

of the jelly fish. On comparing the notice in Record I., p. 77, of Hunnius and other physicians in Russia, and Record IV., p. 34, a case of poisoning observed in France, translated by J. G. Houard, we observe that like the snake poison it can be exposed to the heat of boiling water without losing the specific effect it has on the action of kidneys and on the mammæ, similar to the *urtica urens* and formic acid.

ARTICULATES; OR INSECTS.

Apis mellifica. Accidental Proving. In the summer of 1872, W. S., æt. 50, nervo-bilious temperament, general health somewhat feeble, while near his bee-hive was stung by a bee on the back of his hands. He had several times before been stung without experiencing much inconvenience. On this occasion he was seized in a few minutes with nausea and vertigo, and a general sense of distress and prostration accompanied with mental anxiety. When seen a half hour later he was found lying on his back with puffed and slightly flushed face and ears, and flushed neck, breathing with some difficulty; a sense of fulness and choking as if filling up in the throat, oppression over the chest and epigastrium, troublesome itching or stinging of the face, ears and throat, and also of the hands, feet, wrists and ankles. There was little or no itching on any other portion of his body. There was marked redness of the hands and wrists, also of the feet and ankles. The pulse was quick and full, not hard. Upon examining one of the punctures it was observed that the bee had struck directly upon a prominent vein on the dorsum of one of the hands. There was no swelling at this point. The precise order of development of all the symptoms could not be accurately ascertained. He suffered in this way about two hours and then the symptoms gradually subsided. (H. Ring, O. M. and S. R., v. 7, No. 5; Proc. H. M. S., O., 1873, p. 60.)

A man stung by twenty-seven bees in the head. Head did not swell at all, but shortly was attacked by sharp crampy pains in the stomach and abdomen, followed by vomiting and diarrhoea which lasted at intervals for about two hours. In a few hours symptoms passed away, followed by great exhaustion. He was entirely well next day. (E. W. South, A. J. H. M. M., v. 6, p. 181.)

Farmer stung by bees in nine places became faint and began to vomit, which was repeated nine times; his bowels also were relaxed. (J. Kitchen, A. J. H. M. M., v. 6, p. 249.)

— Will often do excellent service in seasons when the flies sting with unusual vigor. It acts well in such times in chills and fever. (Eggert, N. A. J. H., v. 22, p. 255.) Comp. R. I., p. 79; II., p. 33; III., p. 36; IV., p. 34.

Arachnides, Scorpion-poisoning. Two species of scorpions (*Alicrans*) red and black are frequently found in Mexico; the red being the most poisonous of the two. Bites and consequent death of children especially are very numerous, the deaths amounting to several thousand per year. The symptoms of the bite, which are immediate, are: numbness throughout the whole body, commencing at the point bitten and sometimes extending through the whole body in fifteen minutes; choking, seemingly a spasm of the glottis, accompanied by tetanus; there is a slight flush of the face, brightness of the eye, with increased heat of the body, later coldness of the extremities; death ensues often very quickly from strangulation.

The tincture of aconite-root in water has been found to relieve the symptoms and antidote the poison very speedily. (G. M. Pease, M. I., v. 10, p. 665.)

VERTEBRATES.

Molluscs vacat, First Step.

Fishes, Second Step.

Oleum jecoris, Cod-liver oil. Proving, by C. N. (M. A., p. 83.)

Effects when taken in dilutions (prepared by mixing the pure Ol. jec. aselli with alcohol, and letting it remain on it for a long time):

Giddiness in the head.

Dull aching pain in the forehead.

Steady aching sensation from left to right temple.

Everything turns black.

Swelling of the thyroid gland.

Weakness in breast; tickling in the throat.

Soreness of the chest.

Quick, sharp stitch in the left side.

Burning heat in left chest.
Expectoration of thick white phlegm.
Hard coughing spells in the morning.
Cough all night.
Soreness in chest on coughing, with expectoration of thick yellow phlegm.

Palpitation of the heart.

Heat in the palms of the hands every night.

Soreness of both feet.

Chill at 3 A.M.; chill in evening.

During chill blindness before the eyes.

Sleeplessness after 3 A.M.

Sensation of nausea.

Loss of appetite for dinner and supper.

Yellow coating on the tongue.

— *Relieved by it:*

Soreness extending all over the chest.

