

may be a non-resident of the county or state; it may have its principal office in another county or state; yet if it comes into a county or state and establishes a local agent for the transaction of its business, it is there present for all the purposes of its business, and for all purposes of suit.

I have extended my remarks much more than I should have done but for the claim that there was now no provision in existence authorizing a suit against a foreign corporation, which claim, upon careful examination, appears to me to be incorrect. In the plea now under consideration in this case there is no denial of the allegation in plaintiff's petition "that Charles Dexter is the local agent in the city of Houston, Harris county, Texas, of the defendant, and is recognized by them as such in the conduct of their said business;" which, in my view of the case, is the only jurisdictional fact to be denied or ascertained, and the only question of fact to be submitted in the plea to the jurisdiction, when the proceedings are, as in this case, otherwise regular. And said Dexter having been personally served as agent of defendant with process herein, the defendant must be regarded as personally served, and in court for the adjudication of the matters embraced in the plaintiff's petition; and it is ordered and adjudged that the matters and things set forth in the defendant's protest and plea to the jurisdiction interposed herein be held for naught, and that the cause be proceeded with upon its merits.

AMERICAN BELL TELEPHONE Co. and others v. PEOPLE'S TELEPHONE Co. and others.

(Circuit Court, S. D. New York. December 1, 1884.)

1. PATENTS FOR INVENTIONS—NOVELTY—PRESUMPTION FROM GRANT OF LETTERS—BURDEN OF PROOF.

Evidence of doubtful probative force will not overthrow the presumption of novelty and originality arising from the grant of letters patent for an invention. The defense of want of novelty or originality must be made out by proof so clear and satisfactory as to remove all reasonable doubt.

2. SAME—CREDIBILITY OF WITNESS.

Where a witness falsifies a fact in respect to which he cannot be presumed liable to mistake, courts are bound, upon principles of law, morality, and justice, to apply the maxim, *falsus in uno, falsus in omnibus*.

3. SAME—BELL TELEPHONE—DRAWBAUGH INVENTIONS.

Upon careful examination of the testimony in this case, held, that Daniel Drawbaugh was not the first inventor of the electric speaking telephone, and that patent No. 174,465, for improvements in telegraphy, granted to Alexander Graham Bell, March 7, 1876, and patent No. 186,787, for improvements in electric telephony, granted to said Bell, January 30, 1877, are valid.

In Equity.

Dickerson & Dickerson, for complainants. Edwd. N. Dickerson, Roscoe Conkling, S. J. Storrow, and Chauncey Smith, of counsel.

Lysander Hill, for defendants. *Geo. F. Edmunds, Lysander Hill, and Church & Church*, of counsel.

WALLACE, J. This suit is brought to enjoin the defendants from using and furnishing to others for use the several inventions described in two patents granted to Alexander Graham Bell, of Salem, Massachusetts, being No. 174,465, bearing date March 7, 1876, for "Improvements in Telegraphy," and No. 186,787, bearing date January 30, 1877, for "Improvements in Electric Telephony." The issues made by the pleadings are practically resolved into the single question, to which the proofs and argument of counsel are mainly addressed, whether the patentee Bell, or Daniel Drawbaugh, of Milltown, in Cumberland county, Pennsylvania, was the first inventor of the electric speaking telephone. Concededly, Bell was an original inventor of the telephone, the principle of which, with the essential means for its application, are described in his first patent, and of the improved apparatus described in his second patent. The fifth claim of the first patent is for "the method of and apparatus for transmitting vocal or other sounds telegraphically, as herein described, by causing electrical undulations similar in form to the vibrations of the air accompanying the said vocal or other sounds, substantially as set forth." This patent has been judicially construed in two cases in the Massachusetts circuit; and in both cases it was substantially held that Bell was the discoverer of the new art of transmitting speech by electricity, and that the claim should receive the broadest interpretation to secure to the inventor, not the abstract right of sending sounds by telegraph without regard to means, but all means and processes described which are essential to the application of the principle. *American Bell Telephone Co. v. Spencer*, 8 FED. REP. 509; *Same v. Dolbear*, 15 FED. REP. 448.

