This mull adapts itself very nicely to uneven surfaces, and is, therefore, particularly useful when employed as a mask for the face and on the genitals.

The mull is fastened behind the head with safety-pins; in cases of moist eczema, it must be renewed several times daily, the affected places being each time wiped off with cotton. On hairy parts, I use, in the acute stage, merely a watery solution of borax (1 : 100), or of acetate of alumina (1 : 100), or of thymol (1 : 1,000), either of which is applied thrice daily with a rag or small sponge. Later in the course of the complaint I resort to the preparations hereafter to be mentioned in connection with chronic eczema. In some cases of moist eczema, the lead ointment has an irritating effect, while the zinc salve, a decidedly milder compound, is borne without inconvenience.

(℞ Sebi benzoinat., 70 (in winter, 75); Adip. benzoinat., 15 (in winter, 10); Zinc. oxydat. alb., 10.0; Ol. amygd. dulc., 5.0.)

When desquamation occurs, mild ointments are indicated, to be rubbed in three times daily, such as vaseline, ungt. leniens, ungt. rosat., ungt. zinc. (zinc. oxydat., 1 : ungt. lenient., 20), ungt. plumb., ungt. bismuth. 1 : 50, and especially the ungt. Wilsoni (℞ Benzoes pulv., 5; Adip. suill., 160.0; digere, cola et adde Zinc. oxydat., 25.0, M. F. ungt.). Tannin ointment (acid. tannic., 1 : ungt. lenient., 10) is also very useful.

Inflamed surfaces may be covered with these ointments or dusted with a powder. If the desquamation does not cease under this treatment, we may have recourse to tar.

(*b*) *Chronic Eczema.*

The great secret of the therapeutics of chronic eczema is persistence. Whenever possible, the treatment should be so managed as not to keep the patient from his occupation. In the majority of instances, however, this is impracticable.

The problem to be solved is threefold:

1. To remove the crusts, scales, and indurations from the affected integument.
2. To effect a healing, if possible, of the moist surfaces.
3. To put an end to the remaining infiltration, hyperæmia, and desquamation.

The removal of the crusts is accomplished: First, by the action of water, applied through compresses, douches, vapor-baths, or ordinary immersion. The compresses, which are best made of strips of gauze or fine linen, must be changed frequently, otherwise they become very hot, and themselves give rise to eczema. Hard water ought not to be used—distilled water is best—or, if this is not obtainable, rain-water, river-water, or water which has been boiled. Equal parts of Goulard's lotion may be added to it if the skin is irritable. Ice water is to be avoided, since common salt is often added to the ice to make it last longer (Hebra). Wet bandages covered with india-rubber cloth, so as to need changing less often (Priesnitz), are recommended only in eczema of the scalp, hands, legs, and feet.

Douches are applicable only to eczema of the head, and even in this they are unnecessary.

Vapor-baths speedily soften the affected parts, but are often very irritating in their effects. Baths taken in the usual way play an important part in treatment, promoting, as they do, the healing process, by dissolving the crusts and softening the epidermis. There are many patients, however, who cannot endure bathing, as it causes very decided aggravation of the eczematous symptoms, especially the itching. Non-medicinal baths are best suited to the majority of cases. If the water is hard, holding saline substances in solution, it must be boiled, and it will be well to add to it some mucilaginous substance, as bran (four pounds to a bath) or starch-flour. Baths medicated with corrosive sublimate, alum, common salt, or sulphuret of potash, and the natural "sool" and sulphur-springs, do more harm than good. Sulphur waters are indicated only for inveterate forms of the malady, combined with a non-irritable, torpid condition of the skin. The vulcanized rubber bandages, and the gloves and socks of the same material, have an effect very similar to that of water. Like benefit is not afforded by all rubber garments, as they are apt to cause great irritation.

