

rel-organ in the whole fair. A boxing-booth, however, invited the farmers and butchers to come in and take a lesson in the once most popular branch of the fine arts in Great Britain. But fried fish, tobacco, and whisky constituted a far more general attraction.

It only remains for us to take a look at the winter fair which has been held in London at those rare intervals when the frost has been so strong and continuous that the ice even on the Thames, as well as Serpentine and other metropolitan waters, has attained a solid thickness capable of bearing the thousands of people who assembled there. Innumerable stalls and booths for eating, drinking, smoking, and dancing, portable ones for roast potatoes and chestnuts, together with swings, peep-shows, puppet-shows, and other amusements, were rapidly erected or wheeled on the ice; there were also many little card-sharpening and thimble-rig tables,

roundabouts, ballad-singers, and instrumentalists, from the humble Jew's-harp to the ostentatious brass-band. The many slips and tumbles upon the ice constituted a considerable part of the fun, and were promoted by the glassy surface of various cross slides, as well as by frequent jerks and sudden pushes with a view to the destruction of an equilibrium. The crowning joy, however, was at night, when a great bonfire was lighted upon the ice, and a bullock was roasted whole. As the form and face of the creature changed with the action of the flames and the red heat, and the head and horns became inexpressibly hideous, John Bull, far more than his emblematic representative, might be said to have been in his glory while dancing and whirling in uncouth and rampant mazes round the crackling and roaring flames, amidst which the national divinity, self-basted with black and crimson streams, was fiercely roasting.

## DELUSIONS OF MEDICINE.\*

### CHARMS, TALISMANS, AMULETS, ASTROLOGY, AND MESMERISM.

**I**F we regard the mass of people among whom we are living, we are soon convinced that intellectually as well as bodily they are of very different ages. Unfortunately the proportion of those adult in mind is but small compared with those adult in body. Most men are in the infantile or child-like condition.

When, therefore, we speak of the high intelligence of the age we must remember that the remark applies to the few, and that these types of advance disseminate ideas with more or less difficulty through the masses. Nay, more, if too far ahead of the times, generations may elapse before their writings are credited.

Because the community as a whole does thus lag behind the age, it is of interest to us as physicians to study the medical ideas of former times, for we shall find that all those beliefs are prevailing in the various grades of society, and must be contended with, and often, alas! submitted to. It is instructive to the philosophical physician to trace, as in the case of Greece, the passage through fetichism, miracle-cure, and astrology to a sound system of medicine such as that propagated by Hippocrates, well called the Divine Old Man. In the rest of Europe—and from this point of view Americans are Europeans—the same progress has taken place as its nations have passed through their infancy and childhood toward the adult condition.

In considering the cures of all ages they may be divided into two classes: first, *cures by imagination*; and second, *cures by remedies, drugs, or hygiene*. Under the former head should be put miracle-cures, invocation, exorcism, astrological medicine, amulets, charms, talismans, and mesmerism; and under the latter a large part of the present plan of treatment, alchemical in its origin, in which drugs are relied on to crush disease. This will eventually be succeeded by the expectant and sustaining system, such as Hippocrates taught when he says that disease is caused by fermentations and other chemical changes in the fluids of the body, and that relief comes when such substances are discharged; that such changes may be local, as in erysipelas, or general, as in a fever. The power of the physician is to be shown by helping on the elimination. He should watch carefully the progress of the disease, and guide it without trying to stay it. When he has learned the course of a disease, he may predict the issue of a case from experience.

Let us, then, in the first place, consider *cures depending on the imagination*, apparently so supernatural.

That the mind can exercise a strong influence over the body might be proved by a thousand instances. Even such an insensitive tissue as the hair is authentically stated to have turned white from grief or fear. As Scott in *Marmion* says,

"For deadly fear can time outgo,  
And blanch at once the hair."

The sad case of Marie Antoinette will oc-

\* Introductory Lecture in the Medical Department of the University of New York. Session 1872-73. Delivered by Professor HENRY DRAPER, M.D.





GNOMES TERRIFYING A MINER.

cur to every one's mind, although the French revolutionists accounted for that in another way. Jaundice has been caused by a paroxysm of anger, and the relief of toothache by ascending a dentist's steps. Who has not suffered from a fit of the blues, when "the soul melteth away for very heaviness?" Macbeth may well say to the physician,

"Canst thou not minister to a mind diseased;  
Pluck from the memory a rooted sorrow;  
Raze out the written troubles of the brain;  
And, with some sweet oblivious antidote,  
Cleave the stuffed bosom of that perilous stuff  
Which weighs upon the heart?"