In view of the conclusion reached upon the merits of the issue, it is not material whether Bell's inceptive invention did or did not antedate the time of filing his application for the first patent. That application was filed February 14, 1876. It describes apparatus which was an articulating telephone, whether Bell knew it or not. Mr. Cross, an expert, caused apparatus to be made in conformity to the description and to drawings as shown in figure 7 of the patent, which proved itself to be an operative, practical telephone. Probably the date of his inceptive invention might be carried back to July, 1875, but, irrespective of the time of the invention, the justice of his claim to be an original inventor of the telephone must remain unchallenged. It was through him also that the telephone was made known to the scientific public, and thence introduced into commercial use.

The defendants contend that long before Bell had perfected his invention, and long before its mental conception by him, Drawbaugh had not only made the same invention, but had perfected improvements in organization and detail which Bell never reached, and which

were only reached years afterwards by the work of many other inventors in the same field of improvement. Their theory of the facts is stated with substantial accuracy in the answer to the bill of complaint. The answer, among other things, avers that Drawbaugh "was and is the original and first inventor and discoverer of the art of communicating articulate speech between distant places by voltaic and magneto electricity, and of the construction and operation of machines and instruments for carrying such art into practice * * *; that the said electric speaking telephones so constructed and successfully and practically used by him contained all the material and substantial parts and inventions patented" in the two patents granted to Bell, and also contained other important and valuable inventions in electric and magneto telegraphy * * *; "that some of the original machines and instruments invented, made, used, and exhibited to many others long prior to the alleged inventions of Bell are still in existence and capable of successful practical operation and use, and are identified by a large number of persons who personally tested and used and know of their practical operation and use in the years 1870, 1871, 1872, 1873, 1874 and both subsequently and prior thereto * * *; that said Drawbaugh, for more than 10 years prior to 1880, was miserably poor, in debt, with a large and helpless family dependent upon his daily labor for support, and was from such cause alone utterly unable to patent his said invention or *caveat* it, or manufacture and introduce it upon the market; and that said Drawbaugh never abandoned nor acknowledged the claims of any other person thereto, but always persisted in his claim to it, and intended to patent it as soon as he could obtain the necessary pecuniary means therefor."

Drawbaugh, in his testimony, adopts the statements of the answer as true. He also testifies that he commenced his experiments with the electric telephone as early as 1866; that prior to or as early as in 1867 he had made apparatus (in which he employed a tea-cup as the transmitter) through which speech could be transmitted feebly and incoherently; and that as early as the time of the birth of his son Charles he had so progressed that his wife, who was then confined to her bed, could, by listening with one of his instruments, hear the words spoken by him in the other instrument in a distant part of the house. His son Charles was born in 1870, and, if Drawbaugh's narrative is true, he had succeeded at that time in transmitting speech distinctly through the instruments, although whispered words would not be accurately heard. He describes instruments which he says were made by him from time to time as experiments led him from one improvement to another. He testifies that he thinks he made his first telephone apparatus prior to November, 1866, and is positive he had it before he moved his shop to the "Clover-mill" in 1867. As he describes it the body of the transmitter was a porcelain tea-cup, the diaphragm was of membrane, the electrodes interposed in the circuit were two copper disks, the upper one of which was con-

