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Collection Overview

Repository: Archives Center, National Museum of American History
Creators: Ehrat, Arthur
Fleckner, John A., 1941-
Title: Arthur Ehrat Papers
Dates: 2011, 1865-2005
Bulk Dates: 1970-1990
Quantity: 10 cubic feet, 26 boxes
Abstract: Arthur Ehrat invented and patented a breakaway basketball rim, fashioning his prototypes from bolts, metal braces and one key part: a piece of the heavy-duty coil spring on a John Deere cultivator. His invention helped to revolutionize the way basketball is played because players could slam dunk the ball with fewer injuries and without bending the rims or breaking backboards. This collection includes correspondence, legal documents --such as patent papers, litigation files and licensing agreements --photographs and sketches that relate to the basketball invention, as well as materials regarding his two field spreader patents and other invention ideas.
Language: English

Administrative Information

Acquisition Information
Donated to the Archives Center in 2005 by Arthur Ehrat. An addenda of materials related to Toby Dittrich was donated by Toby Dittrich in 2014.

Related Material
Artifacts related to this collection were donated to the Museum's Division of Music, Sports and Entertainment, now the Division of Culture and Arts.

Processing Information
Processed by Tamara Salman, August 2006 and supervised by Alison Oswald, archivist. The 2014 addenda was processed by Tyler Stump (intern), 2015.

Preferred Citation
Restrictions on Access

The collection is open for research.

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Biographical Note

Arthur Henry Ehrat was born December 20, 1924. He grew up on a farm near Shobonier, IL, east of St. Louis. Ehrat had four sisters and a brother: Dorothea, Ruth, Bernice, Grace and Walter. Growing up on a farm during the Great Depression, Ehrat learned farming skills, including milking, baling, and operating heavy equipment such as threshing machines. After graduating from Vandalia High School he moved to Wheaton, IL, to work on a farm. From the latter part of 1945 until 1947, Ehrat was an Army medic, stationed in Fort Sheridan, IL; Camp Atterbury, IN; Fort Meade, MD; and Manila, Philippines. After his Army service, Ehrat moved back to Illinois and spent a few years farming with his brother.

In the early 1950s Ehrat lived with his sister Bernice and her family in Minneapolis while attending a two-year course at Minneapolis Business College. Upon completion of the course, he returned to Virden, IL and worked at a grain elevator. Ehrat met Mary Mardell Worth in Virden. They were married June 27, 1954, and had five daughters: Rose, Jo, Sharon, Jane and Linda. Ehrat managed the grain elevator at Farmers Elevator Co. in Lowder, IL for nearly 30 years.

In the mid-1970s, Ehrat's nephew, Randy Albrecht, a coach at St. Louis University, mentioned that basketball players were slamming the basketball ball through the rim and hurting themselves, as well as bending or breaking the rims, which were affixed directly to the backboard. The bent rims had to be straightened, causing a delay of game. While Ehrat never had a strong interest in the game of basketball, Albrecht suggested his uncle, who was known as a tinkerer, come up with a safer basketball rim. The conversation sparked a few ideas. Ehrat bought a flimsy $20 basketball rim and began building a prototype.

Basketball fans during the 1940s and 1950s didn't see many slam dunks. Despite the leaping ability of stars Bob Kurland, George Mikan, and James Clifford Pollard, aka "the Kangaroo Kid," the dunk shot was considered showboating and was often done only in practice. Basketball players, whose average size was smaller in the mid-20th century, viewed the dunk as a low-percentage shot compared with the ubiquitous jump-shot.

In 1967, the National Collegiate Athletic Association (NCAA) outlawed dunking. A few years later, Julius "Dr. J" Erving, who played professionally for the American Basketball Association's Virginia Squires, re-ignited excitement about basketball with his high-flying slams. In the first half of 1976, a few months before Ehrat first applied for a patent, the dunk was reinstated in college basketball.

At the professional level, flamboyant hoops star Darryl "Dr. Dunk" Dawkins shattered some glass backboards in the late 1970s and early 1980s, which prompted the National Basketball Association (NBA) to ban the shattering of backboards and make collapsible rims mandatory. The NBA's call for collapsible rims, along with the NCAA's reinstatement of the dunk, opened the door for innovations in basketball rims.