Oils in general, cod-liver oil, and fats are better adapted than water to the loosening of the crusts. The first are especially suitable to hairy parts, on which they are freely poured and then rubbed in with a painter's stiff brush, and which are finally covered with a woollen rag dipped in the same. The fats (for smooth surfaces) are applied after being thickly spread on flannel or lint. They consist of pork-fat, mutton-suet, and the mild ointments mentioned under acute eczema. Usually the crusts and scales come off when the dressings are removed. When this does not occur, as on hairy parts, and where the epidermal desquamation is more abundant, we may have recourse to soap, especially soft soap, or, for sensitive skins, Sarg's liquid glycerin soap, which dissolves the epidermis by its free alkali. The soft soap is rubbed on with the hand or a piece of flannel, until it forms a lather, which is washed off with warm water. Spiritus saponato-kalinus (Hebræ) (℞ Saponis virid., 200.0; Spirit. rectificatiss., 100.0; digere filtra) is very useful, especially on hirsute parts, as its fluidity enables it to penetrate further between the hairs. It is poured on a moistened piece of flannel and rubbed in. Scales and crusts are soaked in this way for several days together, fatty substances and soap being always used in alternation; but not upon the hard callosities which often give much trouble in eczema of the palms and soles, since the usual remedies cannot act upon the diseased parts. All the chemical agents previously recommended, as acetic acid, hydrochloric acid, soft soap, caustic potash, as well as mechanical measures, friction with sand or pumice stone, scraping with the sharp spoon, etc., have been superseded by salicylic acid (Unna) which speedily removes the callosities. When the latter are situated on the hand, Dr. Unna's salicylated gutta-percha plaster mull (10–20 gram per 1–5 qm.) forms the best application. After it has remained from four to eight days, the hardened epidermis can be removed along with it. A ten-per-cent salicylic ointment is then substituted, either applied by means of bandages, or rubbed in at hourly intervals.

If the diseased surface has been denuded, the second indication we have given—that of healing the moist surface—has to be fulfilled in order that it may be fitted for the application of tar. In most cases, this is best accomplished by the use of diachylon ointment or lead ointment mull. If these are too irritating, the less energetic zinc-salve mull, or zinc ointment, may be tried. Lister's borax ointment will be found serviceable in some cases. Should these be insufficient, they may be reinforced by washing with soft soap, after the manner already described. Immediately after washing off the soap, the coating of diachylon ointment must be renewed. When the diachylon ointment cannot be employed, as frequently on the face, inunctions of tannin (acid. tannic. 1 : ungt. lenient. 10) will prove speedily effectual. Where fatty substances are not tolerated, the affected surfaces may be dried by bathing them with Goulard's lotion, or with acetate of alumina (1 : 200 aqua). In these ways moist eczema may generally be changed into the squamous form, when the third requirement will remain to be satisfied, by removing the hyperæmia and desquamation. The latter often disappears spontaneously, or by the use of mild remedies, like Wilson's zinc ointment. This, however, is not generally the case. Stimulating applications must then be resorted to, foremost among which is tar—an

agent quite indispensable in the treatment of eczema. Tar, however, cannot be classed as a purely external remedy, as its volatile elements readily pass into the circulation, and are discoverable in the urine. It is obtained for medicinal use from various sources, as follows:

1. Pix liquida s. oleum empyreumaticum coniferum; pine-tar. This, produced in Finland, is most frequently employed by us.
2. Oleum fagi, beech-tar.
3. Oleum rusci, birch-tar.
4. Oleum cadinum, from Juniperus oxycedrus.

Oleum cadinum is thinner and clearer than the other kinds, and hence preferable for use on uncovered parts, but has a very strong odor. Tar ought never to be employed in the treatment of acute, of moist, or of impetiginous eczema. In some few individuals its administration is always followed by dark urine, fever, rigors, headache, vomiting, and diarrhea. Oftentimes, this idiosyncrasy is only manifested at the beginning of the treatment, which may afterwards be continued without inconvenience. Another troublesome consequence is an exceedingly painful and obstinate eruption of acne. Tar is applied either pure or diluted with alcohol (pic. liq. 1: spir. 1). In order to assist it in penetrating, for instance, to the scalp, it is also combined with ether (℞ Ol. rusc., Spirit. æther., ana; Hebra). Another very agreeable and more gentle mode of employing it is in the form of an ointment. Tar mixes best with fatty substances after having been boiled with equal parts of common alkaline soap (soap-boilers' soap); so long as the resulting compound continues soft, it corresponds to Ungt. pic. liq. This unites in any desirable proportion with fat, diachylon ointment, or zinc ointment, 1 : 1–20. The tar ointment is rubbed in with the hand; the tar and spirits of tar are laid on in thin layers with a stiff brush. In order to prevent apposed cutaneous surfaces from adhering, they are powdered with starch flour after applying the spirits of tar. Tar often produces such an irritating effect, even on surfaces which have healed, as to bring back their former condition of redness and exudation. In these cases, the application is to be combined with that of diachylon ointment, the former being either mixed with the latter and spread on in the form of ointment, or diachylon ointment or lead ointment mull being applied after painting with spirits of tar. Tar ointments are contra-indicated, and spirits of tar indicated, in eczema of the beard, of the hair of the pubes, and on the hands. In the first-named situation, the former often give rise to sycosis or eczema impetiginosum, while they are well tolerated on the scalp. Tar ointments are indicated where the skin is brittle and disposed to chap. In mild cases of eczema, such as are met with in children, the tar-soap now coming into use often has a very good effect. The employment of tar must frequently be persevered in for weeks before the desquamation and redness disappear. A very favorable accessory result of its action is a lessening of the troublesome itching.

