NEW GAUGING DEVICE

INSTRUMENT MEASURES 1-40,-000.000 OF AN INCH.

Bottingham, Eng., Scientist Constructs Most Delicate Bit of Apparatus Known-Promises to Revolutionize Certain Branches.

London.-A remarkable discovery made by Dr. P. E. Shaw, one of the physical science lecturers of the university college at Nottingham whereby measurements up to the 1-70,000. With part of an inch can be taken is likely to lead to some vitally important developments in scientific investigation. It already has been applied to practical use in the improvement of telephones, as it will measure the smallest audible movements in the telephone disphragms in movements of only 1-40,000.000th part of an inch.

The apparatus has proved of the greatest use in measuring engineering gauges, surpassing all other methods in delicacy and accuracy. Wireless telegraphy is expected to benefit from Shaw's work to a great extent, the mechanism acting as a most delicate

The most important branches of scisence which will receive aid from the invention will be those dealing with the investigation of the secrets of life and matter. The instrument will aid physicians in studying nature, and possibly even the movement of molecules of matter.

When Shaw was conducting his experiments he had to use the vaults tonder the university and could work only in the dead of night when all the factories were closed and traffic in the streets entirely suspended. He spent many nights in these vaults experimenting during the last five years. He still is improving the apparatus and has every hope of measuring

quantities still more minute. Some idea of the delicacy of the instrument may be gained from the fact that the vibrations of an engine 100 yards from the vault make it impossible for Shaw to work. It is so delicate that he cannot demonstrate it before an andience because it is affected even by ordinary dust and drafts.

The apparatus consists of a fine micrometer screw and a series of six Jevers acting in conjunction with it. The principle is that of the electric

RAM UNEARTHED FORTUNE

Animal Tried an Experiment and Died, But Owner Made Money from the Results.

Washington, D. C. - A ram imported from England to improve the breed of sheep raised near Durango, Col., "rubbered" at a strange plant which it had never seen in England and partook heartily of its verdure because it sent up the first green shoots of the spring, while all the other native sheep in the wast berds roaming over the hills and mountains in the same flock turned up their noses at the weed and passed it by. The ram which had come to improve his associates was bowled over by the new food and died. His death, however, proved a boon to science and invention. For years sheepherders had noticed the disinclination of the sheep in their flock to touch this particular "weed." as they called it, though it is a small shrub. resembling ginseng, with pronged roots like a carrot's. When the English ram vited a veterinarian made a post-mortem examination, and the stomach was found filled with little balls, not rubber balls exactly, but balls of gum of a consisteney which, upon experimentation, proved as valuable as the para gum of South America from which rubber is made.

The discovery has led to the organimation of a company in Detroit which will continue experiments upon a large scale with the shrub. Representative Denby, of Michigan, and a Mr. Dunbar, of Durango, president of the corporation, have called on Secretary Hitchcock and asked for the withdrawal of a whole township of land on which the weed grows. They told him that the rents of this weed yielded a gum from which an excellent quality of rubber would be made, and submitted samples of soles of tennis shoes, rubber beels, a piece of hose, and a specimen of the plant, along with specimens of the gum and specimens of South American gum.

REVOLUTIONIZE STEEL WORK

New Process of Electric Smelting to Cut Pig Iron Cost a Third-Electric Smelting.

Sault Ste. Marie, Can.-By a new method that promises to revolutionize the iron and steel industry, pig iron can be made for \$10 a ton, which is tive dollars less than the cost under the system now generally in use, acwording to an announcement made bere recently. Electric smelting is part of the process, which has been adeveloped by secret experiments at the expense and under the general direction of the Canadian government.

The plants where the work was done are owned by the Lake Superior corporation. Dr. Herault, a French expert, had charge of the tests. Canadians think it means the development In the near future of large ore fields are the vicinity of Lake Superior on the " Untario side.

Mard on Dead Men. Dead men will please keep away from London, Ky. That's where every dead man found on the streets is fined .all the money there is in his pockets,

Largest Gold Output, Reports of the world's production of gold last year show the largest output ad which there is any record.

SNARES "THIEF" BY 'PHONE

Mrs. Rudolph Ortmann Summons Police-"Noises" Prove to Be Cook and Her Sweetheart.