nected to the diaphragm by a wire so as to vary its pressure upon a low conductor of fine earth or pulverized charcoal interposed between the disks through the action of the sound waves upon the diaphragm, and the receiver was a tin can without a top or bottom, having a membrane diaphragm stretched over one end connected by a tense cord to an armature supported on a spring and arranged close to the poles of an electro-magnet in the electric circuit. He testifies that subsequently he constructed apparatus upon the same general principle, with some change of detail, and he produces Exhibits F and B, the former a transmitter and the latter a receiver, as the remnants of the original instruments. Exhibit F is a glass tumbler; and he states that at first he used a membrane diaphragm over it, and then one of thin metal, and that for the conductor he used pulverized carbon, or carbon mixed with bronze powder, and used various tops or mouth-pieces to speak into it. The Exhibit B, he says, was the receiver, and in this he had discarded the string and the spring of his earlier receiver. He says that experiment led him to improve the transmitter, F, by substituting a metal diaphragm in place of membrane, and he produces a sketch. A reproduction of this instrument has been made by him for use in the proofs which is designated as "Exhibit F reproduced." In this the mouth-piece is modified in size and in distance from the diaphragm. He made, according to his testimony, a new receiver of more perfect construction, and produces the remnant of the original, which is designated as "Exhibit C." As he describes the instrument it was a decided advance upon the former receiver. In using this he says he tested it also as a transmitter with some success, and then improved it by placing a permanent magnet against the heel of the electro-magnet, and thus made a magneto telephone. A reproduction of such an instrument as he describes is made and referred to in the proofs as "Exhibit Reproduced C." After Exhibit C he produces Exhibits I, A, E, and D as likewise original instruments, made respectively in the chronological order of their production as exhibits. He states that I was used by him as a companion instrument to C. Exhibit A discloses a modification of form and a higher degree of mechanical adaptation. The last two, D and E, are concededly perfect, practical instruments, and according to the testimony of Mr. Benjamin, an expert witness for the defendants, would compete successfully for public patronage with any magneto telephone which had been introduced into use in 1882. It is asserted of these instruments by counsel that no higher development of the magneto telephone has been reached at the present time than is indicated by Exhibits E and D. Drawbaugh does not attempt to fix the time at which he made any of these instruments, or even the year. He testifies, however, that he made all of them prior to the time the axle company commenced business, which was in December, 1874, except E and D which were made about that time.

The theory of the defendants is that Exhibits F and B were used

by Drawbaugh in 1867, 1868, and 1869, Exhibit C in 1869 and 1870, Exhibit I in 1870 and 1871, Exhibit A in 1873 and 1874, and that Exhibits E and D were made in January or February, 1875, although cruder instruments essentially similar were made somewhat earlier. It is in proof that 33 patents were granted for improvements in telephones in 1878, 64 in 1879, more than 100 in 1880, and 94 in the first six months of 1881. According to the theory of the defendants, therefore, as early as February, 1875, Drawbaugh had not only distanced Bell in the race of invention, but also Gray and Edison, and had accomplished practically all that has since been done by a host of other inventors. The case for the defendants must stand or fall by this theory. The proofs leave no room for fair doubt that defendants' contention is substantially true, or that the defense has no foundation in fact. It is either true that Drawbaugh had long been treading his solitary path of investigation and experiment in poverty and obscurity, but had perfected his work when the inventions of other explorers were in embryo, or his story is an ingenious fabrication. And, as will hereafter appear, if the defense is a fabrication, many disinterested witnesses have contributed innocently to give it color and strength, but Drawbaugh has deliberately falsified the facts.

The complainant starts with the benefit of the presumption of law that Bell, the patentee, was the inventor of that for which the letters patent were granted him. Whoever alleges the contrary must assume the burden of proof. Evidence of doubtful probative force will not overthrow the presumption of novelty and originality arising from the grant of letters patent for an invention. It has been frequently held that the defense of want of novelty or originality must be made out by proof so clear and satisfactory as to remove all reasonable doubt. *Washburn v. Gould*, 3 Story, 122; *Smith v. Fay*, 6 Fisher, 446; *Hawes v. Antisdel*, 2 Bann. & Ard. 10; *Patterson v. Duff*, 20 FED. REP. 641; *Wood v. Cleveland Rolling-mill Co.* 4 Fisher, 560; *Parham v. American Button-hole Co.* Id. 482. In *U. S. Stamping Co. v. Jewett*, 18 Blatchf. 469, S. C. 7 FED. REP. 869, BLATCHFORD, J., said the defendant had not fulfilled "the necessary obligation of showing beyond any reasonable doubt" that Weber (the alleged prior inventor) was prior to Heath, (the patentee.) In *Coffin v. Ogden*, 18 Wall. 120, Mr. Justice SWAYNE, delivering the opinion of the court, stated the rule applicable to the defendant as follows: "The burden of proof rests upon him, and every reasonable doubt should be resolved against him." To overthrow this presumption and disprove that Bell was the first inventor, the defendants introduce the testimony of nearly 200 witnesses tending to prove the priority of invention by Drawbaugh. As the complainant concedes that Exhibits E and D are highly organized, practical telephone instruments, and fully capable of perfect articulation, the patents are invalidated if these instruments were in existence at the date of Bell's invention:

and, as will hereafter appear, either they were in existence as early as in 1875, or it is incredible that they existed at all until long after Bell's first patent had been granted and his invention had attracted general public attention at the centennial exposition and elsewhere.