More energetic remedies are required for those isolated, circumscribed hard places which tar cannot soften. The latter may be combined with soap (Ungt. pic. liq., Sap. virid., ana), or with carbolic acid (Spir. pic. liq., 50; Acid carb., 1). Excellent results are also obtained by rubbing with soft soap twice daily, washing it off every day in a bath. Still more effectual against these obstinate indurations are naphthol ointment, pyrogallic acid ointment, and especially the chrysarobin ointment (1 : 10 to 1 : 50 vas.). It is well to begin with a two-per-cent chrysarobin ointment, carrying its strength up gradually to ten per cent. The application is made with a paint-brush. As soon as the skin becomes reddened or inflamed, the chrysarobin ointment must be discontinued, and after the lapse of a few days it will generally be well borne. The rapid disappearance of the infiltration from the use of chrysarobin ointment is often quite marvellous. The patient should always be warned against getting any of the chrysarobin into his eyes while bathing, since this substance produces a very severe and painful conjunctivitis.

Rhagades are healed most speedily by soft soap, which is painted into them twice a day. In cases where tar cannot be employed, tannin ointment, 1 : 10, or friction with carbolized oil, 1 : 30, or white precipitate ointment, 1 : 10, or yellow precipitate ointment, 1 : 10, will often promote healing; though I avoid as far as possible the use of mercurial preparations. Caposi recommends a 1, 2 or ½-per-cent solution of naphthol in alcohol and water. This agent is very serviceable in individual cases, especially of E. squamosum capitis. When large cutaneous surfaces are under treatment, it must, however, be used with caution, the urine at the same time being carefully watched. As soon as this becomes black, the naphthol must be stopped. The violent itching is greatly relieved by bathing the parts with vinegar, or by ointments of chloral and camphor (1 : 8 of fat) or of carbo-glycerin (Bulkley), ℞ Ac. carbol., 1; Ungt. glycer., 50, which the patient rubs on while in the bath. Against the eczema to which antiseptic surgical dressings sometimes give rise, frictions with salicylic emulsion (℞ Ac. salic. cryst., 10; Aqua destillata, 50) have been highly recommended (Nussbaum).

The therapeutics of eczema in general having now been considered, we proceed to a few remarks on the treatment of its localized manifestations.

1. ECZEMA OF THE SCALP.

When pediculi constitute the original cause of eczema or are generated in its course, about 50 grm. of petroleum are first to be rubbed into the scalp, which is then kept covered with a woollen cloth for twenty-four hours. After this the crusts are removed by means of ointment and spirits of soap, as already described. If moist surfaces now remain, they are treated with zinc or diachylon ointment (prepared with olive oil, not with vaseline) which is washed off with spirits of soap. Vaseline ointments are not to be used upon the head, as they do not saponify, and it is very difficult to remove them from the hair.

As soon as the exudation has ceased, tar is to be applied in the form of tinctura rusci as above, or of tar-pomade (Ungt. pic. liq., 1; Ungt. popul., 5). Should these be ineffectual, pyrogallic acid pomade, 1 : 10, is indicated. When the redness disappears, some degree of desquamation frequently continues, which is completely removed by washing the scalp daily with a 5-per-cent alcoholic solution of chloral hydrate. Female patients should not have their hair cut, but should be informed that a good many diseased hairs will fall out during the progress of the cure.

