

**“AN INGENIOUS MAN ENABLED BY CONTRACT”:
ENTREPRENEURSHIP AND THE RISE OF CONTRACT**

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Between 1875 and 1895, a muscular new law of contract redefined the obligations of the employment relation for skilled craft workers. As the growing manufacturing firms sought ways to wrest control of the production process from their skilled workers and to expand their market power through control of patents, their lawyers found a sympathetic ear in judges who found employee control of workplace knowledge to be “a reprehensible practice,” as one put it, and not a “good custom,” as said another.

This paper begins with a survey of the changing law of employment in the context of the rise of laissez faire contract. It then explores how judges, responding to the arguments of business, used the law of contract, particularly “implied contract,” to define knowledge about the manufacturing process as a trade secret. As implied contract is not really contract at all, in the sense that it is prescribed by courts rather than agreed upon by the parties to the relationship, it was the doorway through which the rule of employer ownership moved from a real or imagined realm of actual agreement into a legal realm of ascribed duty, what today’s lawyers call a tort. Misappropriation of trade secrets, which was initially justified as breaching the agreement of employer and employee, came to be defined as a legal wrong regardless of the parties’ agreement. Finally, the paper tells the previously unknown story behind a leading case from 1895 upholding the validity of a

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pre-invention patent assignment agreement. This case, and others involving trade secrets, rejected the vision of the employee innovator as an entrepreneur. They re-imagined such workers as people who benefited by contractual arrangements enforcing their loyalty to, and dependence upon, the large corporations that were becoming the paradigmatic source of technological innovation.

The Growth of Contract

Contract emerged in the 1870s as a unified body of law with the particular purpose of facilitating the formation of productive exchanges that would enrich the parties to the contract and, therefore, society as a whole. The development of laissez faire contract, and its particularly enthusiastic embrace by judges confronting employment cases, was the dominant feature of the intellectual landscape of the late-nineteenth century law of the workplace. The rise of a scientific view of law and highly formalist approach to contracts, especially in the areas of master-servant, intellectual property, and equity, changed the perspective of judges and legal treatises on the employment relationship. Employment was a contract whose terms were determined by the employer and freely accepted by the employee.

The law of contract was embraced by judges and treatise authors as a vehicle to effectuate the wishes of private persons regarding their business dealings and thus to liberate the productive energies of society, even in legal relationships, such as property ownership and employment, that had not previously been defined primarily in contractual

terms.¹ The idea that the advancement of modern democracy would be aided if legally prescribed obligations should be replaced by “freely” negotiated ones – that status should give way to contract – was both influentially and cogently stated by John Chipman Gray with respect to privacy rights in his treatise on restraints on the alienation of property. “The process of civilization consists in the courts endeavoring more and more to carry out the intentions of the parties.”² Contract was the legal vehicle whereby the intentions of the parties (as courts imagined those intentions) could be carried out. A core tenet of the late nineteenth century regime of laissez faire contract was that there should be few restraints on what parties might wish to achieve through their contracts. Courts, Gray said, should “restrain[] them only by rules which have their reason for existence in considerations of public policy.”³ The particular vision of public policy that had been the chief justification for many of the doctrines allocating control of workplace knowledge to employees came under attack. As argued by Elisha Greenhood, a proponent of the view that contract rather than legislatively imposed rules ought to govern private relations, in his influential treatise, *The Doctrine of Public Policy in the Law of Contracts, Reduced to Rules* (1886), it was the “capacity of an individual to produce constitutes his value to the public.” While the product of a worker “belongs immediately to him who employs him,” Greenhood said, it belongs “mediately to the State, and goes to swell the aggregate of

1. As Morton Horwitz explained, “one of the primary functions of the classical legal treatise” was “not simply to report on the state of the law but to advance a highly abstract and integrated version that was grounded in a picture of a decentralized, individualistic economic and political order.” And nowhere was that project more influential, and more zealously pursued by treatise authors, than in the area of contract. Morton J. Horwitz, *The Transformation of American Law, 1870 -1960: The Crisis of Legal Orthodoxy* (New York: Oxford University Press, 1992), 45. See also P.S. Atiyah, *The Rise and Fall of Freedom of Contract* (New York: Oxford University Press, 1979); James W. Hurst, *Law and the Conditions of Freedom: In the Nineteenth-Century United States* (Madison: University of Wisconsin Press, 1956), 14.

2. John Chipman Gray, *Restraints on the Alienation of Property* (2d ed.) (Boston: Boston Book Co., 1895), 66. On Gray, see Stephen A. Siegel, John Chipman Gray and the Moral Basis of Classical Legal Thought, 86 *Iowa Law Review* 1513 (2001).

3. Gray, *Restraints on Alienation*, 66.

public wealth.”⁴ The law of contract came to be understood as protecting the ability of the individual to produce while respecting the right of the employer to own the product.

While the primacy of contract as an agreement between people was celebrated in general terms, in particular terms the employment contract that was actually enforced was an “objective” one whose terms were supplied, as often as not, by judges rather than the parties themselves. An objective contract provided uniformity and predictability to legal arrangements, freeing them from the uncertainty of jury determinations about the actual intent of the parties.⁵ Once courts embraced the notion that idea ownership was governed by contract, and accepted the objective theory of contract under which courts could imply contract terms, as Holmes said in *The Path of the Law* in 1897, “because of some belief as to the practice of the community or of a class, or because of some opinion as to policy,” it was a relatively simple process to determine that the implied contract allocated most rights to the employer.⁶ Across the spectrum of the law of the workplace, most notably the rights to fire without cause, to prevent employees from joining unions, and to control workplace knowledge and intellectual property, courts used the legal fiction of implied contract to shift rights from employees to firms.

The law had always prescribed some terms of employment; calling them implied contract terms simply affixed a new label to an old phenomenon. But the new label was significant, as it suggested equality and free assent, rather than hierarchy and imposition. More important, the rights and obligations that were implied changed as courts adapted their vision of an employee’s proper duties to the factory model. As courts became aware

4. Elisha Greenhood, *The Doctrine of Public Policy in the Law of Contracts, Reduced to Rules* (Chicago: Callaghan & Company, 1886).

5. See Horwitz, *The Transformation of American Law*, 35.

6. O.W. Holmes, *The Path of the Law*, 10 *Harvard Law Review* 457, 466 (1897).

of the value of employee knowledge to firms, they sought an expanded role for the law in facilitating economic development by allocating rights in that knowledge. As the persuasive force of status-based obligations of confidentiality associated with the notion of honor and the traditional incidents of craft work disappeared, contract law provided an alternative foundation for the employee's obligation of secrecy and a justification for employer control of workplace knowledge. Contract rhetoric also suggested that employees voluntarily assumed and were compensated for whatever loss of mobility they suffered when the new law of trade secrets and pre-invention patent assignment agreements prevented competitive employment. When the popularity of Frederick Winslow Taylor's scientific management made rationalization and corporate control of every detail of employment and production seem imperative, contract provided the most powerful legitimating discourse for the significant loss of workplace autonomy that Taylorism entailed.⁷

Liberty of contract discourse enabled courts to reconcile the emerging hierarchical control and loss of entrepreneurial opportunity entailed in the managerialism of factory and office work with the free labor ideology that had long dominated American thinking on the subject of labor. As Charles McCurdy observed, the roots of the liberty of contract discourse that dominated *Lochner*-era labor cases may be found in the free labor ideology that suffused political and legal discourse during Reconstruction.⁸ There must have been a certain cognitive dissonance facing judges who believed in free labor and yet found

7. On the enormous popularity and widespread influence of Taylor's scientific management, see generally Robert Kanigel, *The One Best Way: Frederick Winslow Taylor and the Enigma of Efficiency* (New York: Viking, 1997).

8. Charles W. McCurdy, The Roots of "Liberty of Contract" Reconsidered: Major Premises in the Law of Employment, 1867-1937, *Supreme Court Historical Society Yearbook* 20 (1984).

themselves enforcing draconian non-compete agreements, effectively restraining craft workers from working for others by preventing them from using their knowledge, and ruling that creative employees had lost the right to dispose of their patented works. Believing that workers had freely contracted for employment on these terms helped remove the dissonance.

Eventually critics like Roscoe Pound gained traction with the argument that the freedom of contract doctrine rested on a notion of equal rights between employer and employee that was a “fallacy to everyone acquainted at first hand with actual industrial conditions,” but the realist criticism of the laissez faire formalism did not surface in elite circles until after the turn of the twentieth century.⁹ In making every resource a commodity that could be bought and sold, contract law did not necessarily liberate people who found themselves constrained by economic necessity to sell their land, labor, or personal property at times or on terms that felt brutal, unfair, or humiliating. Moreover, law prescribed many terms of employment and penal sanctions were occasionally imposed to enforce prescribed contract terms against poor or vulnerable workers.¹⁰ The notions of exchange and consent that underlay contractarian legal reasoning of the late nineteenth century tapped into the remnants of the free labor ideology and legitimated, when it failed to obscure, the harsher aspects of laissez faire contractual legal rules as applied to the emerging class of poorly-paid factory and clerical workers.

Master-servant treatises and treatises on intellectual property approached the question of employee-generated intellectual property in distinct ways. Each type of

9. Roscoe Pound, *Liberty of Contract*, 18 *Yale Law Journal* 454, 454 (1909).

10. See Robert J. Steinfeld, *Coercion, Contract, and Free Labor in the Nineteenth Century* (New York: Cambridge University Press, 2001); Robert Hale, *Coercion and Distribution in a Supposedly Non-Coercive State*, 38 *Political Science Quarterly* 478 (1923).

treatise tried to assimilate the phenomenon into categories that were intelligible according to the organizing structure of that field of law. While patent and copyright treatises regarded employee inventions and copyrights as an adjunct of ownership, dealt with the topic briefly and as a special case, and generally accorded the employee significant rights over products of their creativity, master-servant treatises treated intellectual property like all other products of employee work, tending to allocate to employers broad rights over intellectual as well as material work product. The potential of master-servant treatises thus to expand employer rights was tempered by the fact that they gave intellectual property short shrift, as the significance of the issue was not apparent to many authors even fairly late in the nineteenth century.¹¹

Contract concepts were eagerly embraced by treatise-writers seeking to rationalize all employment obligations, and courts and treatise authors used an objective theory of contract to divorce rights and obligations from the particulars of a contracting party's status (e.g., sales agent, household servant, mechanic) in favor of a generalized notion of servant applicable to all who worked for others.¹² Wood's *Treatise on the Law of Master and Servant*, for example, described the employee's duty to maintain the

11. The shop right doctrine, which gave an employer a right to use employees' workplace inventions, was not mentioned in master-servant law treatises for 40 years after the right was created in 1843. Even the second edition of Wood's influential *Treatise on the Law of Master and Servant* in 1886 dealt with the ownership of employee inventions only in a couple of sentences, putting inventions in the category of the master's entitlement to the servant's earnings but stating that "the master is not entitled to the patent as against the servant, unless the servant was hired for th[e] purpose [of inventing.]" Wood, *A Treatise on the Law of Master and Servant*, 200; see also *id.* at 76 ("an apprentice or servant who invents a machine during the period of his apprenticeship or service is entitled to the patent thereon, but, in the case of a servant, the rule is different, if he was employed for the express purpose of inventing"). Wood cited *Hill v. Thompson*, 8 Taunt. 375 (1818), and *Bloxam v. Elsee*, 1 C & P 568 (1827), but in neither did the employment relationship play into the court's analysis. Wood also cited *Green v. Willard Barrel Co.*, 1 Mo. App. 202 (1876), which was a wrongful discharge proceeding and is discussed below at note 194, and *Joliet Mfg. Co. v. Dice*, 105 Ill. 649 (1883), which involved an express contract and is discussed below at p. 31.

