the courts have been liberal in holding any form of notice sufficient which contains the essentials of "name," "claim of exclusive right," and "date when obtained" (Lithographic Co. v. Sarony, 111 U. S. 53, 4 Sup. Ct. 279; Bolles v. Outing Co., 23 C. C. A. 594, 77 Fed. 966), they have not yet sustained the sufficiency of a notice which wholly omits some one of these three essentials. The demurrer is sustained.

FRUIT-CLEANING CO. v. FRESNO HOME-PACKING CO. et al.

(Circuit Court, N. D. California. May 22, 1899.)

No. 12,529.

1. JURISDICTION OF COURT—PARTNERSHIP NAMED AS PLAINTIFF.
   The introductory part of a bill was as follows: "The Fruit-Cleaning Company, a co-partnership consisting of [three persons, named in full], doing business at the city of Brooklyn, in the state of New York, complainant, brings this, its bill of complaint," etc. The bill further alleged that, "at all the times hereinafter mentioned, the said [naming such three persons] were and are co-partners in trade under the firm name and style of the Fruit-Cleaning Company, having its principal place of business at the City of Brooklyn, in the state of New York." *Held* that, while the co-partnership was named as the complainant, the bill sufficiently disclosed the real parties in interest, and therefore should not be dismissed, after answer, on the ground that there was no legal party plaintiff sufficient to give the court jurisdiction.
2. PATENTS—PARTNERSHIP AS PATENTEE—VALIDITY.
   A co-partnership, to which an invention has been assigned, possesses legal capacity to take the legal title to a patent when issued; and hence a patent issued to the co-partnership, as patentee, is valid, and confers the exclusive right to the invention.
3. SAME—INVENTION—COMMERCIAL SUCCESS.
   Though one follows the general ideas of a patent issued many years before, yet if, by adding thereto other devices, he produces the first machine, which, in a commercial sense, successfully performs the work sought to be done, he is entitled to a place among inventors.
4. SAME—CONSTRUCTION OF CLAIMS—REFERENCE TO SPECIFICATIONS.
   If a claim contain the phrase, "substantially as described" or its equivalent, the entire specification is entitled to be considered in connection with the claim.
5. SAME—INFRINGEMENT—MECHANICAL EQUIVALENTS.
   In a raisin-seeding machine, a laminated rubber roll employed to force the fruit upon the teeth of a carrier is the mere mechanical equivalent of a brush roll, used for the same purpose, and its substitution therefor does not avoid infringement.
6. SAME—FRUIT OR RAISIN SEEDERS.
   The La Due patent, No. 543,834, for a fruit-seeding machine, adapted especially to the seeding of raisins, construed, and *held* not anticipated, valid, and infringed, as to claims 1, 2, 3, 4, and 5, by the Cox patent, No. 608,108, and not infringed as to claims 6, 7, and 8.

John H. Miller and Tracy, Boardman & Platt (T. D. Merwin, of counsel), for complainant.

Wheaton & Kalloch and Bigelow & Titus, for defendants.

MORROW, Circuit Judge. This is a suit in equity for infringement of letters patent on mechanism for seeding fruit. The bill of com-

plaint describes the complainant as "the Fruit-Cleaning Company, a co-partnership consisting of Alfred Nicholls, George E. Lewis, and Charles F. Allen, doing business at the city of Brooklyn, in the state of New York." It is alleged that one George C. La Due, a citizen of the United States, residing at the city of Brooklyn, N. Y., was the inventor of mechanism for seeding fruit, and on the 23d day of May, 1895, applied for letters patent of the United States on the same; that, prior to the issuance of any patent therefor, the said La Due, by an instrument in writing executed as required by law, sold, assigned, and transferred to the Fruit-Cleaning Company all his right, title, and interest in and to the invention; that said assignment was filed in the patent office, and on July 30, 1895, letters patent of the United States No. 543,834 were granted to the Fruit-Cleaning Company for said invention, since which time the said company has been the sole owner and holder thereof, has made large numbers of machines containing the said invention, and upon each one has caused to be marked the word "Patented," with date and number of patent. The respondents are alleged to be the Fresno Home-Packing Company (a California corporation), L. L. Gray, Thomas H. Lynch, L. R. Payne, E. J. Gray, and John D. Gray, and to have infringed upon the rights of complainant by the making and using, within the two years last past, in the Southern district of California, machines containing and embracing the invention patented in and by said letters patent No. 543,834. Complainant alleges great and irreparable damage by reason of the infringement, and prays for a writ of injunction restraining respondents from making, using, and selling any machines containing said invention, for an accounting, and for costs of suit. Respondents, in their answer filed February 17, 1898, deny that George C. La Due was the original or first inventor of the said mechanism for seeding fruit, and aver that the alleged invention was described and patented in United States letters patent No. 56,721, granted to J. B. Crosby, of Boston, Mass., on July 31, 1866, for an improved raisin seeder or mechanism for seeding fruit. They admit the filing of an application for patent by said La Due; the assignment by him of his right, title, and interest in the same to the Fruit-Cleaning Company; and the granting of letters patent No. 543,834 to said the Fruit-Cleaning Company; but allege that the patent so granted was and is invalid by reason of the prior invention and patent of said mechanism by said J. B. Crosby, and there is therefore no infringement. A replication was filed to this answer on February 28, 1898, and the parties thereupon proceeded to take testimony. Respondents, on October 13, 1898, asked leave to file an amended answer, setting up as a defense the alleged defect in the character of complainant. The application was denied, and the case was set for argument on final hearing. Thereafter, on October 26, 1898, a motion was made by respondents to dismiss the bill of complaint, upon the grounds that no person, either natural or artificial, having capacity, power, or right to maintain a suit in this court, is named as complainant in said bill, the Fruit-Cleaning Company being neither a corporation nor a natural person, but only the fictitious name of a co-partnership, not a party constituting any actual

or legal entity, and therefore incapable in law of being a complainant in this suit; also, that no person or entity, either natural or artificial, is named as complainant over whom this court can exercise any jurisdiction. It is admitted by the respondents that it is too late to raise the objection of a mere defect of parties by demurrer, but it is contended that the motion to dismiss is proper at this time, for the reason that there is an entire absence of a party plaintiff; that, without such a party, the court has no jurisdiction to try any of the issues of fact tendered by the bill of complaint; and that this objection can be raised in any form and at any stage of the proceedings. It is not a question of federal jurisdiction based upon allegations of diverse citizenship of the parties to the action. The federal jurisdiction is invoked in this case on the ground that it is a suit in equity arising under the patent laws of the United States. Nor is it a question of misjoinder or nonjoinder of parties plaintiff, but it is the legal question whether there is an actual party plaintiff in the case. If there is no such party capable of maintaining this action, then the case should be dismissed.

The introductory part of the bill now under consideration is as follows: "The Fruit-Cleaning Company, a co-partnership consisting of Alfred Nicholls, George E. Lewis, and Charles F. Allen, doing business at the city of Brooklyn, in the state of New York, complainant, brings this its bill of complaint," etc. This is in form, at least, a substantial compliance with equity rule No. 20, which requires that every bill, in the introductory part thereof, shall contain the names, places of abode, and citizenship of all the parties plaintiff. But it is objected that the Fruit-Cleaning Company, which is here set forth as the plaintiff, is the name of a co-partnership that does not contain the names of the partners, and no federal or state statute authorizes an action to be brought by plaintiff in a co-partnership or firm name. The answer to this objection is that, while the co-partnership name does not itself disclose the names of the co-partners, they are given in the title to the bill of complaint, and these names so declared constitute as much a part of the introduction to the bill as the name of the co-partnership. But the bill goes further, and alleges "that, at all the times hereinafter mentioned, the said Alfred Nicholls, George E. Lewis, and Charles F. Allen were and are co-partners in trade under the firm name and style of the Fruit-Cleaning Company, having its principal place of business at the city of Brooklyn, in the state of New York." This specific averment as to the parties composing the firm or partnership named as plaintiff discloses the real parties in interest, and informs the respondents of the names of their adversaries. These are the parties to whom the court will resort, if necessary, to compel obedience of orders, and to enforce the payment of any costs awarded in favor of the respondents. Wise v. Williams, 72 Cal. 544, 14 Pac. 204; 1 Daniell, Ch. Prac. (6th Am. Ed.) 357. The objection that there is no party plaintiff to the action cannot, therefore, be sustained.

