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METEORITES, THEIR ORIGIN.

It is a most curious but, notwithstanding this, a well established fact that sometimes stones fall from the sky, and formerly the most absurd hypotheses were invented to explain their formation, in the upper strata of our atmosphere, by the condensation of vapors of solids, as hailstones are formed by the congelation of the vapor of water. Towards the end of the former century, La Place sought their origin at a greater distance; he concluded that as gravitation on the moon is some four times smaller than on the earth, it might be possible that the volcanoes there could propel stones with such a force as to go beyond the limits of lunar attraction into the sphere of terrestrial gravitation, as a velocity double or triple that which we can give to a cannon ball would be sufficient to accomplish this result; this hypothesis was accepted for a time, notwithstanding the objection of astronomers and chemists, the former proving that the observed velocity of the bodies and the force with which they strike the earth were much greater than they could possibly obtain from a source so near as the moon; in fact, astronomers proved that aerolites possess a planetary velocity. Chemists, from their side, pointed out that the chemical composition of aerolites was by no means that of matters ejected from volcanoes, but that they were compounds of metals, as found in earth, but combined in a way different from any terrestrial mineral known; in fact, that the greater number of aerolites were imperfectly mixed alloys of iron and nickel, with 4 to 14 per cent of phosphorus, the iron being on the average present in the quantity of 60, the nickel of 21, per cent. Chladni, in the beginning of this century, founded his theory in regard to the origin of the aerolites on the opinion of Kepler, who maintained that there were more comets and smaller bodies of different kinds flying about in space than fishes in the ocean. Chladni's theory was that, in the interplanetary and interstellar spaces, small masses of solid matter are moving about in countless numbers, either in regular or irregular orbits, and that when they happen to come within the sphere of gravitating attraction of any planet, they will fall towards the surface with a velocity the resultant of their own planetary velocity plus the newly acquired velocity of gravitation, minus the resistance of the air which surrounds the planet. On reaching its surface, these velocities are destroyed, and the necessary consequence is the evolution of heat, this being nothing but molecular motion, the metamorphosis of mass motion when the latter is forcibly prevented from continuing. This accounts for the heat of the masses when picked up immediately after their fall, while the train of fire exhibited in many instances is easily explained by the consideration that they originally may contain combustible substances which had no chance to burn in the highly rarefied interplanetary medium; but, coming in contact with the oxygen in our more dense atmosphere, and that with the immense planetary velocity, the friction, combined with chemical action, raised the temperature rapidly to the point of combustion.

The latest theory in regard to their origin is that of Proctor, in England. It is based on the recent investigations of the solar atmosphere by means of the spectroscopic and telescope, which show that continually the most gigantic eruptions take place in the solar surface, throwing up gaseous

matter containing iron vapor, etc., at an initial velocity of more than 500 miles per second to a height of over 200,000 miles. Proctor thinks that if any denser material is ejected from the bowels of the sun by these explosions, it will never return to the sun again, and will fly off into space, revolve for some time around some planet, and finally descend on the same, as the meteors do on earth. If this view be correct, the specimens of meteoric iron preserved in our cabinets are pieces of the sun.

If we take in account that the spectroscopic shows that the most prominent substance in the sun is iron, and that the same is the case in the meteorites, that they are combined chiefly with nickel, another metal found in the sun, forming an alloy not found on earth: that they also show a peculiar crystallization, and in general a common origin, the view is by no means so improbable, however startling it may be; it is moreover sustained by the unanimous testimony of all modern observers, who affirm that the solar eruptions surpass in immensity any volcanic eruption which ever takes place on earth, or which, in past ages, must have taken place on the moon.

THE EIGHT HOUR STRIKE IN NEW YORK.

The progress of the eight hour movement here, which until recently appeared successful, has encountered a check which bids fair to result in defeat. Elated by the easy victories gained over the smaller employers, the strikers have carried the war to the doors of the great manufacturing firms and corporations. But here a strong opposition has been encountered. Hitherto the action of the strikers has been characterized by but few breaches of the law, and the public has been led to believe that the revolution might be effected without the usual recourse to riot and violence. This in the beginning was the opinion held by us, but the late reports of the new position taken by the workmen indicates that our city is likely to be disgraced by acts of lawlessness.

