

1839 Revue et Gazette, article by G. – E. Anders

M. Montal presented himself at the Exposition this year for the first time. He debuted there in a manner that did him honor, which must astonish us the more when we consider his unfavorable position for the exercise of his art. If piano making is a difficult art for those who have the full use of all their senses, and who can see the minute details of such a complicated instrument, what can we say of a maker who, struck by complete blindness, has hazarded on a career where many do not succeed, even with the aid of sight? However, this is the case here. M. Montal is blind. In spite of his handicap, he has undertaken to make pianos, and what is more remarkable, he has succeeded.

Let us say a few words about this artist before speaking of his instruments.

It was at the age of five and a half years that M. Montal lost his sight following an illness. Having entered later into the Institution of the Young Blind in Paris, he spent several years, and devoted himself principally to the study of mathematics and music. He started studying the violin, then the oboe, and finally took up the piano. His curiosity naturally brought him to get to understand the details of this instrument, and he succeeded, thanks to that patience that is the normal share of his fellow sufferers. It would take too long to recount here how he procured an old piano which allowed him to satisfy this desire, and of which he disassembled and reassembled all the parts. The result of these painstaking researches was a perfect understanding of the structure of this instrument.

In 1830, M. Montal left the Institution, and chose the career of tuner. The ability he demonstrated in that difficult branch of art was not long in bringing him many customers, among whom were even found some makers.<sup>1</sup> In this way, a great quantity of pianos of all sorts passed through his hands. He had the occasion to familiarize himself with diverse actions, whether French, English, or German, and to examine them in all their details, which he did with astonishing address; for, to see him take apart an instrument, remove and replace the smallest parts, one would not guess that one had before on a man deprived of that organ one would say is essential for that sort of work. Furthermore, this is only one of many examples that could be cited in the history of the blind who have distinguished themselves by a remarkable ability, and we will return to this interesting subject in an article we will devote to some blind men who have come to make musical instruments.

After having acquired a perfect knowledge of the construction of pianos, M. Montal resolved to make them himself. He began in 1833, aided by a single workman, for

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<sup>1</sup> In 1834 M. Montal published a short treatise on the art of tuning the piano. This brochure, which had the honor of a German translation, was only the forerunner of a large work that occupied the author for a long time, and which appeared under the title of *The Art of Tuning Your Own Piano Yourself*. This is, without a doubt, the best work that exists on this topic.

his means did not allow him to proceed to quickly. Soon he added a second workman. Today he has thirteen or fourteen, and the number of pianos that have left his atelier in the space of five years has risen to 172. No doubt his establishment will be extended more, for his is well under way, and the obstacles against which he had to strive in the beginning have been vanquished by success.

One of the greatest of these obstacles has been, no doubt, the prejudice of the public, for a blind man is unlikely to inspire confidence in an ordinary person when it comes to the making of objects that demand accuracy and precision. One would be trading in pianos constructed by a maker who could only examine the case and the action by touching them with the tips of his fingers. But this prejudice vanished before the good results M. Montal has achieved, and which he owes to his rare intelligence, joined to the painstaking care that his condition has led him to bring to his work. All his instruments are rapidly sold, and he has found in the reception by amateurs the encouragement merited by his perseverance and talent.

In beginning to make pianos, M. Montal could have chosen one of the existing systems and contented himself with scrupulous imitation. He has preferred to be eclectic in taking what seems best to him in each, and in adding improvements of his own invention, for which he has received patents. Many of the experiments with which he is occupied in this moment have not been completed, so we can only speak here of the three instruments which have been displayed at the Exposition. These are a grand piano, an upright with oblique strings, and a pianino with vertical strings.

The grand piano, hinged and with a reversed soundboard, is remarkably different from ordinary grand pianos. The soundboard is placed above the strings. It is, along with the strings, situated in a structure movable by hinges, which leaves the case of the instrument like an etui, when you wish to reveal the strings. Only the action, lodged in the bottom of the instrument, occupies its usual place. In this design, the hammer, while striking the hammer upward, pushes it against the nut and against the soundboard as in vertical pianos or downward striking actions. The result is a real advantage for sonority. It is in considering the beautiful quality of tone of upright pianos that M. Montal adopted this system, invented by a Swiss maker named Kohl.

Experience proves, says M. Montal, that when a thin body, like a soundboard, is placed between the strings and the ear of the listener, the tone takes on more volume. One notices this result generally in an upright piano, when the public is facing the performer, that is to say when the piano is heard from its back; the piano turned around makes its full tone heard.

The construction of the new grand piano presents the same favorable conditions for sonority and propagation of tone. For the hammer, striking the string toward the nut and the soundboard, impels the tone upward by means of the soundboard, which is in contact with the upper column of air. The quality of tone becomes better,

stronger, and propagates farther. As for the action, M. Montal has tried to avoid friction as much as possible by the suspension of the spring and the interpolation of little rollers or cylinders between the points of contact. He has taken out a patent for this invention, intended to make the keyboard lighter and the mechanism more durable, for the friction is almost eliminated. One can also regulate the action and remove the keys without removing the keyboard.

We have spoken earlier of the problems that result from the ordinary disposition of dampers, which consists in not damping the sound sufficiently when the finger is raised. M. Montal uses a second damper that moves in the opposite direction of the first and in the short part of the string, so that the string is seized at the same time from above and from below, in front of and behind the hammer. This simultaneous movement produces its effect in a complete manner, causing the vibrations of the string to cease immediately.

Another improvement has been introduced in this instrument to assure its solidity. M. Montal has placed three bridge pins for each string, which allows the strings to be straight in their entire length, and thus avoids the considerable force on the soundboard that occurs in pianos that have only two pins. The soundboard is thus relieved of almost all its work, the wood does not lose its newness, and the instrument lasts a long time.

Finally, M. Montal has taken great care with all the details of the making of this instrument which adds to the beautiful quality of tone the advantage of a keyboard that is light and facile, and of which the solidity is guaranteed.

The upright piano exhibited by M. Montal is distinguished also by its exterior: it is decorated in the style of the renaissance, in ebony with incrustations in nacre and copper, engraved and decorated with marquetry, with a keyboard in nacre and shell.

We cannot approve the use of nacre in place of ivory, for a keyboard made thus dazzles and fatigues the eyes of the performer, especially under light.

In this piano as in the preceding, M. Montal has tried to eliminate friction in the action by the use of rollers or cylinders. The double damper has also been applied, as well as the bridge with three pins. One can see that in constructing an instrument that could be considered a work of art, M. Montal has not at all neglected making the qualities of the interior in rapport with the elegance of the case.

The pianino, a lovely instrument of six and a half octaves, participates in the same improvements. One sees there a new action with rollers; there are dampers on the rear of all the strings, and they act at the point where the hammer strikes; in addition, a roller applied to the damper pilot makes the weight of that damper almost insensible at the key, without making it lose its action on the string.

It is with great satisfaction that we have examined these instruments and pointed out the efforts of an artist who, in view of his position, merits double the praise. We

wish sincerely for M. Montal the ever-increasing prosperity of the establishment that his intelligence makes him so apt to direct with full success.

From *Panorama of French Industry*, F. Lucas, 1839 (incomplete: the last page is missing in the available source)

MONTAL (Claude), holder of patents for inventions and improvements, including rollers in actions, bridges with three pins, a new extended hitch pin plate, etc., etc.; maker and tuner of pianos, teacher of tuning, blind student and former teacher of music and mathematics at the Royal Institute for Blind Youth of Paris, author of *The Art of Tuning Your Own Piano Yourself*; Paris, 36 Rue Dauphine, Dauphine Passage.

Pianos—From his studies of music, mathematics, mechanics and physics, M. Montal, while he was a teacher at the Institute for the Young Blind, undertook research concerning the temperament of fixed pitch instruments, such as the organ, the piano, etc., in the hopes of reconciling practice with theory. All scholars, following Mersenne, had occupied themselves with this question, but as physicists only, not being tuners. The latter were in favor of unequal temperament, nothing was decided, and the learned dissertations shed no light on practice. The tuners lacked sufficient specialized knowledge to be able to read these theories profitably, and often held to their traditions in which the principles were mutually contradictive, especially in the partition or operation of tuning. M. Montal has settled this question, that had remained undecided up to this time, by publishing, under the title of *The Art of Tuning Your Own Piano Yourself*, a work in which practice found itself united with theory. He has even made piano tuning quite accessible to amateurs, by means of several practical exercises, something considered impractical up to now.

M. Montal did not stop there. In spite of the total blindness with which he is afflicted, his theoretical and practical knowledge led he even to establish a piano manufactory, and he has introduced notable improvements into that instrument, appreciated by musical artists.

Three pianos, a grand with inverted pivoting soundboard, an upright piano with oblique strings, and a pianino with vertical strings, were prepared for the Exposition, but could only be seen individually, due to the placement given to Montal.

The grand piano of seven octaves is constructed with the most favorable conditions for sonority and the propagation of tone. Experience proves that when a thin body, like a soundboard, is placed between the vibrating strings and the ear of the listener, the sound has much more volume. We notice that affect generally with an upright piano when the public is facing the performer. The piano, turned in this way, makes its full sound heard. M. Montal must have speculated about the use of these harmonic conditions. For this purpose, he has constructed his grand piano entirely opposite of ordinary grand pianos. The soundboard, the strings, and the action are placed beneath the instrument. From this arrangement, the hammer pushes the string against the nut and against the soundboard, sending the sound from below to above by means of the soundboard, which is found to be in contact with the column of air above, and by this means obtains a better quality of sound, stronger, propagating farther. By this means he obtains the advantages of pianos with

downward striking actions, without the defects of their mechanisms, more apt to develop problems than ordinary pianos. Here, the hammer falls back of its own weight, instead of being lifted back up by a spring.

In his escapement system, M. Montal avoids friction by the suspension of the spring [attached at one end by a thread rather than bearing against the escapement] and by the interpolation of small rollers or cylinders between the points of contact. The keyboard becomes lighter, repetition...

Foucaud, *Les Artisans Illustres*, 1841

Before leaving the subject of piano making, we should speak of a man whose prodigious labors have earned admiration and astonishment, and whose success is a new and striking example of the force of will. This man, blind so to say from birth, as been able to do for music in our time what the Englishman Saunderson did in the last century for mathematics.

This man is M. Claude Montal, who owes only to himself, as he can say with just pride, the high reputation he enjoys today in the musical world. Twelve years ago he was still filling the role of tutor at the institution for the young blind, that philanthropic establishment founded by the generous Valentin Haüy. It was in that house that the young Montal passed his childhood and youth; it was there that he began to cultivate his intelligence; it was there that he spent his days teachings his companions in misfortune what he had learned himself.

He was not yet aware of his true vocation. A certain circumstance aroused and inspired in him the strong desire to create an existence independent of administrative caprices. He had heard it said that one could make an very honorable living tuning pianos. All his ambition was focused from that time on that idea. Conscientious and painstaking studies were indispensable, and he undertook them with an indefatigable courage, and devoted his all to work towards his aim.

From his savings, which were very modest, he bought a piano, and set to study its mechanism piece by piece with an attentive intelligence, seeking to take account of all the effects that arose, or should arise, from the functioning of each of the parts of this musical mechanism. At the same time, he paid young sighted people to read him all the books that would bear upon his research. By means of these labors, he rapidly acquired a rare ability in the art of piano tuning. Little by little his talent became known. The most celebrated professors were pleased to hire him, and from that time M. Montal was considered as the master *par excellence* in that specialty. He is, in fact, the only teacher of tuning possessed by France. M. Montal did more: he published a luminous and scholarly treatise on his art under the title of *The Art of Tuning Your Own Piano Yourself*,<sup>1</sup> which demonstrated fully the solidity of his principles.

Having become tuner for the most renowned professors of the Conservatory, M. Montal conceived the idea of enlarging his sphere, taking up the manufacture of pianos. This was soon put into action, and his trials in all genres have been remarked by connoisseurs, and have assured him of an honorable place among the best piano makers.

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<sup>1</sup> Second edition, one volume in octavo. J. Meissonier, Music Publisher, Rue Dauphine, 22. [The “second” edition was simply a fresh printing of the first edition, published in 1836]

Notable in his pianinos is a new bridge, which by its position, is glued toward the middle of the soundboard, without reducing the length of the strings. This produces more vibration in the bass of these small instruments, which is ordinarily the weakest part. In addition, M. Montal has used individual brass flanges for each note, making it possible to remove the hammers individually instead of having them strung in groups of twelve, as in ordinary instruments. This improvement results in more solidity for the instrument, and better speed of repetition of the notes.

