Woman & Home

THE ENGAGED GIRL.

An engaged girl is often a very foolish girl with regard to her future husband's relatives. She looks at them with coldness, as people who suppose themselves to have more right in her lover than she herself has. She does not care particularly about them, perhaps, and thinks them frumpy or over particular, and she takes little pains to hide that they don't interest her. She seems to expect that he will lose his old closeness of relation with his own people at once, and adopt hers in their stead. She is impatient and resentful of any claim they make to his time or notice, and thinks she ought to have the monopoly. This is not only wrong, it is foolish as well, says the Toronto News.

She should remember that, after all, his own family have the prior right, and that it needs a good deal of unselfishness and self-effacement to resign that right without a pang to a strange girl, if even it is a girl he loves. She should think that to even the most generous of mothers it is a hard thing to part with her son to another woman, and the more she herself loves that son the more she ought to understand his mother's love and sympathize with it.

She ought to reflect that upon her attitude now toward her finance's people much of the happiness or the discomfort of her future life will rest. She ought to realize what a terrible responsibility she is taking on herself if she does anything to sever the close bond between her husband and his people. It is inevitable that if she makes a faction against them he will side with her, and by how small a difference may she make a quarrel that will break the old affection for life.

Her aim should be to win their liking and their confidence, no matter how little congenial she may chance to find them, and it does not always follow that because she loves a man she finds his family lovable, too. She should make up her mind to put up with much, if needs be, to endure and to be patient, and to overlook. She must realize that from henceforth his people are to be her own people, and that if she is not prepared to take the rough with the smooth, in that relation she had better let the whole thing go. A girl who really loves the man she marries will not need be told much of what it is right to do in this respect.

AS TO DRESSING THE HAIR.

With the flat hats and low turbans now in vogue a change in hairdressing became necessary, and the coiffure has receded from the extreme top and front of the head to the back. A charming arrangement has the hair waved softly all around, parted at the side and coiled loosely in two figure eights, held together by jewelled combs. The Catogan braid also is seen. This old-fashioned coiffure is made by tying the hair just below the crown and forming two braids that are looped up to the tying and fastened there. This leaves four lines of braided hair, which are flattened to the head and caught by pins, and finished with a fancy comb. If the loops of the hair extend beyond the nape of the neck, so much the more fashionable is the wearer. The front of the hair should be parted off and waved and fastened under the knot, says the Plain Dealer.

It seems quite certain that low and elaborate hairdressing, with many curls and braids, will take the place of the styles that have prevailed so long. The pompadour, as of old, parts reluctantly with its sway, but it grows smaller day by day and cannot last into the summer.

SPRING GOWN, TRIPLE SKIRT.

"Dry rot" is the putrefaction of the vegetable albumen in wood, and can be prevented only by some process of hardening or extracting this element.

RECEPTION AND LUNCHEON GOWNS.

1. Reception gown of tan cloth, with embroidery on the bodice in shades of pink and green; trimmed with green panne velvet and white chiffon.

2. Luncheon gown of mauve crepe de chine, with bolero of panne velvet of deeper shade of mauve, yoke and sleeves of cluny lace; spangled tulle drawn from under bolero and knotted with rosette in front.

THE LAKE SIDE.

The shadows round the inland sea,
Are deepening into night;
Slow up the slopes of Ossipee
They chase the lessening light.
Tired of the long day's blinding heat,
I rest my languid feet;
Lake of the Hills, where, cool and sweet,
Thy sunset waters lie!

Along the sky in wavy lines,
O'er isle and reach and bay,
Green-belted with eternal pines,
The mountains stretch away.
Below, the maple masses sleep
Where shore with water blends,
While midway on the tranquil deep
The evening light descends.

So seemed it when you hill's red crown,
Of old, the Indian trod,
And, through the sunset air, looked down
Upon the Smile of God.
To him of light and shade the laws
No forest lyric taught;
Their living and eternal cause
His truer instinct sought.

He saw these mountains in the light
Which now across them shines;
This lake, in summer sunset bright,
Walled round with sombering pines.
God near him seemed; from earth and skies
His loving voice he heard,
As, face to face in Paradise,
Man stood before the Lord.

Thanks, O our Father! that like him,
Thy tender love I see,
In radiant hill and woodland dim,
And tinted sunset sea.
For not in mockery dost thou fill
Our earth with light and grace;
Thou hid'st no dark and cruel will
Behind Thy smiling face.

—John Greenleaf Whittier.

