

The Position of Women in Africa.

Dr. W. Stoss, in the *Frauen Zeitung*, Berlin, gives an interesting account of the position of women in Africa. He says:

Among natural people women have to suffer on account of their natural want of physical strength, and this is especially the case among the African tribes, where polygamy adds to the degradation of the weaker sex. But their lot is not without mitigation. It is influenced by the same factor that raises woman to her high position among civilized people—the love of her children. The laws of the barbarous African tribes give much influence to the mothers in regulating heritage and succession, which gives them a more important position in the family and in the tribe. The mothers and sisters of an African chief are often his most influential advisers, even the real rulers. On the whole, however, the old maxim holds good: if the intellectual state of a tribe is very low, their women are treated badly. With the lowest of the African tribes, the Bushmen, woman is nothing but a slave and a beast of burden. During the travels of a Bush-

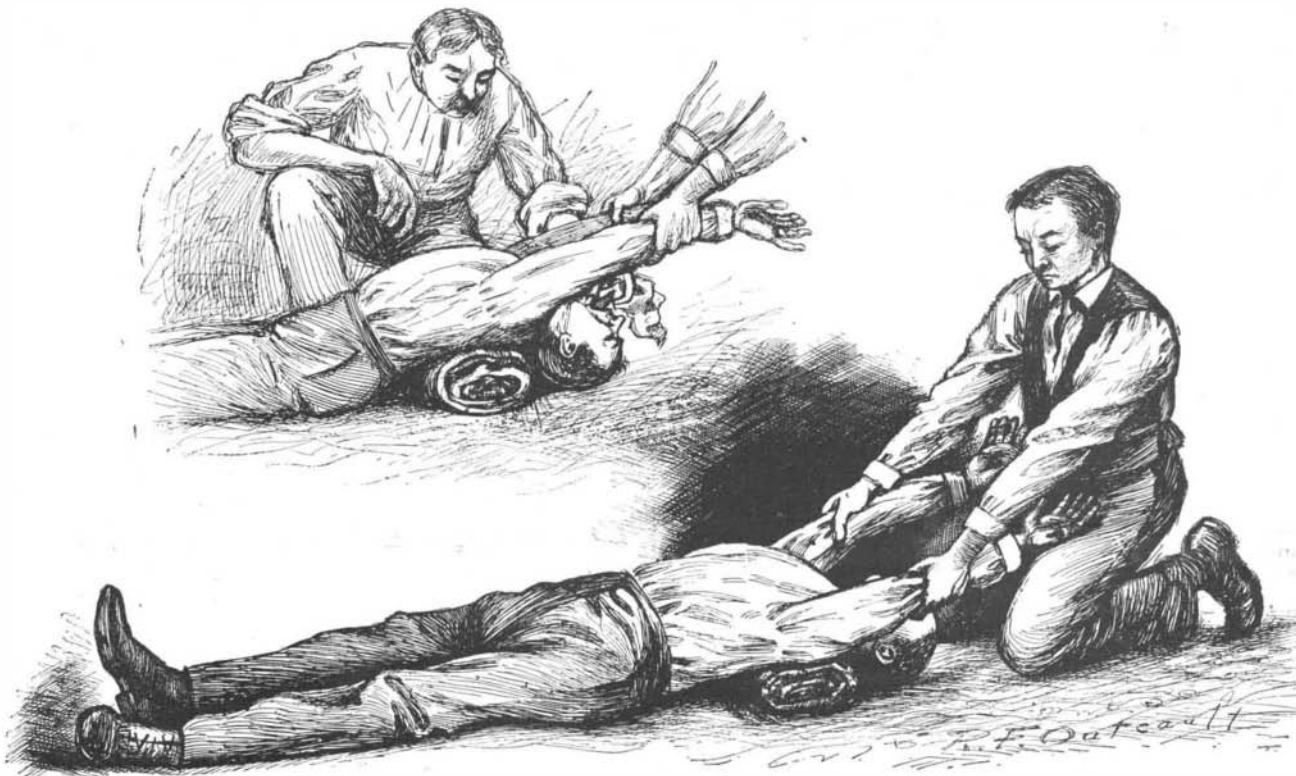
man family the wife has to carry everything, and if there is a scarcity of food, the woman has to suffer first. If she becomes weak and old, she is abandoned to the mercy of the wild beasts. Very different is the treatment accorded to the woman of the genuine negro. All things considered, their position is the same as with us. Men and women share in the necessary work. True, if the man thinks fit to beat his wife, no one is likely to interfere. On the other hand, the woman will find the laugh on her side if she succeeds in getting the better of her spouse by a judicious use of her teeth, her nails, and—her tongue.