M. Montal has also made upright, square, and grand pianos in his atelier. His upright pianos are made like those of M. Roller, with some improvements to the action and soundboard. His square pianos offer an improvement of the brass agraffe system introduced by Érard. These pianos have extended hitchpin plates; the ribbing of the soundboard and the action include improvements, especially springs that are suspended, i.e., without rubbing [attached at one end by a thread, rather than rubbing against the part], and longer lasting than any known spring. Add to this an English action that can be raised or lowered by means of an adjustment screw, so that the attack and precision of the action are not impaired. Also notable in these square pianos is an improvement in the escapement button which assures the solidity of this part of the action. As for the grand pianos, they are made according to a modification of Érard's system.

Such have been the most notable accomplishments of M. Montal up to now, truly prodigious when you consider the obstacles of all sorts that he has had to overcome. Blind, without fortune, without a patron, he has been able, in very few years, to take a place among the masters, in an art that ordinarily demands long and persistent study. One day M. Montal could be cited as a phenomenon of our era.



Extract from Annals of the Education of Deaf-Mutes and the Blind:  
Biographical Note concerning Claude Montal, Maker of pianos in Paris  
By M. Gaudet, Teacher at the Institute for Blind Youth in Paris  
1845

Time and distance are too often, for the mind, what the microscope is for our eyes: they give singularly exaggerated proportions to men and things. They make a marvel out of an ordinary deed, a giant out of a man of medium size. What comes of this? Compared with the prodigies born from our imagination, what surrounds us is diminished and seems less than it really is; for our admiration is focused entirely on what is distant or in the past, and we are cool to what belongs to our time and our country. That is how we are made.

More than once I have been able to apply this sad truth to some of the blind among whom I have been called to live. If we need to show the degree of merit to which we can arrive without the help of sight, let us cite Saunderson, who taught mathematics in the first half of the 18<sup>th</sup> century, and invented a calculation table; or we can speak of the blind Du Puizeaux, of his vast wisdom, and his great memory of tones; but it won't occur to us to say that M. Paigneon, a guest of the hospice of Quize-Vingts, won all the prizes for mathematics in the general competition of the four high schools of Paris in 1806, and, for many long years, taught mathematics with distinction at the Royal College of Angers; it wouldn't come to our mind to say that we owe to M. Gauthier, that able professor of the Royal Institution for Blind Youth, a number of musical compositions of the highest order and many very remarkable works on the principles of his art.

On the subject of handiworks, mechanical inventions, one will cite with admiration a blind man sculpting small figures of wood with a knife! But, my God! What about he who recently took a thousand pieces of an organ out of the garbage of sighted workmen, thrown pell-mell, and reconstructed the instrument, he who every day exercises the trade of clock repair in the hospice of Quinze-Vingts, does the most astonishing things in our opinion, and the name of Silvain Plismy has never, that we know, had the honor of being printed.

The Institution for Blind Youth has existed for fifty years. It has served as a model for all those that have been established, whether in Europe or in America. It has remained the first of all for its importance, and has produced a plethora of remarkable men of all sorts. I believe the time has come to say who these men are. Modesty and abnegation are virtues without doubt, but the virtues themselves must have their measure, and modesty and abnegation in excess can be called indifference.

Today I only wish to speak of blind technicians, and I will begin with M. Montal.

Claude Montal was born in La Palisse (Allier), on July 28, 1800; his father was saddlemaker by profession. At the age of five and a half he came down with a putrid fever that left his eyes paralyzed; he completely lost his sight, and there was no longer a difference between light and darkness for him.

Perhaps no child has ever shown better what he would become one day. Placed among his young comrades endowed with two good eyes, little Montal was always the leader of the pack. It was they who led it, but it was he who directed their games, their wanderings. So that he could learn to recognize letters, they came up with the idea of tracing them on cards in relief, by means of needle pricks, and he himself soon used this kind of writing. Later, they sent him to school, and, in a short time, he left his rivals behind and became for them a sort of mentor. They named the letters, and he had them assemble them by syllables. They said the syllables, and he had them make them into words. When it came to lessons learned by heart, he always knew them first and repeated them to the others.

He also manifested early a disposition for music. His mother, who was an intelligent woman, wanted him to learn the violin, but there was none in the area, neither musician nor instrument. Young Montal, who had had occasion to touch violins, got it into his head to make one. He began by giving a piece of wood the form of the instrument. He created strings by means of several hairs twisted together. He attached them to a tail of his making and stretched them over a bridge by means of tuning pegs that he placed, not on each side of the neck, but on fingerboard itself of the instrument, as is done with guitars. He also made a bow and came to be able to play some little tunes. All of that, on the part of a blind child, showed a truly marvelous initiative. The postmaster of Droiturier, where the Montal family had recently moved, was so taken with what he saw that he bought a real violin for the blind boy. Imagine the joy of the little music lover. However, he found it difficult to tune his violin, and ended by giving it up and adopting the flageolet, an instrument in fixed pitch that allowed him to play the airs that were in his memory.

As he grew, the blind child showed a particular aptitude for mathematics. He most often did the accounts that the commerce of his father required. Having also acquired the habit of working with the craftsmen among whom he lived, he had developed a considerable skill with his hands. He created a small industry, making whips, fringes, bell holders and other leather decorations for horses. He sold these objects on his own account, and found there the means to support his needs. Thus he always had a marked disposition for commerce and industry.

However, the poor blind child was nothing but an object of pity for those who knew him. His mother was a better judge, and for a long time she had not ceased to pray to heaven that her son could come one day to the school for the blind of Paris, of which people had spoken vaguely. Meanwhile, time marched on. The young Montal attained the age beyond which he could not be admitted into the Institution. And he had long passed this age when in 1817 he received the long desired admission. He

was then sixteen and a half, but, by a white lie that nobody could have the courage to blame, he passed for no more than fourteen and everything went for the best.

In his studies, the young Montal constantly showed the greatest ardor. They had all the trouble in the world trying to keep him from rising earlier and going to bed later than his fellow-students, in order to have a few moments more to work. Thus he was bound to have, and in fact he did have, great success. He succeeded above all in whatever had to do with reasoning and calculation. His compositions were never remarkable for their style, and he wrote with much difficulty, but they were ordinarily the strongest, the best reasoned, the most logically organized. From the year 1820, four years after his entrance into the Institution, the Director made him tutor of a class of grammar, because there were no blind professors at the Institution then as there are now, but only blind tutors. Soon after he taught geography, arithmetic, algebra, and geometry.

His musical aptitude developed very rapidly as well. At that time they gave much more encouragement to instrumental music than to music theory at the institution. From 1820, the young Montal had acquired a certain degree of ability on the oboe and on the violin, and he played also a good bit on clarinet and bassoon. He was charged with a class of violin that included the teaching of the principles of music, for there were no classes of solfege at the Institution. He taught piano a little later, and, without having much ability on that instrument, he produced very good students.

These intellectual and musical occupations did not keep the young Montal from pursuing handicrafts enthusiastically. In very little time he knew how to make knit slippers, braided rugs, boxes, and woven fabric. He became one of the best weavers in the house, for he made up to 7 or 8 meters of common cloth a day.

There was a young man among the tutors named Touras who, lacking the inventive genius with respect to mechanics of young Montal, nevertheless had more skill than he in execution. He had procured himself almost all the tools needed for a carpenter. Touras and Montal formed a close friendship, and both set to make wooden boxes and small pieces of furniture in their spare moments. They even tried to make a birdcage, but it was beyond their ability and they abandoned it.

They agreed on another project. A sighted tuner was charged with maintaining the pianos of the house. But this maintenance left much to be desired, and the instruments often remained out of order for days on end. Touras and Montal tried to tune the ones they used themselves. The tuner complained, and they were forbidden to touch the pianos. Touras then had his parents give him a piano, and got the Director to allow this piano to be placed in his antechamber. The two friends took apart the instrument, made the necessary repairs, and put it back together, so that the Director could have the opportunity to see them work and become convinced that the blind could tune a piano. The experiment was successful.

The organ in the chapel was out of order, and the Director charged Touras and Montal with repairing it, and put at their disposition a carpenter and a tinsmith, one to prepare the wooden parts, the other to solder the metal tubes. Montal set himself to study the books he could find on the making and tuning of the organ, among others the excellent work of the Benedictine D. Bedos; he took as many lessons as he could with workers in that skill, and they watched him at work. Their efforts were crowned with full success.

The Institution possessed many harpsichords, study instruments for organ students. The Director charged Touras and Montal with adapting pedal keyboards to these harpsichords. They had never seen any, so they invented them, and they completed this new work with honor as well.

We have said that each professor of an instrument gave his students the notions of solfege necessary for their study. This was obviously a bad system. M. Montal pointed this out, and the Director charged him, in 1823 or 1824, with organizing a method of teaching classes of solfege. He studied the works published on that subject, he consulted with several professors from the Conservatory, and then composed a method. Then he called together all the students, and, after testing them, divided them into three or four classes to which he gave regular lessons.

Harmony and the art of the organist were not taught or taught very imperfectly. Messieurs Lasceux and Marigue, organists of Saint-Étienne-du-Mont and St Thomas Aquinas, had given the Institute's students disinterested and useful counsel, but it was only advice and not an organized course of study. Montal and two of his comrades, Gauthier and Renaud, decided to have the treatise of Harmony of Catel read to them during their free time, and to learn it by heart. M. Gauthier, the one with the most musical disposition of the three, took on the greatest part in that study.

Meanwhile M. Montal did not lose sight of piano tuning. He thought, and it was then a new idea, that one day he could use that skill to make a living if he came to leave the Institution. He had had the occasion more than once to become convinced that sighted tuners only proceeded by rote, that few of them were capable of understanding the theory of their art. He conceived that there was a better route to follow, and he resolved to make use of the knowledge he had of acoustics and music in the methodical study of temperament – the system of tolerance in the tuning of instruments that are fixed in pitch. He set himself to consult the works he could procure on the subject. He applied all the theories and sought to reconcile them with practice in developing a new way to make the partition, a way that would also be easier for tuning a piano than with existing theories.

By means of private lessons he gave to people both inside or outside the Institute, he had earned some money, and, as an orderly and economical man, he had known how to save. An opportunity to buy a good piano arose, and the Director, whose misgivings had then completely dissipated, had the pleasure to facilitate this

acquisition by advancing him a small sum of money he needed. However, as the repeated exercises to which he subjected the instrument had quickly caused it to deteriorate, he bought a second piano on which he could make all sorts of experiments without trouble, and soon he joined theory and practice together.

His thoughts of the future were not long in being realized. The position of tutor at the Institution was not at all attractive: because these tutors were blind, it was believed they must be subjected to a cloistered life, so to speak, and to complete supervision. In addition, it was thought they could nearly dispense with remuneration for their services. They could well receive a salary of 150 francs, but they only arrived by degree at that splendid recompense. M. Montal at first received 2 francs 50 centimes a month, then 5 francs, then 8 francs, finally 10 francs.<sup>1</sup> He was given hope for a long time of a better position, but the promises were never realized. He experienced other disappointments besides. As he felt himself capable of providing himself a more independent and lucrative career, he left the house in March, 1830. He was a little over thirty years old.

Having left the Institution, M. Montal asked to be given charge of the maintenance of the organ and the pianos of the house, with the payment that had been given to those who had been doing that work. He had been promised that favor during his stay in the establishment, but it was refused him when he left. They told him that henceforth there would be tuners from within the house, and in fact the Director found men capable of fulfilling his wishes in M. Moulin, a young tutor paid 3 francs per month, and also in M. Binet,. The Institution was relieved from that time of making payments to sighted tuners.

This was the time for M. Montal to think seriously about establishing a position for himself as a tuner. But life in the Institution was little apt to foster worldly abilities in its students. Unfortunately the opinion was spread through the house that outside its walls there was no welcome for a blind man. This opinion seeped into the morale of the most hardy, and destroyed that rightful self-confidence so necessary for success. So our tuner barely dared to present himself even in the most modest houses. We must say, in addition, that nearly everywhere his blindness created obstacles for him, and more than once he was reduced to regarding it as good fortune to be given permission to tune a piano gratis. Often he found himself obliged to give lessons in grammar, arithmetic, violin, and piano at 8 to 10 sous a sitting, to earn his bread, that being the proper term.

Meanwhile he managed to establish a relationship with some professors of the Conservatory, and among others M. Laurent. He had two pianos at home, one a grand and the other an upright, made by two different makers. Nobody had yet been able to maintain these two pianos in tune with one another. M. Laurent asked M.

