J. W. WHITLOCK AND HIS AUTOMATIC HARP

“To sail under the sea or through the air, to talk through space, to see through flesh and bone, to make wax speak and pictures move - these have been the deeds of the poets of our generation. The things that were dreamed of in the 'Arabian Nights' have become realities - young men talk the impossible on street corners and then make it come true.

These men delight to love, delight to plan and dream and hammer out results. Nothing staggers them, and failure or success is greeted with a smiling face.”

From **"Is Poetry to Have a Chance"** by **Robert Bridges Colliers**, October, 1904

The harp: an instrument that fires the imagination recalling romantic moments, wispy tunes or delicate coloring in quiet moments of an orchestral piece. The harp is an exotic instrument.

Certainly it is ancient. In early history, Egyptian priests played upon a polycord instrument shaped like a harp. The old Egyptian harps had no fore-pillar, leaving to doubt how the string tension could be maintained for any length of time. The harp developed through the ages when, in the early 1700's, Handel became the first of the great masters to introduce it into the orchestra in his oratorio Esther.

The instrument further evolved both as an orchestra component and as a solo accompaniment to the voice. It was in this latter capacity that one occasionally found a harpist at more-refined eateries and hotel lobbies as the turn-of-the-twentieth-century approached. To be sure, the harp as a solo instrument in 1890 had competition. The bawdier houses and saloons were more apt to employ piano players or banjoists. Ragtime flourished on these more powerful instruments. But there was also a place for refined music of softer character, and harpists were able to make a living easily. Still, it is surprising that the early wave of automating musical instruments included the harp in its wake.

Fig. 1. Wurlitzer Automatic Harp, Style B, #1544 in the author's collection during the 1980’s. This Harp's history includes playing for President Nixon at the Kennedy Center in Washington, D.C.

The Encore Automatic Banjo was taking shape in 1893-95. The Roth & Engelhardt coin-op pianos were innovative at the turn-of-the-century as was the Wurlitzer Tonophone pinned-cylinder-operated piano. In the absence of adequate phonograph musical quality and power, the perforated-roll-operated instruments became the media that enabled ragtime to become the first American national music form.

Amidst the earlier developments in the automatic-music field was John William Whitlock's Automatic Harp, invented and produced in Rising Sun, Indiana, and eventually exclusively distributed by the Wurlitzer Company. Why a harp? What kind of music did it play? How successful was it? Who was Whitlock? As with any early development, there are many questions. Some careful digging mixed with some fortuitous preservation of original records and literature provided many of the answers.

The Wurlitzer Automatic Harp is beautiful in appearance, soft in volume and, while a rarity, enough are around to make it possible to own one. As with other desirable instruments, the Harp has been flattered by being replicated as mentioned later in this article. During the 1980's I sponsored the production of recut rolls by compositing some of the best original music as well as by having produced some newly arranged music by Art Reblitz that makes the Harp play in a way that the inventor never imagined.

Fig. 2a. 1905 news photo. **Fig. 2b. Whitlock with his Euphonium. Photo from sheet music by Kathleen Whitlock.**

J.W. Whitlock - The Early Years of an Entrepreneur

A look into the invention of the Automatic Harp reveals an inventor who was a classic combination of entrepreneurialism and Edison-like dogged inventiveness that helped build America. The man, J.W. "Row" Whitlock (1871-1935), made a story of his life that should be recollected, for the way in which he accomplished "the American Dream."

The setting is Rising Sun, Indiana, a small Ohio River city just 35 miles upstream from Cincinnati, Ohio. Whitlock became the heart of Rising Sun not only for the economic impact of his businesses, but for the sheer adventure and excitement he brought every time he embarked on a new venture.

Whitlock never went to college, not even high school. When he was a teenager, he worked on the river cutting timber. His father owned a sawmill and had a skiff shop in Rising Sun. Row Whitlock had no plan at all for his life. Using his nose for a guide and his head and hands for tools, he forged a series of accomplishments as though he didn't have a minute to spare. He was a leader who seemingly could walk through a wall because no one told him it was impossible.

The only rhyme or reason to the projects he tackled was that as an opportunity arose, he would get it done without assessing the difficulties or the risks. Row Whitlock worked night and day. He loved to closet himself in his workshop, an enclosed room in a corner of his Harp and chair factory. At times he would unceremoniously emerge with some new contraption to solve the latest problem posed by one of his projects or in order to help a friend. If successful, he capitalized on it to whatever extent possible. If the idea turned out to have no future, he discarded it with no remorse, moving on to the next challenge.

In 1980 I traveled to Rising Sun and interviewed several people including Row's son-in-law, Robert Neaman. He recalled one day when he went into Row's workshop and saw the inventor working on some small item. But his attention was drawn to a larger mechanical device that appeared to have been recently discarded. "What's that?" Neaman asked of the discarded item. "That's an electric starter I made for a Ford motorcar," Whitlock replied. When his son-in-law commented that it sounded like a useful item and inquired as to why he wasn't doing anything with it, Whitlock responded, "Oh, somebody else just beat me to it" He had thrown it aside without much further thought.

Years later, after World War I, the U.S. Government became sensitive to a growing dependency on foreign-supplied rubber. Enterprising American companies such as Firestone, Edison and Ford were enlisted to find ways of growing and extracting rubber from the tropics of South America under American control. Henry Ford knew Whitlock and approached him to develop a type of boat that could negotiate the swampy waters. At his own risk and expense, Whitlock proceeded to build a boat dubbed The Bear, a product of the second floor of the Harp factory. It was over 40 feet long, had only an eight-inch draft and its rudders were hinged to flip up when snags were hit. It was powered by two airplane engines Row had purchased from the Navy. It was a forerunner of the swamp buggy. Eventually, the depression ended further development of The Bear before it was ever put to use. The Bear was just another example of Whitlock being able to create more throw-away items than most people have ideas.

Henry Ford knew of Whitlock from the Harp-producing days. Supposedly Ford proposed to Row that he invest in the Ford Motor Company not long after its formation in 1903. Whitlock declined.

Fig. 3a: Rising Sun, West on Main St. in 1909.

Neaman recalls: "I helped him make a coin-operated horserace game once. It looked like it might have been a popular game, and a number of them were made. Someone came along and suggested that we put an automatic coin payout feature on it, like the gambling machines. 'No,' he didn't want to do it, and I don't know why. He just knew how he wanted things, and he didn't want to work on it anymore."

Fig. 3a: Rising Sun facing east on Main Street in 1980 with the forested Ohio River shore of Rabbit Hash, KY

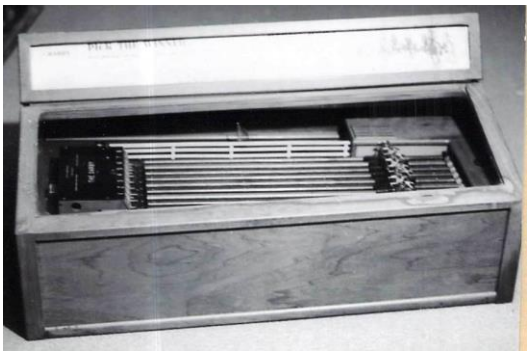
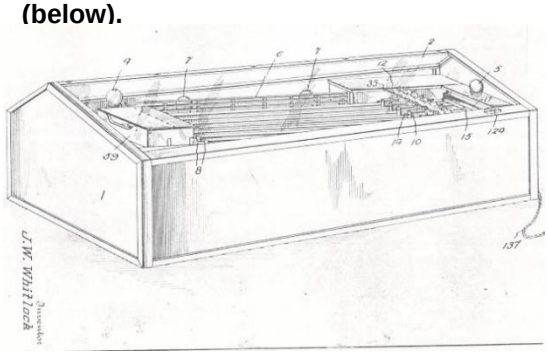


Fig. 4. Whitlock's Derby horserace game, which he actually patented (below).



