

### IN THE FIELD.

The skies are clear,  
The boys all cheer,  
For base ball season now is here.  
With bat in hand,  
The bawling band  
Perambulate throughout the land.  
The sides installed,  
Then "time" is called  
And battle orders loudly bawled.  
With ringing shout  
The players rout  
And try to put each other out.  
The pitcher he,  
With savage glee,  
Throws wildly, with celerity  
The catcher stands,  
As he expands,  
Behind the bat with yawning hands.  
The umpire by,  
With watchful eye,  
Looks out for balls that foully fly.  
He doth preserve  
An iron nerve,  
And from his duty ne'er will swerve.  
The game is o'er;  
They count the score,  
And one side's very sick and sore.  
The doctor comes,  
And blithely hums  
While fixing up their broken thumbs.  
—(Krys, in N. Y. Journal.)

### THE OMAHA LANDS.

Secretary Teller's Order Regarding the Sale.

DEPARTMENT OF THE INTERIOR,  
WASHINGTON, D. C. March 29, 1884.

Pursuant to act of congress approved August 7, 1882, (22nd statutes, page 841) lands within the Omaha Indian reservation in Nebraska, embraced in townships 24 and 25 north, of ranges 5, 6 and 7 east, will be thrown open to settlement on Wednesday, April 30, 1884, at 12 o'clock, noon, under the following rules and regulations:

Within thirty days from date of settlement the party must file his declaratory statement, the same as in pre-emption cases, paying a fee of \$2 therefor, accompanying said filing by an affidavit (corroborated) setting forth the character of settlement, which affidavit may be made before the district land officers at Neligh, Neb., or the clerk of the court of the county in which the land is situated, or before a United States commissioner at Bancroft or Wisner, Neb. At any time after six months from date of filing and within one year from April 30, 1884, the settler must make actual entry of the land, submit final proof, and make the first payment therefor. Within one year from such actual entry he shall make the second payment, and make final payment within two years, with interest on deferred payments at the rate of five per centum per annum.

Full payment may be made at the date of entry if so desired. In default of either of such payments for a period of sixty days, the party forfeits all right to the land, and any payments he may have made. In no case shall any lands be disposed of at less than the appraised value thereof. The right of settlement and purchase is restricted to persons who have arrived at the age of twenty-one years, or are the heads of families, and who are citizens of the United States or have declared their intention to become such; and no person can purchase unless he is a bona fide settler, actually occupying the land, and having valuable improvements thereon. Six months residence and cultivation must be shown as evidence of good faith. Entries can be made only of one quarter section, or 160 acres, except as provided in said act.

A descriptive list of the lands subject to settlement, with appraisement thereof, has been furnished the district land officers at Neligh.

None of the tracts lying east of the right of way of the Sioux City and Nebraska railroad are subject to settlement or entry as above. (See section 8 of the act referred to.)

H. M. TELLER,  
Secretary.

### Cheating Old Age.

Old age, which used to come gradually and be in no particular haste to begin its visible progress, has recently caught the spirit of the time and advanced upon some people at a galloping pace. The fault is with the victims themselves. The life endurance of any given person is fixed by nature, and the man who draws most largely and steadily upon his physical capital must be the first to display gray hairs and discover chronic bodily weaknesses. Any one can find scores of men who at 35 have whitening heads and nerves that need "bracing" at short intervals every day. Whether they reach this condition by too much work or too much play (of the kind that uncharitable persons call dissipation), the indications of hastening age are equally significant. How is the progress of the destroyer to be arrested?

Many physicians are devoting themselves to prolonging the lives of persons who are not ill, yet they have begun to wear away too rapidly. Among the practitioners who study the subject carefully there seems to be but little difference of method. Their first and hardest work is to convince their patients that it is dangerous to live "fast"—a word which has a special significance which makes it absolutely insulting to many eminently respectable transgressors of the laws of health. It seems impossible to persuade a merchant who does more work in one hour than his best clerk can do in three that he is guilty of fast living and dissipation, even if he never drinks a drop and refrains from all improper pleasures. The lawyer or broker who accomplishes wonders in the morning, but feels a sense of "goneness" early in the afternoon, cannot be made to believe that part of him is literally gone, and that if he urges himself beyond that point, without first taking a little rest, he expends vitality with frightful rapidity. Ladies who, between household cares, religious duties and social responsibilities, are steadily active from 8 in the morning until midnight, sometimes wonder why they lose the freshness of

youth, while some of their sex, whom they occasionally see, but would not for worlds speak to, preserve face and figure in spite of lives of which the less said the better.

