

## Agricultural Implements.

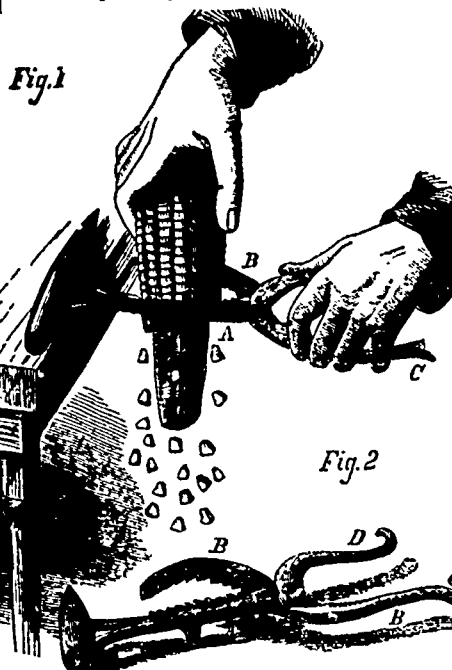
### Wind Power for Farm Use.

An account has reached us recently of a new wind-mill which, if at all what is claimed for it, must meet with a ready sale, and be largely used for the purposes of agriculture—that is, for sawing wood, chopping grain, straw cutting, and the like—will, in fact, supplant portable steam engines which, however useful, cannot be set or kept in motion without fuel; and fuel in this country, especially in those parts of it which are cleared and settled enough to warrant the introduction of mechanical power, is a very important consideration as a question of expense. The usual form of the wind-mill, as most persons are aware, is vertical, and a great deal of trouble and expense is necessary in the construction; in fact, more than almost any common farmer would feel justified in expending upon it. That now proposed to be introduced is built on the horizontal principle, and its respective parts are so adjusted as to "take on" the utmost influence of the wind, and when that object has been attained, the sail is constructed to "feather itself" by an automatic arrangement until it arrives into position for receiving the impulse, at which instant it again presents a flat surface to the wind. Another consideration has also been attended to, viz., that when the wind shifts the automatic action may also be changed without difficulty and in a few seconds of time. The model which has come under our notice is constructed with sails 2 feet 10 inches long by 1 foot 6 inches wide, on an arm about 4 feet long. This gives an extreme width of 8 feet from end to end, and there are four sails. The upright shaft is about 2 feet long and 1½ inches in thickness. The power evolved by such a comparatively tiny thing is astonishing. In a nice, brisk breeze, the revolution of the shaft could not be stopped by the hand however tightly grasped, and it may safely be calculated, we think, that an apparatus about half as large again would drive a small lathe or a straw or turnip cutter. Of course, for a general purpose farm mill the sails would require to be much larger, say 10 to 12 feet long and from 3 to 4 feet in width. Such a one should drive over a small threshing machine. Another feature of the horizontal mill is, that it need not be elevated more than 6 or 7 feet from the ground, whilst the vertical one must be raised as high again if not higher. In the former, too, the "wind shaft" is entirely done away with, the sails being on the upright shaft itself, and moreover the sails, in the event of a brisk wind, may be furled in a moment, or so adjusted for that matter, that the wind may strike against their edges instead of their flat surfaces. We will not, of course, vouch for the ultimate success of this new apparatus as a motive power on the farm. We will only say that the model promises well to all appearances, and should the requisite sized article only perform its duties as well, we have no doubt but the invention will prove as successful as useful, and meet with the demand which it will merit.

**WOOD SAWING BY HOT WIRES.**—A recent American invention is the sawing of wood by a white-hot wire. The process consists in substituting instead of the saw a platinum wire, heated white-hot by means of an electric current. The wire receives the same reciprocating motion which is commonly given to the saw, and thus burns its way through the wood. It is practicable, according to the inventor, not only to cut logs, planks or heavier forms of timber by this means, but also to give curvature to the cut and to produce fantastic forms of every description, since the saw, being without breadth, adapts itself to such purposes better even than the band or ribbon saws. Inasmuch as the wire burns its way instead of cutting, it leaves the surface of the wood charred; but this is an effect entirely superficial, and occasions no injury to the material.

### A Combination Implement.

Wonders apparently will never cease, especially so long as our American cousins are permitted to live and move and exercise their ingenuity. Some time ago we took occasion to call attention to a swing-plough manufactured on the other side and imported into Canada, its main feature being a movable swing mould board adjustable on a swivel and designed for side hill ploughing. The novelty of the present moment, however, is a combination implement prepared more especially for shelling corn—a most tedious and uncomfortable job, all will admit, when accomplished by hand—but the implement or apparatus in question combines with its main use those of a boot-jack, a hammer, a hook-claw, a tack-drawer, a pot-lifter and a wrench, being thus seven-fold in its purposes. The following cut gives a very fair representation of it. As will be observed, it is constructed solely of three simple pieces of metal fastened together by one rivet.