It is next objected that the plaintiff has no title to the invention patented. This objection was not taken in the pleadings, but, on the contrary, respondents in their answer "admit that on the 23d day of

May, 1895, the said George C. La Due filed in the patent office of the United States an application praying for the granting and issuing of letters patent of the United States for the same; that, prior to the granting and issuing of any patent therefor, the said La Due did, by an instrument in writing, under his hand and seal, executed as required by law, assign and transfer to said complainant, the Fruit-Cleaning Company, all his right, title, and interest in and to said invention, and did by said assignment request the commissioner of patents to issue such patents to said complainant, the said Fruit-Cleaning Company, and that said assignment was in writing, and was filed in the patent office of the United States prior to the granting and issuing of any patent for said invention." Respondents further admit "that, after proceedings had and taken in the matter of said application, and on the 30th day of July, 1895, letters patent of the United States thereunder, dated on that day, and numbered 543,834, were granted, issued, and delivered by the government of the United States to said complainant, the Fruit-Cleaning Company." The respondents further admit "that said letters patent were issued in due form of law, under the seal of the patent office of the United States, and were signed by the secretary of the interior, and countersigned by the commissioner of patents of the United States, and that prior to the issuance thereof all proceedings were had and taken which were required by law to be had and taken prior to the issuance of letters patent for new and useful inventions." These admissions on the part of the respondents constitute all the facts necessary in this case to establish the complainant's title to the patent, and enable it to maintain this action for its infringement.

It is contended, however, that it appears from the complaint that the patent to the invention was issued to a co-partnership; that a co-partnership has no legal capacity to take the legal title to a grant; and therefore the patent is void. But a patent right is an incorporeal kind of personal property (Shaw Relief-Valve Co. v. City of New Bedford, 19 Fed. 753; Bradley v. Dull, Id. 913; Vose v. Singer, 4 Allen, 230; Machine Co. v. Featherstone, 147 U. S. 209, 222, 13 Sup. Ct. 283), and, in a certain sense, analogous to property in a share of stock (Hall, Pat. Est. § 14). The discoverer of a new and useful improvement is vested by law with an inchoate right to its exclusive use, which he may perfect and make absolute by securing a patent from the government in the manner provided by law. This right the inventor may, under the law, assign before the patent is issued, and request that the patent be issued to the assignee. When the patent is issued, an exclusive right to the invention for the statutory period has been created and vested in the assignee. Gayler v. Wilder, 10 How. 477.

In Bloomer v. McQuewan, 14 How. 539, the supreme court, by Chief Justice Taney, said:

"The franchise which the patent grants consists altogether in the right to exclude every one from making, using, or vending the thing patented. This is all that he obtains by the patent."

In Jordan v. Overseers, 4 Ohio, 309, the supreme court of Ohio said:

"This leads us to consider the nature and extent of such rights as accrue from letters patent for useful discoveries. Although the inventor had, at

all times, the right to enjoy the fruits of his own ingenuity in every lawful form of which its use was susceptible, yet before the enactment of the statute he had not the power of preventing others from participating in that enjoyment to the same extent with himself; so that, however the world might derive benefit from his labors, no profits ensued to himself. The sole operation of the statute is to enable him to prevent others from using the products of his labors except with his consent. But his own right of using it is not enlarged or affected."

The court of appeals of Kentucky, in Patterson v. Com., 11 Bush, 315, said:

"The right of the appellant to sell oil is not derived from the patent laws of congress. If no patent had been issued, the right to sell this character of property would exist, and the only benefit to be derived from the patent is that it excludes others from selling the same kind of oil for a limited period, unless authorized to do so by the patentee, with the additional right on the part of the latter to sell and transfer his patent right in the mode prescribed by the patent laws."

Section 4898 of the Revised Statutes of the United States provides that:

"Every patent or any interest therein shall be assignable in law, by an instrument in writing; and the patentee or his assigns or legal representatives may in like manner grant and convey an exclusive right under his patent to the whole or any specified part of the United States."

An oral agreement for the sale or assignment of the right to obtain a patent is not invalid; if sufficiently proved, it can be specifically enforced in equity. Somerby v. Buntin, 118 Mass. 279; Dalzell v. Manufacturing Co., 149 U. S. 315, 320, 13 Sup. Ct. 886.

The technical rules that would render void a grant of real property are manifestly inapplicable to the right of property in an invention confirmed by a patent. It is common knowledge that a partnership may acquire the title to an invention in the name of the partnership after the patent has been issued, in the same manner as it would acquire the title to any other personal property, and there does not appear to be any good reason why it may not do so before the patent has been issued. The grant in the patent of an exclusive right does not change the character of the property. A conveyance of personal property to a partnership in its firm name conveys the title, and the property becomes partnership property. But, conceding that resort should be had to the law relating to grants of real estate for the purpose of defining and construing rights secured under letters patent for an invention, we do not find that under that law the patent is void because the grant of an exclusive right has been made to a co-partnership.

In Kelley v. Bourne, 15 Or. 476, 484, 16 Pac. 40, it was held that a deed conveying real estate to a partnership by its firm name, if ineffectual to transfer the legal title, was valid and binding as a contract, and created an equitable estate in the land described.

In Dunlap v. Green, 8 C. C. A. 600, 60 Fed. 242, the action was trespass to try title. In plaintiff's chain of title was a deed to a partnership by the firm name of Darcy & Wheeler. It was held that:

"A deed is void which does not in some way point out the grantor and grantee. The usual method of describing a person is by giving his name in full. But this is not the only method. Any other description would suffice which would distinguish him from others; as, for example, where one is

described by his office or by his relation to other persons. 5 Am. & Eng. Enc. Law, 432, and cases there cited. * * * The office of a name at common law is merely to identify, and for that purpose the description in the deed objected to seems to be sufficient. If evidence should develop that there was more than one Wheeler in the city of New Orleans, state of Louisiana, or more than one firm of Darcy & Wheeler in said city, it would merely be a case of latent ambiguity, arising from extraneous evidence, capable of being removed, and in every such case of doubt the true party may be shown by parol."