But more than this Chaucer sings—

"Men may die of imagination,  
So depe may impression be take;

and it is well known that Sophocles died of joy when his last tragedy was crowned with success.

Conversely, the body can react on the mind; for Voltaire profoundly remarks that the fate of empires is decided by the intrigues of women and the constipation of kings.

Taking for granted, then, that imagination can govern the operations of the body in instances where the impression is strong enough, consider the case of a nation in its infancy. Every natural object contains a good or bad spirit, and multitudes are wandering disembodied through the air. Draper's *Intellectual Development* well may say of

the Middle Ages of Europe: "In its opinion the earth, the air, the sea, were full of invisible forms. With more faith than even by paganism itself were the supernatural powers of the images of the gods accepted, only it was imputed to the influence of devils. The lunatic was troubled by a like possession. If a spring discharged its waters with a periodical gushing of carbonic acid gas, it was agitated by an angel; if an unfortunate descended into a pit and was suffocated by the mephitic air, it was by some dæmon who was secreted; if the miner's torch produced an explosion, it was owing to the wrath of some malignant spirit guarding a treasure, and whose solitude had been disturbed. There was no end to the stories, duly authenticated by the best human testimony, of the occasional appearance of such spirits under visible forms; there was no grotto or cool thicket in which angels or genii had not been seen; no cavern without its demons. Though the names were not given, it was well understood that the air had its sylphs, the earth its gnomes, the fire its salamanders, the water its undines; to the day belonged its apparitions, to the night its fairies. The foul air of stagnant places assumed the visible form of dæmons of abominable aspect; the explosive gases of mines took on the shape of pale-faced malicious dwarfs, with leathery ears hanging down to their shoulders, and in garments of gray cloth."

Surrounded by such objects of marvel and



fear, was it wonderful that men adopted the notion that disease was a possession by devils? When a patient was struggling in an epileptic fit, did it not indeed seem as if a demon was striving to obtain possession of his body, and was not exorcism by holy men, and fervent prayer for aid by some benign spirit, a natural resort for their infantile and fetich-ridden minds? Such beliefs were as real to them as the ghosts of a dark room are to children now.

A profound desire to conciliate and form alliances with powerful spirits or with the devil was, therefore, a natural consequence of those times, and hence arose the various practices of magic and the belief in witchcraft. It is impossible for me to point out clearly the periods when these ideas originated, flourished, and died, because in a mixed community there are men of all intellectual ages, the infants being perhaps half a dozen centuries behind the adults, and all cherishing their own delusions. Multitudes of the superstitions of the Middle Ages flourish under our very eyes. I have but to mention a horseshoe to bring the fact home. Even among the most cultivated a leaven of superstition survives: and while we may blame Celsus for attributing diseases to the anger of the gods—"Morbos ad iram deorum immortalium relatos esse"—we should remember that many gentlemen and ladies of to-day will pale with fear if salt is spilled, and would as soon see their death-warrant signed as sit down thirteenth at a dinner. As physicians and physiologists, such things must not anger you; you must humor them as the delusions of children, not contradicting unless you wish to be overwhelmed with a myriad of instances in point.

The obvious result of supernatural disease and forms of cure was the coalescence of the



ST. DUNSTAN'S NEGOTIATION WITH THE DEVIL.

functions of priest and physician in one person, and a resort to all kinds of magic, divination, sacrifices, incantations, exorcisms, and eventually mercenary practices. Even as early as A.D. 366, the Council of Laodicea found it necessary to forbid the study and practice of enchantment to priests; but the temptation to persist, and gain money by terrifying the sick and dying, was so great that the Lateran Council, A.D. 1123, had to forbid all medical attendance by the clergy, and that of A.D. 1139 threatened the disobedient with excommunication. Medicine was never completely severed from theology till physicians were allowed to marry. There is a singular resemblance between this state of affairs and that in Greece 1500 years before, just previous to the time of Hippocrates.

