Scientific American.

HUTCHINS' IMPROVED CRANK INDICATOR.

Improvement in Machinery for Making

New Inventions.

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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 peculiarmovements, one a rotary and the other a rectilinear, whereby the block is fed up to the saw insuch 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 se cure 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 fromt, 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 axis, 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.

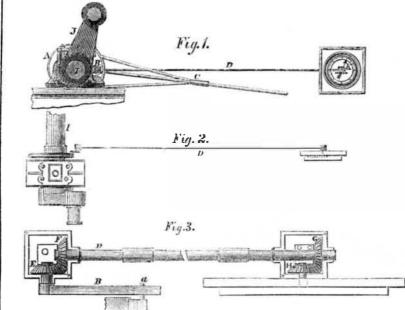
Mr. Edwin Weed, of Westport, Conn., has taken measures to secure a patent for an improvement in Saw Mills, by causing the saw to be operated by chains made fast (each chain) at one end, to guides holding the saw at one end, the other ends of the chains being secured to pulleys which receive a vibratory 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

Substitute for Shoe Leather beautiful improvement made in Oil Cups for cup, and kept in by a ring, D, which is secuwork all day on his farm, cutting a heavy There is an establishment at Abington, Journal Boxes, by Mr. Aaron Richardson, of red into the socket, a, and forms a bearing for crop of wheat, with very long straw, partial-Mass., for grinding up the chips and shavings ly laid, and that he had arrived at the follow-Bellows Falls, Vt., and patented on the 29th the spring which presses under the valve, and of leather which are cut off by the shoe and of last July (1851). Figure 1 is a side view causes it to keep the mouth, b, closed (as ing conclusions respecting it: "1st. It will bootmakers, and which have hitherto been cut from ten to fifteen acres per day, according of one of the cups, and figures 2 and 3 are shown in figure 2) when it is not opened by some external pressure. The oil is poured into burnt or thrown away. These are ground to to circumstances. 2nd. The quantity cut devertical sections through the centre. The a powder and mixed with certain gums and the cup by pressing the spout of the oil can same letters refer to like parts. A is the body pends greatly on the strength of the man who other substances so thoroughly that the has to remove it from the rake boards. 3rd. (as shown in figure 3) upon the ball or valve, of the cup, which has a screw socket at its bottom, for the purpose of screwing it into the which may or may net project above the mouth, The paddle wheels do not injure the crop." whole mass becomes a kind of melted leather. cup of a journal box, or any bearing in which b, when closed. The spring is made with tenit is then rolled out to the desired thickness. He says he is " convinced that all the reaping and is quite solid and water proof. This arit is to be used. Its mouth, b, is made smaller sion just enough to keep the valve up to its in England will soon be done by horse or ticle will soon be offered in the market.- Exseat, but to yield to the pressure of the can steam machines. than the inside part below it, to form a valve spout, d. When the cup is filled up with oil, phange. It is desirable in that rainy country to harseat. B is a spherical valve (hollow ball) fitvest the crops in a great hurry in dry days; [Let the people look out for the poor shoes and the feeder withdrawn, the spring raises ting within. Any other suitable valve may from that quarter, if it is used for soles or up- be used, but this is the best. C is a spiral the ball into the seat, closing the mouth, b. there is a prospect of this now being done by spring within the cup; this spring and the A wick may be used inside of the cup, if de- machines to the great benefit of farmers. rtal pers

The accompanying figures representian im- | same; figure 3 is an enlarged plan. The same provement in an apparatus named a "Crank letters refer to like parts. The object of the Indicator," invented by Mr. Samuel B. Hutch- invention is the communication of motion to ins, first Engineer of the Ontario steamboat, an Indicator from a pin secured in the band or on Lake Ontario, commanded by Captain H. N. Throop. A patent was granted for it on the said pin acting upon a small crank and the 3rd of June, 1851. Figure 1 is a side elevation of a portion of a

rod of the eccentric which works the valves, giving a rotary motion to the spindle upon which it is secured, and by a small shaft and

steamboat engine, showing the working of the bevel gearing to the Indicator, which has a Indicator; figure 2 is a minute plan of the rotary motion corresponding with that of the

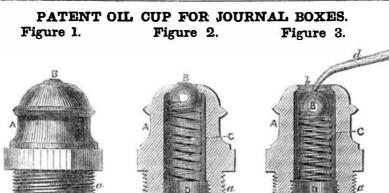


the eccentric band on the main shaft, I; and J is the crank; C is the eccentric rod to work the valves ; K is the dial of the indicator, the arrow being the pointer. There is a small spindle made of a fine steel rod, and hung in suitable bearings parallel with and at a short distance from the main shaft. 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 indicadles do not require to be more than about half New York.

crank on the main shafe of the engine. A is | 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. Law rence Steamboat Co., certifying that they have used it on the boats to which they are attached, and that they deem it a valuable improve ment and superior in every respect to any other device used for the same purpose. Its advantages they state to be "simplicity of space it occupies.

Communications about rights, &c., wil meet with gentlemanly attention from Mr. tor occupies but very little room; as the spin- Wormer at the Steamboat Office, Oswego,



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 construction; absence of liability to get out length, connected with the stationary engine of order; cheapness, and the small amount of | 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 Machineny in England.

Mr. J. J. Mechi, the gentleman on whese a valuable improvement, and Mr. Charles estate Mr. McCormick's machine did such cre-Crofut, of Westport, has become the assignee ditable work, has published a letter, stating of the invention. The accompanying engravings illustrate a | valve are put in through the bottom of the that the said Reaping Machine had been at