Collapsible rims, which folded down when pressure was applied to them, were the precursor to breakaway rims and had to be manually put back in place. Ehrat created a safer basketball rim that automatically snapped back after a slam dunk.
Ehrat's first rim, used a door spring. It was bolted to two plates, one that remained fastened while the other flexed down under pressure. The hinge was not strong enough, so he focused on creating a detent. A detent is a device that holds one mechanical part in relation to another so the device can be released when force is applied. If someone slam dunks a basketball and pulls on the rim, a detent would allow the rim to flex downward with minimal pressure on the backboard. Ehrat fitted some heavy-duty magnets between metal plates on the rim, but this did not work as he envisioned.

The turning point came when Ehrat decided to use a spring mechanism. Drawing upon his agricultural background, he pulled a spring from a John Deere cultivator, cutting it to fit the basketball rim. The thick, sturdy coil was able to withstand more than a hundred pounds of pressure before yielding downward and would push the rim back into place. In addition to the spring, he tested ball bearings, bolts, and corner braces before finding the right combination that would hold at least 150 pounds of pressure.

Once he had viable prototypes, Ehrat tested their durability. He sent one to Virden High School and enlisted Randy Albrecht, to test the other prototypes. Albrecht used his connections as a basketball coach at St. Louis Community College at Meramec to have prototypes installed at the schools where he worked. The rims were sent to other high schools and colleges by Ehrat. For more information on where the prototypes went, see his deposition in Series 3, Subseries 3. Ehrat estimated in his deposition that he built approximately 36-40 prototype rims.

It took six years, from July 1976 to December 1982, for Ehrat to receive the patent on his basketball goal (United States Patent No. 4,365,802, Deformation-preventing swingable mount for basketball goals). His application was rejected twice, with patent examiner Paul Shapiro noting that Frederick C. Tyner held a patent for a similar basketball goal (United States Patent No. 4,111, 420, energy-absorbing basketball goal/backboard unit).

Ehrat and his attorney, Ralph Staubly, pursued an appeal of the rejection. Staubly, a retired patent examiner had moved to Springfield, IL, in the 1970s to open a private practice. A major part of the appeal involved notarized letters from acquaintances who said that Ehrat's invention was unique and would be an asset to the sport of basketball. He also proved, through copies of canceled checks and a rough sketch of his invention, that he was working on his breakaway basketball goal in 1975 before Frederick Tyner conceived of his. In a 1984 deposition (Series 3, Subseries 1), Tyner placed the date of his invention near the last week of March or first week of April 1976, not long after he heard that the NCAA had reinstated dunking.

Ehrat won the appeal, effectively rendering the Tyner patent invalid. After Staubly fell ill and moved to Texas, and in early 1983, Ehrat found a new patent attorney, McPherson Moore of the St. Louis firm Rogers, Eilers and Howell, who became Ehrat's main legal counsel for approximately 20 years.

In February, 1983, two months after Ehrat received his patent, his attorney McPherson Moore sent certified letters to more than 60 sporting goods companies to announce the patent. The letters were sent to alert companies of possible infringement and to garner interest in licensing agreements.

During the basketball goal patent's 17-year lifespan, Ehrat obtained a dozen companies as licensees. Only Fisher-Price and Schutt Manufacturing signed without much difficulty. Ehrat worked to get the other companies licensed, in some cases filing patent infringement lawsuits or threatening to file them. Ehrat's first licensing agreement, signed in 1983, was with Basketball Products International.

Ehrat was involved in eight civil action lawsuits, five of which took place in 1984, when he had to prove for a second time that he had his idea for a breakaway goal before Tyner. Ehrat also defended his patent against other, similar patents issued to sporting goods companies in the early 1980s. Kenneth Mahoney of Toss Back, Charles Engle of Gared Company, and the Porter Equipment Co. all received patents for basketball goal devices, citing Ehrat's patent as prior art. Ehrat was involved in lawsuits with all three companies.
In 1986, Ehrat and attorney McPherson Moore were contacted by William "Toby" Dittrich, who held two patents --United States Patent No. 4,151,989, basketball practice device and United States Patent No. 4,465,277, basketball goal structure. Dittrich was having difficulty licensing his patents to companies because of the confusion over Ehrat's and Tyner's patents. Dittrich assigned his patents to Ehrat in 1987 and they signed a joint licensing agreement to split royalties and settlement money.

In addition to his basketball goal patent, Ehrat also holds two patents for agricultural inventions: United States Patent No. 4,358,054, field-sprayer tank-vehicle having means for on-site metering and mixing of soil-treating chemicals; and United States Patent No. 4,588,127, material-spraying field vehicle having means for on-site metering and mixing of soil-treating chemicals.