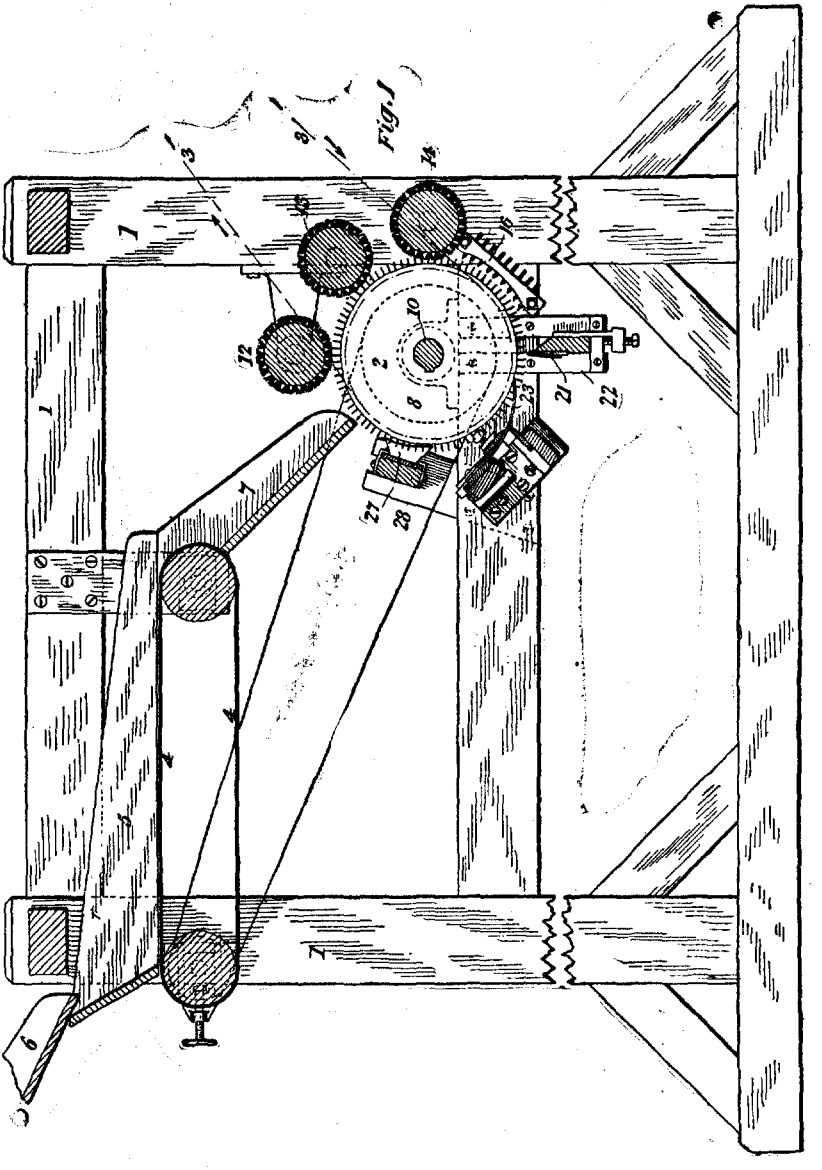
The doctrine of these two cases, applied to the grant in the present case, would alone be sufficient to dispose of the respondents' objection to the complainant's title to the patent in suit.

The subject-matter in controversy is a mechanism for removing the seed of fruit from the pulp or body thereof, especially dried fruit, such as raisins, currants, etc., consisting mainly of a cylinder built up of a series of toothed disks, spaced with smaller plain disks, and clamped upon a shaft or mandrel, the space between the toothed disks and between the several teeth of each disk being less than the diameter of a raisin seed; three cylinders, having elastic surfaces formed of bristles, arranged adjacent to the toothed cylinder, and progressively closer to it; suitable devices for the feeding of the fruit between the first of these rolls and the toothed cylinder, and for the carrying of the fruit thence around and under the other bristle-covered rolls, which rolls, in turn, impale the fruit upon the surface points or teeth, and press the fruit until the skin is ruptured and the seeds thrust out; a series of stripping wires, arranged tangentially in the grooves between the disks of the toothed cylinder, which serve to push the fruit off from the teeth; and cleaning blades, arranged in these grooves, for the purpose of wiping off from the teeth the free pulp exuding from the fruit and adhering to the teeth. The accompanying drawings illustrate the details of construction, and are explained as follows:

"Fig. 1 is a central vertical longitudinal section of a machine embodying my improvements. Fig. 2 is an enlarged detailed cross section of the fruit-carrying or impaling roll, taken between the circular plates composing the same. Fig. 3 is a lengthwise detail section of said roll, looking from the left hand of Fig. 2. Fig. 4 is an enlarged detailed view of the fruit-stripping devices, as viewed in the direction of the upper arrow of Fig. 2. Fig. 5 is a similar detail view of the carrier roll cleaning blades. Fig. 6 is an enlarged detailed section, similar to Fig. 1, of the carrying roll, showing certain modifications, to be hereinafter more fully described.

"Referring to the views in detail, 1 represents the general framework of the machine; 2 represents, as a whole, the fruit-carrying roll or the surface upon which the fruit is impaled for the purpose of removing the seed therefrom. This roll is driven by belt, 3, and it in turn drives the endless feeding belt, 4, which runs along the bottom of trough, 5, into which the fruit is fed, as from the spout, 6; 7 being a long spout inclined from the vertical, which delivers the fruit upon the carrier roll. The belt, 4, acts to agitate and separate the raisins, and to deliver the same singly, or in a single layer, to the delivery trough, 7, down which they fall upon the carrier roll, and are thereby separated, and the movement of the roll keeps them in motion, so that they will not stick together, but will be carried forward singly or in a single layer.

"The carrier roll, 2, is composed of toothed plates, 8, alternating with spacing plates, 9, which are properly bound together and fixed to the shaft of the roll, 10, the roll being supported in suitable journals on the frame of the machine. The teeth, 11, of the alternate plates of this roll, are perfectly



square in cross section, and the length thereof is such as conforms to the thickness of the fruit to be operated upon, while the space between any two adjacent teeth is less than, or at least does not exceed, the average smaller diameter of the seed of the fruit.

"12 is a removable brush roll, journaled in brackets or other like supports fixed to the machine, and which roll is the impaling roll, or the one which forces the fruit upon the teeth of the carrier, the roll being so adjusted relatively to the fruit-carrier surface, and the character of its surface of fiber, bristles, or other yielding substance being such, that the fruit is impaled

upon the teeth without being at least to any essential extent ruptured by the action of the roll. 13 is a similar roll, similarly mounted, but adjusted somewhat nearer to the carrier surface, and the bristles or operative surface of this roll may be stiffer or less yielding than that of the roll 12. The function of this roll is to perforate the skin of the fruit lying over the seeds of the impaled fruit, preliminary to the unimpaled portion of the fruit being pushed from off the seeds. 14 is a similar roll, similarly supported on the frame, the brush or yielding surface of which is adapted to engage the perforated skin of the fruit, and press the same down upon the main body of the fruit; thus leaving the seeds upon points of the carrier surface, but stripped of the skin and pulp of the fruit. These rolls are driven by contact with the surface of the carrier roll, or they may be driven by belting,—such, for example, as is seen at 15, in Fig. 6. Their peripheral speed, however, should be the same as that of the surface of the carrier roll.

"16 indicates a frame, and a series of longitudinal wires carried thereby, under tension, and located at different distances, or at distances whereby the first wire 17 (Fig. 2) is at a distance from the carrier surface somewhat less than the average thickness of the fruit seed, while the intermediate wires are