12. See Atiyah, *The Rise and Fall of Freedom of Contract* 398-412; Friedman, *Contract Law in America*, 20; Gilmore, *The Death of Contract*.

employer's secrets as a species of express or implied contract applicable to all "servants," not just those in traditionally confidential relationships, even before that proposition was clear in the case law.¹³ Wood also listed the employee's failure to protect his employer's secrets as grounds for discharge because it was "a breach of an implied condition of the contract."¹⁴ Wood's statement of the law did not actually find solid support in the cases until some years after the treatise was first published in 1877, as the basis for confidentiality was still grounded fairly clearly in either express contract or in defined confidential relationships, as with "attorneys, agents, or in other confidential relations."¹⁵ Wood's habit of generalizing about *all* employment relations based on cases describing the customary duties of a particular relationship – a typical generalizing tendency of nineteenth-century treatise authors – was the mechanism by which the new implied contract of employment came to encompass a duty to guard the secrets of the trade. Through this process of abstraction and generalization, workplace secrets were assumed to be the employer's property rather than, as earlier cases had held and skilled labor still insisted, the employee's "stock in trade."

Intellectual property treatises made a similar move in adopting contract concepts to create a default rule of employer ownership, but were more ambiguous in doing so. Eaton Drone's influential 1879 *Treatise on the Law of Property in Intellectual Productions in Great Britain and the United States*, for example, could be and was read to support three contradictory propositions: a default rule of employee ownership of intellectual property rights; a default rule of employer ownership; and a rule that

13. H. G. Wood, *A Treatise on the Law of Master and Servant* (2d ed.) (San Francisco: Bancroft-Whitney Company, 1886), 265.

14. *Id.*

15. James L. High, *A Treatise on the Law of Injunctions*, vol. 2 (4th ed. 1905), 15.

ownership should be assessed in each case from the express or implied agreement of the parties. The treatise began its analysis of employee ownership of copyrights with the uncontroversial proposition that a “literary production is primarily the property of the author who has created it.” Drone then struggled to assimilate conventional individualist notions of authorship into a situation of collective creation. “When a person has conceived the design of a work, and has employed others to execute it, the creation of the work may be so far due to his mind as to make him the author.” But, cautioned Drone, “he is not an author who ‘merely suggests the subject, and has no share in the design or execution of the work.’”¹⁶ Yet, “[t]he produce of labor may become the property of him who has employed and paid the laborer. Literary labor is no exception to this universal rule. When an author is employed on condition that what he produces shall belong to the employer, the absolute property in such production vests in the employer by virtue of such employment and by operation of law.” In 1879 when Drone’s treatise was published, there were no cases to support this assertion and the treatise cited none. As Drone conceded a few pages later, this time citing a case, employees who litigated retained ownership of their copyrights, absent a clear contractual promise to assign the copyright. “The mere fact of employment does not make the employer the absolute owner of the literary property created by the person employed. Where there is no agreement or *implied understanding* that what is produced shall belong to the employer, it is clear that the latter acquires no title to the copyright.” So the treatise compromised between what the author evidently considered the rational view (employer ownership) with the antiquated position of the cases (employee ownership) by simply saying the law was unsettled: “Whether a complete legal title to the copyright will vest *ab initio* in such

16. *Id.* at 236 (quoting *Shepherd v. Conquest*, 17 C.B. 427, 445).

employer without the necessity of a written assignment, is a point on which the law has not been expressly declared by the courts of law.”¹⁷

***Trade Secrets, Non-Competition Contracts, and the Demise of
Craft Worker Control of Workplace Knowledge***

The transformation of craft knowledge into trade secrets occurred relatively quickly in a series of cases in the late 1880s and early 1890s. Using implied contract, courts revised traditional workplace norms while insisting that they were simply enforcing a bargain. Trade secret law grew from a relatively limited obligation to guard a particular and highly confidential piece of information or to convey a secret recipe along with the sale of a business, into a general prohibition on using a wide range of firm-specific information in subsequent employment. As courts expanded trade secrets and used non-compete agreements to protect employer control over workplace knowledge, they transformed the nature and ownership of what had been regarded as artisanal knowledge. It ceased being an attribute of skilled craft workers and became an asset of corporate employers.

The rejection of the artisanal tradition of knowledge transmission was stated most clearly in *Merryweather v. Moore*, an English case of 1892 that was widely cited by American courts. A draftsman, an apprentice of a firm that designed fire engines, copied dimensions of his employer’s designs shortly before leaving their employment. When the former employer sought to enjoin him from using or revealing the information, the defendant argued that he was simply using the knowledge of fire engine design that he had legitimately acquired, and that his copying was not wrongful because the plaintiffs,

17. Eaton S. Drone, *A Treatise on the Law of Property in Intellectual Productions in Great Britain and the United States* (Boston: Little, Brown, and Co., 1879), 236-61.

as employers of an apprentice, had a duty to instruct him. The court rejected the core obligation of apprenticeship -- the obligation to train -- by redefining the contract of employment. It was, the court said, “a matter of bargain. I cannot imply from that relation any obligation on the part of the employer to instruct the clerk.” No sooner, however, had the court thus revised the traditional obligation of a master-apprentice relationship by invoking a supposed bargain between them, the court also insisted that a duty of confidence existed wholly apart from the bargain: “[I]s not this an abuse of the confidence necessarily existing between him and his employers a confidence arising merely out of the fact of his employment, the confidence being shortly this, that a servant should not use, except for the purposes of service, the opportunities which that service gives him of gaining information?”¹⁸

Although in America the artisanal tradition had never been as well established as in Britain, American courts in the 1880s similarly blended the emerging notions of trade secrets and implied contracts to reject the tradition of worker control of craft knowledge in favor of the factory production model. The most articulate defense of the new legal regime was offered by William Howard Taft during his first year on the bench as a state trial judge in Cincinnati. The son of an Ohio judge, Taft, who later became President and then Chief Justice of the United States, loved being a judge. He took very seriously the judicial task of crafting the law, and so took the unusual step for a young state trial judge of writing a self-consciously path-breaking opinion that clearly aimed to influence the

18. [1892] 2 Ch. 518, 523-24. Three years later, in *Robb v. Green*, [1895] 2 Q.B. 315, 317 (C.A.) Lord Esher applied the new concept of trade secret to customer list and stated that “in a contract of service the Court must imply such a stipulation as I have mentioned, because it is a thing which must necessarily have been in view of both parties when they entered into the contract.”

path of the law toward greater employer controls on workplace knowledge.¹⁹ The opinion in the case, *Cincinnati Bell Foundry v. Dodds*, reads like the early handiwork of the man who later was popularly regarded as “a stubborn defender of the status quo, champion of property rights, apologist for privilege, inveterate critic of social democracy – the gigantic symbol of standpattism.”²⁰ As Taft himself described his judicial philosophy in labor matters, in a graduation speech at the University of Michigan Law School in 1894, it was necessary that judges fight “the present movement against corporate capital” so that “every laborer, and every man of moderate means” will see “the truth” that it was in their interest “to preserve the inviolability of corporate property.”²¹

In *Cincinnati Bell Foundry*, the issues were whether the technique for making bells was a trade secret and whether employees could be enjoined from using or disclosing it even in the absence of an express contract not to disclose or use the employer’s secrets. The employee, Dodds, denied that he had been instructed to keep the process secret, and Judge Taft conceded that the evidence showed that the employers had not “attempted to enjoin secrecy upon their many subordinate employees, but preferred rather to rely upon the difficulty there would be in acquiring such a complete knowledge of the bell-making as to enable them to communicate it or use it if they wanted to.” There was no basis for finding Dodds to have breached a trust in using his knowledge. Neither was there a basis for a finding that he breached an express contract. Nevertheless, Judge Taft concluded that, because Dodds had learned the technique in the course of his employment, “I am inclined to think that his obligation to preserve such

19. 10 Ohio Dec. Reprint 84 (Super. Ct. 1887).

20. Alpheus T. Mason, *William Howard Taft, Chief Justice* (repr. ed.) (Lanham, Md.: University Press of America, 1983), 13.

21. The Right of Private Property, 3 *Michigan Law Review* 215 (1894).

secret as the property of his employer must be implied, even though nothing was said to him on the subject.”²²

Cases such as *Cincinnati Bell* and *Merryweather v. Moore* signified the demise of the craft tradition of employee control of workplace know-how and the rise of the modern notion that an implied term of the employment contract is corporate control of economically valuable information. Taft mixed old notions of duties of trust and breach of confidence with the new concept that all employment rights and obligations were a matter of contract. The contract concept was used to reject the old tradition that a master was obligated, by his relation if not by express agreement, to instruct his apprentice. One might argue about whether the traditional training in an apprenticeship included the right to copy specific information, but that was not the approach the courts took. Rather, the court redefined an old status-based relation as entirely bargained for, and then, irrespective of what the actual bargain between the parties may have been, prescribed an implied term that prohibited the employee from carrying away certain information. The rhetoric of contract was used to redefine the rights of employment while making the redefinition seem to be a matter of consent, not prescription.

The expanding definition of trade secrets increased the possible uses of covenants not to compete. Courts extending the horizon of contractual restrictions on employment faced rhetorical challenges that both resembled and differed from those of the trade secret cases. The effort to articulate the employer’s legitimate interest in restricting competition from former employees was complicated by the challenge of fitting the rules into the liberty-of-contract jurisprudence. A covenant not to compete is both a contract in its own right and a restriction on future freedom to contract. Not surprisingly, the *laissez-faire*

22. *Cincinnati Bell*, 10 Ohio Dec. Reprint 154, 157-158 (Super. Ct. 1887)..

jurisprudence of the Gilded Age made interesting appearances on both sides of the courtroom debates, as courts would cite liberty of contract and property rights in labor as the basis for both granting and declining injunctive relief to employers.²³ The malleability of the freedom of contract concept in this context, however, made it an unreliable rhetorical move for the courts and the litigants.

Taft returned to the conflict between the freedom of the skilled worker and the employer's property and contract rights to control workplace knowledge several years after the *Cincinnati Bell Foundry* case while a judge on the federal court of appeals. In the later case, which became an influential defense of noncompetition agreements, Taft again laid out a vision in which private agreement was taken as the apotheosis of freedom in the public square. In *United States v. Addyston Pipe & Steel Company* (1898), Taft stated that an agreement not to compete would be valid if it was ancillary to the main purpose of another lawful contract, such as a sale of business or an employment contract.²⁴ Thus he stated, as if it were settled law and the articulation of a basic freedom, a rule allowing for the free enforcement of restrictive covenants against employees as if the law had been settled for decades. The *Addyston Pipe* decision, in the words of Herbert Hovenkamp, “fused the neoclassical model of competition with the legal doctrine of combinations in restraint of trade” and in the process “created the

23. Compare *New Method Laundry Co. v. MacCann*, 161 P. 990, 992 (Cal. 1916) (the court refused to enjoin employee from collecting laundry for a company that competes with his former employer because an injunction would interfere with employee's liberty: “The laborer has the same right to sell his labor, and to contract with reference thereto, as any other property owner. . .”), with *Kellogg v. Larkin*, 3 Pin. 123, 139 (Wis. 1851) (“[W]hile the avenues to enterprise are so multiplied, so tempting and so remunerative, giving to labor the greatest freedom for competition with capital, perhaps, that it has yet enjoyed, I question if we have much to fear from attempts to secure exclusive advantages in trade, or to reduce it to few hands”; the court upheld a covenant restricting plaintiff from purchasing wheat except under the direction of the defendant because the covenant was supported by consideration and not in contravention of public policy); *Beal v. Chase*, 31 Mich. 490, 530 (1875) (enforcing promise by vendor not to engage in business within certain territory).

