ASTRONOMY AND OUR SOLAR SYSTEM

Before paying our respects to the next nebula, or gaseous vapor, extending be-planes in this system, a word or two about youd the orbit of the most distant planets; the 'man in the moon' may not be that in the process of gradual condensaplanet in this system, a word of the system, a word of the system in the mean" may not be that in the process of gradual concess.

the 'man in the mean' may not be that in the process of gradual concess.

tion, by attraction, a rotary motion was amiles, since more is known about this tion, by attraction, a rotary motion was amiles, since more is known about this engendered and imparted to the whole and the consolution of the co

mess to us. The moon's diameter is 2000 miles, and its circumference is 6000 miles. It is distant from us about 240,000 miles. It revolves around the earth from west to be in the carrier of the construction of the carrier of the construction of the carrier o wolves around the earth from west to east in 29 days 22 hours 46 minutes and 2 retaining their motion, were gathered up seconds; this is called the lunar month.

The moon, as even through a telescope, has its mountains, valleys and plains—but at has no atmosphere; therefore, no rivers, lakes or seas. There are comparatively few mountain ranges. One range, called the Apennines, is more extensive than all the others. They have a length of about 450 miles, and some of the peaks rise to beights of from 18,000 to 20,000 feet, There are also isolated peaks to found on the surface of the moon. And one of the most remarkable of these is

It is claimed that the heights of the lunar mountains are more accurately known than those of the mountains on the earth.

As regards the surface of the moon we eare able to sprak of one side only. The other side is hidden from us, because as the moon revolves once around the earth, it also turns on its own axis just once

The rise and fall of the tides are caused, principally, by the attractive power of the moon. The sun also has a certain influ-ence, but the moon has a greater attraction. The moon has been the cause of much superstition, and, in some instances, does of life.

It was some of the wise (?) that claimed mot only intelligent and animated creatures were subject to its influence, but that the minerals and vegetables were under its control. At full moon, cucum-bers grow larger, as well as beet-root, curnips, lilles and saffrons. Herbs gathered while the moon is increasing will be of peculiar excellence. It is attributable to an eclipse of the

moon, that Nicias, the Athenian general, delayed his departure from Syracuse for one month; his enemy took advantage of this delay and blockaded the port; when Niclas made the attempt to retreat by Sand he was overtaken, and, after losing \$6,000 men, surrendered; the ruin of Athsens is dated from this calamity.

The Chinese astronomers were held re sponsible for the correctness of their calculations. During the reign of one of the Chinese emperors, his two chief astronomers were condemned to death because of their neglect (7) in announcing the precise time of a colar eclipse.

Mars is the last or fourth one of the first group of planets. It is much smaller than Venus or the earth, but is visible to the naked eye. Mars was named for the heathen god of war, and so called or account of its flery, reddish color. The length of Mars' duy is only 40 minutes nger than the carth's. Its year is a tle less than two of ours. Two very email moons have been found circling around this planet; one of them makes the revolution in 19 hours, and the other makes it in the short period of 71/2 hours.
Astronomers think that Mars has its continents and tracts of water, like those

Having briefly passed over the first four principal planets, we now come to the asteroids or telescopic planets. Those as-teroids which are nearest the sun, and to make one revolution of it, will take about three of our years; and those lying farthest, to travel once around him take about six of our years.

New members of this group are some times found. The number now known is something over 400. The largest of the asteroids is about 600 miles in diameter, whilst others measure only a few leagues. Leaving behind us the busy zone of planetoids, we meet Jupiter as the first one of the second group nearest the sun. It is distant from the sun about 459,000. 000 miles. Jupiter is visible to the eye without relescopic aid; it shines with a brilliant white light, and which exceeds that of every other planet except Venus; his size is enormous; his mass largely ex-ceeding that of all the other planets comblined. Its diameter is about \$5,000 miles; but it is uncertain as to the measure ments of Jupiter, owing to a dense atmosphere or heavy clouds surrounding

what is supposed to be a solid body.

Jupiter's day is of 10 hours' duration only; but its year makes up for the unusually short day; nearly 12 of our years go by before Jupiter has finished one rev-

olution of the sun. This "giant planet," in his long journey ground the sun, does not travel alone; he

around the sun, does not travel alone; he is accompanied by four moons, which are constantly circling around him.