Van Zandt's Vindication.

BY J. F. PHILLIPS.

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Asher had just finished putting an extra block of coal in the blazing grate and was tapping it with the tongs to increase its brisk glow, when one of of the men spoke, thus breaking the chain of silence. Outside, the air was filled with particles of swirling snow and, all portentous of a night in-doors, with jovial companions, one youthful member of the Lethe club puffed more vigorously than ever at his pipe. Then he stopped, looked inquiringly at the coterie nestling in easy chairs around the fire and advanced the words that dispelled the unusual quiet.

"Where's Vanny?" asked Collier, he of the light curly locks and Arundelian bearing, as he looked at his watch. "He told me he was coming here at 10; we're due to finish that tie game of billiards, but, as yet, I've seen no sign of him. Wonder what's the matter?"

"Oh, you needn't bother about Van Zandt," answered Asher, as he once more seated himself in the restful leather covered armchair. "Never knew him to keep an appointment strictly on time; I'll lay you odds of five to one he finishes the stretch at least a quarter hour to the bad. I know that's no more than he'd be willing to allow if he was here now. And besides, it would take a more rigid promise than the one he made you to induce him to leave Miss Trezevant without his customary brief grace for saying 'good night.' She'll be the undoing of him, I'm afraid."

Carlough, the club's self-appointed analyst in all matters pertaining to the love affairs, bethumbed the magazine he had been reading and looked up.

"Well, she'll have a dandy opportunity to prove her adroitness," said that gentleman. "Vanny's not the chap to allow himself to be dictated to. He's too much a devotee at the shrine of independent bachelordom; not saying, of course, that the right woman, at the proper time, may not succeed in breaking this steel-clad barrier. He's often spoken of it to me; decried the weak-mindedness of men who allow themselves to be transported hither and yon by the buffeting

"Where's Vanney?"

waves of Aphrodite's sea. He calls it misguided reason and silly sentimentalism. Mary Trezevant, from what I know of her, is not the girl to conquer under such circumstances. I've half a mind to believe she wouldn't try, either, since her mother and she are so opposed to men who indulge their appetite for an occasional brandy and soda or a nip of warm Bourbon.

"That may be true," interjected Phil Pearson, a ruddy-faced chap, who, while innately championing Vanny's cause, had hitherto refrained from saying anything. With head bowed in his hands, he had sat there for the last half hour, as if meditating a great flyer in wheat or some new coup on the board of trade. In truth, it was Van Zandt's behavior that concerned him most deeply; for Vanny and he had long been kindred spirits—chums from boyhood. So, when Carlough finished his remarks, Phil's ears were soon turned to catch all that was said.

"That may be so," he said, "but as for keeping promises, I'd pit the old fellow against anyone in this club." Hotly, "We know how he likes his toddy; especially at such a cold, blustery time as this, but that doesn't weigh in the balance against him—not with me!"

"None of us is trying to pose as a saint, my dear boy," mildly interposed Carlough, "you have placed a wrong construction on what I have said. We have a bit of the ancient spirit about each of us, when it comes to a tempting glass or a pretty woman, and you know that Vanny's no exception. In his case, unlike the acid and the alkali, however, one will not neutralize the other; one must give way and I'm ready to vouch for his good sense."

Sound of a familiar voice in the corridor announced the arrival of the

"For the second, you would better ask Miss Trezerant."

much-discussed Van Zandt. A kindly word to the porter and a nod to friends in the billiard room, off the hall, and soon the young lawyer, with cheeks aglow, strode into the room, wherein he would find his cronies. At sight of him, there was a simultaneously whispered greeting from each, but it was plain that his entrance had caused a lull in the conversation.

The possibility of losing one of the brotherhood of Letheans, New York's famous bachelor organization, after all kinds of resolutions against marriage had been passed, was more than the most stanchly hearted of them could bear. A mental pall seemed to settle over the little gathering, as if one of their number was already under the shadow of some mysteriously ominous power. He who brought the pervading gloom, maintained a rigid silence, not at all in keeping with his conduct, when, with glass to lips he was wont to join in the chorus:

"He's a jolly good fellow,
He's a jolly good fellow,
He's a jolly good fellow,
A jolly good fellow is he."

Then someone suggested the regular nightly potation, which, for some strange reason, thus far, had been overlooked. Prospects of that which was to follow brought back the good cheer and soon all were laughing and joking, conscious only of the joys of comradeship.