Scope and Content Note

The collection is divided into five series and consists of approximately seven cubic feet.

This collection includes correspondence and legal documents--such as patent papers, litigation files and licensing agreements--that relate to Arthur Ehrat's basketball goal, as well as materials regarding his field spreader patents and other invention ideas. The bulk of the collection is made up of attorney correspondence, patent infringement documents, and patent licensing documents. The collection also contains handwritten notes by Arthur Ehrat and his attorneys, sketches of his inventions, an oral history interview, and photographs.

Attorney McPherson Moore sent many of the legal documents and correspondence to Ehrat. These documents were assembled by the law firms for which Moore worked. The original order has been preserved.

The correspondence consists of letters from attorney McPherson Moore to Ehrat and from Moore or his associates to other attorneys regarding litigation, pending licensing agreements, and other actions. The correspondence contains handwritten notes, promotional materials for sporting goods companies, drafts of legal documents, copies of patents and other enclosures. The majority of the correspondence is copies.

Correspondence found throughout the collection is key to understanding the legal documents because it provides insight into the legal negotiations behind the settlement and licensing process, and the diligence necessary to protect a viable patent from infringement. Correspondence should be read in conjunction with litigation and licensing documents to gain a better sense of the negotiations between attorneys and how and why the legal documents were created.

Throughout this collection, reference is made to legal terms, including pleadings, production documents, discovery, patent infringement, file histories, and Bates numbers. Series 3, Civil Action and Settlement Records has numerous sets of pleadings, which are the legal documents filed in a lawsuit. These documents encompass complaints, petitions, answers, motions, declarations, and memoranda.

The discovery process is the effort of one party to a lawsuit to get information from the other party prior to a trial. This is done through depositions, requests for or production of documents, and interrogatories (written questions to the other party).6

Bates numbers --named after the Bates Automatic Numbering Machine patented in the late 1800s --are used to identify documents with a unique number. The parties to a lawsuit use these numbers to keep papers in order when they are sent to the other party during discovery. This collection contains sets of production documents stamped with Bates numbers. (See Series 3, Subseries 8: Ehrat v. Icon, Proform and K's Merchandise, 1984-1996)7
Patent infringement is "the manufacture and/or use of an invention or improvement for which someone else owns a patent issued by the government, without obtaining permission of the owner of the patent by contract, license or waiver."8

A patent file history (also called a file wrapper) is a folder maintained by the United States Patent and Trademark Office. It contains all of the correspondence and documents from a patent application.9 See Series 2, Subseries 2 for the file history of Ehrat's United States Patent No. 4,365,802.


This series, which is further divided into three subseries, comprises oral history interviews, early sketches of Ehrat's basketball goal, articles about slam dunking, Ehrat's breakaway rim, correspondence and notes, income and expense records (including legal expenses), photographs and facsimiles of photographs, and invoices from the components Ehrat purchased when he created prototypes. One receipt documents the heater Bob Copelin purchased for his new shed in 1975, around the time Ehrat began inventing. This was significant when Ehrat was trying to prove to the United States Patent Office that he had his idea before Frederick Tyner.

Subseries 1: Ehrat History, 1968-2005

Correspondence in this subseries includes a handwritten list of possible names for the basketball rim, one which Ehrat titled, "The Rebounder Has Been Tested." The correspondence also contains copies of letters sent to the United States Patent Office intended to prove that Ehrat's rim was unique; a letter from National Basketball Association saying that, after testing, it is going to use Kenneth Mahoney's (Toss Back) rim instead of Ehrat's; letters from basketball halls of fame; and copies of e-mail from the Smithsonian. This subseries has an original sketch of Ehrat's basketball goal with annotations. Also included is a 1 D2" VHS tape of Ehrat explaining the components he used to fashion his first breakaway rim prototypes and a news segment in which Ehrat was interviewed about his invention at the Chicago Board of Trade. The audio and video recordings contain some repetition of information.

Subseries 2: Photographs and Clippings, 1973-2005

Color photocopies of photographs depicting early rims; a birthday gathering for Ehrat's father, William Ehrat, circa 1974-1975 (used to help prove that he was working on the rim before Frederick Tyner); Ehrat giving a rim to Virden High School; Ehrat with sportscaster Dick Vitale; and a studio shot of his daughters, Rose, Jo, Sharon, Jane, and Linda.

Three photographs in this subseries show prototype rims with coil springs. Ehrat holds up one of these photographs in the video history, but he does not discuss the photographs' origin. There are no markings of any kind on the photographs.

