

## "THE DOUBLE STRINGED UP-RIGHT."

An Upright Double Grand Which Virtually Cannot Get Out of Tune.

A PIANO WHICH IS TO BECOME FAMOUS.

The Ithaca Organ company has for months contemplated adding the manufacture of pianos to their present large business. Having decided upon the style of piano they will make, a JOURNAL representative was courteously permitted to inspect the same and furnished many interesting facts in connection with it.

The new piano now stands in the wareroom adjoining the business office of the organ factory.

Mr. J. H. Hintermister in whom natural aptitude, education and ripe experience have developed expertness and judgment in matters musical was our guide to an understanding of the new piano, while Prof. Perkins of Bradford, Pa., demonstrated upon its keyboard his love for the classical and his fondness for the newly discovered instrument. While the Professor swept the keys with deft fingers Mr. Hintermister gave expression to his delight and admiration of the combination of wood and metal from which such royal harmony was being evoked. He said:

"Upon the public endorsement of my judgment upon this piano depends the future of a great industry in Ithaca and the employment of hundreds of men. I am confident of that endorsement. When it comes to be the recognized piano I shall be enabled to lay claim to no credit save that of recognizing and adopting the result of another man's skill and invention.

Let me interest you in him. A poor workman in one of the great piano factories in New York city he saw many years ago, that to put a strain of fifteen tons upon one side of a piano frame and hope that it would remain in tune long at a time was not reasonable.

It must cause the frame to wind, tighten some strings while loosening others, derange the action and throw some of the hammers out of line with their respective strings, causing them them to strike but partially, not at all or possibly the wrong strings.

He thought and wrought and two years ago had this completed instrument as the result of a master's hand and brain bent for years to the achievement of a great object. So humbly was he circumstanced and lacking in address and tact that he was unable to secure any consideration for his invention by the potentates who believed they had long ago attained perfection.

For two years he vainly sought to yoke capital to his invention when I learned in an inland village in this state that a Swede had come to that place with an upright piano of a power and sweetness of tone surpassing anything before known there. I sought the man and his wonderful instrument and found them at dusk. Upon being told the object of my call he described to me the merits of his work and it being by this time

dark he guided my hands from part to part as he described each. I felt myself in the presence of a master. One who painfully realized existing faults and had conscientiously overcome them. I felt honest devotion in every tone of his voice and touch of his hand.

I knew enough of the piano to appreciate as "true bills" the indictments he found one by one against the instrument as now built. I was also able, from a considerable experience in the manufacture of musical instruments, to comprehend and justly value the practical improvements he had found and applied.

Seating himself, he drew such strong yet soft melody from his instrument that I was satisfied the day must dawn when the inventor's name will rank in the musical world with those of Weber, Steinway and Chickering.

He detailed to me his struggles and how one by one he had become victor over difficulties. Of his hopes and aspirations now that perfect fruition crowned his years of labor and study. When afterward I asked him to send to me, at Ithaca, this beloved offspring of his brain and first-born child of his hands, coupled with the promise that if found practicable I would aid him in introducing it to the public, he was very happy and gave quick consent.

Now please to examine the piano of which I have been saying so much to you."

Here the speaker drew near to the ordinary looking upright disrobed of its casing. The effect of the touch upon the key could be traced through all the trackage and action to the soft hammer as it struck the string.

"You will notice that this is virtually two pianos in one. Instead of being strung only upon the front causing a strain of 15 tons for the back to resist, it is strung also upon the back in precisely the same manner as upon the front. Thus while 30 tons' strain is put upon the frame it is evenly divided and maintains an equal pull in either direction upon every fibre of the frame. Some manufacturers of uprights have of late endeavored to correct this glaring defect of stringing only

the one side by putting an immense iron back or brace upon the back.

This offset is unnatural and can never prove more than a partial success because the resistance of the iron back is of a nature entirely different and not responsive to the strain it is assumed to neutralize.

Again it is a cumbersome makeshift which adds to the weight while detracting from the resonance and tone. The more intelligent pianoforte makers of to-day, must concede that it is this enormous strain upon only one side of the frame which renders it so difficult to keep pianos in tune.

Barring the tensile change incident to the slight expansion and contraction in the metallic string, which may be largely overcome by proper attention to tuning and testing at the factory, the unequal strain above cited is the only reason why a tuner's frequent presence is necessary.

This double-stringed piano is one which cannot from ordinary usage be gotten out of tune.

This particular instrument has been subjected to hard and almost constant pounding for nearly two years and yet it is in excellent condition, with but a trifling variation in two or three of the chords discernible only to the most practised ear.

Imagine, if you can, the condition in which any singly stringed piano would be found after such usage. It would be so discordant that one air could not be distinguished from another when played upon it.

