CONTEMPLATED EXTENSION OF CAPITOL IN ACCORDANCE WITH PLANS OF THE LATE THOMAS U. WALTER.

# A LARGER CAPITOL

## Description of the Plans Authorized by Congress.

## WILL BE NO RADICAL DEPARTURES

## To Enhance the Symmetry and Beauty of the Building.

## IMPROVING THE ROTUNDA

Written for The Evening Star.

The United States Capitol is to be vastly enlarged and improved, in consequence of the need felt by Congress and the Supreme Court for more room, incident to the growth of the nation's business. Authority was granted to the architect of the Capitol by a provision in the last sundry civil appropriation act to prepare the plans and specifications for the work, and the preliminaries to these have just been begun.

Happily, the general plans, so excellent in their character as to be above criticism, are already in hand, having been perfected and handed down to the present architect of the Capitol by his famous predecessor, the late Thomas U. Walter, architect and engineer, and the creator of the great white dome and the magnificent marble wings occupied by the House and Senate. The specifications, based upon the Walter plans except as to certain minor details of interior arrangements, are now being worked out under the supervision of the acting architect of the Capitol, Mr. Elliott Woods, and an estimate of the cost, approximating $2,500,000, will be reported to Congress promptly at the beginning of the next session.

### No Radical Departures.

An architect with the temerity to suggest any radical change in the structure of the Capitol would be a madman indeed, for the country at large would not hear of it for a moment. Hence it will be gratifying to the public to learn that in the enlargement of the building as contemplated, there will be no departure from its present style and design, but that the extensions, on the contrary, will really carry out the original conceptions of an enlarged Capitol precisely as they were developed in the master mind of Architect Walter at the time he planned the Senate and House wings and capped the whole structure with its glorious dome. And far from being incongruous, the extensions will actually improve the appearance of the whole pile and render it more harmonious and majestic than ever.

### A Great Addition.

The accompanying ground plan, with the extensions indicated, shows what an enormous addition will be made to the capacity of the building. The area will be increased from 132,730 square feet to 184,120, an increase of 51,390 square feet, or 38 per cent. From an inspection of this ground plan it will be seen that on the east front the central staircase, opening on the portico of the rotunda, is at present indented twenty feet within the line of the two marble wings. This gives a sort of rambling look to the building on front view, and at first glance imparts to the dome, despite its incomparable beauty, an appearance of undue size and top-heaviness in proportion to the narrow base on which it rests, though this idea wears off on further acquaintance. Instead of this indentation the central east front will be extended so as to project some fifteen feet beyond the line of the wings, and this extended front will be faced with a magnificent portico of fluted Corinthian columns so elaborate and superior as to dominate the porticoes facing the wings, and where the present diminutive and inferior portico faces the center front there will be an imposing vestibule to the rotunda. All this new construction will greatly augment the central bulk of the building, will convey an impression of much greater depth and compactness, and will give the dome a much larger, broader and more substantial-looking base to rest upon, thus eliminating the appearance of top-heaviness. Incidentally the two little cupolas that surmount the old wings at either side of the dome will be removed, since they will no longer be architecturally necessary, and their removal will restore simplicity and severe precision to the general design.

### Will Also Be of Marble.

Furthermore, it has long been a subject of regret that the old portion of the Capitol should have been constructed, not of marble, but of scaly sandstone, which has to be repainted continually in order to preserve it. The Senate and House wings are of white marble, and it is proposed that the projected facings of the new extensions both on the east and west fronts shall be also of marble, thus restoring uniformity to the exterior of the building, which with the necessary exception of the dome, which is made of structural iron painted white, will then be entirely of white marble.

The accompanying photograph, reproduced from a water-color sketch of the building in perspective as it will appear when the extensions are added, tells its own story. An ordinary observer, no matter how familiar he might be with the Capitol as it looks today, would be puzzled to know, on examining this picture, just what has happened, and he would be wholly at a loss to point out the particular changes, so thoroughly do they accord with the genius of the building and with all its architectural requirements. Only by comparing it carefully with a picture of the building as it looks at present could he detect the points of difference. And yet these changes are highly important. They increase the capacity of the building by 1,854,400 cubic feet all told, and of this increase 1,068,000 cubic feet go to the east front of the old central portion.

