RECENT DECISIONS RELATING TO PATENTS.

By the Commissioner of Patents.

WEBSTER *vs.* PARKHURST AND HAM.

Where one has conceived of an invention and discloses the essence of it to another whom he employs to develop and perfect it, suggestions from the employe in the course of experiments and dependent upon the main idea will not ordinarily give the employe any rights as an inventor. (Citing O'Reilly *vs.* Morse, 15 How., 62, and Agawam Co. *vs.* Jordan, 7 Wall., 583.)

U. S. Circuit Court of Appeals—Ninth Judicial District.

NORTON *et al. vs.* JENSEN *et al.*

Hawley, J.:

Claims 1 and 2 of letters patent No. 267,014, to Edwin Norton, November 7, 1882, for a machine for putting on the ends of fruit and other cans, and claims 6 and 7 of letters patent No. 274,363, to Norton and Hodgson, March 20, 1883, for a can-ending machine, and claim 14 of letters patent, No. 294,065, to Norton and Hodgson, February 26, 1884, for a can-ending and seaming machine, and letters patent No. 322,060, to Edmund Jordan, July 14, 1885, being an improvement on the original Norton machine, sustained and *Held* infringed by the "Jensen machine" made under letters patent No. 376,804, to Mathias Jensen, January 24, 1888, for a can crimper and capper. Letters patent No. 307,197, to Edmund Jordan, October 28, 1884, and No. 307,491, to Norton and Hodgson, November 4, 1884, for machines of the same class, *Held* not infringed.

It is the duty of courts to construe a patent by a reference to the language of its claims and an examination of the specifications and drawings accompanying the same.

Where an invention is of a primary character and stands at the head of an art, it is entitled to a liberal construction of its claims, and all persons who make devices or machines operating on the same principle and performing the same functions by analogous means or equivalent combinations, even though the machine may be an improvement of the original and patentable as such, are to be treated as infringers.

An infringement takes place whenever a party avails himself of the invention of the patentee without such a variation as constitutes a new discovery.

When a combination patent covers a new arrangement of old elements, producing a new and useful result, the same may be protected by invoking the doctrine of equivalents, as against the substitution for any particular element of a different device known at the date of the patent as a means of performing similar work; and the fact that the substitute performs some additional functions does not prevent it from being an infringement.

There cannot be any infringement of a combination claim unless every element of the combination or a mechanical equivalent of an omitted element is used.

The opinions of experts are admissible in evidence in patent cases; but they are not conclusive upon the courts.

Prehensile Babies.

Monday, August 8, was "monkey day" at the Anthropological Section of the British Association, which was crowded on the occasion. The most sensational paper was by Dr. Louis Robinson, on "The Prehensile Powers of Babies." He regretted that he could not reproduce his experiments in public, because he had only arrived in Edinburgh on the Sunday. Next day, however, in the microscopic room of the anthropological department of the New University he laid out an exhibition of photographs of his experiments, which exhibition was unique in its character, as may be gathered from his account of what those experiments were.

Dr. Louis Robinson said that when carrying her young the mother ape required all her limbs for climbing, especially so when she had to traverse the branches rapidly in escaping from a foe. The young one, therefore, must hold on by its own strength, and it was plain that every infant ape which failed to do so would fall to the ground just at a time when the fall would be most dangerous to life. That a young child had an inclination to close its hands upon anything which touched the palm was a fact which had been noted by many, although no one appeared to have associated the instinct with the remarkable development of the muscles of the shoulder, girdle, arm, and forearm, especially the latter, at the time of birth. In order to test the power of gripping in the young infant, he placed his fingers against the palm, having first divested the child of all superfluous clothing. The contact at once caused the hand to close apparently by pure reflex action, since it made little difference whether the child was asleep or awake. He then slowly, but with a slight jerking motion, lifted his fingers, and found to his surprise that the child tightened its grasp and allowed him to raise it from the bed, so that its whole weight depended from the hold of its hands. This experiment was performed with a considerable number of babies, some of which were absolutely new, with the same result.