"Let's drink a toast to Vanny and his promises," suggested Dan Wilson, an ex-football player who was always ready for a tackle at just such critical times. At this juncture a clinking sound marked the rise of the glasses as they went aloft; all eyes were centered on the member whose immediate future was a matter of so much concern.

"To Vanny and his promises!" all yelled and it was not until silence ensued that any of them noticed the emptiness of Van Zandt's hands. Many looked aghast; so great was their surprise.

Vanny grasped the back of his chair as he arose to give response. Something tugged at his throat, a sign of the weakness his companions would charge him with, and which made speech, for the moment, difficult. His heart throbbed fast in the excitement but thoughts of her steadied his nerve and calmed his voice, so that his words fell measurably clear and eloquent.

"I've a confession to make," he advanced. "It's due to you, I know, since I'm the first to nullify—our bond—of fellowship. Your toast has taken me completely off my guard. I hadn't considered, for a moment, that you knew of the serious turn this affair had taken—how could you?—when the affirmations were made only tonight. There were two of them; the third shall be an invitation to dine with me Thursday evening. Will you come?"

A curious lot cried "Yes, go on!" They wondered what would follow next.

"I don't drink with you tonight, boys, because—I've quit. Now that's the first promise, and it's one I shall keep.

"For the second, you had better ask Miss Trezevant."

PineForest of Arizona.

Arizona is supposed to be almost an unbroken desert, but in reality it has the largest unbroken pine forest in the United States, covering an area of over 8,000 square miles. This timber is usually found in an altitude of between 5,500 and 7,500 feet. The total quantity of pine timber fit for sawing purposes within the boundaries of the territory amounts to 10,000,000,000 feet, which can supply the needs of a populous state for more than a century.

Chief Butler of England.

The duke of Norfolk, as hereditary earl marshal of England, has entire control over the arrangements at Westminster abbey at a coronation or other ceremonial of a public character, and as chief butler of England he is entitled at a coronation to receive a drinking cup of pure gold. He can claim an escort of cavalry whenever he likes. The dukedom goes back more than four centuries.

Science and Progress

One of the most recent and useful applications of electricity is to the work of typewriting. An electro magnet is put into a central position in one of these typewriters in which an ink ribbon is used. In such machines there are a lot of type-bars, which fly up and hit the ribbon and white paper, thus transferring some of the ink from the ribbon to the sheet. The magnet is properly connected with some convenient source of current. The keys of the machine are so arranged that depressing any one of them, no matter how lightly, will turn on the current, energize the magnet and make the latter do the heavy work of operating the type-bar. The type-bar then falls back to its normal position automatically.

In the manufacturer's salesroom and business office, where the machines are in use, a plug has been inserted in the electric light socket, and current is taken from the local lighting circuit. A flexible twin cable leads to the rear of the machine and is connected by binding posts.

The machine can also be operated by using five cells of primary battery or two small cells of storage battery. There is very little current consumed, as was shown by a metre measuring the current used by one machine in constant service for one month. The bill was twelve cents.

The strength of the electro magnet is controlled by a well-known electrical device known as a rheostat, the handle of which is just back of the magnet, so that the force of the impression is regulated at the will of the operator, according to the kind of work being done. For ordinary work a weak current is used, but for taking carbon copies the strength of the current is increased, so that the type-bar delivers a stronger blow. More than twenty distinct copies with carbon paper have been made at one time, of a quality not yet attained by any non-electrical typewriter.

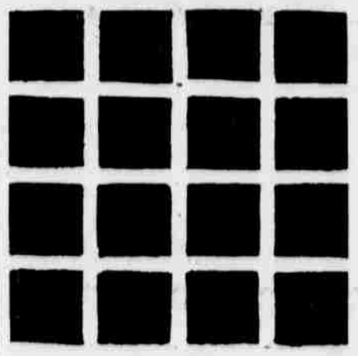
Other advantages of the electrically operated typewriter are thus stated: Only a light touch is necessary, a four ounce touch being sufficient to operate the key; the depression of the key is only about one-third that of non-electrical machines; a running or overlapping touch is easily acquired by the operator and several keys can be depressed in succession without releasing the preceding key; a saving of one action on each word is made by making the space simultaneously with last letter of the word; the printing is uniform as to clearness, as each type-bar is impelled by the same magnet, in the same manner, and with identically the same amount of force.

THE FLOWERS OF THE SEA.