### Growth Provided For.

At the time Architect Walter worked out his plans for the central extension, back in the 50's and early 60's, nobody foresaw that the need for more room would come so soon. Walter thought it might come in a century and provided for it in his prospective plans, which the government inherited and which Congress is preparing to avail itself of. Walter was thoroughly saturated with the architectural ideas wrought out and represented from the beginning in the original old building. The new dome and the wings designed by him were accordingly in strict harmony with those ideas; and in the same way the plans he prepared for future extensions and left to his successors for use when the proper time should arrive are in perfect consonance with all the plans that went before.

The Capitol as it now stands is indeed much more the work of Architect Walter than of anybody else, and by the adoption of the plans which he bequeathed to the future the work that will be done thereunder becomes in a sense his also. These plans he wrought out with the most painstaking care and elaboration, and the drawings which the government inherited from him were executed largely by his own hand.

### Improvement of the Rotunda.

Incidental to the plans to be submitted to Congress for the extensions designed by Architect Walter, there will also be plans for the further improvement and decoration of the rotunda. These will embrace a series of Corinthian columns where the pilasters now are, a rich-colored wainscoting base of marble, the facing of the walls with lighter-tinted marble, and the setting of the historical pictures already on the walls in marble at a higher elevation than they now occupy. These alterations and improvements contemplate an expenditure of $275,000. The work of reconstructing and fireproofing the roof of the old portion of the building, already under way, will entail a further expenditure of $150,000, but it will not have to be done again in consequence of the proposed extensions, since the plans have been drawn in such a way that the new work will fit in with the extensions without further modification.

It has been suggested that the additional room to be acquired from the extensions may be used to accommodate the Supreme Court, the Court of Claims and certain other subordinate tribunals with enlarged quarters; but these matters must necessarily be left to the determination of Congress. Whatever that determination may be, it will not require any radical change of the Walter plans.

JOHN DORLAND CREMER.

THE CAPITOL AS IT IS TODAY.

# NEW HOUSE IDEAS

## Suggestions as to Furnishings and Wall Treatment.

## ENGLISH FRIEZES AND OLD TILES

## Pleasing Combinations in Shape and Color.

## FANCY WORK FIXINGS

Written for The Evening Star.

Now is the time when those people who are contemplating building summer homes are agog with hopes concerning the same; are in a receptive condition as to suggestions, and yet have cherished ideas to be carried out and be embodied in the architect's plans. On all sides are novelties offered to the prospective home builder; some of them tested by use, so there would be no uncertainty in benefiting by them, others so new that some daring might be required to incorporate them in a house without further knowledge as to the wear and tear they would be capable of enduring. In large establishments so much is set forth in an attractive way and the practical side of things also displayed that choice is made comparatively easy. For instance, the other day I came upon such a pretty mantel and fireplace, set up, apparently sold and ready for use, but really only an advertisement, and a sham. Against a dark red wall the mantel stood quite high, and of black oak finish; a wide margin of tiles was around the fireplace opening, and the same formed the wide hearth.

This was the novel feature, the old and apparently well-worn appearance of the tiles. They were small, rather a light dull red—brick red, perhaps—and were octagonal in shape, and the corners and edges were softened, blurred, blunted, as it were, so that they looked as if many generations had already sat around that genial fire, and many scrubbings had worn off all sharp edges and all raw newness and sharpness of outline and precision of setting were taken away accordingly. Some are quite Persian in design, with that green and blue coloring and often a dash of yellow added, and many in this style have lettering burnt in for the mottoes, without which no modern out-of-town house, at least, seems complete. Another Persian effect is on a small, square pot, with decoration of white on blue, intended to hold a small fern; very novel and pretty.

### An English Frieze.

Another new thing is an English idea in friezes. A plain ceiling paper, rather heavy in tone, is used, and brought down on the side walls, the depth depending upon whether the room is very high or otherwise. A good margin, at all events, is left, and below that a striking frieze, about twenty-two inches deep, is set, below which is picture rod, and then the same paper as is on the ceiling is continued down the side walls to the base board. It is just a variety, and deep, strong colors must be used, preferably a green, which is the favorite of the hour in all shades and combinations.

To use with such a treatment one firm has provided furniture of liberty designs—resembling somewhat the so-called California-Mission style. This is all very heavy, severe in outline and either dark brown or black oak. A huge settee and large octagon-shaped table are covered with leather of a brown tone, mottled with tawny yellow, the leather brought over the edges on all sides of each piece and fastened with very large brass nails of antique finish, set close together. Of course, such furniture does not look well everywhere, but in the right place—and especially space—it is very striking and picturesque. It must not be crowded, however, and its surroundings must bring out its proportions harmoniously, and it should not be mixed with other and lighter shapes; its straight-backed, heavy chairs must be given their true values.