Conception of the Automatic Harp

Whitlock's throw-aways were interesting enough, but the exciting stories lie in his successes: the Automatic Harp, his furniture and his record-setting speedboats. It all started in the beginning of the 1890's when, as a lad just turned 20 years of age, Row had already mastered woodworking skills in his father's sawmill. Still wet behind the ears, he was ripe for a challenge that would set him on

his own independent feet. Here we find one of the first instances of Row following through on his tendency to follow his nose. Neaman recalls:

> *“Row had a very good friend, and they played a lot as kids. It was a funny thing, there were three of them, Harry Conners, who played the harp all around the big hotels in Cincinnati, and another guy called Duck because all he did was catch ducks and fish. They had personalities as far apart as you could get, but they were inseparable. Harry would play the harp all the time. He would come and spend a week at a time with Row at his house.”*

How an inventive mind comes up with an idea above all others, such as "automate a harp", is not the sort of thing one discovers from rational research. As Raymond Bedgood, an original Harp factory employee also interviewed by the author in 1982, puts it:

> *“How do we get any of this stuff nowadays? It's because somebody has a dream of this or that, and next you know we have it. When you get into technology, you know, you can't figure it.”*

The whole idea of coin-operated amusement was brand new. Patent records show that the U.S. Patent Office was granting patents for coin slots since the late 1890's. One can only conjecture the reasoning between Conners and Whitlock: if you could make a self-playing harp, then Conners could leave them behind as he completed live performances at hotels and restaurants in Cincinnati.

The other key to the puzzle, I.e. where Whitlock got his exposure to pneumatic technology, is provided by Bedgood's recollections:

> *"Well, up in the attic of the shop, he (Whitlock) had an old paper-roll organ and an old slumber chair. J.W. would work on that organ — always fixin' it He'd pedal on it and made a hell of a racket it didn't have electric and my dad would set up there with J.W. and crank that organ."*

What we know for sure is that on September 16, 1899, J.W. Whitlock filed his first patent application (issued on September 18, 1900) stating as follows:

> *“This invention relates to musical instruments which are automatic in their action, starting upon the introduction of a coin . . . and stopping automatically when the piece is finished.*
>
> *The particular class of musical instruments embraced within the purview of this invention is stringed, and the vital feature of the invention resides in the action mechanism for sounding the strings . . . comprising pickers and actuating mechanism for the pickers. The style of instrument for which the action is designed is of the harp type, the strings varying in diameter or gauge, one string for each note, and attached to a frame approximating the harp outline as nearly as practicable and chromatically tuned.*
>
> *The actuating mechanism is of the pneumatic type and comprises a tracker bar, perforated note or sheet music, feeding mechanism, vacuum and suction bellows, pneumatic action and motor-bellows.*
>
> *The chief object of the invention is the provision of a picker mechanism that will be quick in action, responsive to its actuating mechanism . . . and not liable to derangement”*

A Whitlock family-produced resume claimed that Row spent six years developing the Automatic Harp. Surely the idea to make a self-playing harp must have been more than just a whim to have maintained the dedication of its inventor for six years. We know also that a local banker, Percy G. Tumy, joined Row

as the financier of the project. Financial gains must have been forecasted that contributed to the motives for building the Harp, and perhaps profits were even the principal motive.

Once Row had a working Harp it became the latest prop of his boyish tendency to pop in the middle of things with his latest contraption. A July, 1903, Rising Sun newspaper article gave the following illustration:

> *"Mrs. J.W. Whitlock entertained 60 of her lady friends very pleasantly Thursday with progressive Flinch* [which I think is where party-goers take turns entertaining for prizes]. . . *Light refreshments were served, during which the guests were surprised by an exhibition of Mr. Whitlock's new invention - the electric harp. The loud applause and expressions of delight with which this music was greeted was sufficient to assure the success of the instrument."*

Fig. 5. Whitlock's own Automatic Harp, Style A still in Rising Sun.

Row donned a marketing hat and set his sights on Cincinnati, the harp-stomping grounds of his close friend, Harry Conners. The Rising Sun Local newspaper documented many trips that the inventor-turned-marketer made to Cincinnati. “exhibiting his electric harp."

Indications were that with all the effort invested during the 1903-1905 period, Whitlock (and Tumy and possibly Conners) could only place seven Harps on location. Probably all of them were in Cincinnati; none were in Rising Sun except Row's own Harp which became a fixture in his office.

As events would prove, the initially poor showing of the Harp was less due to the desirability of the instrument and more a function of the lack of marketing prowess of the inventor.

The Harp is "Discovered"

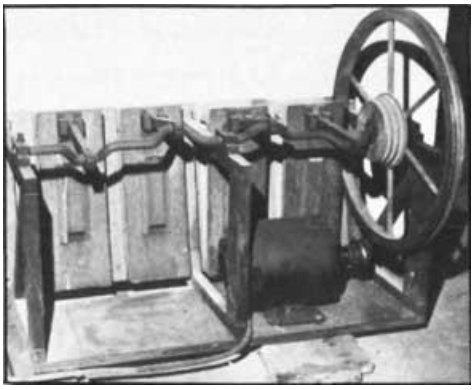


Fig. 6. The pump for Row’s Harp was kept separate in another room for maximum quiet.

As luck would have it, one of those seven Harps was in a cafe in Cincinnati frequented by one of the Wurlitzer brothers. Just as with Hollywood, the Harp was discovered by someone who could bring it fame and fortune. The story of the discovery was obtained from direct sources (Farny Wurlitzer and Stuart Whitlock, Row's son) by Q. David Bowers:

> *“Cincinnati turned out to be the ideal place to try out the Harps, for that city was also the home of the Rudolph Wurlitzer Company. Wurlitzer cut its teeth in the coin-operated musical instrument business in the 1890's with the sale of coin-in-the slot Regina music boxes. In 1899 Wurlitzer sold its first Tonophone and it quickly became a success. Coin-op music was taking a firm foothold with the American public, and Wurlitzer was out for its share of the profits.*

Sometime in 1905 Howard Wurlitzer, then the business manager of the enterprise, wandered into a downtown cafe. There, confronting him, was a most unusual machine: a self-playing harp. Upon hearing it, Howard was impressed with its soft melodious tones.

Howard Wurlitzer learned of the Harp's inventor and quickly negotiated an exclusive sales contract with the co-partners J.W. Whitlock and Percy Tumy. The value of the contract was in excess of $350,000 assuming all options were exercised. Even the committed portion of 1,000 Harps was surely the largest single business dealing in the history of Rising Sun."

Summary of the Wurlitzer/Whitlock Contract

1. The agreement was between the Rudolph Wurlitzer Company and J.W. Whitlock and P.G. Tumy as individuals; exact date illegible but was mid-1905.
2. Firm order placed for 1,000 Harps at $200 each, delivered "f.o.b. the wharf boat at Rising Sun."
3. Included in the 1,000 were seven Harps already built and on location in Cincinnati.
4. The remaining 993 Harps would be built "as fast as their facilities will enable them to do so;" all 993 were to be delivered in three years.
5. Wurlitzer committed to receive a minimum of 35 Harps per month.
6. Harps were to be equipped with either a D.C. motor or no motor (at a $10 discount).
7. Wurlitzer was granted two options each for 500 additional Harps at a price of $125 per unit, Each option had to be exercised prior to the expiration of the previous order.
8. The contract was exclusive to Wurlitzer.
9. Whitlock was to produce all the music rolls and Wurlitzer committed to at least 18 copies of each new roll; The wholesale price was $4 per roll.

Fig. 7. The original Harp factory as it still stood in 1980.

10. Rolls were to have 8 tunes each (later changed to 6) with each tune being an average of 20 feet of paper. Maximum output was 300 rolls monthly; Wurlitzer could submit up to 8 tunes per month of its own selection for arranging.

The seven existing Harps had been built in the original factory behind the Whitlock residence. It continued as the Harp factory through 1905, with manufacturing on the lower floor and roll production on the second floor. A real factory was needed if Row was going to produce 35 Harps per month.

Fig. 8. The factory workers are gathered outside circa 1905.

Row was finally going to realize financial gain from his inventiveness. He was 34 years old and he had just signed a contract that guaranteed his financial future for the following three to six years.