This eight hour movement affects every working man in the land, and unless all or a very large majority of the laboring classes afford it an unwavering support, the accomplishment of its design is impracticable. This encouragement from other localities has not, with the exception of a few trifling instances, been accorded. The leaders of the uprising are fully aware of this fact, and, stung by disappointment and at the same time forced to contend against unlooked-for and powerful resistance, they rush desperately to the last extremes, and endeavor, by threats of personal violence, incendiary documents, and other methods of brutal intimidation, to enforce the ends which they have failed to accomplish by peaceful measures.

We marvel that any sensible mechanic can lend himself to such proceedings and virtually take the bread from the mouths of his family or devote the little sum he has laid aside for a rainy day to the furtherance of such principles.

Organized gangs of malcontents have of late infested the surroundings of our large manufactories, seeking to induce the operatives, by persuasion or argument, to join their ranks. Now, however, their policy seems to have changed, and with the utmost audacity they enter the buildings, spread through the shops, and compel the workmen, who may be perfectly satisfied with their hours and their wages, to abandon their labor; and this in direct contempt of the remonstrance of the manufacturer or corporation on whose premises they may be trespassing. The hands having been enticed away or forced to quit work, the next proceeding is a declaration of terms on the part of the League to the employer, coupled with the information that, under no other circumstances save a compliance with the demands therein set forth, will he be permitted to continue his business.

The outrageous nature of these claims is illustrated by the following requisitions made to Mr. J. G. Batterson, the builder of the Masonic Temple on the corner of 23d street and Sixth avenue in this city, and communicated by him to the *Hartford Times*. Mr. Batterson had last fall resisted the strike at his quarry at Westerly, R. I. and has continued to cut granite under the system hitherto maintained, with a certain number of apprentices and last year's rate of wages. He carried that through successively and is now met by the stone cutters in New York with a declaration that he can only be permitted to carry on business in this city by complying with the following exactions: 1st. He must throw away all the cut stone which has been wrought during the past six or eight months by "non-society" men and apprentices—amounting to about twenty-five thousand dollars in value—and have it all done anew out of new stone by "union" or "society" men. 2nd. He must reimburse the various trades' unions who contributed money to support the striking workmen in the Westerly quarries, or, in other words, he must pay them all they expended in the attempt to break him down. 3d. He must dismiss all apprentices and recognize the power of all trades' unions. Extra emphasis was given to these requirements by the smashing of various ornamental parts of the cut stone about the building. Mr. Batterson refused acquiescence, appealed to the police for protection—and also continued work with men from his quarries at Westerly.

The detail of a force of police to insure the security of the Masonic Temple and also to protect other threatened points called forth the memorial from the League to the Governor, which, as a specimen of matchless effrontery and insolence, we have never seen rivaled. Like the Southern confederacy, the strikers wish to be "let alone," and they protest against the unwarrantable interference of the police in their peaceful occupations of closing factories, threatening employers, and offering personal abuse and violence to workmen who refuse to agree to their wishes.

We sincerely trust that the Government, both municipal and State, will invoke the full power of the law to repress and punish every act of violence these men may attempt. Ample protection is due to every workman who wishes to continue his labor at old rates; the entrance of committees and delegations into factories should be prevented, and any riotous movement should be crushed with a promptness and severity that would teach these organizations, and bring home to the minds of trades' unions generally, the fact that the use of violence as a means of coercion is beyond their powers, and that irresponsible associations, however numerically great, have no more authority than single individuals to abridge or violate the rights of the citizen.

THE PNEUMATIC RAILWAY BRAKE AND OTHER APPLICATIONS OF THE PNEUMATIC SYSTEM.

The pneumatic railway brake, or Westinghouse brake, which for several years past has been so successfully used on the principal railways in this country, is now attracting great attention in England, where it is considered a remarkable improvement. It is the invention of Mr. George Westinghouse, Jr., of Pittsburgh, Pa. It is used on twenty thousand miles of railway here. It has lately been adopted on the Caledonian railway of Scotland, a first class company. A locomotive and train of six cars has also been recently fitted with it on the St. Albans branch of the London and North-western railway, and on both of the above roads the invention has been subjected to the severest practical tests. The train, running at a velocity of 50 miles per hour on a level, was stopped in 16 seconds after turning the air on, within a distance of 260 yards. On a down grade of 1 in 68, train running 60 miles per hour, the stop was made in 23 seconds, within a distance of 308 yards.