He then determined to time the performance with his watch, and having taken all precautions by way of putting pillows or having a blanket stretched by assistants below the embryonic gymnast, he let him hang as he would. To the astonishment of the experimenter and witnesses, it was found that in many cases a newly-born child would hang and support its weight with ease for a minute, and some 30 seconds longer. Several infants of under a week old hung for over a minute and a half; a few others of a fortnight old for nearly two minutes, and one child of about three weeks old for 2 minutes 35 seconds. In many cases he was convinced that loss of temperature, rather than exhaustion, caused the babies to quit their hold, since they would renew their grasp and allow themselves to be lifted immediately after falling. He had himself tried hanging to the bar, and by the time a minute was up his arms were thoroughly exhausted. Of course, it would not be fair to pit a trained gymnast against a newly-born infant. Still more surprising was the fact that in most instances, if the child were in a good temper to begin with, it would make no objection to the experiment whatever, and would hold quite placidly without a cry or grimace of pain until its fingers began to slip, when it at once evinced distress and screamed lustily, as from a fear of the consequences of falling. Indeed, it was quite evident that many of the little creatures felt quite at home in this pendent state of existence. Several proved themselves capable of hanging by one hand, and in two instances the children grasped his finger firmly, and absolutely allowed themselves to be lifted up while asleep. He then handed round for the inspection of the audience a number of photographs of infants hanging from the branch of a plum tree in his garden, with a piece of braid wrapped round it to keep the tiny hands from the cold, rough surface of the bark.

With material so plentiful as it was—for he had seen several babies since coming to Edinburgh—he ought, perhaps, to have demonstrated the facts he had brought forward with living specimens. He begged them to forgive the omission on account of the lack of time, since he only arrived in Edinburgh on the previous day, and he knew, of course, that it would be quite useless to endeavor to enter into any contract with an Edinburgh infant on the Sabbath. When they considered the generally feeble condition of the muscular system in the newly-born, this remarkable strength and efficiency of the flexor muscles of the digits appeared altogether phenomenal. From their efficiency at birth they would seem to have to do with some habit of vital importance to the babe. Yet they found that among the newly-born offspring of the human race they were of no use whatever. It seemed, therefore, legitimate to infer that the astonishing prehensile power in the hands of the modern infant was a surviving vestige of the habits which for many epochs, compared with which the whole stretch of historical time was but a moment, saved their aboreal forefathers during their tender youth from destruction. He noticed during his experiments that all infants when hanging by the hands drew up their knees and sprawled their toes about This suggested to him to place some graspable object against the sole of the foot near the toes, and he found that at once the little creatures tried to clasp the toes around it, as if endeavoring to supplement the hold of the hands. A further examination of the foot of the young babe suggested that it was much more hand-like in character than that of the adult. The toes were more mobile, the hallux being especially free in movement. Frequently the great toe was bent across the sole after the fashion of a thumb, so that it almost touched the fifth digit. In most infants the outer and inner toe could be made to touch one another with ease with a little assistance from the observer. He took some pains to ascertain if the various lines and creases on the infantile foot were constant in different individuals, as those of the hands were. He had obtained about 500 prints from babies' feet, and had ascertained that although there was a certain range of variability, the chief lines were present in all cases. Broadly speaking, these pedal markings were the same in the higher anthropoid apes as in the child, but in the orang-outang, owing to the small size of its great toe, had been placed somewhat differently. He was not aware that any explanation could be given of those lines so characteristic of a prehensile organ on the foot of the human infant other than that they were vestiges of an aboreal state of existence.