But when these, as well as less innocent classes, are convinced that they are living too rapidly, able physicians begin to arrest the advance of age by urging rest. No practitioner of high standing now prescribes stimulants to any persons not really ill, excepting to those who are absolutely compelled to more exertion than is good for them. Short periods of relaxation throughout the day are always found beneficial; some business men have been greatly helped by dropping upon a lounge for five minutes in every hour or two; they may not—cannot—stop thinking, but there seems great relief in merely assuming a recumbent position for a little while. During the recent civil war a general, whose men were noted for coming out of a hard march in fine fighting condition, attributed his success to his imperative order that his men should lie down whenever a halt was ordered. Regular and full hours for sleep are also insisted upon, and until the patient endeavors to adhere closely to this rule he does not begin to comprehend how nature's great restorative is diminished in quantity by the demands of business and society in a great city. One or two half-nights of sleep do not seem to mar the health of young people, but any person who has reached the age of 35 is weakened by such privations, and few of them who have active nerves can ever make good the loss.

"High living" is remorselessly tabooed—not only the custom of drinking a great deal of wine at dinner but that of eating concentrated food with stimulating condiments and sauces. Much meat and little vegetable is the rule with active people in large cities. It is the result of a physical craving, born of the rapid waste of physical tissue, for stimulation. A hard-working farmer, who is in the open air all day, would not—because he could not—eat as much meat as a slightly-built business man will consume daily in New York, and he would become excitable almost to madness were he to partake as sparingly of bread and vegetables. Good physicians place no restriction on the quantity of food for a city man or woman, but they urge that the proportion of meat and pastries to vegetables be lessened. The free use of fruit and milk is strongly advocated to correct the bad effects of over-eating and of stimulating food. Fruit juices are believed to accelerate the natural and healthful action of the alimentary canal, to prevent the retention of wasted tissue and to maintain at its normal condition the respiratory system, one of the most important and least remembered portions of the physical machinery. While not delaying or diminishing nutrition in any way, fruit, if used in sufficient quantity, is known to lower the temperature of the blood that is overheated by liberal feeding combined with lack of exercise. Every one should eat berries, melons and peaches during the summer months, but in eight of the twelve months of the year fruit is regarded as a luxury rather than as a necessity. A physician with a large practice said recently that careful inquiry failed to discover that any one of his patients ever bought apples, except for special treatment in the kitchen, although the apple is the most abundant, cheap, and ever-present of the fruits which are peculiarly beneficial as food.

The few rules given above do not obviate the necessity for special treatment of persons who are growing old too rapidly, for age nearly always manifests its approach by finding its victim's weakest part and attacking it. They are, however, so contrary to general custom that they will be new to most people who read them, as they are to nearly all who obtain them, for the first time, from family physicians.

### Making Paper Pails.

There is a paperware factory in Syracuse, New York, that is intended to turn out 500 paper pails per day. The Syracuse Herald describes the process of making them as follows: Rags and paper waste are steamed in vats for a few hours and then thrown into beating troughs, which are partly filled with water. The "beating" is done by a revolving cylinder with fifty knives, set at different angles. The knives reduce the rags to a dirty purple pulp and change the newspaper wrappers to a soft mass. About 400 pounds of material are put under each beater. When paper and rags are each reduced to pulp the opening of a trap lets it run into the stuff chest in the cellar. One part of a rag pulp to three of paper is run into chest. When pumped from the stuff chest into the trough of the winding machine the future pail looks like thin water gruel. A hollow cylinder covered with brass wire splashes around in the trough and the pulp clings fast to the wire. After the cylinder has performed a half revolution it comes in contact with another cylinder, covered with felt, that takes off the pulp. As the cylinder goes down on the return trip, and just before dipping into the trough again, all little particles of pulp sticking to the wire are washed off by streams of water from a sieve. On the inside of the cylinder is a fan-pump that discharges the waste liquid. From the felt-covered cylinder the pulp is payed on to the forming cylinder, so-called. It is about the shape of the paper-cone caps worn by bakers and cooks, but made of solid wood and covered with zinc with the small end, or bottom part of the pail, toward the workman. The forming roll drops automatically when pulp of the required thickness is wound around it. From here the now promising pail is put in the pressing machine, which looks something like a silk hat block, in six sections, with perforated brass wire upper faces. The sections move from and to a common center, and the frame is the exact size of the pail wanted. The workman dropped his damp skeleton of a pail into the frame, touched a lever, and the sections moved to their center and squeezed the moisture out of the pail. The pail is still a little damp, and spends a few hours in the

