

fixed in a wooden frame, so as to work in the same manner as at the forge. This apparatus being placed at the edge of the well; one end of a leathern tube (the hose of a fire engine,) was closely adapted to the nose of the bellows, and the other end was thrown into the well, reaching within one foot of the bottom. At this time the well was so infected, that a candle would not burn at a short distance from the top; but after blowing with my bellows, only half an hour, the candle burned bright at the bottom; then, without further difficulty, I proceeded in the work, and finished my well.

Wells are often made in a very slight manner, owing to the difficulty of working in them, and there have been several fatal instances of the danger attending the workmen; but by the above method, there is neither difficulty nor danger in completing the work, with the utmost solidity.

It is obvious, that in cleansing vaults, and working in any other subterraneous place, subject to damps, as they are called, the same method must be attended with the same beneficial effect.

N^o. XXXVII.

A method of draining Ponds in level Grounds, by JESSE HIGGINS, of Delaware.

Read July
15, 1791.

AT a certain distance below the surface of the earth, there is a stratum of loose sand, which freely admits the passage of water. This stratum is at various depths, in different elevations; but it will be generally

nerally found, that lands most subject to stagnant ponds, have but a shallow stratum of clay, over the sand.

All that is necessary, therefore, is to dig a pit in the bottom of the pond, till you arrive at this stratum of sand, when the water will be immediately absorbed, and the pond emptied. Should there be too much water to permit a hole to be dug within the pond, it may be made at the edge of it, the communication afterwards made by a trench. It would be prudent not to make the sides of the pit so steep, as to prevent cattle from getting out, should they happen to go in.

The writer does not pretend to be the original author of this invention; the idea was suggested to him, by seeing it practised by a farmer, who enjoyed the benefit, though he did not appear to know the cause

N^o. XXXVII.

Observations on the severity of the winter 1779, 1780, by the Rev. MATHEW WILSON of Lewis, dated 22d June 1780.

Read June
1781.

TH E extreme cold made great devastations on the animal and vegetable kingdoms. Such observations as were in my power to make, are,

1. The moles generally perished, many were found dead above ground.

2. The bees are almost all destroyed, but few hives have escaped.

3. The frogs suffered greatly, it is supposed that at least two thirds of the species were cut off.

4. Our shell fish of all kinds, that run in shoal waters, were destroyed; after the thaw the air was infected by their putrifaction.

5. Bugs