Soreness in chest through the shoulders, more on right side.

Pain through lower part of the left chest passing through to the back.

Laughing excites fit of coughing.

Region of liver sensitive to touch.

Stitch in right side on motion, with coughing on raising the arm.

Draughts of air aggravate the cough.

Cough worse on lying down at night.

Loose cough all day, worse on lying down, preventing her from sleeping.

Expectoration of a yellowish-green color.

Menstruation irregular but of a natural color; sometimes amenorrhœa for six months.

Heavy pain in right side, with numbness in right arm as though it were dead.

Hæmoptysis with hawking of phlegm in morning; flying pains all across the chest caused by a fall.

Sore, dull pain in chest when in motion or riding on horseback.

Chills from occiput down to the back (very characteristic).

In eighty-one cases the most characteristic symptom was the *soreness in various parts of the chest. Pain through the*

back was mentioned in twenty-one cases. (C. Neidhard, U. S. M. and S. J., v. 8, pp. 139, 301.) Comp. R. III., p. 39; IV., p. 35.

Reptiles, Third Step.

Elaps corallinus. Cases cured, by A. C. Clifton. (H. M., Nov., 1873, p. 171; B. J. H., Oct., 1873.) Comp. R. II., p. 35.

Lachesis⁷ and ²⁰⁰, confirmations: craving hunger; relief after eating; sufferings after acid drinks; constipation; abdomen sensitive to weight of clothes; flushes of heat; flushes after eating, after mental or physical effort. (C. F. Nichols, N. E. M. G., March, 1873, p. 105.)

— Confirmation: suddenly something runs from the neck to the larynx and interrupts breathing completely; it wakens him at night. (H. Gross.) (J. Heber Smith, N. E. M. G., July, 1873, p. 310.)

— Recommended and used with good results in hydrophobia. (Drs. Leadam and Pope, B. J. H., 1873, p. 128.)

— For the troubles of the menopause, especially when the capillary circulation is affected. (B. J. H., 1873, p. 130.)

— Apotheosis. (J. Heber Smith, N. E. M. G., March, 1873, p. 113.)

Comp. R. I., p. 83; II., p. 35; III., p. 39.

On Therapeutic Action of Serpent Venom. (Dr. Richard Hughes, B. J. H., 1873, p. 114.)

See Toxicological Remarks.

Aves vacat, Fourth Step.

Mammalia, Fifth Step.

Kumiss. Provings, reported by C. C. (M. A., p. 75.)

Pepsin. Its preparation, properties and effects. (A. Z., 1873; J. Pr., 1873, p. 208.) Comp. R. IV., p. 35.

NOSODES.

Ustilago maidis. Provings by T. S. Hoyne. (Trans. A. I., 1872, p. 493.)

— Like ergot, it deteriorates rapidly with age. It should be selected in the field at maturity, before it has been injured by the heavy autumnal rains and winds. Very little value remains in this drug after having undergone the heating process incident to the gathering and husking of the corn;

hence it should never be obtained from the shock or bin.

Doubtless some of the published provings of this medicine are rendered incomplete by its age or imperfect preparation. *Ustilago* controls uterine hemorrhage and induces uterine contractions, but not with the same promptness or vigor. *Characteristics:* For many days slow, persistent oozing of dark blood, with small black coagulæ; passive congestion of uterus, with enlarged uterus, cervix tumefied or somewhat dilated. (J. H. Woodbury, N. E. M. G., Sept., 1873, p. 408.) Comp. R. I., pp. 84, 252; II., p. 14; IV., p. 36.

Secale cornutum. A paper on its physiological effects. (J. H. P. Frost, H. M., March, 1873, p. 345.)

— Caused retention of urine. (A. H. O., Nov., 1873, p. 577.) Comp. R. I., p. 83; III., p. 39.

Ambra grisea. A practical exposition of, by Dr. Karl Hencke. (A. H. Z., v. 86, p. 187.)

— *Ambra*^{15c}. Cough worse by reading aloud, waking her at night, with sore throat. (E. W. Berridge, N. A. J. H., v. 22, p. 190.) Comp. R. III., p. 40; IV., p. 36.

Psorinum. Confirmations: canine hunger; craving for food without appetite; depressed in spirits and hopeless; aggravation from sudden changes of weather; eruptions; headache with hunger, or hunger before headache. (W. P. Wesselhœft, N. E. M. G., Feb., 1873, p. 51.) Comp. R. I., p. 84; II., p. 35; III., p. 41.)