drying room at a temperature of about 150. The sections of the pressing machine mark the bands which are seen on the finished pail. After it is dry the pail is ironed, or calendered, as it is called. The pail is drawn, like a glove, over a steel forming roll, which is heated, and is ironed by another revolving calendar, with steam thrown on the pail to keep it moist, as if it were a shirt bosom. The pail, or rather its frame, is pared at each end, punched with four holes to fasten on the handle, and corrugated, or channeled, for the putting on of the iron hoops. A wooden plate large enough to spring the pail so that the bottom can be put in, is inserted and the paper bottom held under a weight which drops and knocks the bottom where it belongs. The hoops are then put on.

The factory has a machine of its own invention for the bending of the hoops into shape. After it has been cut to the proper length and width the straight strip of iron is run over a semi-circular edge of steel, on which it is firmly held, and drops on the floor a rounded hoop with a fold in the middle to catch the top and bottom edges of the pail. After a waterproof composition is put on, the pail is baked in a kiln for about forty-eight hours at a temperature of between two hundred and three hundred degrees. It is dried after its first coat of paint and sandpapered, and then takes two more coats of paint, with a drying between, and a coat of varnish which is baked on, before—with its wooden handle and brass clamps—the pail is ready for the hand of the dairy maid, hostler or cook. The advocates of paper pails claim that they are lighter, cheaper and more durable than those of tin or wood.

### John G. Saxe's Joke.

Harford Courant.  
Mr. Saxe had long been a contributor to The Knickerbocker and a correspondent of its editor before he and that editor met. One day Lewis Gaylord Clark was seated in his library, hard at work, when a stranger opened the door and entered unannounced. He was a large man, whose thick boots and modest raiment were covered with country dust. "Hello, Clark," he said, "how air you? How's the folks? Got a new one?" Clark, who was the pink of courtesy, arose, bowed stiffly and begged the stranger to be seated. "Wal, old feller, how'er yer bin?" resumed the visitor after he had taken a seat. "Look rath'er yaller 'bout the dew-laps. No bin h'istin' too much gin and pepperment. I hope—eh?" "Sir!" answered Clark with dignity, "may I inquire whom I have—?" "How's Clara and the young folks?" "Sir!" All the time the stranger was propounding these kindly inquiries he was edging his chair bit by bit closer and closer to Mr. Clark, who, beginning to get quite nervous, was vainly trying to keep his distance by the same system of tactics. "Well, Old Hoss, I'm mighty glad to see yer. Give us a grip of yer potato rake"—extending his own hand cordially, and then bringing it down with a thump on the writing table, which made the pens and ink and all the little articles of vertu jump again. "Say, Lewis, I feel dry. You ain't got no rum 'round the shanty, hev yer? No, I bet you've bin and soaked it all up yourself, ye old sinner;" and here he poked Clark in the ribs with the end of a piece of shrubbery which stood to him in place of a cane, at the same time advancing his chair two hitches on Clark's left flank. "But, say, Clark, I'll tell yer wot; you lend me a quarter and I'll run up to that gin-mill on the corner and git yer bottle filled, then we'll hev a quiet, sociable time together. What d'yer say? Is it a deal?" Here the stranger threw himself back in the chair, and, raising one of his huge dusty boots, laid it confidently on Clark's knee. "Sir," said Clark, jumping to his feet, "I have not the pleasure of your acquaintance, and must therefore beg you to leave my house, as both my privacy and my time are of value to me." Again the stranger threw himself back in his chair, and, laughing heartily, exclaimed: "Excuse my joke, Mr. Clark, but I am John G. Saxe. I thought we had known each other long enough by correspondence, and ought to make each other's acquaintance personally, so I have just taken a run down the river to see you."

When Clark had recovered from his first astonishment he shook his old contributor cordially by the hand, and tradition says they "made a night of it."