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<sup>1</sup> The position of the blind professors is far from being brilliant today. However, in the past few years it has improved notably, and, in all appearances, it will soon improve more thanks to the benevolent justice of the director of the establishment.

Montal if he believed he could do that. He offered to try. He examined the instruments, recognized particularities of their construction that required a different technique in each, understood what needed to be done to succeed, and succeeded. This astonished M. Laurent so much that the next day he presented M. Montal to the professors of the Conservatory as the best tuner in Paris. He recommended him particularly to Zimmermann and to Adam, who received him well, procured for him the tuning of the pianos of some of their students, and they authorized him to use them as references. This was of the greatest advantage in the world, and helped him vanquish the prejudice he encountered whenever he presented himself in a new house. I say a new house, for the prejudice left quickly when they had seen the tuner at work.

In 1832, M. Montal thought of giving a public course in piano tuning open to the public. This course was well attended, and showed connoisseurs how much more rational and simple the method of the blind tuner was compared to all others that had been used up to then. The clientele of M. Montal increased considerably as a result.

The exposition of products of industry of 1834 placed M. Montal in the top ranks of tuners. Most of the makers wanted their pianos to be tuned by him. He took advantage of that circumstance to have printed a short brochure entitled *Abridged treatise on the art of tuning your piano yourself*. This brochure, which was sold at the exposition itself, on the pianos of the makers, made a sensation. It was spoken of in the artistic world, and half the edition was sold in less than eight days.

M. Montal already did a small commerce in pianos: he purchased some instruments and repaired them himself or had a workman do the work. He had a second workman the following year, and the piano manufacturing firm he heads today really began at that point.

However, his establishment was still very modest. It was located in a loft on Rue Poupée, on the fourth floor. M. Montal made small upright pianos there, of the sort that M. Pleyel had imported from England, and which were then much in style. These pianos, made with care and intelligence, were placed easily with the help of the tunings the maker was far from neglecting.

In 1836, M. Montal published a complete treatise on piano tuning, a work read not only in France, but everywhere the art of tuner was exercised.

We now touch on one of the principal phases of the life of M. Montal, his marriage. For a sighted person a marriage is a grand affair; it is even more so for a blind man: M. Montal thought this to be so. Many times already he had refused alliances, even those that one might call advantageous, thinking that if a blind man must be, in many respects, in a sort of dependence with regard to his wife, he must at least establish an equilibrium so that she should depend on her husband with respect to fortune. In the same way, it wasn't exterior merit that should determine his choice,

but before all, qualities of heart and modest habits. When, in 1836, he believed that his economic condition could permit him to sustain a family by means of his business, he sought a wife who would be honest, simple and organized, who would not feel unlucky to be the wife of a blind man, and he had the good luck to find her.

M. Montal then descended from the attic to a larger and more convenient apartment; he hired more workers, and from that time made upright and square pianos. He had the occasion, as a tuner, to study every species of instrument, and instruments of the principal makers of Europe; as an able man, he profited from all the best they were doing, and constructed very good instruments as a result.

The exposition of 1839 was announced. M. Montal enlarged his atelier to allow him to pursue innovations he had been thinking about. The pianos he presented to the jury had among other things one feature in particular, that at the point of contact of different parts of the action, the maker had applied rollers or cylinders to reduce friction. But this feature made his pianos too expensive. It presented some other problems, and has been abandoned. M. Montal also exhibited a grand piano of entirely new construction: the soundboard was placed under the structural body of the instrument, the strings under the soundboard, and the action lower still; it was the construction of an upright piano reversed, the strings parallel to the ground. The body of the piano was separate from the case, and could be swung up like the lid of a case. M. Montal later learned that a maker from Zurich had invented something analogous around the same time, and we have seen that later M. Herz took up the system of soundboards with strings below, and recommended them warmly to the public. M. Montal received no prize in 1839, which may have been due to the fact that he had not had the time necessary to perfect his actions; and we all know that first steps are difficult: M. Montal debuted, and he was among men of long-standing reputation.

M. Montal had already made 171 pianos; he continued to enlarge his manufactory and to perfect his actions, promising himself to present to the jury, at the next exposition, something that would merit their attention. He turned his mind particularly to the double escapement that had occupied Sébastien Érard during part of his life, a system that, keeping the note always under the finger of the artist, produced a tone strong or weak, according to whether one allowed the key to rise more or less, and consequently favored nuances of expression. Érard had only resolved the problem for grand pianos, and he used, and still uses, a very complicated mechanism. M. Montal entertained the possibility of obtaining the same results with a much simpler mechanism, and being able to apply it not only to grand pianos, but to square and upright pianos as well. Aided by intelligent workers, he made a great number of trials that incurred considerable expense, but that were also crowned by success. In February, 1842, he took out a patent of invention, and showed that one could not only employ a mechanism different from that of M. Érard, but many sorts of mechanism, which had seemed impossible to all the other makers. Around the same time, the Royal Institute held a competition for supplier of pianos, and M. Montal was named maker to the Institution, a title that perhaps had belonged

to him by right. He has since made a great number of instruments for the establishment under this title.

At the exposition of 1844, M. Montal presented grand, square and upright pianos, having, thanks to his innovations, the ability to repeat notes at all heights of the key, which no other maker had been able to do for square pianos, or above all for uprights. The jury, this time, awarded him a bronze medal, a small compensation perhaps for his labors; for it had merely placed him in the ranks with many other makers who only sent to the exposition one instrument of ordinary construction. His blindness had acted fatally on the spirit of the jury, for one would not wish to suppose that favor could have any part in the judgments it makes.

M. Montal, still young, is far from having said his last word; he considers new improvements in the fabrication of his pianos, and is assembling the materials for a large work on the art of the piano maker. That very necessary work must be made by a man who is at the same time maker, tuner, master of harmony, who has studied acoustics and the physical sciences, and who also has the ability to express his ideas in writing, conditions that rarely come together in one individual, and which M. Montal has the advantage of possessing.

However that may be, M. Montal will always have the merit of having opened to the blind a double career, that of tuner and that of maker of pianos, and at the same time the glory of having surpassed in the one, and perhaps equaled in the other the most able sighted people.



## Claude Montal, Piano Maker: his life and works (1857)

### Part one, Biography, by Dufau

If in the following there is a spectacle worthy of sympathetic attention, it is assuredly that of a person who, faced with a physical defect or handicap, overcoming all obstacles, rises and takes his place among the ranks of those noble workers of his époque who serve as examples of industry and the arts. This spectacle is eminently brought to our sight by the blind maker Claude Montal, whose life we will outline.

Born in La Palisse (Allier) on July 28, 1800, Claude Montal did not come into the world blind, and his early childhood was free and happy. But around his sixth year he came down with typhoid fever, which put his life in danger. He survived, but this illness, as so often happens, was followed by complete neurological blindness. From that moment there was no difference for him between light and dark. The child entered then into a new condition, without regret or nostalgia for the other. He lost none of the happy disposition with which nature had endowed him, and on the contrary developed a very remarkable force of will, a persevering energy, a striking characteristic of blindness, that we remark at every step in the career of M. Montal.

He learned to read by means of relief letters made on cards by needle pricks. Later he was sent to the public school. The intelligence of the little child, beyond that of his young comrades, allowed him to acquire promptly those first elements to which a child is with difficulty initiated, and he became the smartest in his class.

From an early age everybody has traits that are apparently insignificant, and which escape a superficial glance, but in which the attentive observer can see hints of their future. The young Montal's mother wanted him to learn to play the violin, as this is the talent always sought for the blind in the country. But this desire encountered a difficulty that seemed insurmountable: there was neither teacher nor instrument in the area. That which would have stopped an ordinary child was for him a stimulant. Already a certain musical instinct was manifested in him. He had had occasion to hear and touch violins. Not having one available to him, he had the notion of making one.

He went to work, laboring for days at a time, with ardor. He knew nothing and lacked everything. It didn't matter, discouragement did not interrupt this singular labor for a single instant. A piece of wood received the form of the instrument, twisted hairs served as the strings he needed. The tail, the bridge, the tuning pegs, nothing was forgotten, and soon the young blind boy possessed a violin, quite crude no doubt, but on which he came nevertheless to be able to play some tunes. The history of M. Montal is contained entirely in this remarkable tale.

Around 1811, his father, who was a saddle maker by trade, left La Palisse to establish himself in a hostelry he had had built in the little village of Droiturier, on the route from Paris to Lyon. There, placed in contact with craftsmen of all sorts, the young Montal learned to work with wood, and developed a singular dexterity of hands. He found there the means to create a business; he made small pieces of leather trappings for horses that he sold on his own account. These small manual

tasks did not impede his education, which developed with the years. He showed much aptitude for calculation, and it was he who often did his father's accounts. But music had above all a strong attraction for the child. A generous neighbor, the postmaster of the village, M. Noailly, recognizing his talent, had given him a real violin, and gave him in addition some instruction that he himself had received at college. This was a powerful encouragement for our young musician, and he made notable progress. But this did not resolve the worries of his mother. One day, deprived of his parents, without support, without fortune, what would become of the poor blind man, cast alone on the paths of the world? Would he not be reliant on public pity, that pity that wounds so cruelly with its cold disdain the unfortunate one for which it is the only hope and the necessary recourse? Oh! It was a frightful image for the heart of a mother to foresee a life of anguish and torments for her son, while she would not be there to guide and defend him!

They had heard vague talk in that modest village of the Institution for Blind Youth of Paris. All the ambition of the mother of the young Montal was then to see him enter that establishment. But the first attempts were fruitless, because he had already passed the limit of the age of admission. It was necessary to obtain an exception to the rule. A voyage that Madame the Duchesse of Angoulême made to Vichy in 1816 provided the opportunity. A request was addressed to her to obtain this favor. At the beginning of the next year, the desired admission finally arrived: Claude Montal was then sixteen and a half. They had excusably given his age as fourteen.

There he was in that Institution, founded by the respected Valentin Haüy, not yet at the degree of importance and example it would later achieve, but where nevertheless the aim of the young Montal's parents could be accomplished. We find him there with the same passion for study, the same resolution in the face of the difficulties that oppose his efforts, rising when he could ahead of the time when his fellow students' work began, disputing with sleep the moments that nature requires. Thus success did not delay in crowning his hopes. After three years, he obtained the prize for good conduct and the prize for excellence, with a cross, preserved up to this day as a precious memento of a first triumph.

During that time, Charles Barbier, former officer of artillery, whose name should be recognized in memory of the blind, was developing a method of writing with raised points that later, ably modified by Louis Braille, would play a great part in teaching the blind. M. Montal, already teacher of a class of grammar, was designated by M. Barbier to help him elaborate his system. A little later, in charge of a class of mathematics, he invented geometric relief charts, that were a powerful help in that branch of instruction.

Meanwhile our young teacher had not set aside his musical studies, which were always a predilection for him. He had acquired a certain skill on the oboe, the violin, and notably on the piano, thanks to the good attentions of Madame Vanderburch, whose lessons supported the emphasis placed on musical studies at the Institution. He also played the clarinet and bassoon a little. From that time he never ceased that activity of spirit that led him constantly to seek all paths for improvement. In concert with his colleagues, he invented a new system of musical notation, since replaced, but which was used for many years. Charged to give lessons in violin and

piano to young students, he came to recognize the defects of the method of solfege adopted in the establishment. After having studied works relative to that material and having consulted the experience of some professors at the Conservatory, he devised a new method for instruction. Finally, impelled by a pronounced taste for mechanical arts, with a manual aptitude that had been manifest in him, as we have seen, from his early childhood, he came to the most ingenious of his explorations, to that which would make for him, and for many other blind people, a new destiny.

Among the teachers at the Institution there was a young man named Tourasse, who, though without equal intelligence, had like Montal a particular aptitude. Bound together by the same inclinations, the two young blind men, after several attempts, finding the pianos of the establishment very badly tuned, undertook one day to tune them themselves. They succeeded; but the tuner complained, and the pianos were locked up. They needed to demonstrate their ability, to make it palpable in some way. Tourasse had a good brother from whom he obtained the sum of 200 francs, by means of which an old piano was acquired, on which the new tuners were entirely free to work as they pleased. The piano was placed in the antechamber of the director. The two friends took it apart piece by piece and, after having studied each part, reconstructed it, and presented it to the director, who was stupefied by the fact that it had been perfectly repaired and tuned.