As the idea of fetichism died out among the more intelligent classes of Europe, the gods and demons who had inhabited surrounding objects were exiled to more distant spheres, and became controllers of the planetary motions. Simultaneously astrology arose, and horoscopes, nativities, and man-





PROTECTION FROM WITCHES BY A HORSESHOE.

sions of the sky filled the minds of men. Mackay remarks: "An undue opinion of our own importance is at the bottom of all our unwarrantable notions in this respect. How flattering to the pride of man to think that the stars in their courses watch over him, and typify by their movements and aspects the joys or the sorrows that await him! He, less in proportion to the universe than the all but invisible insects that feed in myriads on a summer leaf are to this great globe itself, fondly imagines that eternal worlds were chiefly created to prognosticate his fate. How we should pity the arrogance of the worm that crawls at our feet if we knew that it also desired to know the secrets of futurity, and imagined that meteors shot athwart the sky to warn it that a tomtit was hovering near to gobble it up!"

There is, nevertheless, a delusive basis for astrology, for in certain great natural phenomena the influence of distant orbs is plainly traced. The moon and sun conjointly rule the tides; the aurora and the magnetism of the earth seem to depend on eruptions and cyclones in the sun; maxima and minima of death are related to the rotation of the earth on its axis, and the inclination of that axis to the plane of the orbit. There is even a subtler connection; for chemistry has shown that, with one or two exceptions, all the force upon the globe, whether exhibited in the simple process of combustion or in the highest manifestations of animal life, is only a minute fraction of the

power sent forth from the central luminary and transmuted here. Living beings are truly children of the sun.

The astrologers were not, however, content with any such general proposition. Lilly, in a copy of his work, published in 1647, that I have used, says: "There is nothing appertaining to the life of man in this world which in one way or another hath not relation to the twelve houses of heaven; and as the twelve signes are appropriate to the particular members of man's body, so also do the twelve houses represent not onely the severall parts of man, but his actions, quality of life, and living; and the curiosity and judgment of our forefathers in astrology was such as they have allotted to every house a particular signification, and so distinguished humane accidents throughout the whole twelve houses as he that understands the questions appertaining to each of them shall not want sufficient grounds whereon to judge, or give a rationall answer upon any contingent accident and success thereof." In this book of 900 pages there is a world of quaint and curious information: the planet Saturn, for instance, "signifieth one of a swart color, palish like lead, or of a blacke, earthy brown; one of rough skin, thick, and very hairy on the body; not great eyes; many times his complexion is between blacke and yellow, or as if he had a spice of the blacke or yellow jaundies; he is leane, crooked, or beetle-browed; a thin whay beard; great lips like the black-Moores; he lookes to the ground; is slow in motion; either is bow-legged or hits one leg or knee against the other; most part a stinking breath; seldome free from a cough: he is crafty for his own ends, seducing people to his opinion; full of revenge and malice, little caring for the church or religion; it's a foule, nasty, slovenly knave; a great eater, or one of a large stomacke; a brawling fellow; big, great shoulders; covetous, and yet seldome rich."

Three planets, it appears, "signifie cures of diseases: ♃ by money and good counsell; ♄ by medicine; ♀ by magick naturall, divine assistance, or chance."

Werenfels, speaking of an astrological believer, says: "He will not commit his seed to the earth when the soil, but when the moon, requires it. He will have his hair cut when the moon is either in Leo, that his locks may stare like the Lion's shag, or in Aries, that they may curl like a ram's horn. Whatever he would have to grow, he sets about it when she is in her increase; but for what he would have made less, he chooses her wane. When the moon is in Taurus he never can be persuaded to take physic, lest that animal which chews its cud should make him cast it up again. If at any time he has a mind to be admitted to the presence of a prince, he will wait till the moon is in



conjunction with the sun, for 'tis then the society of an inferior with a superior is salutary and successful." And Hudibras believes in

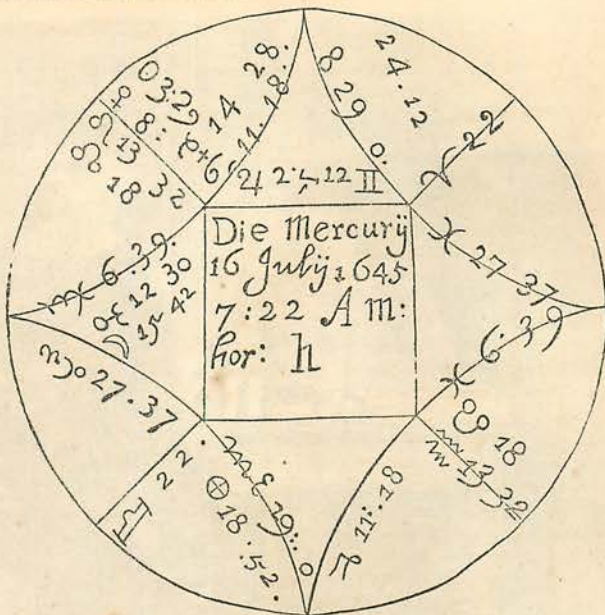
"The Queen of Night, whose vast command Rules all the sea and half the land, And over moist and crazy brains In high spring-tides at mid night reigns."

