

**UNDERHILL'S LEAF BEEHIVE.**

Sometime ago Mr. Langstroth—who is probably as conversant with the habits of the honey bee as any person in this country—invented a plan for filling a beehive with frames about an inch in depth which were placed about a quarter of an inch apart, with a view of having the bees make their combs in these frames, which might be separately removed when filled with honey, and thus the honey procured in the most beautiful condition possible for market. The plan was found to work admirably in practice with the exception of one important obstacle; in drawing a frame out from between two others, the comb was apt to be broken, not only in the frame which was being removed, but in the others adjoining, by which the honey was wasted in the hive, and the bees badly irritated. To obviate this difficulty, another person who has passed his life in rearing bees, has invented the plan illustrated in our engraving.

A, is the hive made in the usual manner, with the ordinary box, B, on the top, and proper holes, c c, for the entrance of the bees. The frames, d d d, made in the manner described, are connected by a pivot to the table in the manner represented in Fig. 2. A wooden pin, e, has inserted firmly into it the wire rod, f, which passes through staples in the frame, so that the frame may swing on the rod, as a door swings on its hinges. The hive, A, slides in the grooves, g g, of the table, so that it may be pushed back from around the frames as shown in the cut. When it is desired to examine the interior of the hive, the box, A, is pushed away from the frames, when these may be turned gently outward on their hinges, so as to separate them from each other, and if one of them is found to be filled with honey, it may be removed without any damage to the comb, and its place supplied with an empty frame. A strip of tin a quarter of an inch in width projects vertically downward along the middle of the upper part of the frame, to induce the bees to make their comb in a straight line, a plan which was discovered by accident, and which is found to be perfectly successful in practice. The capacity of the hive inside may be adjusted to the size of the swarm by means of the movable side, G. A series of holes are made and stopped by the movable pins, i i i, and the slide, G, is pushed in as far as desired opposite any of these holes, when pins are inserted to hold it in place; the proper amount of frames of course being removed to make room for the admission of the adjustable slide. When the hive is closed, the box, A, is held in place by means of a hook and staple.

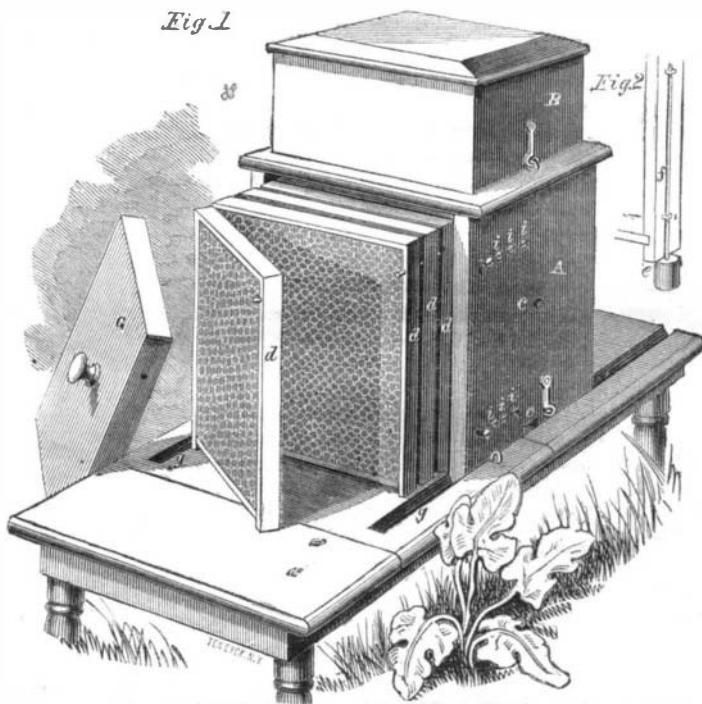
The patent for this invention was issued (through the Scientific American Patent Agency) on December 13, 1859, and persons desiring further information in relation to it, will please address the inventor, T. S. Underhill, at St. Johnsville, N. Y.

**LIGHTNING ACCIDENTS IN 1859.**

The following are statistics collected by E. Merriam, of Brooklyn, and published in the *Journal of Commerce*, this city:—

"In the year 1859, 76 deaths were recorded (on the land), and 41 persons were injured by lightning, of whom three were not expected to recover. No death by lightning is reported, in the field of our research within the year 1859, in a building or vessel furnished with metallic lightning conductors, reared for the purpose of protection. Four deaths only have been reported by light-

ning in buildings having lightning rods, within a long series of years covered by our record; and the cause of these four, no doubt, was explained by the lightning in the marks it left on the buildings, could we have seen them soon after the several occurrences. Persons within steamboats, within railroad cars, iron vessels and iron buildings, and telegraph operators while operating with the wires, continue to enjoy absolute protection from lightning; no death by lightning ever having been reported in a steamboat, railroad car, iron vessel or iron building, or to telegraph operators, since the introduction