The portion A is provided with a hammer at one end, a fulcrum or rest near the middle, and a curved stem, having teeth on one side. The part B is S shaped, and its upper curve is provided with teeth facing those on portion A. Its lower extremity, C, is formed for drawing out tacks or lifting off stove lids. The third section, D, is terminated with a hook which adapts it to various purposes. The position of the pivot is clearly indicated. Fig. 1 shows how the implement is used for shelling corn, the ear being introduced vertically between the toothed portions and the hammer edge placed upon the table. The shelling is accomplished by a downward motion and a quick turn of the wrist. When laid upon the floor, as in fig. 2, on the hammer end being pressed down by the foot of the operator, the leg or fulcrum raises the handles, which, together, form an excellent boot-jack.

Not content with all the applications of his device, as above noted, the inventor also suggests that a recess might be arranged in some portion so as to adapt it to cracking nuts.

Patents on combined implements of this kind, and simple household contrivances of easy manufacture, without involving large capital, are the class of inventions most in demand, and meet with ready sale.

The loss occasioned by carelessness in the handling and use of implements is one of the heaviest items of expense the farm has to bear.

### Wheat-Threshing in California.

A subscriber sends us the following account, from a local paper, of the way in which threshing machines are run in California:

The thresher stood at one end of a narrow passage-way, between two stacks of wheat. The engine stood at the other end, some distance from the stacks, and was connected with the thresher by a band. Ten pitchers tossed the wheat upon aprons on either side of the cylinder, before which the feeder stood, who crammed it into the capacious throat of the thresher as fast as his busy arms could work. The threshed and cleaned grain poured in a ceaseless stream from the machine on the other side. It was received by the sack tender, who has always two sacks ready. As one is filled, a moveable slide turns the grain to the other, he passes the first to the sack sewer just behind him. The sewer lifts the sack to settle the grain—perfected by practice, with a few deft and rapid motions, he sews and ties the corners of the sack. The whole operation requires about thirty seconds. The sack packer carries away the sacks, placing them in order so that they may be easily counted.

The work requires the following crew: one engineer, two feeders, ten pitchers, a sack tender, a sack sewer, a sack packer, a water hauler and a "straw buck," who removes and keeps the machine clear of straw, with the aid of a horse. In all eighteen men, and the owner, who is superintendent. The owner pays the two feeders and engineer \$3.50 per day each; the water hauler \$2 per day, the ten pitchers \$2 per day each, the sack sewer and packer each \$3 per day—the "straw buck" works for fun. The owner boards all hands and pays four cents a bushel for the wheat turned out. The full capacity of the machine is 1,500 sacks a day, the average work about 1,000, holding over two bushels each.

While we were present, a stack of wheat was finished, and it became necessary to remove to another part of the field. We, with others, timed the operations. The last sack was filled and sewed simultaneously with the last revolution of the cylinder. The band was slipped and in fifty-nine seconds both machine and engine, with crew following, were on the way to the other stack—the time employed in reaching the stack four minutes. The machine and thresher were re-set—every man was at his post—the band was attached, and the straw was crashing through it in just two minutes. The time from the filling of the last sack at the first position was just seven minutes, and the distance between was a little less than four hundred yards.—Country Gentleman.

**PUTTING A STAPLE INTO STONE.**—One often desires to put a staple into a block of stone. The hole is made, the staple inserted, and lead melted to run in. But unless the hole is made with the bottom large than the top, the lead will in time work out, if there is much jar or side strain on the iron. Besides, the lead itself is liable to some compression, which admits of looseness, especially after being subjected to very hot fires. A much better article is sulphur. If this be melted and poured in around the staple instead of lead, it makes a much more durable job.

**SOLDERING BROKEN FILES.**—A writer in the *English Mechanic*, who had broken the only half-round file he had by him, says:—After trying to use the broken end (it was broken about the middle) I was about to give up in despair, when I thought I would try soldering; and, to my surprise, it not only stood while I completed the small job I was then doing, but is in use still, and will stand all the force such a file needs to have applied to it in ordinary use. I used ordinary solder, Baker's soldering fluid, and a Bunsen burner.

**LATE FALL WORK.**—The *Maine Farmer* makes these suggestions: Fall ploughing, not only of sward land, but of grain stubble and corn hill, may be advantageously performed now, and such pieces as are to be sown to wheat should be fully prepared this fall to receive the seed early another spring. The necessity of the complete fall preparation of land for wheat need not be fully set forth, as its advantages have been so well tested by many good farmers as to need no encouragement from us. In regard to land for other crops, it would be well if autumn preparation of the same were more fully practised. Especially would it be found useful on land generally wet in the spring, and upon which teams could not well move at a time when it should be worked to receive the crop. Manure may be also hauled out of the yards to better advantage now than in the spring, and if fences are to be changed or rebuilt, much of the work consequent upon it can be done better in fall, even if put off till quite late, than in the spring.