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Artificial Stone.

Mr. Hodgson's Fire-Proof Stone, the claim of which may be seen in the list of patents granted this week, is affirmed to stand intense heat better than granite, or even than many varieties of fire brick. The granite or quartz used in its manufacture is readily made friable in the usual way, by heating and plunging in water, and neither the materials nor the process appear to be very expensive. It is worthy of attention.

Corn Husking Machine.

This engraving illustrates a machine already in practical and successful use, for not only ridding corn of its husks and nub, or stem, but for so crushing and cutting the husks, and more especially the short portions of stalk termed the nub, that they are prepared for fodder by the same operation.

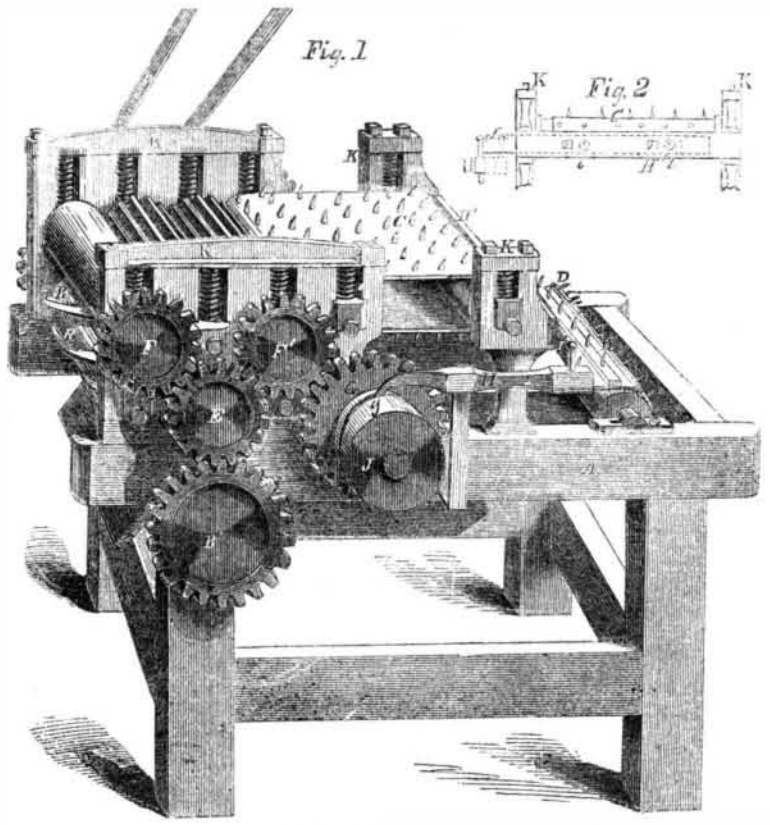
One important feature of the machine is but partly in sight in the main view, and is added above it at fig. 2. The principle features of the machine consist, 1st, in means for cutting off the nub or nubbin; 2d, in devices for carrying forward the ear thus treated, and for agitating and loosening the husks, and 3d, in powerful rollers slightly fluted. which seize all the loose parts and draw them through, grinding and cutting them fine by the same operation, while the ear of corn, being rejected by the rollers on account of its size and its smooth, hard character, is quietly dropped into a depository below.

The power may be of any kind, and may be applied at any point in the train of wheels. In the engraving it is applied to the shaft of the wheel, B, by means of a belt acting on a light and loose pulley on its further extremity. This gives motion to E, and this again to F and F', and also by gears on the further extremities to a roller between them. Both F' and the unletterred roller are fluted, though not as deeply as appears in the engraving, and both, in common with F, are kept down by stiff spiral springs as represented, upon the rollers, E and R below. These constitute the train of rollers which treat the fodder, the roller, R, being armed with knives to complete the operation, and discharge it finely cut.

There are two endless belts, the upper of which, C, is armed with spikes, the lower, D, is armed with both longitudinal slats and spikes. Both belts move in the same direction, and with different velocities, and serve to carry the corn forward, loosening the husks, and present it in such a manner to the fluted rollers that the latter are certain to deprive it of all the loose material before allowing it to fall through the narrow space remaining between them and the belt. The rollers which carry the upper bolts are also, as represented, pressed down by springs, so as to cause the belts to rub with some violence on the ear of corn in passing through, but these springs are much weaker than those on the boxes carrying F', etc.

The device for cutting off the butt or nubbin is a vibrating knife, I,—figs. 1 and 2. It is mounted immediately back of the cross bar, H This cross bar has two holes countersunk, so as almost to receive a full-sized ear

BRYSON'S CORN HUSKING MACHINE.

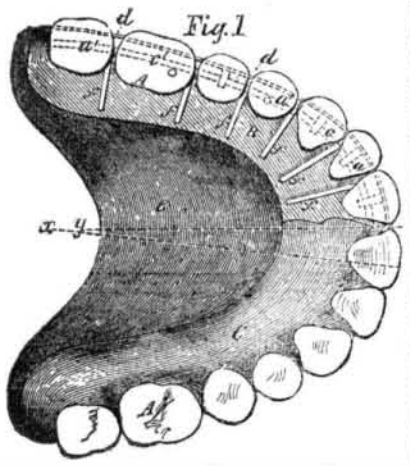


of corn, the hole being ample to admit the nub with the roots of the husks. The knife, I, is connected at its near extremity to the lever, H, and this lever is actuated by running in the oblique groove, g, in the surface of the pulley or cam, J, so as to receive a quick reciprocating motion.

