

New Inventions.

Artificial Hair.

A mode of treating horns is talked of, by means of which the clippings and waste may be used in the manufacture of artificial hair, as a useful substitute for natural hair. It is stated that the horn has but to be rolled into bands and then cut into threads, and that hair thus prepared may be used advantageously instead of horse, bull or cow's hair, for a variety of purposes in the mechanic arts. Horn is analogous if not identical in character with hair, and the transformation may be practicable.

Flouring Extraordinary.

A French chemist of some note professes to have discovered a cheap and practicable method of disintegrating wheat and other grain by chemical instead of mechanical means, so as to produce fine and admirable flour without a mill of any kind. A commission has, it is stated in a late French paper, been appointed to examine the nature of the flour chemically, so as to ascertain its character, as compared with flour which has been produced by crushing and grinding.

Improved Cork Cutter.

The machine represented in the accompanying engravings is the invention of Edward Conroy, of South Boston, and is secured by letters patent, dated the 16th of June last. Its object is the rapid manufacture of corks or bungs, and the like conical forms, and it accomplishes the object with a perfection rarely excelled in any art.

The material is supplied in sticks or sheets of a thickness equivalent to the length of the bung to be produced. The action consists in rapidly rotating two cutters, which remove the material in an annular space around the same, leaving the manufactured article untouched in its center. It is easy to conceive how this operation can produce perfectly cylindrical shapes, and, in fact, a somewhat similar tool has long been employed for the manufacture of deck-plugs, and the like, but in this machine the cutters are expanded, so as to produce a perfect conical form. The peculiarity consists in the means for effecting this.

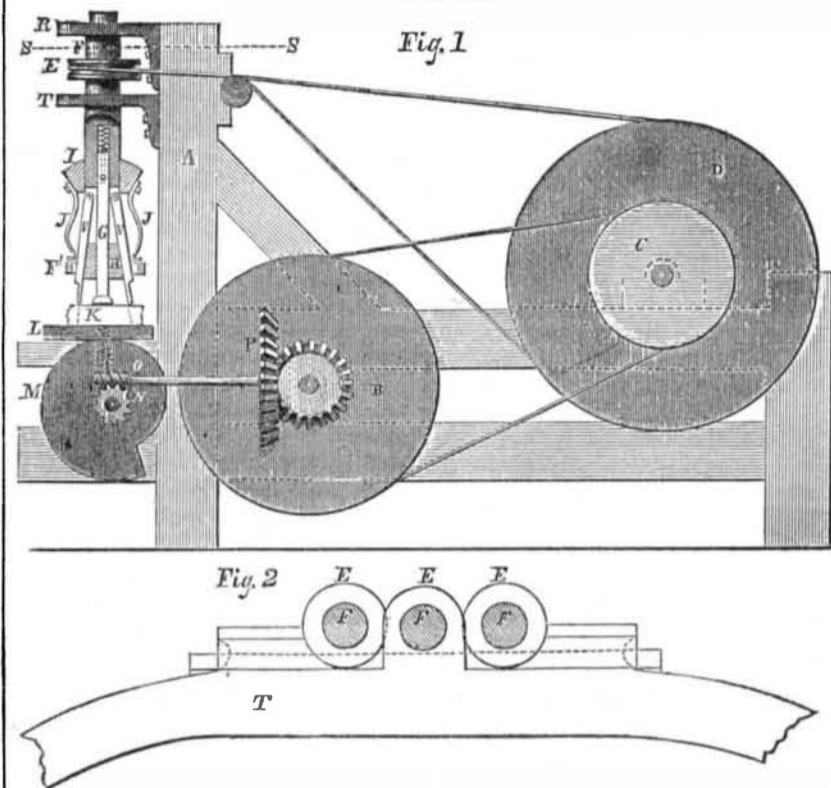
A is the frame of the machine, and B the driving pulley. A short belt leads from B to C, which latter is a smaller pulley on another shaft. On the same shaft with C is mounted the larger pulley, D. This latter pulley carries a light belt, which, running quickly, gives a very rapid motion to the small horizontal pulley, E, mounted on the vertical arbor, F. There may be two or more of the vertical arbors, F, and a corresponding number of light belts to convey the motion thereto from the pulley, D. Fig. 2 represents a plan view of this portion of the apparatus, showing three of these arbors, which is the number preferred in practice. Each of the arbors, F, are mounted in suitable bearings, capable of lubrication, and not allowing a vertical motion. As the three are similar each to the others, a description of one will suffice for the whole.