A little later came another tour de force, even more surprising. The organ of the chapel, which was a considerably defective instrument, needed a complete repair. A large sum of money was required, and the Institution was not rich. The director, for whom the earlier happy experience had revealed the ability of the two young people, called them one morning into his office, and asked them to undertake an important task. They accepted, on condition of having a carpenter and a tinsmith available to them, to proceed, under their instruction, to put together the parts of the case and solder the metal tubes.

To prepare himself for such work, Montal procured the excellent book on the making of organs by the Benedictine Dom Bedos. He studied with care, cutting out figures from playing cards and drawing up many plans, which he compared. After having, in addition, consulted several renowned organ makers, he went to work with his companion, and after long efforts, among which were mixed several moments of discouragement, fortunately temporary, a marvelous result was achieved: the organ, completely put back in condition, could be played as in the past.

Encouraged by this success, our two young people accepted soon after the new proposal made by their director to adapt pedal keyboards to the harpsichords serving as practice instruments for organ students. These keyboards were entirely unknown to them. No matter, the spirit of invention, with which both were endowed, came to their aid, and this problem was also resolved. But this was the last work to be undertaken by their efforts, for death came at that time, taking Tourasse, to break the fraternal ties and bring an end to an association cemented by many years of continuous labor, of joys and pains experienced in common. This loss was heartbreaking for M. Montal, and from that moment his stay at the Institution became painful to him. The moment had come to think seriously of the future. For a long time he had thought secretly about piano tuning. He had the firm conviction that he would find resources outside the Institution, and that he would open as well

a path that many of his comrades in misfortune could follow, which was later so happily realized. Knowing from experience that sighted tuners proceeded most of the time only by rote, that few among them were capable of understanding the theory of their art, he resolved to make use of the understanding he had acquired of acoustics to study in a methodical way temperament, or the system of tolerance in tuning of instruments with fixed pitch. He consulted various writings on the matter, tried to reconcile them with practice, and finally invented a new method of making the partition, and this method, which made it possible to tune both better and more easily than the known methods, made him soon one of the most capable tuners.

But it was not at the Institution that he could acquire renown. And there the young man would find no hope of a real existence. The position of teacher was very poorly paid and was surrounded by constant obstacles. Animated by a noble zeal, though he had but few monetary resources, painstakingly acquired by giving lessons to outside students who were authorized, not without difficulty, to enter and receive them in the Institution, relying on Providence, he decided to leave definitively the monotonous and almost cloistral life to try to achieve his rank in society.

At this moment the Revolution of July took place. This event could not change his resolution, and he definitively left the establishment in November, 1830.

There he was without support, without protection, without resources, challenged by the difficulties every man encounters in making himself a career, difficulties that are much greater for a blind man, who faces a fatal prejudice, too much believed among the people of the world. He had counted on tuning and maintaining the pianos and the organ of the Institution. No such thing, this modest clientele was refused him. What calm and energetic persistence must he have had to face such a situation without faltering! Let us follow our poor tuner to the apartment he had rented a short distance from the Institution to whose service he had for so long given his singular aptitude and which was now closed to him! He has there nothing but two bad pianos, a violin, and a few books in relief. His existence is supported only, for the moment, by lessons he gives to two children of a widow who is no richer than he. He is condemned to the hardest privations. Nevertheless, his courage is not shaken.

His hope for a better future was not at all deceived. At that time there was among the administrators of the Institution a Monsieur the Count Saint-Aulaire, a man with a noble heart and an elevated spirit, for whom both politics and letters were a source of pride, and who has left those who knew him with such regrets. Far from sharing the narrow and petty views which were the source of the animosity toward M. Montal on the part of the Institution, M. de Saint-Aulaire believed that it was his duty to support the courageous efforts of this young man, and he presented him to Madame the Countess of Saint-Aulaire, whose life was devoted to good works, and who did not cease to be for M. Montal a generous protectress during that period. She entrusted the maintenance of her pianos to him, and recommended him to her numerous acquaintances. On her account he obtained soon after a pension from Quinze-Vingts [an institution for the blind], and was thus relieved from his primary needs, in awaiting reputation and fortune.

Also at that time he was able to establish relations with some professors at the Conservatory, among them M. Laurent, and artist whose sentiments equaled his

talent. Thence arose a circumstance that was decisive in the life of M. Montal. M. Laurent had at home two pianos, one grand and the other upright, coming from different ateliers. Nobody had yet been able to maintain both instruments in the same tune. The professor asked the blind tuner if he believed he could succeed in this, and the latter offered to attempt it. After having examined the pianos well, and recognizing the particulars of their construction, which were very different one from the other, he understood what he needed to do to tune them together, and he succeeded. His success so astonished M. Laurent, that the next day he told some of his colleagues that Montal was the best tuner in Paris. He recommended him particularly to Zimmermann and to Louis Adam, the father of the celebrated composer whom the art of music has just lost. These eminent professors gave him a warm reception, obtained for him the tuning of many of their students, and authorized him to use them as references. From that point on all doors were open to him. The prejudice was vanquished.

In 1832, M. Montal had the happy thought of giving a public course in the art of tuning pianos, open to everybody. This course, given at the shop of the Wetzels manufactory, was much attended, and demonstrated to the connoisseurs the excellence of the blind tuner's method. He was able through this to expand his clientele, but his method was also divulged. It happened that, two years later, in anticipation of the Industrial Exposition that was about to open, when M. Montal presented himself at a well-known publisher, a *Manual of Tuning* in hand, he met with a rejection, the cause of which was discovered a few days later. One of his students, contrary to all delicacy, had stolen his method, and was at that very moment having a treatise printed that would be published by the same publisher at which our unfortunate author had presented himself. What would M. Montal do in this difficult circumstance? He lacked the time to file suit to recover his property. With that intelligent energy that we have already seen in him, he ran to the printer Terzuolo, who counted among his friends, and there, on the spot, dictated to the boy who served him as guide a short extract of his method, under the title, *Abridged Treatise on the Art of Tuning Your Piano Yourself*. The typesetters set to work, and distributed among themselves the pages as they left the hands of the copyist. In twenty-four hours it was all printed. Musical engravings were prepared at the same time at an engraver, and were collated. The two necessary copies were deposited at the Copyright Office, and M. Montal, armed with the precious receipt, ran to the publisher, and one can imagine his disappointment and anger in recognizing that he would be pursued in court if he did not destroy completely a work already in press and nearly completed. M. Montal was assured of priority. The Exposition of 1834 opened. His *Abridged Treatise* sold very well, and was transformed later into a complete treatise, whose success was very great, both in France and abroad. Thanks to this publication, he became the mostly highly regarded of tuners. In that same period he made his first steps in manufacture, purchasing some pianos that he adjusted and repaired, whether by himself or with the help of a workman initiated in his methods. From there he proceeded to construct some small upright pianos, which were easily sold, thanks to the relationships he made in his position as tuner. But it was only a small establishment, which could give no inkling of the house M. Montal heads today.

We arrive at one of the principal phases of his life. Marriage is an important affair for everybody; but for a blind man, it is that much more crucial, for it involves contracting a sort of natural dependence on someone whom the law puts under your protection. M. Montal understood this well; and not wishing that a superiority of fortune should constitute an advantage that would weigh against him in the balance, he asked above all, so to say exclusively, that the person with whom he would associate his destiny should have qualities of heart and modest habits. In 1836, then, judging that his commercial situation, although still in its early stages, could permit him to sustain a family, he sought a woman who was honest, simple, organized, susceptible to find a sweetness in becoming the devoted companion of a blind man, and he had the good luck to find her.

Meanwhile, the Exposition of 1839 was announced. M. Montal, whose ateliers had grown, and who had added to the manufacture of upright pianos that of squares and grands, had been content up until then to adopt, without innovation, the greatest care in the construction of his instruments. Initiated as a tuner into the proceedings of the most celebrated manufacturers, and trying in his turn to follow in their footsteps, he presented at this Exposition several upright and square pianos, and a grand piano with reversed soundboard, which rivaled the best instruments the Exposition had to offer both for their exteriors and for their interior qualities. However, the susceptibilities of the entrants awoke in seeing a new athlete enter the race, and prejudice arose against the audacious pretention of M. Montal. For a blind man to aspire to enter the ranks of the Érards, the Pleyels, the Rollers! It was not to be believed! Such presumption must encounter chastisement: M. Montal obtained no medal. But the upright piano in ebony, with copper and mother of pearl inlay had caught the eye of some amateurs, and shortly after, thanks to an expressive organ the intelligent maker had ably introduced into the case, so that by means of registers the same keyboard could play separately or together both instruments, and one could accompany the treble of one with the bass of the other, this piano was acquired by M. Faure and transported to the Château of Grignan, near Montélimart, and placed in the bedroom itself occupied by Madame de Sévigné. It is not the least of the curiosities of that apartment, still adorned with furnishings that had served that celebrated woman.

Meanwhile, M. Montal redoubled his zeal, and, seizing on the idea of improving the action, he turned his thoughts to the double escapement, whose application to grand pianos had occupied Sébastien Érard during much of his life. He entertained the possibility of achieving the same results by a simpler means, and to be able also to apply this mechanism not only to grand pianos, but to squares and uprights as well. Following many trials, quite costly, made with this aim, success crowned his hopes. For he was able fully to demonstrate that one could without difficulty use a mechanism different from that of Érard, and that many different sorts of mechanism produced a similar result, which seemed impossible to other makers, especially for upright pianos. He obtained a patent in 1842 for the actions that were his own.

In 1843 the contract to supply pianos to the Institution of the Young Blind was opened to competition, M. Montal was one of the contestants, and after an attentive trial of the diverse instruments presented, he was the one who obtained the title of Maker for the Institution.

From that time, M. Montal marched at a rapid pace on the path of progress he had with such difficulty started. He constantly invented new designs, new actions, new systems, which led him to obtain other patents of invention and improvement. With renown arrived prizes, which elevated him. At the Exposition of 1844, where he exhibited pianos of all forms with double escapement, and presented various other notable improvements, he obtained from the jury a bronze medal, a prize small in proportion to the importance of his work, no doubt. In 1846, the Academy of Industry awarded him a silver medal; in 1847 he received first a silver medal, top prize of the Atheneum of Arts; second another silver medal, top award of the Free Society of Fine Arts; third a platinum medal from the Society for Encouragement, for his system of transposition, and for various single and double escapement actions; fourth and last a gold medal from the same society, for his system of counter-tension, his improvement of bridges, and his soundboard. The next year he received the gold medal from the Academy of Industry. In 1849 he presented at the Exposition of products of industry magnificent upright pianos and a semi-grand with reversed soundboard, with new double escapement actions and other important improvements, which though weakly encouraged perhaps by the reporter of the jury, Pierre Érard, nevertheless earned M. Montal a silver medal. In 1851 he added to his previous inventions his new expression pedal, so appreciated by artists, and presented at the London Exposition four magnificent upright pianos, constructed with all his improvements; the prize-medal was awarded, and on his return to France, the Prince who today rules so gloriously over the destiny of France, presiding himself at the distribution of prizes merited at this Exposition, decorated him with his own hand with the Legion of Honor, accompanying with several happy and benevolent words this high testimony accorded to the talents of the blind industrialist.

In 1853 M. Montal received the title of patent provider to their majesties the Emperor and Empress of the French, and in 1854 that of provider to the Imperial House of Brazil. Finally, in 1855 he displayed in his rich showrooms on the boulevard Montmartre, where he had moved a few years earlier, that splendid collection of pianos that had figured in the great Exposition of that year, and which had earned him a first class medal. When one listens to and examines these instruments, in which are united all models, forms and systems, works so remarkable with respect to manufacture and exterior decoration, one must ask why among the prizes awarded more had not been given to this eminent blind man, who arrived with such effort to place himself among the masters of manufacture. But M. Montal has the future before him, and for the present what sweet satisfaction must he experience in regarding his past, in measuring the immense interval that separates his point of departure from the point to which he has arrived, considering above all that this interval is marked by a notable benefit for the entire class of blind people, whom he has given a new career, in which they are notable year after year for new success!

Already this future has begun for him. His Majesty the King of Hanover has bought one of the pianos shown by M. Montal, and this prince, distinguished by a remarkable musical talent, has sent, on his birthday, to its maker, a gold medal

bearing his effigy with these words: *To Montal, maker of pianos, for his industrial and artistic merits!*

M. Montal is firstly, since 1838, a member of the academic society of the Children of Apollo, the oldest artistic society of France; secondly, member of the Society of Patronage and Help for the Blind, founded in 1841; Thirdly, member of the Agricultural and Manufacturing Academy since 1845; fourthly, member of the Society for the Encouragement of National Industry, since 1847; fifthly member of the Committee of the Society of Inventors, founded by M. the Baron Taylor in 1852; and finally sixthly, member and one of the founders of the Society of Piano Makers of Paris, created in 1853.