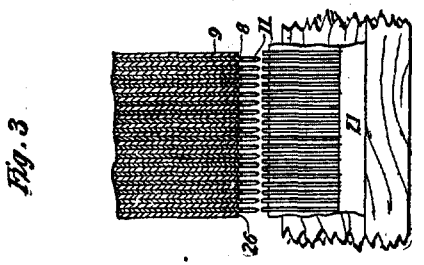


Fig. 3

Fig. 5

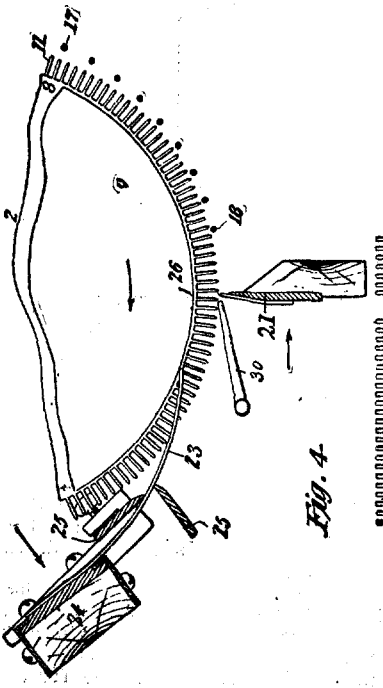


Fig. 2

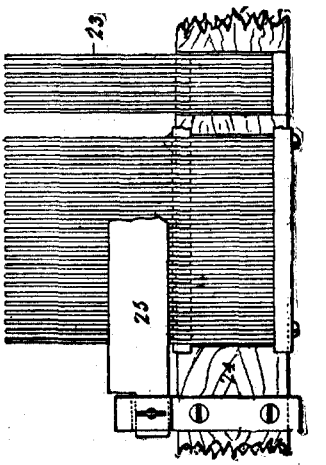
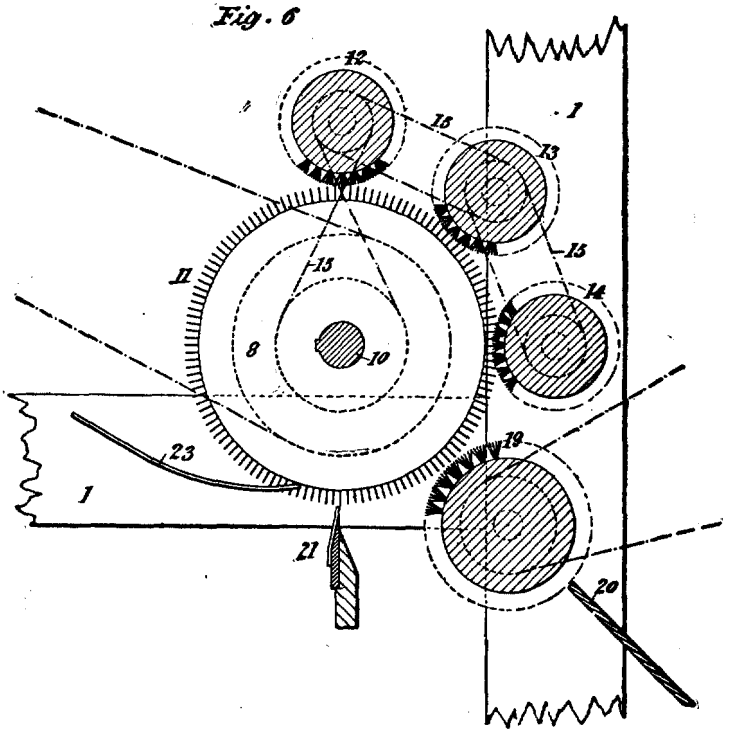


Fig. 4

Fig. 6



set successively slightly closer to the surface of the carrier roll, the last wire, 18, just escaping the points of the carrier teeth. The purpose of these wires is to remove the seeds which have been excluded from the fruit impaled upon the carrier surface. As the seeds roll under and out from or are brushed off by these wires, the wires are caused to vibrate, and thereby further assist in moving the seeds by their vibrating or flicking action, and at the same time prevent undesirable accumulation of gum upon the same. In lieu of the use of such wires, a rapidly revolving roll, such as the brush roll, 19, of Fig. 6, may be employed, and which has a peripheral speed considerably greater than that of the speed of the carrier roll. Other like or similar acting devices may be used for removing the excluded seed from the impaling points, the desirable action of such device being that of a flicking or whisking nature. In the use of such a roll or like device, a guard or cleaner, 20, may be employed, the purpose of which is to restrain and confine the flying seed as well as to remove the same from contact with the seed-removing roll. To insure the removing of the seed from the carrier surface that may pass the last wire, 18, a comb, 21, is provided, the teeth of which just clear the points of the teeth of the carrier surface.

"If it be desired, the wires, 17 and 18, may be omitted, and the comb alone used, but preferably with an air-blast nozzle, 30, which is located to direct a jet of air, under pressure, to between the points of the comb and the impaling surface, whereby the seeds will be blown off. In the case of the use of an air-jet, the comb may be omitted, or it may be employed with one or more of the wires, 17, 18, or the wires alone be used; the comb or the wires, or both, acting to loosen the seed, and the jet acting to remove them. This comb is mounted in removable supports, 22, so that it can be taken from the machine and cleaned at any time when needed, and another put in its place.

"23 indicates a series of fruit-stripping wires, which are secured to the

crossbeam, 24, removably mounted in the frame. Adjustable bearing blades, 25, are provided, whereby the wires are brought to a common plane, and the desired pressure of the same upon the carrier roll is effected. Preferably, these wires are slightly curved, as shown, but in substantial effect they are arranged tangentially to the carrier. The points of the wires rest in grooves, 26, between the toothed plates, 8, of the carrier roll, and upon the edges of the spacing plates, 9, the spacing plates being of smaller diameter than is the circle of the bottom of the spaces between the teeth of the toothed plates, and preferably the thickness of the points of these wires is not in excess of the depth of the grooves so formed, whereby it is insured that the points of the fingers will be beneath the fruit when the same reach the fingers, as the carrier rotates. The function of these wires is to strip the seeded fruit from the carrier teeth. It is essential to this stripping action that the fingers bear stiffly on the carrier, so as not to have any vibratory or relative movement, and be composed of long slender wires, in contradistinction to blades or plates.

"27 indicates a series of scraping or cleaning blades mounted on the bar, 28, removably supported on the frame of the machine. These plates are of the general segmental form shown in Fig. 5, and their curved or working edges, 29, lie in the grooves, 26, and in contact, or very nearly so, with the edges of the spacing plates, 9, of the carrier roll, the thickness of these scrapers being practically that of the said spacing plates. The function of these plates is to scrape off any gum that may collect in the grooves, 26, or on the grooved sides of the teeth of the carrier."

In regard to the commercial requirements of a suitable mechanism for seeding raisins, the inventor says in his specifications:

"In seeding raisins mechanically in practical quantities, and by impaling the same on a surface of points or teeth, and with the purpose of not destroying the natural form of the fruit and of not wasting the pulp of the fruit, the following conditions have to be considered: If the impaling points are sufficiently slender to not unduly rupture or tear the raisins, nor force therefrom the pulp thereof, then, by reason of the toughness of the skin, it is not practicable to force the raisins upon the impaling points by a single action, so as to at the same time drive the seeds from the fruit without injuring the impaling teeth. If the impaling teeth be sufficiently strong to sustain a single impaling and seed-removing action, then they would be so large as to undesirably rupture and force out much of the pulp of the fruit, and the force of such action would have to be in excess of the resistance of the seeds, and would crush them, which would spoil the fruit for commercial and consumption purposes."

And, particularizing the improvements contained in his invention, he states:

"The essential features of operation of my mechanism consist in first partially impaling the raisins upon the pointed or toothed surface, or so that the teeth will only perforate one side or through the skin on one side of the fruit, and engage and force the seeds to contact with the skin on the opposite side of the fruit, and in then puncturing or rupturing the skin over the seed, and pressing the same and the underlying pulp farther upon the impaling teeth; the actions of impaling the fruit, opening the same, and forcing the seed therefrom being separately effected, in contradistinction to the action of a roll which forces the fruit upon the teeth, and expresses the seed by a single pressure."

The difficulties previously experienced in seeding raisins, by reason of the gummy pulp of the fruit adhering to the working parts of the machine, and clogging its action, is remarked, and the inventor's method of disposing of this annoyance is thus explained:

"This clogging takes place particularly on the impaling teeth, and on the devices which strip or remove the fruit from the impaling teeth, which latter, as heretofore employed, act to increase this difficulty, in that they have consisted

of blades or devices of extended or plane surfaces, adapted to collect the gum, and bind the stripped raisins together into clogging masses; whereas, it is desirable that the raisins be singly stripped, and fall away from the impaling surface without adhering together. My improvement in this regard relates to the use of stripping wires in contradistinction to blades or fingers, and in supporting said wires in such manner that they may be readily removed and substituted by other like wires while one set of stripping wires is being cleansed. It is essential that the raisins be delivered singly, or not in masses, to the impaling surface, in order that they shall not overlie one another when submitted to the impaling action, and to this end I provide means whereby the raisins are dropped upon such surface, and kept agitated or in motion, so as to be separated, if clinging together, and caused to feed singly to the impaling device. It is also highly essential that the impaling teeth be kept clean of collections of gum or pulp, and to this end I provide cleaning blades that lie in the grooves or between the teeth of the impaling surface, and collect whatever gum may pass the strippers, which cleaning blades are mounted upon movable supports, so that one set thereof may be substituted by another while the former is being cleansed."

