

the battle was won, the field was strewn with dead and wounded, it was night, and the soldiers were weary. Then one began to sing a hymn of thanksgiving, the bands joined in, and presently it rose from the army in full and mighty chorus that reached and greatly moved the king, who turned round, exclaiming, "What a power there is in religion!"

It was at the battle of Leipzig that Gustavus Adolphus sang with his army, Luther's Carmen Heroicum, and after that he thanked God for the victory in a stanza of the same hymn.

The Te Deum won the fight at Liebnitz; it was a "Poor Sinner's song" of Luther's that the peasant raised before the battle of Frankenhausen; and brave Earl Oldenburgh triumphed at Drakenburgh by the song of Simeon.

So curiously are the lives of these hymns interwoven with fiercest human struggles and profoundest human joys, with kings and politics, and famous battles that determined the fate of kingdoms, with poor peasant and lonely and nameless households, with crimes that leave the reddest stains in history and softening of rugged and wild hearts. And it is pleasant to take up a hymn that has connected itself with past events, and can be traced in many a house and heart, by its comfortable thoughts. Herbert's hymn on Sunday gains a certain mournful delicacy, when we know that he sung it himself upon his death-bed; that—

"Like a sweet swan he warbles, as he dies,
His Maker's praise and his own obsequies."

Gerhardt, himself, died repeating one of his own hymns, and even with the very words,

"Him no death has power to kill."

And there is a touching legend by which, as King Christian of Denmark lay sick at Christmas time, an angel came to him in a dream and told him he would live but eight days. And on New Year's day his chaplain preached him a farewell sermon; but when his courtiers would not sing death-songs over him, he cried: "Then will I sing myself, and with me, and it shall be said, the King of Denmark sung himself to the grave." And he lifted up his voice clear and strong, and they sang the Song of Simeon, but as they sang he fell asleep Jesus.

CALIFORNIA PRODUCE OF 1863 AND COMPARED.—It appears from the *San Francisco Gazette* that the California produce of 1864, of certain leading articles of agriculture, as compared with the yield of 1863, was as follows: Wheat, 1,120,000 sacks; oats, 34,000 sacks; barley, 152,000 sacks; rye, 1,900 sacks; corn, 30,000 sacks. The only article exhibiting any increase was corn, which was chiefly from Los Angeles county.

PHOTOGRAPHY.—The chemical fact which is the keystone of photography is, of course, the sensitiveness of certain compounds or "salts" of silver to action of light. Silver of itself is unaffected by exposure to the sun; but has this peculiarity which distinguishes it from every other metal, that a large number of its "salts," or combinations with other substances, become unstable, and tend to fall asunder under influence of light. This is peculiar to the case with the salts that silver forms with those elements which we derive principally from the sea, chlorine, bromine, and iodine. In combination with most other metals, these elements remain unchanged, whether the light or in the dark. But the chloride of silver, though it will remain stable in the dark, is separated in the chlorine and silver of which it is originally composed if brought out to the light; and the same is true of bromide of silver and of the iodine under some conditions.

This tendency of silver to escape from its compounds in the presence of light is the fundamental fact upon which the art of "drawing with light" is built; for this escaped silver is not silver as we know it in mass—a bright white metal. In the state of infinite subdivision into which it falls when light separates it from the iodine or bromine with which it was combined, it is blackish brown or purple. This released silver is therefore the pigment with which the sun paints his picture. Wherever his ray falls upon a sensitive silver salt, there, after a time, the mark of its presence is left in a patch of black silver, and the mass of the silver is greater or less, according to the length of time during which a ray of light has fallen on it.

The photographic process in its simplest form consists in simply guiding the incidence of this ray. A plate covered with a sensitive salt of silver is put

upright into a dark box, known as the "camera," which has a round hole at the other end, and in this round hole is screwed a lens. The lens throws upon the plate a picture of the objects opposite to it, and each of those objects leaves its mark of reduced silver upon the plate. Those which reflect much light, such as the sky or a white dress, leave a very dark mark; those which reflect less light leave a less decided mark; and those which reflect little or no light leave no mark at all. Thus the rays of light describe, in monochrome, a complete picture upon the sensitive salt of silver, only it is a picture with this peculiarity, that everything white is represented black, and everything black is left white. Such a picture, however, if left at this stage, would be a very useless achievement. It could never be brought out into the daylight to be shown; for the same light that had darkened special portions of the plate would then infallibly darken the rest. This difficulty actually did for a considerable time obstruct the efforts of the first discoverers of photography. They contrived to make pictures of some sort, but nothing had been discovered to remove those parts of the sensitive surface which had been untouched by light; and therefore they could only show their pictures to their friends in a dark room.