The year 1905 was a busy one. In what must have been only a half year, Row set up his new 20,000 square-foot factory in time for a grand opening on September 26, 1905. From the Rising Sun Local:

> *"The evening of Tuesday, September 26, marked the dedication of an enterprise of which all loyal Rising Sunners have just reason to feel truly proud. The occasion was the dedication of the factory buildings just completed by J.W. Whitlock Co., manufacturers of the Whitlock Automatic Harp. An excellent program was arranged for the evening consisting of music by the orchestra of Harry Conners, an old Rising Sun boy. . . The program was one of the best ever rendered in Rising Sun and was enjoyed by more than 400 people. Many of the citizens of Rising Sun had never before seen the plant or the Harps. . . Mr. J.W. Whitlock and Mr. P.O. Tumy, the owners of this business, have been engaged for more than six years past in perfecting their invention which is now on the market in the shape of an automatic harp.*

Fig. 9. A 1912 Wurlitzer mailer showing a Style B Harp in use in a restaurant setting. The Wurlitzer decal on the side of the harp has not been found on any extant machines.

Excerpts from a 1905 article in The Ohio County News related the following:

> *"The evening was spent in an inspection of this departure from old time methods in Rising Sun. It is no longer a question whether the people of Rising Sun appreciate and are ready to back up a successful business enterprise and manufacturing concern having a handsome weekly payroll.*
>
> *Through the efforts of J.W. Whitlock Co. backed by a few of the progressive businessmen, there has been installed in our midst, almost before half our people knew it, a magnificent manufacturing plant which is turning out daily as handsome and ingenious a musical instrument*

as has ever been known in musical-instrument lines, an Automatic Harp, about the size of an upright piano and operated by electric power."

Wurlitzer lost no time advertising that "The soft sweet music of the Harp makes it especially desirable where a piano cannot be used on account of its being too loud." The machines were offered at $750 each, almost a 400% markup on the wholesale price and ten times the production cost.

Whitlock Flourishes

The Harp contract was a critical turning point in Whitlock's life. It added the one missing ingredient he needed to become the adventurer, the businessman and the social benefactor—money. Employment at the factory jumped to 50 workers and the profits became a resource to fund many new projects.

Fig. 10. Wurlitzer's setup and repair room for automatic instruments as depicted in a 1906 article in the Music Trades Review. Four or five Style A Harps are identifiable.

Row would fund and manage almost any worthwhile venture that contributed to Rising Sun and needed help. Raymond Bedgood recalls:

"There used to be a ferry from here to Kentucky (Rabbit Hash, immediately across the river) and some businessman from up river someplace bought the ferry.

Well you know how these business clubs are. They go into big things but they wind up with boop boop. So after six months it didn't work. Things kept going wrong. They went to J. W. and sold him the ferry for $1 and he did all the fixit work to make that ferry run. It became a good car and passenger ferry that he called the "Kittie Whitlock" after his sister. Right through the depression he didn't charge anything and he didn't make anything so that people could get to work. That's the kind of man he was, and he didn't brag about it."

To J.W. Whitlock, music and entertainment were to become central themes for many of his enterprises. Another musical venture was his own 40-piece band called "Row's Band" that played often at Rising Sun occasions. Whitlock himself played the Euphonium and the saxophone.

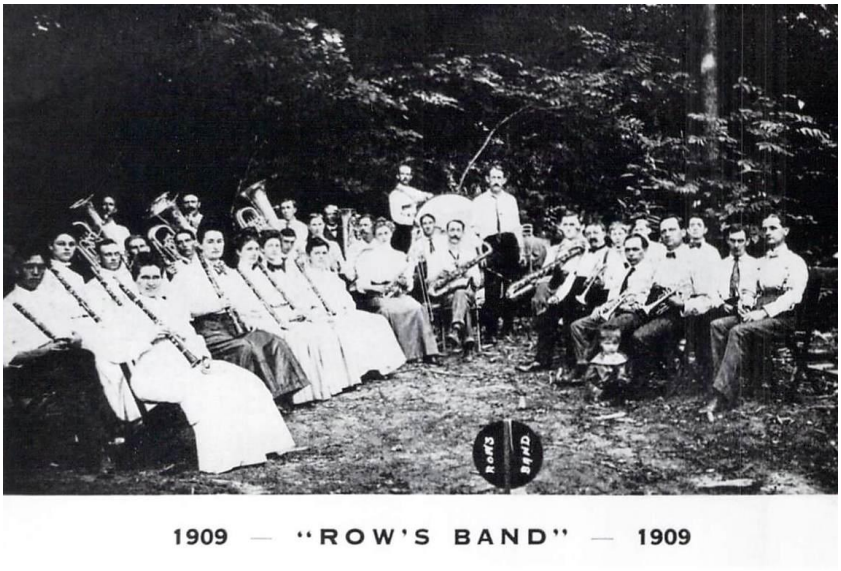


Fig. 11. Row's Band in 1909. Note J.W. Whitlock standing in front of the bass drum.

On August 18, 1907, the 1,000th Harp rolled off the line. Wurlitzer had executed the first of its options for another 500 Harps and production continued. This second batch was being sold at the contract of $125 each to Wurlitzer, which still allowed a $60 profit for Whitlock. The Harp had clearly been a success for Wurlitzer to have placed 1,000 of them in 2 ½ years and then to have contracted for 500 more. Two months later, in October, 1907, Row added to his growing entertainment "conglomerate" by purchasing the local moving-picture show. From the Rising Sun Local:

> *"The moving picture show, until recently conducted by Erna Scranton has been purchased by Rows Band, and the equipment moved to Clark's Hall. . .Mr. Whitlock has spared no expense in this matter, and the show will be bigger and better than ever. In addition to the moving pictures, there will be band music, vocal and piano music, the program lasting 45 minutes and all for 5¢."*

Music-collector enthusiasts will love this next bit. If you asked J.W. Whitlock, "Aside from your self-playing harp, what other mechanical instrument would you purchase for your own?" The December 23, 1907, issue of the Rising Sun Local gave the answer:

> *"J.W. Whitlock placed an electric harp and an automatic banjo in two of the stores last Friday. All the money found in them was to be donated to the poor. Thirty-four baskets, each containing one dollar's worth of presents, were distributed."*

Thirty-four dollars in nickels, that's 680 plays on two machines in one day. At an average of one and one-half minutes per tune, the Encore Banjo and Whitlock's Harp were played for an average of eight and one-half hours each in one day! We'll never know which one brought in the most money.

In late October, 1908, the Harp factory continued at the center of attention and served more purposes than only the manufacture of harps. From the local paper:

Unique Farmers Barn Dance Given By Mr. & Mrs. J. Will Whitlock

> *"Say,*
>
> *There's goin' to be somethin' doin' in our barn Saturday night, Oct. 31, 1908 and you'ns had better be there. Come for a good time - leave your troubles at home. You must mask.*
>
> *Row and Alice*
>
> *The above unique invitation called a motley crowd to the Harp Factory, where Mr. & Mrs. J. Will Whitlock proved themselves a most charming host and hostess to their many friends. After a lovely and exciting time in identifying the different ones, partners were selected for the grand*

march and were taken to the Harp room where the supper table brought forth many exclamations of delight Covers were laid for 80 and a bounteous supper was served. Prof. Harry Conner's orchestra of Cincinnati was there and furnished delightful music. The hospitality of Mr. & Mrs. Whitlock will never be forgotten. . .”

Row the inventor-turned-businessman was now the socialite. He was the town's fixit man, healer, entertainer, and employer. Son-in-law Bob Neaman recalled a few stories:

“One time a bunch of people tried to put up a flagpole in town, and one evening it fell down. J.W. came down and fixed it good and never told anyone about it

Come 4th of July he'd be on a boat in the middle of the river blowin' off fireworks, but not for publicity. He did it for the kids. When we were kids we got out of school at the end of the day, we'd always go down to the Harp Factory and he'd give you a job right there on the spot.”

Whitlock and River-Boat Racing

The 1906 to 1909 period was quite a time for the Whitlocks. Row had risen to success in business, and his tremendous capacity for achievement was only beginning to show itself. He was fanning out on many fronts without showing any signs of spreading himself too thin. Before 1907 was over, he jumped into a new hobby that would become long lasting and would win him much fame: river boat racing.

Anyone raised in Rising Sun had a close association with the Ohio River, and the Whitlock family was no exception. Row's father was mainly known for his sawmill business, but he also had a small shop where he built skiffs for local use on the river. By 1909 Whitlock had already built several boats in the Harp factory. He built them for speed, and he entered races on the Ohio River. One boat became the first in a series that set speed records in races upriver all the way to Buffalo, NY, and to Louisville, KY.