### In a Lighter Style.

Another English importation is a light straight, high-backed, low-seated chair, almost as low as a cathedral chair, and which makes a pretty slipper chair, being too straight-backed for sewing and too low for anything else. Any of this furniture can be ordered with green stain instead of black, I believe, when that coloring is preferred.

An extremely pretty cupboard has been devised of pine, stained green, with long horizontal iron hinges at top and bottom of each of the two doors, which are nothing more or less than shutter hinges, such as all Philadelphia used a few years ago, but are happily not much in use for that purpose here. Quite a mediaeval touch is given by applying them to the cupboard, though, and a plate rack hanging above, with odd green and white and gay Brittany plates, makes a very effective side of the small dining room where they are set forth.

### Green Glassware.

While I am speaking of green things the pretty glass should be mentioned, which is made in Glasgow, and in the specimens I saw, from individual designs, and only such, imported. The shapes are all attractive, if not graceful, especially a tall, slender vase, with wide, flat, thin rim standing out an inch or more horizontally from the neck, a charming piece to hold a single branch of cherry or peach blossoms in Japanesque fashion. The glass is rather coarse in texture, but the price is not high, and the oddity of it is a decided attraction.

### Odds and Ends.

Some new trifles always appear at the Easter season, among them a waste basket, triangular in form, of heavy water-color paper, decorated with burnt work, design of large flowers, with shaded background, ragged edges, well scorched also, and the thin pieces laced together with fine leather thongs. Something new for pyrographic artists to try.

A dainty little summer work basket or bag is made by taking a narrow-brimmed leghorn hat, embroidering the brim delicately or heavily, according to fancy, turning the hat upside down and making a silk bag top, sewing it to the edge of the brim and drawing it up with shirring strings. Pink azalias or bachelor's buttons are as effective as anything, and as pretty a striped or chine silk in those colors for the bag as may be gotten makes a novel and pretty receptacle for the piece of embroidery that may have already seen several summer campaigns on hotel piazzas, and which, still unfinished, needs at least a fresh repository to offset its own untidy self.

### For Burnt Work.

Good articles for burnt work also are to be found in small pieces of furniture, of white wood ready for decoration, notably a screen about 30x36 inches in size, a solid panel of wood set in a pretty frame, which in skillful hands could be made an effective object.

The tabourette is a favorite form, and quite a variety can be found in that style. While this shape is no novelty, it is so useful for a number of purposes that the demand for it is steady. It is good when something beyond the small pieces—photograph frames and boxes—can be gotten ready made, for all special orders are expensive, and yet any one who has tried pyrography soon tires of these small bits and wants a larger field for ingenuity—always provided that quality is present, a fact to be doubted sometimes when one sees the shoals of commonplace work turned out by artists (?) in this particular line.

### Proceeding to Add the Insult.

From the Chicago Tribune.

"You see now, you wretch," vindictively exclaimed the fair prosecuting witness, after the trial was over, "that it's an expensive thing to kiss a woman against her will!"

"You are right, madam," said the wretch, who had just paid a $50 fine for the offense. "It wasn't worth it."

### Very Amusing.

From the Smart Set.

Wife—"What's funny in that letter you are reading?"

Husband—"It's from Bobson. He asks if I don't want to pay him that $10 I owe him."

# A CULINARY DISPLAY

## Paris Chefs Take More Than Pride in Their Work.

## GIVE AN ANNUAL EXPOSITION

## Then Show a Wondering People What They Can Do.

## ENCOURAGE APPRENTICES

Special Correspondence of The Evening Star.

PARIS, April 2, 1901.

The Gould-Castellane Galeries de la Charite, in the Rue Pierre-Charron, offered to the fashionable charity organizations of Paris by the Comte and Comtesse Boni de Castellane after the tragic burning of the old Bazar de Charite, is a particularly fireproof building. This is well; because if ever a fire should start in its narrow aisles, its crooked stairways and its choked-up galleries, the inevitable panic crush would bring about a new catastrophe. Last Sunday, the first day of the culinary exposition, organized by the head cooks of great Paris families, the crowd was so great in this queer new building that moving about among its awkward pillars became almost impossible. The many tables—and there always will be tables at charity fairs—choked up the passageways still more. A magnificent wedding cake, four stories high, was overturned and smashed at a critical moment. The resulting scramble for the pieces, which might easily have turned into a panic, gave one pause for thought. The world may have something yet to hear from Count Boni's idea of a fireproof charity bazar building.