Leaving Jupiter, we next reach the most interesting of all the planets in our system, viz., Saturn. This planet is not so large as Jupiter, but there is no very great difference in size; they, also, are spoken of as "twins." This planet is plainly visible without the telescope's ald, and its color is a dingy reddish light, as if seen through a smoky atmosphere. Saturn's day is about the same as Jupiter's; urn's day is about the same as Jupiter's Jupiter's long annual journey seems short beside Saturn's journey of 30 earthly

Fears. Saturn's system, or family, we might rm it, is more wonderful than Jupiter's Eight moons travel ceaselessiy around him; and in addition to the eight moons there are three curious but magnificent rings, which also revolve around him constantly. The first one, which lies almost over his equator, has a dusky appearance; the next, or middle ring, is very brilliant; and the third, outside the second, is

The theory now generally held by astronomers is that the rings are composed of a cloud of satellites, or of little "moonlets," which run swiftly side by side around the planet, Just how small they are no one knows yet.

The size of Saturn has perplexed as-tronomers as much, and for the same causes, as is presented by Jupiter, viz., varying clouds and changeable atmos-phere. Until the year 17st Saturn was believed to be the outermost planet of the solar system; but one night Uranus was discovered by Herschel, while he was busy exploring the heavens with a powerful telescope. This planet is \$60,000,000 miles from Saturn, and had often been seen; but it was not known as a member of the

Uranus is notable as the first planet ever "discovered"; all that were known when Herschel found it had been known from prohistoric antiquity. It was now

supposed that the outermost planet was discovered; but no! there was yet another, Astronomers know with great exactness the path of each planet in the heavens. Uranus, at first supposed to be the outer-most one, would not follow the path, or orbit, as laid down by astronomers; they were confident that their calculations were correct, consequently there must be another planet beyond, whose attractive power prevents Uranus from following fts assigned orbit. And it proved to be so. The name of this "prodigal boy" is called Neptune. Its discovery is "probably one of the greatest achievements of

mathematical science ever recorded."

Lattle is known about these two outer planets, owing to their great distance from us. Uranus is equal to 14 earths in size, and Neptune is equal to about 165. When about 84 of our years have rolled by, Uranus has made but one revolution of the sun; Neptune takes about 165 of our years to make its annual revolution. Uranus is known to have four moons, and Naptune is believed to have two.

Origin of the Solar System. It was the opinion of La Place, a cele-brated French astronomer, "that the entire matter of the solar system, which is fession: "It was while I was writing a

(Concluded from last Sunday.) mass; that this motion caused the consol urn; and, finally, that these rings collaps-ing at their respective distances, and still

> into planets, as they are now found to By the invention of the telescope, the Copernican theory, of which previous men-tion has been made, was sustained. It is not known that the ancients had any knowledge of the telescope. It was in-vented in 1900 by Galileo, an Italian philosopher, who was the first man to con-

statesman, who was then forming a gov-ernment, offering me a post in his cab-inet. Gentlemen," continued Mr. Morley, "so strong in me was the journalistic instinct that, after accepting the Illustrio statesman's offer. I went back and finished that leading article! And I can assure you," he added, when the applause which greeted this statement had died away that neither the grammar nor the style of the latter half of the article fell short of my usual standard."

MAGNETIC ISLANDS.

Their Influence Often Felt at a Distance of Ten Miles.

New York Times When the Paris went ashore on the Manacles it was offered as a first excuse that the iron in the dreaded rocks had deranged her compasses. Later another and the real reason for the disaster was learned.