2. ECZEMA FACIEI.

The crusts are dissolved by wearing a mask lined with diachylon ointment, or with lead ointment mull. Moist surfaces are healed in the same way. The masks must be very accurately applied. Afterwards, we have recourse to tar, or to one of its substitutes already referred to. The disease is very difficult of cure in situations where the epidermis merges into mucous membrane.

(α) *Eczema of the Eyelids.*

Here lead ointment mull, applied at night to both eyes at once, and to alternate eyes in the daytime, has an excellent effect, especially if the ocular catarrh is removed by

instilling a ¼-per-cent solution of salicylate of lead. Sycosis of the lashes is treated by epilation, after which the edges of the lids are painted with an ointment of yellow precipitate (1 : 50 vaseline).

(β) *Eczema of the Nostrils and upper Lip.*

First of all, the nasal catarrh which is sometimes present must be cured by injections, every two days, with a Richardson's insufflator, of a one-per-cent solution of nitrate of silver. The crusts are dissolved by tampons of cotton, dipped in zinc-glycerin (zinc. sulph., 1; glycer., 100), and introduced into the nostrils. Unna recommends for the same purpose, the use of drainage-canulas, wrapped around with lead ointment mull. As soon as the crusts are softened, they are painted every second day with the yellow precipitate ointment. The sycosis-like eczema of the upper lip is treated, until the pustules cease to appear, by painting them daily with an alcoholic solution of pyrogallic acid (1 : 100), followed by the application of sulphur-paste (℞ Lact. sulph., Spirit., Aqua destillata, ana 20), twice a day, with a small sponge.

(γ) *Eczema of the Lips.*

When chaps and fissures exist in this situation, the lips are first covered with zinc salve mull; the use of lead ointment is not advisable on account of its poisonous qualities. Very obstinate fissures are painted twice a day with soft soap. As soon as the fissures are healed, diluted tar (1 : 5 to 10 spirit), or, if this should irritate, simply first-proof alcohol, is applied in the same way to the red portion of the lips. Frequent inunction with lip-salve (ceratum cetacei rubrum) will suffice for the cure of labial eczema when caused by cold.

3. ECZEMA OF THE EXTERNAL AUDITORY CANAL.

The affected membrane, so long as it continues moist, is to be painted over with tannin ointment (1 : 10 vaseline), and afterwards with the diluted alcoholic solution of tar (1 : 10).

4. ECZEMA MAMMÆ.

Borax ointment, prepared by Lister's method (℞ Acid. boric. subtil. pulver., 1; Ceræ albæ, 1; Paraffin., 2; Ol. amygd., 2), is an excellent remedy for fissured nipples of nursing women. The nipple is washed off, after nursing, with borax water (1 : 25) and then covered with borax ointment spread on gauze. When nursing has ceased, painting the parts with an alcoholic solution of tar, together with the use of borax ointment, will generally prove effectual. If not, more stimulating applications should be employed, as poultices of soft soap, or painting with chrysarobin (1 : 10 vaseline) (Hebra recommends frictions with a solution of caustic potash [kali caust. 1 : aqua 2]).

5. ECZEMA OF THE GENITALS AND ANUS.

So long as the eruption is very moist and much inflamed, it is best treated with diachylon ointment, or a dressing of lead-ointment mull, held in place, in men, by a suspensory bandage, and in women by a T-bandage. As soon as the exudation has ceased, the *cautious* use of chrysarobin ointment is preferable to that of tar, on account of its speedier operation where pronounced infiltration exists. The ointment may be gradually increased in strength (1 : 10). If this treatment gives rise to much heat or redness, the ointment must be discontinued for a few days, during which the affected

parts should be powdered with starch flour. When the inflammatory symptoms have subsided, the ointment is again resorted to, until the thickening of the skin has disappeared. The last vestiges of the complaint are completely removed by spirits of tar. In eczema of the anus, the improvement from chrysarobin is often extremely rapid.