Chicago.-Rudo!ph Ortmann, first vice president of the Griffin Wheel company, and living at 99 Lincoln Park boulevard, tound his residence in an uproar when he returned the other night. The patrol wagon from the East Chicago Avenue police station was standing in front of the door and three policemen were coming down the steps.

Mr. Ortman rushed up to the policemen and inquired the cause of the commotion, and he was referred to Mrs. Ortmann, who was in the parlor convulsed with laughter.

Mrs. Ortmann has in her employ a domestic named Hannah, and she has a sweetheart named Fritz. As arranged when she started to work for the family, Fritz was allowed to call Friday evenings, and he came as usual. Mr. Ortmann was away from home, and shortly before ten o'clock Mrs. Ortmann thought she heard some one moving in the rooms downstairs, and listening heard inuffied voices. She hastened to the telephone, and sent a hurry call for the police.

Detective Hiott and three policemen hurried to the house, and discovered that the "burglars" were Fritz and Hannah, who were in the diningroom exchanging confidences and planning what they would do in the future, when their ships arrive in port.

BEWARE OF WIND ON SHINS

New Terror to Everyday Life-Exposure of Limbs Chills Blood.

London.-A new terror is added to everyday life owing to the discovery by a medical journal of an unexpected and insidious method of catching cold. "It is not generally known," says the British Journal of Nursing, "how frequently a bad cold is induced by coldness of the shins due to thin stockings, or by their exposure to draughts in a railway train, or in other chilly conveyances.

"The blood vessels on the front of the shin are peculiarly exposed to such influences, because the skin covering them is so thin, and thus it can easily be understood that such exposure to cold on the front of the leg may chili the blood circulating through it as thoroughly as the evaporation of water from wet boots or clothing can do.

"For the same reason, cold draughts on the back of the neck, where again the skin is thin, and the blood vessels are easily exposed to atmospheric influence, are a very common but often overlooked cause of bad 'colds.'

"The moral of all this is abviousespecially in weather such as this, or when traveling to keep the front of the legs and back of the neck warmly

VAST CAVERN OF WONDERS

Kentuckians Return from Week's Exploration with Tales of Animals, Mirrored Rooms and Noises.

Danville, Ky.-Telling many strange tales of a newly discovered cave five miles from Danville and two miles east of Perryville, Irvine, Parks, who found it. Eugene Carpenter, George and Joseph Godbey and John Mitchell have returned bearing geological curiosities and five opossums and seven coons. One of the coons weighed 50 pounds and is the largest animal of its kind ever seen here. The animais were vicious and showed fight Other animals were seen, and bevice of birds were heard making strange noises as they darted through the dark passages.

Equipped with lanterns the men penetrated the cave eight miles, and were unable to reach the end of it. They carried provisions to last one week, and they stayed that long. Parks and his companions say the cave rivals in splendor the famous Mammoth Cave, in Edmonson county. in one place they found a room lined with mirrorlike stone. Reflection from the lanterns produced a dazzling effect.

BELL IS 200 YEARS OLD.

Resurrected for Service as Fog Signal for Steamers at Essex, Conn., Landing.

Essex, Conn.-William H. Parmelee, merchant and dockmaster at the Essex steamboat landing, has in his possession a relic which he prizes very highly. This is a two-tone copper bell which as near as he has been able to learn is at least 200 years old. This bell was first used to call workmen to their dinner in the old shipbuilding industry in Essex. It was owned by Mr. Parmelee's great-grandfather, Timothy Starkey, and was resurrected some few weeks ago in the attic of Mr. Starkey's house on lower Main street, where it had remained in seclusion for many years. Mr. Parmelee has had a standard made, and it will soon be placed on the peak of the steamboat landing, where it will be used as a fog bell for steamers on the river. The old shipyard where this bell was located and hung in as old apple tree was near where the Smith yacht works are to-day located

Flying Squirrel in Chimney. A flying squirrel recently came down the chimney a la Santa Claus at Wil lam C. Leavitt's home in Norway He got into the soot on his passage down and got through the flue and into the room. He looked black, and at first was called a black squirrel. He was a rare looking animal. He did not appear to be much frightened and was

CHICKEN FEATHERS.