But the Danish Island of Bornholm, in the Baltic sea, is so magnetic as to be danger to navigation. The island is 23

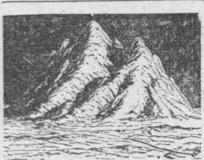


AN IDEAL LUNAR LANDSCAPE.

therefore, awarded the honor of this in-

The telescope, as constructed by Galileo, only one inch in diameter. With this sim-ple instrument, however, he saw that the moon was full of inequalities, like moun-tains and valleys, the spots on the sun, the satellites of Jupiter, the phases of Venus, and hundreds of new stars were observed in all parts of the heavens,

At the present time telescopes are used



Pico.

whose magnifying powers are many time greater than was Gallieo's, and thousands of new stars have been counted. The progress of the telescope toward its present state was slow; for as late as 1816 it is spoken of as being "nearly the greatest perfection that this kind of telescope is

The first telescope constructed was re-fracting, or one that refracts the light to focus with a glass lens. The reflecting telescope, invented afterwards, reflects the light to a focus with

a concave mirror.
At present, the largest complete telescope in the world is the Yerkes, of the university of Chlcago, which has an object glass 40 Inches in diameter.

France contemplates having a telescope even larger than the Yerkes, the Deloncie, so called because its construction was first suggested by M. Francois Deloncle, of the French chamber of deputies. It will be one of the interesting features of the Paris exposition in 1909, and will be the most remarkable instrument ever constructed. The object-glass will measure 4 feet 1½ inches, and will weigh 992 pounds. The lenses alone will cost between \$100.000 and \$200.000, and the com-pleted instrument will represent an ex-penditure of \$280,000. It is not merely in penditure of \$250,000. It is not herely in size and cost, however, that this great telescope will be remarkable. Its focal distance will be over 180 feet; and to make a tube of that length, over four feet in diameter, capable of sustaining the great weight of the lenses, yet so delicately polesis. delicately polsed as to be easily adjusted to the changing positions of the planets, would be extremely difficult. The telewould be extremely difficult. The telescope will, therefore, be firmly fixed in a horizontal position on a masonry foundation, and the image of the stars reflected into it by a movable mirror which follows the motion of the heavenly bodies by clockwork. About the eyeplece of the telescope has been built an amphitheater, where, upon a vast screen, visitors may see the tingge of sun, moon or stars mag-nified from six to ten thousand times. A correspondent not long since in referring to the origin of the solar system ning to the origin of the soal system uniquely stated that there must have been a long courtship, resulting in marriage, planets born and then a big family row, because of an unequal division of real estate at the death of some member of the

We must not forget, however, that our solar system is but one of many others. What a grand aggregation of families movement afoot to divert the Western

struct one on principles of science; he is, miles long, 14 wide and is 24 miles east by south from the nearest point of Sweden It consists almost entirely of magnetite The telescope, as constructed by Galileo, and is much feared by navigators on ac-tagnified objects but 30 times, it being count of its influence on the magnetic needle, which makes the correct stearing of a ship a matter of much difficulty.

This influence is felt at a distance of

10 miles, and so palpably that, on the

Island being sighted, mariners on the Baltic at once discontinue steering their course by the needle and turn instead to the well-known lighthouses and other igns by which to direct their craft.

There are several magnetic islands and points along the Atlantic coast of South America. Near the mouth of the Rio de la Plata is a famous magnetic point western side of the headland known as the Punta Negra-and navigators vessels bound for Buenos Ayres or Montevideo have to be careful not to go too near it. Trinidad is another place of the same description, and one reason for its abandonment to Brazil was its utter unlitness for a telegraphic station, owing to its strong magnetic powers.

CANADA'S PROGRESS.

She Is Actively Competing for the Carrying Trade of the West.

Coming Age.

Up to June 30, 1898, Canada had spent upon her canals \$87,571,498. This, with the railroad expenditures, amounts to over 500,000,000 pnid out by less than 5,000,000 of people in one generation for the development of their transportation system. For the most part this enormous ex-penditure meets with public approval. Especially is this true of the money de-voted to enlarging and deepening the ca-



Refracting Telescope.

nals, for the Canadian people are deter mined to wrest from their American rivals a large share of the carrying trade of the West. That this is a prize worth struggling for may be seen from the fact that last year grain and flour equivalent to 270,000,000 bushels were loaded at Buffalo, and thence carried to New York. The cost of carrying this great total from the west-ern end of Lake Superior to the ocean was at the lowest calculation, between \$11,600,000 and \$12,000,000, and it gave employment to nearly 40,000 men.

Aiready the canals have been deepened



SATURN.

not a jar to disturb the family peace.