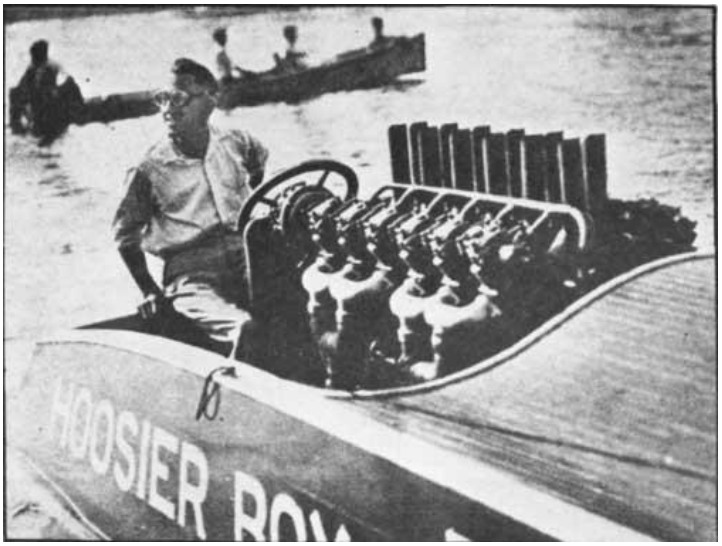


Fig. 12. Row Whitlock sitting atop one of his Hoosier Boy racing boats which he designed, built and raced.

Only twice in 19 years did he ever lose a race. Once he hit a log and sank, and the other time he was disqualified in a controversial technical decision in Cincinnati. The disputes were between the officials and the fans (including the press) - Row would have no part of it. Even the local Cincinnati papers got emotional about Whitlock's boats and his sportsmanship.

Press coverage on July 31, 1909, went like this:

ROWS BOAT IS THE CANDY KID OF THE OHIO RIVER

“In the opinion of experts the annual Regatta run-off Saturday by the Ohio River Launch Club at Cincinnati was a decided success, but in the opinion of about 100,000 people who lined the banks of the Ohio it was about the most unintelligent and complicated affair that has ever been seen in the annals of sports in the Queen City. The day was an ideal one for racing. The Hoosier Boy had

no trouble in demonstrating that she is one of the fastest boats in the West, and can easily take the measure of anything that floats on the Ohio.

The Hoosier Boy was disqualified in the speed event . . . charged with exceeding the speed limit, based on the trial time. It was nearly 8 o'clock before the judges finally announced their decision. While Mr. Whitlock was much chagrined at the failure to award him the Fleischmann trophy, he stated that he would not contest the matter. It cost Mr. Whitlock several thousand dollars transporting his fleet from Rising Sun to Cincinnati and engage the help required for the care of his racer. He spent an entire year in the construction of the boat Hoosier Boy."

Monday's Cincinnati Post had this to say about the race:

"Everyone who witnessed the motor-boat races on the Ohio Saturday agreed that in the Hoosier Boy they had seen the fastest motor craft ever raced on the Ohio. Its actual time was a little over 17 minutes, or about a rate of 32 miles per hour. Rising Sunners and thousands of Cincinnati people feel that he was double-crossed, and that the Committee was afraid to award the first-prize outside the Queen City."

The following verses were sent in by a local poet:

HOOSIER BOY

"Is he frisky, O no! Stubborn. Not a bit: You ought to see him get up and git. He gives some little puffs and his wheel goes round; He leaps into life with one great bound, Then settles down to actual work to run the course without a shirk.

The pulse of his master's hand he feels, And throughout a thrill of excitement steals; The continuous heart throbbings within his breast are urging him to do his best; And with one great spurt he sets the pace, Forges ahead and wins the race.

Did he get the Cup, which was won so fair? O no! It was in mighty paws in the Club's lair. It was a nice rich bone, with lots of meat which should be fed to the home boat, even if beat. But the Hoosier Boy, with speed and grace, In the minds of the people won the race.

Toast:

Then here's to "Row" also the Boy, Which to old Rising Sun had given such joy. May "Row" on his fair-won laurels rest, with credit to the Boy that has stood the test."

Row's success with boats continued for decades. Visitors to the Ohio County Historical Society in Rising Sun can see a curved-glass china cabinet crammed with trophies won by the Hoosier Boy series of boats.

By the 1920's the town's adulation of Row Whitlock had risen to a crescendo of emotion. A few examples of his effect on the town are found in the local newspaper. The first article covered Row's win of the "world championship" from the favorite, The Fore, a Chicago hydroplane entrant. The October 2, 1924, article in The Ohio County News was ebullient:

"The world of speed-boat racing admirers already has learned of the great victory of the Hoosier Boy. . .the 75,000 spectators (in Cincinnati) who lined the banks were thrilled and they shouted to the echo as the Hoosier Boy smoothly reached the goal 15 seconds ahead of The Fore.

Then on Monday morning at 10:30 o'clock there came into Rising Sun harbor something that roused more heart throbs and true sentiment then was ever couched within human emotions in a great audience such as the winner faced in Cincinnati.

Mr. Whitlock approached this city as a "speck" upon the waters' surface and gradually loomed up to be recognized by both the old and the young folks at home . . . Hundreds of persons soon gathered at the riverside, and when the boat was driven to the shore at the foot of First Street, there was a true exhibition of hometown love and devotion. Tears of joy were on the faces of many, while whistles blew, church bells rang and dynamite charges on the river bank were exploded. He (Whitlock) said 'This was the best race I ever was in. But my greatest satisfaction is in knowing the pleasure the victory gave my friends, who were so loyal in their good wishes for the Hoosier Boy's success.' The Hoosier Boy beat the boat that had never before been beaten."

After that mile-a-minute performance, Row Whitlock had all of Rising Sun mesmerized. In a July, 1925, article a demonstration of Hoosier Boy on the river at Rising Sun was described:

"Row's Band whooped 'er up lively in the grove below the old distillery; the saw mill whistle at Rabbit Hash tooted and the staid old ferry boat horses executed a two-step. Everybody wore a smile that wouldn't come off, for they realized that at last Rising Sun was on the map, and it was all on account of the Hoosier Boy and Row."

Then the Pastor of the M.E. Church addressed the crowds:

"We have met here this afternoon to witness an exhibition of speed in a motor boat such as no one could give between Pittsburg and Cairo, because no other town could deliver the goods.

Rising Sun is receiving telegrams not only from Ohio and distant parts of Indiana, but from Iowa to New York. Rising Sun is built up on a hill but she stands higher today than ever before and it is due to the genius of this man who has been able to build and run the fastest boat in the western waters. . .And we are glad to do him honor.

All nations of all ages have honored the men that were able to do things. On the monuments of Egypt are miles of hieroglyphics lauding the deeds of her great men. Greece had her Olympic Games. . .Rome had her triumphal arches, France her gallery of busts of famous men. . .Dayton, Ohio covered herself with flags and bunting that she might cover the Wright Bros, with glory because they had built an airship that could remain in the air one hour. You have a motor boat that can run in the water all day and be the head of the procession in the evening.

And this man of genius is a product of Rising Sun, born here, grew up here, developed his genius here. . .and it is fitting that we pay him this tribute of respect here."

The Harp's Popularity Wanes

Sometime in the 1909 to 1910 period demand for Harps must have slackened, and production rates declined from the peak of 35 per month. No mechanical improvements had been made since 1906 and the only style change was the major new introduction of the beautiful Style "B " in November of 1906.

It is likely that Wurlitzer never exercised the second option for the 500 Harps that would have made the total of 2,000 initially contemplated. Toward the end of the 1,500 Harps that were committed, Howard Wurlitzer must have decided to cancel altogether. The fact that he had written commitments to take all 1,500 Harps did not seem to bother him. Dave Bowers recalls Stuart Whitlock saying:

"Well, my father brought suit against Wurlitzer for this, and Howard said, 'Well, I'm sorry we just don't want any more.' My father replied: 'We've tooled up for 1500 Harps, we have the finger pluckers, the flywheels and all the parts for 1500 but now you want to cancel your order. What's going on?' "

Whitlock did file suit on January 12, 1911 in a Cincinnati court against the Rudolph Wurlitzer Compa

There were several actions. One was recollected by Court records in response to my inquiry. It was for money damages in the small amount of $827.20. Wurlitzer defaulted by not answering the complaint. No other communication was recorded by the Court until April 9, 1917, at which time the case was dismissed without prejudice at Whitlock's request.