The invention, it will be remembered, consists in having an air reservoir placed under the locomotive, in which reservoir a supply of compressed air is maintained by a steam pump. The compressed air is conducted, through lines of double pipes, to a series of air cylinders or engines, one of which is placed under each car for the purpose of working the brakes. In order to apply the brakes, the engineer simply turns a cock which admits air to all the brake engines in the train at once. Nothing could be more effective or convenient. An air pressure of 70 lbs. to the square inch is maintained in the reservoir.

The practical applications of the pneumatic system are becoming yearly more and more various and extended. In London, there are now in operation some nine miles of pneumatic tubes, for the conveyance of letters, etc., under the surface of the streets. For some ten or twelve years, passenger trains were regularly operated on one of the Parisian railways by the pneumatic plan, while in Great Britain, during a series of practical trials with the same system, passenger cars were propelled at a velocity as high as sixty miles per hour. It is true that this method of propulsion has not yet been reduced to the same point of economy that is realized with the steam locomotive; but there are situations where the employment of steam is for special reasons so undesirable that even at an increased expense, a good substitute becomes necessary. As for example, for city railroads, the pneumatic plan, which furnishes rapid speed and pure air, is decidedly preferable to a steam road, which whether placed above or below ground is more or less of a nuisance to everybody.

Another important application of the pneumatic system relates to rock drilling, and is now very extensively employed for that purpose. It was used in the boring of the great railway tunnel through the Alps. It is also employed at the tunnel now being bored through the Hoosac mountains, Massachusetts, which, next to the Alpine tunnel, is the largest work of the kind. The pneumatic drills are also used in boring the net-work of tunnels under the East river, at Astoria, N. Y. In all of these examples a pneumatic pressure of about 60 lbs. to the square inch is used.

Another very beautiful and successful application of the pneumatic system is employed in the construction of the foundations of bridges under water. The great bridge over the Mississippi at St. Louis is an example, the foundations of which were carried down, one hundred and thirty-six feet below the level of the water, by the maintenance of a pneumatic pressure within the caissons of some fifty-two pounds to the square inch. The same system was employed here in the sinking of the foundations of the Brooklyn suspension bridge.

IRON SHIP BUILDING IN WILMINGTON.

Among our maritime manufacturing cities, Wilmington, Del., must now be held to take a very prominent position. During the last eight or nine years, the energies of her capitalists have been directed to iron shipbuilding, and great success has resulted from their efforts.

The city is naturally well situated for shipbuilding purposes, and the facilities for obtaining iron are unexcelled. Two railroad lines extend to the mining regions of Pennsylvania, and the ore is brought by them directly to the shipyards. The latter are all located on the Christiana Creek—a wide and deep stream which forms a junction with the Delaware River at Chester, Pa. Adjacent to Hollingsworth and Harlan's yard is a large dry dock, only rivaled by that at the Brooklyn navy yard, which has just been completed by that firm at a cost of \$125,000. The basin is of solid granite, built in terraces. The above firm alone employs 700 mechanics, and another, 500; the whole number employed by the various builders is, according to a correspondent of the *Evening Post*, about 3,000, which is rapidly on the increase with the extending business. The builders

roll their own iron plates and manufacture everything pertaining to an iron vessel themselves. Many magnificent steamers have been built at this yard, the workmanship of which would bear comparison with that of the finest Clyde-built vessels. There are now on the ways a vessel of 3,000 tons intended for the Pacific Mail Steamship Company, and one of 1,500 tons for the Cromwell line. At the yard of Pusey and Jones, over sixty iron vessels for different lines have been built during the last seven years, and at present they have on the ways a 3,000 ton ship for the South American trade.

The business of the other builders is also in a flourishing condition, and there is every prospect of Wilmington becoming the great center, on our continent, of this branch of industry.

HOW PAPER COLLARS ARE MADE.

One hundred and fifty million paper collars, it has been estimated, are yearly used in the United States; and statistics show that even this immense number is steadily increasing as improvements in the manufacture multiply.

The collars are made in two varieties: of paper and cloth combined and of paper alone. The best materials are used in the manufacture of the paper. It is supplied in heavy white sheets, sixteen by thirty-six inches in dimensions, weighing 125 pounds to the ream. On being received in the manufactory, it is sent to the enameling room, where each sheet is covered with a thin layer of enamel and then placed on racks heated by steam pipes until thoroughly dry. This work is performed entirely by hand, and the enamel mixture applied with an ordinary brush.

