New Inventions.

Turning the Leaves of Music Books.

The patent granted this week to Isaac Gallup, of Mystic Bridge, Conn., for an apparatus to turn the leaves of music books, relates to an improvement in the leaf turning apparatus of Bridgham & Stewart, illustrated in No. 11, present Vol. One improvement consists in an arrangement of parts which obviates the necessity of employing a separate contrivance for returning the leaves to repeat a part of the piece of music. Another improvement obviates the employment of a separate device for locking the finger to prevent a leaf returning before the tune is finished, or for unlocking the finger to turn back for repeating. This is done by providing each of the keys with a notch and a spring catch to fit into each notch. The fingers for turning the leaves are thus placed conveniently under the control of the performer.

Carhart's Melodeons.

Jeremiah Carhart, of this city, whose name appears in the list of claims this week, has been long distinguished for the many improvements which he has made in the manufacture of melodeons, for which he has already secured a number of patents. The nature of the improvements embraced in his present patent, consists in a certain arrangement of reeds and valves relatively to the bellows, the principal object of which is the convenient application of hammers to the reeds in connection with an exhausting bellows. Also in a certain arrangement of the striking action for the same purpose, and in a certain application of a buff between each reed and its respective hammer.

New Hay Press.

The patent which has been granted this week to Pells Manny, of Waddams Grove, Ill., relates to the lever press. It presses the bales into a square form, and the levers act so as to press them when moving both forwards and backwards; that is, no time is lost when one bale is pressed, in returning the followers to the point where they commenced, to press in the box, a second bale from the point where they commenced to return. There is no time lost, therefore, in running back the followers, and hooping the bale, as this is done while the box is being filled for the succeeding bale. With a proper supply of hands this press can accomplish a great amount of work in a very short space of time. It is adapted for pressing cotton as well as hay.

Stud Fastener.

In the list of patent claims for this week will be found one granted to S. H. Hopkins, of Providence, R. I., for a very neat improvement in fastenings for shirt studs, buttons, &c., by constructing the shank of the stud or button in the form of a small tube, having a spring in it, and a bar connected with the stud in such a manner that the stud will be effectually secured in the eyelet, and cannot escape. Common studs are very liable to come out and be lost, and besides, their shanks are in general so short that they are troublesome to place in the eyelets of shirts. This improved fastening will prevent the stud from coming out of the eyelet, and thus from being lost.

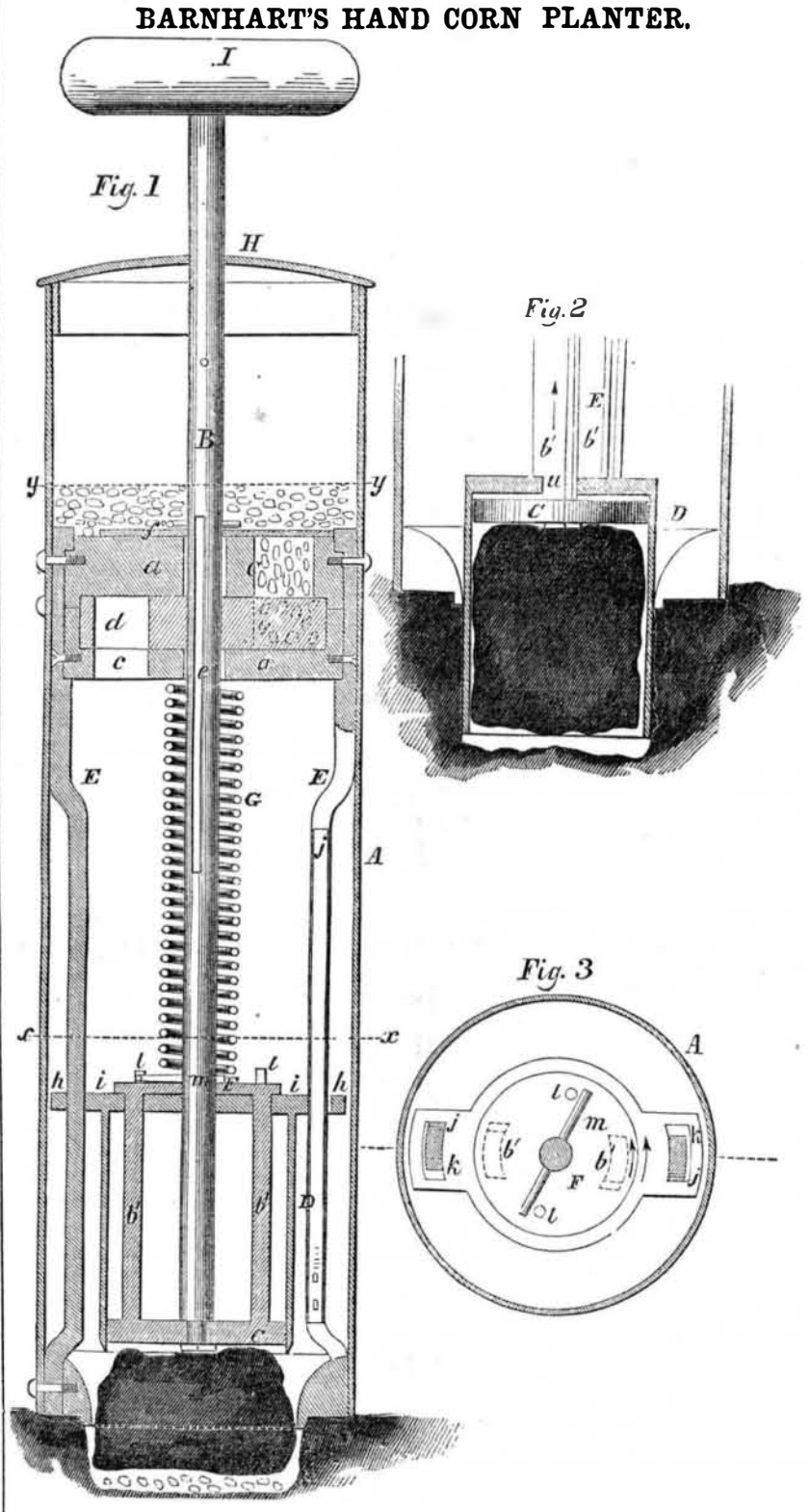
Gas Cooking Stoves.