There was another complaint by Whitlock for a much larger amount, $37,415, for an alleged breach of contract. This action was settled in July of 1911 with Wurlitzer paying legal fees as reported in the Music Trades Review of July, 1911. But in the October, 1911, issue of the Music Trades Review we found an article which shows the Company line on the Harp in glowing terms:

> *"The Wurlitzer Automatic Harp is one of the most wonderful musical instruments ever invented. The picking of the strings by little automatic fingers, almost human in their action, is a marvelous operation. The Automatic Harp fills a niche in the field of music that cannot be filled by any other musical instrument.*
>
> *It is now nearly six years since we placed the Automatic Harp on the market. When it was first introduced it created a sensation wherever seen and heard. Since then it has proved itself the best attraction and money getter ever introduced in first-class public resorts where soft, refined music is required."*

The last Harp was produced in late 1910 or 1911. The Harp lingered on the market for another six to seven years. By 1916 they were being "remaindered" for $375 each, half their original selling price.

Fig. 13. Matilda Jackson playing her Style GG Wurlitzer harp. Coincident with Wurlitzer's dropping of the Whitlock Automatic Harp was its 1915 release of the real Wurlitzer Harp which it proudly touted as "the costliest harp in the world." The timing of the two events appears to be totally accidental.

Toward the end of the Harp's life Wurlitzer must have been trying to push the remainder anywhere it could. Raymond Bedgood recalled:

"Most all of the Harps went to whorehouses, put there by Wurlitzer." Some substantiation of this claim was obtained from a book published in the 1930's entitled The Barbary Coast an Informal History of the San Francisco Underworld by Herbert Asbury and uncovered by Dave Bowers:

> *"Each girl (from the parlor houses) had one day off a week, which she usually spent with her lover or drinking in the dives of the Barbary Coast (the San Francisco red light district). The parlor houses also derived a considerable income from the sale of beer in bottles - and for music. Practically every resort was equipped with some type of automatic musical instrument, usually electric, which played only when fed with nickels or quarters. A great deal of the revenue from the music and sale of liquor went to the police and politicians as graft, in addition to the regular payments which were usually based on the number of girls in a house.*
>
> *In the late spring of 1911, the police forbade all music in houses of prostitution and ordered the removal and destruction of every musical instrument in the red-light district. A month later in July, the proprietors of the houses were told that they might provide music for the entertainment of their guests, but that it must be music of the Automatic Harp. There wasn't such an instrument to be found in the Barbary Coast, but the lack was soon remedied. A few days after the house owners had been notified, a salesman for a Cincinnati piano house appeared in the district and offered Automatic Harps for sale at $750 each, about four times what they could have been bought for in the open market."*

Wurlitzer must have had some kind of pull in Francisco, otherwise who ever heard of local authorities exclusively requiring harps for whorehouses.

Life After the Automatic Harp

Not much is known about what Whitlock did in the few years after he stopped manufacturing the Harp. Surely Row's Band, his theater and the ferry produced enough income to provide a living. Whitlock realized that the Harp factory was only nine years old and still had productive capacities, skilled workmen and woodworking machines that could be set to perform some new task.

In 1914 Row formed the J.W. Whitlock Furniture Company and began building a line of quality chairs: a line that continued for decades and became one of the prominent producers of Indiana furniture. Undaunted by his experience with Wurlitzer, J.W. Whitlock once again shrugged off the past and with characteristic enthusiasm, plunged headlong into making the best chairs in Indiana often called "Whitlock's Walnut Wonders" and "Mahogany Marvels." Several newspaper accounts made brief mention of J.W. Whitlock as a millionaire, but if such was the case, it was not a known characteristic of the Whitlock family after Row's death in 1935.

In the early 192O's Row put together a radio and produced hundreds or perhaps thousands under the name Skylark. How much invention was actually involved in the radio is unknown, but the unit was completely assembled at the factory.

Fig. 14. Whitlock's Skylark Radio as high class in every way is seen in 1980 in rough condition.

Indications are that even in his 60's, Whitlock was still puttering in his shop. In 1935 he was working on his own version of the 78 rpm jukebox, a project he never finished. In April, 1935, he suffered a fatal heart attack and died at the age of 64. The local obituaries were lengthy and are excerpted here:

J.W. WHITLOCK EXPIRES SUDDENLY AT HIS HOME

"Many hearts were shocked and saddened Sunday when it became known that John William Whitlock, known to hundreds of friends and admirers as "Row", had passed away in the early hours of the morning as the result of a heart attack.

Endowed with the genius of a mechanic and the talents of a musician, he invented an automatic harp which was placed on the market by the Wurlitzer Co. of Cincinnati. This Harp proved a success and was manufactured by Whitlocks here until 1918. The Whitlock factories grew, and since 1914, furniture and motor boats have been their leading products.

The Whitlock motor boats are known far and wide, having competed in races in all the leading cities. In 1909, his "Hoosier Boy" held the world's speed record for single motor speed boats. In addition to these interests, Mr. Whitlock was proprietor of Laughery Club, an attractive summer resort near Rising Sun, and also operated the ferry boats between Rising Sun and Rabbit Hash. He had been for many years a director of the Rising Sun State Bank.

In September, 1901, he was married to Alice Stewart who passed away after a short illness in August, 1913. In 1928 he married Maude Eifers, who has been a loving wife and companion.

Mr. Whitlock was a man of business ability. He was truly a public-spirited citizen, a friend to all, a fellow man to his employees, and a man honored, respected and loved in this community."

Music for the Automatic Harp

The music that was arranged for the Automatic Harp is a study all in itself. By some stroke of coincidence, the birth of this early, coin-operated music machine matched the period of ragtime popularity. Row Whitlock apparently never intended for his Harp to play harpy music with its long, undampered glissandos. Instead, his Harp was set with 60 chromatic notes in the center of the piano range with no pedal action or expression. The pickers had dampers on them which allowed the Harp's music to be arranged similarly to a player piano. In fact, collectors have been known to play "A"-roll piano music on the harp and achieve good results.

However, with clever arranging, the Harp can be asked to play much more like a real harp. This was accomplished through a project I sponsored invoking the arranging talents of Art Reblitz of Colorado Springs, Colorado. Two rolls were created for the Harp with a mix of harpsichord, harp and modern popular music. Listening to a well-restored Harp play selections from the Nutcracker Suite with long, undampered, chromatic runs is a surprise and a treat

A total of 238 music rolls were originally made for the Harp, most containing six tunes each. There were about 30 eight-tune rolls made, but sometime soon after the Wurlitzer contract in 1905, a decision was made to produce six-tune rolls. Roll numbering was restarted at No. 1 and the eight-tune rolls were condensed into six-tune rolls.

The 1,400 tunes vary from a few classical pieces and waltzes to marches, popular songs and characteristic intermezzos (short pieces normally for piano that were characteristic excerpts of themes such as foreign tunes, Indian rhythms, et cetera). Above all, ragtime was king on the Harp. These

seemingly odd bedfellows, rags and the harp, combine to provide music which is fun to hear, soft, string like and definitely ragtime.