If the chrysarobin ointment is not well borne, we may employ, after the exuding surfaces have healed, an ointment of tar diachylon (1 : 20), which may be gradually increased in strength to 1 : 2. When this has taken effect (since this variety of eczema often proceeds from the decomposition of sweat), the folds of the skin should be powdered, for a still longer time, with salicylic acid (℞ Acid. salic., 1.0; Amyl., 89.0; Talc., 10.0). This must always be retained by means of a suspensory bandage. Against the intolerable itching, Bulkley recommends the application, three times in succession, for a minute at a time, on going to bed, of compresses dipped in water as hot as can be borne. This procedure is very serviceable in the case of females, but only when followed by the use of diachylon ointment, or some other mild ointment.

6. ECZEMA OF THE HANDS AND FEET.

Vesicular eczema of the toes, fingers, instep, and back of the hand is, as a rule, speedily cured by the use of spirits of tar and lead ointment; unfortunately, however, it is very likely to relapse. Dry eczema, with the formation of rhagades, is also soon relieved by the same treatment. It is in this form of the complaint that Unna's lead-ointment mull is of the greatest service, owing to the ease with which it can be applied. India-rubber gloves, also, worn constantly and cleansed every night and morning, soon bring about considerable improvement in dry eczema. Yet I have never known a case of constitutional eczema to be completely cured by either of these means alone; the application of tar or some other stimulating agent is always necessary.

Indurations on the palm of the hand or sole of the foot are removed by salicylic acid, together with inunctions of pyrogallic-acid ointment or chrysarobin ointment (each 1 : 10); these are more speedily effectual than tar. Superficial eczema of the palm is frequently removable by means of Carlsbad Sprudel-soap, the latter rubbed upon the hand at bed-time, and left on all night.

When eczema attacks the nails, they should be scraped as thin as possible with a piece of glass, and spirits of tar applied beneath them and within the ungual furrow. Proliferations in the latter locality must be destroyed with nitrate of silver. Poulticing the nails with soft soap often has a very good effect. This is done by cutting off the fingers of an india-rubber glove, filling them half full of soap, and drawing them over the affected members.

7. ECZEMA OF THE LEG.

To Dr. H. A. Martin, of Boston, belongs the great merit of having introduced the use of the elastic rubber bandage in the treatment of eczema of the leg, and of the ulcers with which it is so frequently associated. Even in long-standing cases, the patient is not detained from his occupation for a single day.

The remarkably strong, yet soft bandages devised by Dr. Martin himself are preferable to any others for this purpose. With them—in the morning before he has risen—the patient's foot is enveloped, beginning at the toes. The binder is taken off in the evening, disinfected with carbolized water (two per cent), or with thymol water (one per cent), and dried during the night. The exuding surface is covered in the evening with lead ointment mull; the dry places are lightly smeared over with fat. If the ap-

pliance is unendurable, the disease must be treated according to the general methods already described.

IMPETIGO.

It would perhaps be better to exclude this term altogether from the list of cutaneous diseases, but it is still used to designate two complaints—impetigo contagiosa (Tilbury Fox), and impetigo herpetiformis (Hebra).

1. *Impetigo Contagiosa* (*Tilbury Fox*) *s. Parasitaria* (*Caposi*).

Our mention of this disease in the present connection, and not as one of the mycoses, is justified by the fact that its parasitical origin is still undetermined. It appears most frequently in children, and especially on the face, vertex, occiput, and back of the hands, under the form of vesicles, from the size of a pin's head to that of a lentil, whose bases are usually not inflamed, and which very soon dry into gummy crusts appearing as if glued on.

These, on falling off, leave a smooth surface, free from scales. There is no pain or itching. The affection is diffused by scratching. According to Caposi, the eruption is followed by great swelling of the submaxillary glands. The complaint often attacks several children in the same family and is said to be contagious. Caposi has discovered a fungus beneath the epidermis of the vesicle, but which is always derived from without. Geber and Lang have also found a fungus and are inclined to identify this disease with herpes tonsurans vesiculosus. Taylor and Unna were unable to detect these organisms. The disease usually disappears spontaneously in from two to six weeks. Its cure is hastened by zinc and white-precipitate ointments.

2. *Impetigo Herpetiformis* (*Hebra*), *s. Herpes Vegetans* (*Auspitz*), *s. Herpes Pyæmicus* (*Neumann*).