Subseries 2 also contains field photographs taken by John Fleckner, National Museum of American History staff, in May 2005. Field photographs include: the grain elevator Ehrat managed; rim prototypes; and a donated rim hanging on the gym wall at Virden High School.

Articles in this subseries are from the Virden Recorder, The State Journal-Register, Chicago Tribune, The Wall Street Journal, and Kentucky Living. The topics covered include collapsible rims and breakaway rims; Ehrat and his invention; and the Smithsonian Institution's interest in the breakaway rim. Also included is a clipping from Farmers Elevator Co.'s meeting minutes from December 15, 1973, in which the board voted to relinquish rights to any patent or product created by Ehrat.

Subseries 3: Oral History Interview, 2005

A May, 2005, interview of Ehrat by John Fleckner at Ehrat's home in Virden, IL. Ehrat discusses his background, attorney Ralph Staubly, basketball rims he built, and a slam dunk contest that his nephew
Randy Albrecht helped organize in the early 1980s at St. Louis Community College. Subseries 3 also contains Digital video disks (DVD) in which Ehrat discusses the documents he sent to the Archives Center, National Museum of American History. There is some repetition of topics discussed in the audio and video recordings.


This series, divided into four subseries, contains copies of patents used as research or as prior art for Ehrat's patent application, a file history of the patent, correspondence/notes from Ehrat and his attorneys, and legal papers sent from Ehrat's first attorney, Ralph Staubly, to McPherson Moore.

**Subseries 1: Ehrat and Dittrich Patents, 1979-1984**


**Subseries 2: Research and File History, 1865-1984**

The complete patent file history consists of a list of actions taken (rejections, appeals, civil action filed) on the patent application for United States Patent No. 4,365,802. Pages 19-23 are copies of letters sent to United States Patent Office to establish the rim's unique qualities after the examiner's interference search found Frederick Tyner's patent (United States Patent No. 4,111, 420, Energy-absorbing basketball goal/backboard unit) and ruled Ehrat's invention was too similar.

**Subseries 3: Correspondence and Notes, 1976-1984**

Two sets of letters from acquaintances. The first set, 1977-1978, was sent to the United States Patent Office and provide a sense of the invention's unique quality. The second set, 1983-1984, consists of letters written by Ehrat's friends and was used in Basketball Products International and Ehrat v. Mt. Vernon School District and Porter (Series 3, Subseries 1) to establish that Ehrat had his breakaway rim idea before Frederick Tyner. A letter in the correspondence folder for this litigation, dated February 23, 1984, mentions that copies of these letters were sent to Basketball Products International. Also in this subseries is a transcript of a phone conversation between Ehrat and attorney McPherson Moore about when Ehrat had the idea for a breakaway rim and who knew about it.

**Subseries 4: Files from Ehrat's First Attorney, Ralph Staubly, 1976-1982**

Includes the file about Ehrat sent from Ralph Staubly to McPherson Moore when Ehrat changed legal representation in 1983. The folder contains originals, copies, and drafts of documents sent to the United States Patent Office, some with annotations. Also included is a high school basketball rulebook, 1977-1978, and the notes Ralph Staubly used to write an affidavit for Ehrat's patent application in which Ehrat swears he invented before Frederick Tyner.

**Series 3: Civil Action and Settlement Records, 1984-1996**

This series is divided into eight subseries. It contains full and partial sets of case pleadings, with pleadings indices, from eight court cases, attorney correspondence and notes, depositions of Ehrat and Frederick Tyner, case judgments, and signed settlements.

In 1984, Ehrat and Basketball Products International were plaintiffs or defendants together in five civil action lawsuits that involved sporting goods companies, including Porter Equipment Company, Gared Company, and Toss Back. These lawsuits and their correspondence should be consulted in conjunction with one another.

Civil action, February 1984-June 1984: The complaint alleges patent infringement by sporting goods company Porter for manufacturing products embodying the invention, and infringement by Mt. Vernon School District (WA) for purchasing Porter basketball goals. Action dismissed June 11, 1984. This subseries contains the subpoena and deposition of Frederick Tyner regarding United States Patent No. 4,111,420, Energy-absorbing basketball goal/backboard unit. It also contains plaintiff's exhibits, numbered 1-31, which include Tyner's notes, documents, and facsimiles of photographs related to his patented basketball goal.


