

New Inventions.

Improvement in Machinery for Making Pails, &c.

Mr. Elijah Whiton, of Hingham, in Plymouth Co., Mass., has taken measures to secure a very excellent improvement in machinery for making pails, buckets, and all such hollow wood-ware out of solid blocks of wood. The block to be acted upon has peculiar movements, one a rotary and the other a rectilinear, whereby the block is fed up to the saw in such a manner as to be, when sawn, a single spiral sheet or scroll, or in concentric layers or sheets. The saw frame and block, when desired, may be placed in an inclined position, so that the sawn spiral sheet or scroll will be conical in form. A spring is placed upon the saw frame, by which the saw, when it runs fast, works with a very smooth instead of an irregular motion, as is commonly the case. This machinery is adapted for wooden cylinders, which can be extended into tubes, and for all the kinds of vessels referred to. We have seen various samples of the pails made by this machinery, and can speak confidently of their qualities. It will be understood that a sawed scroll, with a bottom put in, and then hooped, forms a pail.

Improvement in Bee Hives.

Mr. Robbins H. Stevens, of Litchfield, Hillsdale Co., Michigan, has taken measures to secure a patent for an improvement in Bee Hives, consisting of a series of boxes placed in a rectangular case, and which are so arranged, that but four boxes are used for oneswarm of bees having communication through all the boxes; but each box has an opening in front, and the whole four openings placed directly in front of a square tube passing through the front board of the case, but with a passage in it for each box. By this means any of the four boxes may be taken from the hive, with the honey it contains, without disturbing the bees or the other three boxes.

New Lubricator.

Mr. T. Mingus, of Lanesboro', Susquehanna Co., Pa., has invented and taken measures to secure a patent for an improvement in an apparatus which he terms the "Universal Oiler," for lubricating the bearings of axles, &c. He employs a roller covered with cloth, or any other suitable material, secured in a vibrating frame, having two arms connected together by rods. This roller touches the bearing of the shaft or axle, and revolves in an oil cup below, in which there are coiled springs pressing on the arms spoken of which keep the lubricating roller, continually in contact and revolving with the bearing which it lubricates.

Improvement in Saw Mills.

Mr. Edwin Weed, of Westport, Conn., has taken measures to secure a patent for an improvement in Saw Mills, by causing the saw to be operated by chains made fast (each chain) at one end, to guides holding the saw at one end, the other ends of the chains being secured to pulleys which receive a vibratory motion and operate the saw. The usual saw-gate and connecting rod are dispensed with and additional saw space is obtained. Any number of saws may be used upon the same plan. This improvement is considered to be a valuable improvement, and Mr. Charles Crofut, of Westport, has become the assignee of the invention.

Substitute for Shoe Leather.

There is an establishment at Abington, Mass., for grinding up the chips and shavings of leather which are cut off by the shoe and bootmakers, and which have hitherto been burnt or thrown away. These are ground to a powder and mixed with certain gums and other substances so thoroughly that the whole mass becomes a kind of melted leather. It is then rolled out to the desired thickness, and is quite solid and water proof. This article will soon be offered in the market.—[Exchange.]

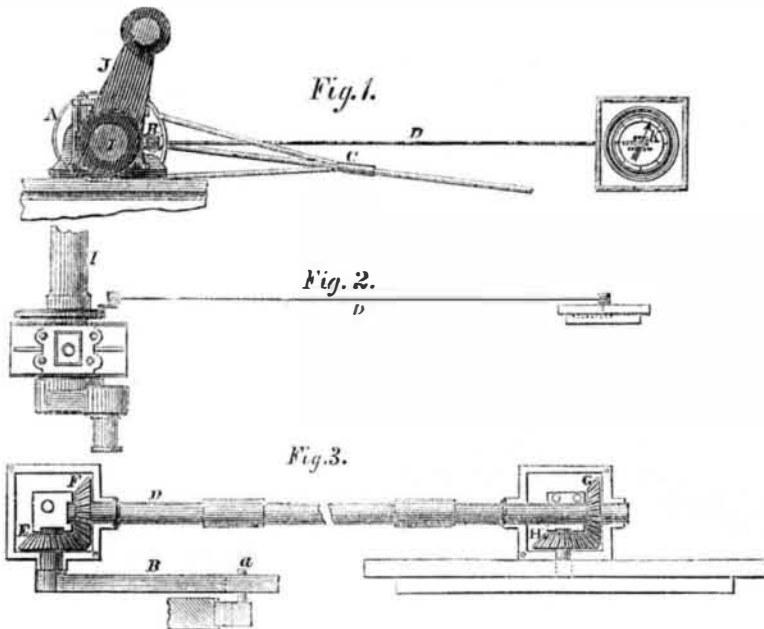
[Let the people look out for the poor shoes from that quarter, if it is used for soles or uppers.]

