it impoſſible to dive while he keeps his head erect and his eyes fixed on the heavens @@(a).

The eaſieſt poſture in ſwimming is lying on the back. When you wiſh to ſwim in this poſture, lay yourſelf ſoftly on your back, and raiſe your breaſt to the ſurface of the water, keeping your body extended in the ſame line. Put your hands eaſily over the upper part of your thighs, and throw out your legs and draw them in alternately, keeping them within two feet of the ſurface. In this way you may advance in any direction you pleaſe. You may perhaps not like having so much of your head under water ; there is, however, no way of ſwimming ſo eaſy, ſo ſafe, and ſo little fatiguing. If you wiſh to ſwim with great rapidity, you may uſe your arms as well as your feet ; and you will find this the eaſieſt way of breaking the force of the waves.

In ſwimming on the back, one may advance forward as well as backward. For this purpoſe the body muſt be kept ſtraight and extended ; the breaſt inflated, ſo that the hol­low of the back may aſſume a ſemicircular form. The hands muſt recline over the upper parts of the thighs. It is allo necessary to raiſe the legs one after another, and draw them in ſtrongly towards the hams, and then leave them ſuſpended in the water. This way of ſwimming is not only pleaſant, but may ſerve to rest you when fatigued.

When you are tired with ſwimming on your back and belly, you may ſwim on one side. When you wiſh to do this, sink a little your left side and raiſe your right ; you will immediately find yourſelf on your left side. Move then your left hand without either railing or sinking it ; you have only to ſtretch it and draw it back, as in a ſtraight line, on the ſurface of the water. Independent of the plea­sure which this kind of motion will give you, you will have the ſatisfaction of ſeeing both ſides of the river.

It is poſſible to ſwim on the belly without the aſſiſtance of the hands. For this purpoſe you muſt keep your breaſt erect, your neck ſtraight, and fix your hands behind your head, or upon your back, while you move forward by em­ploying your feet, This way is not without its advan­tages. It is an excellent reſource when the arms are ſeized with a cramp, or with any indiſposition which makes it painful to exert them. This in ſome caſes may be prefer­able to ſwimming on the back ; for while in that attitude, one cannot ſee before them without turning every inſtant. If one of your legs be ſeized with a cramp, take hold of it with the hand oppoſite to it, and uſe the other hand and leg to advance or ſupport yourſelf.

A very ancient and graceful mode of ſwimming, is that of ſwimming with the hands joined. When you wiſh to put this in practice, join your hands, keeping the thumbs and fingers towards heaven, ſo that they may appear above the water ; then draw them back and puſh them forwards alternately from your breaſt. This method of ſwimming may be uſeful in ſeveral circumſtances, but above all if you are entangled with grass or weeds. Your hands will then open a paſſage for you.

As a perſon may ſometimes have occaſion to carry ſomething in his hand in ſwimming, which he is anxious to preſerve from the water, he may ſwim eaſily with one hand and hold a parcel in the other, as Cæsar ſwam with his Commentaries at Alexandria ; or one may ſwim with both hands elevated. To perform this well, the ſwimmer muſt raiſe his breaſt, and keep it as much inflated as he can, at the ſame time that he ſupports the arms above the water. It muſt not be concealed, that this method of ſwimming is attended with ſome danger to one who is not dexterous at the art ; for if one ſhould imprudently draw in his breaſt, when his arms are raised, he would immediately sink to the bottom.

Every one knows that when a man plunges into the water, and when he has reached the bottom, he has nothing to do but to give a ſmall ſtroke with his foot againſt the ground, in order to rise ; but an experienced ſwimmer, if he miſſes the ground, has recourſe to another expedient, which is very pretty, and which has not been conſidered with sufficient attention. We ſuppoſe him at a conſiderable depth, when he perceives that he cannot reach the bottom. In ſuch a caſe, he firſts puts his hands before his face, at the height of his forehead, with the palms turned outwardly; then holding the fore part of his arm vertically, he makes them move backwards and forwards from right to left ; that is to ſay, theſe two parts of his arms, having the el­bow as a kind of pivot, deſcribe very quickly, both the hands being open, and the fingers joined, two ſmall por­tions of a circle before the forehead, as if he would make the water retire, which he in fact does ; and from theſe ſtrokes given to the water, there reſults an oblique force, one part of which carries the ſwimmer upwards.

There are many artificial methods of ſupporting one’s ſelf in water, but we have not room to deſcribe them.— Thoſe who wiſh to ſee a full account of them may conſult the *Encyclopédie Methodique.*

*Swimming of Fish.* A great proportion of the inhabi­tants of the waters have an air-bladder, by whieh they poise themſelves. Their movements chiefly depend upon their tail. See Comparative Anatomy, n⁰ 147, 155 ; and Ichthyology, n⁰ 3.

SWINDLER, a word which has been lately adopted into the Engliſh language, derived from the German word sch*windel, "* to cheat.” Swindling has now become ſo com­mon in ſeveral of the great towns of this country, that it is unfortunately too well known to require any deſcription.

SWINE, in zoology. See Sus.

*SWINE-Stone.* See *Swine-STONE.*

SWINGING, a kind of exerciſe ſtrongly recommended to perſons in conſumption by ſome physicians, and diſapproved of by others. See Medicine, p. 224.

SWING-tree of a waggon, is the bar faſtened acroſs the fore-guide, to which the traces of the horſes are faſt­ened.

*S*wing-W*heel,* in a royal pendulum, that wheel which drives the pendulum. In a watch or balance clock it is called the crown-wheel,

SWINGLE, in the fire-works in England, the wooden ſpoke which is fixed to the barrel that draws the wire, and

@@@(a) An intereſting queſtion occurs here, which deferves to be conſidered. Since the body, when ſpread upon the ſurface, can be ſupported with ſo little exertion, and frequently without any at all, as in ſwimming on the back, how comes it to paſs that a perſon when drowned sinks and frequently riſes again ſome time afterwards ? The reaſon is this : In the act of drowning, the lungs are filled with water, and conſequently the body, being ſpecifically heavier, sinks. It is well known that the human body contains a great quantity of air : this air is at firſt compressed by the water ; and while this is the caſe the body remains at the bottom : but as ſoon as the air by its elaſticity endeavours to diſengage itſelf from the compreſſion, the body is ſwelled and expanded, becomes ſpecifically lighter than the water, and conſequently riſes to the top.