Civil action, April 1984-June 1984: The complaint alleges that Ehrat's and Basketball Products International's patents are invalid and unenforceable and that Porter and Mt. Vernon School District did not infringe. Porter calls for dismissal or transfer of the case. The pleadings index for Vol. 1 has a note at the bottom that says "Start Vol. 2," but Vol. 2 is not in the collection.


Civil action, March 1984-October 1984: This action is in response to letters sent by attorney McPherson Moore threatening a lawsuit if Gared Company does not cease manufacture of infringing goals. Gared Company files a complaint for declaratory judgment, calling the patent invalid and alleging unfair competition. A stipulated dismissal of complaint was signed by Moore and Ralph Kalish, Gared Company's legal counsel. Declaratory judgment is the judgment of a court which determines the rights of parties without ordering anything be done or awarding damages.

Of note in this subseries is the deposition of Ehrat regarding his involvement with Gared Company and the city of St. Louis, where the company is based. Gared Company's counsel, Ralph Kalish, asks Ehrat questions about his nephew, Randy Albrecht. Ehrat purchased 12 rims from Gared Company, on the advice of his nephew, for the purpose of building and testing his releasable basketball goals. Kalish tries to assess whether there was a profit motive and how Gared Company's goals factored into that.


Civil action, April 1984-June 1984: Complaint filed against Gared Company and Athletic Supply (which purchased Gared Company goals) for patent infringement. The case was dismissed.

Subseries 5: Basketball Products International and Ehrat v. Toss Back

Civil action, May 1984-June 1984: Complaint filed against Toss Back and the cities of Seattle and Tacoma (which purchased Toss Back basketball goals) for patent infringement. There is no evidence of a settlement or of court action. Toss Back signed a licensing agreement with Ehrat in 1985 (See Series 4, Licensing Agreements).


Civil action, 1988-1990: Complaint filed against sports equipment company Gared and its parent company, Nixdorff-Krein Industries, for patent infringement. Request for passing case for settlement filed by Ehrat's attorney, McPherson Moore, and granted by the court. The signed settlement is in this subseries. This subseries has file histories of Gared Company patents. A file history (or file wrapper) is a folder kept at the United States Patent and Trademark Office that has all of the correspondence and documents from a patent application.

Civil action, 1993: A complaint was filed against Diversified Products after a series of letters calling for the company to cease manufacture and sales of infringing basketball goals went unheeded. The parties were granted a consent judgment to settle out of court. The signed settlement is in this subseries.


The Icon Health & Fitness Inc. (hereinafter Icon) pleadings consist of two volumes, Vols. 2 and 3. Vol. 1 is missing. There is a draft of the first page of Ehrat's complaint against Icon in Box 9, Folder 3. A consent judgment was entered, and the parties settled out of court. The signed settlement is in this subseries.

There are two categories of production documents in this subseries, those for the plaintiff (three folders) and those for the defendant (seven folders), that have Bates numbers affixed to or printed on the bottom of the pages. Bates numbers are used to identify documents with a unique number. The parties to a lawsuit use these numbers to keep papers in order when they are sent to the other party during discovery.

The plaintiff's production documents include Bates numbers 1-205. Numbers 1-105 contain Ehrat's patent file history; numbers 107-205 are copies of Ehrat's licensing agreements through 1993.

In the defendant's production documents, one folder has Bates # I10001 and other numbered pages that are not in a particular order. Bates numbers I10068-110882 include the file history for United States Patent No. 4,365,802, deformation-preventing swingable mount for basketball goals; correspondence among defendant's attorneys; copies of patents; and copies of licensing agreements through 1993.

**Series 4: Licensing Agreements, 1982-2000 (bulk 1980s-1990s)**

This series is divided into twenty-six subseries and encompasses materials pertaining to Ehrat's relationships with numerous companies that manufacture or sell sports equipment. These materials include correspondence and notes, licensing agreements and drafts of agreements, Dun and Bradstreet financial reports, catalogs, pamphlets, and other promotional materials. Ehrat and attorney McPherson Moore used the promotional materials to determine whether the companies were marketing or selling basketball goals that infringed on Ehrat's patent, then contacted the companies about licensing Ehrat's patent. With the exception of Subseries 1: Correspondence and Subseries 6: William Dittrich Patents, each subseries represents a different company.

To better understand Ehrat's relationships with these companies, researchers should consult Subseries 1: Correspondence, as well as the correspondence within specific subseries, in conjunction with licensing agreements and other documents in this series.