The Zulus are a patriarchal race. The father is master of the family and owner of its female part; therefore the position of the woman is much lower, if her husband has a high rank. The wives of the chief never take part in his councils and may only move about on their knees before him. The principal reason for this degradation is the custom of selling women. The price varies between ten and a hundred head of cattle for the daughters of a chief. Other women may be had for three or four cows. If the wife does not suit the husband in every particular, then he sends her home and demands another, or else part of the price paid must be returned to him. But if she proves to be specially valuable, the relative who sold her will demand some extra payment. A bad wife may also be sold as a slave.

Among the Dualla tribes, on the west coast, the women have not the slightest vestige of a right. They are sold and resold at the pleasure of the men. They may be given away, lent and hired out. They must do all the work in the fields, and, if they fail to bear children, they may be killed. And yet they often manage to hold their own against their masters. The natural result of their position is that the women combine against their husbands in a most alarming manner. The traveler Bastian tells of a rich man in Okoloma, with whom he stayed for some time. The poor fellow was at loggerheads with his women, and had to

barricade his hut at night time. Twenty infuriated women inhabited his place and refused to come to terms.

The importance of the women among the Dahomeyans is well known. Their female warriors were much more dangerous to European troops than the men. The enormous extent to which decapitation was carried on among the Dahomeyans during Behanzin's reign accounts for the great predominance of women in point of numbers. A procession of the king included fifteen



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of his daughters, accompanied by fifty female slaves, 730 of his wives, thirty Amazons of the bodyguard, six companies of Amazons of seventy each, 350 slaves, and a rear guard of another sixty Amazons—but only 150 male warriors. The influence of the women among these people has been felt by both the Germans and the French in their colonial troubles.

The Russian Pacific Railway.

A length of 2,200 miles is now open and Omsk is now reached by rail. The cost has been about \$44,000 per mile. The natural conditions were on the whole unfavorable. The men often had to carry their food with them, and they were not unfrequently compelled to allow themselves to be lowered down in baskets in order to prepare the track. On the section between



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Ufr and the Sima River there was, between Urakowo and Bulaschawa, a bog of about 60 miles extent, which had been formed through the rain water accumulating in the course of thousands of years in this natural pit of granite. The engineers and the men were for a long time compelled to live in huts, built of earth on crossed piles, which they could only approach in boats. The mosquitoes were another trial, and 4,000 masks had to be procured, in addition to which smoking with juniper was resorted to.

HOW TO DEAL WITH APPARENT DEATH FROM ELECTRIC SHOCK.

[FROM THE ELECTRICAL WORLD.]

BY AUGUSTIN H. GOELET, M.D.

Much interest has recently been excited by the report from France of the resuscitation of a man apparently killed by electricity, and by the announcement of the French scientist D'Arsonval that a person so shocked should be treated as one drowned. The suggestion is a good one but may be somewhat misleading

unless understood; that is, unless the person undertaking the resuscitation appreciates what is to be accomplished and just how it is to be done.

As this authority says, an electric shock may produce death in one of two ways, viz.:

1. By producing destructive tissue changes, when death is absolute; or 2, by producing sudden arrest of the respiratory and heart muscles through excitement of the nerve centers, when death is only apparent; in other words, animation is merely suspended. The subject may be aroused from this syncope if efforts at resuscitation are not too long delayed.

The alternating current, which is usually regarded as the most deadly, strange to say, nearly always produces death in this second manner.