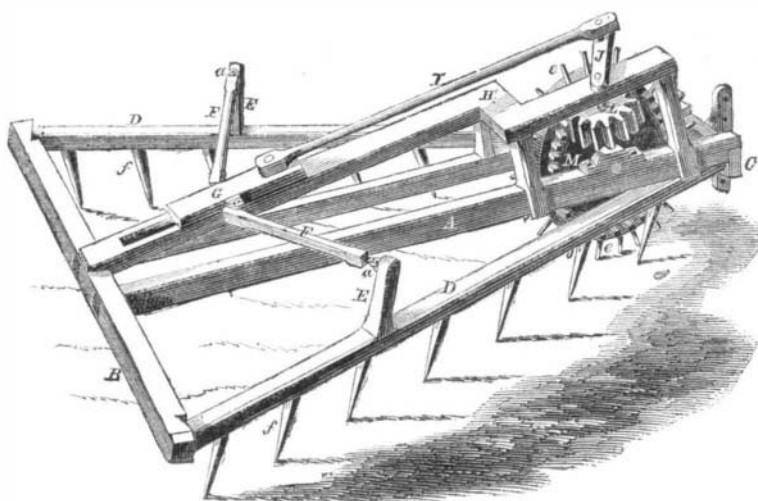


**UNDERHILL'S IMPROVED BEEHIVE.**

of these several useful inventions. The knowledge of these facts may have the effect to quiet the minds of very many persons who entertain fears during thunderstorms."

**NEW VIBRATING HARROW.**

The object of this invention is to give a vibratory motion to the teeth of a harrow, and thus pulverize the soil more perfectly than is done by the ordinary harrow.



**PATTERSON'S IMPROVED VIBRATING HARROW.**

The two side-pieces, D D, shown in the cut, are pivoted at their ends, so that they may receive a rocking motion, and thus cause the teeth to oscillate transversely to their course. To produce this rocking of the pieces, D D, the uprights, E E, are mortised firmly into them, and are connected at the top by the rods, F F, with the block, G, which has a sliding motion on the beam, H. This sliding motion is imparted to the block, G, by means of the rod, I, which is connected with the crank, I, on the axle of the pinion, L. This pinion meshes into the gear of the wheel, M, the pins, e, of which enter the earth and cause the wheel to receive a rotary motion as the

harrow is drawn along. The vibratory motion thus imparted to the teeth tends to free them from any clods or sticks which they might otherwise gather, also to work them more easily through the soil.

An application for a patent has been made on this invention through the Scientific American Patent Agency, but it has not yet been granted. Persons desiring further information may address the inventor, N. A. Patterson, Kingston, Tenn.

**"ARE YOU INSURED?"**

This is an inquiry which almost invariably greets the eye of the visitor to our large mercantile houses. It is placarded in large letters upon the walls of the store, as if to say, "We have no confidence in merchants who do not keep their stock well insured." During the year 1859 the losses which have resulted from fires occurring within the United States cannot be estimated at less than \$17,000,000. There were 42 fires during the year, each consuming property varying from \$100,000 to \$800,000. We have before us a letter from an old correspondent, announcing that he can no longer take the paper, having been wholly ruined by a recent fire which consumed his shop, stock and tools, on which there was no insurance. We are pained to hear of his calamity, and if there had existed no remedy against it, our regrets would have been still deeper; but there was a remedy within his reach, though he failed to adopt it, and is now suffering the dire consequences. Every mechanic, manufacturer, and householder ought to insure. It can now be effected upon most classes of property at very reasonable

rates, and there is no excuse for not doing it. There are responsible insurance companies in this and other cities in which it is safe to insure property. We could name at least fifty good companies in this city, which furnish security ample to cover all losses accruing against them, and we urge all our readers to think of this matter in time and provide for the possible contingency of loss of their property by fire. What if your neighbor has lived in the same house and done business in the same shop or factory for 20 years, and was never burned out? To-morrow morning his house, shop or factory may be in ashes, and the ruins will re-echo with the old cry of "No insurance." We repeat, there is a remedy, and we advise all to seek its advantage.

**BREWING AND THE YEAST PLANT.**

—The article on our first page contains a brief and plain account of the art and science of brewing. Some very curious and interesting facts will be found in it, especially in relation to the growth of the yeast plant. Yeast consists almost wholly of a certain microscopic vegetable, and its quantity is increased in fermentation by the growth of this vegetable.

**COUNSEL TO INVENTORS.**—Inventors, patentees, and those interested

in patents and desire counsel upon any questions relating to Re-issues, Infringements, Interferences or Extensions, are advised to seek the counsel of the Proprietors of the SCIENTIFIC AMERICAN, who, in connection with the Hon. Judge Mason, the late *Commissioner of Patents*, are prepared to thoroughly investigate such matters in the most careful manner. Our facilities for the transaction of all business connected with the Patent Office are unequalled by any other existing agency. We are at all times prepared to receive and examine sketches and descriptions of alleged new inventions, and will advise inventors as to the probable novelty of their devices.