We have made known in M. Montal the artist, and the industrialist, whose success has brought such honor to the Institution, without which he would perhaps have been obscure his whole life. We would be negligent in this Notice if we did not, in closing, speak of the man and the estimable qualities that distinguish him: upright, sincere, devoted to all his duties, faithful to his friends, loyal in his relationships, these things M. Montal has always demonstrated. We are happy to be able to complete by this description the outline of the career of a man whom we have been in a position to follow step by step from his beginning to the brilliant position where he has revealed his true merit through persevering efforts!

P.-A. Dufau

Former Director of the Imperial Institution for Blind Youth



Claude Montal, Piano Maker: his life and works (1857)

Part 2:

Notice concerning the Fabrication of Pianos by M. Claude Montal

By P. E. Bienaimé

During the last half century, the construction of musical instruments in general has made immense progress; but the piano indisputably is the instrument that has been the object of the most research and the most important work.

In fact, if we look back at the époque (around 1780) when Sébastien Érard and his brother, come to Paris from Strasbourg, made those small double strung pianos that began their reputation, we would find that the manufacture of the piano has been subject to such considerable changes and improvements, that it would be difficult to recognize in those first trials the origin of the powerful and magnificent instrument that we possess today.

The taste for music, that magic art, that art which so often arouses in our soul such sweet emotions, and which has become in our modern societies such a powerful means of civilization, the taste for music, as we were saying, is today so widespread in all classes of society, that the piano has become so to say an indispensable piece of furniture for each family. Where don't we find a piano? In our most sumptuously ornamented salons, in the boudoirs of our most elegant and distinguished people, in the room of the modest young girl, in the back room of the simple storekeeper, even in the attic of the workman, everywhere the piano is cultivated.

Once the productions of the genius of our great masters was only understood and appreciated by the happy privileged; but today, thanks to the general usage of the piano, the study and interpretation of musical masterpieces have become familiar to the greatest number.

However, one must say that the bad construction of many of these instruments is sometimes an obstacle to the progress of study. In fact, how many artists or amateurs does one see, even the most zealous, becoming discouraged because the instrument they are using is almost always out of tune, or because certain defects of the action prevent them from achieving finesse of execution! It is necessary, then, to have a good piano; it must be solid, it must also not take up too much space, for the size of the apartments of today makes this obligatory. On this latter point, nothing meets that condition better than the upright piano; especially since it has benefitted especially for the past few years in its manufacture and improvements.

The efforts of all the manufacturers have always had as their aim giving to its tone more power and sustain; to its action more precision, lightness and delicacy, while preserving the necessary energy; to the general construction, more solidity, seeking by iron rods, or by other means, to resist the enormous tension of the strings on the pinblock and hitchpin rail, and consequently to avoid harm to the case and failure of the soundboard.

It is then from this triple perspective that we propose to examine with attention all the improvements brought to the manufacture of the piano by M. Montal, one of

our most able manufacturers, and perhaps one whose labors have been directed by the most talent and perseverance.

After having been engaged for a long time in making all sorts of piano, M. Montal has especially concentrated for several years on the construction of upright pianos, and not without marked success. But turning his study back to grand pianos, on the occasion of the Exposition of 1855, M. Montal has obtained in that new manufacture, and in the opinion of the most competent artists, one of the most remarkable results.

We do not have the intention of giving an exaggerated praise for M. Montal; but we believe we can justly note here the various prizes his conscientious labors have earned him.

Eleven medals, in bronze, silver, platinum and gold, awarded him in the Industrial Expositions and by various learned societies, have successively crowned his inventions and improvements; finally, after the Universal Exposition of London, M. Montal was named Knight of the Legion of Honor.

We will add that at the last Exposition the king of Hanover, having chosen for himself one of the pianos exhibited by M. Montal, was so satisfied with it that he felt a duty to give this maker a particular mark of approval, and had made for him a gold medallion, accompanied by a letter conceived in the most flattering terms.<sup>1</sup>

M. Montal has also been honored by the following titles: he is official provider of pianos to Their Majesties the Emperor and Empress of the French, to the Imperial House of Brazil, and maker for the Imperial Institution for Blind Youth.<sup>2</sup>

To proceed with clarity in our examination, we will review successively the most important parts of the general manufacture of the piano.

### Case

Convinced that the lack of solidity of upright pianos had long hindered their use, M. Montal set himself to improve the construction of the case. Consolidated and maintained by iron bars and rails, the case already offered good guarantees of solidity; but there remained still something to be done to resist the enormous action of the strings, valued at the force of ten thousand kilograms, and which often damages the best made instruments. To oppose this tension of the strings in the reverse sense, that is to say in a counter-tension, M. Montal has managed to neutralize the effects. This counter-tension consists of threaded iron rods placed in the back of the case and adapted, by means of nuts, to the posterior parts of the rails. These rods, disposed parallel to the strings, can be lengthened or shortened, and consequently they offer a greater or lesser force opposing that of the strings.

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<sup>1</sup> The king of Hanover is an excellent musician.

<sup>2</sup> This last title was conferred on him by the Minister of the Interior.

<sup>3</sup> M. Montal has patents for these three pedals.

<sup>4</sup> The *jalousie* as a means of obtaining *piano* and *forte* is not a new invention: it has long been used in the making of organs; but what belongs to M. Montal is the application of it to the piano. This title was made for him by the Minister of the Interior.

<sup>5</sup> Other makers have also invented systems making the hammer come closer to the

This system, simple and well designed, maintains the rails and the soundboard, and gives the possibility of compensating if some flexing should manifest itself. The soundboard then being returned to its normal state, will get back its original sonority and vibration.

It is easy to understand that with this system you can easily remedy any problems that might arise from atmospheric conditions in different latitudes.

This invention, sanctioned by experience, and that many makers have tried to imitate, remains one of the real advances in manufacture.

### **Soundboard and Strings**

The soundboard and its ribbing have also received important improvements, which consist in changes in the dimensions of the board, in the arrangement of its ribs and in the increase of thickness in the treble portion. In addition, a new disposition of the bridge in the bass and treble bring even more stability and elasticity to the board, while permitting the strings to be given the greatest length possible. The nut pins have been replaced by brass agraffes, which M. Montal was the first to use in the upright pianos he has made, since 1840.

All these improvements have the goal of giving the tone more intensity, more roundness, and consequently to make it more satisfying to the ear.

One of the most common defects of the piano is the inequality of tone in the different parts of the keyboard. M. Montal has remedied this problem by using one and two strings in the bass, three in the middle, and four in the treble. Most often only three are used in this last portion, but they are then of a larger diameter.

This innovation, in conjunction with the particular disposition of the soundboard and bridge, give to his instruments a power, clarity and evenness of tone that has not been obtained up until now.

The upright piano being the diminutive of the grand piano, the vertical alignment of the strings is considered as conforming to the best construction. Nevertheless, this disposition has always been resisted by artists because of the inferiority of the bass, deriving from the shorter length of the strings.

With the help of his understanding of acoustics, M. Montal has made strings of which the construction makes up for the length by conditions of vibration that other strings do not possess. These conditions depend on the metal used, on the relationship between the core of the string and the wire wrapped around it, and in the soldering of this wrap at both its ends. Most makers of today have adopted this new means of fabricating strings.

These improvements and those already mentioned have produced excellent results, and the bass has acquired a very remarkable power of tone.

While improving pianos with vertical strings, M. Montal has not neglected those with oblique strings; he has applied to these instruments his system of counter-tension, and has included in them all the improvements he has thought compatible.

Independently of these types of pianos, M. Montal has also constructed upright pianos in which the strings are placed in a fan, that is to say that they are vertical in the treble and become progressively oblique toward the bass, of which the last string has the greatest length possible.

By this means of construction one obtains the clarity of tone in the treble of pianos with vertical strings; in the middle the power of semi-oblique pianos; and in the bass, the roundness and vibration of oblique pianos.

Counter-tension is here also a valuable help in neutralizing the action of the strings, acting in a different alignment.

### **Action**

The action, such an important part of the piano, has also been the object of constant experimentation by M. Montal, whether with simple escapement or with double escapement. Many new models of the second genre of escapement are included in his patents for upright and grand pianos.

All the flanges of his actions are brass with pressure screws, which gives more precision to the blow of the hammer, and at the same time facilitates repairs, making them less costly.

Brass being less susceptible than wood to atmospheric influences, the stability of the flanges protects the instrument from perturbations resulting from changes of temperature, and consequently increase its solidity and longevity.

The escapements are furnished with a sticker that puts them in communication with the keys, which, by the combination of the different centers of the action, increases the force of impulse given by the finger, and gives the tone more vigor, requiring less effort.

Another result of this mechanical communication is to give the keyboard a great sensibility and to permit the performer to express with facility all the most refined and delicate nuances.

### **Hammers and Dampers**

The hammers are covered in a very particular manner: they are covered with many layers of leather and double felts of different fabrication; they acquire by this process more elasticity, and produce an excellent quality of tone.

We know that in upright pianos the dampers do not always fulfill their function in a satisfactory manner, and that after returning they allow the string to vibrate still. M. Montal's attention has also borne on this point: he has invented new dampers, which stop the tone completely as soon as the key is raised, and thus keep the vibrations from being confused.

### **Keyboard**

In most pianos, even those that have been carefully constructed, it often happens that the keyboard, after having been played for a period of time, makes noises, unbearable clicks. These noises arise from the fact that the mortises of the keys become larger, following repeated friction, which means that the pins that hold the keys in place have too much play in their mortises.

This problem disappears in the pianos of M. Montal, because, on the one hand, all the mortises are covered with leather or cloth, and in a very particular manner; and

on the other hand, because the pins fixed to the key frame are oval, or flat, with pressure screws placed in the sides of the keys. By these two means, one can easily repair any problems the keyboard may sustain. In addition, on the end of each key can be found a rocker with an adjustment screw, which is intended to make the compression of the coverings disappear, which time and use will inevitably bring, and return that part of the instrument to its original precision.

The upright pianos are in three formats: small, medium and large. The large format has a tonal force superior to that of the best square pianos, and can thus be said to compare to that of grand pianos.

### **Transposition**

Everyone who is seriously occupied with music knows that transposition at sight requires a great deal of practice and ability, and, even with that, it always presents difficulty if the music includes a fair amount of modulation. There are cases where that difficulty becomes not entirely insurmountable, but excessively great: for example, if one improvises a piano accompaniment from an orchestral score, and it also involves transposition; certainly this operation becomes complicated by a thousand embarrassing circumstances, and becomes the most troublesome of labors.

A piano supplied with a transposing mechanism, like that which M. Montal has patented, is thus of real utility, since it permits one, by means of regulator and a simple lever easy to put in motion, to raise or lower at will the pitch of the piano by one or many semi-tones.

Far from reducing the solidity of the instrument, this mechanism, on the contrary, increases its durability.

Amateurs who study voice, and who are not used to reading all the clefs, must understand how useful such an instrument can be for them. In fact, one of the difficulties most of them experience, which often blocks their progress, is in transposing their singing exercises into different keys: with a transposing piano, no more problem, no more time lost in studying an accompaniment in a key other than the one it is written in: a lever pushed to the right or to the left by a light movement, and the transposition is done.

Teachers of voice must certainly appreciate the usefulness of this invention: it allows them to choose at will the most favorable key for the different voices they teach, and their attention, no longer being preoccupied by the difficulty presented sometimes by transposition, can be entirely focused on the work of their student.

Artists, and above all amateurs, will be grateful to M. Montal for working to improve and simplify an invention of so real a utility, that in many circumstances shortens a long, painful and fastidious labor.

### **Pedals**

The resources offered by the piano with respect to mechanical means to vary the intensity of tones are very limited: they are generally confined to opposition of

*piano* and *forte* obtained by two or three pedals, of which the effect is not very satisfying; and in addition these oppositions are not susceptible to gradations.

M. Montal, seeking a means to prolong as much as possible the tone of the piano, is at the same time wishing to find a mechanism that permits one to vary progressively the intensity, and he has succeeded in offering artists an instrument that possesses altogether new resources. These remarkable results are due to the *jalousie pedal*, the *expression pedal*, and the *prolonged tone pedal*.<sup>3</sup>

### **Jalousie Pedal**

The tonal expansion of upright pianos is, as is known, greater in the back of the instrument, that is to say on the side where the listener is ordinarily placed, than on the side of the performer. M. Montal has thought that one should take advantage of this natural circumstance, in seeking a means to modify the effect.