To say that a person has received a shock from a wire conveying a current of four or five thousand volts, does not necessarily signify that the body has been subjected to the full force of the current, even if the meter does register nearly one ampere during the time of the accident. In view of the fact that the human body offers a resistance of several thousand ohms, which resistance is greatly increased by imperfect contact, and by charring and burning the tissues at the points of application, it is not often that the internal structures or vital organs are submitted to a very considerable volume of current, though it apparently passes through the body. It must be borne in mind that when the clothing is moist with perspiration

or wet with rain, it offers a circuit of less resistance than the human body, and in this event the body receives only a shunt current very much less in quantity than the main current. The bulk of current, in this instance, passes over the surface and does not enter the body. This may explain the survival of some who have apparently withstood very powerful currents. It must be presumed, therefore, that electricity seldom kills outright, though the condition of suspended animation, which it induces, would result in death if not counteracted.

All things considered, it is rational to attempt the resuscitation of those apparently killed by electricity, and if not too long delayed, the effort promises fair chances of success, provided proper means are instituted.

If the body has actually been submitted to a current of sufficient volume to produce destructive tissue changes, all efforts at resuscitation will, of course, be futile.

If, on the other hand, only respiration and the heart's action have been temporarily arrested, there is a condition of syncope simulating apparent death

by drowning, or from anæsthetics, and the physician knows that patients in this condition are frequently revived. Laymen will appreciate the nature of this condition if it is explained as one of exaggerated faint, and would not feel appalled upon encountering it if previously instructed how to cope with it. In an ordinary fainting spell the necessity to stimulate is universally appreciated. In syncope resulting from an electric shock stimulation is likewise indicated, but more vigorous measures are required. This is the only difference.

As said above, the direction to treat one shocked by electricity as one drowned may be misleading, as the conception of the layman of the necessities in this case would be to roll the body on a barrel. Let him understand that the condition is one of exaggerated faint, that the necessity is for prompt stimulation, and that the quickest and most powerful stimulant which can be employed is artificial respiration. The man must be made to breathe, if this is possible, and efforts to induce respiration must not be suspended until breathing is fully and normally restored or until it is absolutely certain that life is extinct. This cannot be assured in less than an hour's persistent, energetic, tireless effort.

The accompanying illustrations will serve to make intelligible the following directions for artificial respiration:

The body must be placed upon the back. A roll made of a coat or anything else convenient (rolled, not folded) is placed under the shoulders and must be sufficiently large to so prop the spine up as to drop the head backward. The operator should kneel behind the subject's head, facing him, grasp the elbows and draw them well over the head, so as to bring them almost together above it, and hold them there for two or three seconds. Then he carries them down to the sides and front of the chest, firmly compressing it by throwing his weight upon them. After two or three seconds the arms are again carried above the head and the same maneuver is repeated, at the rate of fifteen or sixteen times per minute. At the same time the tongue must be drawn out to free the throat. This manipulation stimulates respiration in the following manner, viz.: When the arms are extended over the head, the chest walls are expanded, just as in inspiration, and if the throat is clear, the air will rush into the lungs. When the arms are brought down to the sides of the chest, compressing it, the air is expelled, just as in expiration.

This is the most convenient and reliable manner of inducing artificial respiration. It is known as Sylvester's method. The operator must, however, appreciate the fact that this manipulation must be executed with methodical deliberation just as described, and never hurriedly nor half heartedly. To grasp the arms and move them rapidly up and down like a pump handle is both absurd and absolutely useless.

In addition to this, if an assistant be at hand, the tongue, held by a cloth or handkerchief to prevent slipping, should be seized and drawn forcibly out during the act of inspiration or when the arms are extended above the head, and when the chest is compressed it may be allowed to recede. This rhythmical traction upon the tongue is in itself an excellent stimulant of respiration. It acts not only by freeing the throat of the tongue, which may fall back and obstruct breathing, but also by reflex irritation, through the fraenum or bridle under the tongue being drawn forcibly against the lower teeth.