COMPARISONS.

Sulphur and Calcarea. I conclude that Sulphur giddiness is mainly congestive and visual, that is, connected with affections of the corpora quadrigemina and great sympathetic; while the *Calcar.* giddiness is mainly nervous, that is, not connected with mechanical causes like blood pressure, such mechanical causes, at least, as we have cognizance of. The giddiness of *Calcar.* is sometimes produced through the action of the par vagum, is frequently of the whirling character, and often attended with stupefaction. Studies from the *Materia Medicæ*. (Dr. T. Hayle, M. H. R., v. 17, p. 345.)

NOTE.—One of the best essays in our whole literature. The most able author ought to continue such studies, and attempts to reach such real scientific steps ought to be made by others.—C. Hg.

Comparison of Graphite with related remedies. By Dr. Goullon, Jr.

1. *Graphite and Pulsatilla.* Both suit more the female sex; both have silent whining mood with melancholy; in both we find suppression of or delaying menses, an unequal distribution of blood, with tendency to chilliness; chlorotic constitution, with a sallow color. Graphit. gives us dryness of the skin, cysts, erysipelatous inflammations, moist herpetic eruptions, phagadaenic blisters, vulnerability of the skin, stinking, granulating ulcers; scurfy eruptions around the mouth and chin, and many other cutaneous diseases; Pulsat.: eruptions, like varicella, erysipelas with swelling, cracking of the skin, easily bleeding ulcers; great tendency to blenorrhœas. Digestion cannot be healthy in chlorotic patients, and we find thus under Graphit. great weakness of digestion, with bloatedness and vomiting of all food, foul urinous breath, excessive foul smelling flatulency; tedious constipation or constant inclination to diarrhœa, a quantity of mucus being passed with every stool. Under Pulsat. foul breath, flat taste, or of putrefying meat; bitter taste after drinking or eating; eructitious tasting of the food, vomiting of food immediately after eating, diarrhœa. C. Hg. gives as a parturient symptom of Graphit. when in large women of venous constitutions, here and there, with greatly stitching herpetic spots, having a viscous exudation, labor-pains become weak or cease entirely. Both have rheumatic pains; Graphit.: pains, with reddish swelling, tightness, as from muscular contraction, and curvation of some parts; stiffness of the joints: Pulsat.: wandering pains, parietic debility and swelling of the affected parts. Stitches and sensation of coldness at every change of weather.

Differential diagnosis. Graphit. is the Pulsat. of climaxis; it is also a specific for the so-called darts, dry herpetic constitution. Pulsat. corresponds to blenorrhœa and suppuration, and thus becomes a remedy for the scrofulous constitution. Graphit.: constipation; Pulsat.: diarrhœa, which is green, mucous, bilious, whereas the stools of Graphit. are knotty, and united by mucous threads or tedious pultaceous diarrhœa. Pulsat. has tenesmus, which is absent in Graphit.

2. *Graphite and Platina.* The former: menses too late, too scanty, too pale, the latter: too early, too copious, too long. Graphit. anti-herpeticum, Platin. anti-hystericum, both remove the labor-like colicky pains setting in at the beginning of menstruation, but

Platin. cures dysmenorrhœa, with consequent hypermenorrhœa, Graphit. the same with consequent amenorrhœa.

3. *Graphite and Sepia*. Sepia is also a chlorotic remedy, has suppressed, scanty, rare menstruation setting in under difficulties. Both have chronic herpetic eczemata (moist, itching, burning), but Graphit. corresponds more to the psoric and scrofulous dyscrasia, and Sepia more to those forms of herpes standing in direct connection with hepatic diseases. Sepia cures migraine, which Graphit. fails to do, though it has symptoms of sour vomiting, eructations, frontal headache, dizziness, etc. Faulty innervation is found in Sepia, but not in Graphit. There is also a great difference in the precision by which they act in suppression of habitual discharges, where Graphite is far ahead of Sepia.

4. *Graphite and Kali carbonicum*. In dysmenorrhœa, the Kali carb. is only reliable in cases of hypermenorrhœa, or where menstruation lasts for weeks, and in passive hemorrhages during puerperium. It is also a great remedy for the pneumonic processes of consumptive persons.