The interior resembles that of a narrow church, even to the dim religious light. Notwithstanding that the Galeries have been building since 1898, and were opened more than a year ago, the new, white look of the bare Caen stone, the absence of woodwork and the temporary and insufficient character of the electric lighting continue to give the impression of a still unfinished building. A series of broad tables spread with all kinds of delicious dishes cluttered up the nave of this ecclesiastical looking interior. The aisles, still more choked up by many little tables, were full of dark corners. But the sights—and odors—were of this world. And so were the names attached to monumental pieces, princely dishes, masterpieces unknown to the average man, "The Lobsters Out Walking," for example, or "The Pullet in Tights." The greatest chefs of Europe figure in the patronage committee.

### Prizes for the Ambitious Young.

One of the most touching details of this peculiar exposition is found in the list of medals and prizes to be given to apprentices, young cooks, beginners and "brothers out of work." M. Jean Labonde gives 75 francs "to permit a colleague out of work to produce himself." M. Boutier gives 50 francs to pay for the material, etc., of a piece of "decorative and practical" pastry cook work, "to show the talent of a confrere out of work." The French chefs of Rome sent on four prizes for apprentices. Half a dozen individual Paris chefs offer money prizes "for the encouragement" of apprentices. M. Alepee, chef to Prince Tratinia of Palermo, offers "a savings bank book with 50 francs to be discerned to an apprentice for the most succulent chaudfroid."

In this way it becomes more than a formal exposition given by great cooks for the advertising of themselves and their employers. These worthy people hold together, really sustain one another; the successful encourage their humbler brethren; a live spirit of emulation, enterprise and experiment is stirred up among them. M. Docquet offers a prize for the best young pullet in the English style; M. Gillet for the most novel fish entree; M. Barre for a first hors-d'oeuvre; M. Delafoy for the smartest chaudfroid; M. Lion for the best entree revived from the cuisine of the seventeenth or eighteenth centuries; M. Quenon of the royal Belgian kitchens for the best dressed salmon trout; M. Cochelin for the best entree on a rice foundation. I have just heard the romantic story of the young apprentice, Allibert, who won the first prize offered by the chefs of Rome for the encouragement of apprentices. It seems that this young man, although a proper member of the local Paris association and entitled to exhibit as an apprentice under the rules of the present salon, had been forbidden, not by his chef, but by his employer, the proprietor of a small but expensive Paris restaurant. He worked at night on a most ambitious masterpiece, "The Lobsters Out Walking," a name and idea entirely his own. There they are today, in a place of honor. They repose on a canape, or lounge of parsley, three splendid lobsters of varying sizes and complexions. The old papa lobster, keeping his dull red-brown color, is all swelled up with his own succulence; the ardent mamma lobster, blushing fiery red beside him, has lost part of her shell and shows a certain discreet surface of delicate white meat; while the daughter, melancholy lobsterine, all muffled up in a whitish mayonnaise-like sauce covering, cut in a pretty and becoming pattern, seems to be following her parents with an amorous languor.

### Rare Mayonnaise Sauce.

But all this is only the exterior look of the thing. Allibert's triumph consists in the flavor of that white mayonnaise-like sauce, which seems to be something utterly new and out of the common. How it is made, of what it is composed, nobody knows. The severe judges who tasted it were none the less of one accord. It is more than a variation on the classical mayonnaise. It is a new sauce. And new sauces scarcely come more than four to the century. I have heard that its distinguishing flavor came from a puree of certain nuts. However this be, the young apprentice, still trembling under the reproaches of his employer, received an offer to work in the royal Belgian kitchens under the great Quenon himself. In a day he rose from obscurity to celebrity. All Paris is talking about "The Lobsters Out Walking" and their peculiar mayonnaise may be expected to figure on the cards of all the Paris restaurants—on the cards, I say advisedly, for do you think that Allibert will tell his little secret to those exploiters of his tribe, the restaurant proprietors? No, it is Leopold—and his new American friends—who will enjoy that faint nutty perfume in all its true delicacy.

When the chef, M. Lion of Vienna, offered his prize for the best entree revived from the cuisine of the seventeenth or eighteenth century he was not obeying a merely personal whim. As in interior house decoration and feminine dress, the movement is back to those old times, to pick up forgotten beauties, good old styles, and modernize them. In this salon a whole great dinner table, set for twenty guests, showed what it called an eighteenth century banquet.

