

HISTORY OF MEDICINE EXHIBITS. EAST GALLERY

FOR DESCRIPTION OF PLATE SEE PAGE 2

THE MAGIC, PSYCHIC, ANCIENT EGYPTIAN, GREEK,  
AND ROMAN MEDICAL COLLECTIONS OF THE DIVI-  
SION OF MEDICINE IN THE UNITED STATES NA-  
TIONAL MUSEUM

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INTRODUCTION.

The origin of the materia medica collection of the United States National Museum dates back to 1881. In 1882 the drug collection which had been exhibited at the Centennial Exposition at Philadelphia in 1876 was transferred to the Museum by the Department of Agriculture. For a time the efforts of the section of materia medica were confined almost exclusively to procuring authentic specimens of medicinal materials. Some years later the scope of the section was enlarged to include exhibits visualizing the history of the healing art, and in 1898 the more comprehensive name of division of medicine was substituted for the "section of materia medica" theretofore used. The scope of activities of the division was again enlarged in 1916, this time to include the history of pharmacy, public hygiene and sanitation, and the division, which up to that time had been administered under the department of anthropology, was made a unit of the department of arts and industries.

The materia medica collection has served the purpose of giving the general public an easy reference to specimens of "official" medicine and has afforded students of medicine and pharmacy the opportunity of studying this subject in its various details. The subjects of history of pharmacy, public hygiene and sanitation, because of their comparatively recent addition to the activities of the division, have not progressed to the same degree of perfection as the materia medica and history of medicine collections, but with the cooperation of the various government departments and outside agencies interested in these subjects, extensive plans for their development are now under way.

This paper has been prepared to meet the demand for labels and information concerning the historical medical collections, and to

make the exhibits of value not only to those who find it convenient to pass through the exhibition halls, but to many others. In endeavoring thus to carry into effect the purpose of the Smithsonian Institution, "the increase and diffusion of knowledge among men," it has been considered preferable to describe small groups of related exhibits in detail rather than to compile a larger and more complete list which would necessarily be limited to very meager information.

The collections herein described are located on the east gallery, Arts and Industries Building. Plate 1 gives a view of one side of the gallery. Plates 2, 3, 4, and 5 show the arrangement of the separate exhibits.

#### EARLY THEORIES OF DISEASE.

Disease, a malevolent spirit, assuming material form either animate or inanimate, attacking the victim with or without provocation. Primitive.

Disease, a spirit, acting at the suggestion of a human enemy possessing supernatural powers. (Sorcery, witchcraft, conjury.) Savage and half-civilized people.

Disease caused by the angered spirits of the dead, either men or animals, or even plants. Savage and half-civilized people.

Disease, a punishment, inflicted by an offended deity. Ancient.

Disease due to the influence of the planets or other heavenly bodies. Astrology.

Disease due to a disturbance in the relative proportions or distribution of the fluids, or "humors" of the body, namely, blood, phlegm, black bile, and yellow bile. (Hippocrates, Galen.)

#### ARRANGEMENT OF EXHIBITS.

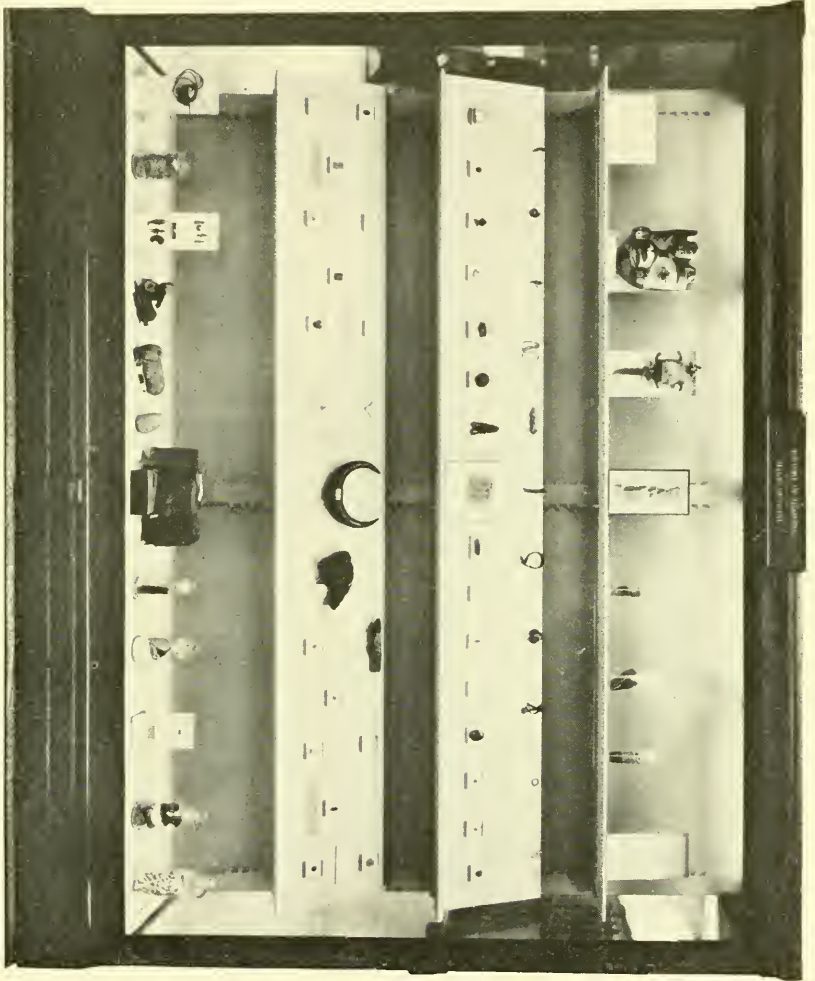
Magic medicine: Exorcism; invocation; incantation; amulets and charms; talismans; fetiches; transference of disease; signatures; the evil eye; sympathetical cures.

Psychic medicine: Music; metallotherapy; laying on of hands; royal touch; hypnotism.

Pharmacological medicine: Egyptian medicine; Greek and Roman medicine.

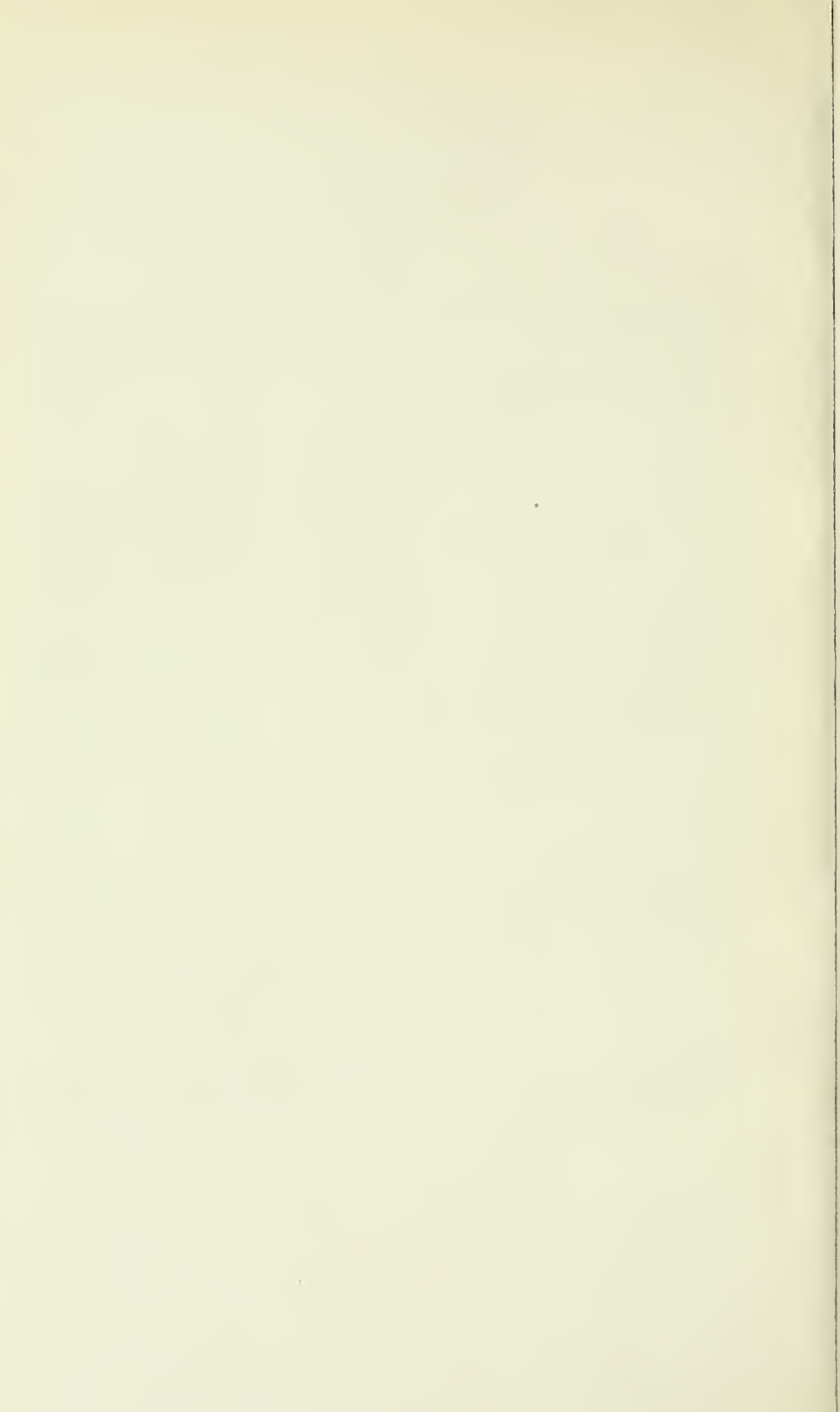
#### MAGIC MEDICINE.

Magic is the "pretended art of producing supernatural effects by bringing into play the action of supernatural or spiritual beings, of departed spirits, or of the occult powers of nature." Its application to the treatment of disease is magic medicine. The agents may be



MEDICAL EXHIBITS—MAGIC MEDICINE

FOR DESCRIPTION OF PLATE SEE PAGE 2



gods or demons, disembodied spirits of men, animals, plants, or minerals, or may be occult influences residing in, or exerted through, certain natural objects. These agents or influences are brought into action by invocations, sacrifices, incantations, and ceremonials of various kinds.

In so far as these magic arts produce physiological and remedial effects, which they undoubtedly sometimes do, they might be classified under the head of psychic or mind medicine, the mental state aroused by a firm belief in their efficacy causing modifications of physiological function and even tissue change.

Magic medicine is especially characteristic of the earlier stages of human development, when all natural forces were personified, and disease and death believed to be caused by malignant spirits.

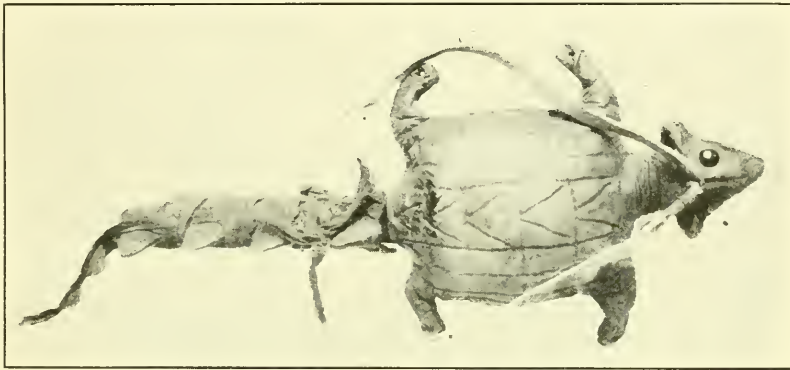


FIG. 1.—INDIAN MEDICINE MAN'S RATTLE.

The collection only outlines the subject of magic medicine, which covers a wide field for investigation and illustration.

**Exorcism.**—Casting out evil spirits by religious or magic formulas or ceremonies. A mode of healing the sick as old as the history of medicine. Has been practiced by the people of all ages and in all stages of civilization. It is still an authorized religious ceremony.

*Indian medicine man's rattle.*—Made of wood, covered with buckskin in imitation of a turtle. Used in the ceremonies of exorcism (fig. 1). Cat. No. 165,848, U.S.N.M.

*Animal mask.*—Worn by Indian medicine man in the practice of exorcism (fig. 2). Cat. No. 67,957, U.S.N.M.

**Invocations.**—Prayers for the assistance of disembodied spirits of animals or men, or the mythical gods and heroes, or of the Deity, commonly used as an accompaniment of other remedial measures, are among the oldest, most persistent, and most widely diffused of the means employed for the cure of disease.

*Isis*.—One of the principal deities of ancient Egypt. The following prayer was used while preparing medicines, and before taking the same:

May Isis heal me, as she healed Horus of all the ills inflicted upon him when Set slew his father Osiris. O Isis, thou great enchantress, free me, deliver me from all evil, bad and horrible



FIG. 2.—ANIMAL MASK.

things, from the God and Goddess of evil, from the God and Goddess of sickness, and from the unclean demon who presses upon me, as thou didst loose and free thy son Horus. Baas's History of Medicine.

*Indian invocations. Fern roots*.—For the cure of rheumatism. The common belief of the Indians regarding rheumatism is that it is caused by the

revengeful spirits of slain animals, especially deer. The disease can only be driven out by some more powerful animal spirit. The doctor invokes the aid of the Red Dog of the East, the Blue Dog of the North, the Black Dog of the West, the White Dog of the South, and finally the White Terrapin of the Mountain, in separate prayers. While reciting the prayers the doctor rubs the afflicted part with a warm solution of fern roots and at the end of each appeal he blows once upon the part. Cat. No. 143,087, U.S.N.M.

**Incantations.**—Magical words said or sung. A mode of treatment employed by the Persians and Greeks, and transmitted by tradition down to the "folk-medicine" of the present day.

*Abracadabra.*—This was one of the most famous of the ancient incantations employed in medicine. Its mystic meaning has been the subject of much ingenious investigation, but even its derivation has not been agreed upon. The first mention of the word is found in the poem "De Medicina Præcepta Saluberrima," by Quintus Serenus Samonicus, a noted physician in Rome in the second and third centuries. In addition to being used as an incantation it was used as an amulet or charm. "Write several times on a piece of paper the word 'Abracadabra,' and repeat the words in the lines below, but take away

A B R A C A D A B R A	a b r a c a d a b r a	
A B R A C A D A B R	a b r a c a d a b r	
A B R A C A D A B	a b r a c a d a b	
A B R A C A D A	a b r a c a d a	
A B R A C A D	a b r a c a d	
A B R A C A	a b r a c a	ABRACADABRA
A B R A C	a b r a c	BRACADABR
A B R A	a b r a	RACADAB
A B R	a b r	ACADA
A B	a b	CAD
A	a	A

FIG. 3.—ABRACADABRA.

letters from the complete word and let the letters fall away one at a time in each succeeding line. Take these away ever, but keep the rest until the writing is reduced to a narrow cone. Remember to tie these papers with flax and bind them round the neck." After wearing the charm for nine days it had to be thrown over the shoulder into a stream running eastwards. This incantation and charm was believed to be beneficial in treating fevers and various other diseases (fig. 3).

*Incantation.*—"A prayer and incantation for visiting of sick folkis." Used by Agnes Sampson, a famous witch of England, who was burned in 1590.

"All kindis of illis that euer may be,  
In Chrystis name I conjure ye,  
I conjure ye, baith mair and less,  
By all the virtues of the mess,  
And rycht sa, by the naillis sa,  
That naillit Jesu, and na ma,  
And rycht sa by the samyn blude,  
That reiket over the ruthful rood,  
Furth of the flesh and of the bane,  
I conjure ye in Goddis name."



**Amulets and charms.**—Amulets are material charms whose purpose is to protect the wearer against real or imagined dangers—witchcraft, evil eye, sickness, disease, accidents, etc. They are of various kinds and formed of different substances: Natural, as stones of a peculiar shape, roots, leaves, seeds, horns, teeth and claws of animals, various metals, etc., or artificial, as rings, strings, representations of the hand, eye, crescent, beads, etc., and written charms, quotations from sacred writings. The use of charms is practically world-wide, wherever the belief in witchcraft, evil eye, and demons is specially pronounced. But they are in special favor with the eastern nations and are very common in Mohammedan countries. The Mohammedans frequently use as amulets either a small copy of the whole Koran, the sacred book of the Mohammedan religion, or certain portions of it. The writing is covered with waxed cloth to preserve it from accidental pollution, and inclosed in a case of gold or silver, which is attached to a silk string, or a chain.

*Peony root.*—Carried in the pocket as a preventive of insanity. The root, or a necklace of beads, is suspended from the necks of children to prevent convulsions, and to cure epilepsy. Cat. No. 143,069, U.S.N.M.

*Chestnut.*—A horse-chestnut (begged or stolen) carried habitually in the pocket, as a preventive of rheumatism. A widely spread superstition among all classes of society. Cat. No. 143,070, U.S.N.M.

*Scarlet silk.*—A skein of scarlet silk thread, tied with nine knots, worn around the neck to prevent bleeding at the nose. Cat. No. 143,071, U.S.N.M.

*Rabbit's foot.*—The right forefoot worn in the pocket to prevent rheumatism. Cat. No. 143,068, U.S.N.M.