### Picking Out a Wife Among the Immigrants.

New York Herald.  
"I want a wife; can you get me one?"  
This was the question asked of Supt. Jackson at Castle Garden by a well-dressed, prosperous-looking man, with an intelligent German face. He described himself as William Mock, a widower, aged 36 years, and a resident of Mount Vernon, Westchester county. Mock said he was a florist, with a comfortable business, and could give good references as to his character for industry and sobriety. He wanted a wife and helpmate in his household, took an extremely practical and business-like view of the matter, had neither time nor inclination for love-making "and such foolishness," and, therefore, he said, he went to Castle Garden in the hope that the superintendent would pick out a strong, good-tempered and sensible young German girl for him.  
Mr. Jackson turned the case over to Detective Peter Groden, who, it is said, has been instrumental in bringing about more marriages than any other man in New York. Groden and Mock walked about the rotunda inspecting all the German girls on hand. Only two of them seemed to please the unsentimental florist. One buxom frau-lein, he said, might do, but she, when approached, said she wouldn't marry a stranger. The other maiden smiled amiably and said she was willing, but Mock withdrew his proposal upon learning that she was not in very good health.  
"I am coming again," said Mock, when he left Castle Garden; "I may be more fortunate next time."

Jumbo is the suggestive name of a town recently incorporated in Texas.

### DIFFERENT PATHS.

I lately talked with one who strove  
To show that all my way was dim,  
That his alone the road to Heaven;  
And thus it was I answered him:  
"Strike not the staff I hold away,  
You cannot give me yours, dear friend;  
Up the steep hill our paths are set  
In different ways, to one sure end."  
"What, though with eagle glance upfied  
On heights beyond our mortal ken,  
You tread the broad, sure stones of Faith  
More firmly than do weaker men."  
"To each according to his strength;  
But as we leave the plains below  
Let us carve out a wider stair,  
A broader pathway through the snow."  
"And when upon the golden crest  
We stand at last together, freed  
From mist that circle round the base,  
And clouds that but obscure our creed,  
"We shall perceive that though our friends  
Have wander'd wide apart, dear friend,  
No pathway can be wholly wrong  
That leads unto one perfect end."  
—[Every Other Saturday.]

### POPULAR SCIENCE.

One of the plans to make Paris a seaport is to convert the river Seine into a canal ninety-eight feet wide. The cost of dredging, etc., is estimated at \$20,000,000.

The brain of the celebrated Russian author Turgenoff has been found to have the extraordinary weight of 2,012 grammes. It was exceedingly symmetrical, and the great amplitude of the convolutions was remarkable.

Commenting on boiler insurance, The Engineer says it is a noteworthy fact that none of the companies has ever put forward any statistics to prove that the practice of insurance has decreased the number of boiler explosions.

Professor Dieulafoy, lecturing recently at the Sorbonne, contended that metalliferous minerals have been extracted by sea water from the older rocks, but admitted that it is by no means certain they are all of sedimentary origin.

It is reported that at one of the Gethin coal mine explosions a caller was able to traverse the whole of the working in making an exploration while the pit was full of gas, his cap, saturated with cold tea and held to the mouth and nostrils, proving an efficient safeguard.

M. F. Dupont in a paper on a certain carboniferous limestone explains the formation of the older marine rocks of organic origin by causes still in operation, and from this deduces a fresh proof of the value of the comparative method applied to the study of the past geology of the globe.

To ebonyize mahogany, apply acetate of iron, French stain, with a brush before polishing, when it will be seen that it strikes well into the wood and takes a fine finish. Unless a large quantity of the stain is required it is cheaper to purchase it. Several good recipes for its preparation are to be had in the books.

This is how corn pops: When pop corn is gradually heated, and so hot that the oil inside the kernels turns to gas, this gas cannot escape through the hull of the kernels, but when the interior pressure gets strong enough it bursts the grain, and the explosion is so violent that it shatters it in the most curious manner.

Wellington's Watches.  
The Duke of Wellington was extremely fond of watches, and needed to have at least half a dozen within reach and all ticking their liveliest at once, and this he had half the story. Fearing that some ill might befall those just under his eye, orders were given whenever the great man traveled to have as many more stowed away in a portmanteau made to fit his carriage. One timepiece was, above all others, his acknowledged favorite; it was of old-fashioned English construction and had once been the property of Tippeco Saheb. Another of the duke's treasures had ordered it of Breguet for the fob of his brother Joseph, and, as an extra curiosity, directed a miniature map of Spain to be wrought in niello on one side and the imperial and royal arms on the other. Just as this lovely gift was finished Joseph was driven out of his kingdom by the duke, and the emperor, for reasons best known to himself, refused to take or pay for the costly bauble. At the peace it was purchased from Breguet and presented by Sir E. Paget to the Duke of Wellington. Another watch owned by the duke was made for Marshal Junot, and a great horological curiosity it is. There has never been more than two others like it. They are constructed to mark both lunar and weekly movements. The great duke gave preference to certain montres de touche—and he had several of them—a contrivance of Breguet, having sundry studs or knobs by which one could feel what hour it was, and this merely by what seemed "just fumbling in his pocket."