24. 85 F. 271, 282 (6th Cir. 1898), modified, 175 U.S. 211 (1899).

illusion that the law of combinations in restraint of trade had always been concerned with ‘competition,’ neoclassically defined.”²⁵ In reality, of course, the content of the contract was imposed by courts (as Taft had done in inventing a contractual duty to guard trade secrets in the absence of any such contractual provision) if not by powerful firms. Taft’s seamless blending of a laissez faire defense of freedom of contract with a deliberate effort to accord as many rights as possible to the firm penetrated the law of restrictive covenants in the 1890s.

Opinions like Taft’s enforcing restrictive covenants against employees at the turn of the century obscured the novelty of the legal doctrine by relying on eighteenth-century cases having little to do with employment. Since the question was whether to enforce a contract, the cases compelled judges to reconcile liberty of contract values with other values, including the value of restricted labor and trade and that of freely usable knowledge. Courts had to determine explicitly whether the employee’s knowledge was alienable. Courts also brushed aside old doubts about whether or how much value must be paid for a monopoly on employee knowledge, whether employers were likely to exploit employees in seeking to control the use of knowledge, and whether the employer’s interest justified the restriction on an employee’s freedom (or obligation) to work.

Given the increased uses of restrictive covenants and the difficulty of justifying their enforcement simply by reference to liberty of contract, courts sought a new rationale. One of the most persuasive was that the contract was necessary to prevent an

25. Herbert Hovenkamp, *Enterprise and American Law 1836-1937* (Cambridge, Ma.: Harvard University Press, 1991), 287.

employee's "abuse of confidence."²⁶ As the trade secret concept became a settled part of the late nineteenth-century tort doctrine, courts could justify restrictive covenants as an unobjectionable contractual expression of the obligations that tort law imposed already. Ironically, just as contract discourse was on an ascending arc in trade secret cases, tort concepts popped up in cases involving contracts not to compete. Of course, the distinction between "contract" and "tort" was itself a product of the latter half of the nineteenth century. Inasmuch as the distinction was not yet clear, it should come as no surprise that the concepts blurred in the area of trade secrets and restrictive covenants.²⁷

The transformation of artisanal knowledge into corporate intellectual property was resented by some craft workers who experienced the change in law as a significant loss of workplace autonomy and possibilities for entrepreneurship associated with the threat of job mobility. The impact of the new law can be seen most clearly in looking at the story behind the famous Pennsylvania Supreme Court decisions in *Dempsey v. Dobson*, which arose out of the Philadelphia textile business. Philip Scranton's careful history of the industry in that era tells the story behind the litigation, which was covered extensively in the Philadelphia textile trade press. Until the late nineteenth century, dyers had a practical monopoly over technical knowledge of the chemistry and mechanics of dying fabrics and yarns. For generations, dyers had relied on traditional organic dyestuffs and methods handed down from father to son and from master to apprentice, and thus maintained effective control over craft knowledge and enjoyed considerable labor market autonomy. The impact of German advances in the chemistry of synthetic

26. John E. Hannigan, *The Implied Obligation of an Employee*, 77 *University of Pennsylvania Law Review* 970, 978 (1929) (lamented that the courts' emphasis on whether the knowledge constituted a trade secret "mislead[s] courts to adopt an inadequate test The essential question is: Has there been an abuse of confidence? If there has been, it is not necessary that the secret be a business secret.").

27. Gilmore, *The Death of Contract*, 98.

dyes associated with the so-called aniline revolution began to be felt in American textile manufacturing at the end of the nineteenth century.²⁸ As Scranton noted, “[t]he Philadelphia trade journal *Textile Colorist* inveighed relentlessly against by-guess and by-golly dyers throughout the 1880s, calling for the application of science to textile processing and an end to craft secrecy.”²⁹ The case of *Dempsey v. Dobson* represented a legal rejection of the tradition of craft knowledge in favor of corporate control over economically valuable workplace knowledge.

Dempsey was a final skirmish in a legal battle that textile employers and dyers had been fighting for centuries over control of the chemical knowledge of dyes. The leading English case on noncompete agreements, the *Dyer’s Case* (1414), which had declined to enforce a noncompete agreement, had been an early effort of a master to control knowledge by preventing a dyer from setting up shop for himself.³⁰ A later English case involving dyers, *Makepeace v. Jackson* (1813), was a common citation in early American trade secret litigation. In *Makepeace*, as explained in paper one, a calico printer’s shop fired its head dyer, who sued to recover the color book. The dyer sought to prove that some of the entries in the book were his own invention and that on that basis he was entitled to some of the book. The judges held that the book was the property of the employer, even though some of the colors were devised by the dyer, because “[t]he master has a right to something beside the mere manual labor of the servant in the mixing of the colors; and though the Plaintiff invents them, yet they are to be used for his

28. Ernst Homburg, The Emergence of Research Laboratories in the Dyestuffs Industry, 1870-1900, 25 *British Journal for History of Science* 91, 110 (1992).

29. Philip Scranton, *Figured Tapestry: Production, Markets, and Power in Philadelphia Textiles, 1885-1941* (New York: Cambridge University Press, 1989), 24 n.6.

30. Y.B. 2 Hen. 5, fol. 5, Michaelmas, pl. 26 (Eng. 1414).

master's benefit."³¹ *Makepeace* was cited not only in cases involving early trade secrets but also in early patent treatises on disputes to ownership of inventions.³² Nevertheless, as illustrated by the Philadelphia dyers' view of the story underlying *Dempsey v. Dobson*, the custom of dyers controlling books persisted notwithstanding *Makepeace*.

It was no accident that the Dobsons, whose extensive operations represented the modernization of mass factory production of textiles, should have been the driving force behind what they (and the courts) perceived as a badly needed modernization of the law. Brothers James and John Dobson owned and operated a successful textile business comprising several mills on the Schuylkill River. John W. Dempsey, the plaintiff in the case, was a well-compensated and skilled British color-mixer who had learned the dyer's trade in Britain before coming to Philadelphia and the Dobson mills in 1873. Dempsey worked with the Dobsons' carpet designer to match pattern colors and he created batch lots of dyes for each design and for use in tinting yarns for both initial and repeat orders. Dempsey recorded each dye formula in his "color books," along with notes to facilitate duplication of the shade at a later time. After twenty years at the Dobson mills, Dempsey gave notice in August 1892 of his intention to quit their employ in September. According to Scranton, although Dempsey "had routinely taken his books home with him for study and updating, Dempsey was stopped August 30 by the mill watchman and was 'informed that he could not quit the mill until he gave up his recipe books ... by order of the Dobsons.'" Dempsey offered to stay the night in the mill with his books, but "he was after a few hours forced out of the factory, the books remaining behind." The Dobsons

31. *Makepeace v. Jackson*, (1813) 128 Eng. Rep. 534.

32. George T. Curtis, *A Treatise on the Law of Patents for Useful Inventions in the United States of America* (Boston: C.C. Little and J. Brown, 1849), 43 n.1.

kept the books for almost four weeks while they were copied in their entirety for the firm, “and even then, only a portion of the volumes were returned.”³³

Among the facts proved at trial were that Dempsey had purchased the blank ledgers himself and that of the 2300 recipes in the books, he had recorded 1800 in England before coming to the Dobson mills. When the trade press, sympathetic to the mill, reported on the decision, the article neglected to mention that the majority of the recipes in the books predated Dempsey’s employment in the U.S. Perhaps in their view it was not relevant who had originated the recipes. The textile manufacturing firms that controlled the trade press might well have deemed all employee knowledge to be corporate property, not merely the knowledge developed on the payroll of the firm.

The trial court focused substantially on the ownership of the books as objects, rather than on the knowledge in them, and a jury returned a substantial verdict for Dempsey. The Pennsylvania Supreme Court overturned the verdict in 1896, saying that although Dempsey might keep copies of his recipes, the books containing the recipes and yarn samples were the property of the Dobsons. The court emphasized that the firm purchased, through wages, the product of Dempsey’s skill. “The designer and the color mixer, like the printer and the weaver, are employed, and their wages adjusted with reference to their skill and experience.” The court emphasized that Dempsey was an employee whose skill is owned by the firm that paid him. Dyers like Dempsey “are not independent contractors, producing designs or shades of color by a secret process of their own, which they sell, as patterns or colors to the manufacturer, for a fixed price; but they

33. Scranton, *Figured Tapestry*, 200.

are employés, bringing their skill and experience, in the use of the materials furnished by their employers, into his service, for his benefit in the production of his goods.”³⁴

On remand for a new trial, Dempsey offered evidence to prove that the custom in the industry was that the carpet mixer’s recipes and sample books belonged exclusively to the employee. Dempsey testified that “color mixers and dyers keep color books for their private use” and that neither in the U.S. nor in England would a dyer “give his books up, because they are the tools of his trade.” In addition, he offered the testimony of an experienced dyer who had worked both in England and in Philadelphia that the dyers’ possession of color books was a custom of the trade, and the testimony of the proprietor of a Philadelphia textile firm to the same effect. The trial court excluded the evidence.

On appeal, the Pennsylvania Supreme Court upheld the exclusion of this evidence and again ruled for the Dobsons. Given Dempsey’s evidence, the court could no longer rest on its earlier stated view that the implicit contract between dyers and their employers was that the dyer sold his talent to the firm. Rather, the court insisted that whatever custom of dyer control of workplace knowledge that might exist was not a “good custom” and was not “reasonable” because it was contrary to what the court imagined to be the employees’ duty of loyal service to the employer. “The color mixer, like the designer and weaver, is employed because of his supposed ability to serve his employer in the particular line of labor which he is expected to follow. . . . The employer has an equal right to the faithful service of each, and is equally, so far as his own business is concerned, entitled to the results of the labor of each.” Moreover, continued the court, a

34. Dempsey v. Dobson, 174 Pa. 122, 130, 34 A. 459 (1896).

custom of employee ownership of the dye books must be illegal because it would give the employee excessive power over the firm. “If a color mixer could at his pleasure carry off the recipes and color books from his employer’s factory, and refuse to permit their further use except upon his own terms, it would be in his power to inflict enormous loss on the manufacturer at any moment, and not merely to disturb, but to destroy, his business. Such a custom would not be reasonable, and could not be sustained.”

Finally, insisted the court, the custom of dyer ownership of recipes and dye samples was contrary to the shop right rule that had begun to emerge in the area of employee patents, and it was “against the law” for that reason as well: “Even if his employee had obtained letters patent for his formula, protecting himself thereby against the public, still the employer’s right to continue its use in his own business would be protected by the United States courts.”³⁵ Although the court cited the 1843 edition of Curtis’ treatise on patent law for this proposition, the court’s characterization of the strength of the employers’ shop right was an overstatement of the law that existed at the time. With respect to the recipes developed before Dempsey began at the mills, the firm would have had no interest, and with respect to the others, the firm would only have had the right to use the recipes, not to keep the books so as to prevent Dempsey from using them. But the court did not bother to state the law of patent ownership correctly, and simply assumed that employers *would* own employee patents because they *should*.

