WARTS.

WARTS, rat-tails, scratches, &c. are excrescences, nearly of a similar nature. Scratches and rat-tails are certain dry scabs, chops, or rifts, that occur between the heels and pastern-joints, and do frequently reach from above the pastern to the very hoof of the hinder legs, and sometimes attack all the four legs at once.

Warts, however, differ in some respects, as they are excrescences that arises indifferently on any part of the body; while the other two, are confined to legs only, and never grow so long nor so large as the warts. Some horses are extremely subject to warts, and are often very much disfigured by them, particularly when they grow near the eyes.

The cure of warts is extremely easy to be performed, be they ever so large and numerous. For, fix the animal properly, or let it be thrown down on straw, in the usual manner, then getting the excrescences between a pair of clamps, or strong forceps, cut them off with a very sharp knife; after which apply the actual cautery over it, to stop the bleeding, and prevent the future generation of the warts.

If the rat-tails or scratches are large and
WARBLES.

numerous, they must be treated in the same manner. For any other treatment of these two last mentioned diseases, we refer to the article Grease.

WARBLES.

A warble consists of inflamed tumours, to which saddle horses of all descriptions, but particularly those of cavalry regiments, are extremely subject. They take place in consequence of an unequal and continual hard pressure, which produce hard and painful tumours or swellings upon the horse's back, &c. more or less hurtful and difficult to cure, as they are nearer to, or at a distance from, bones and ligaments.

A fresh warble will easily subside on application of an astringent, composed of white vitriol, two drachms; water, one quart; and extract of lead, two ounces; or a table-spoonful of common salt, dissolved in a quart of water, to which add, vinegar, a pint; brandy, or spirit of wine, two ounces. Let the part be well fermented with either of these several times a day.

These astringents will succeed very well, providing the skin is not destroyed. But if this should be the case, a contrary method
must be pursued; which consists in bathing and fomenting the part with warm water, and afterwards applying or covering the sore with a plaister of mild or healing ointment. If the skin turn black and hard, forming a kind of dead body, called Sit-fast, it must be removed by warm emollient fomentations, having previously been rubbed with a little blistering ointment; then it will slough off very easy itself; if not, it will be easily extirpated with the knife, and the cure soon completed, by dressing the wound with the ointment mentioned above.

WATERING.

As too much or too little water, given to a horse at once, or at an improper time, or perhaps the constant use of unwholesome water, may produce disorders, which sometimes prove fatal, it becomes necessary to say a few words on this important subject.

As the water which enters into the composition of the animal fluids is considerable, and as in proportion to it are the fluids secreted, a sufficient quantity ought to be always diffused through the whole mass.

And it will be obvious, that a constant and frequent supply of water is not only neces-
WATERING.

sary to dilute the food in the stomach, but the mass of fluids in general, as they even, in the most healthy state, have a constant tendency to putrefaction; and on that account require a constant supply both of food and drink to keep them in a healthy condition.

It has been observed, by several writers, that diseases in the human subject proceed, in a great measure, from the use of unwholesome water, and, by comparing the different strata of the earth through which the water passes about populous cities, they affirm, that where the water is bad, obstinate chronic diseases prevail most.---It is likewise thought the disposition to gravel in the urine may be owing to the same cause.