Shakspeare puts into the mouth of Trinculo that Caliban is a moon-calf—that is, a brute spawned by the moonlight on the scum of the sea—because he has "a very ancient and fish-like smell; a kind of, not of the new-est."

The accompanying figure of a horoscope is from Lilly's book, and the text explaining it is as follows:

"JUDGMENT OF THE FIGURE AFORESAID.

"The signe ascending, viz., ♈, is in the figure most afflicted by the corporal presence of ☿, who is partly lord of the eighth house; therefore from that house and signe must we require the disease, cause, and member grieved. ♁ being the signe of the sixth, is fixed, afflicted by ☿; and ♃, who is lord of the sixth house, is in ☿, a fixed signe, earthy and melancholy, of the same nature and triplicity that ♁, the signe ascending, is of; the ♃ being a general significatrix in all diseases, being afflicted by her proximity to ☿, and posited in the ascendant in an earthly melancholy signe, together with the other significators, did por-



Whether the Sick would live or dye, and what his Disease was.

tend the patient to be wonderfully afflicted with the spleen, with the wind-cholick, and melancholy obstructions in the bowels and small-guts, small feavers, a remisse pulse; and as the signe ♁ is the signe ascending, and ♃ and ☿ therein, it argued, the sick was perplexed with distempers in his head, slept unquietly, etc. [All which was true.]

"I perswaded the man to make his peace with God, and to settle his house in order, for I did not perceive by natural causes that he could live above ten or twelve days."

To this very day a lingering confidence in planetary domination is retained. The moon

Head and Face. ♈ ARIES, The Ram.

Arms. ♊ GEMINI, The Twins.

Heart. ♌ LEO, The Lion.

Reins. ♎ LIBRA, The Balance.

Thighs. ♐ SAGITTARIUS, The Bowman.

Legs. ♒ AQUARIUS, The Waterman.



Neck. ♉ TAURUS, The Bull.

Breast. ♋ CANCER, The Crab.

Bowels. ♍ VIRGO, The Virgin.

Secrets. ♏ SCORPIO, The Scorpion.

Knees. ♑ CAPRICORNUS, The Goat.

feet. ♓ PISCES, Fishes.





CANNEL-COAL MAKING REVELATIONS TO DR. DEE.

is believed to regulate the weather, and particularly the fall of rain, when, in truth, she has nothing whatever to do with it. So in our present almanacs one page usually contains the figure of a man with associated signs of the zodiac. As Southey describes it: "There Homo stands, naked but not ashamed, upon the two Fishes, one foot upon each, the fish being neither in air, nor water, nor upon earth, but self-suspended, as it appears, in the void. Aries has alighted with two feet on Homo's head, and has sent a shaft through the forehead into the brain; Taurus has quietly seated himself across his neck; the Gemini are riding astride a little below his right shoulder. The whole trunk is laid open, as if part of the old accursed punishment for high treason had been performed upon him. The Lion occupies the thorax as his proper domain, and the Crab is in possession of the abdomen; Sagittarius, volant in the void, has just let fly an arrow, which is on the way to his right arm; Capricornus breathes out a visible influence that penetrates both knees; Aquarius inflicts similar punctures upon both legs; Virgo fishes, as it were, at the intestines, Libra at that part affected by school-masters in their anger; and Scorpio takes the wickedest aim of all."

This figure is stated by Champollion to be derived by descent from the Egyptian ritual for the dead, and is often found in their pyri.

So, again, doctors still put at the beginning of a prescription the astrological sign for Jupiter, ♃, looking like R, and supposed to mean recipe.

I might multiply observations upon astrology *ad infinitum*; for hundreds upon hundreds of books have been written in various tongues, some legible and some utterly incomprehensible, some by arrant impostors, but more by men full of faith. But we must pass to other imagination-cures, such as talismans, amulets, and charms. It is only necessary in closing to state that in early Christian times the hold of Greek and Latin astrology was found to be so strong that the Church had to countenance it, but, of course, the names of heathen deities were suitably replaced. For instance, in the left hand the top joint of the thumb was dedicated to the Saviour, the second joint to the Virgin; the top joint of the forefinger to St. James, the second to St. John the Evangelist, the third to St. Peter; the first joint of the second finger to St. Simon, the second to St. Matthew, the third to St. James the Greater, etc.