SOME OF THE USES TO WHICH THEY ARE TURNED.

What Finally Becomes of the Covering of Ducks, Geese and Turkeys-Some Trade Secrets.

One turkey supplies more different grades of feathers than a season's receipts of turkeys show different grades of turkeys, and although five cents a pound covers the range of difference in value of the toughest old tom turkeys and the plumpest young hen, the feathers sell at five cents a pound for the body feathers up to 40 cents a pound for the fine tail feathers.

Local poultry men, says the Indianapolis News, sort six to eight grades of turkey feathers and the buyers make even more assortments, the feathers being used for as many different purposes. The small body feathers, which are used for pillows and feather beds, are worth about five cents a pound for common mixed. White feathers are worth more, according to grade, bringing generally about three times the price paid for mixed feathers.

The fine tail feathers used for dusters are kept senarate and sell for about 40 cents a pound and the "skirt" feathers are worth nearly as much. The wing and "point" feathers are also carefully saved and sold to manufacturers of featherbone and other substitutes for whalebone, and the larger ones find their way to milliners, after being made over, cleaned and dyed. Some of the small feathers are made up into artificial bird breasts and tails that adorn countless bonnets. They may cause the bonnet owners a twinge of conscience for wearing such a beatiful bird when, in reality, they are wearing a bonnet of cleverly arranged chicken or turkey feathers.

Duck feathers are worth about 35 cents a pound for white, to 50 cents for mixed. Dealers say the principal reason that goose and duck feathers are worth more than the finest turkey and chicken feathers is that, aside from being fluffler, there is an absence of odor to them that cannot be overcome entirely in chicken and turkey feathers. The reason that white chicken and turkey feathers are worth more than mixed, however, is that they are available for mixing with the better grades for pillows.

Most of the chicken feathers go in the five to ten cents a pound class, to be used for cheap feather beds and pillows, the white feathers being saved separate and bringing a good premium over the mixed grades. Fine tail and wing feathers are saved separate, selling as high as 40 cents.

Feathers shipped from this market are packed in bales of 200 pounds or in six-foot sacks. The tail and wing feathers are usually packed in boxes and sometimes tied in neat bundles

Five chickens will give a pound of feathers, and with Indianapolis firms killing two to three thousand chickens a day for home consumption and shipment this market has nearly two tons of feathers a week to sell. A week's output can be packed in 20 bales, 4x5x3 feet each, but if the feathers were left loose they would fill a house.

A single carload of feathers shipped to Cincinnati the other day contained about six tons. They cost the shipper more than \$1,000. Cincinnati and Chicago are good buyers of all grades of feathers, most of the local shipments going to these cities.

PEOPLE SCARED THE LION.

Zoe Animal Escaped from Cage, But Was Glad to Get Back

A group of loungers were discussing the recent escape of a lion at one of the summer parks just outside of Newark. and one expressed his belief that it must have been something of a scare, says the New York Press.

"Scare!" echoed a man connected with the park. "I should say it was a scare. The people made such a din I was afraid the poor old fellow would die of fright before we could get him back to his cage.

"We found him hiding behind a tree. and it was ten minutes before we could induce him to face that yelling mob and get back to where he knew he was safe. He is the gentlest old fellow in the world, and never would have wardered out had he not been frightened by the man who fell into the cage from the cycle whirl above. Of course that upset him, and when he saw the door open he naturally ran out.

"Then the people made such a noise that his one idea was to fice. The more he ran the more they yelled, and when we did get him back it was hours before he stopped trembling.

"It was a shame to seare the poor old fellow like that."

Sleep Required.

. Seven hours of sleep is the minimum amount required by the average person, according to Prof. Weygand, of the university of Wuzburg. He ascertained experimentally that reduction of the usual period of sleer by three hours diminishes the power of the memory by one-half. Fasting he tound, had a much less injurious of-

Painting Faces.

Mrs. Painter-I see the laft side of the face is usually considered by arttests to be more beautiful than the

right. Mr. Painter-But a lot of you women mem to think both sides should be painted,-Yonkers Statesman.