The arbor, F, is split or slotted from its lower extremity upwards, nearly to the lower bearing. A broad flange, F', is provided on the lower extremity, which is also slotted or divided nearly across its face in the plane with the corresponding opening in the body of the arbor, but leaving a portion of metal at the periphery of the flange, F', to strengthen and stiffen the whole. This construction is well represented in fig. 3, which is a view of M, and its attachments, as it would be seen looking upwards from below. G is a polished rod of smaller diameter, and fitted to play freely up and down in a hole bored in the axis of F. G is impelled downwards by a coiled spring, represented at its head, and has a smooth step or flange at its lower extremity, which presses on the bung or cork while being cut. H is a flat plate fixed transversely in G, edge uppermost, like a cutter key. Its ends are beveled precisely to the inclination which it is desired to give the bung, or article being cut. I is a ring fitting loosely around M, and J J are stout springs

fixed on I, which press against the outer surfaces of the two cutters, V V, and keep them in tight contact with the inclined ends of H.

The ring, I, is supported at two opposite points by light pins, which project from the side of G through slots in the sides of M, as

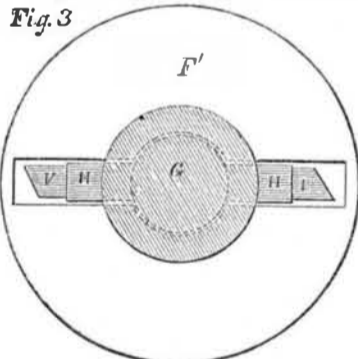
CONROY'S CORK CUTTER.



represented. These slots are of a length equal to, or greater than, the greatest length of any bung or cork to be cut. K is the material to be worked. L is a table, on which K is supported, and which is carried in guides, so as to be capable of a vertical motion. M is a cam wheel. N is a worm wheel on the same shaft with M, which is acted on by the endless screw, O, which endless screw, in turn, receives a slow rotary motion from the bevel gear, P, as represented. The effect is to alternately raise and lower the table, L, and consequently the cork, or material to be cut.

It will be observed that the arbor, F, rotates rapidly at a uniform level, and that the cutters, V, are mounted in the slot represented and carried loosely on slight pins in notches or horizontal slots at their upper extremities, so that their points are ready to cut any material presented to them by the elevation of the table. The inside rod, G, is held down only by its slight coiled spring. It con-

Fig. 3



sequently rests lightly on the top of the cork, and rises therewith, as the table, L, is elevated, carrying with it the transverse plate, H, and consequently wedging open or forcing asunder the cutters, V, to precisely the right extent to induce them to cut out a form perfectly conical. The springs, J, which hold the cutters, V, in tight contact with the inclined sides of the piece, H, are attached to the ring, I, and consequently rising with the rod, G, maintain their constant pressure at the right point, opposite the inclined sides of H. The loose hinges at the upper extremities of V are such as allow a slight motion outwards from the center of M, in obedience to the wedging force of H when it rises, and allow its return in obedience to the tension of the springs, J, whenever the table descends. At each descent of the table the rod G, and consequently the inclined piece, H, descends, and all the parts assume their original position.

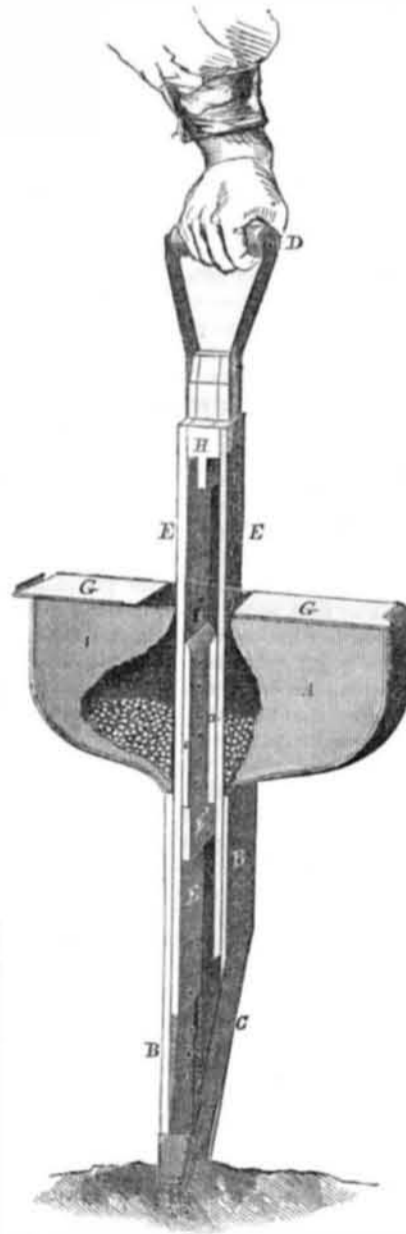
The operation is very rapid, and the waste of material is comparatively very slight. The cork, K, is held and guided by the hand, and is moved to one side sufficiently at each

