

Science and Art.

Glycerine.

Under a process lately patented in England, this substance is stated to be obtained from spent soap-leses, by forcing dry steam of a temperature of 400° Fab. through them. By this means the glycerine is evaporated, and condensed in a separate vessel, upon the common principle of distillation. Glycerine has also been used lately in England mixed with paper pulp whereby the paper so made is rendered soft and pliable, and especially useful for some kinds of wrapping paper.

The Coal Oil Controversy.

MESSRS. EDITORS:—Will you allow me to express to you my feeling of sincere gratification at the broad, manly and consistent course that you have pursued concerning the "coal oil" question. It is unfortunately too rare at the present day to find a journalist who will, without fear or reward, boldly defend the truth or the claims of an individual as you have done. And let me say that I do not doubt but that the minds of all your unprejudiced readers are with you. I think that unless an individual is blinded by interest he must see that Young's claim covers the ground justly, if any claim does. Was india-rubber the special discovery or invention of Good-year? Was it not known, and all its qualities as an impervious material perfectly understood long before his day, yet a patent was obtained for a mode of preparing it so that it could be used for all purposes of life. So, as you remark, Young appears to have been the first to have so prepared coal oil as to adapt it to, and design it for, the general purposes of illumination.

For one, I thank you for the true, disinterested and manly stand you have taken; although I am no more interested in the question than yourselves, yet I love to see courage, honesty, and generosity. R. W. New Berlin, N. Y., March, 1859.

[We cannot refrain from the publication of the above letter, as it is from one of our oldest and most respectable subscribers, and whose calling forbids even the supposition that he is in any way interested in Young's coal oil patent or any other of a like character. He takes a fair and candid view of our position in this discussion, and has also a just appreciation of Mr. Young's rights.

New Horse-Power.

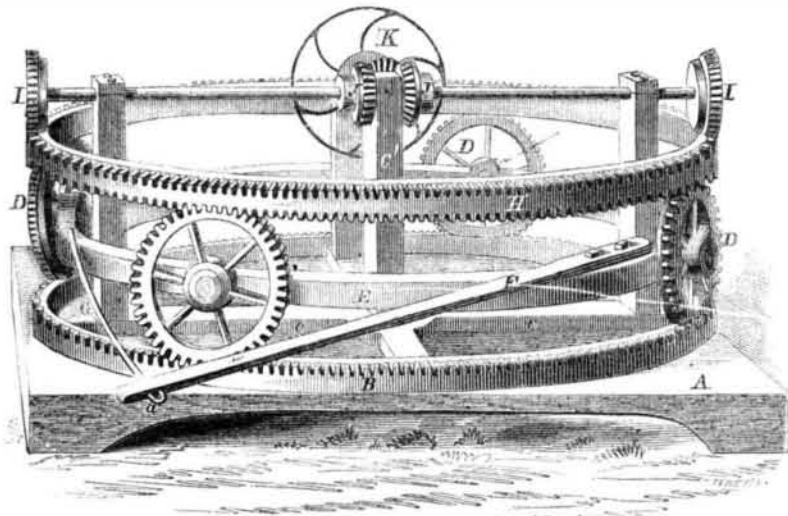
It is not always economical to have a steam-engine to do the work of a farm, but it can never be otherwise than the cheapest in the end for every farmer to obtain some mechanical device with which the strength of the horse can be at any time made available in turning machinery, such as cotton gins, lumber saws, threshing machines, &c. To provide this device, what are called "horse-powers" have been invented, and the subject of our illustration is one of the more recent of them, which we introduce to the notice of our readers, as this is the season when such things are purchased. It has been tested by the proprietors, by gearing it to a forty-five saw-gin, and two mules were sufficient to turn out from 1,500 to 2,000 pounds of lint per day. It is very portable, and any number of horses from one to eight can be applied to it. The inventors are T. H. Wilson and Brothers, of Athens, Ga.

In fixing it for use, it should be secured to some level floor or surface such as A, by pins or clamps. The base of the power that is thus placed is an annular ring, B, provided with cogs and attached to frame, C. On A rest four small cog-wheels, D, connected together by having their axles or shafts at right angles to each other upon a common ring, E; to this ring, E, is also secured a bar, F, the end of which is prevented from being pulled off by a tire, G, that passing through E is looped at a, on the other side, and so forms an attachment

for the horse, it will be obvious that, although only one is shown in the engraving, as many as there is room for on E can be used. On the wheels, D, rests a ring, H, as large as the lower one, B; H being coggled on its upper and under surface and from receiving motion through the intervention of D which have not

only a rotary movement but also a progressive one, H performs two revolutions while the horses are performing one, thus doubling the velocity of the machine at the outset. H gives motion to wheels, I, that run on shafts whose bearings are posts of the frame, C, and whose other ends carry bevel wheels, J, close

WILSON'S HORSE-POWER.