Solid heaviness, with a willingness on the part of the cook to let each meat retain its own flavor, is what distinguishes it from the modern dinner. They were not afraid of "butcher's meat" or "red meat" in those days—filet of beef, leg of venison, the pate of hare and the Mayance ham, not to speak of the sweetbreads and young rabbits. Down to the salads most of the dishes would be served hot. The lobsters, birds and rabbits, served cold, remained on the table throughout the whole meal as "flanks," like the pate of hare and the Mayance ham, at the other end, called "contre flanks."

The vegetables were to be served here and there between the meat courses. Neither were they afraid of vegetables in the old days—artichokes, two kinds of beans, asparagus and cauliflower.

### Comments of the Middle Class.

As the crowds of middle-class Parisians defiled past the long table their comments were approving, if mixed with a little wonder.

"Provisions were cheap in those days," remarked a stout old mamma.

"They had their venison for nothing," grumbled the socialist looking husband.

"What heavy dishes," sniffed a demoiselle. "I wouldn't do a thing to that ham."

"Those lobsters would only have to hold still," sniggered two hungry, laughing soldiers.

And an old philosopher, speaking pompously to his son, said: "You see how men could eat before they had ruined their bodies with tobacco and alcohol." In France alcohol means not wine nor beer, but spirits.

In the money changer's office, at the paying turnstiles, at the card admission entrance, at the catalogue desk and standing about everywhere and always ready to explain were pale-faced men in correct evening clothes, smooth-faced or side-whiskered, their hair neatly plastered down, their hands immaculately white. They are men whose names are known, men with reputations, the maitres d'hotel, butlers and chefs of Paris. We are habituated to thinking of the chef as a fat fellow with a spiked mustache, white apron and white cap. The real Paris chef looks more like an undertaker, and he seems invariably to be slender. I had a few moments' talk with M. Gilles, first vice president of the present salon, one of the "correct-est" looking men I have ever met. A gentle melancholy hangs over his pale, finely-cut features.

"It is our fourth exposition," he said. "Each year our success has gone on increasing until now all the chefs of the last good houses who respect themselves from the point of view of the table have joined us."

I admired a dimpled young pullet, under whose white skin the black truffles, arranged in a tasteful pattern, gave the effect of a faillot. "The pullet in tights?" he smiled. "Yes; but would you believe it, they are now making imitation truffles? I cannot imagine what the substance may be, but I have been told that the chemists, by their synthetic processes, are able to imitate the flavor exactly, just as they imitate the perfumes of flowers and the flavors of fruits. Everything is going," he continued. "Meat extracts have replaced the consomme, margarine has vanquished butter, tinned vegetables make hothouse primeurs seem foolishly expensive. They are sending up tons of tasteless quails and other game birds from northern Africa, where they trap them or else raise them like chickens. Where can you be sure of getting a real Camembert cheese? Fruit jellies are made of chemically flavored turnips. Meats jellies are made without meats."

### Why the Rich Don't Care.

"But how is it," I asked, "that rich people are willing to put up with such substitutes?"

"They are in such a hurry that they do not notice the difference—or have never learned the difference!" he replied bitterly. "Do you know how many families of the Champs Elysees alone have disposed of their stables to take up the automobile? That is the way it goes. Now they ask respectable old coachmen to go to school and learn mechanics. 'If you can't learn to run the automobile we must replace you.' They are in such a hurry they expect a dinner to be served in three-quarters of an hour. They do not enjoy what they taste, and they do not taste half the dishes. They must run off to the theater. They take their luncheons in country taverns, wherever their automobile may have brought them at the feeding hour. They stoke up while the automobile is being stoked.

"Look at this culotte of beef a l'ambassadrice, a complimentary present offered to our president, M. G. Sevin, chef to Sir Edmund Monson, the British ambassador. Do you notice that the ox tail has been boned entirely and rolled like a trumpet around the culotte? Beautiful, isn't it? Yet how few there are who appreciate. Look at the crowds running after sweetmeats."

### A Curious Scene.

It is true that the crowds were struggling to get at the free candies and cakes distributed at each end of the hall. The orchestra was playing a sweet, subdued waltz. The air was full of mingled perfumes. An unusual proportion of young girls of good family had been brought this Sunday afternoon to the culinary exhibition as to a place of innocent revelry, of which there are none too many in naughty Paris. They sucked their old-fashioned sticks of barley sugar with flushed cheeks and moist eyes. The pretty creatures had a hungry look.