5. *Graphite and Sulphur*. Both remedies suit persons of sedentary habits, but we select Sulphur in the habitual constipation of the plethoric sanguineous, Graphit. for the constipation of a girl with tardy, scanty menstruation. Both are indicated in chronic and obstinate skin diseases. Warmth ameliorates the pains of either one, and each has dislike for cold, and sensitiveness to wind and fresh air; great sleepiness in daytime, and difficulty of falling asleep at night; yellowish pale sunken features; roughness of the skin, fissures. Sulphur suits male constitutions, Graphit. female constitutions. The sphere of Sulphur extends farther than that of Graphit.

6. *Graphite and Lycopodium*. Lycop. is also a herpetic and scrofulous remedy; has also constipation, hard defecation and flatulency, but it is also a hepatic remedy, which Graphit. is not. Lycop. has a wider use in gout than Graphit. The relation of Graphit. to Lycop. is like the herpetic or hydraemic constitution to the scrofulous one.

7. *Graphite and Arsenicum*. Arsen. is as indispensable in the darts constitution as Graphit., but surpasses the latter in the hydropic constitution. The leucorrhœa of Arsen. is acrid, corroding, that of Graphit. watery, occurring in gushes. In Graphit. the menses too late, too weak, amenorrhœa, in Arsen. too early, too copious. Arsen. has collapse. The eruptions suitable to Arsen.

generally attack the face (parts of nose and mouth, in and around the nose), the eczematous eruptions of Graphit. have their seat in the region of the ears, and on the hairy scalp.

8. *Graphite and Carbo*. The vegetable charcoal is indicated where in acute as well as in chronic disease the vital power becomes nearly extinct, where stagnation of the circulation threatens, showing itself outwardly by ominous cyanosis; where vital heat sinks to a minimum, and the anguish of the patient with unclouded consciousness is perfectly awful. Animal coal acts on the glandular system, it acts well in cirrhotic dyscrasia, which is only a higher degree of the herpetic dyscrasia.

9. *Graphite and Silicea*. Silic. suits cases involving profuse supuration, Graphit. unhealthy state of the skin, leading to rhagades, excoriations and unhealthy ulcers. The Silic. patient has with a sensation of exhaustion an exalted condition of susceptibility to nervous stimuli; the curative process of Graphit. is a depurative one.

10. *Graphite and Petroleum*. Both grand herpetic remedies, but Petrol. also acts on the sympathetic, which Graphit. does not.

11. *Graphite and Natrum sulphuricum*. Herpes and sycosis. (N. A. J. H., v. 22, p. 33.)

Comparison between Muriatic and Phosphoric acids.
(John C. Morgan, A. J. H. M. M., v. 6, p. 158.)

Comparison of Phosphorus and Hyoscyamus.

Phosphorus.

Tongue, dry, coated white, with stinging in tip.

Soreness of mouth, *easily bleeding*.

Dryness of throat, day and night.

Sensation as of cotton in throat.

Saliva increased, tasting saltish or sweetish.

Painfulness of larynx, preventing talking; the tonsils and uvula are much swollen, and the *uvula is elongated*, with dry and burning sensation.

Hyoscyamus niger.

Parching dryness of the tongue.

Soreness of soft parts between the gums and cheeks.

Constrictive, dry and burning sensation in throat, with *inability to swallow, especially liquids*.

Foaming, bloody saliva, tasting salty.

Parching dryness in fauces, with *swelling and elongation of the uvula*.

Phosphorus.

Pain in chest with coughing, relieved by external pressure. Stitches in left side of chest, relieved by lying on the right side.

Hyoscyamus niger.

Slow breathing. Spasms of chest, with arrest of breathing, compelling one to lean forward. Stitches in sides of chest.

(Alfred K. Hills, Trans. N. Y. S., 1872, p. 237.)

Characteristic of Rhus tox. and Merc. sol. In dysentery both Rhus tox. and Merc. sol. have aggravation each evening, lasting through the night until 3 A. M. (C. C. Smith, M. I., v. 10, p. 39.)

Helonias and Senecio compared. (E. A. Farrington, A. J. H. M. M., v. 6, p. 333.)

Conium has trembling after stool.

Veratr. alb. Great weakness after stool. (J. C. Morgan, A. J. H. M. M., v. 6, p. 395.)

