

ROME LIFE OF THE CAZAR.

Incidents of His Concealment at Gatchina.

The Palace He Lives in—Lunching With His Family—The Czarina's Boudoir.

London Daily Telegraph.

Notwithstanding the commencement of the winter season and the assembly of the nobility in St. Petersburg, the czar remains concealed in the seclusion of Gatchina. This place is about 40 miles from St. Petersburg, with which it is more or less directly connected by three railways. It is thus quite a strategic position, and possibly this circumstance has influenced its selection as an imperial retreat. The residence is surrounded by a beautiful park, with picturesque undulating grounds, the graceful slopes being adorned with fine old timber. The palace itself is an enormous building, or block of buildings, with which it is more or less directly connected by three railways. It is thus quite a strategic position, and possibly this circumstance has influenced its selection as an imperial retreat.

The ordinary sitting room of the czar in which he transacts business is situated on the first floor of the black inhabited by the imperial family. It is comfortably, but simply, furnished apartment. The style somewhat betokens the character of its occupant. A number of heavy German-fashioned and capacious arm-chairs give it an appearance of ponderous solemnity. Little elegance or ornament is noticeable, but a large writing table and other unmistakable signs denote that of the emperor's hours are here passed in close application to the endless business that devolves on the autocratic head of a system of bureaucratic centralization.

The czar is an early riser, and the labors of his day commence at 9 in the morning. Till 1 o'clock he is occupied in his study receiving the ministers, who present their weekly or daily reports, and consulting with them over affairs of state. The reception of ministers is followed by the presentation of officials who have recently received important appointments, or with whom the emperor, for some particular reason, desires to converse. Occasionally a newly appointed ambassador or diplomatic agent is introduced to present his credentials, and rarely a day passes without one or more Russian deputations obtaining an audience. It is specially significant of the policy of the present czar that while high officials have often a difficulty in obtaining an interview, his majesty is always accessible to provincial deputations, which are sometimes composed of wild Kharzig, and sometimes of illiterate Russian peasants who desire to present a holy picture to their great father, and to express their loyalty and devotion to his person. The emperor receives one and all with a sterner dignity which, though accompanied in most cases by a certain kindness of manner, always leaves the conviction that Alexander III. feels himself an autocrat and is determined to yield none of his prerogatives, but to impress on all who approach him that they are in the presence of an absolute though kindly master. This species of self-assertion was a trait in the character of the emperor in his very earliest days. He is devoted to music, and, when a boy, it was suggested that he might derive pleasure from taking a part of the musical performances of the palace orchestra. The then heir-apparent was delighted at the idea, and it remained to be settled on what instrument he should learn to perform. Characteristically this imperious prince selected the trombone as being the instrument with which he could produce the greatest effect, and, lover of music though he was, his performance appeared chiefly to consist in a well sustained and fairly successful effort to drown the remainder of the orchestra.

Although stern and even overbearing toward the majority of those who surround him, Alexander III. has always been a sympathizing and affectionate husband and father. At 1 o'clock daily he lunches with his wife and children, and to his meal none but the closest intimates of his family are ever admitted. After lunch, if there is no further deputations to receive, or important business to attend to, the czar goes out walking or driving in company with the empress or his sons. At 7:30, which in Russia is considered a late hour, the emperor and empress dine, but at this meal the children, who have already been engaged for the night to the care of their superintendents, do not appear. In the evening there is often a little music, of which the empress is as fond as the emperor, and her majesty is a good pianist. The czar retires to bed early, and by 11 o'clock all is silence in the imperial apartments.

During the day-time the empress occupies a room on the ground floor exactly below the czar's study, with which it communicates directly by a small private staircase. The czarina's boudoir is elegantly furnished but in a simple style, and with no appearance of luxury except such as is given by the presence of certain handsome pieces of furniture and objets d'art which remain to testify to the extravagant tastes of former occupants. The look out from the windows over the park is charmingly picturesque, but

the attention is somewhat distracted from the beauties of the scenery by the continual pacing immediately in front of the windows of the many sentries who closely surround the house. The empress is an admirable manager both of her time and of everything that pertains to the household duties. Her great intelligence and sweetness of manner have given her an extraordinary influence over her husband and all other persons who are brought into contact with her. The Antichkine palace, which she occupied as Czarina, was a model of household management, and to her initiative are due the commencement of sweeping reforms in the administration of the other overgrown palaces. She is patroness and takes as far as possible an active interest in the management of half the charitable institutions in Russia, and particularly those that are connected with the protection of women and children. Every morning, while the emperor is busy up stairs with his ministers, the empress receives the reports of M. Lelianoff, Gen. Baumgarten, and others, whom she intrusts with the supervision of the various societies in which she is interested. It is rare that any deputation or individual of importance is presented to the emperor without being subsequently introduced to the empress. But it is not affairs pertaining to her imperial position alone that occupy the attention of this excellent wife and mother. The empress is always the safety of her husband is well known, and it has been observed that she is never at ease when he is called away from home. The education and care of her children also engross much of her thoughts. The eldest son, the Czarevitch, is in his fourteenth year, and resembles his mother in features. He is of an active and lively disposition, and, for his years, is far advanced in his studies. Russian is always the language employed by the imperial family when they are together, but when the boys are with their teachers they speak French and English on alternate days. Six hours a day are devoted to study by the young princes, but their education is not limited to sedentary studies alone. They are also practiced in riding and shooting, and the Czarevitch is, it is said, already a good shot and rider well.