The reasoning in *Dempsey* reveals a view of employee knowledge that is at once both quaintly archaic and strikingly modern. The court believed that Dempsey had developed the recipes and color samples while employed and therefore anticipated the

35. *Dempsey v. Dobson*, 184 Pa. 588, 593, 39 A. 493 (1898).

modern rule that the Dobsons were entitled to “the results of the labor” for which their firm had paid.³⁶ Of course, the court overlooked the fact that most of the knowledge in the books was not the result of the labor for which the Dobsons had paid. The early-nineteenth century emphasis on “faithful service” merged seamlessly with the employer’s right to “the results of the labor” for which it paid. Employee control of knowledge would give “power to inflict enormous loss on the manufacturer,” a very modern concern. Fear of that power provided the basis for rejecting evidence that employee ownership was the custom – part of what would otherwise be described as the implied contract of employment. But it could not be an implied contract term because – as the court quaintly stated -- it is not a “good custom”; it was unreasonable and must, therefore, be “against the law.”

The reaction of Philadelphia dyers to the *Dempsey v. Dobson* opinions as recounted by Scranton reveals that the dyers understood exactly why the company would insist upon ownership of the recipes: it would enable the company to gain the economically valuable knowledge of dyes and therefore to substitute cheaper less skilled workers for the expensive labor of skilled and experienced dyers. As one dyer said, the dye recipes were his property, “handed down (as in my case) from father to son (my grandfather having used some of them a hundred years ago).” To claim as corporate property the skill that he regarded as both a personal attribute and a family tradition was an injustice. “By what right should an employer demand these formulae to put into the hands of an inexperienced and cheaper man, after I had worked for some time?” The dyer imagined a very different employment contract than the one described by the

36. *Id.* at 593, citing Curtis, *A Treatise on the Law of Patents* (1849 ed.) at 43 n.1.

Pennsylvania Supreme Court. “The goods are sent to him to be colored, and the result of his efforts is what he is paid for, not how he does them. If his formulas are incomplete, or have not been compiled with skill, the result will be poor, and his services of no value. If, on the other hand, the colors are good, by his skillful mixing or his peculiar knowledge of the process, he is of value to the concern employing him.”³⁷

No process of common law change is perfectly orderly and linear. The expansion of the trade secret concept met resistance as many litigants and some courts remained anxious to protect the right of the employee to use “mechanical skill and experience.”³⁸ Some courts refused to prevent engineers, mechanics, and other skilled workers, as well as sales and office workers, from divulging or using alleged trade secrets in subsequent employment.³⁹ A New Jersey equity court refused to interpret even an express agreement not to divulge information about the employer’s suppliers and customers to prevent an employee from competing after the term of the employment, finding that the employee remained free, “notwithstanding such agreement” to “use the knowledge he had obtained” at work after leaving the employment to do business with his former employer’s customers in competition with the former employer.⁴⁰ Even Wood’s 1886 treatise on master-servant law conceded that customer lists or relationships

37. Scranton, *Figured Tapestry*, 203.

38. *Herold v. Herold China & Pottery Co.*, 257 F. 911, 917 (6th Cir. 1919) (dissolving injunction against former employee using or disclosing alleged trade secret methods of making, glazing, and firing pottery because, since plaintiff had refused to disclose the secrets, the court could not determine how much the process involved “secret knowledge or information, as distinguished from mechanical skill and experience”).

39. *Cameron Mach. Co. v. Samuel M. Langston Co.*, 115 A. 212, 214 (N.J. Ch. 1921). The court stated: “It has been the practice of both companies and of other manufacturers of such machines to give publicity to every feature of their machines by circularizing the trade with advertising matter, illustrated by photographs or cuts, of the various types of their machines, and the machines are so large and their construction and parts so open to inspection that it is conceded any one could easily copy every feature of them....”

40. 40 N.J. Eq. 400, 403 (1885).

which are now widely regarded as information that an employer can control as property through the law of trade secrets or enforcement of a non-competition agreement, were open to use by a former employee. As Wood said, an employee “may solicit trade from his master’s customers for himself, when he shall set up in the same business for himself, after the term has expired.”⁴¹

As trade secret doctrine expanded, courts struggled with the question whether employers owned only the drawings or objects that embodied the secrets or, more broadly, the ideas contained in them. In an Ohio case about an engineer who went to work for a competitor to build a mill identical to the one he had built for a prior employer, the issue was whether the former employer owned the design of the mill or just the drawings and patterns for it. The court emphasized that the employee, not the former employer, had conceived the idea for the design and although the patterns themselves were trade secrets, the court rejected the notion that “when I employ a man who has skill, knowledge, and experience in a particular line, ask him to furnish me the knowledge . . . and he then supplies me an article, . . . the idea or ideas he evolves become the property of the employer as a trade secret.” Rather, the court thought that “the only property interest that the employer can claim is the product of his skill, the industry, and the intelligence of that workman, *i. e.* [sic], he owns the pattern, but he does not own the idea.” The narrow definition of a trade secret followed from what the court termed the “natural rule of right”:

That a man shall have the benefit of all his intelligent thought and enterprise, of all that he may discover by industry and ingenuity. . . . Therefore, if these mill

41. Wood, *A Treatise on the Law of Master and Servant*, 225.

owners desire to cripple a man's enterprise and his energy and intelligence, to hamper him in his future employment by requiring that he shall not give to that future employer the benefit of his skill or the things that he has developed for the former master, they must contract to that effect.⁴²

By contrast, a Pennsylvania case, decided only two years later, stated quite emphatically that the employer owned "property in the design, in the idea, and in the mental conception, as well as in the piece of paper on which it is expressed." Although the court ordered the defendant only to return the misappropriated blueprints, it obviously envisioned that the remedy would preclude the defendant from using the plaintiff's design. As in *Dempsey*, the court rejected the notion that the employee had breached no duty because it was the custom in the industry for draftsmen to make blueprints of their work and to retain them for their own use, the court said: "If there be such a practice, it is a reprehensible one."⁴³

Intellectual Property Disputes and the Outside Inventor

The intersection of employment contracts and the emerging law governing workplace knowledge significantly affected the ability of inventive employees to act as entrepreneurs as well as employees. An influential 1895 federal court of appeals decision on the ownership of a patent to a cigarette-rolling machine illustrates how courts saw employer control of technical knowledge to be essential to the social policy of inducing innovation. The impact of the decision on the career, business strategy, and self-conception of an entrepreneurial mechanic illustrates how some workers regarded the

42. *National Tube Co. v. Eastern Tube Co.*, 3 Ohio C.C. (n.s.) 459, 460-61, 465 (Cir. Ct. 1902).

43. *Pressed Steel Car Co. v. Standard Steel Car Co.*, 60 A. 4, 8-10 (Pa. 1904).

new freedom of contract rhetoric of the law as being directly contrary to their economic interests and to their vision of what true freedom meant.

The Bonsack Machine Company was founded shortly after James A. Bonsack, the twenty-year-old son of a wealthy woolen mill owner, patented a machine for making cigarettes in 1881. James Bonsack, his father Jacob, a family friend D. B. Strouse, and a banker formed the company, had Bonsack machines manufactured, and then leased those machines to cigarette companies. The Bonsack Company sent its own operators to the cigarette factories to set up and run the machines. The cigarette companies then paid the Bonsack Company a royalty based on the number of cigarettes produced.⁴⁴ Hulse, a mechanic, was employed by the Bonsack Company under a contract requiring assignment to the firm of any “improvement in cigarette machines” he might develop during his employment “or at any time thereafter.”⁴⁵ The Bonsack machine initially did not work very well, and manufacturers initially believed that the public was prejudiced against machine-made cigarettes. That changed in the late 1880s when a Bonsack mechanic managed to increase the daily output of cigarettes and to reduce production costs significantly at the cigarette factory owned by the Duke family of North Carolina.⁴⁶ The

44. Nannie M. Tilley, *The Bright-Tobacco Industry, 186-1929* (Chapel Hill: University of North Carolina Press, 1948) 570-72. To patent his invention, Bonsack first had to buy out the patent of Albert H. Hook, who had already patented a more primitive version in 1876. *Id.* at 570. Ownership of the Hook patent would become important in Bonsack’s patent litigation against other cigarette machines. See D. B. Strouse to J. B. Duke, Mar. 27, 1888 (JBD).

45. *Hulse v. Bonsack Machine Co.*, 65 F. 864, 866 (4th Cir. 1895).

46. Robert F. Durden, *The Dukes of Durham, 1865-1929* (Durham, N.C.: Duke University Press, 1975) 27-28; Tobacco, Nov. 17, 1893, at 4; Tilley, *Bright-Tobacco Industry*, 573; J. B. Duke Testimony, Feb. 25, 1908, *United States v. American Tobacco Co.*, at 3285 (JBD); J. B. Duke to D. B. Strouse, Mar. 16, 1888; Patrick G. Porter, Origins of the American Tobacco Company, 43 *Business History Review* 59, 68 (1969).

Bonsack Company soon sent a number of other operators to work there. One of these was William A. Hulse.⁴⁷

In general at that time, tobacco employees were free to take their knowledge to other factories. Duke company president James B. Duke acknowledged that some employees of a firm Duke bought “knew more about manufacturing tobacco than the man that owned the business and sold it.”⁴⁸ Duke considered it essential to keep the good Bonsack machine operators at his factory and objected to training employees who might take their knowledge elsewhere. Duke objected to the Bonsack Company “sending any man here to learn to run the machines in our factory unless he proposes to remain in our employ,” complained vociferously over the years about turnover among Bonsack operators, and was particularly irritated when he learned in 1889 that a Bonsack operator working in the Kinney Tobacco Company factory was trying to persuade one of the operators from Duke’s factory to join him at Kinney. “[W]e don’t propose to have our factory used as a school to train your operatives to be used at other factories. They can bear their own loss from training men for you just as we have done.”⁴⁹

The cigarette industry of the late 1880s and 1890s was fiercely competitive. Tobacco companies struggled to take control of the latest in cigarette production

47. Samuel A. Ashe, William Thomas O’Brien, in *A Biographical History of North Carolina*, ed. Samuel A. Ashe, (Greensboro, N.C.: Charles L. Van Noppen, 1906), 304-05; Tilley, *Bright-Tobacco Industry*, 574; William K. Boyd, *The Story of Durham, City of the New South* (Durham, N.C.: Duke University Press, 1927), 89; Durden, *Dukes of Durham*, 27; See B. N. Duke to D. B. Strouse, June 6, 1886 (JBD); D. B. Strouse to W. Duke Sons & Co., Aug. 11, 1887 (JBD); D. B. Strouse to W. Duke, Sons & Co., July 24, 1886 (JBD).

48. James B. Duke Testimony, Feb. 27, 1908, *United States v. American Tobacco Co.*, at 3487-88 (JBD).

49. J. B. Duke to Strouse, May 21, 1885 (JBD); J. B. Duke to Strouse, Apr. 20, 1889 (JBD); G. W. Watts to Strouse, Apr. 10, 1889 (JBD) (exclaiming that, “[W]e do not propose to educate hands for Mr. Kinney or Mr. Hulse [sic] or anybody else.”); Hulse to Wright, Jan. 22, 1894 (WP) (referring to Hulse’s former days working for Bonsack at Kinney).

machinery on favorable royalty terms.⁵⁰ J. B. Duke pushed Strouse to pursue patent infringement claims against the users of the cigarette-making machines in use at competitor factories, and the Bonsack and the Duke companies acquired the patents to some other machines.⁵¹ Duke also pressured Strouse to limit the introduction of Bonsack machines at new tobacco companies, complaining about the training costs Duke would incur:

If the machines were put into factories that have an established trade, I would raise no complaint. Five large factories now make, I think at least 90% of all the cigarettes sold in this country, and control the cigarette makers and it is hard for new beginners to take hands from an established factory where they run the risk of losing a permanent position.