Talismans were natural objects, generally imagined to be marked like the signs of the planets or zodiac, but sometimes they were precious stones. They are confounded to a certain extent with amulets, which Arabic word signifies any thing suspended. Charms, on the other hand, from the Latin *carmen*, a song, refer to written spells, col-



lections of words often without sense, like the famous *Abraacadabra*.

In the time of the Crusades, as so interestingly narrated by Scott in the *Talisman*, faith in the virtues of precious stones was universal, and to each was attributed special properties. The heliotrope, or blood-stone, now worn in seal rings so much, "stancheth blood, driveth away poisons, preserveth health; yea, and some write that it provoketh raine and darkeneth the sunne, suffering not him that beareth it to be abused." "A topaze healeth the lunaticke person of his passion of lunacie." The garnet assisteth sorrow and recreates the heart; the chrysolite is the friend of wisdom and enemy of folly. The great quack, Dr. Dee, had a lump of cannel-coal that could predict.

In the fancied resemblances found among talismans none are more extraordinary than those associated with color. Because Avicenna had said that red corpuscles moved the blood, red colors must be employed in diseases of that fluid, and even in 1765 the Emperor Francis I. was wrapped up in scarlet cloth to cure the small-pox, and so died. Flannel dyed nine times in blue was good for scrofula.

Among amulets that of Pope Adrian was curious: it consisted of dried toad, arsenic, tormentil, pearl, coral, hyacinth, smaragd, and tragacanth, and was hung round the neck, and never removed. The arsenic amulets worn during the plague in London were active on the principle that one poison would prevent the entry of another. Ashmole's cure for ague was to take, early in the morning, a good dose of elixir, and hang three spiders about his neck, "which drove it away, God be thanked."

Such statements may cause a smile, and men may say that it is well-nigh incredible that similar silly superstitions should ever have seriously influenced people; but the laugh is soon turned if we inquire whether any of these beliefs have come down to our time. How many now think there is virtue in camphor to prevent infection; that sulphur or a horse-chestnut in the pocket is good for rheumatism! Go to Italy and see



GETTATURA.

grown-up men carrying amulets, like a partly extended hand, to prevent the effects of the evil-eye. Coral is still worn as recommended by Paracelsus for infants, and many

add to the mineral bells of silver, by which sorcerers and witches may be frightened off, on the same principle that bigger bells were used to scare comets away. Perhaps in this latter instance mothers act unwittingly, and only know by tradition that there is some good in the toy, for in many cases usage has continued a practice the significance of which is lost. As an illustration, necklaces and bracelets were originally not articles of ornament, but real amulets; those found on Egyptian mummies are carved with characters relating to the future of the body, the scarabæus, or tumble-bug, typifying symbolically by his performances the resurrection.

With regard to charms a wrong idea prevails: the true charm is written, and is not a natural or carved object; watch charms are in reality talismans or amulets. The virtue that resides in such verses is very great, for Cato the Censor says that a dislocation may be reduced by taking a reed four or five feet long, cutting it in the middle, and letting two men hold the ends opposite one another. While this is doing, say, "IN ALIO S. F. MOTAS VÆTA, DARIES DARDARIES ASTARIES DISSUNAPITUR," then separate them with a piece of iron, and bind them to the dislocation. It has been naively remarked that this system of cure works best in nervous and periodical disorders. The phylacterics of the Pharisees were charms.

Allied to charms was faith in numbers, and particularly in odd numbers. "There's luck in odd numbers, says Rory O'More;" or, to go back a few centuries, "Numero Deus impare gaudet" (God enjoys an odd number); or, still earlier, hear Pythagoras declare that number is the essence or first principle of things. Singularly enough, modern chemistry, in adopting the atomic theory and symbolic notation, seems to lend itself to this conclusion, for it couples hydrogen with 1, oxygen with 16, etc.; and our daily papers attribute special powers to the seventh daughter of a seventh daughter, as the advertising columns show. The taint of old things hangs about us yet.

Perhaps of all forms of cure the most miraculous, not in its effects, but as illustrating the credulousness of men, and their utter blindness to contradictions staring them in the face, was the royal touch for king's-evil. Of course no scrofulous patient ever could have been benefited, and yet Charles II., between May, 1662, and April, 1682, touched 92,107 persons; he had to set a regular day, Friday, for the purpose, and often touched 250 persons at a sitting, presenting each with a touch-piece of gold. I suspect that this gift must have had something to do with the number of cures, for impostors were drawn by multitudes, and yet he had the patients sifted out by his surgeon before they were presented. Johnson, the great lexicographer, when four years old, among others, was



touched by Queen Anne, but without avail. How such a belief could have been sustained surpasses comprehension; but yet many of you may remember Dr. Newton and his imposing of hands, in the vicinity of Cooper Union, within a few years.