His Honor, Judge Lynch.  
The cry goes up over the country, in the fierce light of the bale fire of the Cincinnati mob, that we need harsher laws for criminals, and there is a demand that such additional laws shall be enacted. Public sentiment goes wrong in this. We have laws enough, and severe laws enough, but they are not enforced. It is not the mere statute penalties for crime that is demanded. But it is certainly in the enforcement of the laws and penalties that we have. Here is the wide-open gate of trouble. The average court is too supine in action or too cowardly to enforce the penalties. No more severe law and penalty can be enacted for murder than death. Ohio has that. Iowa has it. Every state in the union but one has it. When Iowa was with out it, for four years, and murder still went on, it was said that the exit of the gallows had made crime fearless and murder common, and popular clamor recalled the gibbet. It was urged that that would stop the prevalence of crime. But it did not, for the real trouble continued still—the courts were weak, juries were weak, the law was not enforced and its penalties not applied. It was the old trouble—plenty of law, severe enough penalties, but unfaithful, timid, or corrupt courts. As a consequence murder has ever since gone on, and the restored gallows has had no work to do, although more murders have been committed annually since its return than were during the years of its absence.

Now murder is one of the safest of crimes to commit in Iowa. There have been over two hundred murders in Iowa since 1864, and not a murderer has been hanged. Very few have had life sentences; the most have had light sentences, and many have been acquitted. In Des Moines alone two of the coldest-blooded murderers known in the history of the state were acquitted last year, and turned loose to kill others. For men who have once put their hands in human blood, and are turned

loose without punishment for it, consider themselves as becoming chartered murderers, and laugh at courts and law. Other cities and counties have had the same experience, and it is said to be true that three-fourths of the men who have committed murder in Iowa in the past twenty years are now at large.

This is the fly in the ointment. It is more law that is needed. It is the more certain enforcement of the law we have. Public sentiment is the power to change the situation. As it is the sentiment goes too often with the murderer, and the best of lawyers will hire out to the worst of murderers, not to see that he has a fair trial and a fair show, but to resort to every device, fair and otherwise, to clear him entirely. According to the maxim of the law and the proverb of the profession, as it used to be, a lawyer is an officer of the court, to aid it in administering justice. Now many of the best lawyers sell themselves to the worst of murderers to help deceive the court and to cheat justice, and to encourage and multiply crime. Crime always has money and always has good lawyers. The people elect too often weak men to prosecute. Juries are packed in the face of the court. The murderer's family are dramatically paraded before them as a device to supplant judgment with sympathy, and too frequently court, jury and all go off in tears at the sight, forgetting justice, forgetting the rights of society, and forgetting also the far more injured family of the man murdered.

The drift among lawyers in the United States for the last fifty years has been to take the most money that can be had to hire them to trick the courts into wrong and to cheat the people out of justice. We need to go back to the old-fashioned way of abhorring murder and loathing murderers, and to go back to the days when no lawyer, however great of well paid, could make a hero out of a murderer. With this, and strong men elected to the bench, and a judge who will carry out the law and compel the best men in the community to serve on juries, the good work will be done, the law enforced, the punishment applied, and crime punished.

If it is not done trouble is to come to every place as it has already come in Cincinnati. More than a majority of the communities in the United States are ripening into the same feeling which broke into fire and blood so ferociously at Cincinnati. This is true of Iowa. In this state murder is not punished, and crime is increasing, and human life is very cheap, and no one feels the security of the law, and it may be said that now in this state if the courts shall repeat the past years and clear the most of the murderers or give them light sentences, there will be trouble here. For his honor, Judge Lynch, will set up his gallows, and punish the criminals which the courts of the state have shown for twenty years that they will not punish. Society has never given up wholly its right to protect itself, and cannot do so. It has put the power of protection partially in the hands of the courts. But if they shall persist in making murder popular, as they have too largely done for twenty years, society will take the power back into its own hands, and clear Iowa air of all this nabby-pambyism which has made murder the safest of all crimes to commit in the state.