Fortunately it was discovered that one or two drugs, such as cyanide of potassium, hyposulphite of soda, and some others, have the property of dissolving salts of silver, while they leave silver itself unaffected, or, at all events, affect it far more slowly. Of course, if a plate is treated with one of these drugs, all the salts of silver which the light has not changed are washed away, and nothing is left behind but the darkened silver picture.—[*London Quarterly Review*.]

GREASE FOR LEATHER.—In smearing leather with oil, we aim not only at making the leather pliant, but also at making it water-proof. Train oil is often used for this purpose, but no fat gives more imperfect results, for while no liquid fat is suited to render leather permanently water-proof, train oil possesses this characteristic, that after a while it dries up, and then the leather becomes brittle. Hog's lard is admirably adapted to secure both objects, pliability and impermeability to water. It renders the leather perfectly pliant, and no water can penetrate it. It is especially suitable for greasing boots and shoes, but in the summer season an eighth part of tallow should be melted with it. It should be laid on when in a melted condition; but no warmer than one's finger dipped in the mass can bear. When it is first applied to a boot or shoe, the leather should be previously soaked in water that it may swell up, so that the pores can open well and thoroughly absorb the lard. The liquid lard should be smeared over the article to be water-proofed, at least three or four times, and sole leather oftener still. Afterward the lard remaining visible on the outside should be wiped off with a rag. By this means you may have a water-proof boot or shoe, without the annoyance caused by most stuffs, of penetrating the leather and greasing the stockings. An occasional coating of hog's lard is also recommended for patent leather boots or shoes, as it prevents the leather from cracking, and if it be not rubbed in too strongly, the leather will shine just as well after the grease has been applied.—[*Morris's Rural Advertiser*.]

MONSTROUS BEETLES.—In Tobago, it is said, there is a species of beetle nearly the size of a man's head. It fixes itself against a tree, and commences a humming noise, which very quickly increases to a whistle. At length it increases in intensity till it almost equals a railroad whistle. There is another species of beetle called the razor-grinding machine, that imitates the sound of a knife-grinding machine so exactly that it is impossible to divest oneself of the idea that he is listening in reality to some knife-grinder, who has wandered out into the tropical winds.

Varieties.

—Pack your cares in as small a space as you can, so that you can carry them yourself, and not let them annoy others.

—James I. remarked, one day, to his courtiers, "I never knew a modest man make his way at Court." To this a gentleman replied: "Please your Majesty, whose fault is that?"

—A bigot would rather get to heaven, by taking his neighbor's life than reforming his own.

—When young Hodge first came up to town, his father told him that it would be polite, when being helped at dinner, to say to the host, "Half that, if you please." It so happened that, at the first dinner to which he was invited, a sucking pig was one of the dishes. The host, pointing with his knife to the pig, asked, "Well, Mr. Hodge, will you have this, our favorite dish, or haunch of mutton?" Upon which, recollecting his first lesson, he replied "Half that, if you please," to the consternation of all present.

—A Cincinnati paper, in speaking of the overthrow of the rebels at Atlanta, says that just before the Federal troops entered the town an Indiana company, almost worn out with the march, were straggling along with very little regard to order, seeing which, the captain, hurrying up his men, shouted—"Close up! close up! If the enemy were to fire when you're straggling along that way they couldn't hit a cussed one of you!" And the boys closed up immediately.

—To start a baulky horse, somebody recommends the following:—Fill his mouth with dirt or gravel from the road and he'll go.—Now don't laugh at this but try it. The plain philosophy of the thing is—it gives him something else to think of. We have seen it tried a hundred times, and it has never failed.

—"Your honor," said a lawyer to the judge, "every man who knows me, knows that I am incapable of lending my aid to a mean cause." "That's so," said his opponent; "the gentleman never lends himself to a mean cause; he always gets cash down."

—Hiram Painter of Waterbury, Conn. won a wager of \$5, on Thursday, by cutting a log 10 feet long, 3½ feet thick at the butt and 3 feet at the small end, into kindling wood in 8 hours and 54 minutes. The time allowed in the bet was 10 hours. He broke two axes in doing it.

—Jackson Haines, the American skater, has made \$15,000 by his skating feats at London and has gone to Paris, at the request of Louis Napoleon.

—In the Paris Archives of Justice there are 300,000 full and accurate reports of cases of suicide, every one of which contains all letters or scraps of writing left by the murderer which relate to his crime.

—It has recently been determined by the Prussian authorities that marriages concluded simply by Dissenting clergymen and not by ministers of the Evangelical or Catholic church have no official validity. All the children of such marriages are declared illegitimate.

—New York has 20,000 people who pay no rent nor taxes. They are mostly in the rag-picking business, and how they live is known only to themselves and their Creator.

—Counterfeits are no new thing. So long ago as 500 years before Christ, Greek and Roman coins were counterfeited, and some of the counterfeits have come down to the present day.