He has thus decided to close the back of the piano with a sort of *jalousie* [like Venetian blinds] with movable slats on pivots, which are moved by a lever pushed by the knee, and which stays in place as long as desired. It is easy to understand that in closing or opening the *jalousie*, the tone is increased or diminished suddenly.

The object of this pedal is to obtain a sweeter sound when accompanying voice or any solo instrument.<sup>4</sup>

### **Expression Pedal**

When pressing the foot on the expression pedal, the hammer blow is modified: the more you press, the shorter the distance the hammer needs to travel before striking the string. As a result, the tone diminishes, and one can pass through all degrees of nuance from the natural tone to the weakest *pianissimo*.<sup>5</sup>

This nuanced effect is made even more sensitive by the addition of the *jalousie*, that functions simultaneously with the expression pedal and by the same mechanism. But here its effect is not sudden; it is graduated, and it follows progressively the adjustment of the hammers.

There is also another way to combine the effects of the two pedals: it consists in closing the *jalousie* at first, and, the tone having been suddenly diminished, to use the expression pedal, which will bring the tone to the weakest degree of intensity.

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<sup>3</sup> M. Montal has patents for these three pedals.

<sup>4</sup> The *jalousie* as a means of obtaining *piano* and *forte* is not a new invention: it has long been used in the making of organs; but what belongs to M. Montal is the application he has made to pianos.

<sup>5</sup> Other makers have also invented systems making the hammer come closer to the string to weaken the intensity of the tone: but the means they have used create the disadvantage that the hammer, being separated from the escapement, loses its precision of attack. Montal avoids this defect by a simple means: his pedal gives the keyboard a light rocking motion, which, raising the escapement proportionally as the hammer approaches the string, maintains the precision of the action. The keyboard thus acquires a lightness, a facility of execution.

The expression pedal can also be combined with the forte pedal: it modifies the effect of the latter, as it modifies the natural tone. One can thus by their combination and their successive use pass insensibly from the greatest forte to the greatest piano and vice versa; an advantage that allows one to increase or diminish the tone during a scale, in a prolonged trill, in a series of repeated notes, etc., with a perfect equality of progression.

This pedal replaces with advantage the double escapement repetition action, of which it has perfected the effect: with the double escapement, one cannot produce the tone at a weaker degree until the key has already been lowered, and only in passages where the same note must be played many times; with the expression pedal, on the contrary, one obtains from the first attack of the key the degree of force one desires, and in all possible circumstances.

One can now see all the effects one can obtain by using this pedal. It has also this additional advantage, that with the instrument naturally giving less tone, there is no more need to moderate the muscular force as much to obtain the piano, and the work necessary to be able to play with nuance is considerably abridged. We definitely think this is one of the most notable improvements, and that one day it will be generally introduced into the manufacture of pianos.

### **Pedal of Prolonged Tone<sup>6</sup>**

The ordinary forte pedal lifts all the dampers at once, and allows all the notes that one strikes while the pedal is down to vibrate simultaneously.

It follows from this effect that one is obliged to release the pedal every time there is a change of harmony; without which the vibrations of unrelated tones from different chords that follow will soon produce an insupportable cacophony.

The pedal of prolonged tone works differently: it lifts only the dampers of the notes struck *before one puts the foot on the pedal*, and which one wishes to leave vibrating, without having to hold the fingers on the keys for the purpose. The great difference that distinguishes the two pedals is easy to grasp; the one allows all the tones to vibrate without distinction, the other only sustains those that really belong to the harmony.

The hand that has become free while the tones are sustained can then execute accompaniments or any sort of figuration, of which the notes are damped as soon as the fingers are lifted, and consequently without causing the confusion of successive harmonies.

In this pedal one has, therefore, the possibility of producing effects analogous to those that one can only produce in playing with three or four hands.

### **Grand Pianos**

As we have said above M. Montal has taken up again the manufacture of grand pianos. But, always guided by his spirit of invention and improvement, he has again

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<sup>6</sup> This pedal was executed by M. Montal for the first time in 1844; but since that time he has improved it.

introduced into these pianos different improvements: for example, the brass agraffes used on the pin block and whose function is to hold the strings, has been improved; the soundboard has been enlarged; its bridge and ribs have been modified. Beyond this M. Montal has decided to place a brass nut in the high treble, which bears on the pin block from above and in front, and against which the iron bars are supported, while at the other end they bear on the iron hitch pin rail.

This disposition produces a proven solidity, more stability in tuning, and a great firmness in the high treble of the pin block. In addition, it keeps the upper pin block from resonating, and eliminates that disagreeable noise that one notices in the high treble of most grand pianos, which makers call the hammer blow.

M. Montal uses new double or single escapement actions for which he has patents in his grand pianos. They are also simple and solid, and allow one to produce a strong or weak tone, depending whether you allow the key to rise more or less.

The three pedals described above, the expression pedal, the jalousie pedal, and the prolonged tone pedal, are adapted perfectly to the grand piano. Their effect has here more power, because pianos of this type naturally have a greater intensity of tone than that of upright pianos.

Here we end our examination: we have passed in review and analyzed all the important parts of the piano. But to sum up, if we cast a glance at the whole collection of inventions and improvements introduced into manufacture by M. Montal; if we consider that the attention and cares of this able and ingenious artist are brought to bear successively on all parts of the instrument, and that almost throughout he has obtained the most satisfying of results, we will recognize necessarily that his labors have rendered the greatest services to the manufacture, and that his house takes its place without a doubt at the level of those who hold the first rank.<sup>7</sup>

Most of the pianos presented by M. Montal at the last Exposition were remarkable for their rich and elegant ornamentation, and to the point of view of the art of sculpture in wood, of inlay and incrustation, they merit a special mention. But this not being in an area of our competence, we leave to another the task of making a particular description of this exterior richness, and to appreciate all its merit.

Émile Bienaimé

Professor of Harmony at the Imperial Conservatory of Music in Paris.

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<sup>7</sup> M. Montal has also made himself known by the publication of works related to his art, notably *The Art of Tuning one's piano oneself*. This work, written with clarity, has been submitted to the examination of the Society for the Encouragement and of the Free Society of the Fine Arts: both rendered a favorable account of it, as will be seen in the reports printed on pages 41 through 44.



From *Les Conteurs en Famille (Family Storytellers)*, Michel Möring

### **Story of a Blind Man Who Became Famous**

The young family was assembled around Madame Delmas. It was her turn to tell a story. But she refused, saying she had nothing to tell.

An old friend of the colonel, who had come to pass a few days at the château, asked to take her place.

As soon as the children heard this proposal, they jumped for joy: they knew that M. d'Amvilliers had written many instructive and entertaining works for the young. So they hurried to surround him and asked him to keep his promise immediately.

M. d'Amvilliers, smiling at his young listeners' insistence, gave them their wish.

"I will tell you," he said, "a true story, the story of a blind man who became famous. The man who will be the subject of this story is one of my oldest and best friends. Nobody knows better than I the smallest details of his interesting life, so filled with useful lessons. The son of simple countryfolk, blind from his earliest childhood, almost without resources and with nobody to protect him, he was able, thanks to his courage, his perseverance, and his strong and energetic will, to reach a lofty position in one of the industries that is most closely connected to art; all this in spite of the prejudices that are associated with blind people, which usually lead to all paths being closed to them, and condemn them to vegetate sadly outside of the life of society.

"You will learn later, my friends, how unjust these prejudices are. There is nothing that education cannot correct and modify. It triumphs over all obstacles, all weaknesses and infirmities. Adapted to each individual, to his needs and his nature, it gives him the means to become useful himself to society. The deaf-mute, thanks to the Abby de l'Épée and his successors, and the blind, thanks to Valentin Haüy and his successors devoted to his work, find substitutes for the sense they are missing. Special methods allow them to be instructed in all branches of human knowledge. And if they are not able to aspire to all careers, at least there are a great many with which they can make themselves useful and even display their talents or their genius.

"In support of these thoughts, a little weighty for your age, I will tell you the story of Claude Montal. Don't let the seriousness of my preamble frighten you, my young friends. What follows will interest you, I am sure, and it will captivate all your attention. Let us begin, then."

In the Department of Allier, about twelve leagues from Moulins, is the little village of La Palisse. This village, on the route between Paris and Lyon, is agreeably located in a large valley, in the midst of fertile fields bathed by the Besbre, a tributary of the Loire. On the slope of the hill that dominates it are the ruins of an

old fortress that belonged to many great historical families, and notably to that of the Chabannes, one of whose members, the marshal of La Palisse, was notable in the Italian wars, under Charles VII, Louis XII and François I.

This famous warrior is better known, my dear friends, by the popular song that begins thus:

Monsieur d'la Palisse est mort (The Lord of La Palisse is dead)  
En perdant la vie; (From losing of his life;)  
Un quart d'heure avant sa mort (A quarter hour before his death)  
Il était encore en vie. (He was still alive.)

But let us leave this song, which you know better than I, and return to our story.

About half a century ago, there lived in La Palisse an honest family of artisans, a father, mother and three children. It was one of those families in which you would find all the good feelings, all the virtues, all the good moral traditions of trustworthiness and honor. Claude Montal was the head of this family. After having served his country for a long time in all the wars of the Republic, he had asked and received a gloriously earned discharge, and went to marry and become established in La Palisse. There he took the profession of saddle maker. Working with courage, he was always able to make it through the year and maintain his family. If heaven had denied him fortune, it had given him the most precious of good things: a virtuous companion, friendly, devoted, endowed with all the precious qualities that give charm to life and honor the hearth and home. From this union were born many children.

When their children were assembled around him, and his wife smiled sweetly, and a ray of sunshine coming through the window joyfully lit all these beloved faces, Claude Montal, with tears in his eyes, thanked heaven for having made him so rich, rich in affection, happiness, health, courage, rich in the work of his hands, enough for the needs of each day.

A cruel trial came suddenly to trouble the happy and peaceful existence of this family: one of the children, named Claude like his father, was suddenly struck by a terrible illness, of which the name alone was enough to make mothers tremble in fright and gather their children in their arms to save and defend them.

Typhoid fever put young Claude's life in danger for a long time. His mother's tenderness, care and devotion triumphed over the illness.

But on the day that the child was cured, he needed to be guided in his steps: a funereal veil was forever placed on his eyes. There would never again be a difference between light and darkness for him. He was blind!

Blind! Not to see the heavens, the clear rays of sunshine, the splendors of nature. To hear the voice of his mother and not be able to see her features. To shake the hand of a friend, without being able to read his expressions and his face. To live alone, so to speak, in the midst of everybody else, in a never-ending night. What a sad plight! What a cruel affliction!

You, my young friends, whom God has made free in your movements, enjoying all your senses and all your faculties, can contemplate all the marvels of nature, of art and industry, thank heaven and recognize its gifts to you! But you should also pity those who, less favored than you, are placed under painful and exceptional conditions. Take an interest in their fates, give them a compassionate and generous hand. And later, when you have become adults, shun hateful prejudices. Help them, take an interest in bettering their fate, in their education, in their efforts and their work. In a word, make their path of life smoother and less painful to follow. These are your brothers, and you owe them that much more, since they have received less than you.

And so the young child was blind, blind forever!

The father and mother were inconsolable.

Wasn't Claude, of all their children, the most intelligent, the most gifted, the one who had the most promise for the future? Everybody envied him. How proud they were of him! Already the father laid many plans for him: He worked an hour more each morning, an hour more each evening, and earned enough to send him to school. The child would become well-educated, and perhaps one day...

And now little Claude was blind!

A proverb says, "God tempers the wind for the shorn lamb." The infirmity that had struck the child, instead of impeding the development of his intelligence and faculties, seemed on the contrary to increase the happy dispositions nature had endowed him with. Soon the force of will was seen in him, that perseverant energy that would be found throughout the course of his life.

One might say that the unfortunate boy, by a special grace of the good God, began a new life. Without regret and almost without memory of the past, he was always sweet, smiling and gay, tender and considerate to his parents, friendly and good with his little friends.

His mother watched over him with the greatest care. By means of letters traced in relief on cardboard by the pricks of a needle, she managed to teach him to read. Later, she sent him to the regular school. There, in spite of his infirmity, the child outpaced all his companions. Always serious and attentive, he learned promptly the first elements to which children are initiated with such difficulty, and became the top student in his class.

At the same time, in his leisure time, he worked at all sorts of manual tasks: he made leather fringes, braided whips, and crafted all sorts of little leather objects, that he sold and joyfully gave the proceeds to his parents.