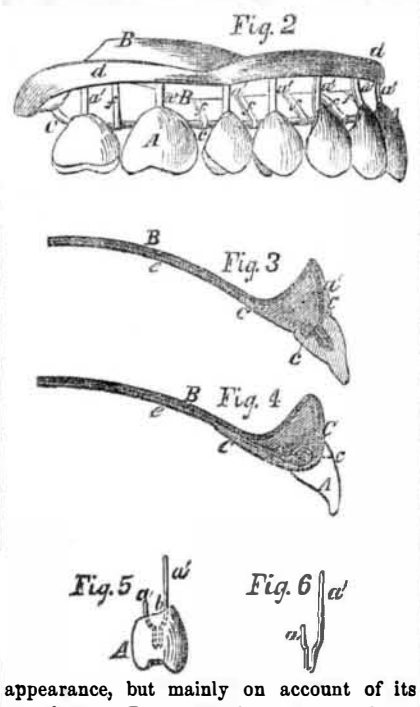
The attendant takes an ear of corn in each hand, presents them butt foremost to the countersunk holes and then drops them on the belt, to seize two more. The ears thus pass nearly endwise through the belts, and are thrust against the husking rollers, where they stand like rejected suitors, until by the continued agitation they are turned quarter around, and dropped through, a process which allows ample time for the rollers to seize and remove all the loose integuments.

Further information may be obtained by addressing the patentee, Mr. Robert Bryson, at Schenectady, N. Y., or Eliphalet Nott, D.D. President of Union College, same place.

Hayes' Method of Mounting Artificial Teeth.



Conspicuous among the many quite recent improvements in dentistry stands the construction of continuous or solid gums, for connecting the teeth with each other and with the plate, when a full set or any considerable portion of a set is supplied. Although the validity of the patent therefor has been, and still is, sharply contested, we believe the material manufactured by Dr. John Allen, of this city, composed of flinty substances which melt at a little less heat than the teeth, is the most popular for the purpose, as it is almost free from any disposition to contract, and thus to warp the plate when exposed to the intense heat required in the baking process. The old process still in vogue with many dentists, employs teeth having each a corresponding short portion of gum cast on it, ready for attaching to the plate by simple riveting, but, although it requires much greater mechanical skill in the operator, the really progressive men in the profession are now adopting the continuous gum, on account, partly, of its greater strength and superior



appearance, but mainly on account of its cleanliness. The patched up sets, made of teeth and gums in fragments simply riveted, are full of joints, forming cavities where food and saliva lodge and become offensive unless cleansed with extreme care, and it is obviously impossible, from its construction, ever fully to cleanse the narrow and crooked fissures thus made.

The improvement represented in the accompanying engravings, relate to methods of attaching the teeth to the plates by wires, etc., which are soldered before the gum composition is laid and finally covered by the same. The earthy composition of the gum is strong, but not sufficient of itself to hold the teeth with certainty in biting very hard substances, and even if it were, a connection of some kind is always absolutely necessary to confine the teeth in exactly the right positions until the composition hardens. We cannot be expected to teach the profession all the details for applying this invention, nor all the points of difference between this and other methods, but will endeavor to set forth its general features.

The heat necessary to consolidate properly the porcelain or earthen gums, forbids the employment of the usual metals in connection. Gold or silver, which melt at from 1800° to 2300° Fah., would be of no service as bands or ties, and even when used as solder for the quite unfusible platinum, melt and would, if used in any sensible quantities, flow away unless confined by the surrounding earths. In this invention platinum plates are used as a foundation, and platinum wires as the means of attaching the teeth thereto, after which the whole is nicely covered with the melted composition, taking care to fill all the interstices between the wires, and to apply the proper oxyds of gold, etc., for producing the proper pink tint natural to the real healthy gum, after which the whole is melted at a very high heat and turned out perfect.

Fig. 1 is a set of teeth represented partly supplied with the gum composition. Fig. 2 is a side view of the set before the composition was applied; fig. 3 is a vertical section through the same, the section passing through the center of a tooth; fig. 4 is a similar section between two teeth; fig. 5 is a tooth properly wired according to this invention before its introduction into the set, and fig. 6 is the wire (a flattened strip of platina) introduced in the tooth before it is baked. We may remark here, that these teeth, as well also as those above mentioned more generally employed, are manufactured on a large scale from a kind of porcelain, and sold to the profession, and are not, as supposed by many, made up on the spot where used, by the skill of the operating dentist alone.

Commencing with fig. 6, and proceeding backward, we may describe *a a* as the short bent wire introduced deeply in the base of each tooth in the course of manufacture. Fig. 5 is a tooth complete with the ends of the wire projecting. Figure 4 shows a tooth in place, B being a plate accurately swaged to correspond with the form of the gums and roof of the mouth, and *e* a smaller plate similarly swaged to cover the roof of the mouth alone. C is the earthenware material The little circle, *c*, shows a cross section of a stout wire which travels continuously around the whole set to steady them, and *f* is a brace stretching from *c* to D, and soldered to each Fig. 3 shows similar parts, but with the short end, *a* of the original tooth wire bent around and soldered to *c*, while the long end, *a'*, is extended up and soldered to B. Fig. 2 shows all the parts in place, and indicates, by the letter *d*, a kind of folded edge (equally visible on figs. 3 and 4) formed on the edge of B. Fig. 1 explains itself, and it is only necessaro to add that the additional plate, *e*, is soldered on, and the edge, *d*, is turned down, both for the same purpose, *i. e.*, to offer better facilities for joining the gum composition, earthenware, or porcelain, C, to the other parts by a perfectly smooth and finsh joint, so that the set, when complete, shall be as nearly like the natural mouth as possible. Teeth thus set are much preferable to the old method on every account, and we believe usually cost considerably more.

For further information regarding this improvement address the inventor, George E. Hayes, Buffalo, N. Y. Patented Jan. 27, 1857.