Do you think it wise, under the circumstances for any of the large factories to put themselves in a worse position by introducing machines that a new beginner can get and be ready to compete without extra expense? It cost us a large amount of money to train our hands, and was a great deal harder for us to build up our business than it would have been if

50. Wright v. Duke, 36 N.Y.S. 853, 854-55 (N. Y. Gen. Term 1895), cited in Tilley, *Bright-Tobacco Industry*, 574-75. See also Durden, *Dukes of Durham*, 32; Porter, "Origins of the American Tobacco Company," 68 (citing Bonsack Machine Co. v. S. F. Hess, 68 F. 119, 125 (4th Cir. 1895)). The royalties were to be reduced to 20 cents per thousand once Duke started using machines on all of its cigarettes. Durden, *Dukes of Durham*, 45. See also J. B. Duke to Strouse, Mar. 27, 1889 (JBD) (reciting a royalty rate of 20 cents per thousand); Bonsack Machine Co. v. S. F. Hess, 68 F. 119, 130 (4th Cir. 1895) (citing a 10 and 13 cent discount in royalties).

51. Durden, *Dukes of Durham*, 37; J. B. Duke to Strouse, Oct. 13, 1885 (JBD); J. B. Duke to D. B. Strouse, Jan. 21, 1888 (JBD) ("We have been using your machine for four years and paying you for it, and you have silently allowed others to operate one practically the same as yours which you claim to be an infringement on yours, without taking steps to put a stop to it. This is an injustice to us that we cannot stand."); J. B. Duke to Strouse, Mar. 20, 1889 (JBD) ("We are getting tired of paying you royalties on your machine if you propose to continue to allow competitors of ours to run a machine that you call a direct infringement of yours, without making an effort to stop them."); Porter, "Origins of the American Tobacco Company," 71-72; Theo E. Allen to Wright, July 15, 1891 (WP). See also Hulse to Wright, Oct. 3, 1892 (WP) (relating Mr. Allison's statement to Hulse that "he had sold out to the American Tob Co"). Strouse to J. B. Duke, Nov. 22, 1889 (JBD); Strouse to J. B. Duke, Nov. 25, 1889 (JBD).

all other factories used machines and we could have gotten them at the time we started and saved this big outlay to train our hands.⁵²

Finally, in 1888 and 1889, Duke got his wish: an agreement to limit Bonsack machines in the United States to the five largest factories. These five companies combined in 1890 to become the American Tobacco Company, also known as the Cigarette Trust. An 1895 newspaper reported that American Tobacco used the Bonsack machine “to crush out all competition.”⁵³

The litigation over employee patent rights had its origins in the activities of Richard Harvey Wright, a businessman with numerous interests, who had been a partner in Washington Duke, Sons & Co. in the early 1880s but had tired of “playing second fiddle” to James B. Duke.⁵⁴ Wright signed a contract in December 1888 for an exclusive agency to sell Bonsack machines to companies in Asia and Africa.⁵⁵ J. B. Duke was angry at the prospect of international competition, threatening to hire an inventor “to get up a better machine than yours to be controlled solely by W. Duke Sons & Co.” Wright’s contract with the Bonsack Machine Company created a venture called “The Bonsack

52. J. B. Duke to D. B. Strouse, July 16, 1886 (JBD). Durden, *Dukes of Durham*, 37.

53. Blow at Cigarette Trust, *Evening World*, Mar. 12, 1895 (WP). See also *Bonsack Machine Co. v. Smith*, 70 F. 383, 385 (C.C.W.D.N.C. 1895) (describing other companies’ accusations that Bonsack and the American Tobacco Company brought frivolous patent infringement suits to unfairly squelch competition); Porter, “Origins of the American Tobacco Company”; Strouse to J. B. Duke, July 8, 1887; J. B. Duke to D. B. Strouse, July 19, 1887; D. B. Strouse to W. Duke, Sons & Co. and Allen & Ginter, Feb. 8, 1888 (JBD); Durden, *Dukes of Durham*, 45.; Strouse to J. B. Duke, May 4, 1888 (JBD); J. B. Duke to Strouse, Dec. 12, 1889 (JBD).

54. Jim Wise, A Man with Big Ideas: Visionary Richard Harvey Wright Invented a Company that Sent Products to the Moon, *The Herald-Sun* (Durham, NC), Jan. 18, 2004, at E1; Durden, *Dukes of Durham*, 19, 28, 50-54. *Wright v. Duke*, 36 N.Y.S. 853, 854-55 (N.Y. Gen. Term 1895); *Wright-Guerrant contract*, Feb. 9, 1889; A. & G. Cameron to Wright, Feb. 6, 1889 (WP); H. H. Benedict to Wright, Feb. 8, 1889; *Smith Premier Typewriter Co. to F. B. Lewis*, Jan. 19, 1892; *Yale & Towne Mfg. Co. to Wright*, Dec. 7, 1894 (WP).

55. See *Wright-Bonsack contract*, Dec. 12, 1888, §§ 1-2 (WP); Durden, *Dukes of Durham*, 41. J. B. Duke to Strouse, Mar. 20, 1889 (JBD), quoted in Durden, *Dukes of Durham*, 41. See *W. C. Seddon & Co. to Wright*, Dec. 18, 1888 (WP) (regarding sale of some Bonsack stock); *Theo E. Allen to Wright*, Sept. 20, 1890 (WP) (regarding an offer for Bonsack stock); *Duncan to Wright*, Aug. 5, 1892 (WP) (calling Wright “a large stockholder in the Bonsack Company”); *W. G. Mathews to Wright*, Jan. 3, 1895 (WP) (declining an offer from Wright to sell Bonsack stock).

Oriental Affairs,” from which Wright and Bonsack would share equally in the net profit. He was to procure foreign patents in his own name or the name of the Bonsack Machine Company, and they would both share ownership in those patents. Wright soon licensed Bonsack machines in Egypt and Malta, and then headed to Port Elizabeth, South Africa. He asked Strouse to send an operator to Egypt at a salary of \$60 per month to train a local operator.⁵⁶ William A. Hulse had worked for the Bonsack Machine Company from July 1886 to July 1889, starting at \$50 per month, and after several raises, receiving \$85 per month. In December 1889, Bonsack sent Hulse to Port Elizabeth, South Africa to operate Bonsack machines at R. H. Drury & Co. on Wright’s behalf. The work relationship while Hulse was in South Africa was punctuated by salary disputes, although eventually Wright paid the sums due to Hulse.⁵⁷

In July 1890, just as Hulse had returned to the United States, a Shanghai company accepted Wright’s offer to license Bonsack machines. In August 1890, Hulse agreed to “make the trip to Manilla [sic] and Shanghai and remain at these two places as long as may be necessary to put up a Bonsack machine at each place and train a man to succeed me for the sum of one hundred and ten (110 dollars) per month” In the fall of 1890, Hulse went to Manila and set up a Bonsack machine. Realizing the power he had, and apparently concerned about a lack of communication from Wright, he threatened to leave Wright’s employ:

56. Wright to Strouse, Apr. 29, 1889 (WP); Wright to Strouse, Sept. 20, 1892 (WP); G. W. Argabrite to Wright, Sept. 19, 1889 (WP); Strouse to Wright, Sept. 21, 1889 (WP); Strouse to Morgan, July 8, 1890 (WP). Hulse v. Bonsack, 65 F. 864, 864-65 (4th Cir. 1895). But see Hulse to Wright, Jan. 22, 1894 (WP) (claiming he had made \$100 per month). Hulse to Wright, July 20, 1890 (WP).

57. Hulse to Wright, July 20, 1890 (WP). Hulse to Wright, July 20, 1890 (WP). Hulse to Wright, July 27, 1890 (WP). Hulse to Wright, Aug. 5, 1890 (WP). Hulse to Wright, Aug. 9, 1890 (WP).

The whole thing lays in my power now to make it a success. If I say the thing goes, she will go, and if I say no, she is a failure. So you will understand by this that I have got the whole thing under my thumb now, and I expect you to do the square thing by me, or she is no go. This company has made me a good offer to stay here in Manila and take charge of the machine department at a nice salary. I have almost given them a decided answer to stay. I will let you know what I am going to do when I get through at Shanghai.⁵⁸

Hulse wrote glowing reports of how well the Bonsack machine was faring. He then went on to Shanghai and then back to Manila to set up another Bonsack machine.⁵⁹ Finally, in July 1891, Hulse returned home to Rochester, New York, complaining that he was sick of Asia: . I h[a]ve had typhoons & centipedes enough to last me a lifetime without any earthquakes thrown in it.”⁶⁰

In August 1891, Hulse told Wright, “I have got something very important to talk to you about when I see you.” Six days later, Wright and Hulse drew up a contract regarding:

[A] certain invention or improvement relating to the manufacture of tobacco cigarettes, the same consisting substantially in wrapping a

58. Mustard & Co. to Wright, July 8, 1890. Wright wanted Mustard & Co. to agree not to reproduce any of the machines that were sent to them, but one of their managers expressed concern about this, due to the possibility that the American Tobacco Company would convince Bonsack to revoke Wright’s exclusive agency. Mustard & Co. to R. H. Wright, June 26, 1890 (WP). There were also continuing annoyances in the United States from possible competing machines. Joseph A. Bonsack to R. H. Wright, July 18, 1890 (WP) (calling the Hardee-Elliott and Ludington machines “undoubtedly infringements on patents” of the Bonsack Company, but advising Wright that, “you want to get your matters in the East consummated at the earliest possible day.”). Hulse to Wright, Aug. 18, 1890 (WP). Hulse to Wright, Nov. 2, 1890 (WP).

59. Hulse to Wright, Nov. 20, 1890 (WP); Hulse to Wright, 1891 (WP); Hulse to Wright, June 19, 1891 (WP); Hulse to Wright, Feb. 27, 1891 (WP).

60. Hulse to Wright, July 30, 1891 (WP). Hulse to Wright, Feb. 4, 1892 (WP).

continuous rod of tobacco in a continuous paper strip or ribbon and folding and crimping the edges together so as to secure or seal the paper strip around the tobacco rod without the use of [sic] paste, it being his present plan to modify the tube now in use upon the Bonsack cigarette machines and apply thereto a device for folding together and crimping the edges of the paper strip after it has been wrapped around the tobacco rod so as to securely hold it in place.