TENEMENT DWELLERS

HABITS OF FAMILIES IN CROWD-ED CITY DISTRICTS.

There Is a Strong Resemblance to Primitive Man in Their Treatment of One Another.

a study of the tenement house famlly will at once suggest a close resemblance between primitive and tenement house man. Lack of capital, migratory habits, high bires and child mortality rates, maternal ignorance, uncontrolled parental affection and sense of proprietorship, sex taboos, lack of "self-determination" in matrimonial instability are circumstances of characters common to both. In the inefficiency, lack of initiative, naive animistic habits of thought and a sense of preternatural interference at a time of good or evil fortune there is also a close resemblance, says the Independ-

Even the members of the family who have had a fair amount of schooling possess small reasoning powers. They show little curiosity or skepticism. If they are unable to understand a thing in the beginning they show little desire to comprehend its meaning. Their. frame of mind is unreflecting and often complacent. They never argue and are seldom persuaded that their course of action has been wrong. A mother will tell you that she has never thought of a given subject since her childhood. just as she has forgotten how to write,

Most of the men read daily or Sunday papers. the women have little opportunity to read. When they do buy a paper they discuss the latest murder, the last automobile accident or the fashionable wedding with their neighbor. Few books are read, except, perhaps, "penny family papers" or "ladies' weekly journals." The children of school age usually belong to a public, church or settlement library. The younger children have no books. Sometimes a family does possess a few books. Among them are books of conundrums, jokes, magic, parlor tricks and fortune telling. Every family has its Bible, with a registry of births and deaths. The marriage licenses or baptismal certificates are put safely away or framed and hung on the wall.

Everybody has crayons and chromos of parents, aunts, uncles, brothers, sisters, cousins, etc. The pictures are copied from photographs, or they are crayon drawings made by the instalment artist. Occasionally there is found a "hand painting." The crayon is paid for in coupons given by the grocer, or is given "free" by the photographer. Sentimental and heroic pictures, picked up at a sale on the avenue, given away by a Sunday paper or acquired with cigar coupons adorp the wall. There are few examples at original decoration.

Memory cards, which express the sorrow of the family, and give date of birth and death of the deceased, are sent to the friends of the family. A variation of the memory card is the wax wreath ornament with silver. framed in glass and wood.

In the Italian home, however, there is usually some attempt toward artistic expression. The daughter of the house takes piano lessons "for to finish her education." Her teacher guarantees perfect playing within the year. The mother sometimes goes to the church concerts. The children take pride in singing in the choir. The German parents know the German fol. songs. The Italians also have a natural love for music. Oftentimes they are familiar with the well-known opera melodies. The Irish like the music of the organ grinder, the street singer and the loud shricking in the music halls.. The chief event of the week in the young girl's life is the "racket" to which she is taken by her "gentleman friends." The dance is either a "plain affair" or a "masquerade." The girl spends her week's wages or her mother's hardearned dollars to be "attached."

Amulets are worn for good luck. heart worn as a charm will bring a sweetheart.

The Model Dog.

The Boston terrier is a development of the English fighting dog known as the bull-and-terrier. The breed originated from a cross between the bul dog and terrier, but the Boston ter rier is now neither a mongrel nor a freak. He seems to inherit rather the virtues than the vices of his ancestors. He possesses much of the faithfulness and tenacity of the bulldog and the activity of the terrier. He is essentially a house dog and is as companionable, affectionate and trustworthy as any other small dog. These qualities are winning new friends for him every day.—Country Life in America.

Cape Colony Forestry. The institution of a forest dans rtment in Cape Colony dates from 1821: since that time three-quarters of a million pounds has been expended, and the staff now numbers no less than 116 conservators and foresters.

Americans Do the Teaching. All the education of native children in Natal is carried on by Americas who are paid by the government a small sum for each child so instructed, the number in the schools being about 3,000.

Social Influences, In England it is not what you know that is of importance, but who you know; not what you are, but who you are; not what you do for yourself, but what others will do for you .-London Truth.

ZUNI INDIANS' CREAT FEAT

Account of One That Surpasses the Tricks of Magic Performed by the Hindus.