Doing House Work My Way.  
Anna B. McMahon in The Current.  
During the difficult and arduous period of "breaking in" a new girl, most women say: "Do thus and do so, because this is my way." When the back is turned, instantly the maid does it another and probably a poorer way, because it is her way. But if my way were shown to be the best one and for what reasons, and it were seen that the lady herself found it not less fitting and beautiful to practice the best way in the work of the kitchen than in her other affairs, then the work seems no longer menial but dignified. Though tedious at first it pays because of the principle involved. For the same reason it is a great advantage to make friendly visits to the kitchen, listen to experiences, discuss methods, because this shows a respect for the work, and is as far as possible from that "familiarity which breeds contempt" which comes from mere chat. There are hundreds of little ways in which a mistress with tact and a genuine respect for the work and the worker, can make this felt and as an incentive to good work it is beyond calculation.

Then, the average mistress is often guilty of ignoring the sensibilities of her hand-maiden. Grant all that may be said of the ignorance, dullness, indifference, indolence, extravagance, rebelliousness, and recklessness of the present body of domestic workers, still these difficulties are not met in the right way and spirit. It is not in the right way when children are allowed to make sport of the blunders, when a lady corrects them in the presence of guests or others, nor when she "nags" continually, nor when she holds up the virtues of some predecessor, nor when she reproves every wrong and failure but fails to praise generously the successes or approximations thereto.

Why Eyes Shine.  
Dr. Swan M. Burnett, in Popular Science Monthly.  
Place a child (because the pupils of children are large), and by preference a blonde, at a distance of ten or fifteen feet from a lamp which is the only source of light in a room, and cause it to look at some object in the direction of the lamp, turning the eye you wish to look at slightly inward toward the nose. Now, put your own eye close behind the lamp flame, with a card between it and the flame. If you will then look close by the edge of the flame covered by the card into the eye of the child, you will see, instead of a perfectly black pupil, a reddish-yellow circle. If the eye happens to be hypermetropic, you will be able to see the red reflex when your own eye is at some distance to one side of the flame. This is the true explanation of the luminous appearance of the eyes of some animals when they are in comparative obscurity. It is simply the light reflected from the bottom of their eyes, which is generally of a reddish tinge on account of the red blood in the vascular layer of the choroid back of the semi-transparent retina, and not light that is generated there at all. This reflection is most apparent when the animal is in obscurity, but the observer must be in the light, and somewhat in the relative position indicated in the above-described experiment—that is, the eye of the observer must be on the same line with the light and the observed eye. The eyes of nearly all animals are hypermetropic, most of them very highly so, so that they send out the rays of light which have entered them in a very diverging manner.

The Greatest of Suns.  
Chicago Times.  
Messrs. Hough and Burnham, of the Dearborn Observatory, have been engaged lately in micrometrical measurements of the companion of Sirius, the brightest star by far in the whole heavens. The distance of Sirius from the earth is estimated to be 1,375,000 times greater than the distance of the sun, or about 123,750,000,000 miles. Or, to measure its distance another way, its light, traveling at the rate of 180,000 miles in a second, would be more than twenty-one years in reaching the earth. In other words still, the astronomer who turns his telescope now on the stars sees it as it was more than a score of years ago. The dimensions of the star must be enormous, even as compared with the sun, for it is quite twice the brilliancy of any of its companions, while our sun at that distance would probably appear like a star of the fourth magnitude.

The discovery of the companion of Sirius was made by the Chicago instrument; not, however, by any of our local astronomers. Mr. Clark, the maker of the telescope, mounted it

temporarily for trial at Cambridge, and, turning it upon Sirius, was amazed and delighted to find a little star of the tenth magnitude, which it had been suspected must be near the great luminary. According to Mr. Burnham, who for several years has kept watch of this pair, the companion moves in position angle between three and five degrees a year, and approaches the primary about three or four-tenths of a second for that period. It will soon, he says, be so near its primary as to escape observation, by reason of the great brilliancy of the brighter stars. Indeed, it is owing to the brightness of Sirius that astronomers failed for so long a time to discover the companion, the latter being within the power of a small telescope were it not so close to a brilliant luminary. Sirius is the bright star seen nearly due south and about thirty degrees from the horizon just after nightfall. It is to the left of the conspicuous constellation Orion and lower down.