There are thirteen signed licensing agreements in this series, some of which bear original signatures. Ehrat's first licensee was with Basketball Products International, which signed an exclusive agreement in 1983. In November, 1984, after five civil action lawsuits in which Ehrat and Basketball Products International were either co-plaintiffs or co-defendants, the company signed a nonexclusive licensing agreement. Drafts of the agreements exist for some companies, but there is no evidence that the agreements were signed. In some cases, correspondence indicates which companies were not interested in entering into an agreement.

Ehrat's licensees include Huffy (signed May 1988); Basketball Products International, exclusive license (signed July 1983); nonexclusive license (signed November 1984); Toss Back (signed January 1985); Porter Equipment Company (signed 1985 and 1989); RDH Enterprises/Schutt (signed August 1991); Industrial Machine Specialties/Bison (signed January 1987); Lifetime Products (signed March 1989); Fisher-Price (owned by Quaker Oats, signed April 1988); Indian Industries/Harvard Sports (signed June 1991); McCullough (signed April 1990); and Sure Shot (signed March 1991).

Companies in this series without signed licensing agreements include Medart; Blazon-Flexible Flyer; Spang/Today's Kids; Sports and Leisure/Ideas That Sell; Wilson Sporting Goods; Hutch Sporting Goods;
Settlements and licensing agreements that Ehrat signed with Gared Company, Diversified Products, and Icon appear only in Series 3, Civil Action and Settlement Records.

Subseries 6, William Dittrich Patents, contains correspondence and documents relating to the patent and royalty agreement Dittrich made with Ehrat in 1987. Dittrich had two basketball-related patents but had difficulty getting companies to license with him because there was confusion about his patents and those of Ehrat and Frederick Tyner. Dittrich contacted Ehrat's attorney, McPherson Moore, and they worked out an agreement. Ehrat acquired Dittrich's patents and they joined forces to attract licensing agreements and to split royalties and litigation settlements. Subseries 6 also has the transcript of a 1986 phone conference between William Dittrich and McPherson Moore regarding a possible joint agreement with Ehrat and the patent file history for United States Patent No. 4,151,989, basketball practice device. There is no file history for Dittrich's other patent, United States Patent No. 4,465,277, basketball goal structure, but there are pieces of the file history in this subseries. Subseries 6 also includes drafts and signed patent assignment papers and a signed licensing agreement between Ehrat and Dittrich, 1987.


Subseries 16, McCullough contains a Dunk-Kit (see Box 18), which Ehrat purchased in 1989. The Dunk-Kit is a set of springs and bolts that turn a set basketball goal into a breakaway goal. According to attorney McPherson Moore, the springs and bolts constituted an infringement of Ehrat's patent. McCullough disagreed with this assessment but eventually agreed to a monetary settlement.

Series 5: Field Spreader Patents and Other Ideas, 1977-2003

Subseries 1: Field Spreader Patents, 1977-2003

This subseries contains copies of Ehrat's two field spreader patents: United States Patent No. 4,358,054, field-sprayer tank-vehicle having means for on-site metering and mixing of soil-treating chemicals and United States Patent No. 4,588,127, material-spreading field vehicle having means for on-site metering and mixing of soil-treating chemicals. It also contains magazines, articles, and pamphlets on agricultural equipment and litigation documents between SoilTeq and Ag-Chem.

Subseries 2: Other Ideas, 1971-1998

In the late 1980s and early 1990s, Ehrat came up with ideas for other inventions, but none of them were patentable. This subseries has original sketches for "electric clippers with box for holding clippings;" a beverage can with multiple containers; and an "automobile refreshment temperature control." Included in the folders are letters that outline the ideas behind the inventions and the reasons they were not patented. Also included are copies of patents that relate to Ehrat's ideas.

Series 6: Toby Dittrich Files, 1889-1997

This series, which is further divided into five subseries, contains administrative records, prior art, patent records, correspondence, litigation materials, financial records, marketing and sales materials, photographs, and newspaper clippings from William A. (Toby) Dittrich. Dittrich invented the "Dunk King" break-away basketball rim in the mid 1970s while he was a physics professor at Pacific Lutheran University in Washington State. Dittrich patented and marketed his rim with mixed success before selling the rights to his patents to Arthur Ehrat in the mid 1980s. The two agreed to market and license their
products independently, and cooperatively share royalties and settlements from patent infringement cases.

Arrangement

The collection is divided into five series.