—A man in Pennsylvania recently purchased a Government horse, and discovering a wound or sore on its thigh, which showed no sign of healing, he made an examination, and found a small pocket knife, with the blades shut embedded deep in the flesh. How it got there is a mystery.

—The best capital that a young man can start with in life is industry, with good sense, courage and the fear of God. They are better than cash, credit, or friends.

—"Well, my boy, do you know what syntax means?" said a schoolmaster to the child of a teetotaller. "Yes, sir, the duty upon spirits."

"I THOUGHT I WOULDN'T."

Two young journeymen mechanics were working at their benches, on opposite sides of a cabinet-maker's shop. They were both about twenty-five years of age; both married, both healthy and intelligent. One of them stopped his work, turned round toward the other, and leaning against his bench, thus accosted him:

"Dick, I always thought you were quick-tempered; you used to be when you were a boy. Now I think I am quick-tempered, but if the boss had talked to me as he did to you yesterday, I believe I should have knocked him down, let the consequences be what they might."

"Well, Tom, I am quick-tempered," replied the person accosted as Dick, "and as to knocking old Scoldem down, I had my thoughts about that matter too."

"To be sure, I reckoned you were

right mad enough when I saw your face as white as a sheet," said Tom, "but I should like to know what your thoughts were on this 'solemn occasion,' as they say."

Dick laid down his chisel, and turning around, folded his arms, and replied:

"I thought I would, and I thought I wouldn't. When old Scoldem first found fault with me and began to scold me, and finally got angry and abused me merely because I would not answer him in the same style, I thought—no it was not thinking, it was only an impulse—it occurred to me that if I should only give him one good blow under the left eye, which would tumble him among the shavings promiscuously—it would be serving him just about right, for I was terribly angry. But then I thought—and it was thinking, for it came after the impulse and restrained it—then I thought that he was a great deal older man than I was, and had a wife, and sons and daughters grown up who would be very much shocked and pained to hear that he had been treated in this way; and I thought, too, that I was in the employ, and could quit him at any moment if his service was intolerable, and it would be disgraceful to me to have it reported that I had a fight with my boss; and I thought how bad Lucy would feel if I was arrested for a breach of the peace, or even made myself liable to be, and so I thought I wouldn't."

"Ah, Dick," said Tom, "those were not exactly your feelings, when you took hold of your hammer, and then pushed it away from you. I believe I was as white as you just at that moment, for I expected you would drop him sure."

"You are mistaken, Tom," replied Dick, "I did not take hold of the hammer from impulse or design to use it, but I thought I wouldn't have it where I could seize it and strike him without stirring out of my tracks; and so I pushed it over the end of my bench, and it fell among the shavings and it took me a long time to find it when I wanted it again."

"Well," said Tom, "I don't believe I could have stood what you did, anyhow. But you use the expression I thought I wouldn't, as if it was a sort of favorite one; have you adopted it as a motto for your coat of arms, I should like to know?"

"Sorter some, sorter not," as they say out west," replied Dick, laughing; "but it is said that all the highest modes of thought have a stereotyped expression, and that is the reason, for instance, why those who speak the English language are always seeking for liberty expressed in the great phrases which are commonly used in books, speeches and newspapers. So I confess that I have got one little phrase, which when I am in action, reads, 'I think I won't,' and when I am pondering over what I didn't do, signifies, 'I thought I wouldn't.' And I think this phrase over a good deal, and I confess it does me good. I'll tell you how I got into it."

"About a year ago, I went home one damp, slushy, thawy night, rather late for supper. Old Scoldem had been very cross that day, and very insolent; and that, with the unpleasant weather, made me feel very cross, too, very. Well, I got home. The fire was almost out, the room uncomfortable but supper was ready, and we sat down at the table. Lucy did not seem inclined to talk, little Jimmy was fretful; the tea was weak and cold, and the toast wasn't made right. I felt very much annoyed, and I thought I would just tell Lucy in a confidential sort of way, that the tea was only slop, and that the toast wasn't fit to throw to the pigs, and that I would then put on my hat, and go off to the Odd Fellows' Lodge earlier than usual, and serve her right. But then I looked across the table at Lucy who sat there holding her baby, eating nothing and looking pale and weary; I noticed, too, that little Jimmy looked flushed, as he sat there in his arm chair; and it occurred to me that it was just possible that my Jimmy was affected by the weather, just like older folks, and that, perhaps, this damp air might have affected the draught of the chimney. I asked Lucy if she was ill, and she said that for six hours she had had a nervous headache; so I thought I wouldn't say anything about the tea, and toast, but I persuaded Lucy to lay down on the settee with the baby, while I took little Jimmy on my knee, and commenced telling him a story, as I put on his night gown, and then put him into his crib, where, as I was describing to him the old man's sheep jumping over the wall—then another—and then another and then another—he went over the wall with the twentieth and was fast asleep.

[TO BE CONTINUED.]