To appreciate fully the importance of this great scientific discovery, it is necessary to bear in mind that ever since the piano was first invented manufacturers and scientists have striven to overcome the immense strain pulling on the wrest-planks through the great tension of the stringing process. Every possible device has been introduced to counteract the influence of that arch enemy of the piano. The Erards, Chickering, Broadwoods, Stodards, Lighte, Thom & Allen, Driggs and the Steinways have respectively introduced their methods to deal with this weak point. But it was reserved for our inventor to finally triumph and put the piano on a footing of perfection.

The saving in the matter of piano tuning may not be any very significant sum, yet it will buy much new music. Those living in the country, miles from any competent tuner, will find the advantage one of inestimable value. It is a great pleasure to have a musical instrument always in condition. This, however, is but one of many points of superiority. The double stringing gives, double volume at an enhanced cost of about one quarter. Duplicate hammers simultaneously strike two strings upon either side or four strings in all. There are also two sounding boards instead of one. Thus each piano of this make contains double the power which can possibly accrue to any single string instrument with a single hammer and single sounding board.

This cannot be gainsaid for we have upon the one side every approved mechanical appliance employed by the single string and its double or duplicate is placed upon the other side.

It is, indeed, two pianos in one.

By a pedal either the front or back action is thrown off or either used at the will of the performer. When but one of the sides is being used we get not only the volume of that one side as in an ordinary upright, but by the law of acoustics or wave sound the volume of the string struck is increased by the vibration of its corresponding string upon the other side to which no force is applied.

This is a charming feature with a most delightful effect.

The vibration of the strings upon which no force is used gives a filling in of rich tone, an added melody as beautiful as it is indescribable. The volume or quantity of sound is not only increased, but enriched and mellowed into liquid sweetness without any of the unpleasant detractors of applied force. It reminds of the Æolian harp in quality, naturalness and thrilling symphony.

And now with both cases employed, we nearly if not quite equal in grandeur of volume a grand piano while mellow full and rich in quality entirely free from any harsh or metallic sound.

Please note that there are now two hammers each striking two strings or four in all. We shall also build them with three strings on either side or six in all. We shall then have the equivalent of a great grand in a third less the space with more music, less noise, an easier touch and at a third of the cost.

These are but a few of many notable gains and coigns of vantage, which are amply protected by letters patent covering some ten specific points of improvement. These letters have been duly assigned and satisfactory arrangements made with the Ithaca Organ Company to produce and introduce the double stringed piano. Piano frames, actions, sounding and key boards are made by certain manufacturers whose specialties they are and who build nothing else. Piano manufacturers build the cases, the blocking,

string and do all the other work  
needful to present the instruments  
finished.

We have in this locality the finest of ash, maple, beach and elm from which cases are made.

There are here economical and delightful village homes awaiting skilled operatives:

Unsurpassed facilities for transportation and a perfectly organized system of agencies in connection with our organ business invite extension of effort. All of these must prove advantageous and we shall soon enter in the field of piano-forte making under brighter auspices than those under which the organ manufacture was inaugurated.

We knew that we had a superior organ and believed that the public would also come to realize the fact in due time just as it is now doing. We are now and have for months been turning out one complete finished organ every fifty minutes. We are behind orders to the extent of hundreds and in receipt of urgent appeals from our agents and the trade by every mail and by telegraph stimulating us to greater effort.

There stands the finest piano ever offered to an appreciative public and its price will put it in every home desiring an instrument of its kind.

We shall of course be enabled to make some minor mechanical improvements but the great principles are already embodied.

Having all my life been brought into direct, personal contact with what is termed the middle class I have become imbued with the belief that unless the price as well as the article is within their means and insures their patronage, the making of that article cannot become a great success. The cost of construction has therefore been an important factor in the consideration of this instrument. It would not do for us to essay its manufacture if compelled to sell it at \$500 or \$600, although it should be conceded the very best thing of its kind, and really worth that amount. We estimate that with proper facilities we can place them upon the retail market, the four stringed at \$400, and the six

stringed at \$450, or thereabouts, varying somewhat perhaps by the style of case and finish.

We shall make no square pianos. This double stringing cannot well be applied to them and no one will in time to come, have other than a double stringed. Uprights are daily growing into favor and this upright must outstrip all others in the race for public preference. I will not be so extravagant as to say that it will consign Weber, Steinway Chickering, Decker and Brothers and other justly celebrated makers to the shade; but I sadly err if it does not make the name of its owner and the place of its manufacture known to the civilized world.

The authorized capital of the Ithaca Organ company is \$125,000.00 of which there has been paid in to this date \$92,000.00 leaving stock in hand \$33,000.00 represented by 650 shares of \$50 each, which are now offered by the company to the public at par value.