R. H. BLOSSOM. Portland Or.

John Morley's Journalistic Instinct.

The Cornhill, and planets, was once a vast I received a letter from an illustrious crosses, stars, badges and other insignia. Ish government and its subjects in these country, but how do you propose to take tag-foom of your "descreet friend."

we are! And how charmingly we agree; carrying trade to Georgian bay and thence by means of a short land hauf to Mon-treal via Lake Ontarle and the St. Law rence.

Valuable Decorations,

Cleveland Leader. Mr. John Moriey, who was a journalist before he became a cabinet minister, delighted the journalists at a press club dinner in London a few years ago by making the following autobiographical conting the following autobiographical continuous formula of the Black Eagle, the Organic "If was while I was writing a day of St. John, of the Garter, and the der of St. John, of the Garter, and the Tolson d'Or. In all, he has over 200

HOLD KEY TO PUERTO RICO

REASONS WHY UNCLE SAM NEEDS DANISH WEST INDIES.

St. Thomas Is the Pinest Available Harbor, and It Can Easily Be Made, Impregnable.

WASHINGTON, Jan. 9.-The Danish West Indies, which Uncle Sam will have to purchase to prevent their acquisition by some European power, will add to our aiready vast insular domain three small specks in the sea, with an aggregate area only as great as that of the city of Philidelphia. Of their 33,000 human souls, likely to become American subjects before the birth of the new century, five-sixths are negroes engaged mostly in sugar culture.

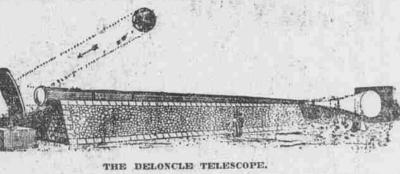
The sacred Monroe doctrine has been but one factor in Uncle Sam's concern in these isles. Lying 30 to 50 miles off the eastern end of Puerto Rico, they hold the strategic key to what in time of war would be the most dangerous approaches to our valuable West Indian possessions. St. Thomas is the only one of the three slands of which Uncle Sam is sorely in islands of which Uncle Sam is sorely in need on this latter account. It lies in the track of all vessels from Europe, Africa, South America, the East Indies and the Pacific bound for the West Indies, and of many plying for our continent by southern routes. St. John and Santa Cruz, the two sister isles of St. Thoras, will have two sister size of St. Intotas, with the sake be acquired with the latter, for the sake of the Monroe doctrine. Government en-gineers, who have lately examined St. Thomas agree that it possesses the choice of all West Indian harbors, Today, under Danish rule, it is undefended. Tomorrow, under Yankee rule, it will be the Gibraltar of the West Indies; and this upon the authority of no speculator. The harbor of Charlotte Amalle is a large, deep, oval, land-locked bay, with an entrance between two promontories commanded by ancient forts, which mean little today, but which can soon be rejuyenated. Be-hind these defenses and upon all closed sides of the bay, steep hills rise to 1500 sides of the bay, steep this rise to how feet, and ground immediately surrounding the harbor is 500 feet high. Guns scat-tered in their tropical shrubbery would command every vessel in or near the har-bor. According to an official who lately investigated the spot, the only defenses guarding this haven are a few ancient saluting guns in barracks upon shore. Furthermore, according to my informant, this harbor can be readily closed against the possible entrance of any foreign craft. A ledge of rock near the mouth serves as a breakwater when hurricanes chance to A ledge of rock near the mouth serves as a breakwater when hurricanes chance to blow outside. Thence a deep and broad channel, a mile long, leads to the inner harbor, capable of holding several squadrons. A floating drydock upon the west side of this bay is found to be in good repair. It was built in England and trans. thence in sections.

colonies, Uncle Sam has become assured of two salient facts. Fact No. 1 is that Denmark no longer has any use for these three islands. Fact No. 2 is that the people want to belong to the United States. But why is Denmark so anxious to get rid

of these islands?