If they were descended from an arboreal being, it seemed plain that the babies of the earliest earth dwelling men were lean and spare, like young apes. Speaking of the plump condition of babies, Dr. Robinson continued that during the recurrence of times of stress among savages, the babe at the breast would be deprived of its natural food, for it could not make use of the coarse food which in the case of the older savage sufficed to keep body and soul together. It must, therefore, fall back upon its own private store of adipose tissue until times improved, and another deer or bison was slain by the hunter of the clan. It seemed probable, considering the universality of the obese and rotund habit of body among our little ones, that the pressure brought to bear by dire necessity was very sharp and long-continued. For long ages during the epoch of absolute savagery all the lean, ape-like infants were eliminated, and only those which varied in the direction indicated survived the ever-recurring periods of starvation, and became our ancestors. These naturally would tend to produce offspring similar to themselves, and so the condition had become habitual. They saw then that when a proud mother showed them the chubby, round limbs of her baby, they had before them the record of an appallingly terrible amount of human suffering written as plainly and indelibly on that tiny plump baby as if recorded on tablets of granite by the graver of a truthful historian. Furthermore, the smile of the infant and his convulsive mouth, when tickled, revealed to them strange and dark chapters in the early history of the race. In conclusion, he said that they had with them, within their very doors, an animal as interesting as any which had been brought by the pioneers of zoological research from the uttermost parts of the earth.

The Origin and Diffusion of Cholera.

Surgeon-General Cornish, C.I.E., has contributed a paper to the current number of the *New Magazine* on the Origin and Diffusion of Cholera. Apart from the obvious interest which the subject possesses at the present time, when European countries are threatened with the prospect of a new cholera invasion on a large scale, the paper merits attention from the fact that its author has acquired a practical knowledge and experience of the disease in the East from the official position he held in India. Allusion is made, first of all, to the great value of the late Mr. J. Netten Radcliffe's labors during his lifetime in having conscientiously chronicled and recorded the facts about the progress and geographical distribution of epidemic cholera from year to year, whenever that disease overflowed the limits of its natural home in the great river deltas of Lower Bengal and India. Reliable information from health officials regarding the progress of epidemic cholera is essential to a correct judgment regarding the liability of any particular area to invasion. So far as can be gathered, Surgeon-General Cornish says, the epidemic which now threatens the whole of Europe appeared in March or April of the present year in the northwestern provinces of India, attacked with great violence the pilgrims at the great Hurdwar fair, near the source of the Ganges, spread through Cashmere and Afghanistan, reached Persia in May or June crossed the Caspian Sea and spread among the population of Asiatic Russia, from whence it is making rapid progress in European Russia. The epidemic since April has traveled in a northwesterly direction and has covered or overflowed many thousands of square miles of territory. The history of the progress of the great epidemic of cholera of 1829-33 should be closely studied by those who wish to understand the significance of the present epidemic. Cholera history, is very apt to repeat itself, and the circumstances which happened in 1831 are therefore very likely to happen again in 1892 and succeeding years. The route taken by the present epidemic is almost identical with that which invaded Europe in 1831. It is quite a mistake to suppose that since India is the natural home of cholera the disease is everywhere present there and ready to take an epidemic form. An epidemic of cholera follows the same laws in India as in any other country. It is endemic only in certain and limited parts, from which an epidemic advances occasionally, with intervening intervals of uncertain duration. Its progress is influenced by season and atmospheric conditions, and after lasting a period of about three years the epidemic dies out. Surgeon-General Cornish questions whether the cholera in the suburbs of Paris, with its peculiar and circumscribed topography and weak infective power, can be attributable to the same cause as that which has invaded and is now advancing in Russia. He alludes to that country's half civilized acquisitions in Asian soil as a source of difficulty and danger in this direction, and considers that, as far as the safety and happiness of her people are concerned, the wealth now spent on the maintenance of a huge army and on ambitious schemes for extension of territory would have been more efficiently laid out in the improvement of the sanitary and social condition of the populations under her rule. As regards land quarantine and sanitary cordons, which European nations are so ready to enforce against their neighbors, these have never been successful in keeping out cholera. In India, with ample military aid at hand, they have been tried again and again unsuccessfully. The only provisions on which any reliance can be placed are sanitation, a good water supply, efficient drainage, surface soil cleanliness, wholesome food and habitations. The invading cholera, if it does not reach this country in the present autumn, is, in Surgeon-General Cornish's opinion, likely to do so in 1893. Happily, the early accession of cold weather has apparently had the effect, to which he alludes, of repressing the progress of the disease for the present. The moral of this matter lies on the surface. What we have to do in the meantime is to seek out and repair the weak places in our sanitary harness.—*Lancet.*

© 1892 SCIENTIFIC AMERICAN, INC.