

PROPOSITION ---- Show how the eight crows settled on the corn with no three in a row.



gist, describing the habits and sagacity of birds, tells how he witnessed a flock of marauding crows descend upon a

corn field and dispose of themselves according to established military tactics. Each bird was posted like an army picket, so as to keep an unobstructed view of every one of his companions, and by his motions apparently maintain a noiseless code of signals which kept the entire flock informed of any approaching danger.

Without attempting to investigate the mysteries of crow wireless telegraphy, occasion is taken to show that the statement of the distinguished ornithologist suggests a very pretty problem in the science of picket posting.

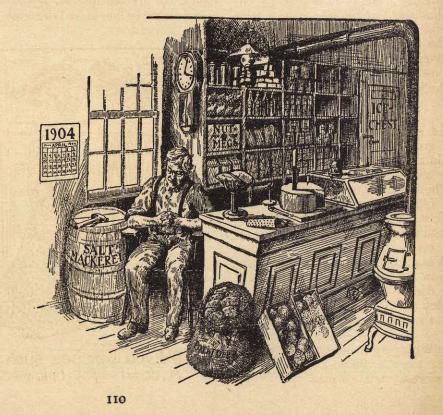
Take sixty-four points like the centers of the squares of an 8x8 checkerboard, as represented by the hills of sprouting corn in the picture, and the puzzle is to place eight crows on such points that there are no two crows on the same row or diagonal; and so that the man with the gun going around the field would find it impossible to get a shot at three birds in a row. The puzzle is closely allied to my wellknown problem of placing eight queens on a chess board so that none is attacked by another, but is an improvement upon the same in that there is but one way of performing

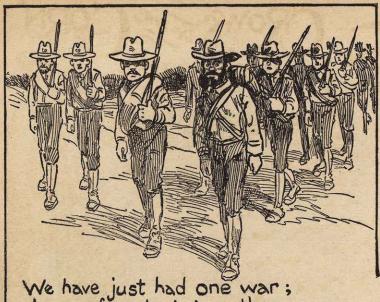
NOTED ORNITHOLO- the feat, while to the other there are twelve different answers, which by turning the board might be increased to 96 transpositions.

The Sceret-of-Success Puzzle.

A country grocer, who was always complaining about his lack of success, fell asleep one day in his store, and dreamed that his goods were discussing the secret of success. "No one should do busi-

ness on tick," said the clock. "One wants push," said the but-ton. "And never should be led," said the pencil. "Take pains," said the window. All of the articles in the store had something to say, and their remarks were so good that it becomes a puzzle worth propounding, to see if our friends cannot suggest a score or more bright things which the other articles might have said.





We have just had one war; keep us from having another.

RPEAKING ABOUT labor strikes which are occupying the public attention at presents reminds me of a war problem I thought to sketch for our juveniles the other day while passing through one of our manufacturing centers. There was a certain parade and mobilization of troops going on, which so revived my old-time patritism and military spirit that I joined the crowd and cheered for the Union, when, to my dismay, I discovered that I was participating in a labor strike and shouting for the motormen's union, whose members were bent upon pulling up the car tracks.

Despite my sympathy for the laboring men, I found that my enthusiasm had placed me in a false position, so I most heartily indorsed the sentiment of a good citizen as given in the description of the picture, which it will be found conceals the locality of the incident.

A PROBLEM.

- As I was beating on the meadow grounds,
- Up starts a hare before my two grey hounds:
- The dogs, being light of foot, did fairly run,
- To her fifteen rods, just twenty-one; And the distance that she started up before,
- Was six and ninety just and no more; Now I would have you clever folks
- declare How far they ran before they caught
- the hare?

Why may a beggar wear a very short coat? Because it will be long before he aets another.

Our juvenile puzzlists are so clever in getting at the correct locality of these concealed places, that I will ask them to explain a matter which puzzled me considerably some time

I had heard a certain person re-

ferred to once as "the most noted man in his State," and, as his fame for any particular art or science had never reached me, I asked regarding his specialty, and was told that he was not looked upon as a great genius, but simply as being "noted." I was baffled by the puzzle, until it so happened that during a visit to his town I observed that strangers and friends alike were so struck by his remarkable appearance as to make him indeed the most noted man in town.