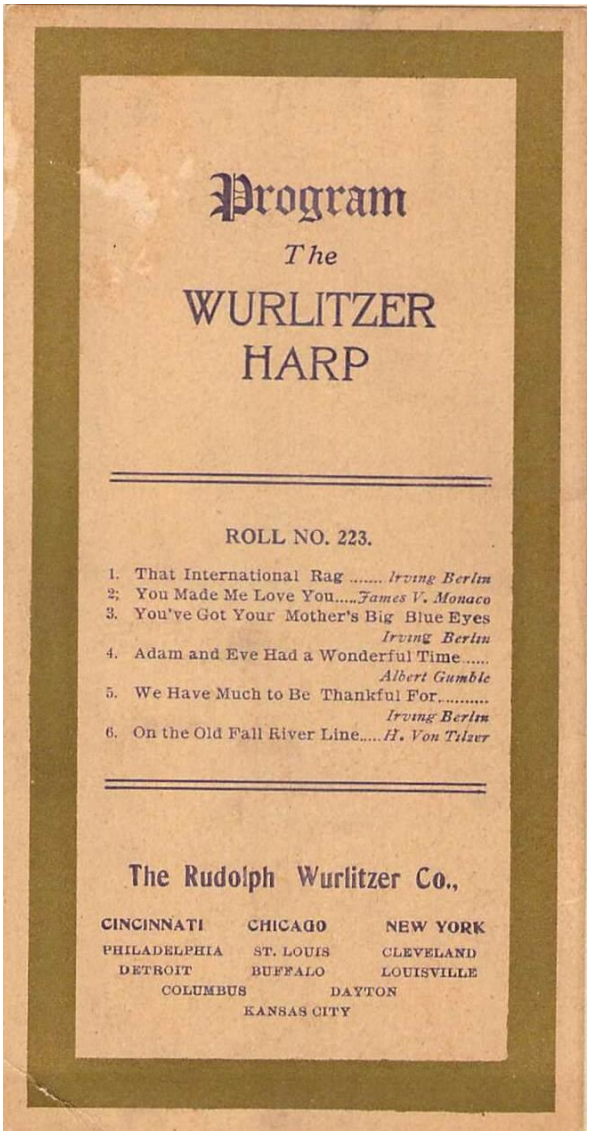


Fig. 15a. Original Harp program card.

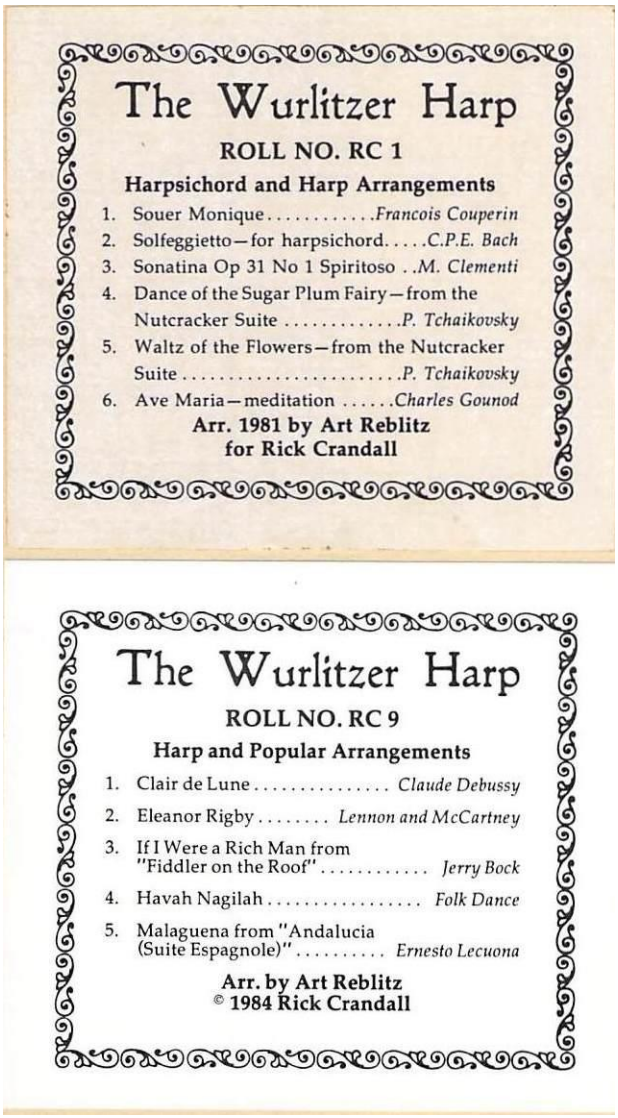


Fig. 15b. Labels detailing the two rolls with newly-arranged harp tunes.

Row Whitlock's sister, Kittie, was the driving force and the talent behind the music selection and arrangements for the Harp. She was a violinist and a pianist in addition to being a music teacher in Kokomo, Indiana. Music was certainly very much a part of her life. Sheet music has been found with Kathleen Whitlock as the composer. At times, Kittie pursued her teaching endeavors, but she then left another trained townsperson, Kate Steel, in charge of music-roll arranging.

Raymond Bedgood recalled that the girls had an outfit they played like a piano that resulted in a master roll being cut. These were edited and recut into a production master which would then be used to make production copies, six at a time.

A review of the original sheet music Kittie used (now in the author's literature collection) showed that many pieces were available orchestrated for bands with mandolin, banjo and guitar, hence the rationale for programming the Harp. In many ways the Harp has been likened to a guitar sound. The custom arrangements have proven that this is more a function of the music arranging than anything else.

In a way, the Automatic Harp was like a camera that captured the vague and undocumented development of American music during a very important period. Later rolls went further to evidence the spread of popularity of the blues. The last of the rolls to be produced was a selection of some of the most lasting songs from World War I.

Kittie Whitlock made sure the Harp's album of music was complete. The most popular composers for Harp tunes were:

H. Von Tilzer 35 tunes	G.M. Cohan 16 tunes	A. Gumble 13 tunes
I. Berlin 31 tunes	G.W. Meyer 15 tunes	P. Wenrich 13 tunes
E. Van Alstyne 21 tunes	N. Moret 15 tunes	K. Mills 13 tunes
T. Morse 21 tunes	J. Schwartz 14 tunes	A. Von Tilzer 12 tunes
T. Snyder 18 tunes	S. Joplin 13 tunes	V. Herbert 11 tunes

The very first rolls contained publishing dates no later than 1902, whereas roll No. 20 began to evidence some 1903 music. Early music for the Harp mainly consisted of marches, two-steps, coon songs, schottisches and waltzes. By the time roll No. 46 came off the punches, Maple Leaf Rag was included. It was 1905 and ragtime had taken over the Harp repertoire. Perhaps Wurlitzer's influence, which commenced in 1905, moved Whitlock toward the popular piano hits. Sousa's Stars and Stripes Forever rolled off the punches in June, 1906, and in July of that year Joplin's Entertainer appeared. Roll production was spread over the years as follows:

1902-1905	#1-45	1911	#191-200	1915	#233-234
1906	#46-105	1912	#201-210	1916	0
1907	#106-135	1913	#211-224	1917	#235-238
1908-1910	#136-190	1914	#225-232		

Sometime in 1917 or 1918 a final roll was made with a hand-typed label including the tunes Till We Meet Again by R. Whiting and Good Bye France by Irving Berlin.

Factory roll-production figures indicate that, by far, the biggest sellers were rolls with the following well-known tunes:

<u>Most Popular Original Harp Music</u>

46 Maple Leaf Rag	186 Ballads and popular songs
50 Chicken Chowder, Turkey in the Straw	188 All rags including Porcupine Rag
65 Buffalo Rag	190 Popular songs
69 Toreador Song, Stephanie Gavotte	198 Alexander's Ragtime Band
98 At a Georgia Camp Meeting	232 It's a Long Way to Tipperary
110-114 Indian and foreign intermezzos	233 All blues roll

Whitlock's Harp Innovations and Variations

The first prototype Automatic Harp was very different from the device that actually made it to market in 1904-1905. It was oddly designed but functional. Almost everything about the Harp had the stamp of the inventor. Whitlock was granted four patents that documented the overall design and eventual improvements that were assimilated in the final product. The first patent, #658,134 was filed in

September, 1899, and granted a year later. It established the earliness of the idea. Some major observations of interest from the patent are:

1. The patent speaks of the use of a bridge for sound amplification, but none is shown in the drawings nor are any used in extant machines. Some restorers have conjectured that if Whitlock knew what he was doing he would have used a bridge to get more power. Apparently he did know of bridges, but rejected them in favor of a softer sounding instrument

2. The frame was described as being made of wood or metal, but in final analysis, Whitlock opted for wood. Perhaps this was because of his woodworking skills. Certainly it is the case that wood is used throughout the Harp even in places where one would expect to find metal. The fact that it all works and has endured through the years contributes to the fascination and primitive allure of the Automatic Harp.