The patent contains 11 claims. Complainant claims infringement of the first eight claims, and contends that, even admitting the respondents' utmost claim as to the technical use of the words "puncture" and "perforate," claims 2, 3, 4, 5, 6, and 7 would be clearly infringed. The claims read as follows:

"(1) In combination in a machine for seeding fruit, a carrier for conveying the fruit, which is provided with a series of points or teeth spaced to engage the seed of the fruit, a pressure mechanism, the surface of which moves to and from the carrier and acts to partially impale the fruit upon the carrier, and a puncturing mechanism, the surface of which moves to and from said impaling surface, and acts, subsequently to the action of said impaling mechanism, to perforate the skin over the seeds of the impaled fruit, for the purpose of uncovering the seed of the fruit.

"(2) In combination in a machine for seeding fruit, a carrier for conveying the fruit, which is provided with a series of points or teeth spaced to engage the seed of the fruit, pressure mechanism, having motion angularly with relation to the carrier, and acting to partially impale the fruit upon the carrier, and by further action to puncture or rupture the skin over the seeds of the impaled fruit, to free the seed preliminarily to removing the same from the body of the fruit.

"(3) In combination in a machine for seeding fruit, a roll for receiving and conveying the fruit, the surface of which is provided with a series of points or teeth spaced to exclude the seeds of fruit impaled thereon, a pressure roll acting to partially impale the fruit on the carrier teeth so that they engage the seed preliminarily to removing the same from the pulp, and a brush roll, acting to rupture the skin of the fruit lying on, and to force the same off, the seed, substantially as set forth.

"(4) In combination in a machine for seeding fruit, a carrier roll provided with a series of points or teeth spaced to exclude the seed of the fruit, a roll acting to partially impale the fruit on the carrier so that its teeth engage the seed, a roll acting to puncture or rupture the skin of the fruit lying on the seed, and a roll acting to force the punctured skin and pulp of the fruit from around the exposed seed, substantially as set forth.

"(5) In combination in a machine for seeding fruit, a carrier roll provided with a series of teeth spaced to engage and exclude the seeds of fruit impaled thereon, and a series of two or more rolls adjusted at different distances from said carrier, and successively acting to partially impale the fruit on the carrier teeth, and rupture and displace the skin of the fruit lying over the seed, preparatory to removing the seed, substantially as set forth.

"(6) In combination in a machine for seeding fruit, a carrier provided with teeth spaced to engage the seed of the fruit when impaled upon said teeth, a roll acting to partially impale the fruit upon the said carrier, a roll acting to

perforate the skin of the fruit over the seeds thereof, and a series of stripping wires, 23, located between the teeth, and acting to lift from the teeth the fruit impaled thereon.

"(7) In combination in a machine for seeding fruit, a carrier for conveying the fruit, composed of a series of spaced teeth, a series of two or more rolls acting to impale the fruit upon the teeth and exclude the seeds therefrom, and a series of cleaning blades, located in the circumferential spaces between the teeth, and acting to remove therefrom collections of pulp or gum, substantially as set forth.

"(8) In combination in a machine for seeding fruit, a carrier for conveying the fruit, composed of a series of spaced projections, pressure mechanism, acting to press the fruit upon the carrier, puncturing mechanism, acting independently of the pressure mechanism, to open the fruit and expose the seeds thereof, and seed-removing mechanism, operating to detach the seed from the said carrier."

The letters patent No. 56,721, issued to J. B. Crosby, set up by respondents as anticipatory of the La Due machine, were granted on July 31, 1866, and are as follows:

"Be it known that I, J. B. Crosby, of Boston, in the county of Suffolk and state of Massachusetts, have invented a machine for removing the seeds from raisins and other similar dried fruit; and I do hereby declare that the following, taken in connection with the drawings which accompany and form part of this specification, is a description of my invention sufficient to enable those skilled in the art to practice it:

"This machine or apparatus operates by impaling the fruit by or upon a number of wires placed so closely together that, while the pulp of the fruit is forced upon the wires, the seeds, being hard and of too great size to enter the spaces between the wires, remain at the projecting ends or points thereof, and are thus thrust through the skin of the fruit, which breaks to allow their exit. The seeds then remaining at the wire ends, and beyond the body of the impaled fruit, are removed, after which the impaled pulp is taken off from the wires. Fig. 1 of the drawings shows, in vertical longitudinal central section, a machine embodying this invention, and Fig. 2 shows an end view of the same. In the cylinder or roll, a, are set the impaling wires, b, the ends thereof, in the rotation of a, impinging upon and slightly embedding in the surface of the cylinder or roll, c, covered or composed of elastic material, preferably vulcanized rubber, the roll, c, being provided with means by which it can be adjusted towards and from the cylinder, a, so that the ends of the wires may, by proper adjustment of the cylinder, c, just puncture through the skin of the fruit. In the operation of the machine, the rolls, a and c, turn towards each other at the same surface velocity, by the impact of the wires with the surface of roll, c. To guard against tearing the fruit by failure of the two cylinders to revolve at about the same surface speed, the rolls are geared together, as shown most clearly in Fig. 2. The machine being operated so as to cause the rolls, a and c, to turn towards each other, and raisins being presented to the action of the two rolls, they are seized in the bite thereof, and are forced by the bed or soft-surfaced roll, c, upon the wires, b; but the seeds remain at the ends of the wires, and embed into the soft surface of the roll, c. In the continued rotation of the rolls, the seeds remain at the wire ends till removed by contact with the scraper, d, which extends across the cylinder, a, just clearing the ends of its wires, b. The raisins may be supplied by hand, or a suitable hopper may be arranged to supply, from a quantity placed therein, the regular and proper number of raisins suited to the capacity of the machine. The hopper is marked e, and its shaking discharging bottom and spout, f. The angle at which the bottom, f, is set, and by which the discharge of the fruit is regulated, can be varied by means of the adjusting cord, g, the bottom, f, being pivoted at h to a rock shaft, i. The hand wheel, j, by which the machine is operated, is provided with a cam, k, acting on a projection from f, so that, in connection with the counteracting spring, l, a sufficient side shake or vibration is given the bottom, f, to supply raisins to the action of the machine dropping them into the bite of the rolls. The wires are arranged at uniform distances apart, and in regular rows, around the cylinder, a, and between these rows are set a series of strippers, m,

which, as the cylinder, a, revolves, wedge off and remove the impaled pulp from the wires, the pulp falling into a suitable receptacle placed to receive it. The series of strippers is kept in place with the points thereof close in contact with the body of the cylinder by the spring, n, the series turning with the shaft on which they are mounted, and it is advisable to have slight grooves turned in the surface of the cylinder, a, to receive and steady the points of the strippers.

"I claim: (1) The employment of closely-set wires, in combination with a bed or presser, for the purpose of forcing out of raisins or similar dried fruit the seeds or stones thereof by the impalement of the pulp of the fruit on the wires, as specified. (2) The combination, with the above, of a seed remover or a pulp remover, or both, arranged to operate substantially as set forth."

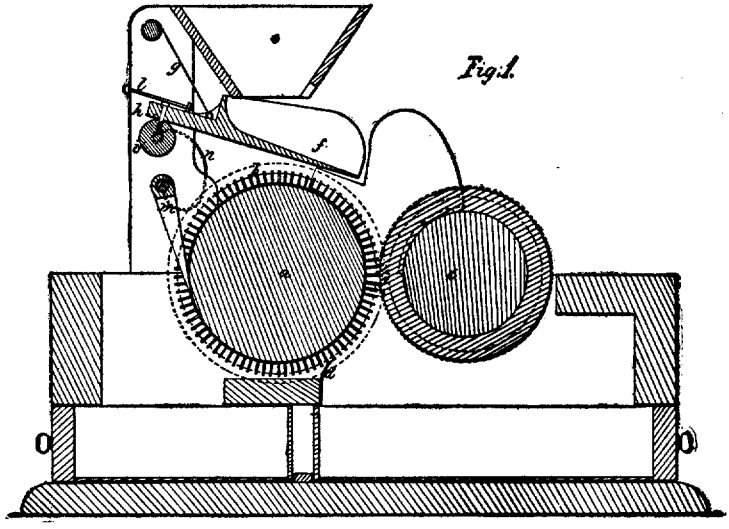


Fig. 1.