"Did you ever see such a color?" "A downright brick red isn't it."

NOTED.

I pass the puzzle on to our young friends, and will ask them to discover the locality of this noted man as concealed in the remarks which I heard upon the streets.

A REBUS.

A bird select, on moorlands bred, And carefully remove its head, Then your admirer, Ladies see! Cut him, and past and gone he'll be. Cypher Ans. 17, 13, 15, 22, 5, 18.

What is the difference between a mother with a large family and a barber? One shaves with his razors, and the other raises her shavers.

Why is a horse an anomaly in the hunting field? Because the better tempered he is the easier he takes a-fence (offense).

Which eat most grass, black sheep or white? White, because there are more of them.

When is a sailor not a sailor? When he's aboard.

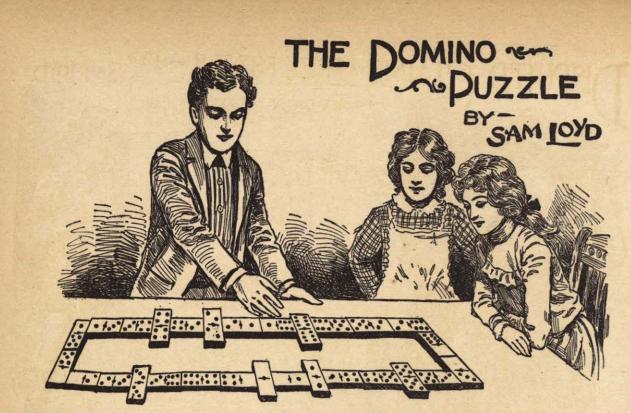
Why are persons with short memories like officeholders? Because they are always for-getting everything.

What is that from which you may take away the whole, and yet have some left? The word whole-some.

What is a quick way to kill ants? Hit your uncle's wife on the head with a hammer!

What is the difference between dead soldiers and repaired garments? The former are dead men, and the latter are mended (dead)!

Why should painters never allow children to go into their studios? Because of them easles (the measles) which are there.



PROPOSITION-How many points can be scored in a game of dominoes?



fond of dominoes, and flattered myself that I could put up a pretty stiff game of straight muggins, but it was my privilege to meet

a certain Monsieur Blume, in Paris, who speedily disillusioned me of the notion that I knew anything about the science of dominoes. He was a professional player, of about 80 years of age and had been blind from birth. He made a living by going about the cafes, giving exhibitions of his won derful play in which he gave phenomenal odds to all opponents. I have upon several occa- ends will be. sions alluded to the fact that every game or pastime is susceptible of furnishing a series of problems or puzzles, as in whist or chess, which illustrate in an instructive way the peculiar strategy of the play. M. Blume would always finish a game of dominoes after the manner of a problem, in that he would announce that he would make exactly five, ten or twenty points, as the case might be, and it was this feature of the play which suggested to me the domino puzzle of: "What is the greatest possible number of points that can be scored by both players in the regular game of muggins wherein the two ends are counted whenever they add up five, ten, fifteen or - had been imposed upon them by twenty?" It may be mentioned to building up magic squares with such of our puzzlists who may not have a set of dominoes conveniently had black dots like "dice." The at hand, that the sketch shows a amusement gradually advanced into complete set of twenty-eight stones, a species of a game of skill, and by a manners? B natural.

USED TO BE VERY which may be utilized to solve the puzzle.

Just lay them down one at a time and count both ends whatever they add up, 5, 10, 15, or 20, and see how much vou can make.

While on the subject of dominoes I will explain one of the neatest parlor tricks you ever saw. Take a full set of the 28 dominoes and mix them up well, and unobserved by any of the spectators conceal one of the, stones in your hand. Tell them you will go out of the room while they match the set in one long row, and you will tell them what the two

Be careful not to select a double number. Mix them all up carefully and while doing so return the one you had, at the same time telling the them that the two ends were 3 and 1, or whatever numbers you had on the dominoe.