Series 1: Background materials, 1968-2005

Subseries 2: Photographs and Clippings, 1973-2005
Subseries 3: Oral History, 2005

Series 2: Patent records for basketball rim, 1865-1984

Subseries 1: Ehrat and Dittrich Patents, 1979-1984
Subseries 2: Research and File History, 1865-1984
Subseries 3: Correspondence and Notes, 1976-1984
Subseries 4: Files from First Attorney, Ralph Staubly, 1976-1982

Series 3: Civil action and settlement records, 1984-1996


Subseries 1: Correspondence, 1980-1989
Subseries 2: Huffy, 1982-1994
Subseries 5: Porter, 1985-2000


Subseries 9: Lifetime Products, 1987-1989

Subseries 10: Medart, 1988


Subseries 16: McCullough, 1989-1993


Subseries 20: Aalco, 1991

Subseries 21: Bergfeld Recreation, 1991


Subseries 23: MacGregor, 1997

Subseries 24: Pro-Bound, 1997


Subseries 26: Hyland Engineering, 1998

Series 5: Field spreader patents and other ideas, 1977-2003

Subseries 1: Field Spreader, 1977-2003

Subseries 2: Other Ideas, 1971-1998

Series 6: Toby Dittrich Files, 1889-1997


Subseries 2: Patent Information, 1889-1989


Subseries 4: Marketing and Sales, 1977-1991
Subseries 5: Other Inventions and Ideas, 1978-1980

Names and Subject Terms

This collection is indexed in the online catalog of the Smithsonian Institution under the following terms:

Subjects:
- Basketball hoops
- Basketball
- Inventions--20th century
- Inventors
- Patent suits
- Sporting goods industry--1950-1990

Types of Materials:
- Audiovisual materials
- Interviews--2000-2010
- Legal records
- Oral history--2000-2010
- Patents--20th century
- Photographs--2000-2010
- Videotapes--2000-2010
Container Listing

Series 1 : Background Materials, 1968-2005

English

Subseries 1.1: Ehrat History, 1968-2005

Box 1, Folder 1  Ehrat History, 1968-2005
Box 1, Folder 1A The story of five guys from all over the United States who saved the game of Basketball, by William A. Dittrich, (essay), 2011 December 22
Box 1, Folder 2 Arthur Ehrat, history of his invention, original ½" VHS, Total Running Time 77:11, February 25, 2005
At the beginning of the tape and at 48:00, Ehrat holds up rim prototypes he made in the mid-1970s and explains the springs and hinges and how they are welded. At two times on the tape, he holds up facsimiles of photographs (see Series 1, Subseries 2) and discusses what's in them. He shows an inventory list for Snell Bros. from the mid-1970s of items he purchased to make the first prototypes (see Series 1, Folder 5). Ehrat also discusses how the National Basketball Association tested his and Kenneth Mahoney's (president of Toss Back) rims and chose Mahoney's.
At 49:00, the tape cuts to a television news interview with Ehrat at the Chicago Board of Trade, regarding his basketball and field spreader patents.
The video goes back to Ehrat at 55:00, and then cuts out at 77:11.

Box 1, Folder 3 Early Sketches, breakaway rim, 1975-1976
Box 1, Folder 4 Correspondence and notes, 1976-2005
Box 1, Folder 5 Invoices, 1975-1979
Box 1, Folder 6 Income and expenses, 1976-1995

Subseries 1.2: Photographs/Clippings, 1973-2005

Box 1, Folder 7 Photographs, 1975-2005
Box 1, Folder 8 Media Clippings, 1973-2005
Box 1, Folder 8  Jones, Dave. The gorilla dunk meets its match. *Chicago Tribune*, February 14, 1981

Box 1, Folder 8  Hall, Ben. Getting The Breaks. *Kentucky Living*, January 1994

Box 1, Folder 8  Sterba, James P. Loose Rims Sink Shots in the Age of Slop. *Wall Street Journal*, March 24, 1995

Box 1, Folder 8  Molen, Sam. Curious World of Sports. *Virden Recorder*, May 6, 1997

Box 1, Folder 8  Molen, Sam. Curious World of Sports. *Virden Recorder*, October 22, 1997


Box 1, Folder 8  Graves, Gary. Bent on revolutionary idea. *USA Today*, December 9, 1997.