On the imagination-cures I have thus far spoken of, all, doubtless, put a common estimate; but in the next, the last I shall refer to, people now would begin to divide; and should I venture into our own times, and mock at psychic force and table-tipping, angry passions might rise, and harmony be disturbed.

Mesmerism originated at the same period as our Revolution, and was in reality an attempt to replace demons and spirits by a natural force—magnetism—and thus come into relation with the spirit of the times. By the ingenious coalescence of truths established by experiment with statements resting on nothing, multitudes were, and are still, deluded. Mesmer began by expounding a truth which is more and more forcing itself on the attention of scientific men: "That the sun, moon, and fixed stars mutually affect each other in their orbits; that they cause and direct in our earth a flux and reflux not only in the sea but in the atmosphere; that there is a medium of a subtle and mobile nature which pervades the universe, and associates all things together in mutual intercourse and harmony." Sure enough, electricity is such a medium.

The application of magnetic ideas to cure does not belong to Mesmer: it had been practiced long before, for Paracelsus gives a method of transplanting diseases from man into the earth: "Take a magnet impregnated with mummy and mixed with rich earth; in the earth sow some seeds that have a congruity or homogeneity with the disease; then let this earth, well sifted and mixed with mummy, be laid in an earthen vessel, and let the seeds committed to it be watered daily with a lotion in which the diseased limb or body has been washed. Thus will the disease be transplanted from the human body to the seeds which are in the earth. Having done this, transplant the seeds from the earthen vessel to the ground, and wait till they begin to sprout into herbs: as they increase the disease will diminish, and when they have arrived at their full growth it will disappear altogether."

Kircher had a remarkable plan for reducing hernia, consisting in putting a poultice of iron filings on the outside, and then causing the patient to swallow a magnet, ground to powder, which, when it arrived opposite the spot, would draw in the tumor.

Magnetism was also applied to surgery, and gave rise to weapon salves, which were an improvement on those of ancient times, such as the following, recommended by Paracelsus: "Take of moss growing on the head

of a thief who has been hanged and left in the air, of real mummy, of human blood still warm, each one ounce; of human suet two ounces; of linseed-oil, turpentine, and Armenian bole each two ounces. Mix all well in a mortar, and keep the salve in an oblong narrow urn." The sword was to be dipped in blood from the wound and anointed with the salve, and put in a cool place. The wound was to be kept clean, covered with linen, and dressed every day.

Dryden, in his *Tempest*, has the following dialogue between Hippolito and Miranda:

Hr. Oh! my wound pains me.  
Mr. I am come to ease you.

[*She unwraps the sword.*]

Hr. Alas! I feel the cold air come to me;  
My wound shoots worse than ever.

[*She wipes and anoints the sword.*]

Mr. Does it still grieve you?  
Hr. Now methinks there's something  
Laid just upon it.

Mr. Do you feel no ease?  
Hr. Yes, yes: upon the sudden all the pain  
Is leaving me. Sweet Heaven! how I am eased!

Pettigrew, in his valuable work, speaking of such salves and sympathetic powders, says: "It is not at all surprising that cures of this description should soon be looked upon as the result of magic, incantations, and other supernatural means, and that the professors of the sympathetic art, therefore, should have been anxious to account for the effects by natural causes. Such appears to have been Sir Kenelm Digby's chief aim before the doctors of Montpellier, and similar reasonings upon the subject may be found in the writings of the supporters of the system already mentioned, who advocated the plan of treatment, and vouched for its efficacy. In this search for natural means to account for the phenomena obtained, the obvious one was overlooked, and the history I have given would have been uninteresting but for the valuable practical lesson which these experiments have afforded. We owe to this folly the introduction of one of the first principles of surgery—one which in this country has done more to advance the science than any other besides—one which has saved a vast amount of human suffering, and preserved innumerable lives. The history of the doctrine of healing wounds by the powder of sympathy is the history of adhesion, the history of union by the first intention—a practice which until the time of John Hunter was never fairly developed or distinctly comprehended.....An incised wound is the most simple of its kind; these, it must be remembered, were the description of wounds to which the sympathetical curers resorted, and their secret of cure is to be explained by the rest and quiet which the wounded parts were permitted to enjoy, in opposition to the ordinary treatment under the fallacious doctrine and practice of that day of digesting, mundifying, incarnating, etc. Surgeons in former times seem really