forded their mother country a handsoma revenue. Not many years ago, Charlotte Amalie was a hive of industry and the market of the West Indies. The decline of this commerce was the indirect result of the perfection of steam vessels and or the abolition of slavery. Before our civil war, sailing ships carried on the commerce of the surrounding seas. Vessels then could not make long routes, and St. Thomas, on account of its convenient lo-Thomas, on account of its convenient lo-cation and excellent harbor, became the trading center of the West Indies. The perfection of steamships made direct shipments possible. The English, French and Dutch in the West Indies thereupon began to send their agents directly to this continent and to Europe. They were thus enabled to buy in their home markets and to have their goods sent directly to their colonies without passing through St. Thomas. It was a sore blow to the little island when the Royal Mail Steam Packet Company, of Southampton, later trans-ferred its workshops to the British West Indies. The old commercial importance of Charlotte Amalie entirely disappeared, chieffy from this cause, 20 years ago. The decline of St. John and Santa Cruz began, however, as early as 1848. In that year slavery was abolished therein by Denmark, and the production of sugar rapidly fell off. Sufficient labor could not be obtained. Weighed down by hard times, the people of all three islands have of late years grown more and more dissatisfied. Upon the whole, however, Denmark seems to have been good to them. She has not burdened them with taxation, although, according to one of my informants, she has been accused of slight partialities to the native Dane as against the subjects of other blood born in the colonies. It is well known that Denmark's expense in maintaining the Islands today is much greater than her revenues derived from

As far back as 1857, when our state department endeavored to acquire the islands, a vote was taken among the people of St. Thomas and St. John to determine whether they wanted to be sold to us. Two thousand voted in favor of and less than 30 against the proposition. Uncle Sam will offer their mother country \$3,000,000 or \$4,000,000 for the three Islands. This will not be a steep price, considering the fact that Secretary Seward offered ands, a vote was taken among the peop:e \$7.50),000 for St. Thomas and St. John alone. Mr. Seward was very eager to make the acquisition, and his secret negotiation with the Danish minister to Washington was begun at a swell dinner given in this the government house at Christianstead, St. Thomas is but a few miles east of a terrific earthquake and tidal wave dam-Culebra and Vieques, our two Puerto Rican aged the town and scared the commis-



chain of mountains now submerged. Its 15,000 inhabitants, mostly blacks, occupy 23 square miles.

"A Niggery-Hispano-Dano-Yankee-Doo dle sort of place, with a flavor of sherry cobblers," is the tribute paid to St. Thomas by a noted authority, who inspected it some time ago. In other words, the 1000 white men who run things in and about Charlotte Amalie, the capital, are mostly Amalie, which would be our naval center in the islands, is built in the shape of a prescent, and lines the inner edge of the oval harbor. The pink and white houses behind are terraced one above the other upon green hills, covered with palms and tropical foliage. From ships anchored in the bay or from either of its crescent points the lights of this terraced city relected in the water present a magnifi

cent spectacle, Our army engineers will not, in St. Thomas, be faced with the hygicale prob-lems met in Puerto Rico and Cuba. Charlotte Amalie, once a pesthole, has been improved by modern sanitary methods. A improved by modern sanitary methods. A drainage canal has been opened from the harbor to the sea, a task proposed but never yet accomplished for the health of Havana. Chariotte Amalle, furthermore, is thoroughly flushed by water flowing down its terraced hillsides whenever it rains. This island and Santa Cruz are now favorite health resorts for invalids suffering from pulmonary diseases. The heat of the tropical sun is constantly modfied by refreshing trade winds.

Santa Cruz, 40 miles south of St. Thomas, while of little or no strategic value, is the largest and most productive of the three isles likely to become our property. Its population of 20,000 are plantation negroes. Its western half is rectangular, but it tapers to a point on the east. Two cities each as large as Denver, could be built upon its area of about 100 square miles. Denmark's governor-general to Indian possessions, who spends half the year in St. Thomas and the other half in Santa Cruz, administers the affairs of the latter at Christianstead, the capital and principal town. His presence and that of a small garrison are the only evidence of Danish supremacy to be seen today upon the largest isle. The only other town of Santa Cruz is Frederickstead, upon the west coast, which can be reached only by

very small ships. Less than 1000 new subjects would be added to our lists by acquisition of St. John, only six miles due east of St. Thomas. The total area of this, the smallest of the three, is just equal to that of the city of Boston-43 square miles. It is of irregular shape, having upon the eastern coral bay, a good harbor little used except by fishermen. Practically all of the in-habitants dwell in a small town named after the island. Santa Cruz and St. John are both more productive than St. Thomas. They yield sugar, rum, luxurlous tropical fruits and vegetables.