*Mistletoe.*—Small branches of the mistletoe, *Viscum album*, worn suspended from the neck as a specific against epilepsy, and an antidote for poisons. It should be cut with a gold knife, and when the moon is only six days old. Cat. No. 143,102, U.S.N.M.

*Amulet.*—A leather strap, with buckle, made from a part of a harness which has been worn by a horse. Firmly buckled around the wrist, and worn constantly, it greatly strengthens the muscles and ligaments, and cures sprains and other local affections. Cat. No. 143,111, U.S.N.M.

*Amulet.*—A spider put in a nutshell, and worn around the neck, was an ancient and famous remedy for ague, from the time of Dioscorides. Its fame has descended to recent times.

" Only beware of the fever, my friends,  
 beware of the fever!  
 For it is not like that of our  
 Acadian climate,  
 Cured by wearing a spider hung around  
 one's neck in a nutshell!"  
 Longfellow's "Evangeline."

Cat. No. 143,110, U.S.N.M.

*Cramp bone.*—The patella, or "kneecap," of a sheep. To cure cramp. Worn next to the skin during the day, and laid beneath the pillow at night. Cat. No. 143,112, U.S.N.M.

*Cromp ring*.—A ring made from a nail that has been used to fasten a coffin, and that was dug out of a graveyard. A sovereign charm against cramps. Used in China, England, and occasionally in the United States. Cat. No. 143,114, U.S.N.M.

*Voodoo, hoodoo, obi, or obeah*.—A species of magic art or sorcery practiced by the African negroes, and continued to some extent by their descendants in the West Indies and the United States. The amulets or talismans used are usually bones, hair, teeth, feathers, rags, bits of wood, etc. This specimen consists of a chicken feather, some human hair, a drop of blood on a bit of rag, and a pine sliver. All are tied together and sewn in a piece of shirting. The amulet is worn on the neck as a preventive medicine, a cure-all, and to prevent the working of a "voodoo" on or against the wearer. Cat. No. 143,106, U.S.N.M.

*Madstone*.—Model, cut from the mineral halloysite, of a "madstone" in actual use. Believed to be the mineral of which some of the famous madstones are composed. It absorbs moisture with avidity, and adheres to a moistened surface until nearly saturated. Applied to the wound produced by the bite of a mad dog, it is said to adhere until the poison is entirely absorbed. The stone is then boiled in milk to remove the poison. Cat. No. 143,103, U.S.N.M.

*Madstone*.—A highly polished seed of *Gymnocladus dioica*, the Kentucky coffee tree, like the one in the Museum's collection, was offered to the Smithsonian Institution as a genuine madstone of proved efficacy for the sum of \$1,000. Cat. No. 143,104, U.S.N.M.

*Madstone*.—A biliary calculus, or gallstone, formed in the gall bladder of an ox. One of the earliest forms of madstones. Ibn Baithar (1248 A. D.) ascribes to it the power of attracting the poison of venomous animals. It was applied to snake bites as well as dog bites. Cat. No. 49,360, U.S.N.M.

*Madstone*.—Said to have been found in the stomach of a deer, by an Apache Indian of New Mexico. It is a pebble of carbonate of lime, which may have been swallowed by a deer with his food or water, and the surface etched by the action of the gastric juices. Sent to the Museum as a veritable madstone. Cat. No. 143,190, U.S.N.M.

*Madstone*.—A reputed madstone purchased from Mr. J. R. Scott, Cable, Wis. A brown, striated, porous pebble, deriving its attributed powers, no doubt, from its peculiar appearance and the not unusual fact that the person bitten by the dog recovered after the application of the stone. Cat. No. 143,492, U.S.N.M.

*Madstone*.—A ball of matted hair, such as is occasionally found in the stomach of domesticated cattle, buffaloes, and perhaps other ruminants. Two balls of this kind were sent to the Museum from Alva, Okla., in 1906, as veritable madstones. One of them was said to have been successfully used in two cases of dog bite. Cat. No. 143,201, U.S.N.M.

*Coral*.—Stops every flux of blood; drives away ghosts, illusions and dreams; hardens diseased gums; cleanses putrid sores; relieves pains in the stomach; and, taken in powder with wine, it cures gravel. Hung on fruit trees it insures fertility and protects from hail and blighting wind. In great repute during the Middle Ages both as a drug and as an amulet. Cat. No. 143,113, U.S.N.M.

*Agate*.—Emblematic of health; an enemy to all poisonous things; assuages thirst when held in the mouth. (Camillus Leonardus, fifteenth century.) Worn as an amulet for the cure of scrofula and skin diseases. (Albertus

Magnus, thirteenth century.) In Persian and Arabian medicine given internally, or worn in a finger ring for insanity, hemorrhages, gravel, etc.; bound upon the thighs of parturient women to facilitate labor. Used at the present day in Syria as a remedy for the "Aleppo boil." Cat. No. 143,118, U.S.N.M.

*Onyx*.—A powerful aphrodisiac and oxytocic. Used as an eyestone "it enters of its own accord, and if it finds anything within that is noxious it drives it out and tempers the hurtful and contrary humors." (Camillus

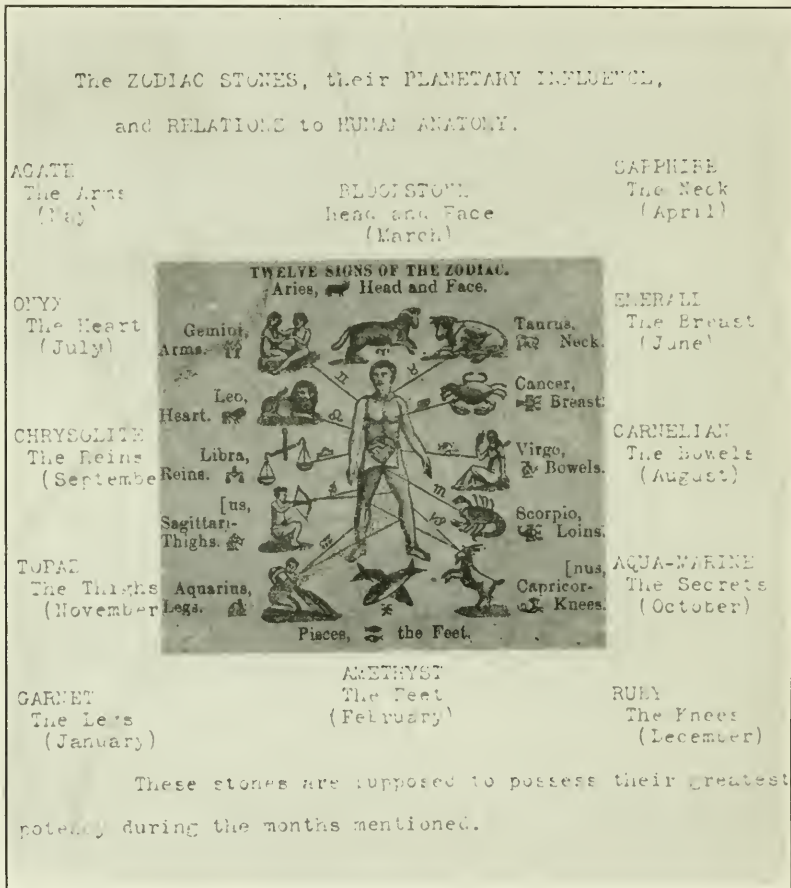


FIG. 4.—THE ZODIAC STONES.

Leonardus.) Said to cause nightmare, for the reason that "in the onyx is a demon, imprisoned in the stone, who wakes only of a night, causing terror and disturbance to sleepers who wear it." (Benoni.) Used at the present day by the Persians for the cure of epilepsy. Cat. No. 143,133, U.S.N.M.

*Topaz*.—Said to restrain anger, cure insanity, check hemorrhage, impart strength and good digestion. The powder taken in wine cures asthma and insomnia. "Rubbed on a hone the topaz gives a milky juice, and yet loses none of its weight." This juice taken internally for dropsy. (Epiphanius.)

Worn as an amulet it drives away sadness, strengthens the intellect, and bestows courage. (Porta.) Cat. No. 143,139, U.S.N.M.

*Garnet*.—Dispels poisonous and infectious airs. (Camillus Leonardus.) Like the ruby it foretells misfortune. Suspended from the neck it wards off the plague and thunder; taken internally it cures epilepsy, insanity, cholera, snake bite, and neutralizes drug poisons. Cat. No. 143,129, U.S.N.M.

*Bloodstone*.—Said to bring safety and long life to its possessor, and to be antidote to poisons. (Camillus Leonardus.) A remedy for dyspepsia. If "washed according to medicinal art" it was a styptic. In powder it was applied to ulcers, and, mixed with honey or white of egg, it was believed to be an excellent remedy for hard tumors. (Albertus Magnus.) Cat. No. 143,122, U.S.N.M.

*Amethyst*.—As an amulet it dispels sleep, sharpens the intellect, prevents intoxication, and promotes chastity. An antidote for all poisons. (Albertus Magnus.) According to Pliny, the amethyst is an antidote to drunkenness, "for being bound on the naval it restrains the vapor of wine, and dissolves ebriety." In Hindu medicine it is said to give strength, abate the heat of fevers, and cure fistula. Cat. No. 143,119, U.S.N.M.

*Jasper*.—Checks hemorrhages, strengthens the chest, lungs, and stomach, cures fevers and dropsy, and clears the sight. (Camillus Leonardus.) Galen (2nd Century) recommends that it be worn next the skin over the stomach, for the relief of dyspepsia. Burton (Anatomy of Melancholy) says: "If hung about the neck, or taken in drink, it much resisteth sorrow." Cat. No. 143,130, U.S.N.M.

*Sapphire*.—Among the Hindus the sapphire, unless perfectly flawless, was an unlucky stone. In the Middle Ages it was said to cure boils, carbuncles, and headaches, rested and refreshed the body, and gave color to the cheeks. (Camillus Leonardus.) Galen administered vinegar in which a sapphire had been soaked, in fevers. An ointment made with the powder cured inflammation of the eyes. Because of its extreme coldness it was thought to preserve the elasticity of the wearer, and hence especially suited for ecclesiastical rings. The Buddhists esteem the sapphire, as a protective charm, above all gems. Cat. No. 143,138, U.S.N.M.

*Carnelian*.—Said to cure tumors and all wounds made by iron. (Epiphanius.) Preserved the strength, prevented hoarseness, and cleared the voice. In powder or worn as an amulet, it was supposed to be a sovereign remedy for hemorrhage. Rings cut from the stone are still worn to prevent bleeding from the nose. Cat. No. 143,123, U.S.N.M.

*Ruby*.—In Persian and Arabian medicine it was said to cure epilepsy, insanity, cholera, hemorrhage from the lungs, snake bite, and the effects of poisonous drugs; it purified the blood and freed the air from the infection of cholera. In the Middle Ages it was an amulet against poisons, plague, sadness, or evil thoughts; forewarned of danger by losing color. "It takes away vain thoughts, reconciles differences among friends, and makes a mighty increase of prosperity." (Camillus Leonardus.) Cat. No. 143,137, U.S.N.M.

*Lapis lazuli*.—Believed to cure melancholia. Used at the present day in India, Chile, and Peru as a laxative. In Hindu medicine it was regarded as a cooling medicine, and curative of biliousness. Cat. No. 143,131, U.S.N.M.

*Chrysoberyl*.—As an amulet it dispels evil dreams, fear, and melancholy. Possesses the general qualities of beryl. In Hindu medicine the chrysoberyl, set in gold and worn on the neck or hand, said to remove diseases and vicious habits, and to increase family, life, and happiness. Is also believed to lose its brilliancy in contact with poisons. Cat. No. 143,126, U.S.N.M.

*Beryl*.—Formerly much used in divination, as it was supposed to be the abode of spirits. As a remedy the powdered stone was taken internally for leprosy. Water in which the stone had lain was used as a lotion for the eyes, and was taken internally for flatulency and disorders of the liver. Cat. No. 143.121, U.S.N.M.

*Amber*.—Supposed to be "generated out of the urine of the lynx, and hardened by time." "It assuages pain in the stomach, and cures jaundice, flux, and kidney evil;" a remedy for all diseases of the throat. (Camillus Leonardus.) Often worn, in this and other countries, as an amulet for the relief of toothache and dropsy, and for the prevention of asthma, croup, and various infectious diseases. It is still used for the cure of goiter. Cat. No. 143.120, U.S.N.M.

*Chalcedony*.—Prevented and cured melancholy. Worn as an amulet it was preventive of danger during tempests and sinister events. (Camillus Leonardus.) Cat. No. 143.125, U.S.N.M.

*Lodestone*.—Magnetic iron ore. "Being carried about one it cures cramps and gout. In the hour of travail, if held in the hand, it facilitates the birth. If bruised and taken with honey, it cures dropsy; and the head being anointed with it cures baldness." "It also taketh away fears and jealousies, and reconciles wives to their husbands, and husbands to their wives." (Camillus Leonardus.) Cat. No. 143.132, U.S.N.M.

*Opal*.—In great repute as an eyestone and a remedy for all diseases of the eye. It preserves from contagious and infectious airs, drives away despondency, prevents fainting, heart disease, and malignant affections. (Giov. B. Porta, Magia naturalist, sixteenth century.) Indicates the state of health of wearer, losing its brilliancy when the person is ill. Cat. No. 143.134, U.S.N.M.

*Pearls*.—In Egyptian medicine an electuary of pearl powder was said to strengthen the body and give luster to the eyes. Largely used in China as an aphrodisiac and medicine for hemorrhage, stomach troubles, etc. In Persian and Arabian medicine pearls were said to cure all mental diseases. In Europe, so late as the seventeenth century, they were used as a remedy for insanity. A decoction of pearl powder in distilled water was one of the remedies given to the insane Charles, King of Spain. Cat. No. 143.135, U.S.N.M.

*Quartz*.—According to Hindu authorities, the crystal, worn as an amulet, removed baneful astral influences, cured biliousness, fever, and fistula, and was a specific for leprosy and consumption. In the Middle Ages it was given, in powder, for dysentery. A crystal held against the tongue assuaged the thirst of fevers, neutralized snake poison, and protected the wearer from drowning, fire, and thieves. Cat. No. 143.136, U.S.N.M.

*Turquoise*.—Worn as an amulet to protect from accident and to insure health and success; it was also said to protect from drowning, lightning, and snake bite. In Arabian and Persian medicine it was said to cure diseases of the head and heart, hernia, tumors, strictures, epilepsy, insanity, and cancer. In Egypt cataract is said to be cured by the local application of a turquoise which had been dipped in water, the application being accompanied by the chanting of the name Allah. Cat. No. 143.140, U.S.N.M.

*Zircon*.—A charm against plague, evil spirits, and lightning. Cat. No. 143.141, U.S.N.M.

*Cat's-eye*.—Applied to the throat for the relief of croup. Tied in the hair of parturient women to facilitate labor. In Hindu medicine the cat's-eye was said to be "warm and sour" and curative of cold, chronic derangement of the spleen, and colic. The Persians used the powdered stone as a remedy for dropsy. Cat. No. 143.124, U.S.N.M.

*Disk cut from a human skull.*—Found in Jung's Hill, near Florence, Nebr., 6 feet 2 inches from the surface, among other human bones, flint chips, and various Indian remains. Probably used as an amulet or fetich. Cat. No. 143,462, U.S.N.M.

*Deer's foot.*—For the cure of toothache, swellings, and itching eruptions. It is to be warmed and rubbed over the painful or swollen parts. Cat. No. 143,097, U.S.N.M.

*Snake slough.*—The epidermis of a snake. In England it is bound around the forehead and temples to cure headache. It is also used for extracting thorns. If the thorn is in the palm, the slough is applied to the back of the hand. Cat. No. 143,115, U.S.N.M.

*Belemnite.*—Regarded as a thunderbolt. Cat. No. 143,480, U.S.N.M.

*Lucky "holed stone."*—Cat. No. 143,481, U.S.N.M.

*Stone for curing cows of sickness.*—Cat. No. 143,482, U.S.N.M.

*Penny.*—A penny, bored, and worn as a charm. Cat. No. 143,483, U.S.N.M.

Miscellaneous medicinal and religious amulets, made in England, and used in trading with the natives of certain countries.

*Rosary.*—A trade rosary of carnelian. Cat. No. 143,463, U.S.N.M.

*Amulet for the Gold Coast of Africa.*—Cat. No. 143,464, U.S.N.M.

*Shell amulet for Madagascar.*—Cat. No. 143,465, U.S.N.M.

*Shell amulet for the Congo.*—Cat. No. 143,466, U.S.N.M.

*Tiger's tooth amulet for the Congo.*—Cat. No. 143,467, U.S.N.M.

*Leopard's tooth amulet for the Congo.*—Cat. No. 143,468, U.S.N.M.

*Glass cowries for the Congo.*—Cat. No. 143,469, U.S.N.M.

*Crescent beads for Zanzibar.*—Cat. No. 143,470, U.S.N.M.

*Glass amulet for India.*—Cat. No. 143,471, U.S.N.M.

*Glass amulet for the Soudan.*—Cat. No. 143,472, U.S.N.M.

*Carnelian beads for the Gold Coast.*—Cat. No. 143,473, U.S.N.M.

*Tubular beads for the Congo.*—Cat. No. 143,474, U.S.N.M.