We will see now proof of the marvelous skill he had acquired in working with his hands.

## **The Little Violin Player**

It was an evening in autumn.

The parents of the young blind boy, seated on each side of the large fireplace, conversed while waiting for supper time. The children played on the side of the road, in front of the house. Through the partly open door, the mother could watch them.

“Alas!” said the mother, “I always worry about our poor, dear child.”

“Our Claude?”

“Yes. Do you know that he has been blind now for three years?”

“And in spite of that he is no less quick, no less intelligent, no less adroit. He astonishes everybody in the country, both adults and his little friends. At school he is the best student, at play he is the boldest.”

“True. You would think he saw clearly. He goes everywhere, alone and without a guide. Nothing bothers him.”

“Did you know that he is very skillful at all sorts of things: that he braids my whips, and makes the fringes I need? He works with wood and leather as though he had two eyes.”

“Yes, but all that doesn’t keep him from being blind, the poor dear child! What will become of him one day? As long as the good God keeps us in this world, he will want for nothing. But when he is left alone, what will he do? If only we could give him a way to make a living!”

“Dear wife, what could we give to a blind person?”

“An idea has come to me.”

“What?”

“If we could have him learn to play the violin! Later, with feasts and weddings, that could perhaps, more or less, be enough for him. What do you think?”

“Your idea isn’t a bad one. But it is difficult to achieve, for now at least.”

“Why?”

“There is no violin to be found in this country. And even if we could find an instrument, there is nobody to teach him to use it. In any case, we will see later. If the opportunity arises, we will take it.”

Thus the father and mother of the little blind boy conversed, when suddenly they stopped and listened. Sharp and shrill sounds came to their ears. It seemed like the sound of a violin in new and incapable hands.

The mother left the corner of the hearth and went out to the street, from which the noise came.

When she arrived at the doorsill, this is what she saw:

On a bench in front of the house is the little blind boy. There is a violin in his hands. He is trying to play one of the folk tunes of the area. He tries and tries and finally succeeds, and his beautiful face shines with contentment.

Around him are groups of little boys and girls, who, with wide eyes, seem to listen in astonishment and admiration.

The mother cannot believe her eyes. Her head inclined through the door, gently moved, she considers her child.

He, by that marvelous instinct that blind people have, has sensed the presence of his mother. He rises and turns to her.

“Mother,” he cries, “It is a violin! A violin I made myself! Look!”

And he gave her the little instrument, which she took and considered attentively. The father arrived and looked at it in his turn.

Certainly, it was far from even the most rustic violin. Still, nothing was lacking: the soundboard, the neck, the strings, the bridge, the tuning pegs, each in its place.

“Claude,” asked his father, “are you the one who made this violin?”

“Yes, father.”

“But somebody has helped you and given you advice?”

“No, I worked on it alone. Boy did it take me a long time! Last year I was able to touch for a few moments the violin of a poor blind man who passed through here. Then I told myself that, if I also had a violin, I could learn to play and succeed in making a living without needing your help. So I set to work, taking care to hide it from you, because I wanted to surprise you.”

“Come, my Claude,” said his father, “come to my arms!”

In being kissed by his father, the child felt the tears that wet his cheeks.

“Are you crying?” he asked.

“It is from joy, my son! Continue, work with courage and perseverance, and in spite of being blind, you will find your place among men. You will know how to make yourself useful and be self-sufficient.

These words of the father were a prophecy.

Consider for a moment, my young friends, this extraordinary fact. Watch this little blind boy: he has touched a violin, and had the notion of making one. So he set to work, toiling for days. He knows nothing, he lacks everything, but it doesn't matter, nothing stops him or discourages him. A piece of wood, fashioned with a knife, takes the form of the instrument. Twisted horse hairs take the place of the strings he needs. At last, after many months of indefatigable labor, the child has an instrument, very crude no doubt, but on which he can nevertheless succeed in playing some tunes.

The history of that violin is the story of the whole life of the blind child: always the same courage, the same struggle against obstacles, the same persevering efforts, the same energy of will; and always the same success.

What an example he is for you to follow, my young friends!

### **The Inn at Droiturier**

On the route from Paris to Lyon, two leagues from La Palisse, is the lovely little village of Droiturier.

It is there that young Montal's father went in 1811, leaving his profession of saddle maker to build a little inn alongside the route.

This inn soon became one of the busiest in the area, thanks to the welcome its guests received, to the honesty, politeness and affability of the host, but also due to the presence of the little blind boy, and to the curiosity and interest he never ceased to inspire.

His intelligence had developed over the years, and at the same time he always showed a need to learn. More serious than children of his age, he sought the society of adults, asked for explanations of everything, and stored in his memory many precious lessons with the help of which he made up for the sense he lacked.

In the village of Droiturier there were workmen of all professions. The child went from one to another, asked them questions, tried to do their work, learned to use their tools, and rendered them many services in exchange for the training he received from them.

It was thus that he learned to work with wood, and developed a dexterity and skill of his hands that few blind people have equaled.

I have already told you that, filled with the desire not to be a burden on his parents, he had set himself to make all sorts of small leather objects, that he sold on his own account. They were easily sold, and he couldn't keep up with the demand.

This manual work did not keep him from his studies. He continued going to school, where he surpassed all his little companions. He showed an especial aptitude for arithmetic, and it was he who kept his father's accounts. But music always attracted him the most. In the evening, sitting at the door of the inn, he tried to play all the tunes he had heard and remembered on the instrument he had built.

All the country around had heard of the little blind boy at the Droiturier inn. Everyone was interested in him and everyone liked him.

Almost directly across from the inn was the post office.

The postmaster, M. Noailly, was a good and generous man. He soon became interested in the little blind boy.

One Sunday he came to look for him, took him by the hand and led him to his house.

‘Was it you,’ he asked, ‘who made the little violin you play?’

‘Alas! monsieur,’ replied the child, ‘that isn’t a violin. Oh, if only I had a real instrument!’

‘You would be very happy, wouldn’t you?’

‘That is what I want most in the whole world.’

‘Try this then.’

And the good M. Noailly put into the hands of the child a charming little violin he had bought for him.

The young blind boy could not stop examining it. He followed its form with his fingers, touched it, turned it every which way, plucking its strings and putting it close to his ear to hear it better.

‘Well, Claude,’ said M. Noailly, ‘the violin is yours. I give it to you.’

‘Mine, a violin! a real violin!’ repeated the child.

And he couldn’t believe it, he was so happy. M. Noailly had to repeat it many times.

‘Come and see me sometimes, my child,’ he said. ‘I played the violin when I was young, and I can teach you a little.’

The child thanked M. Noailly, then ran joyfully to show his parents the precious gift.

### **The Love of a Mother**

The child had grown. He was now fifteen.

But as he grew older, his mother became more worried about his future.

Often she was overcome by very sad thoughts. One day, deprived of his parents, without support, without fortune, what would become of her poor blind child? Would his violin suffice to earn him a living? Or would he have no other recourse than public pity, that pity which is often cold or mocking, which, by its disdain, often wounds so cruelly the unfortunate for whom it is the only hope?

Oh! That was a frightful image for the heart of a mother, the life of torment and anguish which her son would suffer, when she was no longer there to guide him, protect him and provide for all his needs!

One day when young Montal’s mother shared her worries with M. Noailly, who had remained the protector and friend of the whole family, he told her that in Paris there was a school especially designed for blind people, in which they were instructed and trained in skills, in which, in a word, they were made self-sufficient and able to earn their living through work.

From then on, young Montal's mother had but one thought: to have her son admitted into that institution.

The child shared this wish. He too dreamed of other destinies. He too thought of breaking the bonds caused by his sad infirmity, to create an independent future, to work and to take his place among men. And he also thought of the happiness he could bring in being able to come to the aid of his parents, and give them an old age of ease, calm and rest.

But what could be done? Paris is so far away! And the cost of the journey would be a heavy burden for the poor family! Furthermore, was there hope of success? And if successful, wouldn't it take a long time?

They took council, and decided to address a petition to the king. In that petition, made by Montal's father, he related his services as a former soldier, his campaigns, his wounds, with compensation for none of that. Then he spoke of the child, of the happy disposition of his heart and spirit. The king would be moved on reading the petition and would have someone respond immediately. And who knows? Perhaps he would respond himself! In any case, the admission of the child to the Institute for Blind Youth would be assured. Nobody could doubt it, neither father, nor mother, nor little Claude. The good M. Noailly, himself, came to regard it as a sure thing.

With what care was such an important petition written! Each phrase was studied, discussed, redone twenty times perhaps. More than eight days were spent in this work.

It was another thing altogether when it came to transcribing it. No paper was good enough, large enough. They were writing to the king! To write to a king is no small thing! The hand of the schoolmaster, who was charged with the task, trembled so that he wrote worse than the most ignorant of his students.

Finally the letter was sent.

Fifteen days passed in great anxiety. Each morning they waited for the arrival of the mailman. And when he shook his head no, they took courage in saying, "No doubt it will come tomorrow."

The desired tomorrow finally came. Young Montal's mother held the letter and dared not break the great wax seal of the royal coat of arms. She trembled with emotion. This letter would decide the fate of her son!

M. Noailly took the task of opening it. But he had hardly looked at it, when his face fell and showed his sadness.

"The king refuses!" cried the mother. "My child, my poor child!"

And holding her son in her arms, she covered him with kisses and tears.

The response merely said that the child, being older than fourteen, the age limit for admission, could not be received at the Institute.



After the first moments of sadness had passed, young Montal's mother was not discouraged. She maintained the hope of obtaining for her son an exception to the common rule. And trusting in providence, she awaited events.

God sees the tears of mothers and is touched. He hears their sighs and their prayers, and he grants their wishes.

A favorable occasion was not long in coming.

The niece of the king, the Duchess of Angoulême, made a journey to Vichy.

Vichy, my young friends, is a small village in the Department of Allier, famous for its mineral waters. These waters have medicinal powers. Each year they draw a great number of visitors who go in search of strength and health.

When young Montal's mother heard of the journey of the Duchess to Vichy, she conceived the idea of meeting her and obtaining from her that which she wished so ardently for her son. She thought with reason that this noblewoman, who had suffered so much, and whose existence had been so filled with bitterness and sorrows, would hear her suppliant voice and have compassion for her pain and torments.

She left alone, on foot, not telling anyone of her plan. By a lucky chance, or perhaps it was Providence, on her arrival in Vichy she found the princess. Her love for her son made her eloquent. And the good Duchess, moved to tears, promised her protection.

Eight days later, young Claude's parents received a letter announcing the free admission of their child to the Institute for Blind Youth of Paris.

### **The Institute for Blind Youth**

For a long time, my young friends, nobody gave a thought to improving the lot of blind people by education. Public pity was limited to opening asylums where they could find a refuge from abandonment and destitution. Only around the end of the century was a man finally found who, joining to his ardent charity a patient and laborious intelligence, undertook to raise blind people from the state of debasement and uselessness in which their ignorance kept them, and to invent for them the means of education appropriate for their handicap.

This man, whose name can only be pronounced with respect, was Valentin Haüy, the benefactor of blind people.

Valentin Haüy, born in Picardy around the middle of the last century, spent many years searching for a method to instruct blind people. When he thought he had achieved his goal, he gathered some of those unfortunates and tried to teach them. His success surpassed his expectations. Soon the progress of his students was noticed by the public. The State came to his aid, and, little by little, a school for the instruction of blind people came to be founded.

After that time, the Institute for Blind Youth of Paris, an establishment that has

served as the model for all the nations of Europe, has not ceased, under the watchful eye of the State and thanks to the efforts of able and devoted teachers, to make notable progress from day to day.

The Institute, today magnificently housed in a vast palace recently constructed for it on the Boulevard des Invalides, holds nearly two hundred students, who receive complete instruction there during the course of eight years, and also learn skills and useful trades which will later assure them of a sufficient income.

Ask your parents, my young friends, to take you some day to visit that remarkable establishment. You will see things there that will excite your interest and admiration to the highest degree: blind people who read, who write, who demonstrate geography with their fingers on relief maps, who make good and beautiful music and play the organ, the piano, and all the instruments; blind people who weave cloth, do wickerwork, and make all sorts of useful objects from wood which lack nothing in solidity, grace, and elegance of form.

But this has kept us too long from our story.

We return to young Montal at the Institute for the Young Blind. We find him with the same passion for study, the same patience and the same energy of will. Starting work earlier than his fellow students, whenever possible, he also takes time from sleep in reviewing, during the night from memory, all that he was taught during the day. Thus, his progress was rapid. He passed his comrades, and, after three years, he obtained the highest honor given by the establishment: a cross awarded by a vote of the teachers and students.