### FASHION NOTES.

Velvet will be combined with the fine gauzes and other transparent tissues worn the coming season. Gauze bodices, it is said, will have velvet facings turned down to form a bertha. Similar facings, added to the short sleeves, and cockade bows of velvet to correspond, are set here and there, butterfly fashion, among the folds of the cloud-like drapings.

Many hats have no longer broad brims, but the crowns are high. The brims are usually lined with puffed velvet, which is very becoming when placed against the face. A capote for visiting or evening wear may be of light gray English crape. The shirred crown is of the same crape, and around the bonnet are two ruchings of black velvet lined with silk.

Serge, cashmere and finest Austrian wool dresses in pin-check patterns, with stripes of colored satin alternating, will be very fashionably worn this spring on the promenade. Many of these costumes will be formed entirely of the striped materials, while others will be made up in conjunction with one-colored fabrics; the polonaise or waistcoat and panels being made up of the latter material.

Brilliant-hued arabesques, leaf designs, small flowers and vines, heraldic figures and small fruits are now exhibited in new dress and cloak garnitures of plush and chenille. These are displayed on the fronts of the Louis XIV waistcoats, the edges of the panels, cutaway jacket, deep collar and cuffs. Medium-sized buttons to correspond accompany these effective and elegant trimmings.

During the difficult and arduous period of "breaking in" a new girl, most women say: "Do thus and do so, because this is my way." When the back is turned, instantly the maid does it another and probably a poorer way, because it is her way. But if my way were shown to be the best one and for what reasons, and it were seen that the lady herself found it not less fitting and beautiful to practice the best way in the work of the kitchen than in her other affairs, then the work seems no longer menial but dignified. Though tedious at first it pays because of the principle involved. For the same reason it is a great advantage to make friendly visits to the kitchen, listen to experiences, discuss methods, because this shows a respect for the work, and is as far as possible from that "familiarity which breeds contempt" which comes from mere chat. There are hundreds of little ways in which a mistress with tact and a genuine respect for the work and the worker, can make this felt and as an incentive to good work it is beyond calculation.

Then, the average mistress is often guilty of ignoring the sensibilities of her hand-maiden. Grant all that may be said of the ignorance, dullness, indifference, indolence, extravagance, rebelliousness, and recklessness of the present body of domestic workers, still these difficulties are not met in the right way and spirit. It is not in the right way when children are allowed to make sport of the blunders, when a lady corrects them in the presence of guests or others, nor when she "nags" continually, nor when she holds up the virtues of some predecessor, nor when she reproves every wrong and failure but fails to praise generously the successes or approximations thereto.

Why Eyes Shine.  
Dr. Swan M. Burnett, in Popular Science Monthly.  
Place a child (because the pupils of children are large), and by preference a blonde, at a distance of ten or fifteen feet from a lamp which is the only source of light in a room, and cause it to look at some object in the direction of the lamp, turning the eye you wish to look at slightly inward toward the nose. Now, put your own eye close behind the lamp flame, with a card between it and the flame. If you will then look close by the edge of the flame covered by the card into the eye of the child, you will see, instead of a perfectly black pupil, a reddish-yellow circle. If the eye happens to be hypermetropic, you will be able to see the red reflex when your own eye is at some distance to one side of the flame. This is the true explanation of the luminous appearance of the eyes of some animals when they are in comparative obscurity. It is simply the light reflected from the bottom of their eyes, which is generally of a reddish tinge on account of the red blood in the vascular layer of the choroid back of the semi-transparent retina, and not light that is generated there at all. This reflection is most apparent when the animal is in obscurity, but the observer must be in the light, and somewhat in the relative position indicated in the above-described experiment—that is, the eye of the observer must be on the same line with the light and the observed eye. The eyes of nearly all animals are hypermetropic, most of them very highly so, so that they send out the rays of light which have entered them in a very diverging manner.

The Greatest of Suns.  
Chicago Times.  
Messrs. Hough and Burnham, of the Dearborn Observatory, have been engaged lately in micrometrical measurements of the companion of Sirius, the brightest star by far in the whole heavens. The distance of Sirius from the earth is estimated to be 1,375,000 times greater than the distance of the sun, or about 123,750,000,000 miles. Or, to measure its distance another way, its light, traveling at the rate of 180,000 miles in a second, would be more than twenty-one years in reaching the earth. In other words still, the astronomer who turns his telescope now on the stars sees it as it was more than a score of years ago. The dimensions of the star must be enormous, even as compared with the sun, for it is quite twice the brilliancy of any of its companions, while our sun at that distance would probably appear like a star of the fourth magnitude.