Should these efforts fail to elicit any response or arouse any signs of life, recourse may be had to another method of stimulation by exciting the dormant nerve centers. This should, however, be reserved for the physician, who should always be summoned when it is possible to get one, or should be made use of only by one who realizes the injury that may be done if it is carelessly practiced. Still, when the necessity is great and other means have been exhausted, some risk is allowable.

I refer to forcible stretching of the sphincter muscle controlling the rectum or lower bowel. It is well known to physicians that this muscle is the last portion of the body to lose its sensibility and that by irritating it by forcibly stretching, a gasp will often be elicited from one actually moribund.

The method of procedure is this:

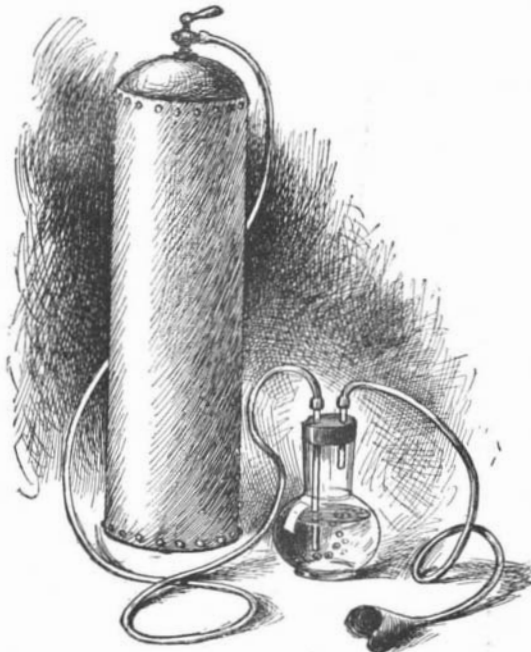
Turning the patient on the side, the index finger or thumb is inserted into the rectum and the muscle, which, if sensible, will be felt to resist, should be forcibly and suddenly drawn backward, toward the spine. Care must be taken not to introduce the finger roughly or to use sufficient force to lacerate or wound the parts.

Having obtained one gasp, artificial respiration should be continued and a repetition of the proceeding should be reserved until respiration again fails. In some instances, however, it may be necessary to repeat this with every effort at inducing inspiration, that is, every time the arms are extended over the head. The subject then being on the back, the knees are drawn upward to facilitate access to the rectum.

If the accident occurs in a city or large town, oxygen, which may be obtained at every drug store, may be

used. This is a powerful stimulant to the heart, if it can be made to enter the lungs.

This gas comes in cylinders furnished with a stop cock and tubes and bottle, which latter is to be half filled with water, through which the gas passes when turned on. (See figures.) If a cone or mouthpiece is not furnished with the apparatus, one can be hastily improvised from a piece of stiff paper and attached by a string to the ordinary mouthpiece. To use the oxygen, place the cone over the patient's face and turn on the stop cock until the gas is seen to bubble freely through the water in the bottle. Efforts at artificial



OXYGEN CYLINDER AND APPLIANCES.

respiration should be kept up while the gas is being administered to favor its entrance into the lungs.

The use of electricity to reawaken the heart and lungs to action offers another auxiliary to the resuscitation process, but implies the skilled employment of special electrical apparatus purely within the possession of the physician, who naturally does not require instruction.

When I was requested by the editors of the Electrical World to contribute this article I gladly accepted because:

1. I am convinced that many who have died in consequence of electrical shocks might have been saved if those at hand had been properly instructed in the methods of reviving suspended animation; and

2. I hope all electrical companies will be impressed with the importance of having their linemen, and other employes engaged in the vicinity of dangerous currents, so instructed and trained that without delay methods of resuscitation can at once be instituted.

Thus the giant Electricity will more surely become



AN IMPROVED MOUTHPIECE.

man's servant, a faithful and ever obedient one, instead of as now, occasionally, through man's carelessness, his slayer.

The Fear of Death.