Hulse agreed to continue to develop this machine, which he called the “crimper,” at his own expense, and to assign half his rights in the invention to Wright. In return, Wright agreed to determine whether it could be patented, to pay to patent it, and to sell or license it. A week after that, Hulse wrote, “I am getting along all right with the crimper. Am convinced more than ever that it will be a success.”⁶¹

Hulse must have suspected at this time that his contract with his former employer, Bonsack Machine Co., might become an issue because he wrote the company to get a copy of the agreement. He wrote to Wright explaining that “it make no difference whether [the company] sends it or not, as I only wanted to destroy the thing.”⁶² Hulse was right to worry that the 1886 employment contract with the Bonsack Machine Company was a problem. The contract stated that if Hulse made “any improvement in cigarette machines, whether the same be made while in the employment of the said company or at any time thereafter, the same shall be for the exclusive use of said

61. Hulse to Wright, Aug. 14, 1891 (WP). Wright-Hulse contract, Aug. 20, 1891 (WP). Hulse to Wright, Aug. 27, 1891 (WP).

62. Hulse to Wright, Aug. 27, 1891 (WP).

company.” The contract also provided that Bonsack could fire Hulse if he “shall in any way neglect his duty,” but Hulse had to give 60 days notice before quitting.⁶³

Such a pre-invention assignment clause was not unheard of in the industry. The American Tobacco Company used the same kind of employment contract, at least for some employees, and insisted on its ownership of inventions developed by them. As J. B. Duke explained in a 1900 letter rejecting an inquiry about licensing a machine from an inventor in New Jersey: “This company does not desire to take advantage of your offer. One, and a sufficient reason for not so desiring, is the fact that this company already owns any machine invented by Mr. A. Moonelis. Under conveyances and contracts made to and with this company, to which Mr. Moonelis is a party, this company is entitled to all inventions and patents of, or belonging to, Mr. Moonelis, on February 11th, 1895, and for a term of 20 years thereafter, which are in any way connected with machines for the manufacture of cigarettes and cigars.”⁶⁴

Hulse apparently began thinking about the crimper as early as 1890, and made a sketch or a model of it. He may or may not have been inspired by inventions he saw on his travels. While in Manila, Hulse wrote of “the machine that makes the cigarette without starch,” saying that, “[T]here is one here [and] . . . you need not fear it in the least, for it makes more waste than it does cigarettes. But what work it does do is fine beyond a doubt.”⁶⁵

63. Hulse, 65 F. at 865-66.

64. J. B. Duke to Josephus Plenty, Jan. 3, 1900 (WP).

65. See Duncan to Wright, Sept. 22, 1894 (requesting “Hulse’s memorandum book in which he made a rough sketch in Aug. 1890 in Rochester when he first conceived of the invention”); Hulse to Wright, Sept. 25, 1894; Hulse to Wright, Nov. 20, 1890 (WP). *Bonsack v. Hulse*, 57 F. 519, 522 (C.C.W.D. Va. 1893) (“The evidence shows that the improvement ‘took practicable shape’ in Hulse’s mind while he was in foreign lands . . . and that he then and their made a model of it.”); Hulse, 65 F. at 865.

Hulse sent frequent letters to Wright with progress updates, and Wright sent money to keep Hulse going. Meanwhile, Wright consulted New York attorney Robert H. Duncan to see whether the crimper could be patented. Duncan found existing patents for similar devices, and in January explained to Hulse that, “It is by no means an easy matter to get an invention of this kind [patented] which is so closely hedged in by inventions which come so near it in shape.” However, Duncan wrote six weeks later that, “I . . . believe that the invention is substantially new.”⁶⁶

To perfect the crimper, Hulse needed access to a Bonsack machine. In January 1892, he went to Lynchburg to show the machine to the Bonsack Company, and briefly tested it there. He also obtained a custom cigarette tube for the crimper and charged it to Wright’s account. On January 27, Hulse met with Duncan, who, perhaps recognizing the trouble to come, told him that Hulse and Wright had “made a great mistake by letting any of the Bonsack Co. know anything about the thing at all until we had the thing patented & secured.” After this meeting, Duncan commented optimistically to Wright that, “It seems to me that the principle of his construction is all right, and I think that he will be able to make such slight improvements in this construction that it will do good work.”⁶⁷

66. Hulse to Wright, Aug. 27, 1891 (WP); Hulse to Wright, Sept. 30, 1891 (WP); Hulse to Wright, Oct. 2, 1891 (WP); Hulse to Wright, Nov. 14, 1891 (WP); Hulse to Wright, Nov. 21, 1891 (WP); Hulse to Wright, Jan. 14, 1892 (WP). Meanwhile, the Bonsack Company started to press Wright for a statement of accounts, as the officers were concerned that they had not yet received any profit from the venture. See Strouse to Wright, June 27, 1891 (WP); Krise to Wright, Nov. 12, 1891 (WP); Duncan to Wright, Mar. 16, 1892 (WP); Duncan to Wright, Nov. 12, 1891 (WP); Duncan to Hulse, Jan. 30, 1892 (WP).

67. Hulse to Wright, Nov. 29, 1891 (WP) (describing problems the crimper might have on a real Bonsack machine, and suggesting that Wright obtain one so he can work on it secretly); Duncan to Wright, Feb. 2, 1892 (WP) (relating a conversation in which Hulse told him the flaw he had discovered by testing on a Bonsack machine – “too much spring to the tongue of the tube”); Hulse to Wright, Jan. 14, 1892 (WP) (planning to go to Lynchburg); Hulse to Wright, Jan. 29, 1892 (WP) (“I have returned home.”). Duncan to Wright, Feb. 2, 1892 (WP). P. S. Bowles to Wright, Jan. 30, 1892 (WP). See also Hulse to Wright, Feb. 4, 1892 (“I had the tube mad[sic] 3 inches longer than the other tubes in order to give the roll more grip and drawing power. I told Mr Bowles to charge the tube to your account, which will be done, and we will settle that between ourselves later on.”).

In February of 1892, Hulse briefly returned to Rochester and kept working on the crimper. Duncan filed the patent application for it on February 12, commenting to Wright that the Patent Examiner was a “very cranky man,” so it would be hard to predict how much trouble they would have getting the application accepted. Duncan also wrote that, “We have heard nothing from Hulse since the application was filed, but have heard of him through Mr. Krise that he was working in Lynchburg and with some success, but that the machine was not operating satisfactorily in many respects.” On March 23, 1892, Hulse wrote: “I have got the thing all O.K. at last. She runs slick as greased lightning.” A few days before reporting that success, Hulse and Wright sent a letter to the Bonsack Company, asking \$100,000 for the rights to the crimper.⁶⁸

Strouse responded the same day, making clear that Bonsack Company regarded the invention as covered by the invention assignment agreement in Hulse’s employment contract. When Hulse found out that Bonsack insisted the invention was covered by Hulse’s employment contract from years before, he was surprised and angry. In his view, Strouse was “trying to play a dirty game on us” by invoking the contract. “We will have to watch them like a hawk after a chicken. It beats the Duce – the meanness that’s in that man.” Bonsack decided not to insist on its right to the machine and offered “not only to pay Mr. Hulse for actual services rendered, but also to pay him what we regard as liberal for his improvement, provided it proves valuable to our company by reason of its being perfected, and letter patent be obtained covering the same.” Wright replied that they

68. Hulse to Wright, Feb. 4, 1892 (WP) (“I am making this tongue shorter than the other and will put on stiffer braces, and will put the heavy one near the end of the tongue by making that folding device some sorter than the other one. Then the end of the tongue will not have that upward spring.”). Duncan to Wright, Mar. 16, 1892 (WP). Hulse to Wright, Mar. 23, 1892 (WP) (on Bonsack stationery with “Lynchburg” pre-printed); Hulse to Wright, Mar. 30, 1892 (WP) (“I will be in L. tomorrow eve.”) (on stationery from the Salem Board of Trade in Salem, Va.). Hulse, 65 F. at 865. Hulse to Wright, Mar. 23, 1892 (WP). A. H. Burroughs was a lawyer for the Bonsack Machine Company. See Bonsack, 57 F. at 519; Goff to Busbee, Jan. 10, 1893 (WP).

would “push forward the crimping device as fast as possible, under the assurance of your board as to your liberality in the matter, if we make a success of it.”⁶⁹ It is not clear what the Bonsack Company initially offered Wright and Hulse as compensation for the invention, although two years later, after litigation over the invention had begun, Hulse reminded Wright that Wright had “rejected the offer the Bonsack Co made us when they offered us the 20 thousand dollars.”⁷⁰

In April 1892, the Bonsack Company tried to sell the crimper to J. B. Duke. Meanwhile, Hulse and Wright tried to make an independent deal with Duke. The Bonsack Company responded with a request for an injunction, which was granted, to keep Hulse and Wright from selling the machine. Hulse regarded Bonsack’s litigation to prevent his using or selling the crimper as gross unfairness. “They are a slick lot of rascals, and I don’t think they can be beat this side of it. I don’t see what grounds they had to serve a warrant on you. Was it for infringement, or what the h--- do they mean by their rascality. I hope to god we can sell to some other Co. and burst the BokCo all to the devil.”⁷¹

To represent himself and Hulse against Bonsack, Wright hired F. H. Busbee of Raleigh, N.C. One of Busbee’s first factual concerns was whether Hulse had been an employee for Wright or Bonsack:

69. Hulse to Wright, Mar. 30, 1892 (WP).

70. See Duncan to Wright, Apr. 11, 1892 (WP). Duncan to Wright, Aug. 5, 1892 (WP). R. H. Duncan’s partner Samuel A. Duncan was actually listed with Burroughs as counsel for Bonsack in the initial suit and the appeal. See *Bonsack*, 57 F. at 519; *Hulse*, 65 F. at 865; Robert H. Duncan to Wright, July 17, 1893 (WP) (showing Samuel A. Duncan as a partner on the firm’s letterhead).

71. Hulse to Wright, Apr. 5, 1892 (WP); Hulse to Wright, Apr. 7, 1892 (WP). Hulse to Wright, May 6, 1892 (WP). Allen to Wright, Apr. 26, 1892 (WP); Busbee to Wright, July 16, 1892 (WP). *Hulse*, 65 F. at 865. Attorney Theo E. Allen also kept a lookout for potential buyers of the crimper, speaking to the owners of competing cigarette machines, who were up against the American Tobacco Company. Allen to Wright, Apr. 26, 1892 (WP); Allen to Wright, June 28, 1892 (WP).

It will be necessary . . . to take an affidavit from Mr. Hulse giving in full the circumstances under which the contract was executed, and the circumstances under which he was discharged from the company, and the manner of his re-employment – that is whether he was told that he was employed by the company or for yourself.⁷²

Busbee agreed with Wright that the Bonsack Company had shown “bad faith,” that the pre-invention assignment contract was “unreasonable” “when the circumstances of concealment are taken into consideration,” and that the contract was void for lack of consideration, and as a restraint of trade.⁷³

The decision in the case was delayed for a while. Wright sought to test the crimper on a Bonsack machine, but the American Tobacco Company refused. Therefore, Wright told Strouse, “I will gladly accept your offer to further test the device on the machine at the Glamorgan works in Lynchburg at my own expense.” However, this test did not occur, possibly due to Hulse’s desire to get the crimper working on the Allison machine instead.⁷⁴

In October 1892, an interference was declared between Hulse’s patent application and two applications of William H. Butler, the secretary of the American Tobacco Company. After obtaining Wright’s permission, Duncan told the Bonsack Company who the owner of the interfering patent was, so that Bonsack could decide to continue fighting

72. Busbee to Wright, July 11, 1892 (WP); Duncan to Wright, July 12, 1892 (WP) (“It is insisted by Mr. Curtis that the agreement be ratified by the Bonsack Co. as there is great doubt whether there is not a partnership between you & the Co. in this matter.”); Busbee to Wright, July 15, 1892 (WP).

73. Busbee to Wright, July 15, 1892 (WP).

74. Busbee to Wright, Aug. 1, 1892 (WP). Wright to Strouse, Sept. 20, 1892 (WP). Hulse to Wright, Sept. 21, 1892 (WP); Strouse to Wright, Feb. 7, 1893 (WP).

with the American Tobacco Company over the Allison patents. Bonsack also hired another inventor to work on a crimper similar to Hulse's.⁷⁵

In February of 1893, Strouse arranged with a factory in Montreal, Canada to allow a test of Hulse's crimper. Strouse insisted, however, that "nothing shall be known of the test or the result of the test, except to the parties directly interested in the said suit, The Bonsack Machine Company, Mr. Hulse and yourself." He justified this secrecy on the grounds of protecting Hulse's patent application from "parties who are antagonizing him in the Patent Office." Busbee, however, feared that the test would work only to Bonsack's advantage, since Wright would be unable to use the results of a secret test to prove the value of the crimper. Also, Busbee would have preferred a test on another cigarette machine called the "International machine," since that would prove the crimper's value while providing less justification for Bonsack to claim ownership. Wright also did not want to take Hulse away from the packing machine project.⁷⁶ By February of 1893, Busbee seemed less optimistic about the case. He was "not at all sure" he could get the injunction dissolved, so he was intent on getting proof that the machine worked, to maximize the monetary award. He was reluctant to go to trial with the evidence available so far, but Wright pushed him to proceed.