The critical position of the country and the personal danger of the emperor are the dread skeletons in the cupboard of the otherwise happy imperial family.

WONDERS IN INVENTIONS.

Important Discoveries of the Last Decade.

New York Star.

The last ten years in the history of American inventions have been wonderfully prolific in important results. To say nothing of the telephone, the phonograph, the electric light, and the system of automatic and quadruplex telegraphy, all of which have been so fully described that their principles are perfectly familiar to general public, there have been numerous discoveries and improvements which, in their way, have brought revolutions in the arts and sciences. The agent said: "Among the most important of recent discoveries are improvements in the manufacture of vulcanized India-rubber in its various applications, which have resulted in making it the best and cheapest material for superior and highly-finished combs. Its elasticity and durability, and equal to the best horn and shell, and are now extensively manufactured. The principal factories for the making of rubber combs are located in Connecticut."

The material produced by this new process possessed peculiar qualities. It was more perfectly elastic than common caoutchouc, resisted the action of the ordinary solvents of that material, was better able to resist the wear and tear of its surface, and preserved its elasticity at all temperatures. Then Mr. Nelson Goodyear patented a process of solidifying rubber, making it susceptible to any form of process of manufacture.

The next invention of any importance was a pegging-machine. Pegged shoes made by hand were manufactured in large quantities a long time before the invention of this machine; but the manufacture was, and is, confined chiefly to men's boots and shoes, and to the coarse kinds of ladies' shoes. Lynn, the great centre of the manufacture of ladies' shoes, was never engaged to any extent in the manufacture of pegged shoes. The introduction of the machine largely increased the production, and, of course, diminished the cost of the product. There have been many improvements in the stitching-machines, the product originally of the mechanical genius of Elias Howe. This machine was first perfected in 1845. Prior to this wonderful invention ladies' shoes were "bound," as it was called, by hand. Its introduction speedily revolutionized this department of industry. A single operator with one of these machines can do the work of nearly a score working by the old process with needle and thread, rendering possible the production of elaborately stitched boots of the present day at moderate cost. These inventions, and many others of minor importance, have revolutionized the shoe manufacturing industry, so that to-day the machinery employed in the prosecution represents an amount of individual labor which it would be difficult exactly to compute.

A process has recently been patented in the United States by which shot is made at a low elevation by forcing a strong current of air upon it as it falls into the water. Another important use to which lead is put is the preparation of oxide of lead or white lead as a pigment. In this branch of the lead industry this country takes a prominent and probably a leading position, as the practice of painting dwelling houses is more common than in any other country.

The safety-drum, another new invention, is a safety device which guards against accidents arising from some derangement in elevator machinery, or some obstruction in the hatch-way, whereby the ropes may be uncoiled from the main drum of the engine while the car remain temporarily lodged at a greater or less distance from the bottom. It is also a perfect safeguard against the too rapid descent of the car in case the belt or any part of the gearing connected with the engine should give way, or if run too fast by the carelessness of the operator. The safety-drum takes the place

of ordinary sheave-wheels and acts as the medium through which motion is communicated from the engine to the car. All ropes connecting from the engine to the car are arranged to act upon this drum in such a manner that any derangement in their bearings, or change in their action, or increase in their motion beyond that prescribed as the regular working rate, will immediately bring into action two powerful brakes and thus instantly stop the entire apparatus.

Great improvements have been made in the methods of construction used for iron safes, making them impregnable to almost any appliance in use by the most expert burglars. The doors, which are generally the weak point of a safe, are constructed of plates so dove-tailed and fitted correspondingly into the jams that the wedge, the most effective implement used by the burglar, is perfectly powerless against them, while the tracery with which they are fitted offers no opportunity for any crevice into which nitro-glycerine or any other explosive fluid can be introduced. The body of the safe being also constructed of alternate plates of iron, welded iron and steel, carbonized and de-carbonized steel and crystal steel, fastened together by bolts from their inside, effectively prevents them being forced by sledge-hammers, jimmies, jackscrews, or any other burglarious instrument. Their fire-proof qualities are also secured by a filling of concrete, which is a most absolutely proof against both fire and damp. In addition to the fire-proof filling, the safes are furnished with improved combination locks, varied for each safe, many of which are supplied with an automatic rotary movement, and consequently operated without any labor or spindle passing through the door into the lock, rendering it impossible to pick them by any process yet invented.