*Pendant amulets for the Gold Coast.*—Cat. No. 143,475, U.S.N.M.

*Amber beads (curative) for Zanzibar.*—Cat. No. 143,476, U.S.N.M.

*Coral beads for the Congo.*—Cat. No. 143,478, U.S.N.M.

*Charm necklet for the Gold Coast.*—Cat. No. 143,479, U.S.N.M.

**Talismans.**—Images or other material objects, generally bearing cabalistic characters, words, or signs, supposed to work wonders whether kept in one's possession or not.

*Talismans.*—Small silver images of the whole or parts of the body, representing by form or attitude painful or diseased organs. These images are often hung in the churches in some countries, either as votive offerings after restoration to health, or as a material part of an invocation or appeal for Divine aid. (See fig. 5.) Cat. No. 73,945, U.S.N.M.

*Talisman.*—A small packet containing a chapter of the Koran, carefully folded, covered with leather, and protected from moisture by some resinous application. Used by the Soudanese warriors for protection against wounds and disease. Cat. No. 143,109, U.S.N.M.

**Fetiches.**—Material objects believed to be the dwelling of a spirit, or to represent a spirit, that may be induced or compelled to help the possessor.

*Zuni fetich.*—A clay image of the mountain lion. The spirit of the mountain lion guards the North, and is master of the gods of the hunt. The hunter

makes invocation to the indwelling spirit of this image for assistance in the pursuit and capture of game and for protection against injury. Cat. No. 128,669, U.S.N.M.

*Indian fetich.*—Carved out of a block of wood in imitation of a naked Indian in the attitude of, and probably impersonating, a quadruped. One of the articles composing the outfit of an Alaskan Indian medicine man. (See fig. 6.) Cat. No. 143,105, U.S.N.M.

*Fetich.*—A conical ball of clay about 3 inches long by 2 inches in greatest diameter. Used in the magic medicine of the Kroos of western Africa. Cat. No. 4,805, U.S.N.M.

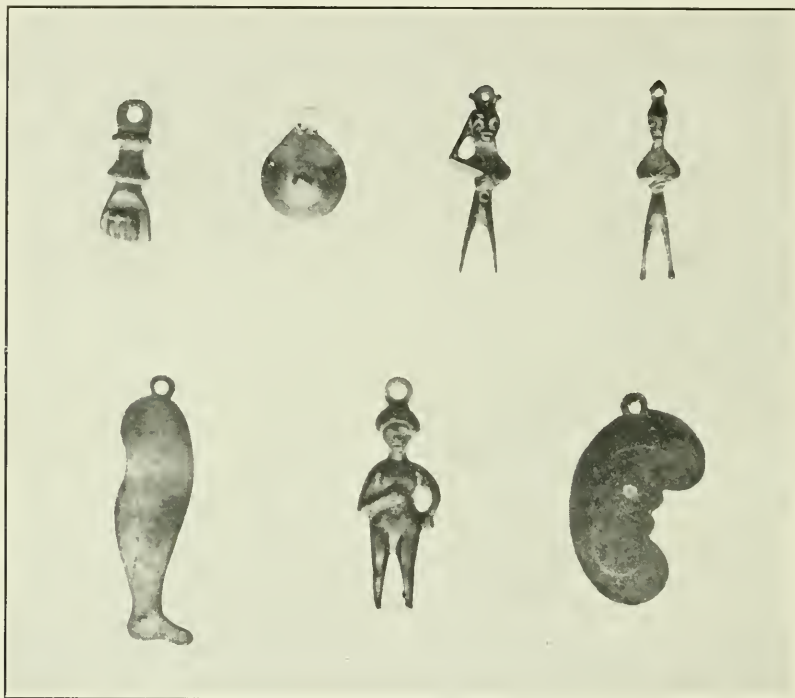


FIG. 5.--SMALL SILVER IMAGES.

*Cherokee fetich.*—A flint arrowhead is put into a decoction prepared for a vermifuge, in order that the indwelling spirit may communicate to the medicine the cutting quality of the stone, whereby the worms may be cut in pieces. Cat. No. 143,088, U.S.N.M.

**Transference of disease.**—One of the magic medical practices of all countries. "When disease was recognized, though tardily, to have positive existence, and the fact realized that, despite prayers and offerings, it might be mysteriously communicated by the sick to another person, \* \* \* without conscious act on his part. \* \* \* why might he not of purpose transfer his complaint to something of a lower order, which should suffer the disease in his place?" W. G. Black, in Folk-medicine.

*Section of a tree grown on the Government grounds near the naval hospital, Norfolk, Va.*—The tree had been tapped, human (negro) hair inserted in the hole, the hole plugged and sealed with clay. Four inches of new growth formed over the plug. Reckoning by count of the annual rings, the plug was inserted more than 50 years before it was found. The operation upon the tree was doubtless performed either (1) to relieve headache by transferring it to the tree by means of the hair; or (2) to cause pain in the head of the original possessor of the hair, the lock having been obtained by an enemy, placed in the hole made in the tree, and the plug driven down hard upon it.



FIG. 6.—INDIAN FETICH.

If you can get a few strands of your enemy's hair, bore a hole in a tree, put them in, and plug up the hole; you can thus give him a headache which can not be relieved until the hair is taken out of the tree. *Encyclopedia of Superstitions*. (See pl. 2.) Cat. No. 143.207, U.S.N.M.

*Disease transference.*—For warts: Rub the warts with a cinder; the cinder then to be tied up in a paper and dropped where four roads meet. The warts will be transferred to whoever opens the parcel. Berdoe, "The Origin and Growth of the Healing Art." Cat. No. 142.209, U.S.N.M.

**Signatures.**—Some outward sign appearing upon plants, minerals, and other objects, believed to point to their medicinal uses. This belief is very evident in oriental medical practice, and was prevalent in European countries up to the eighteenth century.



*Vegetable lamb; golden-haired dog; Tartarian lamb.*—The rhizome and base of the stipes of a fern (*Cibotium barometz*). The rhizome is densely covered with soft golden-brown hairs, and with the bases of the stipes for legs bears a rude resemblance to a small quadruped. It was one of the marvelous drugs of European pharmacy in the sixteenth and seventeenth centuries, and was believed to be a sort of plant animal. It was said to spring from a seed, and root in the earth like a plant, and to feed upon surrounding herbs like an animal, turning upon its root until it had devoured all within reach, when it perished from starvation. The rhizome is thought by the Chinese to be tonic and aphrodisiac. The fine hairs are an efficient styptic. (Fig. 7.) Cat. No. 142,607, U.S.N.M.

*Stalactites.*—“Moreover this stone, reduced to a fine powder and one ounce of it given inwardly, is wont efficaciously to provoke sweat; and in bones

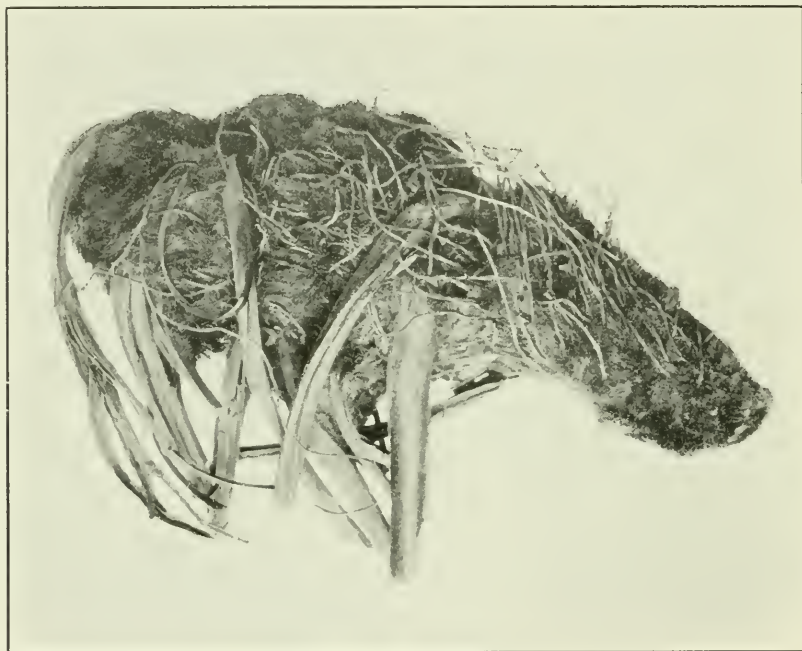


FIG. 7.—VEGETABLE LAMB.

broke, being externally applied, mixed with convenient playsters, it is exceedingly helpful. If by the benefit of distilled vinegar, it be resolved into a salt, in the stone and knotted podagrical effects, by reason of its signature it efficaciously operates.” (Crollius, Treatise of Signatures, 1669.) Cat. No. 49,357, U.S.N.M.

*Walnuts.*—“Walnuts have an entire signature of the head; the exterior rinde, or herby encompassment, of the pericranium: Wherefore salt of the rindes, for wounds of the pericranium, is a singular remedy. The interior hard rinde, or woody shell, of the cranium. The thin skin encompassing the kernel, of the skin and membranes of the brain. The kernel hath the figure of the brain itself: Therefore it is also helpful to the brain. For if the kernel beaten be moistened with the quintessence of wine, and applied to the crown of the head, it comforts the brain and head wonderfully.” (Crollius, Treatise of Signatures.) Cat. No. 143,089, U.S.N.M.

**Evil eye.**—The belief in the power of some persons to bring misfortune, sickness, and even death to men or animals by gazing at them, is one of the most ancient, widespread, and persistent of human superstitions. This belief was, and is universal among savage races everywhere; it was sanctioned by the classical authors, the fathers of the church, the medieval physicians, and is still a matter of implicit faith with the people of many countries. In former days, in England, people supposed to have the evil eye, were put to death, and so late as the seventeenth century two women, who were believed to have fascinated and thereby caused the death of the Earl and Countess of Rutland and their children, were executed. Every form of magic has been resorted to for defense against the evil eye, and objects innumerable, both natural and artificial, have been credited with this power.

*Horns.*—Horns, in one form or another, of all objects, the most common defense against the evil eye. The people of Senegal, Palestine, Greece, Holland, the Druses of Lebanon, the Jewesses of Tunis, the women of South America, the North American Indians, the Belgians and Saxons of old, all wore horns on their heads in some manner, on headdresses or helmets, to ward off that awful, universal, unescapable, mystic glance that has continually harassed man in all quarters of the globe. (See pl. 2.) Cat. No. 143,503, U.S.N.M.

*Amulet.*—A silver image of a merman, or Triton, with the body of a man and the tail of a fish. One of many variations of amulet almost universally worn by Italian children for protection from the evil eye and from sickness and accidents in general. In this form perhaps specifically to protect from drownings, Cat. No. 143,501, U.S.N.M.

*Charms.*—The charms illustrated in figure 8 are made in England for the Italian market where they are in general demand by the people, especially for the protection of children, who are supposed to be peculiarly susceptible to the evil eye. Cat. Nos. 143,484–143,487, U.S.N.M.

**Sympathetical cures.**—A curious chapter in the history of medicine is found in the popular belief in "sympathetical cures," which prevailed in England during the reigns of James I and Charles I.

*Sympathetic powder—Calcined copper sulphate.*—Powder formerly supposed to have the property of curing a wound, if applied to the weapon inflicting it, or a piece of the bloodstained garment. This method of healing was in high repute during the seventeenth century, and learned essays were written to prove that the unquestioned effects produced by the powder were neither diabolical nor magical but were caused by a peculiar emanation, which they called "magnetick."

"The method, and primitive manner how to make use of this sympathetical remedy, was to take onely some vitriol, and dissolve it in raine water, in such proportion, that putting therein a knife, or some polished iron, it should come out changed to the color of copper; and into this water they did put a rag of cloth embrued with the blood of the party hurt. And every time that one put new water of vitriol with fresh powder and new cloth, or other bloudied stuff, the patient should feel new easement as if the wound had been dressed with some sovereign medicament."

Sir Kenelmee Digby, "Touching the cure of wounds by powder of sympathy;" and J. B. Van Helmont, "A ternary of paradoxes." Cat. No. 143.504, U.S.N.M.

### PSYCHIC MEDICINE

Psychic, or mind, medicine is a general term applied to methods of treating disease through mental impressions. States of mind are induced, or mental qualities stimulated to such a degree as to modify physiological function, and through such modified function even to produce tissue change. Confidence, hope, faith, are aroused, the

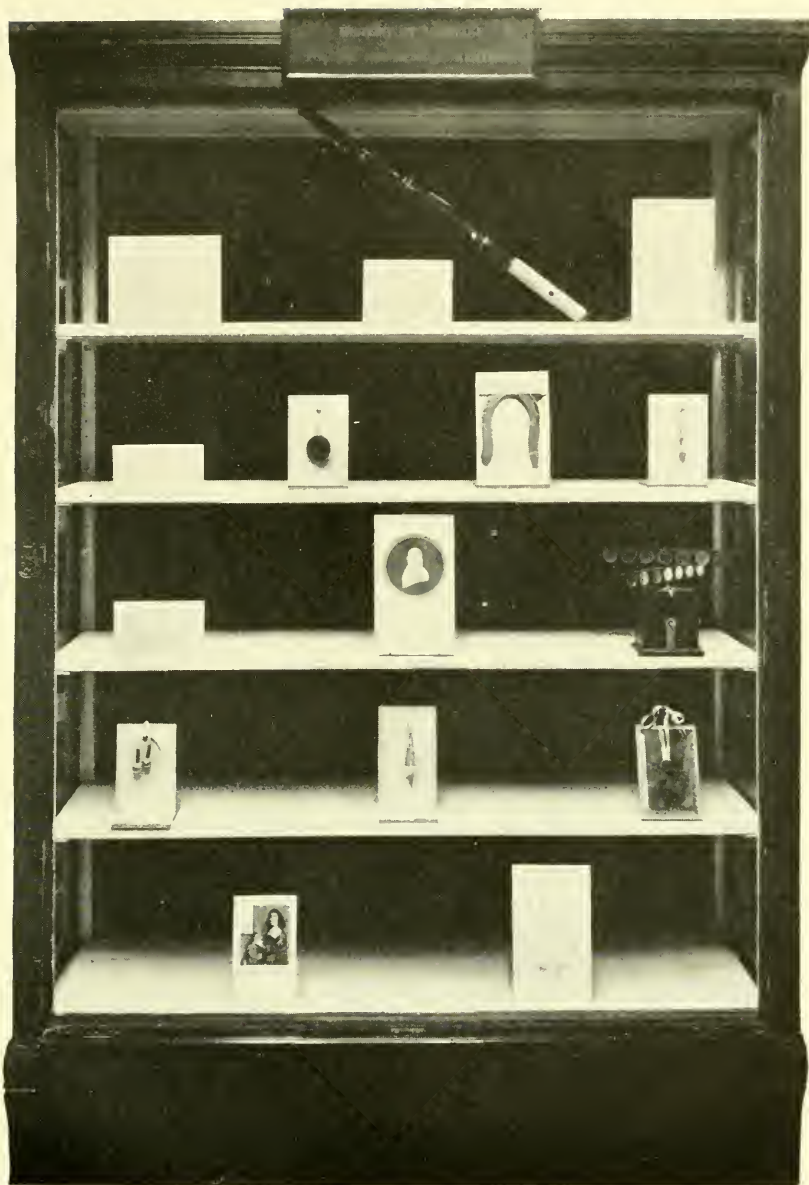


FIG. 8.—CHARMS WORN FOR PROTECTION AGAINST THE EVIL EYE.

imagination excited, the attention fixed by suggestion or individual effort, or certain peculiar mental conditions induced which are known by the names of mind healing, faith cure, mesmerism, hypnotism, etc.