"But how many of them have any culinary education?" asked the pessimistic chef. "I serve a lady nearly seventy years old, a grande dame, who lives alone in a palace, and who dines as well when she sits in solitary state with her paid companion as when she gives a dinner, which she does on an average of two times a week. If one of her grandchildren or nieces should mistake a potage Crecy for potage Rachel I believe she would disinherit the girl. You will notice that we exhibit twenty-four potages here—tortue, oukha, mosaique, Palermitaine, a la Diane, aux Ambassadeurs, Borghese, Fleury, Borsch, Colbert, Vivian (cold), St. Germain, Palestine chatelaine, Crecy, a la Conde, Faubonne, Rachel, Bisque, Sevigne and Kolnick. They are the twenty-four classical soups, and no one can take the place of the other. Yet how many young mistresses of houses could describe ten of them?

"I have been talking to my friend, Ernest Glass of New York," he said at another moment. "He says that New York can be counted on to keep up the good old traditions of the French cuisine."

STERLING HEILIG.

### The Future of the Moor.

From Harper's Weekly.

Morocco, a country naturally rich and fertile, is kept poor by the greed and power of the throne. It is a government of the sultan, by the sultan, and for the sultan; nothing else counts; the people have no rights; the sultan is the embodied might and right of the nation. Fields untilled, crumbling homesteads, rich minerals left untouched, ruin and desolation everywhere—all tell the story of the sultan's terrible rule. For how shall it profit a man to lay up treasures for the monarch to seize? So every talent is buried in the earth, every light is hidden under a bushel.

The Moslem religion, once a spiritual and civilizing force in Africa, now acts as a check to all progress; its morality, its soul, is dead; the petrified shell alone remains, and that is a dungeon of darkness. Within its influence all things remain stationary or else crumble into ruins.

It is difficult to conceive that these degenerate Moors belong to that same great race that once were conquerors of Spain, and who introduced a higher civilization into that country, who were liberal-minded and progressive for their time, and masters of the fine arts. When the Moors were expelled from Spain they found their chief haven in Morocco, but a strange change has come over the spirit of their dreams.

The land of the Moor is stagnant, rotting under the terrible incubus of its government and its religion. Its only hope lies in its conquest by some civilized power; its gods must be banished, its idols shattered, else it must die of its own corruption. Not from that rocky eminence whence Boabdil turned with tear-dimmed eyes to look upon the lost Granada, but from Morocco today ascends el ultimo suspiro del Moro—the last sigh of the Moor.

### The Crowded Street.

Let me move slowly through the street,
Fill'd with an ever-shifting train,
Amid the sounds of steps that beat
The murmuring walks like autumn rain.

How fast the flitting figures come!
The mild, the fierce, the stony face—
Some bright with thoughtless smiles, and some
Where secret tears have left their trace.

They pass to toil, to strife, to rest—
To halls in which the feast is spread—
To chambers where the funeral guest
In silence sits beside the dead.

And some to happy homes repair,
Where children, pressing cheek to cheek,
With mute caresses shall declare
The tenderness they cannot speak.

And some, who walk in calmness here,
Shall shudder as they reach the door,
Where one who made their dwelling dear,
Its flower, its light, is seen no more.

Youth, with pale cheek and slender frame,
And dreams of greatness in thine eye!
Go'st thou to build an early name,
Or early in the task to die?

Keen son of trade, with eager brow!
Who is now fluttering in thy snare?
Thy golden fortunes, tower they now,
Or melt the glittering spires in air?

Who of this crowd tonight shall tread
The dance till daylight gleam again?
Who sorrow o'er the untimely dead?
Who writhe in throes of mortal pain?

Some, famine-struck, shall think how long
The cold, dark hours, how slow the light;
And some, who flaunt amid the throng,
Shall hide in dens of shame tonight.

Each where his tasks or pleasures call,
They pass, and heed each other not.
There is Who heeds, Who holds them all
In His large love and boundless thought.

These struggling tides of life, that seem
In wayward, sinless course to tend,
Are eddies of the mighty stream
That rolls to its appointed end.

—WILLIAM CULLEN BRYANT.

# BRIGHTEN AND FADE

## This is Always the History of Temporary Stars.

## NOT NEW IN A STRICT SENSE

## Speculation as to Their Origin and Composition.

## ARE BY NO MEANS RARE

Written for The Evening Star by Charles A. Young, LL.D., Professor of Astronomy in Princeton University.