Vomiting of Æthusa and Podophyllum. The distinction to be made between the vomiting of Æthusa is, that when Æthusa is indicated, the child vomits without nausea, and will go to the breast and nurse again immediately afterward; whereas when Podophyllum is indicated there is nausea, and the child will not nurse after the vomiting. (W. M. Williamson, H. M., April, 1873, p. 444.)

Apis mell. and *Natrum muriaticum.* 7, No. 4, p. 26, etc. *Apis mell.* and *Belladonna*, *Apis mell.* and *Rhus tox.*, *Apis* and *Cantharis*, *Apis* and *Lachesis.* (Compared by E. A. Farrington, in A. J. H. M. M., 1873, appendix to Nos. 1, 2, 3, 4.)

Acon., Chamom., Rhus tox., Stramom., Apis, Arsen., Kali carb., Hydrast., Pulsat., Camphor., Ferrum, each has as a symptom, "the patient wants to walk about," comparison of same. (J. C. Morgan, A. J. H. M. M., v. 6, p. 260.)

TOXICOLOGICAL REMARKS.

Disinfectants. *Sanitary advantages of Sunflower.* Many facts have been adduced to show that the sunflower has the property of purifying air laden with marsh-miasm, absorbing a great quantity of moist and noxious gases and exhaling ozonized oxygen. (M. I., v. 10., p. 556.)

NOTE.—Of *Eucalyptus globulus* it is said that the tree destroys all malarious poisons.—C. Hg.

Chromic acid a Disinfectant. It possesses beyond any other single article of which we have knowledge, the power to coagulate albumen; consequently to destroy and prevent the formation of diseased germs. Being a powerful oxidizing agent and its efficacy depending on its own decomposition by contact with organic matter, it is not so likely to be taken up by the absorbents as is carbolic acid, the result of the decomposition being insoluble. As a disinfectant, use in one per cent. solution; with a vaginal injection of one grain to the ounce. I have known a foul smelling sanious lochia lose its offensive odor and become natural after two or three applications. Being without volatility it is worthless as an atmospheric disinfectant. (E. P. Colby, N. E. M. G., 1873, April, p. 169, and Oct., p. 446.)

Disinfectants. (J. F. Cooper, Proc. H. M. S., Penna., 1873.)

Carbolic acid. Lionel Beale says, injected into the blood-vessels, it causes death, "though the blood is not coagulated, the living matter of the flowing blood being killed, seems to be the sole cause of the stoppage of circulation." In other words, if it is used beyond a yet undetermined limit, its very disinfectant properties render it a blood-poison; it is readily taken up by the absorbents. Symptoms of depression sometimes follow its prolonged use even in dilute solution. *Introduced into the uterine cavity, the solution has produced dangerous collapse.* (E. P. Colby, N. E. M. G., Oct., 1873, p. 444.)

Antidote to Carbolic acid. Sugar of lime, made by dissolving sixteen parts of white sugar in forty parts of water, digesting with lime for three days filtering and evaporating. (M. I., v. 10, p. 253.)

Bryonia is the best antidote to chlorine. (T. C. Duncan, M. I., v. 10, p. 516.)

Antidote to Phosphorus. Carbon absorbs Phosphorus to such an extent that, taken in pills, it is a complete antidote to the disastrous consequences of the latter to workers in match factories. (M. I., v. 10, p. 252.)

Oxide of Carbon. Poisonous effects. (L. Sulzer, A. H. Z., v. 86, p. 93; trans. by S. Lilienthal, H. M., June, 1873, p. 519.)

Vermillion. *Poisoning from, in dental plates.* (N. E. M. G. March, 1872, p. 69.)

Morphine antidoted by Aconite. Three cases given to illustrate its usefulness; as an antidote to the secondary effects, will always remove ill effects produced by it, and eradicate the habit of

using it. (C. H. Thompson, H. M., Feb., 1873, p. 340; M. I., v. 10, p. 87.)

Aconite will antidote Digitalis, and *vice versa*. (M. I., v. 10, p. 253.)

Poisoning with Cantharides. Used to relieve chilblains. Dragging in the back, as if about to be "unwell," which period she had regularly passed about ten days before. Slight show, but pains the same. *Camphor*.³⁰ cured. (W. M. Williamson, Proc. H. M. S., Penna., 1873.)