A portion of this money is required to start the piano department which is to be placed under the supervision of the inventor of the piano treated above.

An opportunity for safe and lucrative investment is therefore extended by our company in these days of small percentages and I predict that these shares will not linger long in the market.

The brilliant financial record of the Ithaca Organ company, which eclipses by far that of any manufacturing enterprise ever established in this community, is an ample guaranty for its future."

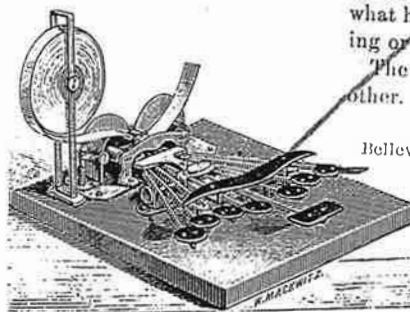
THE STENOGRAPH, OR MECHANICAL S  
WRITER.

[NOTE:—The illustration and description of the Phonographic Machine, presented in the *N. Y. Times* for May 15 last, have elicited considerable comment and inquiry. That machine, being a combination, is not very accessible either for examination or purchase. Shortly after the publication of the *Phonetic plan of writing* has been adopted, we learned that a machine intended for common spelling can be used by those preferring the same work had been recently imported. Pronounced consonants are written and all initials. We have succeeded in securing an instrument from the inventor, and present below his interesting communication. This will be better understood from the following

*Editor Mechanical News:*—In response to requesting me to furnish for publication in your issue a full account of the origin, construction, principles and advantages of the Stenograph, I take pleasure in submitting the following:

As near as I can remember, the possibility machine for short-hand reporting occurred some time in 1873 or 1874; my impression is the Type-writer that suggested it.

My first work was rather in the nature of  
tion, with a view of forming an opinion as  
could be accomplished or not. A great ma  
were analyzed, and the average number of  
word as written in short-hand, or as necessa  
ten on a short-hand machine, was found to  
half. Assuming one hundred and sixty wor  
as sufficient for verbatim reporting, it was fi



letters per minute would have to be made to  
It was further ascertained that only about 30  
minute could be made with one hand. It  
evident that in order to succeed one of two  
be done, the machine must be so constructed th  
one letter could be made at each stroke, or  
must be devised for increasing the rapidity o  
After trying the former plan and finding that  
complication would result, I finally hit upon  
making two sets of keys, one for each hand,  
the strokes in alternation, one with one ha  
next with the other. After that the only di  
with were of a mechanical nature, as by that  
600 letters per minute can be made, which is  
equal the speed of the best stenographers.  
eral unsuccessful attempts a machine was g  
ing shape some time I think in the early  
and it has been in the present shape since the

But five type or markers are used. These to the same number of keys, one of which is operated by both thumbs. The remaining shaped, having a marker in the curve, and finger-piece at each extremity. They are pivoted between the curved part and the finger-pieces. The finger-pieces on the left of the key-board operate markers as the four on the right. By this all the combinations can be made with ease. There is also a spacing-key. The writing takes a paper ribbon one-half inch wide, which is wound automatically by pawl and ratchet at the depression of the keys. The paper passes underneath a roller which receives the impact of the keys, and the paper and the markers there is an impression through which the impressions are made. The instrument also moves slowly along as the writing progresses upon which the instrument is mounted and a-half by nine inches. The weight, each is three-and-a-quarter pounds.

If the five keys are depressed at the same time, either hand, a line of the same number of dots appear across the paper ribbon. The alphabet from the different combinations of these dots. The first or thumb key is depressed a single dot, on the left side of the paper, which indicates the letter D. The second key produces a mark at a distance from the edge of the paper, which represents the letter E. The third key makes a mark in the middle of the

The fourth T, the fifth S. The first and second d represent D, the second and third M, the third a K, the fourth and fifth Z. Other combinations of other letters.

The phonetic plan of writing has been adopted. Common spelling can be used by those preferring pronounced consonants are written and all initials in vowels. Other vowels are omitted except such as essential to legibility.

This will be better understood from the following sentence, which is printed with the letters with which it is written on the Stenograph:

The sadst r thz, it mt hv been.  
 "Of all sad words of tongue or pen,

The uses are identical with those of short-hand. Some of the advantages which the Stenographic system offers over other systems of short-hand are as follows. It can be learned in much less time, as there is no need of writing each letter and an almost entire set of rules.

It is less tiresome than using pen or pencil, and analysis can not result from its use.

It is more legible. The letters are exactly the

It can be operated without looking at it, thus the operator to look at the person speaking what he says, and to look at books and papers writing or making extracts from them.

The writing of one operator can be easily re-

Very respectfully,  
M. M. BARTHO

Belleville, Ill.

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