The trial judge upheld Hulse's 1886 contract with the Bonsack Company. Judge Goff believed from the available evidence that Hulse had read and understood the

75. Duncan to Wright, Oct. 14, 1892 (WP). Hulse to Wright, Sept. 21, 1892 (WP). Duncan also once alluded to someone stealing Hulse's design: "How about that man in Durham who got a copy of Hulse's claims & sent them to the Amer. Tob. Co. or to J.B. Duke! Will he swear to this if we want him to do so." Duncan to Wright, Sept. 22, 1894. Duncan to Wright, Oct. 20, 1892 (WP). Busbee to Goff, July 11, 1893 (WP); Duncan to Wright, July 17, 1893 (WP). Busbee to Wright, Sept. 9, 1893 (WP); Busbee to Wright, Dec. 10, 1893 (WP) ("It is certain that the matter Whipple is at work upon is an infringement of the Hulse device.").

76. See Strouse to Wright, Feb. 7, 1893 (WP). Busbee to Wright, Feb. 9, 1893 (WP). Busbee to Wright, Feb. 13, 1893 (WP); Busbee to Wright, Feb. 20, 1893 (WP); Busbee to Wright, Feb. 25, 1893 (WP).

contract. He found the contract to be a reasonable bargain, in which Hulse got favorable employment, while the Bonsack Company protected its interests with a narrowly tailored restriction on Hulse's subsequent inventive activities. Goff did not seriously consider the public policy argument regarding restraint of trade, since no matter who won the case, the public would not get free use of the device. Instead, the public policy concern that the judge emphasized was "freedom of contract." "To hold that he had not the right to so contract would deprive him of a privilege that might be of great value to him, and the effect of such a rule would be to discourage improvements and prevent inventions."⁷⁷

According to Judge Goff, it did not matter to the case whether or not Hulse was in Bonsack's employ when he invented the crimper, yet Goff went on to express his opinion that "Hulse, so far as the questions involved in this suit are concerned, was in the service of the Bonsack Machine Company when he was on the rolls of, and being paid by, 'Bonsack Oriental Affairs.'"⁷⁸ The invention had been conceived at that time, and Hulse had supposedly made a model of it then. Goff skipped over the second half of 1891 when Hulse worked on the crimper in Rochester, and described the testing that Hulse did in Lynchburg as being an "an arrangement" between Hulse and Bonsack in which "the company furnish[ed] a machine, room, labor, and material . . . with the mutual understanding that the device, when successfully tested and complete, should be the property of the Bonsack Machine Company, and that Hulse should be paid by that

77. Busbee to Wright, Feb. 9, 1893 (WP); Busbee to Wright, Feb. 13, 1893 (WP). Busbee to Wright, Feb. 20, 1893 (WP). Busbee to Wright, Mar. 4, 1893 (WP). Busbee to Wright, July 7, 1893 (WP). Bonsack, 57 F. at 522.

78. Bonsack, 57 F. at 522. Allen described the judge's logic to Wright as follows: "[Y]ou are now and were an agent of the Bonsack Co. and . . . Hulse was with you, you being an employee, those you employed were also employees." Allen to Wright, Aug. 8, 1893 (WP).

company liberally for his work.” Wright had no cause to complain, since he had been aware both of Hulse’s 1886 contract and of the testing done in Lynchburg.

Goff also decided that even though the contract did require Hulse to assign his interest in the crimper to the Bonsack Company, Bonsack would have to pay Hulse “a reasonable and just compensation” for the improvements made while Hulse was not on the company payroll, including the time that he had spent working on the crimper since he had left Lynchburg. Specific performance was necessary, since “[i]t would be impossible, from the nature of the case, to ascertain the damages the company might sustain by being deprived of the invention for which it had contracted.” The case was referred to a master for a determination of what compensation Bonsack would be required to pay. The master appointed was Thomas S. Atkins of Richmond, Virginia, whom Busbee considered a reasonably impartial choice. Atkins returned his decision in late 1893, reporting unfavorably on the practicability of the crimper, and returning an award of \$8126.36, which was calculated based on Hulse’s having spent nineteenth months of labor at a rate of \$5000 per year. Busbee thought this would be acceptable, but Hulse was disappointed, feeling that he had been “bought by the Bonsack Machine Co.”⁷⁹

Hulse was still furious with Bonsack, but he was ready to give up the litigation, especially since he did not want to risk losing the whole settlement if Butler won the interference case. Still, he left the decision to appeal up to Wright. The Bonsack Company, meanwhile, took the position that the crimper was not of practical use, so the

79. See Busbee to Wright, Aug. 16, 1893 (WP) Hulse to Wright, Dec. 7, 1893 (WP). Busbee to Wright, Dec. 3, 1893 (WP); Hulse to Wright, Dec. 7, 1893 (WP); Hulse to Wright, Dec. 10, 1893 (WP). Hulse to Wright, Aug. 7, 1893 (WP) (“The d. dirty skunks. . . . Well, if they will settle with us, and we can get our money back and put us on even ground again, I think we had better let the buggars have it and not go to any more expense and loose [sic] the whole thing in the end, for the way things look now, I haven’t the least doubt in the world but what they would beat us if we went at them again.” (capitalization and punctuation adjusted)). Settlement contract, Feb. 4, 1895 (WP). See Hulse, 65 F. at 865.

award had been excessive. Busbee pointed out that Atkins's poor opinion of the crimper would likely keep the award low, even if on appeal the court decided that Hulse should be compensated for the value of the invention instead of just the time he spent working on it.⁸⁰

In spite of Hulse's and Busbee's misgivings, Wright chose to pursue the appeal. In response, Hulse then hired his own attorney to help Busbee with the appeal and Duncan with the interference.⁸¹ Meanwhile, Hulse worked on Wright's new investments – an automatic tobacco packing machine, and an attachment for stamping and labeling the packets, and Wright negotiated a deal for the use of the Bonsack machine, including an option to purchase a crimper, in the South African Republic. Wright also continued to provide instructions to his lawyers about procuring foreign patents for Hulse's crimper.⁸²

Wright and Hulse settled the case with the Bonsack Machine Company on February 4, 1895 while the appeal was pending in the Fourth Circuit. Hulse and Wright assigned their interest in the crimper to the Bonsack Machine Company, in exchange for a payment of \$50,000, to be divided evenly between Hulse and Wright.⁸³

Settling the case turns out to have been wise, or at least extremely lucky, for Wright and Hulse. Judge Simonton's opinion for the Fourth Circuit, affirming the trial

80. Busbee to Wright, Dec. 8, 1893 (WP). Burroughs to Busbee, Dec. 11, 1893 (WP). Hulse Power of Attorney Declaration, Apr. 24, 1894 (WP).

81. See Hulse to Busbee, Mar. 8, 1895 (WP); Allen to Wright, Sept. 18, 1894 (WP); Busbee to Wright, Oct. 8, 1894; Hulse, 65 F. at 865.

82. Wills to Wright, May 2, 1894 (WP); Bonsack-Wills contract, May 5, 1894 (WP); Bonsack-Wills contract, May 15, 1894 (WP). Wills to Wright, May 2, 1894 (WP); Bonsack-Wills contract, May 5, 1894 (WP); Bonsack-Wills contract, May 15, 1894 (WP). A Transvaal patent was issued for Butler's crimper. W.D. & H.O. Wills, Ltd. accepted this, but made sure to assert their right to Hulse's device as well. W.D. & H.O. Wills, Ltd. to Wright, Feb. 28, 1895 (WP). Serrell to Wright, July 24, 1894 (WP); Serrell to Wright, Oct. 24, 1894 (WP) (notifying Wright that the Hulse crimper had been patented in Spain).

83. Settlement contract, Feb. 4, 1895 (WP). Bonsack-Wright-Allen contract, Feb. 4, 1895 (WP).

court's decision and Atkins's award of \$8126.36, appeared the very next day.⁸⁴ Busbee had telegraphed the court to advise of the settlement and speculated that the court issued its opinion anyway because the Bonsack Company wanted to set a precedent. The case was, indeed, a significant precedent.

The court first rejected the argument that Hulse's promise to assign his inventions had lacked consideration, finding that Hulse's willingness to agree to all the terms of the contract had been a necessary condition for the Bonsack Company to hire him, so consideration was present on each side of the deal. The court also decided that the contract was neither unreasonable nor unconscionable. The primitive state of the Bonsack machine had made it likely that improvements would come to mind which could not be conceived and developed without access to the Bonsack machine. "The improvement would be [the employee's] own idea. But it owed its suggestion and origin, its progressive development and perfection, to the business, the practical working, the opportunity afforded by the company." Therefore, it was "a natural and reasonable thing" for the company to require its employees to agree to assign their Bonsack-related inventions. It was necessary to include inventions that occurred after the employee left the company, since otherwise, "the contract on this point could be easily evaded, and be made valueless." The opinion explained that the exchange of letters in March regarding "liberal compensation" could be seen either as a contract modification, or as a mere statement of intent by the Bonsack Company, but in either case, the terms of the original contract were not unconscionable.

84. Hulse, 65 F. at 870. Busbee to Wright, Feb. 6, 1895 (WP) ("I do not know why the court decided to file their opinion after my telegram. It may be that Gen. Duncan wired them to deliver the opinion if it was in favor of the Company, in order to have a good effect upon subsequent cases; and if you settlement with the Company was complete, I do not object to this.").

The court of appeals agreed with the lower court that the contract was not against public policy, and then elaborated further on its fairness, and on the value of allowing Bonsack to protect its interests. First of all, if Hulse had not signed the contract, or if the contract had been known to be invalid, then Bonsack would not have hired Hulse, Hulse would not have invented the crimper, and “the public would have lost the benefit of his discovery.” Thus, there was a significant public policy rationale in favor of upholding this type of contract. Also, the court saw the agreement as fair in light of the company’s right to protect itself from the misuse of its secrets by its trusted employees. “The company lets [employees] into an intimate knowledge of its cigarette machines, affords them the opportunity of discovering any needed improvements in them, gives them at hand the means of testing any improvements which may suggest themselves. Naturally it seeks to protect itself from an abuse of these results.” Since information about the Bonsack machine belonged to the company, restricting the use of that information could not be considered a restraint of trade. The contract that Hulse signed was limited to inventions related to cigarette machines, so it was reasonable “in connection with the protection necessary for the particular business.”

Overall, the opinion’s description of the equities of the situation suggested that the judges viewed the main problem in the case as being how to protect the firm’s organized efforts at innovation from the depredations of this overly enterprising employee. “Here we have the case of an ingenious man, without opportunity of developing his talent, and struggling under difficulties, enabled by this contract to secure employment in a large and prosperous corporation, where he could give his inventive

faculties full play.”⁸⁵ The court rejected the argument that contracts assigning rights to all future inventions were against public policy because they restrained trade or stifled invention. The public interest, thought the court, lay in promoting innovation, which could best be achieved by protecting the firm, not the employee. Without the contract, the court thought, the employee would never have been hired. “Then, in all human probability, the public would have lost the benefit of his discovery. In this point of view, a contract of this character cannot be said to be against public policy.”⁸⁶

Wright may indeed have been, as the Fourth Circuit said, “a businessman keenly alive to his own interests,” but his fight on behalf of those interests probably made the amount paid to Hulse possible. Busbee wrote to Hulse after the final decision that:

I am sure that your connection with Mr. Wright was most fortunate not only for the suggestion of an effort upon your part to invent the crimper in the first place, but for the strong support given in all negotiations and the back-bone which had its final reward in the decent price realized for the creature of your brain. Both you and myself at times despaired of as good a settlement as was finally obtained and we owe much to Mr. Wright for his general conduct of the matter.⁸⁷

85. Hulse, 65 F. at 868.

86. *Id.*

87. See also Busbee to Wright, Feb. 6, 1895 (WP) (“One thing is certain that unless you had had an interest in the machine from the beginning Hulse would have gotten a very small compensation for his invention. You have been of the very greatest service to him and have very fairly earned all that you will receive.”); Busbee to Wright, Apr. 10, 1895 (“[B]y your action in negotiating the sale you were at least as much entitled to credit in bringing about the result as the inventor, and this without reference to your agency in directing Hulse attention to the field of invention.”). No other documentation has been found suggesting that inventing the crimper was Wright’s idea.