Some years ago we endeavored to impress upon the community the importance and benefits that would result from the application of common gas to cooking purposes. On page 32, Vol. 8., Scientific American, we presented three figures of a stove for cooking with gas, and stated how convenient such apparatus would be, especially in summer. We are glad that our remarks have produced their fruits, as will be observed by the patent which has been granted this week to Andrew Mayer, of Philadelphia, for a new gas cooking stove. The claims express pretty clearly the nature of the improvements. The expense and perfect regulation of the heat of the gas under combustion, being obstacles heretofore to the use of gas for cooking, the improvements are designed to remove these. No one will question the beauty and convenience of using gas for cooking purposes. The time is not far off when charcoal and other coal furnaces will be numbered with the things that were.

Life Preserving Doors and Partitions.

The patent granted this week to Capt. J. P. Pheatt, of Toledo, Ohio, for converting doors into life preservers, relates to those of steamboats and sailing vessels, so that they can be used to save life in cases of danger. It consists simply in attaching air-tight compartments to the panels of doors and the partitions of cabins. An air tight bag is is attached to each panel and partition, and to it is attached a tube with a screw valve, by which it is inflated with air and closed, so as to make it very buoyant. How often have we heard of persons' lives being saved in shipwreck by floating on doors; this improvement will render these more available and useful in such cases of danger.

BARNHART'S HAND CORN PLANTER.



The annexed engravings represent an improvement in corn planters, for which a patent was granted to Andrew J. Barnhart, of Schoolcraft, Mich., on the 27th of last February.

Figure 1 is a vertical section of the planter; figure 2 is also a section, but broken off near the foot, and showing a different position of parts. Figure 3 is a horizontal section taken at *x x*, figure 1, showing the plane section. Similar letters refer to like parts.

This machine makes the necessary hole in the ground, and the corn is dropped and covered by it.