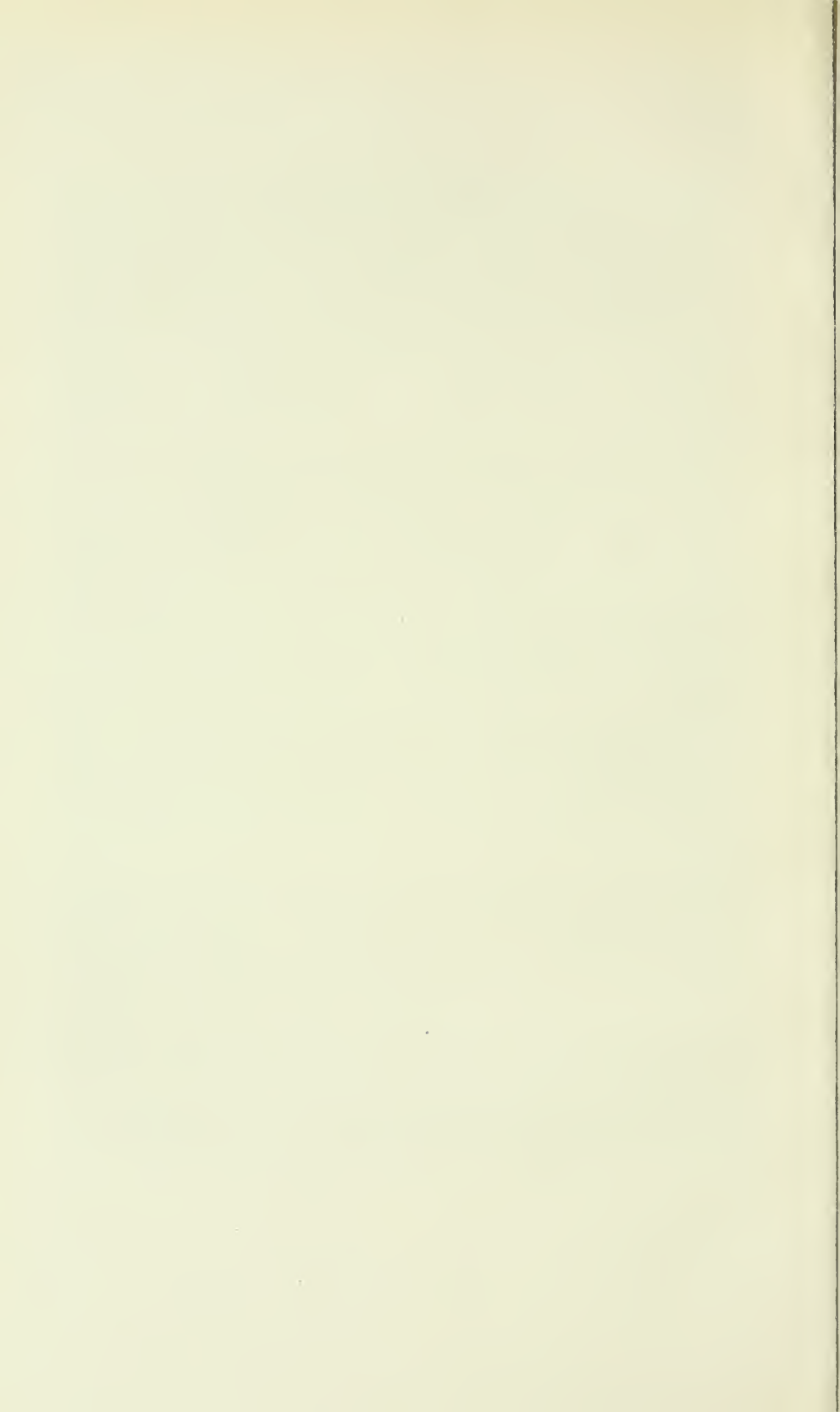
All these psychic conditions may be established by sensory impressions, as by music (incantations), visual objects to fix the attention, eyestrain to modify consciousness, by manipulation, by personal influence (magnetism) of the mind doctor, or by mental effort on the part of the patient.

Since these methods rarely call for paraphernalia, implements, or apparatus of any kind, but are merely ceremonial, it is not possible to illustrate this form of medicine, except by a few objects.



MEDICAL EXHIBITS—PSYCHIC MEDICINE

FOR DESCRIPTION OF PLATE SEE PAGE 16



**Music.**—The use of instrumental music in the treatment of disease is of very ancient origin. David is said to have cured Saul of an attack of melancholia (mania) by playing on the harp in his presence. The eminent Greek physicians Pythagorus, Hippocrates, Theophrastus, Galen, and others of renown recommended it.

Jean Battiste Porta, in the sixteenth century, advised that musical instruments be made of wood of medicinal plants, and affirmed that the music of these instruments would produce the medicinal effects of the plants.



FIG. 9.—EGYPTIAN HARP.

In later times it is said to have been successfully used in the treatment of the delirium of fevers, the plague, gout, poisoned wounds, to mitigate the pain of surgical operations, and especially in nervous affections such as hysteria and melancholia. It is found to be beneficial in the management of the insane, and musical entertainments are frequent in all modern institutions for their treatment.

*Egyptian Harp.*—From a wall painting in a tomb at Thebes. The harp illustrated in Figure 9 probably represents a larger and more elaborate form of the musical instrument used by David for the relief of Saul during an attack of melancholia.

“But the spirit of the Lord departed from Saul, and an evil spirit from the Lord troubled him. And it came to pass, when the evil spirit from God

was upon Saul, that David took an harp and played with his hand: so Saul was refreshed and was well, and the evil spirit departed from him." (Sammel. xvi, 14-23.) Cat. No. 143,505. U.S.N.M.

**Metallotherapy.**—A method of curing disease by the application of metallic substances to the surface of the body. It has been advocated from the time of the middle ages to the present, principally as a prophylactic and a remedy for distinctly nervous diseases. In most instances this method of therapy falls under the head of mind medicine, appealing to the credulity and imagination of the patient.

*Copper.*—A plate of copper to be worn as a preventive of cholera, and a remedy for facial neuralgia and other nervous affections. Commonly used in Europe in the early part of the nineteenth century. (See pl. 3.) Cat. No. 143,149, U.S.N.M.

*Mercury.*—A small tube filled with mercury, worn suspended from the neck as a protection from the cholera. Said to have been used by many people in Germany during the first half of the nineteenth century. The custom had its origin in the immunity of workmen in quicksilver mines during an epidemic of cholera. Cat. No. 143,147, U.S.N.M.

*Horseshoe.*—There are many superstitions connected with the horseshoe, but in metallotherapeutics the healing effects of an old horseshoe were attributed to the magnetic quality acquired by long beating upon stony roads or pavements. It was believed to be a sovereign remedy for cramps, and was to be kept at the bedside where it could readily be seized in case of an attack. Cat. No. 143,148, U.S.N.M.

**Laying on of hands.**—Figure 10 is a copy of an illustration from "The Miraculous Conformist, or an Account of Marvailous Cures Performed by the Stroking of the Hands of Mr. Valentine Greatarick."

Valentine Greatarick, born in Ireland, attained great reputation, about the middle of the seventeenth century, by his marvelous cures of diseases by stroking with the hands. At first he confined his efforts to the cure of scrofula, or "King's evil;" subsequently he successfully treated patients with many other diseases, such as apoplexy, convulsions, palsy, etc.

"I saw him Stroke a man for a great and settled paine in his left Shoulder, which rendered his Arme uselesse: upon his stroking it the pain removed instantly into the end of the Musculus Deltodes: being stroked there, it returned to the Shoulder again: thence (upon a second stroking) it flew to the elbow, thence to the wrist, thence to the shoulder again; and thence to the fingers: whence it went out upon his last stroking, so as that he moved his arme vigorously every way."

By Henry Stubbe, physician, Oxford, 1666. Cat. No. 143,506, U.S.N.M.

**Royal touch.**—A mode of healing said to have originated with Edward the Confessor. (1004-1066.) It was practiced by suc-

ceeding kings and queens of England, with occasional exceptions, down to Queen Anne. (1664–1714.) A register of persons touched by King Charles II. from May, 1662, to April, 1682, gives the number at 92,107. Healing by touch was also practiced by the French kings, and it is claimed by some French historians that the custom originated in France. Until the time of Henry VII no peculiar ceremonies attended the practice of healing by touch. This monarch established a special religious service to be employed at the healings, during which a piece of gold (touchpiece) was presented to the patient, to be worn as an amulet suspended from the neck.



FIG. 10.—LAYING ON OF HANDS.

The ceremony of touching for scrofula, or King's evil, as practiced by Charles II, is described by Evelyn in his memoirs as follows:

“July 6. 1660. His majestie sitting under his state in ye banquetting house, the chirurgeons cause the sick to be brought, or led up to the throne, where they kneeling, ye king strokes their faces or cheeks with both his hands at once, at which time a chaplaine in his formalities says: ‘He put his hands upon them and he healed them.’ This is said to everyone in particular. When they have all been touched they come up againe in the same order, and the other chaplaine kneeling, and having angel gold strung on white ribbon



on his arme, delivers them one by one to his majestie, who puts them about the necks of the touched as they passe, while the first chaplaine repeats, 'That is ye true light who came into ye world.' Then follows an epistle (as at first a gossell) with the liturgy, prayers for the sick; lastly ye blessing; and then the lord, chamberlaine and comptroller of the household, brings a basin, ewer and towel, for his majesty to wash."

*Touchpicce.*—A gold coin of the time of Charles II of England, such as was used by that king in the ceremony of "touching" for the cure of scrofula, or

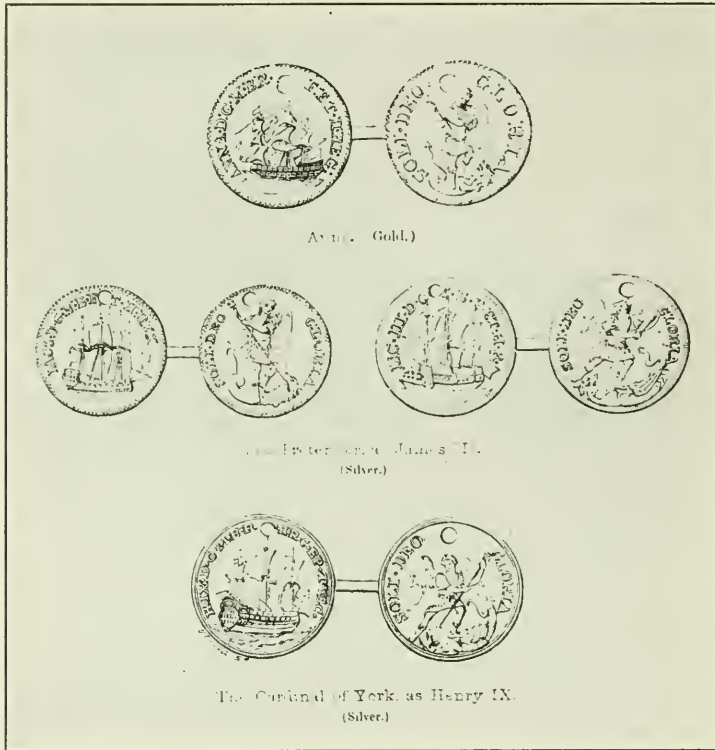


FIG. 11.—TOUCHPIECES FOR DISTRIBUTION AT THE HEALINGS.

King's evil. About four-fifths of an inch in diameter, bearing on one side figures of Saint George and the Dragon and the legend "Soli deo Gloria;" on the other a figure of a ship under sail, with the legend "Car. II, DG. M. B. FR. ET. HI. REX." Cat. No. 143,199, U.S.N.M.

**Hypnotism.**—Animal magnetism, mesmerism, somnambulism, trance, ecstasy. An artificially produced or self-induced mental state, in which the mind becomes more or less passive, and both consciousness and will may be controlled or abolished by the influence of command or suggestion. The mental impressions made by the senses may be perverted or enfeebled or interrupted, muscular ir-

ritability greatly increased, and various and often remarkable nervous phenomena exhibited. As one of the magic arts it was practiced by the ancient Egyptians, Hindus, and Greeks; as a demoniacal possession, or a miraculous interposition of Divine Providence, it is familiar in the religious history of every nation and period of time.

Friedrich Anton Mesmer. Born in Weil, Germany, in the year 1733; died in the year 1815. He gave the name to that form of psychic medicine known as mesmerism or hypnotism. At first he effected cures by stroking the diseased parts of the body with magnets. Afterward, with the aid of the mysterious surroundings of the pro-

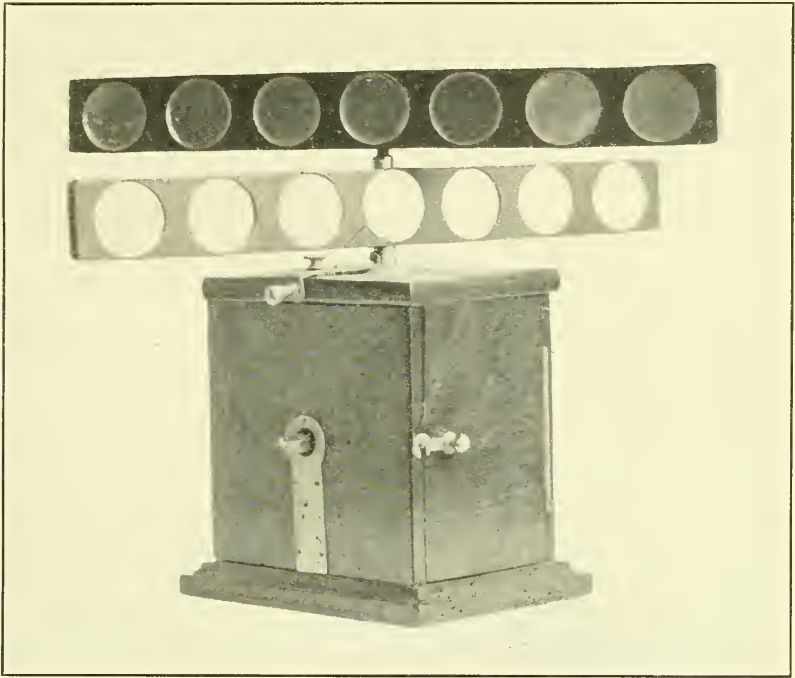


FIG. 12.—MIRROR HYPNOTIZER.

fessed magician, he produced upon his patients the well-known nervous phenomena of hypnotism by a touch, by "passes" with his hands, or even by a look. Though many of his methods were those of the charlatan, yet the effects produced were real, and were attributed by him to what he called animal magnetism, and not to any form of magic. (See pl. 3.) Cat. No. 143.151, U.S.N.M.

*Mirror hypnotizer.*—Consists of two wooden arms about 9 inches long, in each of which are set circular mirrors, seven on each side. The two arms are made to revolve in opposite directions by means of clockwork. Some subjects are peculiarly susceptible to the dazzling effect of the revolving mirrors, especially those who have been hypnotized before. (See "Man and Abnormal Man," Arthur MacDonal, p. 189.) (Fig. 12.) Cat. No. 143.204, U.S.N.M.

*Ball hypnotizer.*—A polished nickel-plated ball mounted on a lead wire. The wire is intended for attachment to a headband, and being of lead it may readily be bent to a position a little above the level of the eyes of the subject and slightly within the natural focal distance, so as to produce a certain amount of eyestrain and consequent fatigue of the ocular muscles. The effect of this and other instruments of the kind are usually intensified by "suggestion" on the part of the operator. Cat. No. 143,205, U.S.N.M.

*Glass refractor.*—One of the means used to induce the condition of hypnotism. The subject is directed to gaze fixedly at a faceted piece of glass, or other bright object, held about 8 inches from the eyes, and above the line of horizontal vision. The fixed attention, together with the eyestrain, are sufficient to excite in some persons the peculiar psychic phenomena known as hypnotism or mesmerism. Cat. No. 143,090, U.S.N.M.

#### EGYPTIAN MEDICINE.

Egyptian medicine is the earliest of which there is a written record, dating as far back as 1550 B. C. In its prehistoric stage, it was doubtless founded on superstition and practiced by magic arts. In its earliest historic period, the sick were taken to the market place "that all who pass by, and have had or seen the like distemper, may give them advice." Later, medicine developed into an orderly system, and at an early historic period, the knowledge of disease and remedies had become quite extensive.

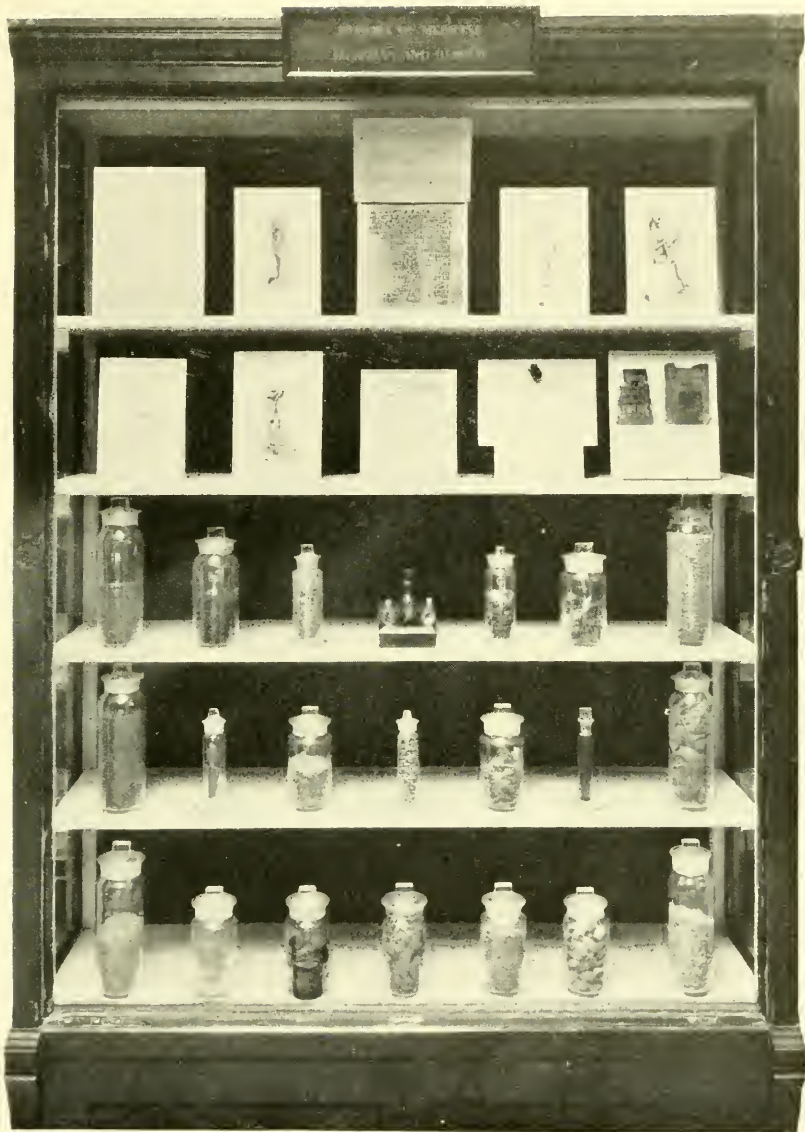
The chief sources of knowledge of Egyptian medicine are the writings of Herodotus (about 480 B. C.), Diodorus Siculus (about 40 B. C.), Galen (130–200 A. D.), and Clement of Alexandria (about 220 A. D.), supplemented by several very ancient papyri, relating to medicine, found in Egyptian tombs.