In the argument for the defendants great stress is placed upon the evidence of a gradual and natural development of Drawbaugh's invention, shown by the original instruments produced, beginning with Exhibit B, and ending with the perfect magnetos E and D. It is strenuously urged that these exhibits fortify his testimony describing the instruments no longer extant, and mark the origin and culmination, beginning with the cup machine and Exhibit F, of two separate lines of invention, one leading to the battery telephone, in which the undulatory vibrations are controlled by variations in the resistance of the circuit; and the other to the magneto telephone, in which the vibrations are created in the act of producing the current itself. The general theory of the defense is substantiated by three classes of witnesses: those who heard of the existence of Drawbaugh's "talking-machines" at various times; those who talked through the machines on various occasions, or heard others talk through them; and those who attempt to identify one or more of the exhibits as the instruments they saw used. Only an outline of their testimony will be given.

More than 50 witnesses testify to having heard of the talking-machines prior to February 14, 1879.

Of these witnesses three think they heard of them in 1869; three in 1870; two in 1871; five in 1872; three in 1873; three prior to 1873; eight in 1874; two in 1875; from 1866 to 1876, one; from 1868 to 1871, one; from 1868 to 1873, one; from 1869 to 1870, one; from 1869 to 1876, one; from 1871 to 1872, two; from 1872 to 1873, one; from 1873 to 1874, one; from 1873 to 1875, three; from 1874 to 1875, one; from 1874 to 1876, one; from 1872 to 1876, one; prior to 1869, one; prior to 1872, two; prior to 1875, one.

Sixty witnesses do not attempt to identify any particular instrument, but testify that they saw a talking-machine, or talked through it or heard it talked through, at Drawbaugh's shop on occasions subsequent to 1867, and most of them fix the occasion as prior to 1876. The substance of the testimony of some of them will be given. Wilson G. Fox testified that he saw the talking-machine at Mr. Drawbaugh's shop about the year 1867 or 1868, when the old faucet company was in operation there. Prior to March, 1871, the witness was employed in the carding room of the Harrisburg Cotton-mill, and Drawbaugh came there to get material to wrap his wire to use for the talking-machine. Henry Bonholtzer testified that he was at Drawbaugh's shop in 1869, and saw talking-machines there. Margaret Breneman testified that she saw the talking-machines at Drawbaugh's shop in 1869. Abraham May testified that he did work on Daniel Hart's house, at Milltown, in August and September, 1870, of which he produces his account-books; that he never did any work