In all three Islands of this group reconstruction under Yankee supremacy would be a task proportionately much less difficult than in Puerto Rico. English today is the universal and official language in

the churches and schools.

The only warm-blooded quadrupeds in-habiting the Danish West Indies are tha agoutl and rat. The former is prized for food by some natives: Its meat is white, tender and very sweet. It is about the size of a rabbit, eats like a squirrel, bris-ties like a porcupine when angry and burrows in the ground. Some giant ligares or iguanas are also edible. There is an abundance of small lizards and a species of harmless snake. Birds are scarce, ow-There is an to an absence of forests. There are also a number of freak pests, notably a worm which bores into furniture and causes it to fail to pieces suddenly and unexpectedly, a wood ant, which destroys the framework of houses, a red ant which bites, not to mention the mosquito, ligger, flea, scorpion, centipede, giant spider and an olorous species of roach.

After taking the pulse of both the Dan
After taking the pulse of both the Dan-

satellites, of considerable size, but of no sioners clear out of their wits. The assatellites, of considerable size, but of no singers clear out of their wits. The asgreat strategic value. It is shaped like a revolver pointing west, with the magnificent harbor in question in the trigger-guard, and therefore, upon the southern side. It is the topmost ridge of a small open negotiations unless first assured that lor of 33 years ago would result in serious compilcations. It is rumored that Santa Cruz cannot be sold to us without the consent of France. JOHN ELFRETH WATKINS, JR.

> Article Written Before Disasters a. stormberg, Magersfontein, Tugela.

and Irish troops were surrounded and cap-tured by the Boers, is only an incident in a war which must eventually end in our favor. Still, it is a serious reverse in it-self, since is brings up the total number of prisoners now in the hands of the enemy to a number which probably ex-ceeds 2000-about one-ninth of the force with which we began our campaign in Natal. Without pausing in this place to consider the tactics which led to so unhappy a result, at the very moment when Sir George White was carrying cut a fairly successful operation a few miles away, it may be of interest to recall some of the principal reverses of British arms

during the past three generations.

Our first great disaster after the conclusion of the Napoleonic wars was the loss of 20,000 men, including British infantry and cavalry, and a large contingent of sepoys in attempting to force the Khyber pass, in 1841. We had sent a double ex-

pedition, under Burnes, by way of Quetta

and the Bolan, and under Wade by way of the Khyber, in order to back an unpopu-

lar claimant to the throne of Afghanistan

we will pay a price agreed upon. Hence our present efforts to purchase have to be made through an unofficial represen-tative, Captain von Christmas, of the Danish navy. Denmark is sure to sell the islands, if not to us, to some European power. A repetition of the senate's behav-lar of 22 wars are would result in

BRITISH DEFEATS IN CENTURY

London Chronicle The disaster which occurred near Lady-smith recently, when some 2000 British our troops.

REFLECTING TELESCOPE,

It back again?" That is the whole gist o the matter; no one withstood our resolute advance, but the hill tribes, the mountains the Afghan winter, absolutely barred re-treat. Of the 20,000 who retired from Caoul, one solitary doctor escaped to tell the fate of the remainder. We have no space to moralize, but it may be observed They, especially St. Thomas, once af-forded their mother country a handsome that in this case we began by backing a worthless man for an inadequate reason; we went up the country slaughtering all our prisoners without quarter, and we attempted a retreat through a blocked mountain pass in an exceptionally severe win-