Like other arts and sciences, medicine was supposed to have originated with the mythological deities of the country, notably Thoth, Osiris, Isis, Horus, and Imhotep. It was practiced in large part by the priesthood of these divinities, and consequently the preparation and administration of remedies were generally accompanied by incantations and invocations, though the practice of the strictly magic arts was severely interdicted. The "Hermetic" medical books, having been given out by the God Thoth, came to be regarded as sacred and any deviation from their rules as sacrilege.

In process of time, the doctors became divided minutely into specialists, until, as Herodotus states:

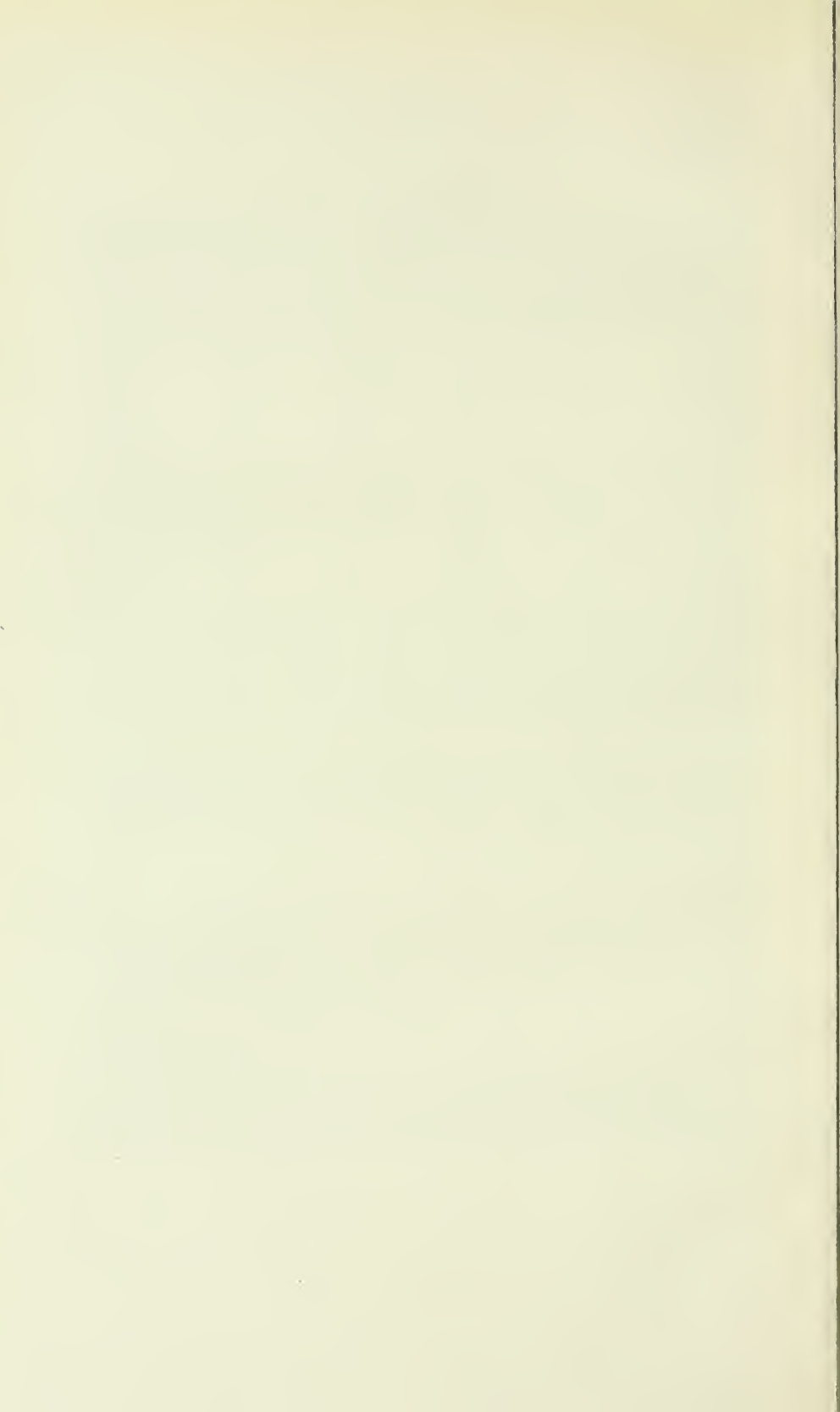
"The art of medicine is so practiced in Egypt that there is found an individual healer for each individual disease; hence, the whole country is filled with healers."

Many drugs—animal, vegetable, and mineral—were used, of which several hundred are mentioned in existing papyri. Only a few of these can be positively identified. Some of them are of known therapeutic value; others inert; and some are strange and repulsive.



EXHIBITS OF ANCIENT EGYPTIAN MEDICINE

FOR DESCRIPTION OF PLATE SEE PAGE 22



The ancient Egyptians were skilled in pharmacy, which art was said to have been communicated by Horus, to whom it was taught by his mother, Isis. The papyri contains numerous formulæ, many of them complex, in style quite like prescriptions of the present day.

The records give evidence of considerable expertness in operative surgery, such operations as venesection, circumcision, castration, and even lithotomy and amputation being mentioned. As oculists, the Egyptians were noted, and Herodotus states that "Cyrus sent to Amasis (500 B. C.) and had for him an oculist—the best in the whole land of Egypt."

Old Egyptian medicine began to decline, with the first influx of foreigners, during the seventh century B. C., and the beginning of the end came when Amasis (570–526 B. C.) received the Greeks

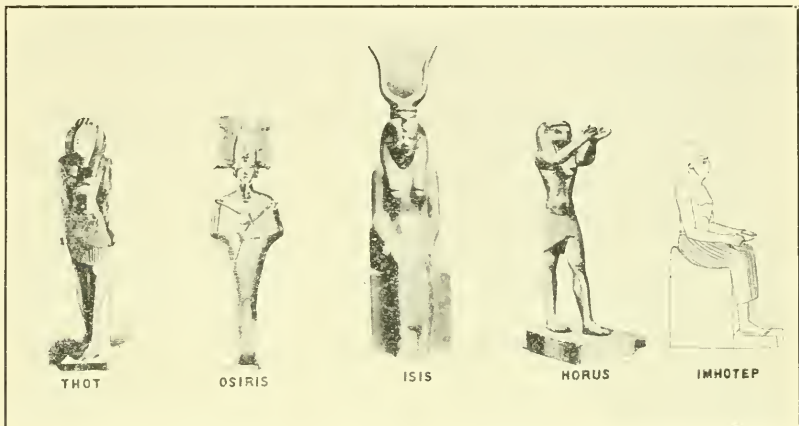


FIG. 13.—THOT, OSIRIS, ISIS, HORUS, IMHOTEP.

into the country. It entirely vanished before the Greek system, or survived only as a wretched abortion of magic and sorcery.

*Thot (Thoth, Tot, Althothis).*—The God of Wisdom. Identified by the Greeks and Romans with Hermes and Mercury. All of the arts and sciences emanated from him, including medicine, astronomy, and magic. Through his body flowed the mysterious fluid "Sa," carrying life and health, which he could communicate to human beings. On his wings of an ibis, he was able to bear the souls of the dead over the lake of Rha to the shores of Paradise. He was author of 36 "Hermetic books," of which six pertained to medicine, as follows: 1. Anatomy; 2. General diseases; 3. Surgical instruments; 4. Medicine; 5. Diseases of the eye; 6. Diseases of women. (Fig. 13.) Cat. No. 143.330, U.S.N.M.

*Osiris (Apis, or Scapis).*—An Egyptian god. Osiris and Isis, his wife and sister, are said to have invented the arts which are necessary to life, including agriculture and medicine. (Fig. 13.) Cat. No. 143.333, U.S.N.M.

*Isis.*—An Egyptian goddess, wife and sister of Osiris and mother of Horus. The chief divinity of the healing art, the goddess of procreation and birth. She invented many medicaments and "was very expert in physick." Being

raised to the dignity of goddess, she still takes care of the health of men, and "those who implore her succor find themselves immediately relieved." She was called the Lady of Enchantments, having originated many of the charms and invocations used in the Egyptian practice of medicine. (See fig. 13.) Cat. No. 143,331. U.S.N.M.

*Horus*.—Son of Osiris and Isis. One of the founders of the art of medicine. Having been put to death by Set, he was restored to life by his mother, Isis, who later revealed to him the secrets of pharmacy. He was called the God of Divination, which he also learned of his mother. He is represented with the head of a hawk. (See fig. 13.) Cat. No. 143,334. U.S.N.M.

*Imhotep; I-em-hotep*.—A learned physician, probably a priest of Ra, the sun god. He lived during the third dynasty, about 3,500 years B. C. In the course of ages he was deified as the special God of Medicine. His name I-em-hotep, is translated "He who cometh in peace," and he is described as the good physician of gods and men, kind and merciful, assuaging the sufferings of those in pain, healing the diseases of men, and giving peaceful sleep to the restless. His great temple stood outside the eastern wall of Memphis, near the Serapeum. (See fig. 13.) Cat. No. 143,332. U.S.N.M.

*Papyrus Ebers*.—The Papyrus Ebers is a treatise on materia medica, pharmacy, and therapeutics, one of the oldest known medical works; written 1,552 years before the Christian era, in the time of Moses, and before the exodus of the Israelites from Egypt. It was found near the necropolis of Thebes, in Upper Egypt, in 1872.

Written in Hieratic characters upon a kind of paper prepared from the papyrus plant, in a sheet 12 inches wide and 100 feet long closely rolled into a scroll.

It contains references to many drugs, animal, vegetable, and mineral, and gives numerous formulæ for the compounding of medicine and the therapeutical indications for their use.

Among the animals mentioned are: The buffalo, stag, ox, pig, camel, ram, dog, crocodile, bat, goose, tortoise, beetles, and flies.

Among the plants: Acacia, sweet flag, wormwood, myrrh, frankincense, coriander, saffron, cumin, citron, henbane, juniper, lettuce, flax, mandrake, olive, pomegranate, castor-oil plant, willow, sesamum, and fenugreek.

Among the minerals: Sea salt, niter, charcoal, lead, bronze, antimony, copper, lapis lazuli, and sapphire.

Miscellaneous remedies: Blood, human brains, urine, feces, genitals of cats, various oils, stale beer, honey, wine, milk, yeast, eggs, and wax.

Therapeutics: Mention is made of purgatives, anthelmintics, tonics, antilithics, abortives; remedies for diseases of the stomach and heart, for fistula, hemorrhoids, strangury, hemierania, diarrhea, conjunctivitis, cataract, inflamed eyes, granular lids, baldness, cancer, gangrene, boils, toothache, erysipelas, eruptive diseases, various diseases of women; as well as instructions for bandaging wounds, the operation for stone, foetal extraction, removal of tumors, etc. In all showing careful observation of diseases and intelligent application of remedies.

The work also contains proof that the ancient Egyptians were tolerably well versed in superficial anatomy for nearly all parts of the human frame are mentioned as well as the larger viscera. (See fig. 14.) Cat. No. 143,511. U.S.N.M.

*Prescription from the Papyrus Ebers*.—Written about 1552 B. C., in the hieratic (script) writing of that period, with translations into hieroglyphic Egyptian, phonetic English, and literal English. (See fig. 15.) Cat. No. 143,325. U.S.N.M.

*Egyptian medicine chest and stone case.*—Picture of a medicine chest of the wife of Pharaoh Mento-hotep, of the XI dynasty, 2500 B. C., and the stone case in which it was found in the queen's tomb. The chest contained six vases, one of alabaster and five of serpentine, with dried remnants of drugs, two spoons, a piece of linen cloth, and some roots, inclosed in a basket of straw work. (See fig. 16.) Cat. No. 143,512, U.S.N.M.

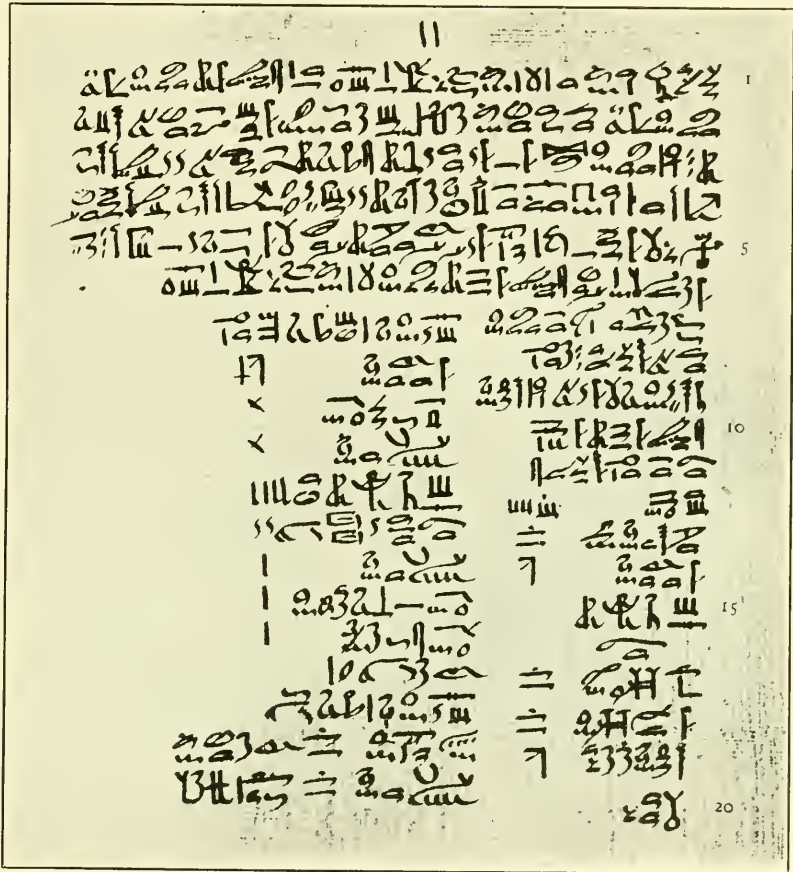


FIG. 14.—A PHOTOGRAPHIC COPY OF A SECTION OF THE PAPYRUS EBERS, REDUCED IN SIZE, TAKEN FROM A FACSIMILE, IN COLORS, OF THE ORIGINAL.

Some medicinal materials of the ancient Egyptians.—The Papyrus Ebers was supposed by its discoverer to have been compiled about the time when Moses was living in Egypt, a century before the Exodus. While the Jews were captives in Egypt it is reasonable to suspect similarity in their materia medica and that of the Egyptians of about the same period. This similarity is evident, passages from the Old Testament of the Bible referring to many of the medicinal substances mentioned in the Papyrus Ebers.



A few of these ancient drugs which are well known, and used up to the present time, are included in the historical collection.

*Mastich.*—A resinous exudation from *Pistacia lentiscus*, a shrub or small tree growing on the shores and islands of the Mediterranean. It was one of the ingredients of "kyphi" much used by the Egyptians for fumigations. Cat. No. 49,963, U.S.N.M.

*Saffron.*—The stigmas of *Crocus sativus*. Saffron is a very ancient drug mentioned by Solomon, Homer, Hippocrates, and Virgil. It was an article of traffic on the Red Sea in the first century. It entered into the composition of all sorts of medicine, external and internal, and was used as a condiment and perfume. Severest penalties, even death, were inflicted on those guilty of its

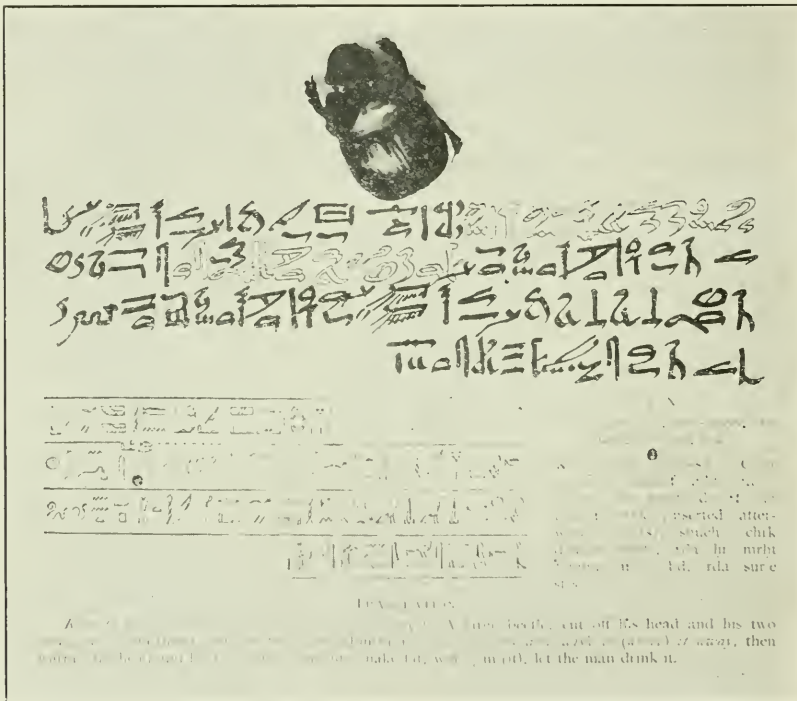


FIG. 15.—PRESCRIPTION FROM THE PAPYRUS EBERS.

sophistication. Its use in modern medicine is as a coloring agent only. Cat. No. 50,222, U.S.N.M.