Here is another puzzle which incidentally introduces two very interesting subjects: the origin of the game of dominoes and that ever popular theme of the magic square.

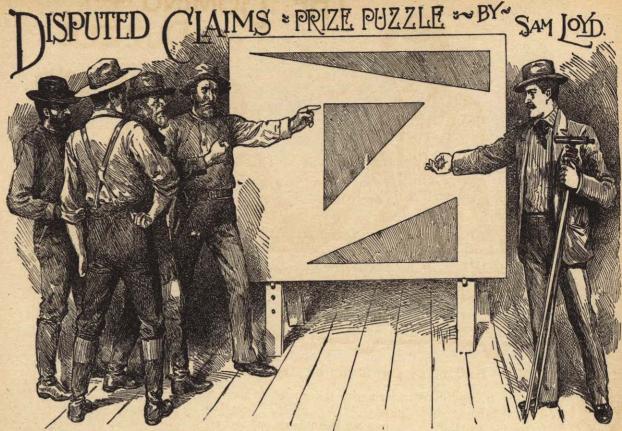
According to a well-authenticated bit of history, two monks who had been committed to a lengthy seclusion contrived to beguile the dreary hours of their confinement without breaking the rules of silence which small flat stones, upon which they

preconcerted arrangement between the players the winner would inform the other of his victory by repeating in an undertone the first line of the vesper prayer. In process of time the two monks so far completed the set of stones as to represent every possible combination of two figures from double blank to double six and perfected the rules so as to make a most interesting game, so that at the end of the term of their incarceration it became generally adopted by all of the inmates of the monastery as a lawful and instructive pastime.

It soon spread from town to town and became popular throughout Italy, and the first of the line of the vespers was reduced to the single word Domino, by which the game has ever since been known.

An old writer on the subject says that the various combinations, or arrangements by which a number of the stones, being the same as our ordinary dominoes, might be formed so as to make magic squares which would add up the same in every direction, seems to have been lost, and its possibility has been questioned by eminent mathematicians. In this respect, however, the writer errs, for to modern puzzlists, who are familiar with the theory and construction of magic squares, the feat is an easy one, and as such I present it to our young puzzlists.

What is the keynote to good



A PUZZLE EDITOR were vague and full of errors which I take occasion to say that now and then a correspondent will write to ask why a certain solution obtained a prize, when, according to his way of thinking, his solu-tion was "just as good." It may be a problem which turns upon a little mathematical point, and, whereas the winner followed the puzzler's custom of carrying the result out to only three decimals, the writer had gone to the pains of working it out to ten points, thereby producing what he considers a better answer. He employed half a dozen sheets of foolscap and worked out ner's solution, produced by natural methods which anyone could understand, covered less than half a postal card, and clearly showed that he understood the point of the puzzle and could carry the answer out to any number of decimals, if the prize were offered for patience or endurance.

An umpire cannot always give his reasons for making an award, and so long as it is done fairly and impartially, should not open the way to discussions. It may be that the winner's answer came several days before the others, or was clear and

Our puzzle shows an animated dispute between some miners over their respective claims. It seems that they had obtained "patents" on some mining claims of the same size. Each claim was in the form of a right angled triangle, and all of exactly the same area, but of differhis solution by algebra. The win- ent dimensions, as would be the case with a triangle with a base of 35 feet, an elevation of 12 and the hypothenuse of 37, as compared with another with dimensions of 20, 87 and 29, as both contain areas of 210 feet. The puzzle calls for a number of triangles containing 210 feet in each, with complete and definite dimensions without any two triangles being of the same shape. This puzzle gives great scope for ingenuity and perseverance, as it turns upon being able to discover the greatest number of such triangles.

sharp to the point, while the others of definite dimensions can you give, kept on the hand.

PROPOSITION-How many triangles can you make of the same size with different sides?

the umpire does not desire to discuss. These remarks are made as a hint for competitors to always give short, clear answers, as free as possible from mathematical terms. Solutions should be perfectly clear when they first go to the umpire, as no arguments or amended explanations should be accepted afterwards.

which will all contain the same areas. but of different dimensions on the sides?