In 1849 Dr. Gathny invented a method of transmitting power by means of compressed air driven through pipes. Up to ten years ago his application for a patent for this process from the United States was rejected by the Commissioner on the ground that it was a discovery, and not an invention. Patents, however, have been obtained for it in Europe, and it is by means of this method that the tunnel of Mount Cenis has been worked. The process was used in the work on Hoosac Mountain tunnel. The refusal to grant him a patent called his attention from this valuable idea, though it is unquestionable that by its future power will be thus created and distributed in cities, avoiding the bother, expense, and complication of individuals having their own sources of power. Like the distribution of gas, and water, this method of distributing power is at a glance so advantageous that its merits are evident.

In 1872 Dr. Gathny invented and patented a steam plow, or earth pulverizing machine, to be propelled by steam and animal power combined. The failure of his health and the low price of grain at that time prevented his bringing this invention into practical use. Dr. Gathny has devoted his time and attention to improving the gun which bears his name, and the success which has attended his labors induced him from the more congenial field of peaceful invention. Within twenty years since collision came to be a prominent chemical in photography, there have, of course, been a thousand delicate and strictly chemical improvements in every step of the process. During the last ten years the quality of the coating material has been carefully studied and artists have discovered just the right combinations of gun-cotton, alcohol and ether to use. The best mode of making this film sensitive, the best material for developing the shadows when thrown upon it; the manipulation best adapted to remove defects in the impression, the bath that will set the lines, and, more than all, the most approved and skillful handling of the glass as a type print with, and the various modes of toning, softening, intensifying, and piercing the pictures thrown from the glass to the paper, have been studied with persistent enthusiasm.

Inventive talent has also been brought to bear upon soap. Several materials have been avowedly and openly mixed with soaps as improvements. The use of resin has been utilized. Siliceous earth or sand or the form of "gelatin" or soluble glass (nitrate of soda), is one of the most common, and some of the soaps made in this way are extremely efficient and useful. Modified soaps for various special purposes are now made by mixing lime-water, dissolved alum, etc., with soap already made.

It will be remembered that soon after the commencement of the Civil War in 1861 Congress appropriated \$1,500,000 for the construction of one or more armored ships. Plans were presented by several different inventors, manufacturers, or companies, and of these three were accepted—the corvette Galena, plated with iron three inches thick, and hulled through and through by ten-inch shot in the attack on Fort Darling; the frigate New Ironsides, which, with her battery of eleven-inch guns, proved very effective in attack; and Ericsson's Monitor, which introduced the principle upon which all the successive and successful ironclad batteries were built. Several leading inventors are now engaged in further improving the existing systems of constructing naval armor that will be completely shot and shell proof.

It is a gratifying fact to note that inventors are taking advantage of the great capabilities of iron for beautiful forms, as shown in its use for architectural purposes. Its strength makes it suitable for structures and tracery of a light and graceful effect altogether beyond what is possible in wood or stone. In it can now be rendered both the slender and the richer beauties of the Greek orders, the characteristic arches and stratifications of Rome, the points and pinnacles of Gothic designs, and the traceries and arabesques, domes and pinnacles of the Moors. Some of the combinations recently produced by a union of light castings and wire or rod work in trolleys and verandas are wonderfully rich and light in effect.

"Buchapaiba." New, quick, complete cure in four days, urinary rheumatism, smarting, frequent or difficult urination, kidney disease, 81, Druggists. Depot at C. F. Goodman's, (3)

Mr. J. G. Robertson, Pittsburg, Pa., writes: "I was suffering from general debility, nervous prostration, etc., so that life was a burden; after using Burdock Blood Bitters I feel better than for years. I cannot praise your Bitters too much."

R. Gibbs, of Buffalo, N. Y., writes: "Your Burdock Blood Bitters, in chronic diseases of the blood, liver and kidneys, have been signally marked with success. I have used it myself with best results, for torpidity of the liver, and in case of a friend of mine suffering from dropsy, the effect was marvellous."

Bruce Turner, Rochester, N. Y., writes: "I have been subject to serious disorder of the kidneys, and unable to attend to business; Burdock Blood Bitters relieved me before half a bottle was used. I feel confident that they will entirely cure me."

E. Southall, Birmingham, N. Y., writes: "I suffered with a dull pain through my left eye and shoulder. Lost my spirits, appetite and color, and could with difficulty keep up all day. Took your Burdock Blood Bitters as directed, and have felt no pain since first week after using them."

Mr. Noah Bates, Elmira, N. Y., writes: "About four years ago I had an attack of bilious fever, never fully recovered. My digestive organs were weakened, and I would be completely prostrated for days. After using two bottles of your Burdock Blood Bitters the improvement was so great that I was astonished. I cannot, though three or four of age, do a fair and reasonable day's work."

C. Blacket Robinson, proprietor of The Canada Palace Hotel, Toronto, writes: "For years I suffered greatly from off-putting headache. I used your Burdock Blood Bitters with happiest results, and find myself in better health than for years past."

Mrs. Wallace, Buffalo, N. Y., writes: "I have used Burdock Blood Bitters for nervous and bilious headaches, and can recommend it to anyone suffering from either of these ailments."

Mrs. Ira Mullholand, Albany, N. Y., writes: "I have used Burdock Blood Bitters for nervous and bilious headaches, and can recommend it to anyone suffering from either of these ailments."

Burdock Blood Bitters advertisement with logo and text.

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