*Fenugreek.*—Seeds. Believed to have been an ingredient of the Egyptian preparation kyphi. It is still among the official drugs of some of the European pharmacopoeias. Cat. No. 50,248, U.S.N.M.

*Squill.*—The bulb of *Urginea maritima*.—Called by the Egyptians the "Eye of Typhon." A highly esteemed remedy for dropsy. Cat. No. 50,259, U.S.N.M.

*Galbanum.*—A gum resin obtained from *Ferula galbaniflua* Boisson and Buhse, a plant growing in Persia and India. It was an ingredient of the incense used in the form of worship of the ancient Israelites; is mentioned by the earliest Greek medical writers; was well known to the Arabians under the name of "kinnah," and is still recognized by many of the European pharmacopoeias. Cat. No. 50,533, U.S.N.M.

*Flaxseed*.—The seed of *Linum usitatissimum*, common flax. The seed was used for food by the Egyptians, Greeks, Romans, and other ancient peoples. Cat. No. 51,380, U.S.N.M.

*Sesame*.—The seeds of *Sesamum indicum*, native of India, cultivated in all warm countries. The Egyptian name, "Sensent," occurs in the Papyrus Ebers, from which name is derived the Coptic "Semsem," the Arabic "Simsim," and the modern "Sesamum." Largely consumed as food; the oil is used for the same purposes as olive oil. The leaves are mucilaginous. Cat. No. 52,162, U.S.N.M.

*Lign-aloës*.—The fragrant resinous wood of the eagle tree of India, *Aquilaria agallocha*. Used as incense, and in embalming the dead. "All thy garments smell of myrrh, and aloes and cassia." Psalms, xlv, 8. "How goodly are thy tents, O Jacob, and thy tabernacles, O Israel. As the valleys are they spread forth. \* \* \* as the trees of lign-aloës which the Lord hath planted \* \* \*." Numbers, xxiv, 5-6. Cat. No. 52,173, U.S.N.M.

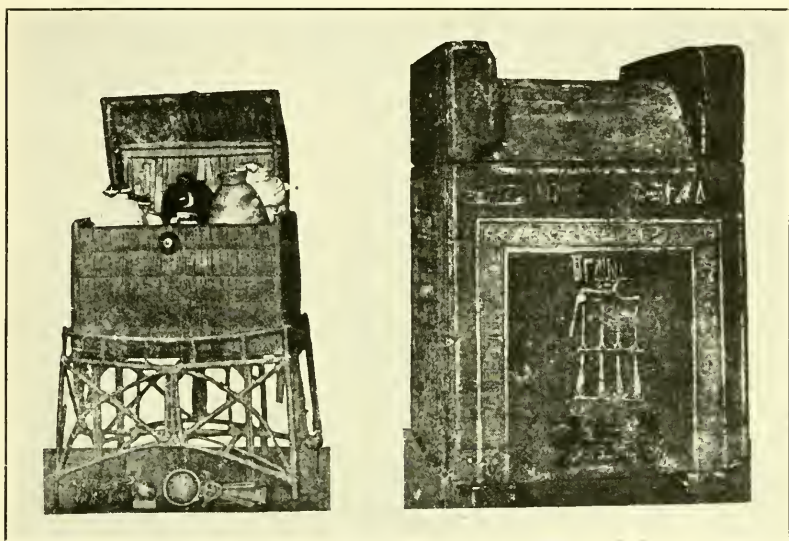


FIG. 16.—EGYPTIAN MEDICINE CHEST AND STONE CASE.

*Castor-oil seeds*.—The seeds of *Ricinus communis*, native of India, early cultivated in Egypt. The seeds have been found in ancient Egyptian tombs. The plant is believed by some to be the same mentioned in the book of Jonah, iv, 6, under the name of "gourd." The plant was introduced from Egypt into Greece where the oil of the seeds was used extensively in medicine, as well as for burning in lamps. Cat. No. 52,177, U.S.N.M.

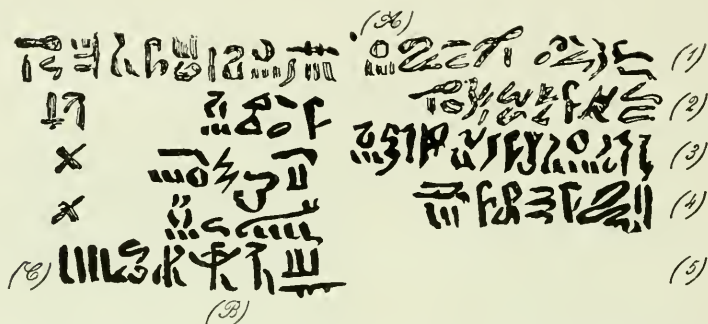
*Bartley*.—The seeds of *Hordeum hexastichon*, indigenous to western Asia; cultivated everywhere. It is mentioned in the Bible as a cultivated grain in Egypt and Syria. Cat. No. 52,393, U.S.N.M.

*Cyperus*.—The root of various species of *Cyperus*. Used by the Egyptians for snake bites and for the retention of urine; bruised or mixed with wine or vinegar it was applied as a poultice. Cat. No. 52,521, U.S.N.M.

*Pomegranate*.—The rind of the fruit of *Punica granatum*, a low tree grown in India, Palestine, and neighboring countries. There are many representations of the fruit on the ancient monuments of Egypt, and it is frequently

referred to in the Scriptures. The pulp of the fruit is edible; the peel is an efficient astringent. Cat. No. 52,535, U.S.N.M.

*Frankincense*.—A fragrant gum resin obtained from various species of *Boswellia* trees, natives of eastern Africa and southern Arabia. Paintings, dating from the seventeenth century B. C., illustrating the traffic in this drug, have been found in the temples of Upper Egypt. It was one of the gifts of the Magi to the infant Saviour. It was, and still is, an essential ingredient of "incense" as used in religious ceremonies. Fumigation with fragrant drugs, of which frankincense was one of the most important, was one of the principal remedial and preventive measures in the treatment of disease by the ancient Egyptians and Hebrews. Cat. No. 52,559, U.S.N.M.



THE ABOVE TRANSLATED INTO THE HIEROGLYPHIC CHARACTER.

		(1)
<i>Medicine for opening the bowels</i>	<i>Beginning of the Book of the Medicine</i>	
		(2)
<i>Milk</i>	<i>To cure the sickness of the bowels</i>	
		(3)
<i>Skeaut (?) Pulverized 1/2 drachme</i>	<i>(seeds of the) The hui plant rubbed up with Vinegar</i>	
		(4)
<i>Honey</i>	<i>To be drunk by the patient</i>	
		(5)
<i>Cook pour out, eat for four days.</i>		

FIG. 17.—FIVE LINES FROM THE PAPYRUS EBERS, WITH TRANSLATIONS INTO HIEROGLYPHIC CHARACTERS AND INTO ENGLISH.

*Coriander*.—The fruit of *Coriandrum sativum*. The knowledge of this drug is of very great antiquity, being mentioned in the Papyrus Ebers, and by the early Sanskrit writers, as well as in the Bible. It was used both as a condiment and a medicine. Cat. No. 52,659, U.S.N.M.

*Medicine vials*.—Made by the inhabitants of Palestine. Used for dispensing medicines. (Fig. 18.) Cat. No. 143,168, U.S.N.M.

*Gum arabic*.—A gummy exudation from various species of *Acacia*. It is recorded that this drug was an article of Egyptian commerce as early as the seventeenth century, B. C. Cat. No. 52,811, U.S.N.M.

*Balm of Gilead*.—An aromatic resin which flows from the trunk of *Commiphora opobalsamum*. Used for its perfume as well as its healing virtues.

"Is there no balm in Gilead: is there no physician there? Why then is not the health of my people recovered?" Jeremiah viii, 22. Cat. No. 53,380, U.S.N.M.

*Myrrh*.—A gum resin. This was one of the many constituents of the celebrated kyphi of the Egyptians, used in fumigations, medicine, and the process of embalming. It was an ingredient of the "holy oil" of the Jewish ceremonial as directed by Moses. It is also mentioned in the Bible among the articles used in the purification of women, as an emblem of purity, as a perfume, and one of the substances used in embalming. Cat. No. 141,681, U.S.N.M.

*Cumin*.—The fruit of *Cuminum cyminum*, indigenous to the region of the upper Nile, early cultivated throughout the east. It is well known to the ancients and is mentioned in both the Old and the New Testament. It was one of the most commonly used spices during the Middle Ages and is found in the drug markets of the present time. Cat. No. 142,259, U.S.N.M.

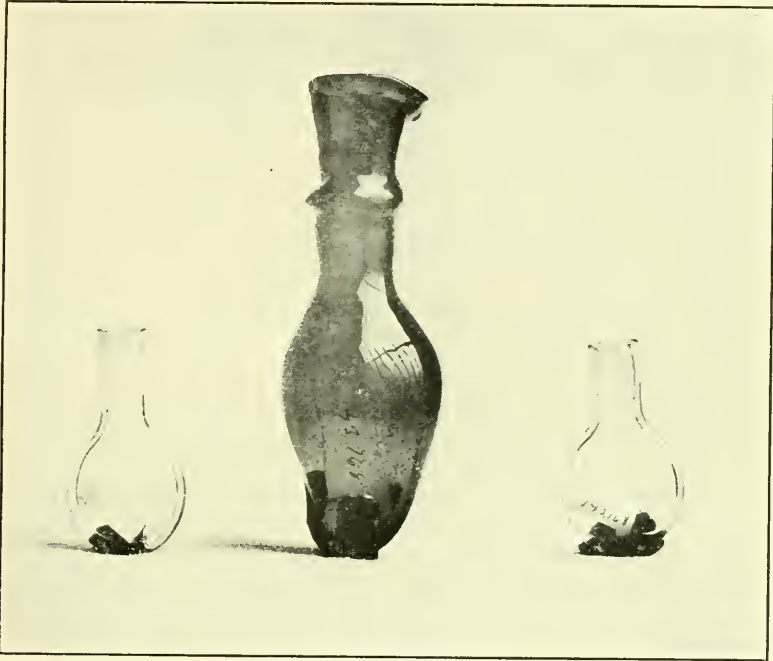


FIG. 18.—MEDICINE VIALS.

*Almonds*.—The seeds of the almond tree, *Prunus amygdalus*, native of western Asia, early introduced and cultivated in northern Africa and southern Europe. Mentioned in the Book of Genesis (xliii, 11) where it is stated that the patriarch Israel commanded his sons to carry with them into Egypt a present consisting of the productions of Palestine, one of which was almonds. Cat. No. 143,197, U.S.N.M.

*Figs*.—The fruit of *Ficus carica*, native of western Asia, extensively cultivated. The fig tree is the first plant mentioned by name in the Bible (Genesis iii, 7). The fruit was an important article of food for the Hebrews and was also used medicinally. "For Isaiah had said, let them take a lump of figs and lay it for a plaister upon the boil, and he shall recover." Isaiah xxxviii, 21. Cat. No. 143,198, U.S.N.M.

## GREEK AND ROMAN MEDICINE

The primitive period of Greek medicine is mostly mythical. It begins with Melampus (about 1,400 years B. C.) and ends with Hippocrates (460 B. C.). The most prominent character during this period was Aesculapius, reputed son of Apollo and Coronis. As the god of medicine he was worshipped by Greeks and Romans everywhere. Temples were erected in his honor and served by a priesthood of his descendants, called Aesclepiadae. The sick were brought to these temples, prayers and sacrifices offered, and treatment prescribed as indicated by dreams or signs given in answer to the prayers and sacrifices. Records of the cases, symptoms, treatment, and results were carved upon votive tablets and hung upon the walls of the temple.

The philosophic period began with Hippocrates (born 460 B. C.), believed to be the seventeenth in descent from Aesculapius. He is styled "The Father of Medicine," and it is justly said of him that "the medical art as we now practice it, the character of the physician as we now understand it, both date for us from Hippocrates." He separated medicine from priestcraft; taught that disease was a process governed by natural laws, and that the clew to proper treatment was to be found in minute observations of its symptoms and natural course. Surgery had already made much progress. Among the surgical operations recorded are reduction of dislocations and fractures, resection of bones, trephining, opening of abscesses of kidneys and liver, operation for fistula and hemorrhoids, operations on club feet, and sounding the bladder for stone.

After Hippocrates came many celebrated Greek physicians noted as authors and founders of various "schools" of theoretical medicine, such as "humoralist," "solidist," "vitalist," "empiricist," etc. The most eminent of these later Greek physicians, and one whose influence was most widespread and continuous, was Galen (born 130 A. D.). He was a brilliant orator and voluminous writer, and the tendency of his teachings was to harmonize the conflicting doctrines of the several schools and to develop the more simple teachings and methods of Hippocrates. His works were authoritative down to a comparatively recent period.

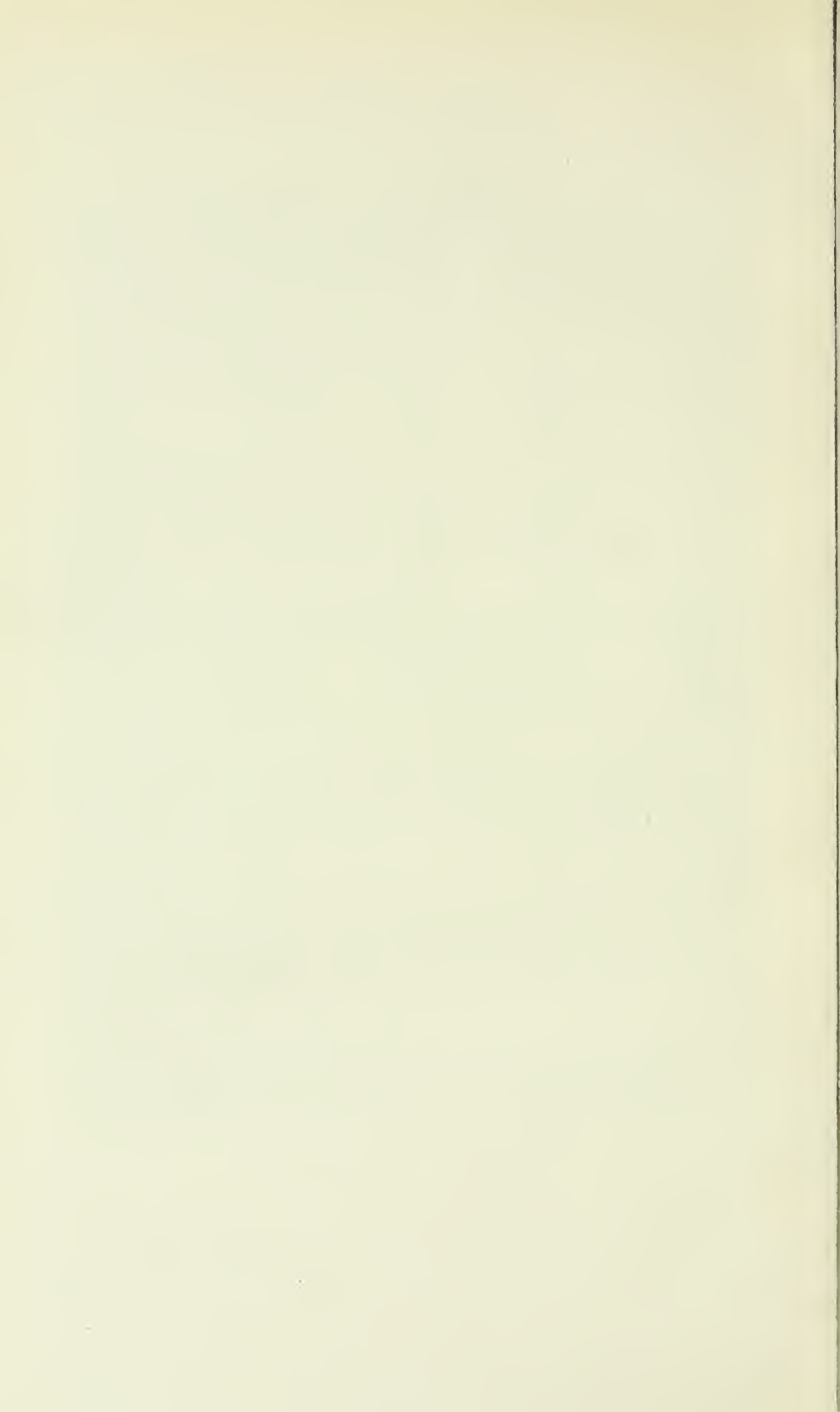
Dioscorides (born about 77 A. D.) was the most renowned writer on *materia medica*. He makes mention of about 90 minerals, 700 plants, and 198 animal substances.