The discovery of the companion of Sirius was made by the Chicago instrument; not, however, by any of our local astronomers. Mr. Clark, the maker of the telescope, mounted it

loose without punishment for it, consider themselves as becoming chartered murderers, and laugh at courts and law. Other cities and counties have had the same experience, and it is said to be true that three-fourths of the men who have committed murder in Iowa in the past twenty years are now at large.

This is the fly in the ointment. It is more law that is needed. It is the more certain enforcement of the law we have. Public sentiment is the power to change the situation. As it is the sentiment goes too often with the murderer, and the best of lawyers will hire out to the worst of murderers, not to see that he has a fair trial and a fair show, but to resort to every device, fair and otherwise, to clear him entirely. According to the maxim of the law and the proverb of the profession, as it used to be, a lawyer is an officer of the court, to aid it in administering justice. Now many of the best lawyers sell themselves to the worst of murderers to help deceive the court and to cheat justice, and to encourage and multiply crime. Crime always has money and always has good lawyers. The people elect too often weak men to prosecute. Juries are packed in the face of the court. The murderer's family are dramatically paraded before them as a device to supplant judgment with sympathy, and too frequently court, jury and all go off in tears at the sight, forgetting justice, forgetting the rights of society, and forgetting also the far more injured family of the man murdered.

The drift among lawyers in the United States for the last fifty years has been to take the most money that can be had to hire them to trick the courts into wrong and to cheat the people out of justice. We need to go back to the old-fashioned way of abhorring murder and loathing murderers, and to go back to the days when no lawyer, however great of well paid, could make a hero out of a murderer. With this, and strong men elected to the bench, and a judge who will carry out the law and compel the best men in the community to serve on juries, the good work will be done, the law enforced, the punishment applied, and crime punished.

If it is not done trouble is to come to every place as it has already come in Cincinnati. More than a majority of the communities in the United States are ripening into the same feeling which broke into fire and blood so ferociously at Cincinnati. This is true of Iowa. In this state murder is not punished, and crime is increasing, and human life is very cheap, and no one feels the security of the law, and it may be said that now in this state if the courts shall repeat the past years and clear the most of the murderers or give them light sentences, there will be trouble here. For his honor, Judge Lynch, will set up his gallows, and punish the criminals which the courts of the state have shown for twenty years that they will not punish. Society has never given up wholly its right to protect itself, and cannot do so. It has put the power of protection partially in the hands of the courts. But if they shall persist in making murder popular, as they have too largely done for twenty years, society will take the power back into its own hands, and clear Iowa air of all this nabby-pambyism which has made murder the safest of all crimes to commit in the state.

This is how corn pops: When pop corn is gradually heated, and so hot that the oil inside the kernels turns to gas, this gas cannot escape through the hull of the kernels, but when the interior pressure gets strong enough it bursts the grain, and the explosion is so violent that it shatters it in the most curious manner.

To ebonyize mahogany, apply acetate of iron, French stain, with a brush before polishing, when it will be seen that it strikes well into the wood and takes a fine finish. Unless a large quantity of the stain is required it is cheaper to purchase it. Several good recipes for its preparation are to be had in the books.

Wellington's Watches.  
The Duke of Wellington was extremely fond of watches, and needed to have at least half a dozen within reach and all ticking their liveliest at once, and this he had half the story. Fearing that some ill might befall those just under his eye, orders were given whenever the great man traveled to have as many more stowed away in a portmanteau made to fit his carriage. One timepiece was, above all others, his acknowledged favorite; it was of old-fashioned English construction and had once been the property of Tippeco Saheb. Another of the duke's treasures had ordered it of Breguet for the fob of his brother Joseph, and, as an extra curiosity, directed a miniature map of Spain to be wrought in niello on one side and the imperial and royal arms on the other. Just as this lovely gift was finished Joseph was driven out of his kingdom by the duke, and the emperor, for reasons best known to himself, refused to take or pay for the costly bauble. At the peace it was purchased from Breguet and presented by Sir E. Paget to the Duke of Wellington. Another watch owned by the duke was made for Marshal Junot, and a great horological curiosity it is. There has never been more than two others like it. They are constructed to mark both lunar and weekly movements. The great duke gave preference to certain montres de touche—and he had several of them—a contrivance of Breguet, having sundry studs or knobs by which one could feel what hour it was, and this merely by what seemed "just fumbling in his pocket."