A REBUS.

Whether backwards or forwards I'm read.

Matters to me not a bit;

I am gentle and light, and transposed Am ever ready and fit.

CHARADE.

In battle-field when front to front, Contending armies bear the brunt,

My first is in the fray; If e'er with quantities perplexed,

You gents may measure with my next.

Or with my total weigh.

Of what part of London does a lame man remind us? Of cripplegate (cripple gate).

Why would a tanner make a good chemist? Because he understands ox (h)ides.

Why are you better looking than a carpenter? Because he is a deal plainer (planer).

Why is the letter F like deathi Because it makes all fall,

Whose chins are never shaved? Ur-chins.

Why are gloves unsaleable arti-How many right angled triangles cles? Because they are made to be



Sporty men are supposed to have unlimited nerve, and as a rule are seldom discouraged. Nevertheless, while returning from the Epsom races on the top of a 'bus, I encountered the worst case of hopeless discouragement I ever witnessed. A little fakir who had been running a side show game known as the new Monte Carlo was bemoaning his fate to the shell-game man. Business had been "rather badly," as he put it, but in the hope of retrieving his fortune he stood out in a soaking rain for a couple of hours. He was preparing to give up in despair when a party of jolly fellows came along, and one of them, too far gone in liquor to know what he was doing, placed £10 on the 3, threw three of a kind, and cleaned him out of his last shilling!

The game is quite popular, and as chances of breaking this bank of Monte Carlo I offer it as an elementary problem in the theory of chances. There are six squares marked 1, 2, 3, 4, 5 and 6, as shown in the sketch, and all are invited to place what money they wish on one or more of the numbers. Three dice are then thrown, and all who like "Why was the turtle that kept pick the numbers which turn up get their money back and as much more. If you place \$1 on No. 5 and two 5s turn up you receive \$1 stake and \$2 more. If three 5s are turned you get \$1 and \$3. Now, then, how many of our clever mathematicians can tell what are the chances for or against the person who tries his luck?

What is that which you cannot hold ten minutes, although it is as light as a feather? Your breath.

What roof covers the most noisy tenant? The roof of the mouth. Why does an orator resemble a

pawnbroker? Because he lives by spouting.

What instrument of war does an angry lover resemble? A cross bow (beau).

Why is a horse smarter than a fox? Because a horse can run when he is in a trap and a fox can't.

Unsolved Riddles.

Probably every one of the millions upon millions of people who have enjoyed Lewis Carol's masterly and realistic description of the vagaries which flit through our minds while in dreamland have pondered over certain unanswered conundrums which were given by Alice in Wonderland.

While Alice, the Mad March Hare and the crazy Hatter were enjoying their tea, the hatter suggested some riddles, and asks, "Why is a writing desk like a raven?"

Alice said she believed she could guess it, but every time the question was revived it flitted from her mind, and faded away like that mysterious cat, which left nothing more tangible than its everlasting smile. It is safe to assume, however, that the famous Oxford mathematician and no two persons can be found who noted puzzlist had some clever give the same opinion regarding the answer up his sleeve, or he would not have propounded the conundrum.

The book itself is a riddle, and many persons, while revelling in its extravagant absurdities, have failed to recognize the faithful and wonderful description of a dream. It abounds in riddles and conundrums,

school like a tortoise?" Because he tort us. What is more puzzling than that tangle of words when the countess deduces the moral:" Be what you would seem to be, or never imagine yourself not to be otherwise than what it appears to others that you were or might have been, would have appeared to them to be otherwise.'

All of which is too apparent to require further digression from our subject:

Why is a writing desk like a raven?

I have never heard the answer, nevertheless, like the ancient query, "Why is a crow?" it has been asked so often that I am satisfied that our clever puzzlists will suggest a fitting answer.

CONCEALED GEOGRAPHY.