Rome neither originated nor possessed an independent school of medicine. Early Roman medicine was founded on superstition and practiced by magic arts. Later it was controlled by Greek physicians, though as a branch of philosophy it was expounded by Roman teachers and writers.



EXHIBITS OF GREEK AND ROMAN MEDICINE

FOR DESCRIPTION OF PLATE SEE PAGE 30



*Aesculapius*.—The Greek God of Medicine, son of Apollo and the nymph Coronis. His mother was slain by his father, and Aesculapius was given to the centaur, Chiron, to be reared and educated. Under Chiron's instruction Aesculapius became marvellously skilled in medicine, not only healing the sick, but raising the dead. On the complaint of Pluto that Aesculapius was desolating the realms of the shades, Jupiter slew him with his thunderbolt, but at the request of Apollo he was placed among the stars. He was worshipped as a god, and numerous temples were erected for his services, conducted by priests called Aesclepiadae. (See fig. 21.) Cat. No. 143,513. U.S.N.M.

*Chiron*.—From an engraving of a wall painting in Pompeii. The most celebrated of the centaurs, son of Saturn and the nymph, Philyra. The legend is

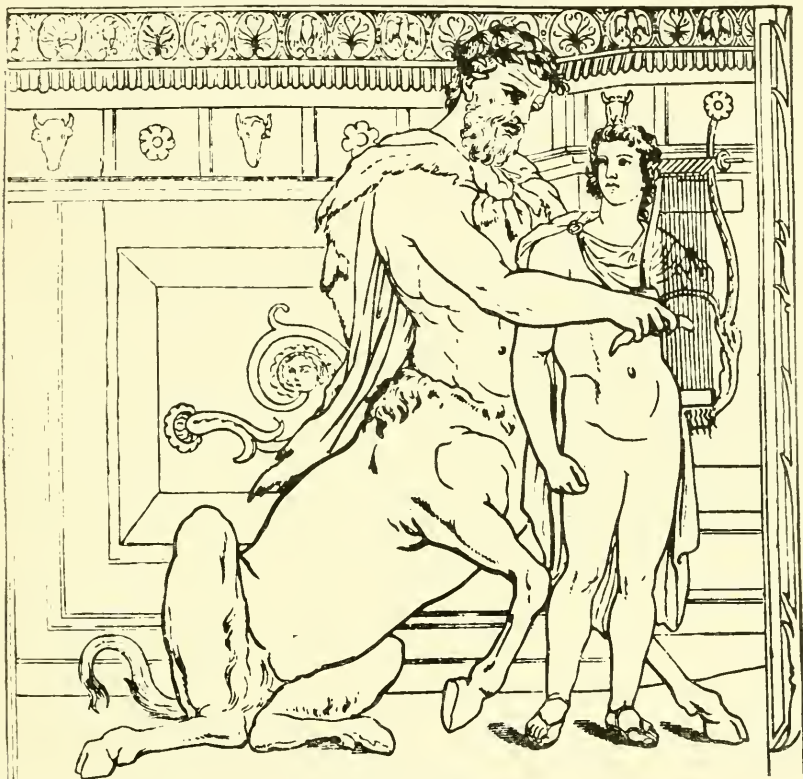


FIG. 19.—CHIRON.

that Saturn dreading the jealousy of his wife, Rhea, transformed Philyra into a mare and himself into a steed; the offspring was Chiron, half man and half horse. Having been instructed in hunting, gymnastics, music, and medicine, he became the instructor of others in these arts and accomplishments, especially Aesculapius and Achilles in medicine (fig. 19). Cat. No. 143,515. U.S.N.M.

*Machaon*.—Machaon and his brother Podalirius, sons of Aesculapius, were next to their father, the most noted physicians in the legendary Greek period. They were equally celebrated as warriors, and made themselves so conspicuous by their valor that Homer ranks them among the first of the Greek



heroes. They commanded a division of the Greek fleet in the Trojan War, being the first doctor admirals on record. Machaon was one of the heroes of the wooden horse, and is supposed to have lost his life on that occasion. After his death he received divine honors, and a temple was erected in his honor. (See pl. 5.) Cat. No. 143,516, U.S.N.M.

*The Hieron or sacred place at Epidaurus.*—This enclosure contained, besides the temple for the worship of Aesculapius, a propylea or gateway, a gymnasium, the abaton or sleeping place for the pilgrims, the tholos, a circular building of which the uses are unknown, a stadium or race course, and several other buildings of doubtful utility. These sacred places were usually located on wooded slopes, or about medicinal springs. Within them no dying person nor parturient woman was allowed to remain. The temples erected to Aesculapius were not only places for worship by prayers, sacrifices, etc., but also places where the sick could make personal application to the divine physician for counsel or cure. The ceremonies were under the direction of

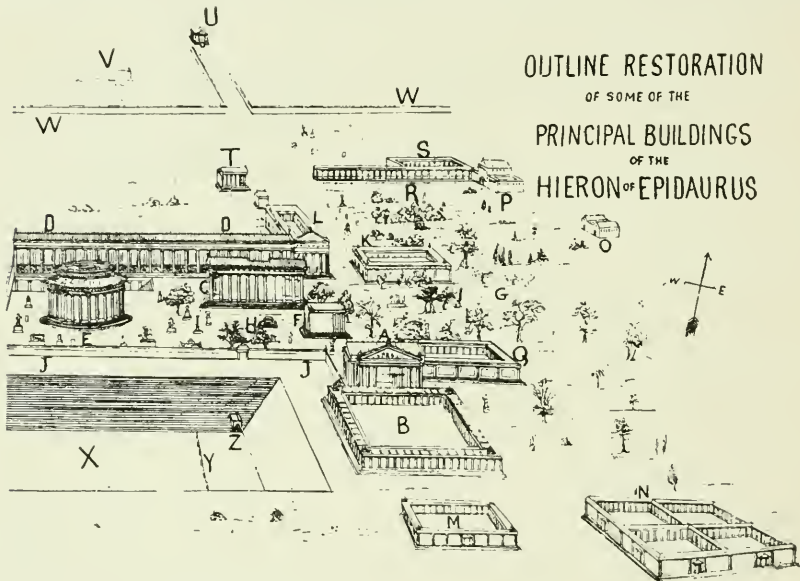


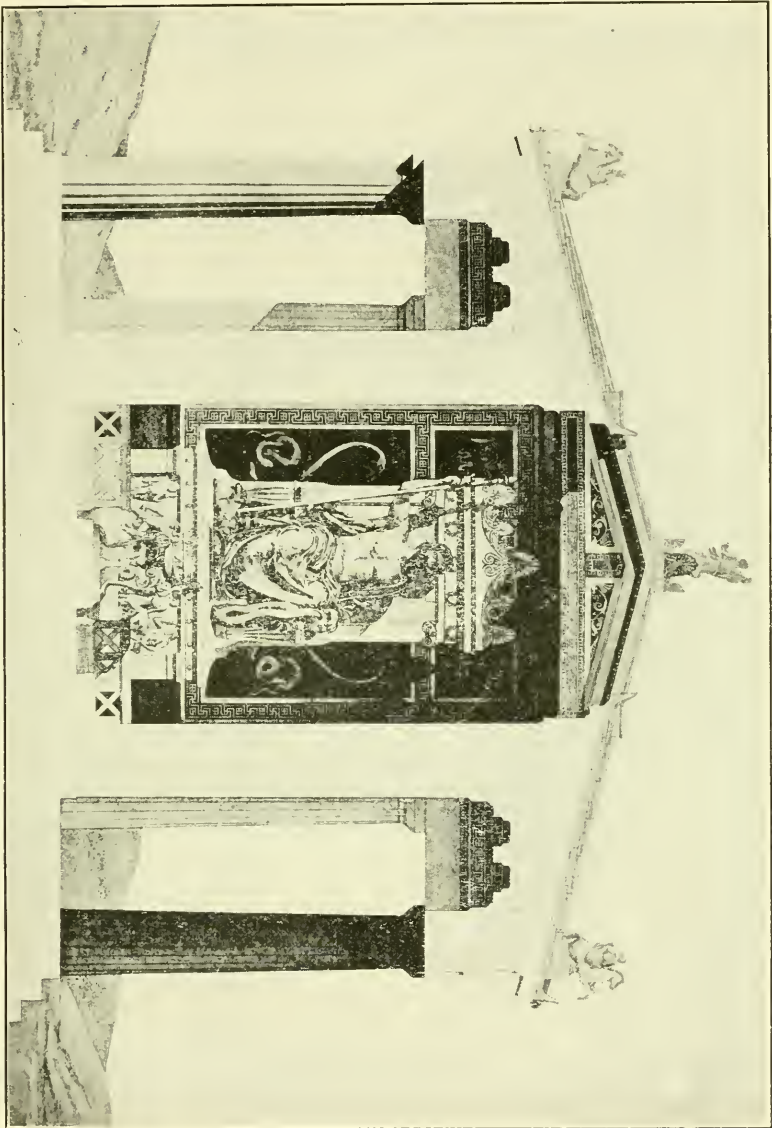
FIG. 20.—THE HIERON OR SACRED PLACE AT EPIDAUROS. OUTLINE RESTORATION.

a priesthood called Aesclepiads, supposed descendants of Aesculapius. The treatment of the sick was almost exclusively psychic, or mind medicine. It was begun with ablutions, prolonged fastings, prayers, and sacrifices, accompanied with elaborate ceremonials calculated to excite the imagination and inspire hope. After these preparations the patient was put to sleep in the "abaton," and in the dreams which followed the god was supposed to appear and indicate the proper remedy for the disease. The patient was aided in the interpretation of the dream by the priest. If the treatment was successful the case was recorded upon stone or metal columns or tablets, for the information of others. Metal or ivory models of the part affected were hung on the walls of the temple, as is the custom in many countries at the present day. (See fig. 20 and pl. 5.) Cat. Nos. 143,517 and 143,518 U.S.N.M.

*Statue of Aesculapius.*—The statue of Aesculapius shown in Figure 21 was made of ivory and gold, by the sculptor Thrasymedes. It represents a handsome figure seated on a throne, holding in one hand a staff, the other hand

resting upon a serpent, and lying by his side, a dog. The serpent and the dog are satellites of Aesculapius, and living specimens of these animals were kept in the temples, and sometimes played a part in the miraculous cures. The serpent, son of the earth, living in the bosom of the earth, symbolizes

FIG. 21.—THE TEMPLE OF AESCULAPIUS AT EPIDAUROS. TRANSVERSE SECTION SHOWING THE STATE OF AESCULAPIUS.



secret and mysterious powers. Its habit of shedding its skin every year makes it a symbol of rejuvenation. The Romans, during a pestilence (B. C. 293), sent a solemn embassy to Epidaurus to obtain the sacred serpent kept in that temple, hoping thereby to stay the plague.

*Copy of memorial tablet.*—It was the custom, in the early Greek period, to commemorate notable cures by a record of the cases engraved upon tablets of metal or marble. The tablet represented in Figure 22 bears the record of four cases, two of blindness, one of hemorrhage from the lungs, and one of pleurisy. It illustrates the fact that the medical practice in the Greek temples was purely psychic, or mind medicine, a method as old as history. Translated into English the records on the memorial tablet read as follows:

(1) Lately a certain Gaius, who was blind, learned from the oracle that he should approach the altar, offering prayers, then cross the temple from right to left, place his five fingers upon the altar, raise his hand and place

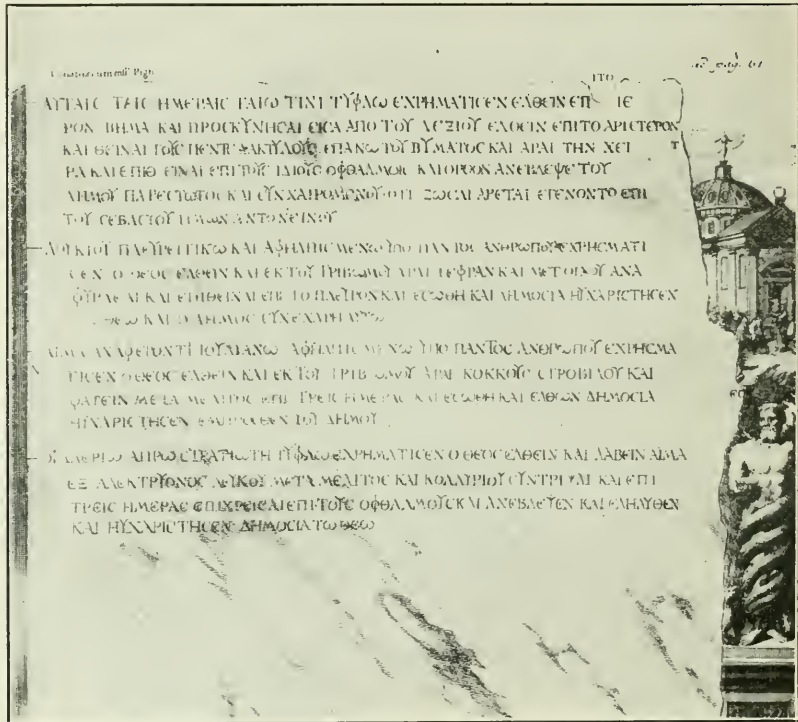


FIG. 22.—COPY OF A MEMORIAL TABLET FOUND ON THE SITE OF A TEMPLE OF AESCULAPIUS ON THE ISLAND OF THE TIBER AT ROME.

it upon his eyes. He recovered his sight at once, in the presence and amid the applause of the people. This evidence of the omnipotence of the god was manifested during the reign of Antoninus (about 120 A. D.).

(2) A blind soldier named Valerius Aper, having consulted the oracle was directed to mix the blood of a white cock with honey, and make of it an ointment which he was to rub on the eyes for three days. He recovered his sight and went to thank the god before all the people.

(3) A certain Julian was given over by all because of a spitting of blood. The oracle directed him to go to the altar, thence take some pine nuts, mix them with honey, and eat of them for three days. He was saved, and returned to give thanks to this god, in the presence of all the people.

(4) The son of Lucius was attacked with a pleurisy and his life was despaired of. The god, who appeared to him in a dream, ordered him to take ashes from the altar, mix them with wine, and apply to his side. He was saved, and came to thank the god before all the people, who wished him all

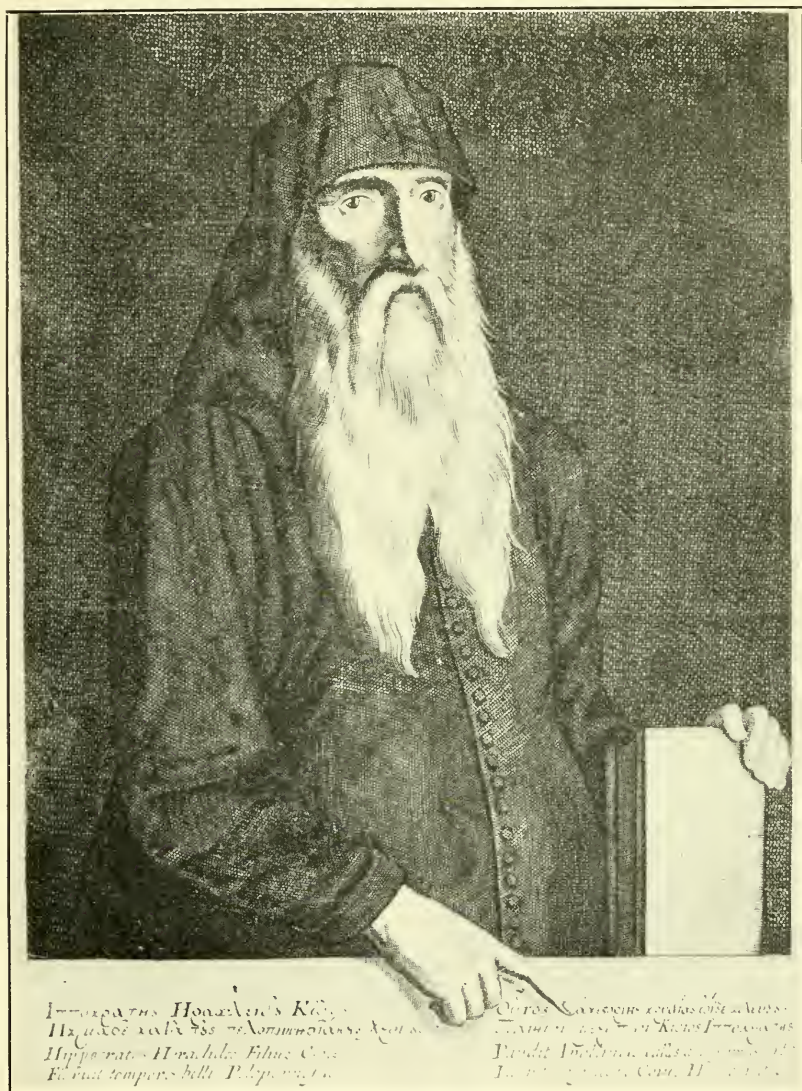


FIG. 23.—HIPPOCRATES.

kinds of prosperity. (See Hundertmarck, "De Incrementis Artis Medicæ.") Cat. No. 143.519, U.S.N.M.

