

**PATENT GEAR-CUTTING ATTACHMENT FOR LATHES.**

We illustrate herewith a new and powerful device designed for the use of machinists who require a gear-cutting machine, but who have not sufficient work for an apparatus of that description to warrant their purchasing one of the larger and more expensive appliances now in the market. The present invention is claimed to be able to perform all the work peculiar to it that is necessitated by the average machine shop; and through its low cost, the advantages which it offers are brought within the reach of mechanics generally.

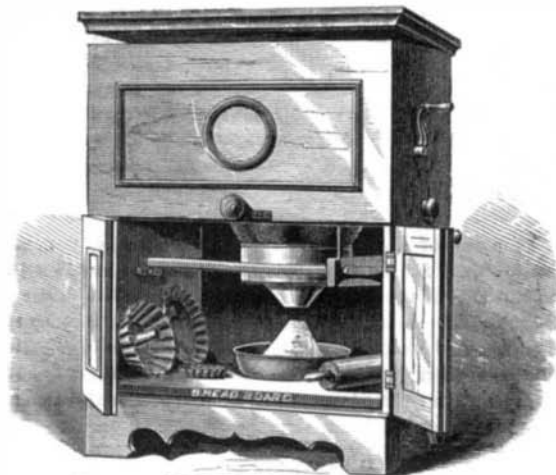
This machine will cut all kinds of gearing—spur, bevel, miter, spiral, and worm—and also taps, reamers, and indexed milling. It is 24 inches in height, weighs 96 lbs., and its index plate is 12 inches in diameter, and has 38 circles of holes, dividing every number up to 75, and every even number up to 150, or 112 different numbers. Attached to the index is a counter which prevents the possibility of making mistakes.

The general construction will be clearly understood from the engravings. The apparatus is shown on the tool post slide of an ordinary engine lathe as arranged for cutting spur gearing, Fig. 1, and for bevel gearing, Fig. 2. The cutter mandrel is represented separately, beside the machine.

Patented to Mr. Thomas O. Mills, and manufactured under his supervision by the Michigan Manufacturing Company, of Kalamazoo, Mich., to whom inquiries for further information may be addressed.

**SMITH'S FLOUR AND MEAL CHEST.**

The annexed engraving represents a handy receptacle for flour and meal, which protects its contents from inroads by rats and mice, and allows of the withdrawal of the exact quantity of material required in a sifted state ready for immediate use. The upper portion of the device is separated into two compartments, one of which serves for flour, the other for meal, the partition being immediately over a bottom orifice. A separate canvas spout, as represented, leads from each compartment to a sieve beneath, which is sustained in a simple holder, which is vibrated and the sieve so shaken by suitable mechanism operated by the crank shown. Slides



are provided to shut off or admit meal or flour to the chutes and are controlled by the knobs shown respectively in front of the chest and beneath the crank. The lower compartment receives the vessel into which the meal or flour is sifted, and also answers as a convenient closet for storing bread, tray, rolling pin, bread board (which last, with a sieve, is provided with the chest), biscuit cutters, and baking utensils generally. Each compartment may be made to hold a bushel of meal and one hundred pounds of flour, or it may be constructed smaller.

The inventor points out that, with this device, no material is wasted in removing it from the receptacle in which it is kept, and moreover that the same is kept from becoming stale and wormy, as is often the case. No old flour remains at the bottom, as that at the bottom is used first, and every time the slide is drawn the bulk is disturbed and fresh air admitted. In this way the contents of the chest are always kept in a fresh state. The hinged lid at the top admits of ready access to the upper compartments; and when the doors below are closed, the device becomes a neat piece of furniture, fit to be located in the dining room if desired.

Patented January 5, 1875. For further particulars regarding sale of rights, etc., address the inventor, Mr. A. W. Smith, Lexington, Mo.

KEROSENE flames are readily extinguished by throwing a rug or cloth over them. But cloth is not always in the kitchen, where kerosene accidents are most likely to occur. Flour is recommended as a substitute. Thrown upon the flames, it quickly absorbs the fluid and deadens the flame.