In like manner water, which contains mineral bodies, or metallic salts, is thought to enlarge the glands of the throat and jaws:---these circumstances seem to warrant the conclusion, that those waters do not assimilate, or mix intimately with the fluid; and so prove the source of calculous concretions, and hard swellings in different parts of the body. I shall not here take the trouble to animadvert on the different opinions of other writers concerning the injury that bad water may produce on the constitution of human subjects, but confine myself to the observations I have made upon
the effects of this fluid, considering it as a common drink to horses and other animals: and it is my opinion, that no such diseases as above described, even by modern veterinary writers, have ever taken place in horses or other animals, by drinking hard spring or pond water, as is represented. Indeed, we are now sufficiently convinced, by experience, that water, impregnated with metallic substances, such as vitriol, iron, alum, and even arsenic, have been given to horses with a most salutary effect, in preventing as well as in curing the most inverteate disorders; such as the mange, farcy, disease of the eyes, (called moon-blindness), and even the glanders itself.---The truth of this will be readily admitted by every impartial reader who knows that, in the above-mentioned cases, we often give half an ounce of blue vitriol daily to a horse, with the best success. Two drachms of arsenic, and often three, have been administered to the same animal, and the dose continued several days, and even weeks, with the best effect possible, succeeding in curing the above complaints, after every other remedy had failed.---What can we say then of those authors who have such an objection to the water that partakes a little of those metallic substances, the quantity contained in which being often so inconsiderable, as to be almost
imperceptible to the taste? We must certainly conclude, that they were totally unacquainted with the difference existing between the structure of the human stomach and the constitution of the horse; it being represented by them, that a single grain of arsenic is sufficient to poison a man, whilst half an ounce of the same will have little or no effect on the stomach of the horse.—By this, as well as many other facts, founded on a proper and judicious investigation of the structure and anatomy of the horse, we have learned that the mechanism of his body is so different from the human species, as to render the simplest remedies of veterinary pharmacopia a real poison to man. Indeed, that which would be the most active poisonous substance to man, is often rendered inert, when introduced into the stomach of the horse. We may therefore reasonably conclude, that the only mischief or danger arising from drinking any of the waters that are so injurious to mankind, is always, and invariably, owing to the quantity taken into the horse's stomach at once, particularly that of wells, some of which are very deep, and the water hard, which occasions that chilliness and trembling; frequently observed in horses, when they drink it immediately after it is pumped, and often occasions the cholic, or gripes, (as it
is called) which frequently endanger the lives of these useful animals.—All these symptoms and diseases are certainly to be attributed to drinking of water, but do not take place in consequence of its containing any metallic qualities, but proceed from its hardness and coldness, and from allowing the animal to drink too large a quantity at once. If they are so disposed, it shews that they have been neglected in this respect; for if they had always water at command, they would drink often, but never too much at once.—For this reason water should be offered to them frequently, but not in great quantities. It is very refreshing to horses, to allow them to wash their mouths and throat by a glut or two of water after performing any severe exercise; but they ought on no account to be indulged in drinking a quantity of cold water when over-heated, as the consequences are dangerous, and frequently prove fatal. It is to be for ever remembered, that when a quantity of cold water is taken into the stomach and intestines in a state of perspiration, a stagnation of the blood takes place, and death may ensue.—On this account I recommend, in very cold weather, the chill to be taken off, with a little bran or oatmeal, or both; which ought also to be punctually and carefully attended to in hot weather, particu-
larly when the water is taken from a spring, deep wells, &c. But these inconveniences may be easily avoided, by causing the water to be pumped into a large trough, or exposed to the open air for some time before it is used; or throwing a cart load or two of clay or chalk in it, will greatly contribute to soften it. Above all, I cannot help saying a few words concerning the common practice of riding horses hard after they have drank their water, with the absurd idea of making it warm in their stomachs, which practice I severely condemn: it ought to be rejected as extremely injurious; for when the stomach and intestines are loaded with water, the viscera press against the diaphragm, by which pressure the lungs are more or less impeded in their functions; and if the animal be put on any violent exercise, some of the air vessels suffer in their exertions, and thereby are subject to be ruptured, and produce broken wind, or, what might be more properly termed, broken lungs.

I shall now conclude this subject, by observing once more, that the bad effects produced in the horse after drinking hard water do not arise from any metallic, saline, or earthy substance, as described by some veterinary writers; but the mischief arising from it always takes
place in consequence of allowing too large a quantity to be drank at once, by which the vascular and sensible coats of the stomach and bowels are exposed to inflammation, which often terminates in mortification and death. It may, upon the whole, therefore be pronounced, upon pretty good authority, that the only water objectionable and unfit for use, is that of stagnated ponds, which are generally green and full of insects, particularly in the summer season: and although some horses seem to prefer this kind of water to any other, yet they should not be allowed to drink it, as it is commonly very thick with mud and filth, which is apt to produce concretions, or stony substances, in the bowels, and many other diseases of equal magnitude. This is the only sort of water unfit to be taken as a proper diluter of food, or of the fluids contained in the animal machine.

