

human agency, he calls in the aid of evil spirits, to account for the fact. He hastens home full of terror, to tell the story, perhaps, with some embellishments, to his neighbours, who are all as ignorant and superstitious as himself, and agree with him in ascribing the appearance to supernatural agency.

Now, it is well known that this appearance arises wholly from natural causes. A gas is formed in damp marshy grounds, from the putrefaction and decomposition of vegetables, which is so inflammable, as frequently to take fire of itself, and so light, as to be moved by the slightest agitation of the air. At this simple explanation, vanish all the phantoms conjured up by superstitious ignorance. The phosphorescent light emitted by decayed wood, or by animal substances in a state of putrefaction, is of the same nature. So also are the balls of fire which are sometimes seen dancing about the masts of ships.

Before the nature of comets, and the laws by which they are governed, were understood, their appearance caused universal alarm. They were regarded as signs of great calamity to nations, and their progress was watched with the most anxious apprehension. Eclipses of the sun and moon occasioned equal dread. It is related that one of the kings of Persia lost a battle in consequence of an eclipse of the sun. His troops imagining that it foreboded some fatal evil to themselves, were dispirited and easily vanquished.

In heathen countries, where the light of science and of religion has never shone, similar ideas prevail at the present day; and even in those favored lands, where the light of science now shines, there has been a period of darkness and superstition. In the sixteenth and seventeenth centuries, the laws of nature were enveloped in obscurity, and the few who studied them were regarded with suspicion, and accused of resorting to magical arts. Before Dr. Franklin's discoveries had acquainted the world with electricity, thunder and lightning were regarded as the result of the agency of evil spirits.

So of optical delusions. In the year 1647, a new ship of about one hundred and fifty tons, containing a valuable cargo, and several distinguished persons as passengers, put to sea from New Haven, (Conn.) in the month of January, bound to England. The vessels that came over the ensuing spring, brought no tidings of her arrival in England. The pious people were earnest and instant in their prayers, that intelligence might be received of the missing vessel. In the course of the following June, a great thunderstorm arose out of the north-west, after which, the sky being serene, about an hour before sunset, a ship of like dimensions with the missing vessel, with her sails and colours abroad, appeared in the air, coming up from the harbor's mouth, which lies southward from the town, seemingly with her sails filled, under a fresh gale, though sailing against the wind, and continuing within observation for the space of half an hour. The phantom ship was borne along, until, to the excited imaginations of the spectators, she seemed to have approached so near that they could throw a stone into her. Her maintop-mast first disappeared, then her mizen top-mast; then her masts were entirely carried away, and finally her hull fell off and vanished from sight, leaving a dull and smoke-coloured cloud, which soon dissolved, and the whole atmosphere became clear. All affirmed that the airy vision was a precise copy and image of the missing vessel, and that it was sent to describe and announce her fate. They considered it the spectre of the lost ship, and the Rev. Mr. Davenport, a minister of New Haven, declared in public, that God had condescended, for the quieting their afflicted spirits, to give them this extraordinary account of his sovereign disposal of those for whom so many fervent prayers were made continually.

The results of modern science have enabled us to explain this mysterious appearance. It is probable, says a writer on the subject, that some Dutch vessel, proceeding quietly and unconsciously on her way from Amsterdam to the New Netherlands, happened at the time to be passing through the Sound. At the moment the apparition was seen in the sky, she was so near that her reflected image was painted or delineated to the eyes of the observers, on the clouds, by certain laws of optics, now well known, before her actual outlines could be discerned by them on the horizon. As the sun's rays were gradually withdrawn, the ship slowly disappeared; and the approach of night, while it dispelled the vapours from the atmosphere, effectually concealed the vessel, as she continued her course along the Sound.

Perhaps this explanation may be made clearer by observing,

that the clouds served for a mirror, which presents the image of any object placed before it.

There are persons in some places in the Isle of France, whose calling and profession is to ascertain and predict the approach of vessels, by their reflection in the atmosphere, and on the clouds, long before they are visible to the eye, or through the glass.

In a voyage performed in 1822, Captain Scoresby was able to recognise his father's ship when below the horizon, from the inverted image of it which appeared in the air. The ships were then nearly thirty miles distant, being about seventeen miles beyond the horizon, and many miles beyond the limits of direct vision.

Our young readers may witness the phenomenon of inverted sight, by trying a very simple experiment. If they view any object through alcohol lying on water, or through water laid above syrup, the object will appear inverted. For a similar reason, a ship, or other object, viewed through two spaces of air of different densities, will appear inverted. Those who are acquainted with the science of optics will understand the reason of these appearances; to others, a more particular explanation would be necessary than our limits will allow.

MORAL COURAGE.

Have the courage to discharge a debt while you have the money in your pocket.

Have the courage to do without that which you do not need, however much you may admire it.

Have the courage to speak your mind when it is necessary that you should do so, and to hold your tongue when it is better that you should be silent.

Have the courage to speak to a poor friend in a threadbare coat, even in the street, and when a rich one is nigh. The effort is less than many take it to be, and the act is worthy a king.

Have the courage to set down every penny you spend, and add it up weekly.

Have the courage to admit that you have been in the wrong, and you will remove the fact from the minds of others, putting a desirable impression in the place of an unfavourable one.

Have the courage to adhere to a first resolution when you cannot change for a better, and to abandon it at the eleventh hour upon conviction.

Have the courage to make a will, and, what is more, a just one.

Have the courage to face a difficulty, lest it kick you harder than you bargain for. Difficulties, like thieves, very often disappear at a glance.

Have the courage to shut your eyes on the prospects of large profits, and to be content with small ones.

Have the courage to tell a man why you will not lend him your money; he will respect you more than if you tell him you can't.

Have the courage to cut the most agreeable acquaintance you possess, when he convinces you that he lacks principle. "A friend should bear with a friend's infirmities"—not his vices.

Have the courage to wear your old garments till you can pay for new ones.

Have the courage to thrust your legs down between the sheets in cold weather, and to shave every day before breakfast.

Have the courage to wear thick boots in winter, and to insist upon your wife and daughters doing the same.

Have the courage to review your own conduct; to condemn it where you detect faults; to amend it to the best of your ability; to make good resolves for your future guidance, and to keep them.

Have the courage to prefer propriety to fashion—one is but the abuse of the other.

Have the courage to discontinue a newspaper that you believe has an injurious influence on the morals of your family.

Have the courage to confess ignorance whenever, or with regard to whatever subject, you really are uninformed.

TO MAKE WATER COLD FOR SUMMER.—The following is a simple mode of rendering water almost as cold as ice:—Let the jar, pitcher, or vessel used for water, be surrounded with one or more folds of coarse cotton, to be constantly wet. The evaporation of the water will carry off the heat from the inside, and reduce it to a freezing point. In India, and other tropical regions where ice cannot be procured, this is common.—*Globe.*