After the sheets have become thoroughly dry, they are embossed to imitate cloth. To produce this effect, muslin is tightly stretched and pasted on plates of tin corresponding in size to the sheets of paper. Between pairs of plates thus prepared, the paper is laid, about fourteen sheets at a time being thus arranged, making a pile of alternate layers of paper and tin. The whole is then passed between heavy steel rollers, the pressure being sufficient to imprint the threads of the cloth on the paper, so that a perfect *fac simile* is thus obtained.

Each sheet is then polished by passing it over swiftly revolving brushes, when it is ready to be transformed into collars. The paper is next sent to the finishing loft, where, by means of movable dies made of steel, with edges sharpened so as to penetrate the material readily, the collars are cut out. A heap of sheets, about eighty in number, is arranged under a press, the die placed upon them, and the press set in motion. A single stroke cuts through the paper, and the collars are shaped. They are now perfectly flat, destitute of button holes, and, besides, must be molded before they are ready for packing.

At one end of the loft are large rolls of starched muslin, the use of which it is at first somewhat difficult to divine. A glance at the next process through which the collars pass soon affords an explanation, for the muslin is seen cut up into little elliptical bits called "patches" which are pasted on the extremities and middle of the collar. Their object is to give the button holes the necessary strength and to prevent them tearing out when soaked by perspiration. A very ingenious machine puts on these patches, cuts the button holes, impresses the imitation of stitches on the borders, folds the collar, and stamps its size on it, all in one motion.

The collars, as fast as they are finished by this machine, are bent or molded so as to fit the neck. The molding apparatus accomplishes its work with astonishing quickness, although it may be fairly considered as rivalled in rapidity of motion by the girls who pack the collars in the boxes. A bundle of a dozen is made up and twisted into its receptacle as if by magic, each girl packing some 20,000 collars per day. The last process is to label the boxes, place them in cases, and the goods are ready for the market.

The cloth lined collars are the more expensive of the two varieties. They are made of paper to which muslin, either white or colored, is firmly pasted, so that no embossing is necessary, and are cut out and finished in the same manner as above described. Cuffs and false shirt bosoms go through the same processes, dies being used of the required forms. This manufacture is largely carried on in this city.

AMERICAN INVENTIONS IN EUROPE.

Several American improvements of a valuable character are now attracting public attention in England and on the Continent. One of these is the Danks puddling furnace, by means whereof mechanism is successfully substituted for manual labor in the production of puddled iron. This is the invention of Samuel Danks, of Cincinnati, Ohio, and its introduction is acknowledged by the iron masters of England to have effected a revolution in the puddling business. It reduces the cost of making the iron at least five dollars per ton. Another improvement is the Henderson process of making iron and steel, the invention of James Henderson, of New York city. The object is to remove the phosphorus and other impurities from the pig iron, and convert it into fine wrought iron or steel at one operation without either mechanical or manual puddling. This is accomplished by melting the iron in connection with fluor spar, ilmenite, and manganese. Some very remarkable results have been obtained. At a trial at the Blockhairn ironworks, Glasgow, pig iron containing 1.14 per cent of phosphorus was melted, and in 50 minutes after fusion only .12 of phosphorus remained, and in the finished wrought iron, only .07.

Another invention is the pneumatic railway brake of George Westinghouse, Jr., of Pittsburgh, Pa., already in extensive use in this country, but now just being introduced abroad. In this improvement, the brakes are operated by

compressed air, supplied from a reservoir placed under the locomotive, a special pump being employed to effect the compression. The practical results obtained in England are considered remarkable by the railway authorities there.

THE SIGN BOARDS OF NEW YORK.

New York presents on her sign boards and in her streets a large series of odd combinations of letters, more *bizareries* in color, form, and design, and probably a greater number of ingenious advertising dodges, than any other city in the world. Among the many of these striking devices which sometimes ornament, often disfigure, the fronts of the buildings on the great thoroughfares, the sign emblematical of the business pursued, though one of the oldest, seems to be one of the most popular modes of arresting public attention, and its manufacture is made a specialty by several well known firms. Broadway is prolific in odd conceits in this class of sign. A depot for homœopathic preparations displays, on its front, a huge white pellet; colossal gilded pipes are suspended over the doors of vendors of meerschaums, and the most prominent of all is an immense gilt eagle which, holding a basket in its beak and perched on the edge of a roof, is visible the whole length of the street, serving to advertise a manufactory of willow ware.