WEN,

A FLESHy substance, that has been known, in different instances, to grow out almost on every part of the body. Wens are seldom painful, owing to their small beginnings and slow growth, being sometimes of several years
standing before they arrive to any great size. They become at last like the natural flesh, and rarely are attended with any other bad consequence, than their deformity or weight upon the part where they are situated. Their substance is generally fleshy, and for the most part spungy; though some are spungy, with a mixture of schirrous hardness, or cancerous disposition, especially when they arise among the glandular parts.

The cause of wens is difficult to assign. They begin usually in the skin, where the vessels are extremely small, and seem to terminate; and these enlarging gradually, at length grow to a considerable size.

All the fleshy, steatomatous swellings or wens may be safely cut out, as they seem to admit no other method to obtain a radical and permanent cure, provided the root or bleeding part is properly touched with the actual cautery after they are extirpated with the knife.

WIND-GALL

Is a puffy kind of swelling seated on each side of the pastern joints of the four extremities of the horse’s legs:—these enlargements have been
named wind-galls, from a false notion of their containing nothing but air or wind. But recent attention to this disease, as well as many others, will enable us to affirm, that wind-galls proceed from an enlargement of the mucus capsula of the pastern joints, and are filled with a fluid, and not with air. These little bags are eight in number, three of which are situated between the posterior and inferior head of the cannon bone and the lower portion of the upper suspensory ligaments. Three more are situated between the suspensory ligament and the perforant tendons. The two last are situated between the flexor perforans and the flexor perforatus tendons above the sheath;—their use is to lubricate the parts, and prevent friction during exercise.

These eight mucus capsula are very small when in health; but when the animal has been exposed to excessive labour, they soon enlarge and become diseased.

The Cure of wind-galls, in their recent state, may be attempted by frequent application of blisters, and astringent fomentations of a strong solution of alum in water, with the same quantity of strong vinegar. But if this treatment should fail, the only resource will be the actual cauter, which will succeed
so far, that if it does not reduce the enlargements, it will prevent the further progress of the disease.

WORMS.

Horses, and many other animals, are equally as subject to worms as the human species; and they are often very fatal to horses, when allowed to remain long in the stomach and intestines.

The most common kinds of vermin that cripple, and are found in the intestines of the brute creation, are---first, bots, which many horses are subject to in the spring season: second, those called teretes, or rotundi, from their resembling earth worms: third, those that are about the size of the largest sewing-needles, with flat heads, called ascarides: fourth, that long species of worm, called taenia, or tape-worm, horses are not much troubled with: ---this kind of worm is the most injurious to health, in consequence of its structure, which seems to be composed of several joints, forming altogether a worm of twelve to sixteen feet long, which renders it very difficult to be dislodged from the animal's body at once; one joint or two coming away at a time only, while
the other remain in the intestines, and do as much mischief as when whole.

Botts are found in the stomach:—they have two very sharp and hard hooks near their anus, by which they firmly attach themselves to the cuticular or insensible coat of the stomach, never, or very seldom, attaching themselves to the sensible, vascular, or secreting coat, and they occasionally do great mischief. I have seen several instances, on dissecting horses, in which their stomachs had been pierced through by these creatures, and having made their way into the abdomen, caused the animal’s death. Some, on such occasions, were found inserted between the coats, where they were almost hid.

It is probable, however, that when these insects are in small quantities only, they may be of some use in assisting the cuticular coat of the stomach to break down the food:—this is confirmed by experience, because they are found in almost every horse at a certain season of the year.

Medicines of any kind have very little effect in destroying botts:—they cannot be detached from the stomach by muriatic acid, spirits of wine, spirits of turpentine, nor by any thing else we know of; so that no medicine will destroy them while attached to the cuticular
coat of the stomach: but when detached, they may be voided by means of purgative medicines.---For further information on this head, see the article Botts.

The teretes resemble common earth-worms in many respects, only that they are sharper at both ends, are more callous towards the middle, and easily contract or dilate themselves:--these worms are of different sizes, some of them not above four inches long; but if they remain long in the intestines, they become an enormous size. I have seen horses void them the length of sixteen or eighteen inches, and otherwise large in proportion, and full of eggs, ready to produce a fresh breed.---These kind of worms, so dreadful in appearance, are, nevertheless, not so dangerous to horses as the

Ascarides, or small sort of worms:---these are very troublesome, and hard to be destroyed and expelled. They often insinuate themselves into the chyliforous vessels, deplete the animal of a quantity of chyle, and make him look as if he was starved; his hair staring as if he was sickly, and nothing that he eats makes him thrive, for they deprive him of his food. When these ascarides are in great numbers, and do not find enough chyle to satisfy their voracious appetites, they often make their way through
the coat of the intestines, and remain loose in the cavity of the abdomen, or attach themselves to the mesentery and lacteal vessels; and sometimes to the peritoneum, from hence crawling between the muscles of the abdomen, where they have been found on dissection, having been the cause of the horse's death.