71. When in India Lord Raglan cast Eros, the blind dog, at his feet. Venus laughed.

71. The bride wore white, the bridesmades blue. (An island.)

72. Trust no past, fear no future. (A river.)

73. Stocks, or rent, or what, make the best investment?

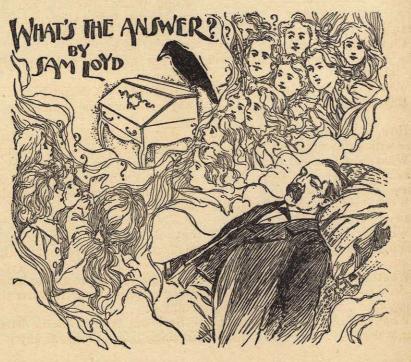
74. Did you ever read in Goldsmit of the curse of ambition?

75. The wounded are borne off the field on litters. (An island.)

76. Not money, but base love of money, harms.

77.a" A widowed bird sat, mourning for her mate, upon a wintry bough." (River.) 78. Tall or short, fat or lean, shall

make no difference here.



Occasion is taken to tel how a member of the recent expedition to the north pole attempted to capture a bride after the custom of the upper arctic circles. Every one sleeps in a bearskin sack up there, so when an And yet my second oft employs his elopment is planned the love-sick swain just creeps in and steals a sack with its valuable contents and bears it off to his home. In this Cypher Ans. 23, 9, 14, 4, 12, 1, 19, 19. case the lover had quite a distance to journey, but calculated that he could go there at the rate of 5 miles per hour and return with his burden at the rate of 3 miles per hour. He carried out the programme on schedule time, making the tour in just seven hours, but when he opened the sack to show the prize to his shipmates he found that he had run off with the girl's grandfather! The story has been so greatly exaggerated that it is claimed that he must have gone from Petermann's Point to Franz Josef's Land, and thence chased by the grandfather to several degrees beyond the parallel reached by Dr. Nansen in 1895. Will our experts assist in figuring out just able journey.

A REBUS.

Transpose a portion of the year, A Christian name will then appear; The same, transposed again will show

A plant that does in India grow. May, Amy, Yam.

How do you define a ring? As a hole with a rim around it.

What did Adam and Eve do when they were expelled from Eden? They "raised Cain."

What town is most frequently drawn? Cork.

What kind of a receptacle is that which is always asking permission to move? Can-i-stor.

What would you advise a person to do who had some money and a buggy-top? Buy a fine tooth-comb. What part of a fish weighs most?

The scales.

speeds, attending; thoughts,

Why is a pen like a perverse child?

self.

Because g makes it go. When is a boat like a snow bank? When it is adrift.

Which animal requires the most baggage, and which two the least? The elephant takes his trunk, the fox and cock only a brush and comb. What relation is that child to its father who is not its father's own son? His daughter.

an anxious bee-leaver.

Why are two heads better than how far he travelled on this memor- one? Because they are fore-sighted. Why is a cart-horse always in the wrong place? Because you have put the cart before the horse.

> stem?A book. CR.

Why is a black woman like a doorway? Because she is an egress (an egress).

Why do cabmen prefer tall ladies to short ones? Because the higher the fare (fair) the better they like it. Why is a newly-married couple like a pair of sugar tongs? Because they are two spoons joined.

Which is betterl getting the gir,

or youf choice or half a loaf of bread? Half a loaf of bread; as nothing earthly can be better than getting her you love, and we know that half a loaf of bread is much better than

nothing. Spell one word with the letters: In magic tale. Enigmatically.)



A REBUS. When yon fine vessel on the ocean

Unto my first the watchful tar's

When at my whole his powerful form is bending.

Why is a horse like the letter O?

Why is the boy that disturbs a beehive like a true Chritian? He is

What has many leaves but no

What two letters make a prophet?

A REBUS.

My first, gentle lady, you give to the youth,

Who now breathes the fond wish of his soul;

Whom with ardent affection, and honor and truth,

You perceive is indeed in my whole.

In my snug little second, secure from the storm,

We the the helpless and innocent find;

And my whole when a contract or bargain you form,

You should give, the agreement to bind.

Cypher Ans. 5, 1, 18, 14, 5, 19, 20.

CONCEALED GEOGRAPHY.