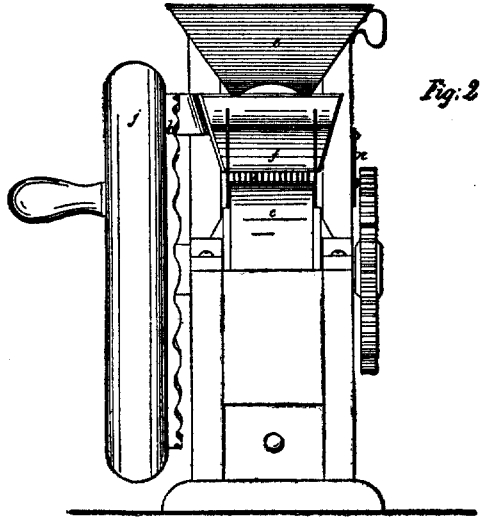


Fig. 2.

The essential features of this patent are a toothed cylinder, the spaces between the teeth being narrower than the thickness of a raisin seed, a single rubber roll adjacent to the toothed cylinder, by means of which the raisins are impaled upon the teeth and the seeds excluded therefrom, suitable feeding devices, and means for stripping from the toothed cylinder the seeds and pulp of the fruit.

The Crosby patent appears to be the first mechanism disclosed embodying the fundamental idea of impaling the fruit upon a series of closely-spaced teeth by an elastic or yielding body, whereby the skin of the fruit is ruptured, and, with the pulp, pressed into the spaces between the teeth, the seeds being held upon the points until specially removed. But this device proved ineffectual for seeding fruit in commercial quantities, and permitted undue waste of the substance of the fruit, with more or less cracking of the seeds. Nearly 30 years later La Due entered the field of invention, and, though following the ideas embodied in the Crosby patent, by employing a plurality of presser rolls, adjusted progressively nearer to the toothed cylinder, instead of the single presser roll, he produced a fruit-seeding machine capable of handling 5,000 pounds of fruit in an hour, with a saving of about 4.99 cents per pound over the processes previously in use. This great increase in speed and saving in cost brought the machine up to commercial requirements, and it may be practically considered the first successful fruit-seeding machine. The fact that he succeeded where many failed, entitles him to a place among inventors. Bath Co. v. Mayor, 77 Fed. 736; Telephone Cases, 126 U. S. 1, 2, 8 Sup. Ct. 778; Loom Co. v. Higgins, 105 U. S. 580; Westinghouse Air-Brake Co. v. New York Air-Brake Co., 11 C. C. A. 528, 63 Fed. 962; Western Electric Co. v. Capital Telephone & Telegraph Co., 86 Fed. 769; Willcox & Gibbs Sewing-Mach. Co. v. Merrow Mach. Co., 93 Fed. 206.

The validity of the complainant's patent having been determined, the decision of the court must depend upon the question of infringement.

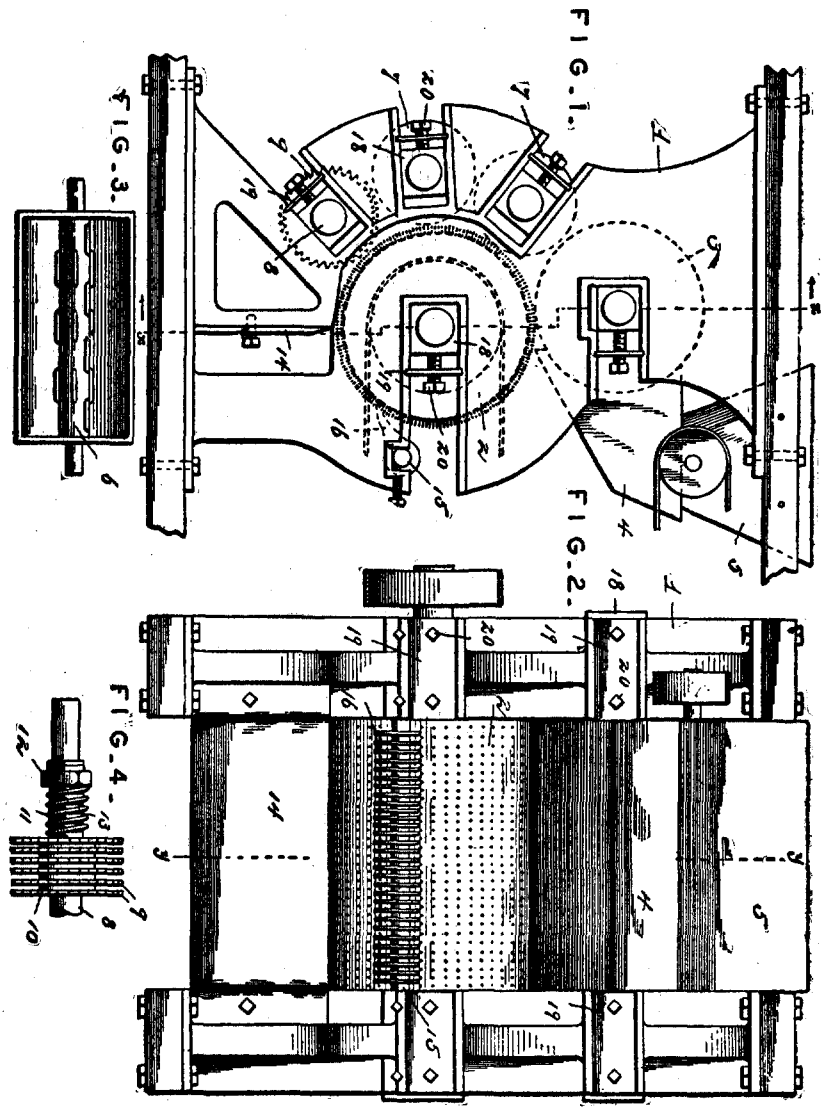
It appears that respondents' machines were made in accordance with letters patent of the United States numbered 608,108, granted on July 26, 1898, to Cary S. Cox, of Fresno, Cal., and to the Phœnix Raisin-Seeding & Packing Company, as assignee of one-half thereof, excepting that the roller made up of serrated disks, termed a "seed loosener," and shown in Fig. 8 of the patent, was not in respondents' machine. The specifications and drawings of the Cox patent are as follows:

"Be it known that I, Cary S. Cox, residing at Fresno, in the county of Fresno and state of California, have invented certain new and useful improvements in raisin seeders; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same:

"This invention relates to a machine or apparatus for seeding raisins; and it consists, essentially, of a pair of rolls operated to turn towards each other, and one of which is provided with impaling projections so closely arranged that, while the pulp of the fruit is forced into the same, the seeds, being hard and of too great size to enter the dividing spaces, remain at the projecting ends or