The medicine men among the Zuni Indians perform a feat at the annual "corn festival" which surpasses the famous mango-growing trick of the Hindu. Many scientists have been present to witness this strange ceremony, but have never been able to

fathom the mystery of it. in front of the southern opening of the medicine lodge a large square of clean yellow sand, carefully smoothed. and packed, is spread. With a ceremonial arrow figures, representing the Great Spirit, the earth, sun, sky and rain, are drawn. There are also the symbols of the corn and a bountiful harvest. The indentations made by the arrow are then filled in with pigments, blue for the earth and chrome yellow for the harvest. The middle of the square is left vacant. This picture in sand painting is a most pleasing specimen of barbaric art.

The hour for the ceremony arrives. and at the right moment the medicine man comes forth from his lodge and takes a seat in the opening of the lodge, facing the sand square. The warriors and chiefs arrange themselves around the square, according to rank. The ceremonial pipe is then filled and lighted and the medicine man blows one puff in each direction of the compass and two to the heavens. He then makes an address, going over the past history of the tribe and the kindness of the Great Spirit and his care. He concludes with a prayer for the continuance of this favor.

The great moment has arrived. With impressive selemnity the medicine man thrusts the sacred arrow into the sand. withdraws it and places a grain of corn in the hole thus made. Carefully smoothing the sand over it, he resumes his seat, while the assembled chiefs smoke their pipes in stolid silence. If the Great Spirit condescends to answer the prayer of the medicine man, and he generally does, the corn will sprout and senc up a shoot. After an interval of 15 or 20 minutes the sand seems disturbed at the spot where the grain of corn was planted and soon the slender green blades of the sprouting corn are seen above the surface. The plant continues to grow rapidly and naturally during the day, and by the next suprise the silk and tassels appear. By noon the stalk and ear have reached full maturity and the ripening begins. Finally the blades and husks turn yellow and rattle when the wind shakes them. All this, we must bear in mind, has been done in 36 hours. On the morning of the second day the corn growing is complete. The medicine han now addresses the watchers who in company with him have watched the plant grow, for it is never left alone. With appropriate ceremonles he symbolizes the harvest by stripping the ear from the husks ture use. The stalk is pulled up by the roots and hung over the door of the lodge.

FRIVOLOUS DEFINITIONS.

Terms in Modern Use That Admit of the Following Constructions.

Luxury-That which makes the poor

discontent and bores the rich. Gossip-Social vivisection. Consistency—The one jewel that

does not arouse a woman's envy. Popularity-The price of self-respect Diet-Denying yourself the indigest ible food you like and eating the dis gestible things you don't like.

Bear-An optimistic dealer in pessimism.

Actor-One who pays more attention to the bill-board than the board-bill. Caution-The brake that stops a capeer from running up-hill to success. Curiosity-Paying a thousand dollars

to see your appendix. Good Judgment-Finding out what Rind of advice a man wants and giving it to him.

Pull-The resource of those who have no push. Conscience—The internal whisper

that says: "Don't do it; you might get caught." Vanity—The food of fools:

Appreciation-Envy in sheep's cloth-A Compromise—An amicable understanding by which you and your wifeagree to let her have her own way.

Alimony-----e grass widow's pension. High Finance-Making two millions grow where none grew before.-Satur-

day Evening Post. Chinese in Mexico.

The Chinese who have come to this country as immigrants are, for the most part, peaceable and orderly people, giving little trouble to the police of the capital, or of the interior cit ies. Yet it is not asserted that the Chinese coming to Mexico are even or the better class of laboring people a home, though there are some excep tions. Merchants find the industries Chinese good customers and careful o their credit, meeting their bills promptly. On the whole, a quiet and well behaved folk.-Mexican Herald.

With Proper Setting. The man had tried to kiss her. Sh drew back with hauteur.

"Sir." she exclaimed, "have you no sense of propriety, or fitness of of-By this time she had succeeded in turning the lamp low.

"Now," she said.-Philadelphia Led

Disappointed Man. "Did Catesby marry for love?" "Yes, poor tellow, and he got noth ing but money.' - Detroit Free Press.

SEES EVIL FOR 1906.

PARIS SEERESS PREDICTS MANY CATASTROPHES.