14. A friend, named Dorcas. owned a red raven named Jehoshaphat.

15. I sailed past Africa, Oceanica Because it never does wright of it- I rounded, and came to America.

> 16. Adam, as customary in Paradise, snubbed Eve.

> 17. A good nap lessens the length of the day.

> 18. Napoleon begins as a comet, ends as a falling star.

> 19. Said Henrietta "Unto no man give I my heart."

20. I bet he loses the race.

21. France may not bear this rebuff a long time.

22. Is there a railroad over the top of Mount Washington?

23. If we drink too freely of the cask, age racks us with pain.

24. Tell King William to send some officer of rank for the answer of Jules Favre.

25. The ravings of the mob I leave to your imagination.

26. To get gold to par is the Secretary's prime object.

27. I saw a little maiden very gayly clad.

28. The Harvard Base Ball Club is composed of nine vehement strikers.

29. Rent on Cornhill is low, but rent on State street is high.

30. She was so fond of beer, she baked her pancakes in it.

31. Which do you like best, fricasseed frog, or ham and eggs?

32. In the days of Queen Elizabeth, Lehens & Co. were jewellers in London.

33. The artist should work with art for duty; not pleasure.

Spell one word with the letters: Tis no demon's art. (Demonstration.)



It appears that five clever newsboys formed a partnership and pooled their issues to lav in a good stock of papers, which they rattled off like hot cakes and then figured up their accounts as follows: Tom Smith sold one paper more than one quarter the whole lot, while Billy Jones disposed of one paper more than a quarter of the remainder. Ned Smith sold one paper more than a quarter of what was left, and Charley Jones disposed of just one paper more than a quarter of the remainder. A this stage of the game the Smiths were just 100 papers ahead, but little Jimmy Jones the youngest kid of the bunch, sold all that were left, so in this friendly encounter the Jones won out by how many papers do you think?

A REBUS.

- Four letters form me quite complete, As all who breathe do show:
- Reversed, you'll find I am the seat Of infamy and woe.
- Transposed, you'll see I'm base and mean.
- My name betrays my race;
- Transposed once more, I oft am seen To hide a lovely face. Cypher Ans. 12, 9, 22, 5.

A CHARADE.

A vowel with two beasts unite, You'll have what poets often write. There are two equally good answers to this charade, 5, 16, 9, 7, 18, 1, 13, or 1, 14, 1, 7, 18, 1, 13.

What chasm often separates friends? Sar-casm.

Why is O the only vowel sounded? Because all the rest are in-audible.

Why is coffee like an axe with a dull edge? Because it must be ground before it is used.

Why is an old coat like an iron kettle? Because it represents hard ware

Why is a dressmaker a most deceptive woman? Because she is not what she seams.

A RIDDLE.

Perhaps you may know That two centuries ago My name in the world was unknown: But now 'tis allowed In the midst of a crowd I am met with in every town. Though varied each lot In life I have got, Yet nothing my course e'er endangers: And wherever I go So familiar I grow That I am nodded to even by strangers. I am cunning and bold. For young or for old I fear not but brawl out aloud;

Pugnacious you'll say, For I knock down by scores in a crowd.

A REBUS.

Though small I am, yet, when entire I often set a house on fire: Take off one letter. and 'tis clear I then could hold a herd of deer; Dismiss one more, and you will know

That once I held a strange cargo. Spark.

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My primal is found where the wild waves are dashing, And thick falls the cold briny

Sprav

My final is seen, where the fierce eves are flashing,

And fortunes are oft thrown away.

- To draw your conclusions by spanning my whole,
- As to what lies beneath or concealed.
- Will oft prove as false as the base flatterer's soul,
 - When facts, stubborn facts are revealed.
- Cypher Ans. 19, 21, 18, 6, 1, 3, 5.

A CHARADE.

Without my first you cannot stand, My second you may now command; Together I attend your will. And am your humble servant still.

Cypher Ans. 6, 15, 15, 20, 13, 1, 14.