Animals troubled with these kind of worms are very often griped, and have other uneasy affections of the bowels; for as fast as the chyle is formed from the aliment, which ought to be converted into blood, it is sucked up by them, and leaves but a scanty supply for the exhausted system of the horse.

Worms are generally occasioned by a want of energy in the functions of the stomach and bowels; or foul feeding, which produce crudities and slimy indigested matter in the organs of digestion, &c.

The signs of worms.—The animal is liable to be griped, but without those violent symptoms that attend a cholic, or an inflammation of the urinary organ: he never rolls or tumbles, but shews uneasiness, and generally lays himself down quietly on his belly for a little time, and then gets up and begins to feed; but the surest sign is, when a horse voids worms with his dung.
WORMS.

The Cure.—As soon as it is ascertained that a horse is troubled with worms, we must endeavour to destroy them, by giving two drachms of calomel, at night, mixed up with oil of aniseeds and a little sulphur, sixteen or eighteen hours after; to be worked off with purging physic, which must be repeated, after an interval of seven or eight days from the time it is settled, and continued until the horse has taken two or three doses; after which course of physic, we may give the following alterative balls daily, for about a fortnight or three weeks.

Take sublimate corrosive, fifteen grains; crud antimony, (prepared) half an ounce; ginger, (powdered) two drachms; and oil of savin, sufficient to form the ball. Or take vitriolated quicksilver, or turbith mineral, a drachm; sulphur, an ounce; oil of savin or rue, or Venice turpentine, enough to form two balls; leaving an interval of a day between each dose, and interposing now and then a ball of aloes, half an ounce or five drachms; Venice turpentine, sufficient quantity to form the ball. If this treatment seems to fail of success, we may try the following powder:—take powdered tin, three ounces; antimony, half an ounce; sulphur, (in fine powder) two ounces; to be compounded, and then divided in three equal parts;
one to be given in the morning, one at noon, and the last at night, well mixed with oats or mashes.---This process does not require any change of diet, or involve any hazard from the effects of cold.

WOUNDS.

Most animals, horses in particular, are much subject to be wounded; but it may be observed, that obtuse instruments wound, and sharp ones cut into the bones.

The best surgical writers have divided wounds into five different species, viz.---

First, simple incised wounds; second, punctured wounds; third, lacerated or contused wounds; fourth, gun-shot wounds; and fifth, poisoned wounds.

To cure a simple incised wound, we must begin by observing, if there be an arterial hemorrhage of any consequence, it must be pressed out with a sponge dipped in warm water; and then we must endeavour to stop the bleeding vessel, by compression, or by ligation. If there is any extraneous body, it must be removed with the fingers, if possible, otherwise with a pair of forceps;---in doing which the animal must be placed in a position,
that may the more effectually tend to relax the injured parts. When a leaden ball is the substance lodged, if it cannot be easily extracted, it may be left without inconvenience; but it is not the same with respect to splinters of wood, glass, iron, or cloth; these substances should be removed as soon as possible after the accident happens. The dressings may be pledgets of tow, spread with some digestive ointment, and large enough to cover the whole; this may be secured by such bandages, as the situation of the wound will admit; the first dressings may remain two days. After the first dressings are removed, they may be repeated every twenty-four hours, according as the suppuration is more or less abundant or acrid.

If there is any great degree of swelling or inflammation, the parts must be well fomented with warm water, previous to the fresh dressing being applied. Let us, however, caution the farriers never to probe the part with their fingers, as is generally practised by them, as such a method will greatly injure the tender granulations; neither should the surface of the wound be totally freed from matter, as it probably serves as a better cement for the new granulations. If there be any fungus, com-
monly called proud flesh, it may be touched with a little powdered blue vitriol, sprinkled over it, or mixed with the ointment, until this obstacle to the healing process is removed.