There are, so far as at present known, no "new stars" in the sense commonly understood. That is, no instance is on record of a star appearing where there was none before, and continuing permanently as a new member of the stellar host. It has happened more than once that such cases have been reported, as well as of stars that have disappeared and are now "missing," but in every instance an explanation has been found in some error of the observer or computer who constructed the star catalogue on which the report was based. It may be that such things happen now and then as the heavens grow old; that dark stars brighten into permanent luminosity and bright ones die out and disappear; but thus far no instance of the kind is certainly known to have occurred.

But we do have instances, and a considerable number are on record, in which a star, before faint or absolutely invisible, suddenly blazes up, increasing its brightness hundreds or even thousands of times within a day or two, and then gradually fades away, until, after several months, it resumes its previous condition, or, as often happens, ceases to be a star and becomes a nebula, a body of quite a different nature. An object of this kind is called a "new star," a "Nova," or, more properly, a "temporary star." We have just had a magnificent example in the star which was first noticed in Perseus on the 21st of last February, rose on the 24th to be the brightest in the heavens, Sirius alone excepted, and is now barely visible to the naked eye, and slowly fading toward extinction.

### Perplexing and Astonishing.

Few astronomical phenomena are more interesting, suggestive and instructive, or, I may add, more perplexing and astonishing. Formerly such cases were supposed to be extremely rare. Miss Clerke, in her admirable "System of the Stars," enumerated fourteen before 1850, beginning with the star of Hipparchus, 134 B. C. (which is said to have caused him to make his famous star catalogue, the first ever constructed), and ending with a little star detected by Hind in 1848, though barely visible to the naked eye. Of these fourteen, however, eight are more or less doubtful, the record not being sufficiently definite as to preclude the idea that the body observed may have been a comet. All but the last were, of course, conspicuous, though only two of them seem to have been more brilliant than our own "Nova Persei."

The most remarkable of all hitherto observed was Tycho's star of 1572, in the constellation of Cassiopeia. This, a few days after it was first seen, outshone even the planet Venus, and was visible in full sunlight; it continued visible (there were no telescopes then) for more than two years before its final disappearance, and still "smoulders," to use Miss Clerke's graphic expression, as a little reddish star of the eleventh magnitude, visible only with a good-sized telescope.

The star observed by Kepler in 1604 may also have been somewhat superior to Nova Persei, since one observer states that it rivaled Jupiter. But since then nothing comparable to our star of 1901 has made its appearance.

### Of Varying Brightness.

Since 1850, however, three objects of the same character and visible to the naked eye have been observed in 1866, 1876 and 1891-2. The two first when at their best were about as bright as the Pole star, and the other much fainter about equal to the small stars in the Hyades. Besides these there have been at least seven others, of telescopic brightness only; five of them were discovered since 1887 by means of photographs made at the Harvard College observatory or at its South American annex, and several of them only after the outburst was over, by an examination of plates made some months earlier. They make it quite clear that if a close watch could be maintained on all the hundred million of telescopic stars, the phenomenon of a Nova would be by no means so exceedingly rare as formerly supposed.

It is an interesting, and probably a significant, fact that, excepting only the star of 1866 in the constellation of Corona Borealis, and the little star which in 1885 appeared in the heart of the great nebula of Andromeda, all the temporary stars hitherto observed have been in the Milky Way or very near it.

### Studying Their Spectra.

The star of 1866 was the first subjected to spectroscopic observation. Its spectrum was found by Dr. Huggins (now Sir William, the Nestor or stellar spectroscopy) to exhibit conspicuously the bright lines of self-luminous hydrogen, along with some others, not then identified, but now known to be due to helium—the same which specially characterize the spectrum of the solar prominences—indicating a sudden and enormous increase of the star's gaseous envelope, or at least of the luminosity of that atmosphere. The star of 1876 in Cygnus presented much the same appearance; but as it died out, its spectrum, instead of returning to the ordinary stellar type, became that of a nebula, and remains so to this day.

The star of 1891-2 (Nova Aurigae) behaved in a similar manner to the preceding, but a remarkable peculiarity presented itself, which may have been present in the spectra of the preceding stars, but if so was overlooked, since in their cases only visual observations were available. The photographs of the spectrum showed that each bright line of hydrogen and helium was not only greatly broadened, but that it had a dark band just above it in the spectrum; the violet is at the "higher" end of the luminous scale. This phenomenon can be accounted for by supposing that the light comes from two masses of hydrogen of different temperatures rushing past each other with a speed of several hundred miles a second; it also, as we now know, admits of a different explanation, as the effect of a tremendous pressure upon the central portions of a gaseous ball, surrounded by an outer envelope that is cooler and less condensed. The spectra of several of the Novae detected by photography showed the same peculiarity, but not all of them, nor was it present in the spectrum of the Andromeda star of 1885, already referred to. Our own Nova showed and still shows it beautifully, although at first, and until after it had passed its greatest brightness on February 24, its spectrum was that of an ordinary star of the so-called Orion type, showing only dark lines mostly due to helium and a few hazy somber bands. But then in a few hours there was a rapid change and a complete transformation of the spectrum. The widened lines of hydrogen shone out bright with their dark companions by their sides, and, in addition, with certain problematical fine dark lines running through the center of the bright ones. As yet, however, we have before us only a very incomplete record of the various spectroscopic phenomena presented by the star, nor do we know at present whether it will or will not take the course of the stars of 1876 and 1891, and end in the condition of a nebula.