Only nine cases of this disease have thus far been observed—all of them in pregnant women, and commencing in the final months. Six out of eight resulted fatally. Hebra gives the following outline of symptoms

Eruption of pustules, arranged in groups or circularly, filled with a yellow purulent liquid, and drying into yellow flat scabs, under which a red, excoriated, non-ulcerated surface is perceptible, and which are surrounded by a succession of new clusters and rings of pustules.

The pustules were always largest and most numerous on the anterior surface of the body and the inside of the thigh, but were also observed on the upper extremities, throat, nape of the neck, back, and face. In three or four months, the disease had affected almost the entire surface, which was swollen, hot, covered with crusts, and fissured and excoriated in places that were here and there encircled by pustules. The mucous membrane of the tongue showed, in one case, circumscribed gray patches, depressed in the centre. Each crop of pustules was preceded by rigors, and the patients finally succumbed to exhaustion. The etiology of the disease is still quite obscure.

Treatment, according to Caposi, consists in antiphlogistic measures, such as the application of amylum and cold wrappings, followed by soda or simple continuous baths, simple ointments, carbolized and plaster-of-Paris tar dressings, besides the use of means adapted to control the fever and the other constitutional symptoms.

LUPUS ERYTHEMATOSUS.

This disease, first mentionod by Biett as erythème centrifuge, and in 1845 described by Hebra under the title seborrhœa congestiva, afterwards received from Cazenave (1850) the name of lupus erythematosus, by which it is now generally known.

Definition.—Lupus erythematosus is an inflammatory disorder commencing in the enlarged capillaries of the corium and of the papillary body and going on to infiltration and focus-like aggregation of cells; it heals spontaneously, or else terminates in degeneration and cicatrical retraction of the cutis and its glands.

I do not rank it among the neoplasmata, notwithstanding its focus-like aggregation of cells in the corium, which brings it into close anatomical relations with lupus vulgaris; still, however, I retain the name of lupus erythematosus, not considering that the real nature of this disease has yet been finally determined.

Course and Symptoms.—Lupus erythematosus does not usually come under medical inspection until after it has invaded a considerably extent of surface, since patients, owing to the fact that it runs its course without pain, and as a rule, without itching, either fail to notice its existence at the outset, or regard it as unimportant.

In its earlier stages, it is found to present the following phenomena:

An eruption of small, red, superficial, slightly elevated dots, varying in size from a pin's head to a lentil, and disappearing on pressure. These at first have a smooth surface, but subsequently exhibit at their slightly depressed centres, small, firmly adherent scales, which send off conical processes between the elongated papillæ, and into the enlarged orificcs of the sebaceous glands.

This primary eruption may appear in one situation only, or in several places at once; the latter, especially, in malignant cases.

Its extension takes place in two ways: through the advance of the disease peripherally, causing adjacent blotches to coalesce, or by the appearance of new primary eruptions.

The coaleseence of blotches produces sinuosity of the periphery as in psoriasis, since the process of recovery usually sets in where two diseased surfaces are in contact. While the disease is extending itself peripherally, its spontaneous cure, by a kind of cicatricial atrophy, commences at the centre. Here, in the course of months or of years, a depressed white and shining cicatrix is formed, or, before atrophy has fairly begun, we meet with a dry, lustreless surface covered with firmly adherent scales, which at first have a greasy feel, caused by an excessive secretion from the sebaceous glands (lupus erythematosus sebaceus), but afterwards, as the atrophy progresses, become gradually dryer and harder, until they feel like the dried skin of a snake. When the sebaceous glands are not involved or are wanting, as in the palm of the hand, the cutaneous surface exhibits these appearances from the outset (lupus erythematosus corneus). Such central atrophy, with peripheral morbid extension, gives rise to that peculiar circularly-formed exanthem, sharply defined at its circumference, but gradually fading away towards the centre, which led Caposi to call it lupus erythematosus discoides. Upon the welt, there are often numerous comedones. Several of these round spots, from the size of a lentil to that of the palm of the hand, may be present at the same time. Their growth is usually very slow, extending over periods of months or even of fifteen or twenty years. In many instances, the disease speedily covers the entire face, especially when combined with erysipelas. This disc-like form of eruption occurs most frequently on the nose, cheeks, eyelids, ears, lips, and scalp, rarely on the fingers or toes. When, as is very often the