Mme. Thebes Who Foretold Bloody Year for 1905 Presages Mad Twelvementh-Belgium to Be

Prominent Figure. Paris.-The new year does not bring much good to anybody if we are to believe the prediction of Mme. Thebes, the secress made ismous by Alexander Dumas, fils. In her almanac for 1906 which has just

appeared, she says: "As I predicted years ago that 1905 would be a bloody year I now predict that 1906 will be a mad year. The civilized world, or, rather, the world which likes to call itself civilized, is in a stage of transformation. What will emerge from the chrysalis? A monster. It will take a long time and many bloody dramas before wars between the classes and nations will be followed by peace and friendship and establishing of a new social order. I once more predict that the small country of Belgium is destined to play a strange and important part in this transformation, which is to come, and which will change the whole political situation in Europe in a most remarkable manner.

"The disturbances which are now threatening the Russian empire will spread to Germany and before the end of 1906 the German colossus, built as it is on a foundation of clay, will begin to crumble into dust. The days of more than one prince are counted. and I am not afraid to say that altogether the year of 1906 will bring the most astonishing events.

"In France the political situation will continue to be as unsettled as ever and to a certain extent more dangerous. though the danger will be more imaginary than real, and in spite of violent financial crises and struggles between political parties the country will _ emerge unharmed.

"I am not able to say whether we shall have any great war, that depends on too many different circumstances and the book of destiny reveals nothing, but neither does it reveal that Europe will remain in peace."

IS RELIC OF A DINER-OUT.

"E. M. P.'s" Knife and Fork Case Carried 200 Years Ago on Exhibition in Collection.

Chicago.-Just who "E. M. P." was is not known. That he lived in Saxony 200 years or more ago and that in his cay and generation he was a great diner-out there can be no doubt. The proof lies in the fact that the leather velvet-lined case in which he carried his knife and fork shows evidence of much carrying.

In those days knives and forks wer ranked as the greatest luxuries. The thrifty housewives of Saxony, whatever their wealth and standing, did not possess sets of knives and forks. To own one was a sign of great prosperity. Therefore each guest carried als or her own knife and fork when invitaed out to dine. "E. M. P's" knife and fork in the battered case are at the Auditorium among the treasures of the collection of William T. Shepherd of

Marie Teresa and the mother of Mozart must have been fond of shawls.

for several are in the collection. From the ruins of Babylonia where they were, it is said, more than 3,500 years, are several seals, which, cut in stones or pebbles, show the earliest use of the crescent and the star.

ADMIRALTY BARS DRINKING "

Officers Claim Whisky Habit Destroys Nerve, Quickness of Brain and Efficiency.

London.-When ships belonging to the navies of other countries visit British ships in the future it looks as if there will not be much flow of wine in the entertainment afforded by the officers, for the admiralty has set its face against the consumption of alcohol except in moderate doses by navai

officers. Sea lords assert daily that the whisky habit destroys the nerve quickness of brain and is in consequence fatal to fleet efficiency.

Officers' wine books are being examined, and no officer under the age of 20 is permitted to consume spirits of any kind. As a reason for the order it is claimed the officers of ships at home which are provided with a nucleus for crews have no work to do in the afternoons, and for that their good habits are endangered by leisure. Instead of providing these officers with work the authorities cut off their whisky be cause few officers in port are addicted te conviviality.

Finds Two-Tailed Comet. A telephone message has been reselved at the Harvard observatory from Prof. Percival Lowell saying that he hadfound a second comet on the photograph made on November 29 at 9 hours 54 min-, utes time, seven hours west of Greenwich, eighth ascension 338.5, declina-! tion minus 8.7. The comet was moving two minutes an hour south by west or north by east. The comet had two tails, one extending north and the other portheast.

. Story by Kaiser. Emperor William declares that he has no warlike plans, but the London

newspapers will regard this as another of William's clever steries under cover of which he may be suspected of intending to send a flest of warships un the Thames.

L'ABEILLE DE LA NOUVELLE-ORLEANS de récendus en Louislanc et dans tous les Brats du Sade. Sa publicité offre dons un commerce des avantages exceptionnelle. Prix de l'abonnement sur l'anglé : Lettiers Oustidienne U.2.00