We miss the impossible counterfeit of the noble red man, for so long the favorite symbol of the tobacconist. Fashion has banished him from the aristocratic marts of Broadway to the less pretentious shops on the avenues; but his place is filled by elegantly painted images representing goddesses of liberty, base ball players, gorgeously attired damsels, or perhaps simply by the upper half of a smiling individual who, placed in the window, seductively beckons us to enter. These effigies carved from wood exhibit much artistic skill both in coloring and in model. A large proportion of them are made across the river, in Brooklyn; their cost is from fifty to two hundred and fifty dollars each. A leading hat firm decorates the roof of its store with a wooden bear: importers of toys favor figures of Santa Claus, and a speculator in dollar jewelry, on the Bowery, displays a banner on which an admirable representation of a one dollar greenback is painted.

New and odd conceits in trade mark signs make their appearance almost daily, those of the umbrella manufacturers being especially ingenious. One of the most striking is a representation of a philosophic individual, calmly seated, holding over his head an umbrella on which a youth pours buckets of water, the latter being furnished him by a third party who is represented as frantically pumping. Another firm in the same business symbolizes its trade by the picture of a South American guanaco, and obtains a still better advertisement by philanthropically distributing white sun umbrellas, on which the name of the manufacturer is printed in large letters, among the stage drivers and cartmen. In many instances, signs are made to advertise a business and at the same time prove valuable as public conveniences. Handsome clocks, surmounting iron columns placed on the sidewalk, are found in many parts of the city, bearing the names of jewelers. A safe manufacturer places an enormous wind vane, on one end which his advertisement is inscribed, on the edge of his roof so that it can be readily seen from the street, and a maker of optical instruments takes advantage of the popular curiosity as to the temperature of the weather by exposing his sign attached to a large thermometer.

Queer conceits abound, the very oddity of which makes them noticeable. An entire building in Broadway is constructed of iron after a Moorish style of architecture, and is painted and stencilled in patterns of every hue in the rainbow. The tea stores in Vesey street color their fronts bright vermilion and green, and ornament their interiors with Chinese lanterns and frescoes depicting scenes in celestial life. Signs with the letters upside down are often used, and sometimes the characters are so intermixed as to require some puzzling to decipher their meaning. A window glass manufacturer arranges the letters of his sign thus "W G I L N A D S O S W." Those pests of Broadway, the peripatetic individuals who carry banners, have happily been abolished, but their places are taken by others, who, dressed in ridiculous costumes, endeavor to force circulars into the hands of passers. Helmbold the druggist, before his failure, placed on the roof of his building the mast of a ship, fully rigged with yards, gaff, boom, etc. Each yard arm was decorated with a flag, and a huge burgee with the name "Daunter" floated from the mast head. A warlike effect was given to the whole by showing the muzzles of two "quaker" cannon protruding from the cornice.

One of the most ingenious devices was that of a photographer on Broadway. An automatic stuffed monkey was represented as taking the likeness of a female of his own species. The figures were ludicrously dressed and, by means of clock-work, made to go through various motions in a very natural manner. The sitter poses herself, the operator inserts the plate in his miniature camera and turns away as if waiting; after a short pause, he removes the plate, bows to the lady, who turns her head, adjusts her dress, etc., and the same performance is repeated.

A printer in Center street displays an effigy of a Chinaman who, worked by machinery in the inside of the building, assiduously turns a wheel on which the sign is inscribed. The fence surrounding the new Post Office contains the advertisement of a western railway, which is embellished by the stuffed head of a huge buffalo, said to have been killed by Prince Alexis. Carts driven around the city, covered with posters and gaily painted transparencies are not so common as formerly; their advent when they are used is generally quite forcibly announced to every body far and near by the

continuous tolling of what is known as the "Tammany" bell. An enterprising individual recently caused considerable astonishment and not a little trepidation among the pedestrians on Broadway by leading a full grown lioness down the street. His advertisement was gaily painted on a cloth which was thrown over the animal's back.