This cross, my young friends, which crowned the efforts of the young man, I have seen placed in the same display frame beside another cross, a noble symbol of honor and merit [the cross of the Legion of Honor], which was awarded for the useful labors of the man, and the remarkable works that arose from his intelligence and came from his hands.

Young Montal had nothing more to learn among the students. He was made a teacher. In that role, he rendered great service to the Institute, principally in contributing to find a system of writing for blind people, simpler and easier to use than ordinary methods.

While working to perfect his teaching and to fulfill the task that had been entrusted to him, our young teacher did not neglect his musical studies, to which he felt drawn by his aptitude and his own taste. He played many instruments equally well, notably the violin and the piano.

Finally, impelled by an irresistible attraction to the study of mathematics and mechanical arts, and endowed with a marvelous aptitude for manual work, as you have seen from his childhood, he was led to the most ingenious of his efforts, that which would decide his future and, at the same time, offer to his companions in misfortune a path with new resources.

Among the teachers at the Institute, there was a young man named Tourasse.

Less intelligent than Montal, he had a great deal of dexterity and a remarkable gift for handiwork.

Montal and Tourasse were bound in a close friendship. Often they made music together or passed long hours conversing about their hopes and plans.

For a long time they had noticed that the pianos at the Institute were badly maintained and especially badly tuned. They thought they would tune them themselves. Never, before them, had any blind person undertaken such work, which seemed to present, in fact, to a man deprived of sight, insurmountable difficulties, because of the great number of parts making up the interior of the piano, and especially the multitude of tuning pins on which the strings were wound.

But these difficulties did not stop the two friends. In a little time, with the help of touch, they became familiar with the various parts of the instrument. Having made this first study, they moved on to tuning and fully succeeded.

However, the tuner complained. He saw, in that attempt, a foreshadowing of the future. He was listened to, and the pianos were locked up.

Far from allowing themselves to be discouraged, Tourasse and Montal resolved to show in as clear a manner as possible that they were capable of doing what they had been forbidden.

They needed to have an instrument that they could use freely. A brother of Tourasse gave them a small sum with which they bought an old piano. They got permission to place this piano in the antechamber of the director. And there, under his eyes so to speak, they took it apart piece by piece, studied all the parts, then put it back together, and presented it to him perfectly repaired and tuned.

That was a decisive experience. From that day on, the tuning and maintenance of pianos was left to them. From that day also, a new profession was opened to blind people, perhaps the most productive and the one most accessible to all.

A new task, even more surprising than their first tour de force, came to enhance further the reputation of the two young people. The Institute possessed an organ, a rather defective instrument, which was in need of complete restoration. A large sum was asked for this work. The establishment was not rich enough to pay. One morning, the director called Tourasse and Montal to his office, and asked them to take charge of this important work. They accepted, on condition that they should be given workers who could, under their supervision, assemble or fabricate various parts.

To prepare for this work, Montal, the more intelligent of the two friends, obtained several books and studied them with care. At the same time, he consulted famous organ makers and visited their workshops. Finally he thought he was sufficiently prepared, and set to work with his companion.

After long efforts, among which were mixed some discouraging moments,

fortunately transient, the desired result was achieved: the organ, entirely put back in order, could be played as in the past.

But death, taking Tourasse, came to break the fraternal bonds and brought an end to an association forged by many years of continuous labor, and of joys and pains experienced in common.

This loss was very painful to Claude Montal's heart, and from that moment his stay at the Institute became unendurable.

In any case, for a long time he had thought seriously about making a future for himself. His thoughts were directed toward piano tuning. He had the firm conviction that not only would he find ample income for himself, but that he would also open a new path that many of his brothers in misfortune could follow.

The Institute, besides, didn't offer him a serious career. There he would have no hope of a comfortable existence. The functions of tutor, meagerly paid, took all his time and kept him from useful and profitable work.

Claude Montal, possessor of very modest savings, but trusting in Providence, left the Institute a few months after the Revolution of July, 1830.

He was fourteen (sic) when he entered; he was now thirty.

### **The Attic of Rue Serpente**

Let us go down one of the darkest and narrowest streets of old Paris, situated not far from the palace of Thermes, whose ruins still attest to the power and domination of the Romans over the Gauls.

This is Rue Serpente, once famous among the scholars of the old University of Paris.

This street, my young friends, as narrow and dark as it is, should not be regarded with too much disdain. It was there that the first printers and booksellers lived. From these black stores, from these old and dilapidated houses, came the first books that were destined to spread through our country the light of science and civilization.

Let us enter one of these houses, and climb to a poor attic on the seventh floor. A bare wooden cot and a few wicker chairs make up, along with two bad pianos, a violin and a few books, all the furnishings of that attic. It is the beginning of the winter of 1831, a harsh winter of a sad year, marked, my young friends, by a terrible plague, whose memory makes the generations that preceded you still tremble in fright.

Snow falls, blown violently by the north wind. The cold and the wind penetrate the attic through a badly fit window, that shakes and seems to sigh and complain.

Everything in the interior of the attic speaks of sadness and poverty. The walls are bare and dilapidated. In the empty fireplace, no joyful flame burns.

Not far from the window, leaning his elbows on the table with his head in his

hands, a man is seated. He muses sadly. Neither the sounds of outside, nor the cold that numbs his hands, nor the north wind that blows on his face, can interrupt the course of his dark thoughts.

This man is the poor blind man who left the institute to seek his path in the world. It is Claude Montal.

He presented himself in society filled with resolution and courage, and society met him with the old and fatal prejudices against blind people, and rejected him. He had counted on teaching lessons outside the Institute. But nobody wanted a blind man as teacher for their children. He presented himself in twenty homes that had been recommended to him, but they laughed at his audacity and refused to receive him. Fortunately, since he was blind he couldn't read in the faces of those who received him thus the expression of mocking pity and smile of disdain, more cruel than the rejection. He had counted on tuning and maintaining the pianos and organ at the institute. Through an unthinkable barbarity, he was refused this modest clientele that he had gained through such long and valuable service. They had rejected a blind man to give the work to a sighted one.

So there he was, alone, without support, without protection, without resources, subject to insurmountable difficulties! His savings were gone, and had it not been for a poor widow in his house, hardly better off than himself, who gave him food in exchange for lessons given to her children, he would have been very badly off.

For someone else, a situation like that would lead to despair. But he did not lose courage. He had faith in Providence and in the goodness of God. At that same moment, chasing the dark worries of the present from his heart, he dreamed of a better future and sought means to achieve it.

It is not in vain that a firm and courageous man trusts in Providence.

At that time, the Count of Saint-Aulaire was among the administrators of the Institute. A man of noble heart, with an enlightened spirit, a distinguished writer and an able diplomat, he has been unanimously missed in the country he served and in the hearts of all who knew him. Far from sharing the strict ideas that had led to Montal being refused the work of maintaining the pianos of the Institute, M. de Saint-Aulaire took an interest in the young tuner. He admired his happy disposition, his inventive genius, and above all his courage and perseverance.

Unhappily for Claude Montal, this eminent protector had been absent from Paris for some time.

But the door of his attic opened, and through it came a young lady elegantly dressed. At the sight of the poor lodging into which she had penetrated, a sweet compassion came to her face, and tears rolled from her eyelids.

These tears that Christian charity spreads are the only ones that the angels of heaven heed.

At the sound of the opening door and the light steps that moved toward him,

troubled in his long reverie, the blind man leaped up. With the acuteness of hearing found among those unfortunates deprived of sight, he recognized the presence of an unknown person, a woman.

“You must be mistaken, madam,” he said, rising and bowing to his visitor. “You certainly didn’t want to come to my place.”

“Aren’t you Claude Montal?” she responded in a sweet and good voice.

“Yes, madam, I am.”

“I am the Countess of Saint-Aulaire. My husband, detained far from Paris, has sent me to you to console you and give you a little encouragement. I come seeking you, first to ask you to maintain my piano, and then to send you to some of my friends, who will not delay, I am sure, in becoming yours. Come, my carriage is below, and I await you.”

How to describe the emotions of the blind man? He couldn’t speak – I was going to say he wept, but blind people do not weep.

Let yourself be led and guided, poor unfortunate! This generous woman who enters your dwelling, it is Providence who sends her. From now on, the future will smile on you, that sun with its sweet rays, a life of joy and rewards.

### **Twenty Years of Struggle**

I will tell you quickly, my young friends, how M. Montal struggled during twenty years against all obstacles, and how, having triumphed he arrived at success and fortune.

By the influence of the Countess of Saint-Aulaire, he developed right away a small clientele for piano tuning. Little by little he was put in contact with some professors of the Conservatory, notably M. Laurent, an artist of distinguished talent and the most honorable character.

Thence arose a decisive occurrence in the life of Montal.

M. Laurent had two pianos in his home, one a grand and the other an upright, from different makers. Until then, nobody had been able to put the two instruments in tune with one another. The professor asked the blind tuner if he believed he could succeed in that. And he agreed to try. After examining the two pianos at length, and taken account of the particulars of their construction, he understood what he would need to do to tune them together, and he succeeded.

This success astonished M. Laurent so much that, from that day, he told his colleagues that Montal was the best tuner in Paris. He recommended him particularly to Zimmermann and to Louis Adam, the father of the celebrated composer who was recently lost by the art of music. These eminent professors were of the greatest support to him, procuring for him the maintenance of their students’ pianos and authorizing him to use their names as reference.

From that time, all doors were opened to the blind man. The prejudices that had

long worked against him had been overcome.

Little by little, Montal began to be able to purchase a few pianos, which he reconditioned and repaired, either himself or with the help of a worker he trained. Soon he constructed little pianos, which were sold easily, thanks to the connections he had as a tuner.

But that was only a very modest beginning, and gave no inkling of his success in the future.

Meanwhile, Montal, thinking that his situation, though still in early stages, allowed him to sustain a family, decided to get married. He sought a devoted companion, sweet, simple, good, full of qualities of heart and domestic virtues. And he had the good fortune to find her.

Little by little his manufacture of pianos grew in importance, his sales became greater, and his workrooms grew in size. He followed in the footsteps of the most celebrated makers, soon equaled them, and ended up, after twenty years of effort, among the first rank.

Many medals, successively awarded in public Expositions, crowned his efforts and recognized a great number of useful inventions and achievements, which gave that much more glory to a blind man than they would have to a sighted one.

### **The Cross of the Legion of Honor**

It was around the end of the year 1851.

The emperor who reigns over France so gloriously today was then only President of the Republic.

You have heard people talk, my dear children, of the Great Exposition that took place in London that year, in which the products of industry of all nations were gathered in the vast and magnificent Crystal Palace.

But you have seen more recently, in Paris, an Exposition no less beautiful and no less remarkable, which relieves me of the need to give details on this subject.

It was, then, after the Exposition of London.

The Prince-President wished to distribute in person to the French artists and industrials the awards they had been given by the jury of London.

These awards, my young friends, were numerous and illustrious. In that contest of industry and the arts, open to all peoples, France, our beautiful and dear country, was placed in the first rank.

A numerous and select crowd, including representatives of letters, sciences, arts and industry, pressed into a large gallery of the Louvre, richly ornamented and decorated with emblems and draped in the national colors.

At the back, on a platform, was the Prince-President, surrounded by ministers and the principal representatives of power, of the clergy, of the government and

of the army.

The Prince himself called the names of those to whom the cross of honor had been awarded in testimony of their merit and their work.

Suddenly, at the call of one of the names, a man guided by a young child was seen approaching the stage.

The crowd parted before him, full of curiosity, and their eyes followed him with emotion.

“It’s a blind man!” someone said.

It was Claude Montal.

The poor child from La Palisse, the little violin player from the inn of Droiturier, the former student of the Institute for Blind Youth, having become one of the most celebrated makers of pianos, was going to receive the cross of honor, after having been given one of the highest awards in London.

The Prince-President wanted himself to attach that cross, so nobly earned, on the breast of the blind man. And, unable to tell him with a look the admiration he held for him, he took his hand and grasped it in his own.

This story is true, my young friends. The subject of the tale is still alive, surrounded by esteem and admiration.

He had his old mother brought to live with him. She died sweetly. She could die, because her son was happy!

If you wish to see, my friends, the hero of this story, ask your parents to take you one day to one of the concerts that M. Montal hosts every year in his vast and magnificent salons.

You will see the man.

Later, you will be able to judge his works.