### Size and Distance.

As to the real size and distance of these bodies we have no positive knowledge, except that in the few cases when they have continued visible long enough—a year at least—to permit an attempt at measuring their parallax, none could be detected. They are veritable stars, probably comparable with the sun in magnitude, and at a distance hundreds of thousands times greater than our distance from the sun—so remote that light takes years, perhaps centuries, to come to us from them. The outburst that we observed last February really took place many years ago; how many we cannot tell.

That the observed phenomena indicate a catastrophe of some sort is hardly to be doubted. On the 19th of February photographs of the region containing Nova Persei were made at Cambridge, and render it certain that then it was not brighter than the 11th magnitude; it does not appear at all on the plate. Two days later, when first seen and announced by Rev. Dr. Anderson of Edinburgh (it was also seen by a number of other observers the same evening) it was a little fainter than the pole star, but brighter than stars of the third magnitude, which are about 1,600 times as bright as stars of the eleventh; on the 24th it was nearly fifteen times as bright as on the 21st, and fully 20,000 times as bright as the eleventh magnitude. Then it began to fade, and is now (April 2) of the fourth magnitude, and about a thirtieth as bright as its maximum. Its decline, as always happens in such cases, is much more general than its rise. When we inquire into the causes of the phenomenon we enter the regions of speculation and find uncertain footing.

### Views as to Their Origin.

In 1866 Huggins was inclined to ascribe it to an action of the same kind as that which produces the solar prominences, but on an immensely grander scale. The sun is now completely surrounded by a thin envelope composed mainly of hydrogen, helium and calcium vapor, to which the name of atmosphere has been given, and from this enormous prominences ascend from time to time to a height sometimes of two or three hundred thousand miles, and with a speed of 100 miles or more a second. These prominences show in their spectra the same bright lines as do the temporary stars; and if by some volcanic paroxysm the sun should suddenly cover itself with such prominences, its spectrum would certainly be closely analogous to theirs.

Zollner held a somewhat similar view—that the "new star" is really a very old one, dying out and covered with a crust or fog that hid its light, until, from some cause, in a sort of dying struggle, the outer shell cracks open or is dissipated in transparent vapor, and the internal fires blaze forth only to die away again.

### Due to a Collision.

But the view at present more generally accepted is that the phenomenon is due to a collision of some kind; perhaps between two stars, though that is hardly probable. More likely it may be the encounter of two meteoric swarms, as Sir Norman Lockyer very positively maintains; or it may be, as Seeliger suggests, the passage of a star through such a swarm. The "twinning" of the spectrum lines which we have described is more simply explained by some collision theory than in any other way, though the velocities, which it is necessary to assume in order to account for the observed dupication, are so enormous—from 500 to 1,000 miles a second—that credulity is somewhat strained and staggered. Still, as a matter of almost unquestionable observation, we have among the "spectroscopic binaries," whirling waltkers (Mu Scorpii, for instance), in which the relative velocity of the two stars which revolve around each other exceeds 300 miles a second. Now, if by any means the orbits of such a pair should be so altered in form or diminished in size as to cause their atmospheres to brush against each other, the masses underneath would soon meet in collision, and something very like the outburst of a "Nova" would certainly result.

But there are serious difficulties in the way of all the theories so far presented, and much further study and careful discussions of observations will be needed to clear the way to anything like a real understanding of the subject.

"Thank goodness, Easter is over!" "Why so grateful?" "Oh, Harry and I always go to church cross Easter morning; he never likes my hat, and I never like his necktie."—Brooklyn Life.

Milkman—"Milk! Milk! Me o!!"
Little girl (to governess)—"What does he say 'Me o!' for?
Governess (readily)—"Oh, that's French, dear. 'Mis' is short for 'demie.' 'Mie-eau' means 'half water!'"—Punch.