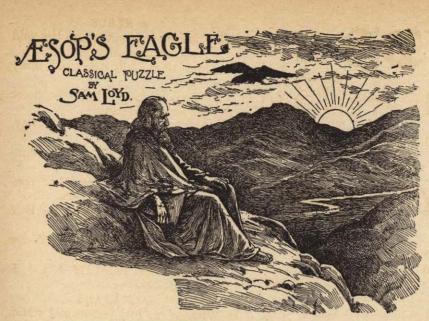
What kind of a hen lays the longest? A dead hen.

I will ask the young folks to enjoy a simple study in concealed geography by locating the poor postman's trouble, as illustrated in the following picture:

You see, some charitably disposed schemer had been working an endless chain racket on an unsuspecting public, and was receiving such an immense correspondence that other ladies in the neighborhood became jealous, so the letter-carrier's patience reached the limit when Mrs. Smith threatened to patronize some other postman if she did not get more letters!



Mrs Smith says you must leave at least one more letter each morning or she will patronize some other postman



Aesop, who lived some twenty- materially affect the distance, it is five hundred years ago, was a slave belonging to a noble Athenian, who, being struck by his originality and marvelous gift of inculcating morals or cutting satire in his stories of birds, animals and fishes, brought him to the notice of Croesus, King of Lydia. Among his oldest fables is the story of the ambitious eagle, which resolved to fly to the sun. Every morning as the sun rose in the east the eagle would fly towards it, going a thousand miles before the hour of noon, when the sun would be on the meridian, thus as the sun would pass on towards the west the eagle would continue its hopeless chase, and just as the sun would disappear below the western horizon the eagle would find itself back to the original starting point.

The story is all right as told, but his mathematics are slightly out of gear, and present a pretty problem for our puzzlists to study over. In the early start towards the sur, they are both advancing towards the meeting point, and we will accept the intimation that the sun goes five times faster than the eagle, so they will speedily be on the meridian, but a stern chase is a long chase, so the afternoon race will be the longer one, and will carry the eagle 500 miles farther west every day, so that it will be many a long day before Aesop's point is actually accomplished and the foolish eagle returns to the starting point after making a complete circuit of the globe.

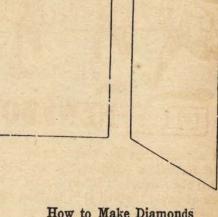
The circumference of the earth being known, and it being assumed that the eagle flies at a height from the earth's surface which does not enough to read it right off.

The Puzzleland Sunday School Teacher is giving the children some good resolutions with which to begin the new year. It is a good idea to inject a little difficulty into the lesson so as to impress it well on the memory. Of course, it is any easy puzzle for the little folks, nevertheless let us see if you are clever

shown that the eagle would go 500 miles further west each day. Let us start the bird on his tour from the dome of the Capitol at Washington, Wednesday January 1st. 1896, on which day of the week would he return to the starting point ?

Here is the way a Dutchman gave the problem: "Suppose two geese start from opposite windows of that dome at Washington, what direction would they have to fly to meet again in the shortest possible time? Third proposition: Do you know why it is that if you saw an Island exactly one hundred miles away due north-east, you would never get there by sailing due north-east?





How to Make Diamonds

The juvenile readers will find in the following an interesting method of passing an hour or two out of school hours or to amuse an evening party. All that is needed is a pair of scissors and some paper which may be cut into the form of a parallelogram or rectangle as shown in the above illustrations:

The puzzle is to discover how either one of the forms can be divided into equal halves which will fit together so as to form a perfect diamond. As both diamonds will be of equal dimensions, it shows that the above forms are of the same size. It would have been a more difficult puzzle to have required you to prove the forms to be of the same size by merely cutting them into halves. It will be found that they are built upon different ideas, although based on scientific principles of geometry well worth knowing.

Of course, it is understood that no paper is wasted, as the diamond, when completed, will be just as large as the present figure.

Cutting puzzles of this kind are always popular and instructive in that they exercise the inventive faculties and serve as an elementary drawing school.

A Rebus

As to what lies beneath or concealed,

Will oft prove as false as the base flatterer's soul,

When facts, stubborn facts are revealed.

Cipher Answer .--- 19, 21, 18, 6, 1, 3, 5.