Punctured wounds, are those made by a small pointed instrument, the external aperture being small and contracted in proportion to the depth. In the treatment of punctured wounds, our view should be the same as in cases of sinuses, where it can be done with safety; viz. we ought to enlarge it immediately, and more particularly in those cases where the wound has been received by a nail, a fork, a pair of scissors, small sword, bayonet, &c. When, from the contiguity of large blood vessels and nerves it may be unsafe to lay the wound open, and when the situation of the wound will not admit of a counter-opening for the introduction of a seton, we must dress as in the article Poll-evil.

If the external aperture seems disposed to heal before a similar tendency appears in the bottom of the sore, a piece of blue vitriol (in substance) must be introduced to keep it open; which process must be continued until the wound is perfectly sound and healed at the bottom.

Lacerated or contused wounds. For the
treatment of these in their early stage, the reader may refer to what has already been said under the articles Contusion, Inflammation, Mortification, and Poisonous Wounds.—See the article Hydrophobia.

When a small artery is wounded, if it be quite divided, it retracts, and hæmorrhage is soon spontaneously restrained; if it be punctured, or partially divided, and it can conveniently be come at, it may be wholly divided, or the wound enlarged, and then the artery may be tied, if proper pressure, or the actual cautery, prove ineffectual. When a large artery is punctured or divided, it must be taken up and secured with a needle and ligature.

When a nerve is wounded, a variety of alarming symptoms comes on, in proportion to the tenderness of the part it is attached to, and the peculiar irritability of the constitution.

When the pain is extreme, it is relieved by dividing the nerve only; and this should always be done every time that it is in your power to do it. When a tendon is wounded, swelling occurs, though not suddenly, advancing gradually with the inflammation. The treatment of wounded nerves and tendons consist in the frequent application of warm water, and poultices of boiled turnips and bran.
If the skin is open, the tendon must be dressed with spirit of Venice turpentine, and covered with pledgets of tow dipped in the same; the whole properly bandaged, and covered with a hot emollient poultice. These dressings must be repeated every twenty-four hours.

We shall now proceed to the treatment of wounds, that penetrate through the cavity of the thorax and the abdomen; joints, or any other circumscribed cavities. However favourable appearances may be, a guarded attention should always be given; because, wounds in the chest, belly, and joints, are always attended with a great deal of danger. The two most material circumstances to be avoided in wounds of this kind, are inflammation and pain: the first will be avoided, by bleeding and pursuing the antiphlogistic plan; the latter will be prevented to a certain degree, by preventing the admission of the air, and the effusion of synovia. To wounds of the chest, belly, joints, mucus capsules, and any other circumscribed cavities, the actual cautery, applied to the wound, will be found an admirable remedy; and indeed the cure of such wounds seem not to be affected in any other way. The instrument most proper for the operation should be of iron, two
feet in length, rounded at the extremity about
the size of a middling sized button, with a
wooden handle. The iron should be moderately
red, for if it be black, the heat will not be
sufficient to produce a proper discharge of
lymph to close up the wound; and if it be
white, it will destroy too much of the sur-
rounding parts, and perhaps injure the liga-
ment. Although the operation in itself is very
simple, yet some knowledge of the structure
and economy of the parts is necessary, in order
to apply the cautery with the best possible
effect. The object in view is to produce a
glutinous substance to close up the cavity, and
before the slough is removed, for the granula-
tions below to supply the place of lymph; but
if the ligament itself be destroyed by the cau-
tery, it must, like other dead parts, separate
from the living, and come away, and then the
joints will still be open.

It is therefore of importance not to destroy
the ligament of the joint with the hot iron, but
confine its application to the external parts.
In cases where the chest and belly is open, it
is generally proper to cauterise the whole ex-
ternal surface of the wound; and if the dis-
charge is not immediately stopped, the iron
has probably not been applied sufficiently deep,
or too cold, to produce a proper discharge of lymph. When a cure of any of these cavities is possible to be affected, the actual cautery will be attended with the greatest success, in closing the cavity and stopping the discharge.

Sometimes, however, in the course of a day or two the discharge appears again, particularly if the wound be very large; if this happen, the operation must be repeated, until the wound remain shut up.

For further information, we refer the reader to the article Bleeding.

END OF THE DISEASES OF HORSES.