3. The patent boasted of double-ended, conical-shaped rubber valves that were self-centering to insure solid seating in the vacuum stack. Indeed extant Harps have these valves which is another of its peculiarities. Although an early British patent (#2470 invented in 1860) shows cone-shaped valves, it is unlikely that Whitlock would have known about them. The stack has been notably difficult to restore since the rubber valves have hardened over the years with no replacement available. (In 1984, Dave Boehm, a California collector, solved the problem by having dies made as part of his replica project)

4. The music roll system in the original patent is the endless roll type, suspiciously reminiscent of the earlier Encore Banjo. This roll system never made it to market, having been replaced by a rewind system that was patented.

5. The coin slot was a Whitlock creation that used a gambling machine-like coin slot and plunger approach. The nickel was used as a contact throughout the entire tune. This too was improved prior to commercial release.

6. The pickers in the original patent were made of metal with a curved metal tip that pivoted into and out of place so that the string would only be plucked on the in-stroke. This style must have produced too harsh of a sound and perhaps was too hard on the strings. A different picker made of wood was eventually employed.

The patent office took note of the Reed and Gustofson patents of a few years earlier that were part of the Encore Banjo patent inventory. While the Encore people had invented the state-of-the-art in pickers for stringed instruments, Whitlock managed to prove uniqueness based on the swiveling picker point The Encore picker is a fixed-metal hook that avoided picking on return by being guided through an elliptical path. The conclusion of the patent office was:

> *“The elements per se are old, but combined, each modifying the action of the other to the attainment of a definite end, the structural organization is new and the combination is novel.”*

Whitlock's revised picker was the subject of patent #773,698 filed in January and granted in November of 1904. He wanted a softer sound so he employed a flat wooden tip ". . . approximating that produced by instruments played by hand." The Harp picker is one of those inventions that humors the collector and impresses the casual observer. It surely contributes to the Harp being such an interesting instrument. Indeed many inventions come from abstractions of something in nature. The Harp picker certainly qualifies because it is clearly a wooden enactment of the human finger, knuckle and fingernail.

Patent #837,991 was filed in October, 1905, and granted in December, 1906, for what was to be a somewhat conventional rewind type of roll frame. The uniqueness was the way one can adjust the lateral position of the music spool and the take-up spool to align with each other on the tracker bar.

Finally, patent #825,167 was filed in August, 1905, and granted in July, 1906, for a new coin mechanism. The purpose of the improvement was to eliminate corroding contacts caused by using the nickel coin itself to make the electrical circuit apparently, passing electricity through a nickel-against-brass contact for extended periods caused an undesirable electrolysis effect. The new mechanism used a set of opposing pneumatics to dispense the coin into the coin box, thereby substituting a brass-on-brass contact. The same mechanism was used to improve the multi-play accumulator function.

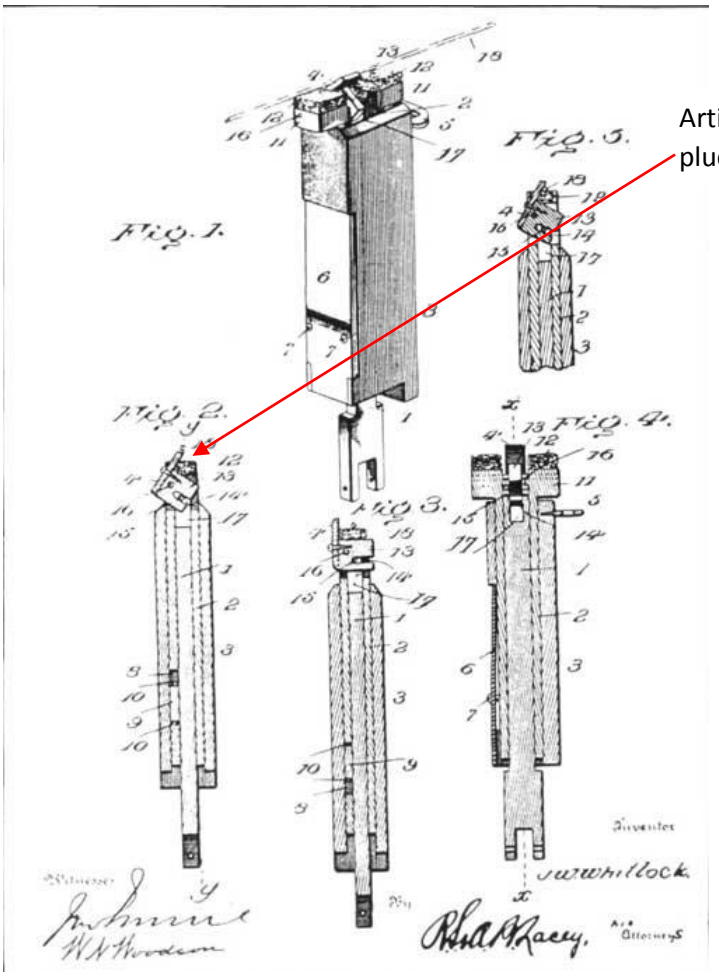


Fig. 16a. Updated picker patent showing both swivel positions of the plucking tip (#4) and a harp string (# 18).

Fig. 16b. Actual picker

With these changes, the Harp became a commercial entity. The first model was packaged in a rectangular case with a fancy fretwork surrounding plate glass cut in a harp-like shape. The 60 strings are chromatically arranged with 60 picker assemblies neatly stacked in two close rows horizontally across the strings in an observable and neat fashion.

Typical of early music machines, power was provided by optional AC or DC motors. Usually the motors were supplied by Wurlitzer once the electric power of the destination was known. Whitlock apparently did supply the DC motors Wurlitzer needed. The DC motors have their usual advantages in that they are quiet, they have excellent starting torque and they can be varied in speed.

Variations - The Exterior

The most immediately apparent variation in extant Harps are the two case designs. The earlier rectangular design was called Style A and was produced throughout the life of the Harp. Approximately 1,100 Style A Harps were made of which 14 are known to exist today. Style A Harps produced after the first half year of production had circular-tune indicators as an added feature. The clock-faced dial with the numbers one through six imprinted thereon would rotate one sixth turn after each tune.

Sometime in the middle of 1906, after about 500-600 Style A Harps had been produced, Whitlock and Wurlitzer must have sensed the need for a "mid-life kicker." The case was redesigned and the top of the mechanism cut down to fit resulting in the new Style B. The first Style B Harp produced was serial #1192 (the 692nd Harp produced, serial numbers began at 500) on November 13, 1906. Wurlitzer's feelings about this new design are quoted in the Music Trades Review from a Wurlitzer catalog:

> *"We are now building two styles of the Harp - Style A, which is the original, and Style B, the new style. The case of the Style A is the straight front, with the harp-shaped plate glass and the fancy scrollwork decorations in the front. Style B is the new design, and is built on the lines of the original Italian harp. This new style case is very artistic and greatly enhances the appearance of the instrument*
>
> *The cases come in beautifully figured quarter-sawed oak in a variety of finishes, such as golden, weathered, Antwerp, Flemish and silver grey."*

About 400 Style B Harps were originally made of which seven are known to exist today. The combination of their rarity, beauty, soft playing ability, mechanical fascination and earliness makes them a prime collectible that can be kept and played anywhere in most homes.

Fig. 17. The two case styles:
Style A from the Bovery collection Style B at auction from the Kessler collection.

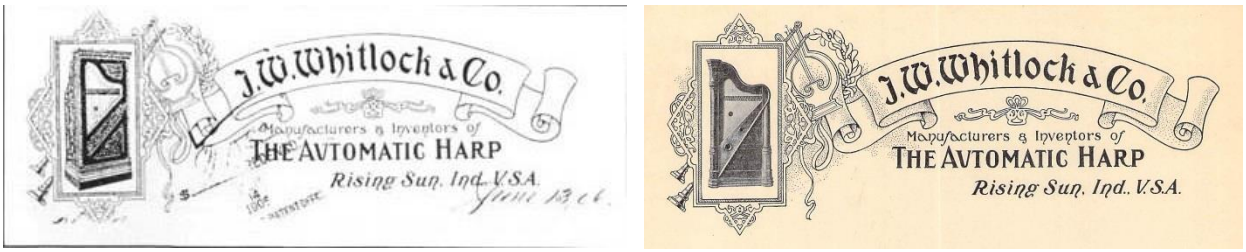


Fig. 18. Wurlitzer was quick to replace the Style A with the Style B in its advertisements and Whitlock even changed his stationery design.

