

The Player Piano

A Triumph of Mechanical Adjustment

By H. C. Skinner

"Necessity is the mother of invention," saith an old proverb, and so it is. In the evolution of things, in the van of progress, the player piano is but the natural outcome of man's insatiable desire to accomplish something better. To follow the development of the pianoforte from its early stages to its present high state of perfection is indeed an interesting study. It carries us back to the days of our forefathers, extending over a period of centuries. Many of us have had the good fortune to see a spinet or a harpsichord, the two instruments which can be termed the foundation of the modern piano. They appeared in many forms, but after the restoration of the Stuarts were accepted and naturalized in England as the harpsichord, which we will define as the long instrument with quills, shaped like a modern grand piano and resembling a wing from which it gained the German appellation "Flügel." The chief characteristics of these instruments were the restricted keyboard and the mechanical plectrum which twanged the strings. The name spinet or spinetta owes its derivation from "Spina," a thorn. These spinetta, better known as crow-quill points, projected from centred tongues in uprights of wood known as "jacks," which also carried the dampers, and, rising by the depression of the keys in front, the quills set the strings vibrating as they plucked them in passing. Of course the full scale as known to us was unknown in those days. The introduction of semi-tones or what is now commonly known as the chromatic scale is of much later origin.

The Pianoforte

Bartolommeo Christofori was the man of genius who invented and produced the pianoforte in 1709. There had been many attempts and failures to put a keyboard with a hammer attachment to a harpsichord before Christofori successfully solved the problem. Literally speaking, the name pianoforte means piano—soft, forte—loud, two expressions retained in modern interpretation. We are indebted to Christofori not only for the power of playing piano and forte, but for the infinite variations of tone or nuances, which render the instrument so delightful. Hawkins, in 1800, was responsible for the upright piano. It was the first piano produced with the strings descending to the floor, the keyboard being raised, and this, altho at the moment the chief, was not his only conception. He anticipated nearly every discovery that has since been introduced as novel.

Scientific improvements being accepted we will pass along to the piano player. And here do not be confused with the player piano, the subject of this article, a more recent addition to the piano family. The piano player was an automatic, mechanical contrivance comprising a portable cabinet provided with bellows and operating pedals, a pneumatic actuating mechanism, a tracker adjusted for the use of a perforated music sheet, a pneumatic motor and winding-roll mechanism to propel the music sheet, and a series of finger levers operated by the pneumatic mechanism, so projecting as to overhang the piano keyboard and play upon it, with rockers or levers for depressing the piano pedals. Herein lay the birth of the player piano, the transitory stage of placing a piano player action in a piano case.

Player Piano Principle

The motive force is air pumped by foot pedals (similar to a reed organ) which operate a bellows and create a vacuum. The air is controlled by means of levers or buttons conveniently placed in the front of the keyboard. Each lever or button performs its own particular function. For instance, pressure by the finger on one will soften the tone, while pressing another will increase the tone volume. There is also a lever or button to govern tempo or time. The return of the perforated roll to its original roll after playing is controlled in a similar manner. Instead of the keyboard being struck on the outside as with a piano player, a mechanical device strikes the hammer at a given point on the inside and produces the same result as if the note is struck by hand.

The roll passes over a tracker bar containing eighty-eight holes and a tube

connects each hole with one of the eighty-eight keys on the piano. As the perforation of the paper passes over the opening in the tracker bar it allows the air to escape and instantly brings that note into action. The duration of the note therefore corresponds with the length of the perforation in the roll.

The player piano has many advantages over an ordinary piano. The first claim of course is that when not mechanically controlled it can be played by hand. In families where there are no pianists it brings joy into the home. Certainly more can be got out of a player piano, because some music rolls have a four-hand arrangement which produces the same effect as a duet. Any class of music known, from rag-time to the world's greatest masterpieces, can be secured from any reliable music house at a mere trifle in cost. Music rolls are sold at reasonable prices as low as 30 cents per roll to \$1.50 each, depending on the class of music. Rolls cheaper than 30 cents cannot be relied on as they are liable to cause trouble on account of their aptness to skin or peel when passing over the tracker bar, thus choking the air holes. The various degrees of light and shade are plainly marked on the roll which is always visible, and some rolls can be purchased in an accompaniment form as a setting to a song with the words of the song printed on the roll. But the one chief attraction is that a player piano is not so mechanical that the services of an operator can be dispensed with, and herein lies its great charm.

Points to Remember

A player piano does not play tunes, it is the individual who plays them or, better, interprets them. It is capable of expressing exactly the mood the operator can put into the music. Soft or loud, slow or fast. What nuances and subtleties of expression are desired depend entirely upon the individual. Correctly handled you can forget it is a mechanical contrivance. Its present state of development is well-nigh perfect, consequently its reproduction faithful.

Standard player pianos can be purchased from about \$600 up, depending on the quality of the piano and the case design. Player pianos can be bought on terms arranged in relation to cost. The additional cost over the same grade of piano that does not contain the player mechanism ranges from \$200 to \$300.

CURING JACK THE HUGGER

The editor of The Coldwater Planet is an elder in the Presbyterian Church. Could the truth of the following story be better vouched for than by the fact that it appears in the elder's paper? A young man at Orr Lake went to see his girl one night last week. After the old folks had retired the young man edged his chair up to the girl and gently put his arm around her. After chatting for some time he unfortunately fell asleep. This so annoyed the girl that she gently released herself and put the churn on the chair just vacated. The sleepy youth was hugging the churn when the old man came downstairs in the morning. He has not gone back since.

Which reminds us of another story told by a good Presbyterian in Winchester, who says the incident occurred in the neighborhood of Winchester Springs. It is as follows: A young man who had a mania for hugging was making himself objectionable in a family where there were two attractive and lively girls. They determined to cure him, and on his next visit he was invited to the kitchen, where the lights had been put out, and the rays from a lamp in an adjoining room were just sufficient to make the sentimental young man think he was safe. He sat on the chair next the fair young lady who seemed to encourage his caresses. She gently patted his cheeks, and ran her slender fingers thru his curly hair. She fumbled about his immaculate linen. When the young man reached his home that evening his parents had difficulty in recognizing him. His face was streaked with black, as was also his collar and shirt front, while his hair was matted with chewing gum. Needless to say the young man did not return to ask the fair lady how it all happened.—Winchester Press.

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