Familiarity with death is apt to alter one's earlier conceptions of it. Two ideas are very generally accepted which experience shows to be false. One is that the dying usually fear death; and the other, that the act of dying is accompanied by pain. It is well known to all physicians that when death is near its terrors do not seem to be felt by the patient. Unless the imagination is stimulated by the frightful portrayal of the supposed "pangs of death," or of the sufferings which some believe the soul must endure after dissolution, it is rare indeed that the last days or hours of life are passed in dread. Oliver Wendell Holmes has recorded

his protest against the custom of telling a person who does not actually ask to know, that he cannot recover. As that loving observer of mankind asserts, so must every one who knows whereof he speaks assert that people almost always come to understand that recovery is impossible; it is rarely needful to tell any one that this is the case.

When nature gives the warning, death appears to be as little feared as sleep. Most sick persons are very, very tired; sleep—long, quiet sleep—is what they want. I have seen many people die. I have never seen one who seemed to fear death, except when it was, or seemed to be, rather far away. Even those who are constantly haunted, while strong and well, with a dread of the end of life, forget their fear when that end is at hand. As for the act of dying—the final passage from life to death—it is absolutely without evidence that the oft-repeated assertions of its painfulness are made. Most people are unconscious for some hours before they die; and in the rare cases where consciousness is retained unimpaired until a few minutes before the end, the last sensation must be of perfect calm and rest. It is worse than cruel to add to the natural dread of death which oppresses the majority of us while in good health, the dread of dying. There is surely fear enough in this suffering world; let us not increase it by adding imaginary to real causes.—Dr. J. West Roosevelt, in Scribner's Magazine for October.

The Detection of Forgery.*

BY DR. PERSIFOR FRAZER.

I wish to put on record three new methods which I have applied successfully for the purpose of detecting frauds in written documents.

The first enables one to determine with comparative ease which of two crossing ink lines was made first, and consists in observing the crossing by a lens of low power (four or five diameters) at a very oblique angle. If a light ink line be made over a darker one, the appearance to the eye when viewing the crossing perpendicularly to the plane of the paper will be that the darker line is superposed. The reason of this is that ink lines are quite transparent and the darker line is seen through the lighter one and seems to make one continuous line with its two limbs across the intersection. When the paper is inclined, however, but few of the rays of light which reach the eye by reflection from the intersection traverse and lose rays by absorption from both ink films; but the greater number penetrate only the upper ink and do not suffer absorption by the lower.

The second is a method of judging whether or not two lines have been made with the same ink, and consists in passing over each in succession prisms of red, yellow or blue glass (or two of these), and noting the number of millimeters through which it is necessary to move each prism from the position where its thin edge is in contact with the mark to be judged to that where the color is extinguished and the line is black. The prism is pushed horizontally over the ink mark, continually adding to the thickness of the colored glass over the latter. When the line appears quite black the thickness in millimeters over which the prism has been pushed is read off and compared with the number of millimeters which the other line requires to attain the same result. If the inks have the same colors, these results must agree.

Third method. In 1886, I read before the society a paper on the use of composite photography for the purpose of establishing the type of an individual's writing, and especially the signature. Since then the mechanical difficulties in the way have been greatly lessened, and the method has given most valuable results in cases before various courts. But there are many occasions where it cannot be employed for one reason or another, and in such cases I have devised a system of measurement and tabulation which accomplishes by figures what composite photography established automatically by form. The older method may be called the graphic average of the handwriting and the latter the numerical average. The advantage of the former is that it takes into account at once all the elements of character, while the latter can deal only with comparatively few, but in spite of this the results attained have been very interesting.

By the system here alluded to a given number of heights, breadths and angles of letters, and spaces between them and between words, are selected and measured in a large number of undisputed signatures. The same elements are then measured in the signature in dispute. The averages of all the elements in the genuine series is then compared with the latter, and their agreement or disagreement will generally lead to a correct judgment as to the genuineness of the disputed signature.

This method has given successful results in a direction which extends the original idea to a study of "guided hands," and it has been possible to extract from the columns of measurements, proofs of the existence of characteristics of each of the separate handwritings.

* Read before the American Philosophical Society, May 18, 1894.