for Daniel Hart after that; that, while doing that work, he was at Drawbaugh's shop to get a boring-machine mended which he was using in the work, and Drawbaugh showed him his talking-machines, and talked through them from one floor of the shop to another. The witness understood and heard through the machine the words that Mr. Drawbaugh spoke into it. His testimony is corroborated by Jacob H. Kilmore, William H. Martin, and John A. Smith. Cyrus Orris testified that he saw Drawbaugh's talking-machines at different times from about the first of April, 1871, down to 1880, and took his son-in-law, Jacob E. Smith, to Drawbaugh's shop to see the machines about April 1, 1871. Benjamin K. Goodyear testified that in 1871 he seized the personal property of George W. Kissinger, of Milltown, upon an execution issued November 13, 1871; that on December 4, 1871, the attached property was appraised, and on that day witness went to the workshop of Daniel Drawbaugh to find J. B. Drawbaugh, to summon him as an appraiser, and had to wait for him there a short time; that, while waiting there, Daniel Drawbaugh showed him his talking-machines and talked through them to him, and witness heard him speak and understood distinctly the words that he spoke through the instrument; and that he was never in Drawbaugh's shop afterwards, so far as he can recollect. George Natcher testifies that he lived at Milltown in 1871, 1872, and never has been in the town since August 9, 1872; that while living there he was at Drawbaugh's shop, and saw and talked through the talking-machine on different floors, and listened at the same machine and understood what was said through it. Mrs. B. B. Spangler, a sister of George Natcher, testifies that she moved away from Milltown in 1872, and never has been there since; that she talked into Drawbaugh's talking-machines while she lived there; and that she was so small that Harman Drawbaugh had to lift her up to enable her to talk into the machine. Mrs. Mary Free testifies that she was with her sister, Mrs. Lydia Drawbaugh, at Drawbaugh's shop, in September, 1872, when he talked through the machines to them, and she remembers hearing through the machines, "Good afternoon, ladies!" Drawbaugh told them that the machines operated by electricity. Mrs. Lydia Drawbaugh testifies that she saw the talking-machines in September, 1872, her sister, Mrs. George Free, being present. David M. Ditlow testifies that he saw Drawbaugh's talking-machine about 1872, when Drawbaugh talked through it, and witness heard and understood through the machine what he said. David K. Ernst testifies that he was at Drawbaugh's shop with John B. Blosser about the middle of June, 1872, and talked with Drawbaugh about the talking-machines, and thinks he saw them at that time. This testimony is corroborated by John Blosser. N. W. Kahney testifies that he saw the talking-machines about 1872. William H. Martin testifies that he was at Milltown with John Keefauver, to get George Hosler to make him a pair of boots. Hosler lived at Milltown only from March, 1872, to

March, 1873. At that time witness and Mr. Keefauver went down to Drawbaugh's shop and talked through the talking-machine from the basement to the attic, and heard and understood what was said through the machines. They talked and listened at the same instrument. John F. Keefauver corroborates Mr. Martin and also states that he talked through Drawbaugh's talking-machine with Jacob M. Sadler in April, 1873, prior to the death of George B. Heck, and that about two or three years before he saw the talking-machines he had heard a good deal about them, and first heard of them at a place seven miles west of Carlisle. William W. Snyder testifies that he was at Drawbaugh's shop on Wednesday, February 5, 1873, and saw the talking-machines. He verifies the date by an entry in his diary. Jacob Barber testifies that he was a candidate for the office of county commissioner of Cumberland county in the summer of 1873, and in connection with his canvass went to Drawbaugh's shortly after the death of George B. Heck. While at Drawbaugh's shop he saw the talking-machine, and was never in the shop after July or August, 1873. Ezekiel Worley testifies that about the year 1873 he saw the talking-machines at Drawbaugh's shop. His statement is corroborated by John K. Taylor. Abraham Ditlow testifies that he knew of Drawbaugh's talking-machine in 1874, and saw it and talked through it at that time. He had forgotten the fact, but was reminded of it by Mr. Alexander Milner, of Porter county, Indiana, whom witness told about it in May or June, 1876, in Indiana. William Eppley testifies that he visited Drawbaugh's shop for the last time in May or June, 1875; that he was there several times during the two years preceding that period, and had seen talking-machines. Jonathan Fry testifies that he was at Drawbaugh's shop with Mr. Hamme and Mr. Frederick in the winter of 1875-76, and saw the talking-machines there. Jacob Evans testifies that he was at Drawbaugh's shop with his wife, his brother Andrew, and his sisters, Margaret and Sarah, about December 1, 1875, and saw and talked through the talking-machines. Henry L. Hamme testifies that he was at Drawbaugh's shop either in the last of January or the beginning of February, 1876, in company with George Frederick and Jonathan Fry, and saw and talked through the talking-machine at the time; that he heard and understood very plainly what was said through the machine even when Mr. Drawbaugh talked in a whisper. George Frederick testifies that he was at Drawbaugh's shop with Mr. Hamme and Mr. Fry in January or February, 1876, and saw the talking-machine. S. S. Rupp testifies that he was at Drawbaugh's shop with Mr. Hammacher and his scholars on February 1, 1876, and recollects that Mr. Drawbaugh at that time spoke about a machine that he had which he called a talking-machine, but the witness was interested in other things and did not pay much attention to it. George H. Bowman testifies that he saw talking-machines in Drawbaugh's shop in February, 1876, at which time somebody was talking to Mr. Drawbaugh through them.