*Hippocrates*.—Called the "Father of Medicine." Born on the Island of Cos in the year 460 B. C. He belonged to the family of the Asclepiadae, a guild of priest-physicians reputed to be descendants of Aesculapius, from whom

he was believed to be the seventeenth in lineal descent. Before his time medicine was almost exclusively theurgic, or magical. Hippocrates was the first to separate medicine from superstition and priestcraft, to base its practice upon the principles of inductive philosophy, and direct especial attention to the natural history of disease. He laid great stress upon regimen, and was the first to enunciate the principles of public health. He wrote voluminously

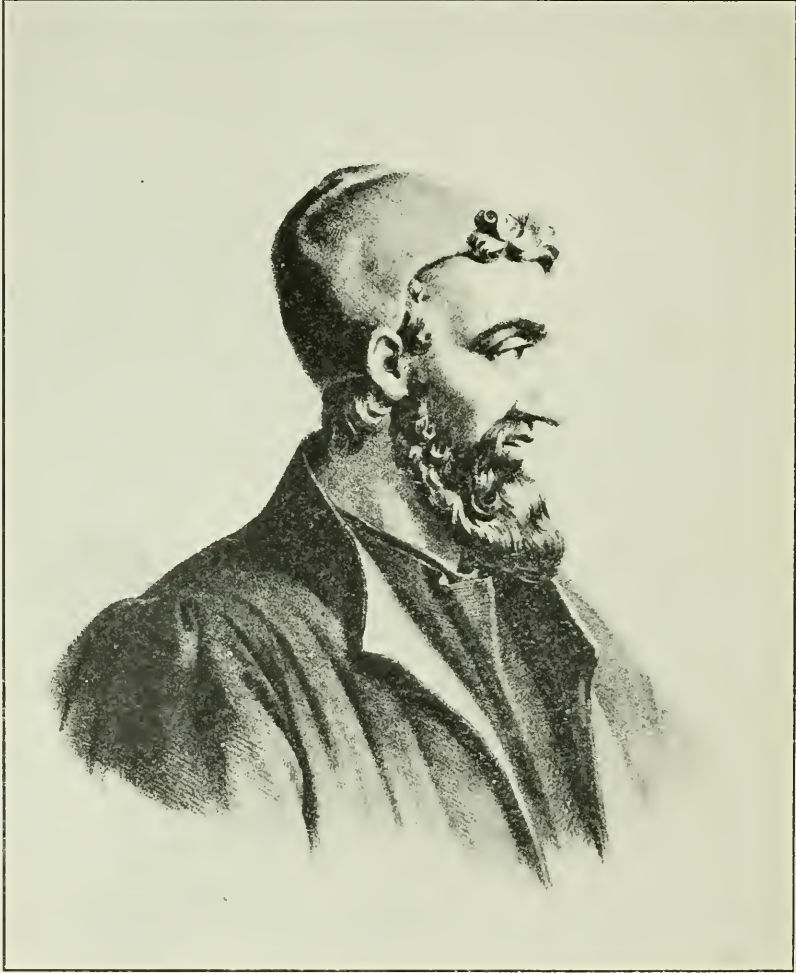


FIG. 24.—CLAUDIUS GALEN.

upon various subjects relating to medicine, and his works have been reproduced in many languages and editions. (Fig. 23.) Cat. No. 143,520, U.S.N.M.

*Hippocratic oath.*—A form of oath said to have originated with Hippocrates, and to have been required of all his pupils. Possibly it antedates his time, as it is believed by some historians to have been administered to the pupils of the schools of the Asclepiadae. Whatever its origin it stands as a remarkable testimonial to the high standard set for the physician of that early period.

Certainly from the time of Hippocrates (460 B. C.) to the present it has been administered or read to the graduates of medical schools, as a classical expression of the high moral principles which should govern the physician in his personal conduct, and in his relations toward his patients.

"I swear by Apollo, physician, by Aesculapius, by Hygeia and Panacea, by all the gods and all the goddesses—taking them to witness—that I will fulfill with my strength and my capacity this oath and engagement: I will place my master in medicine in the same rank with the authors of my life; I will share with him my fortune, and in necessity I will provide for his wants; I will regard his sons as brothers, and if they desire to learn medicine, I will teach them without pay. I will communicate my precepts, my oral lessons, and all other instruction to my sons, to the sons of my master, and to those disciples who are bound by an engagement and an oath according to the medical law, but to no others. I will direct the regimen of my patients for their advantage, to the best of my ability and judgment. I will abstain from all wrong and injustice. I will not furnish poison to anyone who solicits it, neither will I make a suggestion of it to any one; neither will I furnish to any woman an abortive. I will pass my life, and I will exercise my art, in innocency and purity. I will not perform the operation of lithotomy, but will leave it to those who occupy themselves therewith. Into whatsoever house I enter, it shall be for the good of my patients, keeping myself from all corrupting conduct, and especially from the seduction of women and boys, free or slaves. Whatever I see or hear in society, in the exercise, or even not in the exercise, of my profession, I will keep secret, if it is not necessary to divulge it, regarding discretion as a duty in all such cases. If I fulfill this oath, without violation, may it be given me to enjoy happily life and my profession, honored forever among men; if I violate it and perjure myself, let the opposite fate be my lot." Cat. No. 143,521, U.S.N.M.

*Glaudius Galen*.—Next to Hippocrates, the most illustrious of the ancient physicians. Born at Pergamos, Asia Minor, (130 A. D.) son of the celebrated architect Nicon. He began the study of medicine at 16, and when 20 years of age he placed himself under the instruction of eminent physicians at Smyrna, Alexandria, and elsewhere. In the year 164 he went to Rome, where he gained great renown for his skill in medicine, and also aroused the bitter jealousy of his rivals. His vast learning, his eloquence, his voluminous writings on medicine, philosophy, geometry, and grammar, gained for him the greatest admiration, and almost religious veneration. Galen was an enthusiastic admirer of Hippocrates, and used all the power of his genius and the influence of his name to bring back the practice of medicine to the foundation laid for it by Hippocrates in the study of the natural history of disease. The writings of Galen continued to have almost undisputed authority in medical practice down to the sixteenth century. (Fig. 24.) Cat. No. 143,522, U.S.N.M.

#### MATERIA MEDICA OF THE ANCIENT GREEKS AND ROMANS.

"About 800 years separated the periods of Aesculapius and Hippocrates. \* \* \* Leclerc has collected a list of nearly 400 simples which he finds alluded to as remedies in the writings of Hippocrates. But these include various milks, wines, fruits, vegetables, fats, and other substances which we should hardly call drugs now. Omitting these and certain other substances which can not be identified I

take from the author named the following list of medicines employed or mentioned in that far distant age:

Abrotanum.	Coriander.	Meccon. (?)
Absinthe.	Crayfish.	Melilot.
Adiantum (Maiden-hair).	Cress.	Mercurialis.
Agnus castus.	Cucumber.	Minium.
Algae (various).	Cummin.	Mints (various).
Almonds.	Cyclamen.	Mugwort.
Althaea.	Cytisus.	Myrabolans.
Alum.	Dietamnus.	Myrrh.
Amber.	Dog.	Myrtle.
Ammoniac.	Dracontium.	Narcissus.
Amonum.	Earths (various).	Nard.
Anagallis (veronica).	Elaterium.	Nitre.
Anagyris.	Elder.	Oak.
Anchusa.	Erica.	Oenanthe.
Anemone.	Euphorbia.	Oesypus.
Anethum.	Excrement of ass, goat, mule, goose, fox.	Olive.
Anise.	Fennel.	Onions.
Anethemis.	Fig.	Origanum.
Aparine (goose grease).	Foenugreek.	Orpiment.
Aristolochia.	Frankincense.	Ostrich.
Armenian stone.	Frogs.	Ox-gall.
Asphalt.	Galbanum.	Ox (liver, gall, urine).
Asphodel.	Galls.	Panax.
Atriplex.	Garlic.	Parthenium.
Baccharis.	Germander.	Pennyroyal.
Balm.	Goat (various parts).	Peony.
Basil.	Hawthorn.	Pepper.
Bistort.	Heather.	Persea (sebestens).
Blite.	Hellebore.	Persil.
Brass.	Hemlock.	Peucedanum.
Briar.	Henbane.	Phaseolus.
Bryony.	Honey.	Phillistium.
Burdock.	Horehound.	Pine.
Cabbage.	Horns of ox, goat, and stag.	Pitch.
Cachrys.	Hyssop.	Pomegranate.
Calamus aromaticus.	Isatis.	Poppy.
Cantharides.	Ivy.	Quicklime.
Capers.	Juniper.	Quince.
Cardamom.	Laserpitium.	Ranunculus.
Carduus benedictus.	Laurel.	Red spider.
Carrot.	Lettuce.	Resin.
Castoreum.	Licorice.	Rhamnus.
Centaury.	Linseed.	Rhus.
Centipedes.	Loadstone.	Ricinus.
Chalcitis (red ochre).	Lotus.	Rock rose.
Chenopodium.	Lupins.	Rose.
Cinnamon.	Magnesian stone.	Rosemary.
Cinquefoil.	Mallow.	Ruby.
Clove.	Mandragora.	Rue.
Colocynth.		Saffron.
		Sagapenum.

Sage.	Squill.	Trigonum.
Salt.	Stag.	Tribulus.
Samphire.	Stavesacre.	Turpentine.
Sandarach.	Styrax.	Turtle.
Scammony.	Succinum.	Umbilicus veneris.
Sea water.	Sulphur.	Verbascum.
Secundines of a woman.	Sweat.	Verbena.
Sepia.	Tarragon.	Verdigris.
Serpent.	Tetragonum.	Verjuice.
Sesame.	Thaspia.	Violet.
Seseli.	Thistles.	Wax.
Silver.	Thlapsi.	Willow.
Sisymbrium.	Thuja.	Woad.
Solanum.	Thyme.	Worms.
Spurge.	Torpedo (fish).	Worm seed.

This list may be taken to have comprised pretty fairly the materia medica of the Greeks as it was known to them when Hippocrates practiced, and as it is not claimed that he introduced any new medicines it may be assumed that these formed the basis of the remedies used in the temples of Aesculapius, though perhaps some of them were only popular medicines." *Chronicles of Pharmacy.*—Wootton.

#### SOME MEDICINAL MATERIALS OF ANCIENT GREEKS AND ROMANS.

##### VEGETABLE DRUGS.

*Mustard.*—The seeds of *Brassica nigra*. According to Dioscorides (77 A. D.) as a gargle "it is useful in swelling of the tonsils and chronic roughness of the windpipe. Moistened and put in the nostrils, it excites sneezing, is useful in epilepsy, and arouses women from the paroxysms of hysteria. Mixed with figs and applied until the part becomes very red, it is good for sciatica and all chronic pains in which we seek to draw the humors from within outward, removing the disease from one place to another. Mixed with vinegar, it is a useful application for the itch and ringworm." *Cat. No. 50,142, U.S.N.M.*

*Licorice.*—Mentioned by Theophrastus (third century B. C.) as "the sweet Scythian root, good for asthma, dry cough, and all diseases of the chest." The expressed juice, equivalent to the modern "extract," is recommended by Dioscorides for irritation of the bronchial tubes, for burnings in the stomach (heart-burn), and diseases of the chest and liver. Taken with wine for irritation of the bladder and kidneys. Applied, in solution, as a healing lotion for wounds, and, in powder, for the cure of excrescences upon the eyelids. *Cat. No. 50,154, U.S.N.M.*

*Staphisagria.*—The seeds of *Delphinium staphisagria*. It was one of the medicines of Hippocrates, and was used, as now, for the destruction of vermin infesting the human body. Like many other violently irritant medicines it was used internally as well as externally. "In the dose of 10 or 15 grains, taken with honey and water, it purges the gross humors by vomiting. One who has taken it should walk about, and continue the hydromel, for it produces a feeling of suffocation, and burns unceasingly the throat." Dioscorides (first century A. D.). *Cat. No. 50,367, U.S.N.M.*

*Maidenhair fern.*—The fronds of *Adiantum capillus veneris*. Used as a remedy for croup. *Cat. No. 52,445, U.S.N.M.*



*Carpobalsamum*.—The dried fruit of a small evergreen tree growing on the shores of the Red Sea. It was in high repute with the ancients as a medicine and cosmetic. Cat. No. 52,564, U.S.N.M.

*Lycium*.—An extract prepared from the Indian barberry. It was held in great esteem by the Greeks and Romans, and vases made especially for containing it, bearing the name "Lycion," have been found in the ruins of Grecian cities. It was particularly valued as a collyrium in the treatment of ophthalmia. Given internally for dysentery, cough, hemorrhage from the lungs; taken with milk, for cure of hydrophobia. Cat. No. 52,571, U.S.N.M.

*Tragacanth*.—A gum exuding from various species of *Astragalus*. The drug is mentioned by Theophrastus (third century B. C.) and by other Greek physicians. "A useful ingredient of medicines for cough and roughness of the throat. Dissolved in wine, and mixed with a little calcined hartshorn or burnt alum, it is taken for pains of the kidneys and irritation of the bladder." Dioscorides. Cat. No. 52,775, U.S.N.M.

*Hellebore*.—The root of *Helleborus niger*. According to tradition, Melampus (1400 B. C.), cured the daughters of Proetus, King of Argos, of hysterical mania by the use of hellebore. Cooked with lentils or other broth, it was taken as a purgative. Used in gout, rheumatism, and insanity. Applied in form of plaster for dropsy. Scattered about houses to purify them from everything injurious. When about to uproot the plant, prayers were offered to Apollo and Aesculapius, and great care was taken lest an eagle should witness the operation, in which event the gatherer of the plant would surely die.—Dioscorides. Cat. No. 141,632, U.S.N.M.

*Euphorbium*.—A gum resin obtained from incisions made in the branches of *Euphorbia resinifera*. The collection of the drug was described by Dioscorides and Pliny and is mentioned by Galen and other early Greek writers. "The aqueous infusion applied to the eye resolves cataract. Taken with an aromatic drink it relieves the pain of sciatica. For snake bite, it is recommended to incise the skin of the head, introduce a little euphorbium and sew up the wound."—Dioscorides. Cat. No. 143,169, U.S.N.M.

*Conium*.—The expressed juice of the tops of *Conium maculatum*. It was a common plant in Greece, and classed among the deadly poisons. Used medicinally as a constituent of collyria to relieve pain and for plasters for wounds and erysipelas. In the treatment of poisoning by conium, emetics and purgatives were used, and as an antidote "pure wine." Among the Athenians the administration of this drug was the common mode of capital punishment, the execution of Socrates by this method being one of the notable events of Greek history. The drug was given in wine, and the victim required to walk about in order to promote its circulation throughout the body. Cat. No. 143,174, U.S.N.M.

#### MINERAL DRUGS

*Alum*.—"Alum cleanses the eye from everything that tends to obscure the vision, dissipating granulations of the lids and consuming any other excrescences. It arrests hemorrhage, contracts lax gums, and, with vinegar or honey, fixed loosened teeth. Mixed with honey it is good for ulceration of the mouth; with the dregs of vinegar and an equal quantity of the ashes of galls it is efficacious in chronic and corroding ulcers. In form of ointment it removes dandruff, and if applied with water it is a remedy for lice and nits and for burns."—Dioscorides. Cat. No. 50,168, U.S.N.M.

*Rust of iron*.—According to Appollodorus, Iphycelus, one of the Argonauts, was cured of impotence by iron rust dissolved in wine. Iron preparations were

used at the time of Hippocrates and among the Romans at the beginning of the Christian era. Cat. No. 141,807, U.S.N.M.

*Lemnian earth*.—An aluminum silicate containing iron, found native in the Island of Lemnos. Does not differ from the Armenian bole except in the proportion of iron oxide. "It is collected by the inhabitants of the island, and after being washed and mixed with goat's blood it is formed into pastilles and marked with a seal. Taken with wine it is a potent remedy for deadly poisons, is an antidote for the stings and bites of venomous animals, and is useful in dysentery."—Dioscorides. Cat. No. 143,171, U.S.N.M.

*Sulphur*.—Administered in form of fumigation for cough, asthma, and accumulation of phlegm in the chest. Mixed with turpentine, it removes ring-worm, smooths asperities of the skin, and extirpates injured nails. Applied with resin, it heals the stings of the scorpion and those of the sea dragon. Friction with sulphur and niter relieves itching of the whole body. Applied to the forehead in powder or with white of egg, it cures jaundice and catarrh. In powder sprinkled upon the body, it checks perspiration. The fumes of sulphur received in the eyes through a reed cures blindness.—Dioscorides.

#### ANIMAL DRUGS

*Viper*.—"The flesh of the viper, cooked and eaten, sharpens the sight, is good for nervous debility, and resolves scrophulous tumors. The head and tail of the viper should be cut off before cooking; but to say that these extremities must be cut off according to a certain method I hold to be fabulous. The rest of the body, after evisceration, should be cooked with oil, wine, dill, and a little salts. Some say that those who eat vipers' flesh become very lousy, but that is false; others say that they are longer lived."—Dioscorides. Cat. No. 143,170, U.S.N.M.

*Crab*.—"The ashes of the burned crab, given with wine for a period of three days, in a dose of two spoonfuls, with a spoonful of gentian, is helpful to those bitten by a mad dog. Applied with honey it relieves cracks of the feet and anal fissure, and is a remedy for chilblains and cancer. The powdered shell, taken with asses' milk, is good for snake and scorpion bites."—Dioscorides. Cat. No. 143,175, U.S.N.M.



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