engine in which the back pull upon its magnets is avoided. The invention consists in a new arrangement of armatures.

A simple and effective device for operating and locking and unlocking window blinds has been patented by Messrs. John Kelso and Wm. H. Ludewigs, of Lowdon, Ia. The principal feature of the invention is a jointed rod, which is turned, bent, pushed, or pulled to move the shutter in different directions and operate the slats.

A simple and easily constructed pump has been patented by Mr. A. Stoner, of Stony Point, La. This device may be made almost entirely of sheet metal, and may be used for extinguishing fires, washing windows, sprinkling floors, etc.

Mr. George Jackson, of Havre de Grace, Md., has invented a grate for coal burning stoves, furnaces, grates, etc., which may be vibrated vertically, to free the fire from ashes, and to prevent the accumulation of clinkers.

**PATTERSON'S IMPROVED BEETLING MACHINE.**