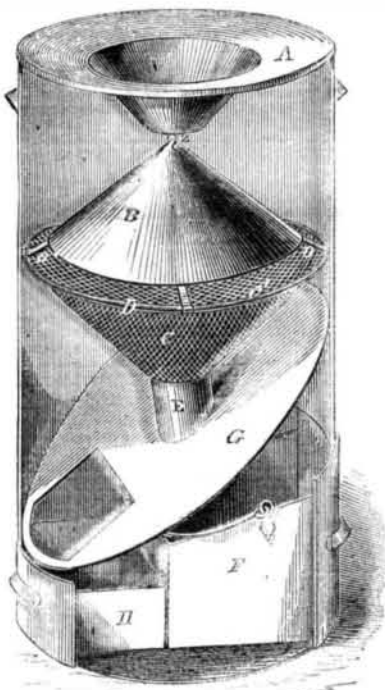


to the central upright, C'. The bevel wheels, S, give motion through another one to the belt wheel, K, by which the power can be conveyed to any machine desired. By varying the proportions of these wheels, any desired relation between the velocity of the horse and

it can be obtained, and this excellent horse-power adapted to fast or slow machinery.

It was patented June 1, 1858, and any further information can be obtained from the patentees as above, or John R. Cecil, No. 11 Park-place, New York.

Cummings' Ash-Sifter.



Plentiful as coals are, they are not too cheap to be wastefully burned. By this we do not mean that waste is at any time excusable, but it will pay for the labor and time expended, to sift coals and save the cinders to be re-burned, especially when the labor consists simply in throwing the contents of the ash-pit or stove into a sifter, and the ashes and cinders separate themselves, as in the invention we are about to describe.

Our illustration is a perspective view, with half the case removed to show the interior arrangements. The ashes are thrown into the top, A, which is inclined inward and brings them to the top of the cone, B. B does not reach quite to the case but is supported by bars, O, from a ring D, that fits in the case and rests on the top of the sieve, C. The ashes and cinders in sliding down the cone are perfectly distributed and fall by their own gravity through the space from O to O on to the sieve, C, that is also conical, inclining inwards. The fine dust and ash of course falls through the meshes of the sieve on an inclined plate or floor, G, by which it is conducted into a box, H. The cinders, on the other hand,

pass through a central tube, E, which opens into the lower part of the sieve, and are received in their proper box, F. Should the sieve at any time become clogged, the top, A, can be removed and the cone, B, taken out by its handle, z, and free access had to the sieve, to clean it. This device acts entirely by the gravity of the ashes and cinders, and is one of the best ash-sifters we have seen.

Any information concerning it will be given by the inventor and patentee, Allan Cumming, of 420 Fourth-avenue, New York. The patent is dated March 18, 1858.

Discovery of Noah's Ark.

It appears that in the eastern portion of that good old State whose staple productions are "pitch, tar, turpentine and lumber," some remarkable fossil discoveries have been recently made, among which, is what appeared to be a portion of a vessel's deck, some forty feet in length and bearing a close resemblance to lignite. The time has been when the discovery of such a remarkable fossiliferous specimen would have set all the geologists and archaeologists of the country on their heads; but at this enlightened period of the world's history, when the duty of not only managing, but explaining all things terrestrial, has devolved upon a class of men known as editors, it excites no surprise; for the simple reason that, whatever occurs on the earth, or whatever is discovered above or beneath, or in the waters around it, is certain of a speedy and satisfactory solution. See how easily the editor of the Wilmington Herald settles this fossil matter:—

"How this vestige of human labor and art came there, is a question easy of solution. We understand that some erudite geologists say that somewhere in Baden county is found the oldest known geological formation in the world. If this be so, if this is the oldest part of the world, it must, of course, have been the first ready for the residence of man, and the first occupied by him; ergo, the Garden of Eden was somewhere in the Cape Fear region, which was then a better fruit growing country than it is now. We think Adam must have settled somewhere around this way, for all the people claim to be descended from him. If Adam and Eve started life in eastern North Carolina, it is not probable that Noah wandered far from the old homestead. This supposition gains strength when we consider

how Noah pitched his ark. Where else could he have got so much or so good pitch or other naval stores to pitch her within and without? Following up the train of reasoning, why should not these fossil remains have come down from Noah—be, in fact, portions of his ark? To be sure, the absence of Mount Ararat is a little in our way, but when we get to be philosophically regardless of all facts that stand in the way of our hypothesis, we won't mind little trifles like this."

Artificial Fuel.

Little or no attention has been devoted to this subject in our country, and yet it is one which should not be treated with indifference. In England there are several large factories where it is made for ocean steamers especially; and if found to be a profitable business there, we do not see why it may not be made so here. It is generally composed of coal-tar mixed with saw-dust and coal-dust, all heated together and then pressed into square blocks. Fine coal and sawdust, that would otherwise be considered waste, are thus converted into a useful fuel, capable of being packed neatly and carried to any distance.

Horse Honors.

Professor Morse has received intelligence that the Queen of Spain has created him Knight Commander of the Order of Isabella the Catholic. The Swedish Royal Academy of Science at Stockholm has also elected him a foreign member of the academy. Our distinguished countryman enjoys these honors with an additional grace when it is remembered that he has a handsome fortune to couple with them. As the chemist would say, there is a remarkable affinity between these two elements.



INVENTORS, MILLWRIGHTS, FARMERS AND MANUFACTURERS.

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