The sea has flowers as the land has, but the most brilliant of the sea-flowers bloom not upon plants but upon animals. The living corals of tropical seas present a display of floral beauty which in richness and vividness of color and variety and grace of form rivals the splendor of a garden of flowers. The resemblance to vegetal blossoms is so complete that some persons find it difficult to believe that the brilliant display contains no element of plant life, but is wholly animal in its organization. Among the sea animals which bloom as if they were plants are included, besides corals, the sea-anemone and the sea-cucumber. Dr. C. M. Blackford, Jr., remarks that among the coral gardens the birds and butterflies of the upper world are replaced by fishes of curious forms and flashing colors, which dart about among the animal flowers.

AN OPTICAL PROBLEM.

The simple illustration herewith raises a question, namely, why in looking at the sixteen black squares, a shadow is seen where four corners meet—except at the place where the eye directly gazes. This exception is, of course, explained by the fact that just there, in the direct line of vision, the image falls on the highly sensitive



yellow spot of the retina. But why the blurs in the other positions where the white bands cross?

WHAT ABOUT THE PASSENGER?

The public is indebted to the Daily Mail of London for introducing, through its Geneva correspondent, an engineer, who is credited with an invention of a "mechanical brake" which stops a train that is running at fifty miles an hour within a distance of twenty yards. Good! But what about the passengers? A train running at the rate of fifty miles an hour covers seventy-three and one-third feet a second; and to stop a train moving at this speed in twenty yards means that it must be brought to a full stop in four-fifths of a second. When we remember that, in an end-on collision, it takes several seconds for the momentum of the train to expend itself in telescoping car into car, one is moved to ask what would be the condition of the living contents of a passenger car that was brought to a stop in a fraction of the time that it takes to bring the last car of a telescoping train to rest?—Scientific American.

AN OUTDOOR ELEVATOR.

In the drawing below is shown a fire escape designed by a Minnesota inventor. It is intended to facilitate the escape of persons in high buildings in case of fire, and can be utilized long after the elevators inside the building have been abandoned on account of the intense draught caused by the open shaft. This apparatus is intended to be operated by the firemen, the car being already suspended from the top of the structure, with its cable extending downward in readiness to be spliced to the one carried by the fire engine. The latter cable is carried on a reel connected with the engine, and a small steam engine is provided to wind up the cable and haul the empty car to the top of the building after each load of human freight has been deposited safely at the bottom. To regulate the speed of descent a brake is provided and the car can be stopped at each floor. A

sliding steel door is provided on the side toward the building which can be closed tightly when passing through flames. With this apparatus it is also possible to elevate lines of hose to the tops of high buildings for putting out the fire.

RESULTS FROM EARTHQUAKE STUDY.

Prof. John Milne says that upon knowledge derived from the scientific study of earthquakes new rules and formulae for engineers and builders have been established, and these principles have been widely applied in Japan and other countries, thereby minimizing the loss of life and property. Such studies have also been of practical use in the working of railways, especially in Japan, by localizing faults in the rocks and suggesting alterations in the balancing of locomotives. Another advantage gained relates to ocean cables, as it has become possible to indicate parts of the sea-bottom that should be avoided in laying such cables.

POPULAR SCIENCE.

Animal Invaders of Europe.

Mr. L. Stejneger showed before the Biological society in Washington at its December meeting how there have been three great migrations of Siberian animals into Europe. The first two occurred in connection with the age of ice, but the third is still in progress, and both birds and mammals are now passing from Siberia into Scandinavia, the most traveled route of the invaders lying along the shores of the Arctic ocean.

To Keep Eye-Glasses Clear.

Wearers of eye-glasses are frequently annoyed in cold weather by the deposit of moisture that forms on the glass upon entering a warm room. According to a German technical journal, a simple preventive of this annoyance is the rubbing of the glasses with soft potash soap every morning. After the soap is applied the glasses can be polished bright, the invisible film that remains sufficing to prevent the deposit of moisture.

Ants That Grow Mushrooms.

Prof. W. M. Wheeler in the American Naturalist describes a species of ants which raise "mushrooms" for food. They first cut leaves into small pieces and carry them into their underground chambers. Then they reduce the leaves to a pulp, which they deposit in a heap. In this heap the mycelium of a species of fungus finds lodging, and, the subterranean conditions favoring such a result, minute swellings are produced on the vegetable mass. These are the "mushrooms," which constitute almost the sole food of the colony of ants that cultivates them.

The worker wasps, like the worker bees, are smaller than the queens or males.