DUTCH ALCHEMIST AND HIS STARVING WIFE.

by their modes of treatment to have tried how far it was possible to impede, instead of to facilitate, the processes of nature, and to those who are acquainted with modern surgery it almost appears miraculous that they ever should have been able to have produced union of any wound whatever. What is the mode of treatment now employed by a surgeon in the healing of a wound? To clear it from extraneous matter, to bring the edges in apposition, to keep them in contact by a proper bandage, to modify temperature, and to give rest. What is this but the mode of procedure on the part of the sympathetical curers? They washed the wound with water, kept it clean and undisturbed, and in a few days the union of parts—the process of adhesion—was perfected, and the cure was complete. The doctrine of adhesion—the exudation of lymph, the junction of old or the formation of new vessels, and the consequent agglutination of parts—was then ill understood; subtle and in many instances, it must be admitted, ingenious reasons were resorted to to account for the effects produced, and the true solution of the process was overlooked. The effect was apparent, but the cause was obscure.”

Mesmer's operations depended on exciting the imagination by every device that could appeal to the senses. His house was luxuriously furnished, lighted by the richest stained glass, perfumed by the most over-

whelming odors, and filled with a sighing of sweet music and soft female voices. According to Mackay's description: "In the centre of a saloon was placed an oval vessel about four feet in its longest diameter and a foot deep. In this were laid a number of wine-bottles filled with magnetized water, well corked up, and disposed in radii with their necks outward. Water was then poured into the vessel so as just to cover the bottles, and filings of iron were thrown in occasionally to heighten the magnetic effect. The vessel was covered with an iron cover pierced with many holes, and was called the baquet. From each hole issued a long movable rod of iron, which the patients were to apply to such parts of their bodies as were afflicted. Around this baquet the patients were directed to sit, holding each other by the hand, and pressing their knees together as closely as possible, to facilitate the passage of the magnetic fluid from one to the other. Then came in the assistant magnetizers, generally strong, handsome young men, to pour into the patient from their finger-tips fresh streams of the wondrous fluid. They embraced the patients between the knees, rubbed them gently down the spine and in the course of the nerves, using gentle pressure on the breasts of the ladies, and staring them out of countenance to magnetize them by the eye. Gradually the cheeks of the ladies began to glow, their imaginations to become inflamed, and off they went





ALCHEMICAL SYMBOLS.

one after another in convulsive fits." But enough of such perilous proceedings and the libertine societies based upon them; let us turn to systems

#### OF CURE BY REMEDIES.

All treatment by drugs was based on alchemical ideas, which in their turn were an offshoot of pantheism. The whole world has a soul; hence every object has a soul or spirit, which may, by suitable means, be expressed or solicited out. Fire and distillation, with incantations and charms, enable the philosopher to subtilize and purify these essences, and ascertain and utilize their various properties. So a spirit could then, as now, be procured from wine more powerful than the wine, and a ghost evoked from chalk able to tear apart the strongest metal vessel.

The spirit of the most noble of metals was long sought for as the elixir of life. Geber is made to say it should assuredly cure all maladies, for gold is the only metal without disease; but when he discovered aqua regia, and had the gold in a potable or dissolved condition, how intense must have been his disappointment! It is devoid of curative property. Albertus Magnus and Thomas Aquinas, however, discovered enough of the secret of life to animate a figure of brass, and make it perform the duties of a domestic: housekeepers say that a brazen kind of servant exists to this day.

Upon equally authentic testimony it is asserted that Alain de Lisle added sixty years to his life, and a recipe by Arnold di Vilanova shows how to add one hundred years. Rub yourself two or three times a week with

marrow of cassia; every night put a plaster of saffron, rose leaves, sandalwood, aloes, and amber liquefied in oil of roses and wax over the heart. In the morning inclose the plaster in a leaden box; eat chickens that have been first starved and then fed on a broth of serpents and vinegar thickened with wheat and bran.

Here is an illustration of alchemical symbolic writing. To the initiated the figure explained itself, and in many works there was no exact written elucidation; but accompanying this was

the following paragraph, the meaning of which is that gold (*the lion*) can be purified by antimony (*the gray wolf*), which is liberated from its gray sulphuret by iron (*valorous Mars*). The figure is from Basil Valentine's work.