Poisonous Serpents. What is this strange and subtle fluid, whose minutest portion possesses such terrible power, which can so speedily quell the force of the active brain and nervous system of a man? To sight, and smell, and taste, it seems a mere harmless saliva. Chemical analysis detects in it a little mucus, much water, and some of the salts of saliva; from which it differs mainly in the slight predominance of an animal acid. There is nothing in all this that could suggest, beforehand, the specific properties of the secretion. It is not poisonous when taken into the stomach. The only danger in swallowing the venom of the viper, cobra or rattlesnake, arises from the possibility of some blister or scar, or any lesion of the mucous membrane of the mouth, throat, or œsophagus, which might allow the poison to be absorbed, and enter the circulating blood. The readiest, therefore, and perhaps the most efficient remedy, that of sucking the wound, may be performed with scarcely any risk. This has been known of old. "Whoever," writes Celsus, "will suck the wound, will be both safe himself and save the sufferer." As to remedies: whenever a person has been the subject of attack, the first indication is to remove the inoculated venom, either by suction or excision; but this, to be effective, must be done promptly, almost instantly after the bite. Olive oil around, and dry radiating heat should then be applied directly to the wound. Alcoholic stimulants and ammonia should be administered freely to the patient until the effect of the poisoning is past.

In the light of this subject, we see a familiar, but striking example of the effect on the animal economy of an almost infinitesimal, yet potent, and deadly power; showing how that finely balanced entity we call vital existence, or life, may be influenced, or swiftly destroyed by a minute principle, inimical to its well-being, that quantity has little to do with resulting and proving effects. (C. C. Bronson, M. A., p. 33.)

Ophidians. Judge D., of New York, confirms the statements of S. B. Higgins, concerning the gall of serpents acting as an antidote to the bite. (J. Heber Smith, N. E. M. G., July, 1873, p. 314.)

NOTE.—In Merklein's Thier Buch, 1739, it is mentioned as a well-known fact, on page 639: Die Galle zieht das Gift heraus und an sich, wenn man es über die Schlangenbisse legt. And in Loskiel's History of the Missions of the United Brethren, Barby, 1789, London, 1794, we find the gall of the snakes is, according to the Indians, a good remedy after the bite.

Toxicological Effects of *Agaricus muscarius* (Lenz); *Phalloides* (Fries); *Boletus satanas* (Lenz); *Russula* and their antidotes: *Atropine*, vinegar and lemon juice, common salt, *tannic acid* and *iodide of potass.*, without effect. (H. Kl., 1873, p. 145.)

Milk as a Disease Agent. May not the milk transported in filthy cans absorb the poison and produce typhoid fever? (R. J. McClatchey, H. M., Oct., 1873, p. 124.)

NOTE.—At the tinsmith's, when repairing the cans, the smell is terrible.—C. Hg.

Index to Cases of Poisoning in the allopathic journals. (E. W. Berridge, M. H. R., v. 17, pp. 224, 415.)

Morphia or Apoplexy: Which? Mr. S. had been taking morphia, and was "twitching and jerking." On reaching him, found his allopathic attendant giving him strong coffee. For six hours efforts were made to rouse him, at the end of which time he died. Did he die of morphia?

He was æt. 45; short, stout, fleshy, pale face, phlegmatic temperament; had not been under treatment for a long time. Thursday evening had neuralgia of head and face, for which he got of Dr. K. a powder of morphia (given by guess) supposed not to exceed half a grain. He retired, and at 10 had pain in the stomach. Dr. W. was called, and R. a capsule of morphia and ipecac., the former not to exceed $\frac{1}{4}$ gr., leaving a like capsule, which was given at midnight. He seemed easier, slept some; but at 3 A. M. his wife awakened him on account of his *loud and difficult breathing*. He sat up on the edge of the bed, complained of *feeling bad; was sick at the stomach; had itching and stinging of the skin*; said, "this morphia makes me feel bad, give me some water. I feel better now. If I can go to sleep I shall be all right." He went to sleep, and at 4 A. M. his wife was awakened by his *loud stertorous breathing*, and tried vainly to arouse him. He never awoke. When I saw him he was *pale and cadaverous; head, whole body and face were cool; facial muscles relaxed; lips bloodless; lower jaw hanging down; eyes*