and it would be an advantage to have two cellars, one much colder than the other. If the liquor, upon pitching fine, were racked in a clean cask and put into a cold cellar, there would be much less risk of its fermenting again. I should recommend no other liquor to be added to it; but, in order to prevent ullage, that it should be racked into a smaller cask;—the less air admitted the better, and if the cask be sound and iron-bound it may be better to close it at this time.

"The application of cold will check fermentation immediately. I have seen liquor in a state of froth boiling out of a large jar, suddenly reduced to a state of quiescence by pumping on the side of the jar. This fact induced me to cause an experiment to be tried at Gayton during a very bad senson for the cider making the weather being very warm; a cask of juice was rolled into a brook of cold water, and sunk by stones attached to it; it remained in that position till nearly Christmas, and was so much better than any other made that year that Mr. Newman obtained double the price for that hogshead he did for any of the rest. Perfect stillness is very desirable, as motion is found to excite the acetous fermentation. A bottle of wine, attached to a suil of a windmill in motion was, after three days, converted into vinegar, although closely corked. When a second fermentation do is take place in cider, there is very little hope of its being ri.h and good.

"In such case, I should recommend its being drawn out into tubs, exposed to the cold as much as possible; and after being thus flattened, put back into the cask, at the same time well stirring up the whites of fifteen or twenty eggs, previously mixed up with a portion of the liquor; if this succeeds in fining it, which probably it will, it may then be racked into a clean cask, and closed as much as possible from the air. It is probable that a great deal of mischief is caused by some principle of fermentation remaining in the case; this might be prevented by well scalding the casks before they are filled: or, what I think would be better, by washing out the casks with clear lime water. One large piece of lime put into a hogshead of water, and allowed to settle would answer the purpose. Some brimstone matches burned in the casks would have a tendency to prevent fermentation.

"I shall not say much upon the mode of crushing the apples and pressing out the juice, having had so little practical experience; but I have always thought that if the fruit were crushed between wooden rollers, and allowed to drain before being put under the stone, the process would be much expedited; as the apples sometimes roll before the stone a long time before they are broken.

"In Ireland they use a press formed by a lever, which might be made at less expense than with a screw, and be more quickly worked: it is impossible the pressure can be too light at first, and it should be increased gradually as the liquor runs from the muss. Two sets of bags, allowing one to drain some time without pressure, would be an undoubted advantage.

"E. P."

I need not, I think, add one word to the advice here given. I earnestly hope it will be followed, and sure I am that we shall all feel and acknowledge the value of it, in the improvement in quality, and increase in value, of our county beverage.

I have been asked by hundreds whether it is really the fact that during each visitation of that awful scourge, the Cholera, which has again appeared among us, not a single case has ever

yet occured in Herefordshire: my reply has been that it is so: I shall be glad to be corrected if I am wrong: if I am right, the knowledge of this cannot be too widely circulated, nor can our thankfulness be too great to the Almighty Being who has so singularly and signally blessed and protected us.

Description of some New Kinds of Galvanic Batteries. Invented by Mr. Kukla, of Vienna.*

The combination used in one of these, is antimony, or some of its alloys, for a negative plate, with nitric acid of specific gravity 1-4, in contact with it, and unamalgamated zinc, for a positive plate, with a saturated solution of common salt in contact with A small quantity of finely powdered per-oxide of mangait. nese is put into the nitric acid, which is said to increase the constancy of the battery. The alloys of antimony which Mr. Kukla has experimented with successfully are the following:-Phosphorus and antimony, chromium and antimony, arsenic and antimony, boron and antimony. These are in the order of their negative character, phosphorus and antimony being the most negative. Antimony itself is less negative than any of these alloys. The alloys are made in the proportions of the atomic weights of the substances. All these arrangements are said by Mr. Kukla to be more powerful than when platinum or carbon is substituted for antimony or its alloys. In this battery a gutta percha bell cover is used over the antimony, and resting on a flat ring floating on the top of the zine solution,-this effectually prevents any smell, and keeps the per-oxide of nitro-gen in contact with the nitric acid solution. When a battery of twenty-four cells was used, Mr. Kukla found that in the third and twenty-first cells pure ammonia in solution was the ultimate result of the action of the battery; but only water in all the others. This experiment was tried repeatedly, and always with the same result. A battery was put into action for twenty-four hours; at the end of that time the nitric acid had lost thirteen twentieths of an ounce of oxygen, and one quarter of an ounce of zinc was consumed.

Now as one-quarter of an ounce of zinc requires only 0.06 of an ounce of oxygen to form oxide of zinc, Mr. Kukla draws the conclusion, that the rest of the oxygen is converted directly into electricity; and this view, he says, is confirmed by the large amount of electricity given out by the battery in proportion to the zine consumed in a given time. In the above battery each zinc plate had a surface of forty square inches. The addition of per-oxide of manganese does not increase the effect of the battery, but it makes it more lasting-the per-oxide of nitrogen, formal in the bell cover, taking one atom of oxygen from the per-oxide of manganese ;- this is evident from only the oxide of manganeso being found in the battery after a time: in the salt solution no other alteration takes place than what is caused by the oxide of zinc remaining in a partly dissolved state in the solution. For this battery Mr. Kukla much prefers porous cells, or diaphragms of biscuit ware, as less liable to break, and being more homogeneous in their material than any other kind. This battery is very cheap, antimony being only 5d per lb, wholesale, and the zine not requiring amalgamation .- The second arrangement tried by Mr. Kukla was antimony amalgamated zinc with only one exciting solution, viz. concentrated sulphuric acid: -this battery has great heating power, and the former great magnetizing power-it, however, rapidly decreases in power, and is not so practically useful as the double fluid battery, which will exert about the same power for fourteen days, when the