STOWELL'S NEW GANG LATH AND PICKET-MILL
AND GANG BOLTER.

Mr. John M. Stowell, of the firm of Filer, Stowell & Co., Milwaukee, has achieved an enviable reputation as an inventor and machinist, having perfected several of the most useful and popular wood-working machines now in use. For the benefit of our readers who are interested in the manufacture of lath and pickets or who contemplate the addition of suitable machinery for such purposes to their mills we have secured engravings of Mr. Stowell's most excellent Gang Lath and Picket Mill and Gang Bolter that manufacturers may be enabled to form correct ideas of these machines and the principles of their construction. The first two illustrations represent views of the Gang Lath and Picket Mill.

The machine was patented in 1873 and its use during the past year has demonstrated its vast superiority. The machine occupies a space 3 1-2 by 4 feet and weighs about 800 pounds. Some of the principal advantages possessed by this machine may be enumerated as follows:

The machine combines all the advantages of the ordinary Gang Lath Mill with the additional capacity for making square pickets, flat pickets, broom handles, sash stuff, or other small strips.

It makes as rapidly as the ordinary gang lath mill, any number of lath from one to ten, according to width of bolt.

It makes six strips of one inch broom handles, or six 3-inch by 1 inch pickets.

It makes five one and a quarter inch square pickets.

It makes five one and a half inch square pickets.

It makes from boards, edgings, or from any refuse lumber, three pickets three inches
wide, or the same number of pieces of any thickness up to three inches; or more pieces of narrower widths.

Those acquainted with the operation of the gang lath mill will appreciate the advantages of this machine, as it does all this variety of work with the same facility as the lath mill makes lath, and it even eclipses that in the specialty of lath making.

For full particulars of price of this machine, more extended descriptions, terms &c., application should be made to Filer, Stowell & Co., Milwaukee, Wis.

We now come to the consideration and illustration of the Gang Bolter which possesses so many points of merit as to have already assured its use whenever its real services have been appreciated.

![Image of Gang Bolter]

The Bolter formerly made by Mr. Stowell was subject to some serious objections, which have been completely removed by the perfection of this machine. Formerly the labor and detention incident to removing the saws for changing or filing was considerable, as the eight feeding chains had to be removed and the arbor taken out at each change; and the guides, being unadjustable, required frequent renewing, and being made of brass were too expensive. The chains also were liable to deposit saw dust on the chain wheels and in the grooves of the roller so that frequent attention was necessary to keep them in order. All of these objections have been entirely removed by the construction of this new machine.

The movable box or journal at the end of the arbor allows the saws to be taken off and replaced just as readily as on an ordinary circular mill by passing them through open circle in the frame, there being no chains or other obstruction in the way. The guides are readily removed and easily adjustable. The guide plate is so constructed as to receive wooden guide pins so that the expense of renewing is merely nominal, and the plate will last as long as any part of the machine.

Another feature of great importance in this machine is a new device operating as a press roller and guard for each separate bolt while and after being sawed until carried entirely away from the machine. This is effected by placing a series of saws behind the cutting saws, there being one outside of each outside cutting saw, and one for each intervening space between the saws. Each guard saw revolves on a stud attached to a heavy arm depending from a shaft immediately over the large saws.
These saws ride each bolt, holding it down against the lower feed roller, and as they revolve freely in the direction the bolts are moving they present no obstruction to their passage through the machine. A ratchet wheel and pawl is attached to each of these saws with teeth in the opposite direction to the teeth on these roller saws, so that they are only allowed to revolve in the direction the bolt should travel. If, as sometimes happens, there is a tendency for the rear edge of the cutting saws to catch the bolts and throw them forward, these guard saws being rigid in that direction, and there being a guard for each separate piece, no such result can happen. This is regarded as a very important improvement and one that should be attached to all gangs of circular saws. It is well known many lives have been lost, and many men maimed from the edgings or boards thrown forward by saws in this way. In one town (Manistee, Mich.) no less than three fatal accidents of this kind have occurred quite recently on gang edgers. The forward press roller is a ribbed roller ten inches in diameter, and is driven from the shaft directly over the cutting saws. Being so large, ribbed, and driven, it easily rises over any inequality on the round surface of a slab and materially aids the lower roller in feeding. The feed in this machine as now made is variable and just as positive and strong as the chain feed. There are several other excellent improvements in this mill which will best be appreciated when it is seen in practical operation. In several instances parties after having one of these machines have purchased a second, throwing out other new machines to give place to this.

For full directions as to setting up and using this machine, price list, and explanation circulars, address Filer, Stowell & Co., Milwaukee, Wis.

**PNEUMATIC CONDUCTORS FOR SHAVINGS.**

*From the Wood Working Machine.*

The rapidity with which a new thing is adopted is generally a true indication of its merits, or at least of its money-saving value. To apply this rule to the system of clearing the shavings from wood manufacturing establishments by induction-fans, or blowers as it has lately come into use in America, we must grant its importance at once, for there is no improvement, involving the same amount of change and expense, that has been so generally introduced in the same length of time. Although but three or four years since the first application of this, it is now the exception to find a first-class mill without it.

The large planing mills of the lake district in America, from being places full of rubbish, dust and shavings, have as if by magic been cleared of everything, and present an appearance of cleanliness, neatness, and safety from fire, that is worth what the conduits cost, as say nothing of the economy otherwise effected.

A large induction-fan is placed at some central point and connected, either by wood or sheet-metal pipes, with the machines of all kinds that create dust or shavings, either by means of hoods that come down over the cutter-heads, or by inclining the whole machine frame and exhausting the interior. A sufficient pressure, or rather vacuum, is maintained to lift the heaviest shavings, which with the dust are drawn through the pipes into the fan, and there expelled by pressure, and carried to the furnace or elsewhere, as may be wanted.

In point of economy it is hard to institute a fair comparison. The old plan of clearing the shops by hand only related to the removal of shavings after they had accumulated, while the fine dust from sand-papering and other machines of the same class was cleared by special blowers. The new system accomplishes all, and does not allow any accumulation whatever; it besides leaves the whole floor room available for handling material, and conduces to the comfort and health of the workmen.

In regard to the relative cost of simply removing the shavings it is represented, no doubt, very nearly in the difference between