"The king's diadem is made of pure gold, and a chaste bride must be married to him; wherefore, if ye will work on our bodies, take the most ravenous gray wolf, which by reason of his name is subject to valorous *Mars*, but by the genesis of his nativity he is the son of old *Saturn*, found in mountains and in valleys of the world. He is very hungry; cast unto him the king's body, that he may be nourished by it; and when he hath devoured the *king* make a great fire, into which cast the *wolf*, that he be quite burned; then will the king be at liberty again: when ye have done this thrice, then hath the *lion* overcome the *wolf*, neither can he find any more in him to feed on."

I might go on with these details for days, from the ethereal discoveries of Heydon, the Rosicrucian, who thought a man might live without eating or drinking, and that there was a "fine foreign fatness" in pure air, and that a plaster of nicely cooked meat on the epigastrium would satisfy the most voracious—through all the search for the elixir vitæ, the philosopher's stone, and the powder of projection, up to those really grand discoveries which lie at the bottom of modern chemistry, and are the basis of our daily comforts and present medication. But we have had enough of the follies of our ancestors: let us delude ourselves into the belief that we are men and they were children, and leave to future times the pleasing task of pulling us



to pieces, and laughing at our faith in drugs and fragmentary knowledge of the real course and nature of disease. When science has displaced quackery; when the organic chemistry of the body is understood, and missing ingredients can be supplied and noxious ones expelled; when dangerous germs are filtered from the air men breathe, the food they eat, and the water they drink—then medicine will become exact, and cease to be uncertain.

The ground-work for such hopes is partly found in the tendency that the advanced medical men of this day have to determine the efficacy of treatment by experiment, and not by faith and hypothesis. To be sure, the patient must be encouraged to hope for the best results, and not be harassed by the doubts that beset the mind of his physician, to whom the empirical nature of treatment is only too obvious.

But more efficacious than this has been, and will be, the abandonment of the idea that, in addition to a soul, the body of man presents another, lower form of spirit—a vital force which regulates the ordinary actions of the system, and dominates over and

counterbalances the usual physical forces that rule the inorganic world. Such an idea strikes at the root of all application of exterior experiment to living beings, and is a relic of the fetich-worshipping age of nations, when every breeze was the breath of a demigod, and every cloud a frown—when the crashing lightning was a bolt sped by Jove, and the thunder the angry rolling of his car. It is associated with the time when naked savages were praying to the spirit of a dried cow's tail.

In these days of the impersonality of force, men know that there is no power which can resist that fiat of Omnipotence, the natural laws, ruling equally an ultra-microscopic atom or a succession of worlds stretched throughout the infinity of space. There is, therefore, a reason that physicians should apply discoveries of actions seen in the outer world to the inner workings of the body; and hence organic chemistry, the microscope, the spectroscope, methods of physical exploration, electrical conductions and inductions, theories of germ origin of disease, etc., are applied to investigation and cure.

OLD KENSINGTON.

By MISS THACKERAY.



CHAPTER XXXVII.

IN AN EMPTY ROOM.

**A**MONG inquiring friends Mrs. Morgan was one of the first and most persistent. Mrs. Palmer was very tired of her whispers and emphasis, and yawned and fidgeted without disguise, not a little to the elder lady's indignation. Mrs. Morgan's one consolation was that Mrs. Palmer felt, as they

did, that dear Rhoda had behaved admirably and with the greatest discretion. Dolly is not at all kind about it, said Mrs. Morgan. Rhoda had come to see Dolly with a little modest, self-satisfied air that was very becoming to her. Dolly came from up stairs with heavy, red eyes. She had been crying, and was quite tired and confused with the two days' anxiety. Rhoda's kiss certainly was no comfort to her. If Rhoda had only told Dolly of George's moonlight visit it might have been of some use, but of this the girl did not say one word.

That same day Dolly, coming down into the garden, found Raban with her mother, and she went up eagerly to meet him, hoping for the news she was looking for. But news there was none, although her mother, arm in arm with Raban, had been for the last hour slowly pacing the gravel-walks, recapitulating all their anxieties and all the complaints they had against that tiresome boy.

"The Admiral will be so shocked. I expect him hourly; and I look to *you*, Mr. Raban, to tell me the plain truth."

The plain truth was that Frank could discover nothing of George. All that long day he had followed up every trace, been every where, questioned every one, including Rhoda, without result. He had come now in the faint hope of finding him at home, after all. When Dolly came to meet them he thought she looked anxious enough already,