HUTCHINS' IMPROVED CRANK INDICATOR.

The accompanying figures represent an improvement in an apparatus named a "Crank Indicator," invented by Mr. Samuel B. Hutchins, first Engineer of the Ontario steamboat, on Lake Ontario, commanded by Captain H. N. Throop. A patent was granted for it on the 3rd of June, 1851.

Figure 1 is a side elevation of a portion of a steamboat engine, showing the working of the Indicator; figure 2 is a minute plan of the

same; figure 3 is an enlarged plan. The same letters refer to like parts. The object of the invention is the communication of motion to an Indicator from a pin secured in the band or rod of the eccentric which works the valves, the said pin acting upon a small crank and giving a rotary motion to the spindle upon which it is secured, and by a small shaft and bevel gearing to the Indicator, which has a rotary motion corresponding with that of the



crank on the main shaft of the engine. A is the eccentric band on the main shaft, I; and J is the crank; C is the eccentric rod to work the valves; K is the dial of the indicator, the arrow being the pointer. There is a small spindle made of a fine steel rod, and hung in suitable bearings parallel with and at a short distance from the main shaft. It carries a small crank, B, at one end, and on the other is the bevel pinion, E, fig. 3. It is united by a steel pin, a, to the band of the eccentric, and there is a slot in the small crank, B, in which the pin, a works; the eccentric, A, therefore, will, by this arrangement, give a rotary motion to the bevel gearing, E F, in the box shown open in fig. 3; D is a small shaft which transmits the motion from the bevel gearing spoken of, connected with the eccentric on the main shaft, to the bevel pinions, G H, in another box, and connected to the indicator pointer, as shown in figures 1 and 3. Every pair of bevel pinions is of the same size. The arrangement shown is for an indicator placed at the side of the engine room. This indicator occupies but very little room; as the spindles do not require to be more than about half

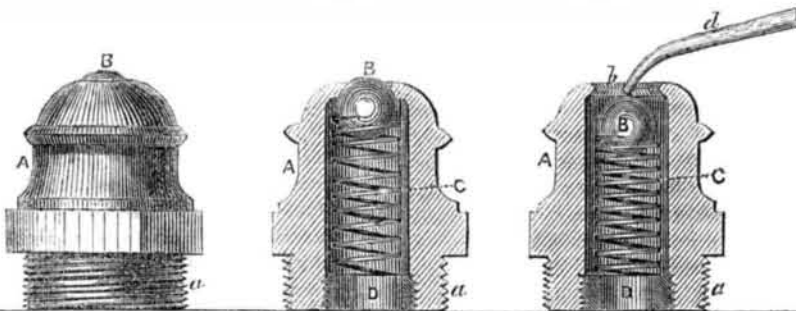
an inch in diameter, and the wheels not over one and a half inches. It is exceedingly convenient and useful to the engineer; at his right or left hand—where the indicator may be placed, he sees at a glance the position of his crank, and knows exactly at what angle it is in relation to the piston rod, a very important thing indeed.

This patent has been purchased by Mr. G. S. Wormer, of Oswego, who is full assignee. We have a certificate before us of the Captains and Engineers of all the steamboats on Lake Ontario, of the Ontario and St. Lawrence Steamboat Co., certifying that they have used it on the boats to which they are attached, and that they deem it a valuable improvement and superior in every respect to any other device used for the same purpose. Its advantages they state to be "simplicity of construction; absence of liability to get out of order; cheapness, and the small amount of space it occupies."

Communications about rights, &c., will meet with gentlemanly attention from Mr. Wormer at the Steamboat Office, Oswego, New York.

PATENT OIL CUP FOR JOURNAL BOXES.

Figure 1. Figure 2. Figure 3.