Mechanical Variations

Early Harps used wood tracker bars, as did many of the European automatic music instruments. In highly varying humidity conditions the wood eventually developed leaks and so Whitlock switched to a more conventional brass tracker bar. A quantity of the brass tracker bars were found in the old Harp factory in the 1960's, and they might still be found today for use in restoration.

Probably the most important technical improvement made to the Harp during its life was the upgrading of the method by which the pickers were actuated by their associated pneumatics. The earlier and noisier style had a hard-wood slat making a rigid connection between the picker and the pneumatic. The undesirable side effect of these slats is that they act as little resonators amplifying the mechanism noise associated with picker actuation. This is surely the single most contributing factor toward why some Harps have disturbing sound qualities.

The last 300-400 Harps produced had a new style connector that was simply a string attached to an adjustable screw on the picker pneumatic. The change was simple and many earlier Harps that wound up back at Wurlitzer's factory for reconditioning were converted to the newer style. The conversion is simple even as a part of a current restoration, consisting mainly of removing the slat, blocking the slotted hole in the back of the picker with a piece of wood, installing the appropriate spring on the picker and introducing a string between the pneumatic and the picker assembly. Conversion to string operation is therefore a valid and highly recommended practice in modern restoration of the Harp.

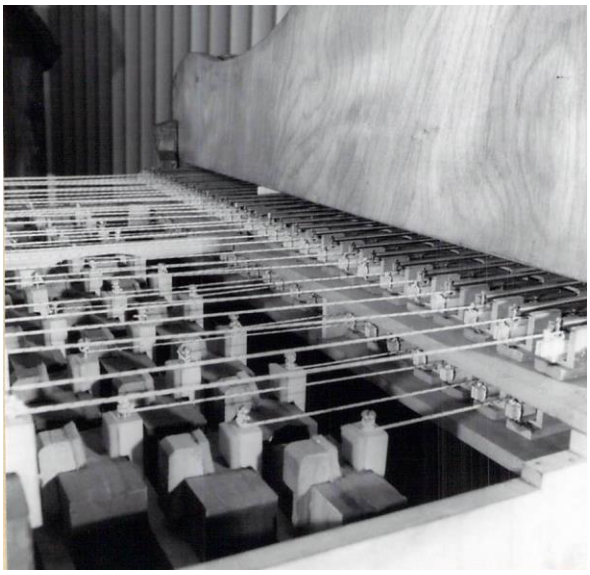


Fig. 18. This Harp has been converted to the string-connector style of operation by Dave Ramey Sr. Each picker pneumatic has an adjustable screw on top that is set to eliminate lost motion in the string which connects to the back of the picker.

Collector Data

About two dozen original Harps are known in collections out of the nearly 1500 originally made.

Fig. 19. The Style B Harps found in a Nashville home. Note style differences with varying sound-emission holes in the curved top.

The impossible can also happen. One of the exciting episodes in my collecting experience was the rediscovery of two Style B Harps in original condition located in a single Nashville, Tennessee household! The owner's grandfather ran a restaurant in Cincinnati in the 1910-1920 period. He had a Harp in the restaurant. When he moved in 1918, he took the Harp and another like it to a friend's place.

The two Harps, long since inoperative, survived eight changes of location and two family hand-me-downs while serving as forlorn decorations for over 60 years. The owner was not a collector, but he heard of my involvement in the history of the machines. It was an exciting phone call, indeed, one night when I heard a stranger speak of the two Automatic Harps "with curvy tops" he had in his living room!

I came to agreement on price, signed a contract and enlisted Chuck Phieffer to help me retrieve them. They've long since been restored and have found homes in collections.

Fig. 20. Al Svoboda's Nickelodeon Tavern years ago. Seeburg F, Seeburg K, Regina disc box, Edison phonograph and a Style B Harp that later were restored and went to the Nethercutt collection in San Sylmar, California.

Wurlitzer Harps were distributed nationally although one rumor asserts that there is a B Harp in Belgium. Of course, the Ohio, Indiana and Illinois areas are probably the best for uncovering a diamond in the rough, although the San Francisco area could be fertile as well.

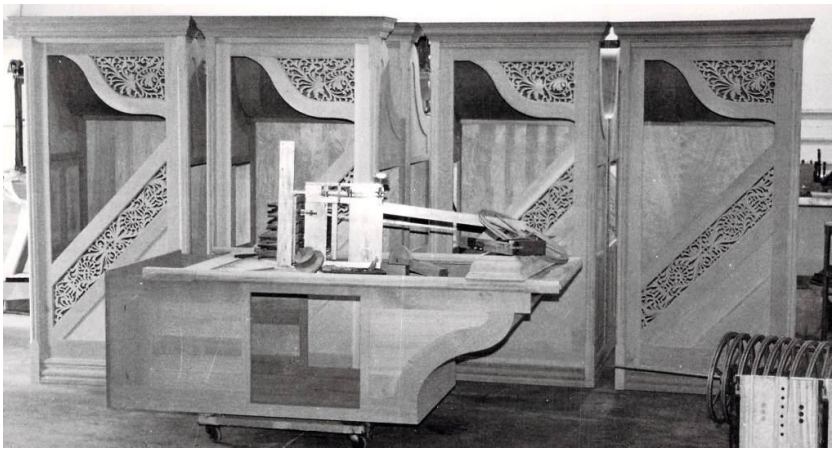


Fig. 21. Some of the replica cases and components.

At the outset of 1985, a project partnered between California collectors Davie Boehm and George Baker to replicate ten Style A Harps was nearing completion. Great pains were taken to remain faithful to the original, including replicating the original stack, cone-shaped valves and all.

The pattern used for the project was original Harp #867, an early machine (the 267th made) that had been converted to string picker-puller operation. Some collectors insist upon collecting original instruments but, as with Dave Ramey's replica Encore Banjo, other collectors appreciate being able to have a perfectly working representative sample of a rare and beautiful instrument in their collection for half the cost of an original.

Mrs. Eleanor Whitlock, granddaughter of J.W. Whitlock, was of great assistance in this research. A few years ago I received a letter from her in which she said:

> *"In looking through some postcards that belonged to Kathleen Whitlock, I found an interesting notation in one. It was postmarked San Antonio, Texas, May of 1907 and said 'Some Harps in this town.'*
>
> *Good Hunting!"*

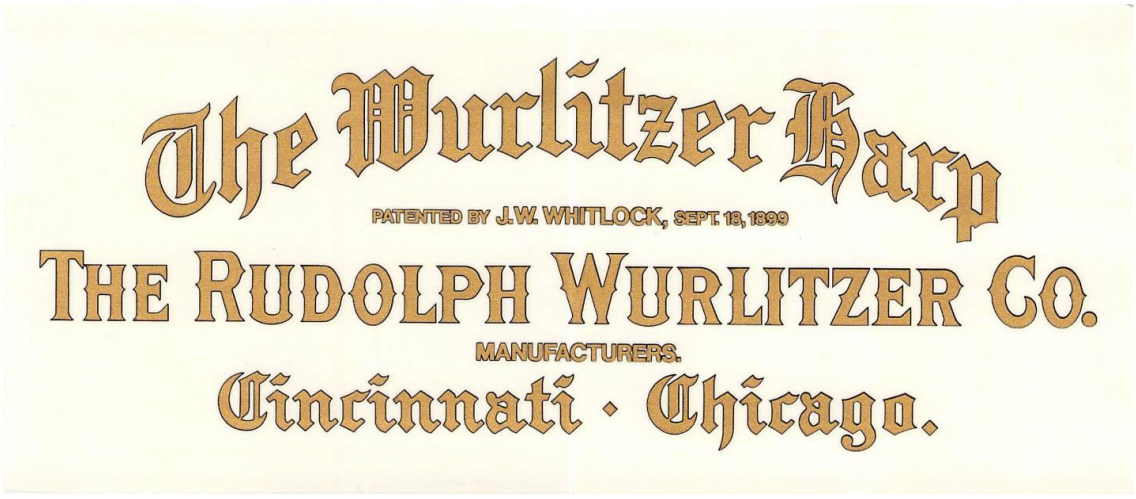


Fig. 22. The decal used on the face of the Harp soundboard.