> of commissariat and organization rather than of arms; but the cost of this uscless war, both in blood and in money, was a disaster in itself. We do not enter it or our black list, but no historian, and few British officers, will make a point of claiming important victories in the Crimean war. This attack upon Russia was followed at a short interval by the Indian mutiny, whereof the earlier chapters re-cord what may be described as the most frightful disasters of the century. revolt of the sepoys took the Indian au-thorities by surprise; the country between Lower Bengal and the Punjab became, in 1857, an almost unbroken area of mas-sacre, and to this day an Englishman can scarcely hear the names of Deini, Luck-now and Cawapore without a shudder. The awfulness of the massacres is only paral leled by the awfulness of our revenge.
>
> The second Afghan war began with our invasion of the country of Shere All in 1878. As in 1839, we marched up country without much trouble or loss, took possession or control of the passes and es tablished our resident at Cabul. The mas-sacre of Sir Louis Cavagnari was followed by a war of varying fortunes, which brought Sir Donald Stewart, Lord Roberts

The battle of Maiwand, fought on July 17, 1850, was a terrible disaster. Burrowes lost over 1890 men out of the total garrison of 3000 at Kandahar, and it was left to Lord Roberts to relieve the isolated town by his famous march. We had our minor reverses during the io or 60 expeditions against the hill tribe within the past half century, but no other great disasters have befallen us in India eyond those which have been mentio The Zulu war inflicted on us the great The Zulu war inflicted on us the great disaster of Isandiana, when 14,000 or the blacks gurrounded Colonel Glyn on his march from Helpmakaar, with two bat-talions of the Fourth, a battery and a few levies. This calamity was almost an extermination; and the news, as it reached

and other generals into prominent no

this country, was only refleved by the ac-count of the splendid stand of Lieutenan's Chard and Bromhead, with 50 men, who defended the commissariat store at Rorke's drift against 600 natives, and so pre-vented the victorious impl of the Zulus from entering Natul.
Our disasters in the Transvaal war of 1881, arising out of the annexation of 1877.

have been sufficiently recalled to mind in the past few months. The comparatively, insignificant defeat at Bronker's Sprui might well have been succeeded by a calm consideration of the Boers, who demanded the restoration of their independence. Bu what we may call the "prestige party" were for the moment in the ascendence in South Africa; Sir George Colley was dispatched with less than 1000 men, of whom he lost more than a quarter at Laing's nek on January 25. The Gordon Highlanders were hurried up in time to share in a further defeat on the Ingogo river; and Colley's fatal occupation of Majuba hill led to the worst disaster of all on February 26. The Highlanders, two companies of the Fifty-eighth, two companies of the Sixtieth, and 64 bluejackets reached the "saucer-like summir" at 5 in the morning. Soon after noon the edges of the saucer were lined by Boers, who, in practical security, shot down half of

our men, with Colley at their head.

The occupation of Egypt brought with it sundry disasters in the Soudan. Hicks Pasha lost an army of 7000 men. Osmar Digna massacred the garrison of Sinkat and inflicted a heavy defeat on Baker Pasha at Trinkitat. In these cases the massnered troops were Exyptians, under British officers. In 1834 came the Nile ex-pedition for the relief of Gordon in Khar-toum. On January I7 of the following year we won the battle of Abu Klen. Horbert Stewart fell in another costly but still sucessful battle at Abu Kru, and Sir Charle Wilson, with his small fiotilla, pushed up-stream to the neighborhood of Khartoum only to find that Gordon's gallant stand rison and his own death.

This list of reverses within the past 69 years cannot be regarded as a long one. rings four lasts serious, when we hear in mind the extent of our empire and the multiplicity of our military operations. As ompared with our victories in the same periods, our defeats shrink into insignifiance. The natural depression which over takes us on the morrow of a reverse may be to some extent relieved by this consid-eration; for, after all, it is the same characteristic spirit of the Brilish army which and secured the final victory. And if it is impossible to abstain from criticising the policy or the administration of the political authorities, when criticism is necessary, there is no Englishman worthy of the name who does not feel a sense of personal grief at the news of a disuster to

Santtation.

Chambers's Journal.

Was it Lord Beaconsield who, as Mr.
Dispaell, was once twitted with being the exponent of a "policy of sewage"? According to Sir William Prece, no loftle subject can occupy the attention of man and, according to him also, an ancestor of the great premier-Moses, to-wit-was "the greatest sanitary engineer the world had ever known," and the Book of Levilleus was "a treatise on hygiene." Th Jaw was the healthiest and longest-live type of humanity, and the doctrines of



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