**CORNELL'S IMPROVED LIFTING JACK.**

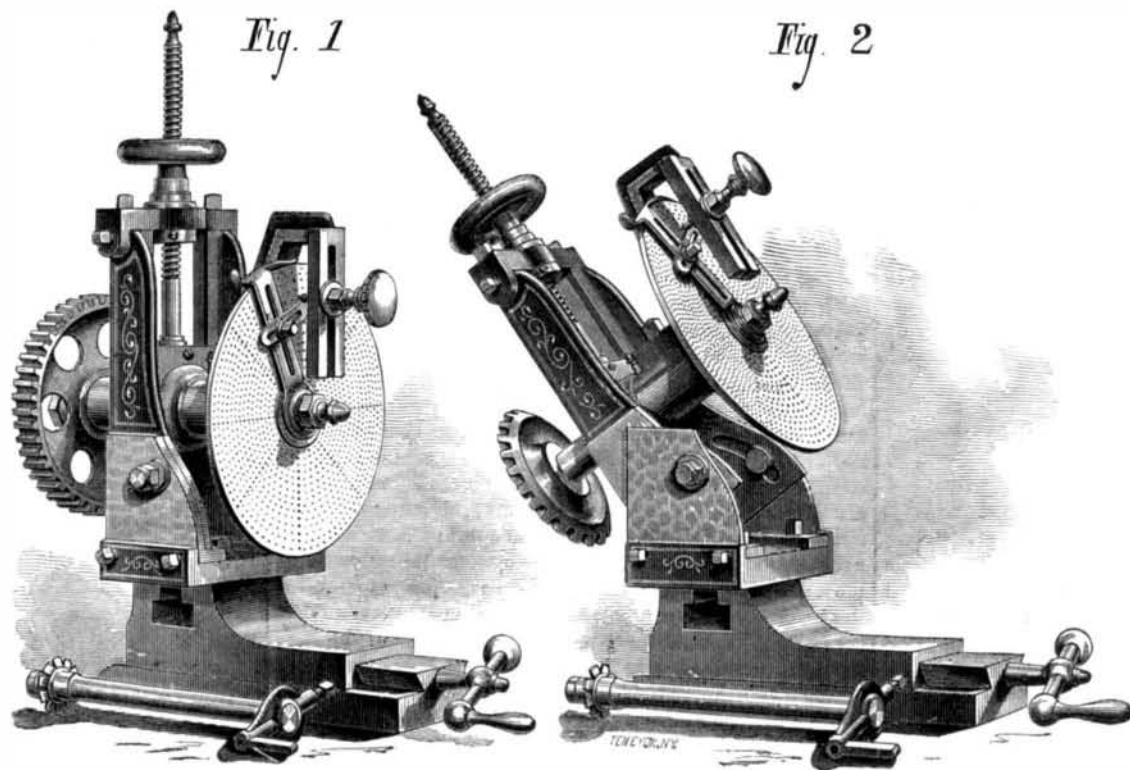
The new jack herewith illustrated offers the advantage of a continuous lift or press from bottom to top, while its mechanical construction is such as to apply the power with great effect. It is thus well adapted to situations where the jack screw cannot be used. It is always ready for operation, is claimed to be perfectly safe under a load, and admits of lowering the weight gradually when desired.

Between projecting flanges, Fig. 2, upon the two vertical

standard upward. On the back of the body are attached metallic plates, which form the bearings for metal friction rollers. The latter play through slots in the body and rest against the standard, so that, in lifting heavy weights, the lever and pawl press upon one side of the standard while the rollers relieve the friction on the other. Also at the rear of the machine is a metallic bar, Fig. 1, which has its ends bent at right angles to its length, but in opposite directions. A pin passes through the upper bent extremity and into the top of the

standard, so as to keep the bar in place and secure it to the latter. The lower arm of the bar is used to hook under objects which are lower than the top of the jack. A wooden block may also be added, as shown, for loads to rest upon, so that the machine can easily be adjusted to objects of any height. The bar is detachable by simply lifting it from its resting place.

In Fig. 2 the application of the jack to a cider press is represented. Here there are two levers, each with its pawls acting on standards on each side of the standard, so that a greater amount of power can be applied. As regards this especial adaptation of the jack, the inventor points out that the iron in a cider or wine press comes in contact with the acid of the fruit, and soon becomes corroded; and this does not happen in the present case. It will be seen that the invention is useful as a wagon jack, fence or timber lifter, and a press for a large variety of purposes. Patented February 1, 1876. For further particulars address Munsell & Dexter, 165 Green-