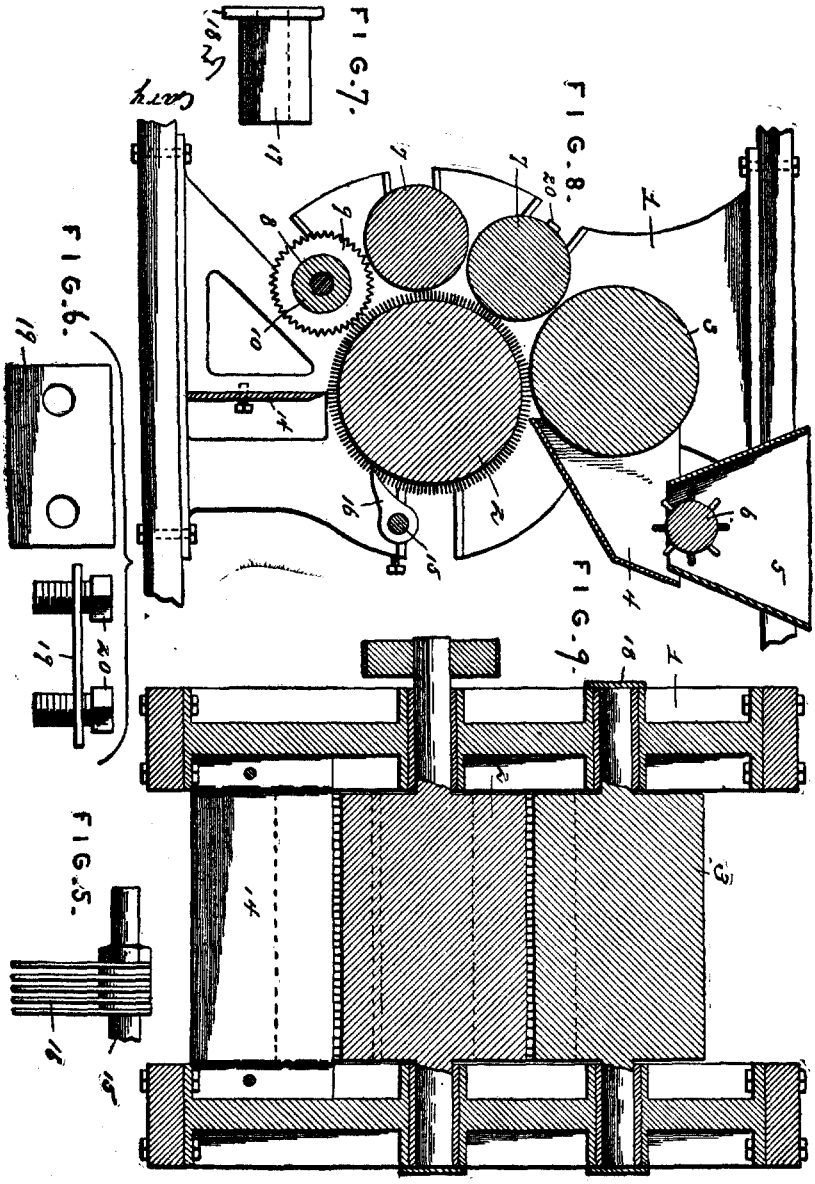
points thereof, and are thus thrust through the skin of the fruit, which breaks to allow their exit, and are afterwards removed by auxiliary devices, which will be hereinafter fully set forth, and forming the gist of this invention; the said impaling devices being acted upon by suitable strippers, located at a proper point, to release the raisins from the roll after they have been seeded. The invention further consists in the details of construction and arrangement of the several parts, which will be more fully hereinafter described and claimed. The present invention, as all others of this class, is based upon the principle established by the mechanisms shown and described in the patent to J. B. Crosby, No. 56,721, dated July 31, 1866, and in view of which other inventions have been invented by me, and it is intended that the present device add still further to the improvements. It is the object of the present invention, therefore, to render devices of the character specified more positive and satisfactory in their operation through the medium of attachments which will facilitate the thorough seeding of the raisins, and conveniently separate the seeds from the pulp; the parts being simple and effective in their construction and operation, strong and durable, easily and readily operated, and comparatively inexpensive in cost of manufacture. In the accompanying drawings, Fig. 1 is a side elevation of a machine embodying the invention, showing parts in dotted lines. Fig. 2 is a front view of the machine. Fig. 3 is a detail view of the hopper used in connection with the device. Fig. 4 is a detail view of the seed loosener. Fig. 5 is a detail view of the stripper. Fig. 6 shows detail views, in edge and front elevations, of plates used to secure adjustment of the bearings. Fig. 7 is a detail view of one of the bearings. Fig. 8 is a vertical longitudinal section on the line, y, y, Fig. 2. Fig. 9 is a transverse section on the line, x, x, of Fig. 1. Referring to the drawings, wherein similar numerals of reference are employed to indicate corresponding parts in the several views, the numeral 1 designates an adjustable metal frame constructed with openings and supports for the adjustment and proper positioning of the several rolls and incidental devices, which will be presently more particularly referred to. In the center of the frame is mounted an impaling or perforating roll, 2, having peripheral projections arranged closely together and circumscribing the entire roll. Engaging the said impaling or perforating roll is an upper rubber frictional roll, 3, both of said rolls being driven towards each other, and at their point of engagement, or near the same, the lower end of a chute, 4, is directed, which leads from the bottom of a hopper, 5, positioned at the upper portion of the machine, and having therein a feed roller, 6, from which, at regular intervals, feeding projections extend of a length sufficient to draw the raisins around towards the bottom outlet of the hopper. Coacting with the impaling or perforating roll, 2, are adjacent holding rolls, 7, adjustably mounted, and below the lowermost holding roll, 7, is a seed loosener comprising a shaft, 8, on which are a series of serrated disks, 9, spaced apart from each other a suitable distance by intermediate washers, 10. These serrated disks are loose on the shaft, 8, and have an independent movement. Surrounding the shaft, 8, is a coil spring, 11, which exerts a tension on the disks, and is adjustable through a nut, 12, to increase or decrease the said tension, the said nut being movable on a screw-threaded surface, 13. These seed-loosening disks strike and are carried around by the impaling or perforating roll, 2, and clear out the seeds by a dragging movement, and cause them to fall away from the impaling or perforating roll. To further cleanse and remove the seeds, a knife, 14, is positioned in advance of the seed loosener, and is gaged to a line with the plane of the outer terminating ends of the devices carried by the impaling or perforating roll. Above the said knife, 14, a shaft, 15, is mounted in the frame, 1, and carries a series of strippers, 16, which bear against the roll, 2, between the peripheral projections thereon, and strip the latter of the seeded pulp. The bearings of the shafts are made adjustable by means of sleeves, 17, having outer rectangular heads, 18, and made adjustable in the openings in the machine frame, and in said openings, on opposite sides, metal plates, 19, are mounted, and carry set screws, 20, which engage the sleeves or boxes, 17, and are used for adjusting the said sleeves, and consequently the rolls or rollers used therewith. These plates, 19, slip in from either side in a groove, and, while they hold the rolls in perfect adjustment, they can at any time be removed by loosening the set screws for the purpose of disconnecting the rolls for the purpose of cleaning or

repairing the same. If the seed loosener does not completely remove the seed from the pulp, the knife in advance of the same will fully complete this operation, and it will be understood that the serrated disks not only break the skin of the fruit and pull away the seeds that may have been forced out by engagement with the projections of the impaling or perforating roll, 2, but also attack the pulp in such manner as to loosen up the seed which may still remain therein. In their operation the seed looseners operate between the projections of the said impaling or perforating roll, and by an independent motion cause the seed to be pushed to the outer terminations of the said projections, and to be taken off by the knife. It is obviously apparent that many minor changes in the details of construction, proportions, and dimensions of the several parts might be made,



and substituted for those shown and described, without in the least departing from the nature or spirit of the invention.

"Having thus described the invention, what is claimed as new is: (1) In a machine of the character described, the combination of an impaling or perforating roll, adjustable rolls coacting therewith, a seed loosener, comprising a shaft supporting a series of independently movable serrated disks, a knife in advance of said seed loosener, and stationary strippers for removing the pulp



from the impaling or perforating roll, substantially as described. (2) In a machine of the character described, the combination of an impaling or perforating roll having peripheral projections, a hopper with a feed roll, a chute leading from said hopper to the impaling or perforating roll, a roll above the impaling or perforating roll and coacting therewith, adjustable side rolls, also coacting with the impaling or perforating rolls, a seed loosener consisting of a shaft supporting a series of serrated disks having independent movement on said shaft, a spring engaging said disks and having an adjusting nut bearing thereon for regulating the movement of the disks, a knife in advance of said seed loosener, and strippers to engage the impaling or perforating roll, substantially as described."