descent of the table, L, to allow the cutters to act on clear material at each operation.

For further information the patentee may be addressed at 94 1-2 Utica street, Boston.

Decker's Corn and Pumpkin Seed Planter.

The inventor of the planter here illustrated has developed a machine admirably adapted to the planting of a uniform quantity of different kinds of seeds in the same hill, as when corn



and beans or pumpkins are to grow together as also to the depositing of any desired small quantity of fertilizer, such as gypsum or the like, with a single variety of seeds. Provision is also made against a possibility of the in-

terior conducting passage becoming clogged, an event which sometimes occurs, especially when the seeds have been soaked, and thus made somewhat adhesive.

A A' represents two boxes of suitable size and form, and B a rectangular spout attached thereto, represented with the whole of one side removed to show the interior. There are two partitions fixed in A A', as shown by a a. The lower end of B is wedge-shaped, and is closed by a metallic plate, C, which is secured to B, as represented, and stands obliquely across the passage, so that it stops the descent of the seeds. It is elastic, however, and allows itself to be thrust aside by any sufficient force.

D is the handle by which the machine is grasped. E F are slides attached thereto, the former being longest, and both running easily through corresponding passages existing in the box and spout as represented. In each of these slides is an opening, the size of which may be increased or diminished in the ordinary manner by adjustable pieces, F. The lower extremity of the longest slide, E, is shod with iron or with hard wood, to enable it to endure repeated plunges in stony or other hard earth, and a small piece, E', is secured on the inner face, which by contact with a serves as a stop to prevent the further rise of the handle, and enable it to lift the machine from the earth to be transferred to another spot. The dotted line at the lower portion of the figure shows the position of the slide, E, when depressed by the hand.

After filling the boxes, A A', with seeds, or with seeds and fertilizing materials, (operations easily performed by removing the slides G G,) it is simply necessary to place it on the earth and depress the handle D. Each descent forces into the soil the seeds previously retained by B, and allows the openings in E F to be again filled with seed. Each rise of the handle of course raises E F, and discharges the contents of the cavities into the central channel, to be forced into the earth at the next descent. At each plunge, the tongue H enters the central opening between the fixed partitions, a a, and ensures the freedom of this space from liability to clogging. This planter was patented April 21, 1857.

For further information address the inventor, John Decker, Sparta, N. J., who has county and State rights for sale.

Inventors have Sunshine as well as Shade.

We do not intend to lumber our columns with matters that may be regarded as of a private nature with those who honor us with their confidence in prosecuting their applications for Letters Patent, but we cannot forego the pleasure of presenting the annexed extracts from letters received by the same mail from two of our clients. The first is from an intelligent lawyer residing in Illinois. He says:—

"I was indeed surprised and exceedingly well pleased at the announcement of your success in the prosecution of my application for a patent. And as attorneys generally feel some interest in the success of their clients, perhaps it would not be uninteresting to you to know that I have made sale of an undivided half interest in my patent for \$5,000, and the purchaser furnishes all the capital and other requisites for a good business, and for disposing of rights; but this, of course, is a client's secret, that may, or may not, interest his attorneys; however that may be, he deems it a very lucky 'hit' for a *pettifogger in moderate circumstances*, owing in the main to the indefatigable zeal and unsurpassed ability of his attorneys."

The other correspondent remarks that:—
"The prompt manner in which you did our business deserves the highest commendation. The invention for which you procured a patent, has been tried, and it works 'tip top.' We have already been offered \$7,000 for one-third of it."

The Great Telegraph.

The *Niagara* was, on the 29th June, commencing to receive the first installment of the cable from a vessel alongside. The second vessel was to be laid alongside on the 31st. These two lighters will contain 750 miles, which will be put on board at the rate of about 100 miles per day.