**MILLS' GEAR-CUTTING ATTACHMENT FOR LATHES.**

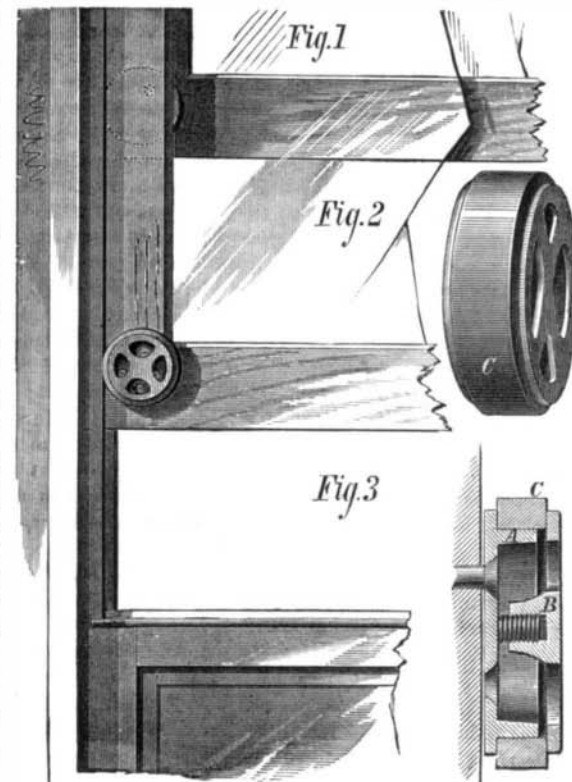
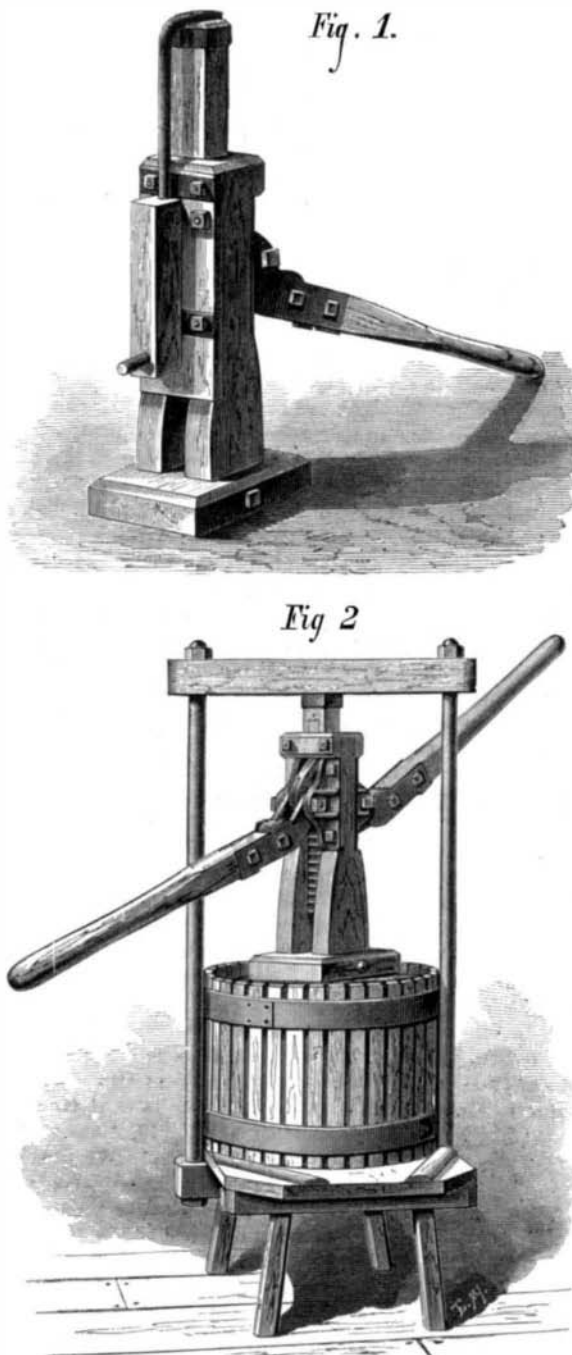
metal bars which form the body, is pivoted the hand lever. On the side nearest said lever, of the wooden standard which plays in the hollow body, is secured a metal rack bar. The lever near its inner end is provided with two pawls, one of which works upon the lever bolt between the prongs of the

wich street, or 49 Courtland street, New York city.

**STELLER'S IMPROVED SASH HOLDER.**

We illustrate herewith a simple and effective little device for sustaining window sashes in any position in which they may be placed. In addition to this, it may also be employed as a sash lock, on sashes which are supported when raised or lowered by cords and weights or like means.

Fig. 1 shows the holder as applied to sashes, and Fig. 2 is a perspective, and Fig. 3 a sectional, view of the invention. It consists of a disk of iron, A, something over an inch in



diameter, having a broad flanged portion, and pierced with holes for the reception of the fastening screw. In the center of the disk is a threaded projection, upon which screws another disk, B. The whole thus forms a grooved wheel, of which the flange constitutes the periphery. Around the latter is slipped a rubber ring, C. To apply the device the disk, C, is removed, and the remainder attached by a single screw to the window sash. It thus is secured eccentrically; and consequently, when the rubber covering takes against the casing, the holder becomes jammed through the downward pressure of the sash, so that the latter cannot possibly descend further. This is clearly shown by the dotted lines on the upper sash in Fig. 1. It will easily be seen that, by turning the holder so that its greater portion is above instead of hanging below the screw, the jamming will then take place when the sash is sought to be lifted, and thus the apparatus becomes a simple, self adjusting, and very efficient lock. The invention is neat, tasteful in appearance, and cheap, and doubtless will meet a ready welcome from carpenters and the hardware trade generally. Patent now pending through the Scientific American Patent Agency. For further particulars address the inventor, Mr. C. E. Steller, 352 East Water street, Milwaukee, Wis.

lever, and the other has a separate pivot also between the prongs. The longer pawl on the lever bolt is stationary; the other moves with the lever, so that the first acts as a lifter and the second as a detent. By operating the lever, these pawls are so caused to catch into the rock bar as to lift the