The accompanying engravings illustrate a beautiful improvement made in Oil Cups for Journal Boxes, by Mr. Aaron Richardson, of Bellows Falls, Vt., and patented on the 29th of last July (1851). Figure 1 is a side view of one of the cups, and figures 2 and 3 are vertical sections through the centre. The same letters refer to like parts. A is the body of the cup, which has a screw socket at its bottom, for the purpose of screwing it into the cup of a journal box, or any bearing in which it is to be used. Its mouth, b, is made smaller than the inside part below it, to form a valve seat. B is a spherical valve (hollow ball) fitting within. Any other suitable valve may be used, but this is the best. C is a spiral spring within the cup; this spring and the

valve are put in through the bottom of the cup, and kept in by a ring, D, which is secured into the socket, a, and forms a bearing for the spring which presses under the valve, and causes it to keep the mouth, b, closed (as shown in figure 2) when it is not opened by some external pressure. The oil is poured into the cup by pressing the spout of the oil can (as shown in figure 3) upon the ball or valve, which may or may not project above the mouth, b, when closed. The spring is made with tension just enough to keep the valve up to its seat, but to yield to the pressure of the can spout, d. When the cup is filled up with oil, and the feeder withdrawn, the spring raises the ball into the seat, closing the mouth, b. A wick may be used inside of the cup, if de-

sirable, to graduate the feed of oil to the journal. This oil cup possesses a great advantage over the common kind in use, as many bearings of machinery are so situated that it is difficult to remove their stoppers when the machine is in motion, while this one, by a long spout on the oil can, may be easily supplied with oil where the hand cannot easily reach. It can never be left open by forgetfulness, as is often done with others, and for locomotives it will exclude dirt and dust, and can be filled with one hand while the engine is running. The claim is for an oil cup having a valve inside operated by a spring, for the purposes set forth.

More information about this excellent improvement may be obtained of the inventor by letter.

Patent Revolving Sail-Ship.

The Liverpool papers record the invention, by Mr. F. Watson, a gentleman of fortune, residing in Manchester, England, of a new method of rigging ships, by which the usual method is entirely dispensed with. The principal feature in his invention is the introduction of a set of revolving sails, sixteen in number, something similar to the fans of a windmill, which are elevated on a wheel, and are attached to a sort of spindle. As soon as the wind touches these sails, they instantly set in motion the spindle, which acting upon a very simple piece of machinery, propels a couple of paddles. The objects attained are greater speed by means of the paddles, and the advantage of sailing against a head wind. This is a great improvement, as the sails can be pointed with great ease to any point of the compass. Head or contrary winds are not recognised; a stiff breeze is all that is requisite to propel the vessel. The paddle boxes give the hull the appearance of a double-bowed steamboat. He has rigged a model ship, 23 feet long by 6 feet breadth of beam, according to this plan, for the purpose of testing its capabilities. The inventor has secured a patent for his invention, and is sanguine of its success. Should it succeed, it is said that it will cause a complete revolution in the present system of propelling vessels—but it won't.

Steam Railroad Turn Table.

We learn by the Pottsville Register, that Mr. Wooten has applied steam power to operate the "turn table" of 40 feet diameter, at the engine house of the Port Carbon Railroad. It is effected by means of a shaft 165 feet in length, connected with the stationary engine in the machine shop, some distance off. This simple contrivance, with its gearing, is all concealed from view, and by means of a lever, the ponderous platform sustaining the heaviest engines and tenders is turned either to the right or left or stands still, according to the will of the operator.

Improvement in Ventilating Cars.

A train of new cars built by Cummings and James, of Jersey City, for the Railroad between this city and Philadelphia, are well constructed and are admirably adapted for ventilating comforts. Besides three circular openings in the roof, a dozen or more small shutters are under the roof, which, by revolving on their centres, can be opened or closed as desired, thus admitting the air, or excluding the rain.

Reaping by Machinery in England.

Mr. J. J. Mechi, the gentleman on whose estate Mr. McCormick's machine did such creditable work, has published a letter, stating that the said Reaping Machine had been at work all day on his farm, cutting a heavy crop of wheat, with very long straw, partially laid, and that he had arrived at the following conclusions respecting it: "1st. It will cut from ten to fifteen acres per day, according to circumstances. 2nd. The quantity cut depends greatly on the strength of the man who has to remove it from the rake boards. 3rd. The paddle wheels do not injure the crop." He says he is "convinced that all the reaping in England will soon be done by horse or steam machines."

It is desirable in that rainy country to harvest the crops in a great hurry in dry days; there is a prospect of this now being done by machines to the great benefit of farmers.