The stereopticon and electric light have lately been employed for night advertising. By means of the former, pictures and business cards are alternately thrown on a large screen, the exhibition always attracting a crowd of spectators. The electric light is used to flash suddenly on the sign to which it is desired to draw attention. Very attractive signs for night use are those made from prisms or cut crystals and glass. The latter are imported from Prussia and set in frames of galvanized iron wire, made in the required shape. Inside the frame are placed revolving gaslights which produce, when seen from the exterior, a dazzling effect. A new way lately introduced of manufacturing these signs is to make the frame of cast iron and set in glass bulls' eyes of different colors. They cost from fifty to one thousand dollars, the price depending on the size. Cups of colored glass, each containing a gas jet and arranged in the form of letters, devices, etc., are also used for illuminated advertisements.

There are not many novelties of late invention in sign making. A heavy wire network on which are fastened large wooden letters is being introduced as a roof sign. Block letters made of sheet brass and nailed to the sign board have lately come into the market and present an effective appearance. For smaller placards, mirrors are very handsome. The design is traced on the back by removing portions of the amalgam, and made prominent by the glass being placed against gilt or colored paper. In banners, those made from network, with strips of canvas on which the sign is painted fastened upon them, have superseded the large pieces of canvas. The former are lighter and much more durable, as they are not apt to blow to pieces in a high wind.

DEATH OF JAMES GORDON BENNETT.

Among the prominent men recently deceased is James Gordon Bennett, founder and proprietor of the New York *Herald*, aged 75. So far as concerns the ethics of journalism, he was unscrupulous and irregular, zealously advocating the cause of truth and justice on one day, but perhaps the very next day assailing the same cause with unworthy vehemence. Editorially regarded, the *Herald*, under Mr. Bennett's régime, was notoriously unreliable; but as a vehicle of news it was the embodiment of enterprise, and in this respect it outranked all its competitors of the press. The New York *Herald* is one of the most widely circulated daily papers in the world, and as a property one of the most valuable. The establishment falls, by the bequest of its founder, to his only son, Mr. James Gordon Bennett, Jr. He is a young man of about 26 years, of considerable physical activity, chiefly famous as a sportsman, particularly in the yacht line. No king upon his throne ever possessed such power for good or evil as that now wielded by young Mr. Bennett in the New York *Herald*. That he may use his great inheritance honorably and wisely is the earnest wish of every person in this community.

QUICK MAILS.—The largely increased mails to be carried from Chicago to New York have induced the managers of railways to put on mail trains proper, each to consist of one locomotive and three mail cars, to be run through in twenty-four hours. Several cars are now building for this purpose, each fifty feet long and adapted for fast running. No stoppages are to be made except for coal and water, and it is intended that the distance (962 miles) shall be accomplished in the time stated, which would be running over forty miles an hour. Some such measures seem to be imperative, and will be attempted, at any rate, to relieve the Chicago and New York city post offices of an embarrassing glut of mail matter growing greater from month to month.

IMPROVEMENT IN FRACTIONAL DISTILLATION.—Linnemann has successfully applied to laboratory purposes the principles of a method largely used in the arts, in the construction of the so-called dephlegmators. This principle consists in partially condensing locally the vapor which rises from a boiling liquid, in such a manner that the vapors which subsequently rise shall pass through the condensed liquid, and thus in a certain measure be washed. The apparatus employed consists simply of a vertical tube, attached to the flask in which the liquid boils, and containing six or eight little caps of platinum wire gauze separated from each other by small intervals.

DR. JOULE, in some experiments lately made on the polarization, by frictional electricity, of platinum plates, has found that charge which they received was only diminished one half after an interval of an hour and a quarter. The plates were either immersed in water or were laid in alternate series, separated by wet silk. The amount of charge they took was measured by means of a delicate galvanometer. He has suggested that a condenser on this principle might be useful in researches on atmospheric electricity.

MILK OF DISEASED CATTLE.—Mr. Husson, in a paper upon the milk of animals diseased with the cattle plague, announces, as the result of one of his researches, that neither the flesh nor the milk of animals suffering from this cattle plague—contagious typhus—will convey the disease, although they may suffer greatly in their nutritive properties. The milk of diseased cows he found to have a more or less marked reddish yellow tinge, and a disagreeable flavor, although cats fed upon it seemed to suffer no inconvenience.