A represents a cylinder which may be constructed of sheet metal, and having permanently secured within it two disks or plates, *a a*, between which a loose disk, *b*, is placed. The disks, *a a*, have each a vertical aperture, *c*, made through them near their edges at opposite sides of their centers. The disk, *b*, also has a vertical aperture, *d*, made through it. B is a rod which passes through the centers of the disks, *a a* and *b*, said rod having a feather, *e*, upon it which fits in a groove near the center of the disk *b*, so that by turning the rod, B, the loose disk, *b*, will turn with it, but the rod may be moved up and down without moving the loose disk. On the rod B, above the top disk, *a*, there is a plate, *f*, through which the rod passes the feather, *e*, fitting in a groove in the plate, causing the plate to turn with the rod. To the lower end of the rod, B, there is attached a piston, C, which works within a cylinder, D, constructed of metal, and having eyes or apertures, *h h*, in projections, *i i*, on its upper part, through which eyes or apertures guide rods, E E, attached to the inner surface of the cylinder, A, pass. The guide rods have springs, *j j*, attached to them, one to each, and they have recesses, *k*, in them, one in each, as shown by dotted lines in figure 3, in which recesses the edges of the eyes or apertures, *h h*, catch when the cylinder, D, is raised; F is a circular plate attached to the piston, C, by rods, *b' b'*, the rods being equal in length to the cylinder, D, and passing through its top. On the upper surface of this plate two small vertical pins, *l l*, are attached, against which a small rod, *m*, which passes through the rod, B, acts; G is a spiral spring placed around the rod, B, and between the plate, F, and lower disk, *a*, as shown in figures 1 and 2; H is a cover or top of the cylinder, A, and I is the handle of the rod, B.

Operation—The corn to be planted is placed in the upper part of the cylinder, A, above the disk, *a*, and the lower end of the cylinder, A, being placed over the desired spot, the rod, B, is first drawn upward, and then drawn from right to left, in order to bring the left plate, *f*, over the aperture, *c*, in the disk, *a*. This plate cuts off all connection between the aperture, *c*, in the disk, *a*, and the space above it, which is in fact the hopper containing the corn, the aperture, *c*, in the upper disk being filled with corn before being cut off by the plate, *f*, and as this plate is turned, the loose disk, *b*, is also turned, and its aperture, *d*, brought under the aperture, *c*, in the disk, *a*. When the rod is turned from right to left, the small rod, *m*, which passes through the rod, B, acts against the pins, *l l*, on the plate, F, and the edges of the eyes or apertures, *h h*, in the projections, *i i*, in the upper end of the cylinder, are in consequence forced out from the recesses, *k*; the rod, B, is pressed downward, and the cylinder, D, is forced into the ground and then withdrawn by drawing up the rod, B, the cylinder, D, being filled with earth, and a hole formed in the ground. When the cylinder is withdrawn the edges of the eyes or apertures, *h h*, catch into the recesses, *k*, being forced in by the springs, *j j*, and hold the cylinder, D, properly in place. The rod, B, is now turned from left to right, and the aperture, *d*, in the loose disk, *b*, is brought over the aperture, *c*, of the lower disk, *a*, and the corn in the aperture, *d*, falls through the aperture, *c*, in the disk, *a*, and passes down around the cylinder, D, into the hole made in the earth by the cylinder, D, when it was pressed into the earth. The rod, B, is now forced down, the spring, G, assisting, and the piston, C, forces the earth out of the cylinder, D, into the hole in the earth, and covers the corn which was dropped therein. Figure 1 shows the position of the parts when the corn is covered, and figure 2 shows the parts when the cylinder, D, is forced down. The rods, *b' b'*, have recesses, *u u*, at their lower end, one is shown in figure 2, which, when the plate, F, is first turned from right to left, catch over the edges of the slots in the head of the cylinder, D, through which slots the rods, *b b*, pass, and allow the cylinder to be forced down by pressing down the rod, B, and when the rod is turned from left to right the recesses, *u u*, are freed from the edges of the slots and allow the piston to be forced down. By this invention the whole operation of planting is performed, viz, the necessary holes made to receive the corn, the corn dropped in them, and then covered with earth, the implement being grasped with one hand, and the rod, B, operated with the other, the lower end of the implement being placed over the spots where the corn is to be planted

More information may be obtained by letter addressed to the patentee.

New Rotary Engine.

An improvement in rotary engines is not a very common occurrence now, but on another page will be found the claims of the patent of one granted to J. J. Thomas, of Manayunk, Pa., for improvements in this class of motors. The object of one improvement has reference to the absence of all packing in the piston or engine, except the stuffing box of the shaft. The difficulty of keeping rotary engines properly packed has always been an objection to their use.

Worcester Mechanics Association.

The Worcester (Mass.) Mechanics' Association appears to be in a flourishing condition. After paying all the expenses of the past year, it has a balance in the treasury of $2,194.