Hulse was not so sentimental: “Whatever he done in the matter he agreed to do by contract and was done for his own interest.”⁸⁸ It is fairly certain, however, that Hulse would have been very hard pressed to pay the \$250 retainer that Busbee had required from Wright, as that was more than two months of the salary he had been paid for his work overseas.⁸⁹

Immediately after the settlement, Bonsack’s stock jumped. Bonsack hired a man named Kirschner to build and improve Hulse’s crimper. Wright continued in his agency for the Bonsack Company, which even continued to refer employees to him. He went overseas to handle their business, which included licensing Hulse-Kirschner crimpers along with Bonsack Machines.⁹⁰

The American Tobacco Company seems to have gotten one crimper from another inventor, but the Bonsack Machine Company owned all the other crimpers on the market. In September 1895, Bonsack lost its U.S. patents for Emery and Bonsack’s machines. In 1896, the American Tobacco Company bought the Bonsack machines they had been using, as well as a non-exclusive license for the use of Bonsack’s crimpers. Although the American Tobacco Company now had to compete with other companies that used similar machines, the decision reduced or eliminated their royalties.⁹¹

88. Hulse to Busbee, Mar. 8, 1895 (WP).

89. Busbee to Hulse, Feb. 27, 1895 (WP).

90. Walker to Wright, Feb. 12, 1895 (WP); Strouse to Wright, Sept. 30, 1895 (WP); Wright to American Trading Co., Mar. 16, 1896 (WP) (“I will sell you five (5) Bonsack Cigarette Machines and five (5) Hulse-Kirshner Crimpers, for the sum of Twenty-five thousand Gold Dollars, (\$25,000 Gold,) and will send my expert to you . . .”). Strouse to Wright, Sept. 30, 1895 (WP); Strouse to Wright, Oct. 11, 1895 (WP); Strouse to Wright, Oct. 28, 1895; Strouse to Wright, Oct. 28, 1895; Wright to American Trading Co., Mar. 16, 1896 (WP).

91. Seddon to Wright, Feb. 6, 1895 (WP); 70 F. at 383; Duncan to Wright, Mar. 6, 1896 (WP). See also J. B. Duke to Strouse, Jan. 31, 1896 (JBD). Durden, *Dukes of Durham*, 65. Tilley, *Bright-Tobacco Industry*, 577 (calling the loss of Bonsack’s patents “a decision not without benefit to the American Tobacco Company as it relieved that organization from the payment of heavy royalties”).

The Bonsack affair was not Wright and Hulse's only entrepreneurial effort in the area of cigarette manufacturing technology. By the end of 1891, Wright had started corresponding with a William Rose of Gainsborough, England, about an automatic tobacco packing machine that Rose had invented. The American Tobacco Company had hired Whipple, the same inventor whom Bonsack later hired to make a crimper, to create a tobacco packing machine. Hulse kept an eye on Whipple's activities for Wright at the end of 1891 while he worked on the crimper. Wright eventually sought to buy Whipple's interest in the packing machine. In May of 1892, Hulse and Wright took a brief trip to England. By May of 1893, Hulse had started working on the packing machine at company in Chicago, and he later traveled the United States, setting up packing machines at various tobacco plants and getting them to work with the customer's specific needs. In spite of his efforts to train local mechanics, Hulse was often the only one who seemed to be able to keep the machines functioning, and hence customers often wrote demanding a visit from Hulse.⁹²

92. See, e.g., Rose to Wright, Nov. 30, 1891 (WP). Jim Wise, "A Man With Big Ideas," E1. Hulse to Wright, Nov. 14, 1891 (WP). Hulse to Wright, Nov. 29, 1891 (WP); Hulse to Wright, June 13, 1892 (WP); Hulse to Wright, Jan. 20, 1893 (WP); Whipple to Wright, Nov. 30, 1894 (WP). Duncan to Thomas D. Wright, May 19, 1829 (WP); Hulse to Wright, June 13, 1892 (WP). Hulse to Wright, May 9, 1893 (WP). Hulse to Wright, May 25, 1893 (WP). Hulse to Wright, Dec. 10, 1893 (WP); Hulse to Wright, Aug. 2, 1894 (WP); Hulse to Wright, Aug. 16, 1894 (WP); Hulse to Wright, Dec. 5, 1894; Hulse to Wright, Jan. 28, 1895 (explaining why a machine at Venable had broken down); Hulse to Wright, June 2, 1893 (WP) (noting the need to train two operators "so that if one of them should hapen [sic] to get mad and leave they would have another man to depend on."); Hulse to Wright, Jan. 15, 1894 (WP) (training an operator at S.W. Venable); Hulse to Wright, Sept. 17, 1894 (WP) (reporting that he has gotten machines at two Richmond factories in "good running order, and the boys verry [sic] well trained to handle them."); E. O. Shelby Tobacco Co. to G. W. Moore (WP) (acknowledging Hulse's visit to their Kentucky factory to set up a machine). Otto C. Schneider to G. W. Moore, Apr. 19, 1894 (WP) ("[I]f you cannot send Mr. Hulse here [to S. W. Venable] very soon, we will be obliged to start to pack by hand again . . ."); Wellman & Dwire Tobacco Co. to Wright, Aug. 1, 1894 (WP); S. W. Venable Tobacco Co. to Wright, Oct. 3, 1894 (WP) ("The new machine will not work. . . . When Mr. Hulse left here it was apparently doing good work. . . . Please send Mr. Hulse here as soon as possible."); S. W. Venable to W. C. Seddon, Jan. 18, 1895 (WP); Schneider to Wright, Feb. 18, 1895 (WP). It was also sometimes challenging to introduce the machines because they replaced employees. Butler to Wright, Nov. 27, 1893 (WP) (using concern about "throw[ing] girls out of employment" to insist on a lower royalty for the American Tobacco Company); Hulse to Wright, Jan. 4, 1894 (WP) (describing apparent sabotage by employees who are supposed to be helping

In 1893, Wright incorporated the Automatic Tobacco Packing Machine Company, which purchased the U.S. patent for Rose's machine from him for \$250,000. Rose kept improving the machine and shipping new ones to Wright's customers. Possibly in response to a customer's suggestion, Wright hired W.R. Landfear at the beginning of 1894 to invent a complementary machine to stamp and label cigarette packages. Hulse also helped Wright stay abreast of Landfear's work, and helped Landfear to test the machine. Wright hired Robert H. Duncan to work on patent applications for the Rose and Landfear machines. Strouse tried to negotiate with the American Tobacco Company to use the Rose machine, which at some point, the American Tobacco Company did use.⁹³

Hulse was well aware of his value as a skilled worker, and the creativity that he contributed to his work, and he was sometimes unafraid to stand up to Wright. When Wright questioned one charge Hulse had made to the company, Hulse protested: "You had a machine here that wasn't worth a cent to you, and I went to work studied out a plan by which means you have a first class machine and now you want me to go ahead and do the same thing on another one, and more than that." Hulse recounted his other successes: "The machines at Lorillards did not work at all until I went to work and studied out a

him run the machine); Hulse to Wright, Jan 12, 1894 (WP) (describing further resistance at S.W. Venable, in which employees refused to stamp machine-made work).

93. Certificate of Incorporation, Sept. 18, 1893 (WP). Wise, "A Man With Big Ideas", p. E1 "The suit [against the Dukes] was unsuccessful, but in later years Wright could take comfort that his adversaries' American Tobacco monopoly became a customer for the Rose Tobacco Packers that he sold."; Rose to Wright, Nov. 17, 1893 (WP); Rose to Wright, May 3, 1894 (WP); Rose to Wright, Oct. 6, 1894 (WP); Rose to Wright, Jan. 26, 1895 (WP). Hulse to Wright, Nov. 20, 1894 (WP); Hulse to Wright, Jan. 8, 1895 (WP); E. C. Venable to Wright, Jan. 15, 1894 (WP). Hulse to Wright, Mar. 25, 1895 (WP). Wright-Lanfear contract, Jan. 26, 1894 (WP); Lanfear to Wright, Jan. 19, 1894 (WP); Lanfear to Wright, Aug. 3, 1894 (WP). Duncan to Wright, June 11, 1892 (WP) ("What I would like is to have Rose send me a copy & drawings of the papers he is going to file in the U. S. Patent Office. . . . As soon as I receive the next papers I will examine them and see then about a search into the art."); Duncan to Wright, Aug. 5, 1892 (WP); Duncan to Wright, Mar. 6, 1896 (WP); Duncan to Wright, Apr. 3, 1895 (WP) (regarding Lanfear patent). Strouse to Wright, Oct. 23, 1893 (WP); Strouse to Wright, Oct. 30, 1893 (WP).

device and attached it to the machine in order to make a success for you.” If he were just a mere mechanic running machines designed by someone else, rather than an inventor and designer, Hulse insisted, “how many would you have made a success of?”⁹⁴ Hulse justified his salary by his importance to Wright’s business: “You know as well as any one that you can’t get a man that is reliable and that can do the work for the Co (that I have done) for any less money than you have been paying me.” “And as to ordinary laborers, yes you can get plenty of them for 40 or 50 dollars per mo. But what earthly good would it do you, for you know better than I can tell you that no ordinary man can handle one of these machines. Just look what a time the Bonsack Co had trying to get men to handle their machines and what it cost them. And they got no returns for the money they layed out for 3 or 4 years and the Bonsack machine is not half as hard to handle as this machine, for it is not half so complicated.”⁹⁵

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In contrast to the inventors featured in the other stories recounted in this paper, and those in the twentieth century R & D facilities described in the papers to come, Wright and Hulse were not regular employees of large corporations. They remained, by choice or by circumstance, independent and were therefore compelled to be entrepreneurial about their inventions. Contrary to the Fourth Circuit’s imagined world in which Hulse was “enabled by this contract to secure employment in a large and prosperous corporation, where he could give his inventive faculties full play,” Hulse never did enjoy such security of employment. He remained an entrepreneur who sold his ideas piecemeal, and was not in a position to trade the stability of corporate employment

94. Hulse to Wright, Jan. 17, 1894 (WP).

95. Hulse to Wright, Jan. 22, 1894 (WP).

for the loss of intellectual property rights. He managed to come out of the litigation successfully only because he settled it the day before the Fourth Circuit issued its opinion divesting him of most of the ability to be entrepreneurial with respect to his patents. The change in law that culminated in cases like *Hulse v. Bonsack Machine Company* would have the greatest impact on a person like Hulse, although Hulse himself did not feel the consequences in that particular case. Inventors like Hulse in later years would either have to negotiate for a much better contract or would have to take and keep a job and pin their hopes on the security of a corporate salary. The dyers like Dempsey, the employees of foundries like Dodds, along with many others, were the people whose implied contracts of employment changed as courts redefined the meaning of contract.