Box 1, Folder 8  Ehrat presents patented break-away rim. *[Virden Recorder?]*, circa 2004-2005


Box 1, Folder 8  Keilman, John. This gadget really was a slam dunk. *Chicago Tribune*, April 4, 2005

Box 1, Folder 8  Smithsonian Institution asks Virden inventor to archive original documents, prototypes. *Virden Recorder*, May 25, 2005

**Subseries 1.3: Oral History, 2005**

**Cassette 907.1**  Arthur Ehrat, oral history interview (original audio tape cassette), Total Running Time: 59:03, May 16, 2005-May 17, 2005

Ehrat discusses growing up on a farm during the Great Depression and how, out of necessity, he learned to use and fix farm equipment. He discusses his background, which includes two years as an Army medic, a two-year course at a business school, and his career as a grain elevator manager. He talks about meeting retired patent examiner Ralph Staubly, who helped him get his breakaway rim patent. He talks about the original 20-plus rims he made and the dunk contest (using Ehrat's rims) that nephew Randy Albrecht helped stage in the early 1980s. After Ehrat received United States Patent No. 4,365,802, he made a list of sporting goods companies and had his attorney, McPherson Moore, send certified letters to the companies asking if they were interested in a licensing deal.

**Cassette 907.2**  Arthur Ehrat, oral history interview (original audio tape cassette), Total Running Time: 59:35

Discussion of Ehrat's prototype rims and the parts he used to create a rim that would snap back without bending and pulling down on the backboard. He tried a hinge mechanism, but that was too weak so he tried a magnet, then a ball bearing and a spring from a John Deere tractor, because he wanted something to hold the rim before it hit the spring. Ehrat talks about
photographs from the early days of the rim, such as the workbench at his friend's shed where they worked on and tested the rims, the rims he gave to each of his seven grandchildren and the Naismith Memorial Basketball Hall of Fame, where he donated some materials. Color photocopies of these photographs are in Series 1, Subseries 2. He discusses the problems he encountered in getting the patent issued and the reversal of examiner Paul Shapiro's rejection. Other topics covered: licensing to companies, attorney fees, and Ehrat's field spreader patents.

Cassette 907.3  Arthur Ehrat, oral history interview (original audio tape cassette), Total Running Time: 19:21

Ehrat says that Bob Copelin's shed, where he worked on and tested the first rims, was important in establishing that he came up with the breakaway rim idea before Frederick Tyner, because the shed was built and a heater installed not long before Ehrat began tinkering. (There is a receipt for the heater, sold by Farmers Elevator Co. in Oct. 1975, in Series 1, Subseries 1.) Other topics: keeping track of rims sold and revenue/costs associated with the patent; licensing; attorney fees; new breakaway rims; Ehrat family history documents (See Series 1, Subseries 1Ehrat History)

Disk 907.1  Arthur Ehrat, oral history interview (reference copy), Total Running Time: 59:03 Track 1 = Side 1; Track 2 = Side 2

Disk 907.2  Arthur Ehrat, oral history interview (reference copy), Total Running Time: 59:35 Track 1 = Side 1; Track 2 = Side 2

Disk 907.3  Arthur Ehrat, oral history interview (reference copy), Total Running Time: 19:21 Track 1 = Side 1

Video 907.1  Arthur Ehrat, oral history (original DVD), Total Running Time: 62:05, July 4, 2005

Ehrat discusses the documents he sent to the Archives Center.

Video 907.2  Arthur Ehrat, oral history (original DVD), Total Running Time: 58:53, July 4, 2005

Subseries 2.1: Ehrat and Dittrich Patents, 1979-1984

Box 2, Folder 1  Ehrat and Dittrich Patents, 1979-1984
Copies of United States Patent No. 4,365,802 (Ehrat), United States Patent
No. 4,151,989 and United States Patent No. 4,465,277 (Dittrich)

Subseries 2.2: Research/File History, 1865-1984

Box 2, Folder 2  Patents used as prior art, 1865-1978
Box 2, Folder 3  Patent research, 1917-1984
Box 2, Folder 5  Patent file history, 1976-1982 (partial)

Subseries 2.3: Correspondence/Notes, 1976-1984

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Box 2, Folder 7  Notes, 1976-1984

Subseries 2.4: Files from First Attorney, Ralph Staubly, 1976-1982

Box 2, Folder 8
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- Box 3, Folder 1: Correspondence, 1984
- Box 3, Folder 2-3: Pleadings, 1984
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- Box 3, Folder 6: Correspondence, 1984
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- Box 4, Folder 5: Ehrat deposition and notes, 1984


- Box 4, Folder 6: Pleadings, 1984

Subseries 3.5: Basketball Products International and Ehrat v. Toss Back, 1984
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- Box 5, Folder 2: Correspondence, 1982-1989
- Box 5, Folder 3-4: Correspondence form letters to companies regarding infringing Gared Company patent, 1987
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