Omitting from the Cox patent the device termed a "seed loosener," a reading of the claims and specifications, and examination of the drawings, readily show that not only the general appearance of the machines, but, with certain exceptions to be noticed hereafter, the various parts and the results of their operation, are almost identical. In complainant's machine there is a carrier for conveying the fruit, which is provided with a series of teeth spaced to engage the seed of the fruit. In respondents' machine this mechanism is described as an impaling or perforating roll. In complainant's patent there are two or more rolls adjusted at different distances from the carrier, and successively acting by pressure to partially impale the fruit on the carrier teeth, and rupture and displace the skin of the fruit lying over the seed, preparatory to removing the seed. In respondents' machine there are adjustable pressure rolls, coacting with the impaling or perforating rolls, which perform substantially the same function as the corresponding rolls in complainant's patent. Considering the pressure mechanism, we find that in the claims of complainant's patent the character of the material forming the different pressure rolls is not specified, except in claim 3, which describes the second roll of the pressure mechanism as "a brush roll acting to rupture the skin of the fruit lying on, and to force the same off, the seed, substantially as set forth." In construing a patent, if explanation is required, the entire description of the invention is applicable to the true interpretation of the claims. 2 Rob. Pat. § 745; Johnson v. Root, 1 Fish. Pat. Cas. 351, Fed. Cas. No. 7,411.

If a claim of a patent contain the phrase, "substantially as described," or its equivalent, the entire specification is entitled to be considered in connection with the claim. The third, fourth, and fifth claims of complainant's patent conclude by a reference to the specifications, "substantially as set forth." Accordingly, examining the explanation of the drawings, we find that "12 is a removable brush roll, journaled in brackets or other like supports fixed to the machine, and which roll is the impaling roll, or the one which forces the fruit upon the teeth of the carrier; the roll being so adjusted relatively to the fruit-carrier surface, and the character of its surface of fiber, bristles, or other yielding substance being such, that the fruit is impaled upon the teeth without being, at least to any essential extent, ruptured by the action of the roll." And again: "13 is a similar roll, similarly mounted, * * * and the bristles or operative surface of this roll may be stiffer or less yielding than that of the roll 12." Also: "14 is a similar roll, similarly supported on the frame, the brush or yielding surface of which," etc. This language

is sufficiently broad to include rolls having a rubber surface, and so deprives respondents of one of the novel features claimed in their invention. In fact, by reference to the file wrapper, we find that the examiner refers to a fluted rubber roll as a mere interchange of well-known equivalents for a brush roll, in considering a prior application for patent by La Due, complainant's assignor. A change of well-known material alone is not invention. 1 Rob. Pat. § 243; Gardner v. Herz, 118 U. S. 180, 6 Sup. Ct. 1027. "In determining the question of infringement, the court or jury, as the case may be, are not to judge about similarities or differences by the names of things, but are to look at the machines, or their several devices or elements, in the light of what they do, or what office or function they perform, and to find that one thing is substantially the same as another, if it performs substantially the same function, in substantially the same way, to obtain the same result." Machine Co. v. Murphy, 97 U. S. 120. "The superior utility of the defendant's machine is not of itself a certain test, because it may contain the whole substance of the plaintiff's invention, and something in addition, and yet be an infringement." Pitts v. Wemple, 5 Fish. Pat. Cas. 10, Fed. Cas. No. 11,194. It follows that the respondents, in substituting laminated rubber rolls for brush rolls, in the pressure mechanism operating with the impaling or perforating roll, have infringed claims 1, 2, 3, 4, and 5 of complainant's patent.

The stripping blade of respondents' machine appears to operate as a substitute for the two distinct devices of complainant's patent, which are the essential elements of claims 6 and 7. These devices are (1) the stripping wires, located between the teeth, and acting to lift from the teeth the fruit impaled thereon, described in claim 6; and (2) the cleaning blades, located in the circumferential spaces between the teeth, and acting to remove therefrom collections of pulp and gum. It is claimed by the respondents that the stripping device of their machine removes the raisins from the teeth of the impaling or perforating roll in a condition which leaves the raisins practically whole, and containing all the meat, while the pressure rolls of complainant's machine leave the raisins in such a condition that the cleaning blades are necessary to gather up and remove the pulp that clings to the carrier. Whatever may be the difference in the function, it sufficiently appears that respondents' single stripping device differs so materially in construction and operation as to avoid the charge of an infringement of claims 6 and 7 of complainant's patent.

Claim 8 is for a combination of (1) a carrier; (2) pressure mechanism, acting to press the fruit upon the carrier; (3) puncturing mechanism, acting, independently of the pressure mechanism, to open the fruit and expose the seeds thereof; and (4) a seed-removing mechanism. Nowhere in the specifications is there any reference to "puncturing mechanism, acting independently of the pressure mechanism." Furthermore, in claim 2, the patentee uses this language: "Pressure mechanism, having motion angularly with relation to the carrier, and acting to partially impale the fruit upon the carrier, and by further action to puncture or rupture the skin." The

term "further action" seems to include the middle or puncturing roll as a part of the pressure mechanism. Claim 5 contains the following: "And a series of two or more rolls, adjusted at different distances from said carrier, and successively acting to partially impale the fruit on the carrier teeth, and rupture and displace the skin of the fruit." Again, in claim 7: "A series of two or more rolls, acting to impale the fruit upon the teeth and exclude the seeds therefrom." In claims 9, 10, and 11, the "pressure mechanism" includes all three rolls, acting to impale the fruit and exclude the seeds therefrom. Claim 8 would therefore seem to some extent to be inconsistent with the other claims of the patent, in that it calls for a "puncturing mechanism, acting independently of the pressure mechanism." In addition to the apparent intention of the patentee, as evidenced by the foregoing extracts from the claims, an examination of the practical operation of the La Due device does not seem to disclose such independently acting puncturing mechanism. If it could be said, however, that there is such a mechanism covered by the specifications and claims (taken as a whole) of complainant's patent, the respondents' device does not infringe claim 8, as it does not contain such an independently acting device. It follows that there is no infringement of claims 6, 7, and 8. The evidence is, however, sufficient to entitle the complainant to a decree on claims 1, 2, 3, 4, and 5.

DICKERSON v. ARMSTRONG.

(Circuit Court, S. D. New York. May 24, 1899.)

PATENTS—VIOLATION OF INJUNCTION AGAINST INFRINGEMENT—EFFECT OF ERROR AS TO DEFENDANT'S NAME.

Defendant, whose true name was James, made sales of an article in infringement of a patent thereon. A suit for infringement was commenced by the owner of the patent against "Frank Armstrong, alias James"; and an order issued therein restraining "the said defendant, Frank Armstrong," from making further sales, which order was served on the defendant. *Held* that, defendant being in fact the person guilty of the infringement complained of, he was bound by the order, and subsequent sales of the article by him subjected him to punishment for contempt.

On Motion to Punish for Contempt in Disobeying Injunction.

Anthony Greff, for the motion.
Joel Marks, opposed.

LACOMBE, Circuit Judge. A statement of the facts which are conceded, either by express admission of the individual attached, or by his failure to controvert the moving affidavits, will relieve this case of all difficulty. In the month of March, 1898, and prior thereto, William T. James, the person now under attachment, resided at No. 97 Perry street, in this city, and there occasionally sold phenacetine, in infringement of the patent, "as an accommodation," to one Frank J. Armstrong, who made his headquarters there. On March 3, 1898, one Klappenburg came to 97 Perry street, and there met said James, whom, in the course of conversation, he referred to as Armstrong.