CONTROL OF SUPER-POWER*

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Is the control of super-power 1 chiefly concerned with constitutional law, with political theory, or with social economics? If with constitutional law, what is its source? Should the giant combines of the electrical industry be left to govern themselves? Should the states control them? Can they? Is their regulation a proper function for the federal government?

Such questions force themselves to the front in any consideration of electrical power-supervision and assume increasing significance in the political and legal affairs of the day. Despite physical limits for economic transmission 2 the power industry has thrown off its swaddling clothes. It is no longer merely a local prodigy. It has become a national phenomenon—international. As it grows its importance increases. Who shall direct its ascendant power? Must we placate doctrine with soft words while we advance the cause of centralization by cliché and circumvention? If so, by what means?

The public is taking its economics seriously. The price of electricity affects the cost of living. Its manufacture engages the public interest.

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1"Super-power" has come to mean the interconnection of generating stations for a more effective pooling and distribution of electrical power. It contemplates regional developments of electrical distribution systems, and the manufacture of electricity at the source, both river and mine. See: Kerwin, Federal Water-Power Legislation (1926) 23-27; Prosperity Through Power Development, excerpts from papers delivered at the First World Power Conference held at London, England, July 1924; Baum, National Superpower Scheme, Electrical World, June 2, 1923.

2Federal Power Commission Annual Report 1929, at 3, estimates the distance at 300 miles. A recent invention may have increased the radius to 500 miles. See Science News Letter, July 11, 1931, at 21.
"Giant Power." "Generation at the source"—stream or mine. "Conservation of national resources." To the fathers of a nascent government these were unknown terms. Coal lands passed early into private ownership, and out of the sphere of governmental regulation—at least for the present. More fortuitous circumstances attended the development of modern water-power policy. Much of the stream-power is still within the supervision of state or national governments. The problem of how this control is to be effected, and so far as the federal government is concerned, of the constitutional mandates on which it rests, is not only for the present but for the future to consider.

There are two topics for investigation. The first concerns the generation of hydro-electricity. The development of this phase is the story of federal encroachment upon state jurisdiction over navigable rivers. The second deals with electricity as a commodity in inter-state commerce. As such it loses its identity as a product and merges into a doctrine. It is in this order that the discussion will proceed.

First, there is the Constitution. We are told that it embodies the delegation of federal powers by sovereign states beyond which the central government may not go. Yet should one be sanguine of so simple a solution? Is it not too much to hope that Benjamin Franklin's experiments with kites could have forewarned his compatriots of the electrical development which was to come, or of the distribution of electrical energy beyond state lines which would sometime call for federal intervention? The Constitution is not explicit. We search it in vain for the mention of super-power, electricity, or the allotment to states or the federal government of control over its generation, transportation or rates.

But herein lies our thesis. Time and a tortuous journey are necessary for a comprehensive view of changing doctrine. Bridges must be inspected as well as dams. Gas cases must be metamorphosed, for super-power control did not spring "full-grown" but is an eclectic of court experience in several lines of cases. The words of the Constitution are indelible, but social needs and men's opinions change. New meanings are extracted from—or more accurately—are given to dry verbalism. And although in the end the intervention of the federal government in this field of paternalism must receive a constitutional sanction, this is accomplished not by a formal perusal

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8 For a description of the term "giant power" see GIANT POWER, the Report of the Giant Power Survey Board of the Pennsylvania General Assembly.

9 Federal regulation of the coal industry as a public utility was recently advocated by Pittsburgh operators. See Pittsburgh Sun-Telegraph, Aug. 6, 1931, at 7; Ltr. Dis., Aug. 29, 1931, at 6.

10 The first hydro-electric plant in the United States was built in 1890. KERWIN, op. cit. supra note 1, at 106.

11 See Marshall, C. J., in Martin v. Hunter's Lessee, 1 Wheat. 304, 326 (U. S. 1816), and in Gibbons v. Ogden, 9 Wheat. 1, 187 (U. S. 1824); U. S. CONSTITUTION, Tenth Amendment; COOLEY, CONSTITUTIONAL LIMITATIONS (7th ed. 1903) 11.
of the instrument, but by reading into its language trends of political and
economic thought which have vitalized and rejuvenated its bare words.

The roots of the problem were planted early. Since the first days of
colonial settlements local governments have interested themselves in the
regulation of water-power and navigation. In 1628 a water mill was con-
structed in Endicott's first colony.\(^7\) In 1629 legislative control of water-
power sites made its appearance in New Netherlands.\(^8\) In 1638 the Massa-
chusetts Colony passed legislation regarding the management of water-
power mills, and erected a government-owned sawmill. By that year
historical precedent had been established for governmental supervision of
water-power sources and mills, and for state ownership.\(^9\) In 1725 the
legislature of Pennsylvania provided for the erection of dams, and the con-
struction of bridges over navigable creeks and rivers.\(^10\)

After the Revolution state intervention became more pronounced. Ver-
mont prescribed for the use of power sites.\(^11\) New York regulated
dams.\(^12\) Other states joined the procession.\(^13\) In 1910 state attitude was voiced
at a convention of governors by a resolution which advocated "that all water-
powers should remain in the control and under the jurisdiction of the
respective states wherein such water-powers are situated."\(^14\) In 1915 this
sentiment was even more vigorously resolved at the Western States Power
Conference.\(^15\)

The cause of such agitation was the steadily increasing congressional
intervention at the instance of conservationists in matters which concerned
navigation and power development.\(^16\) Prior to the Civil War congressional
policy seemed "to leave the regulation of navigable rivers, and in large
measure their improvement, to the several states, and to acquiesce in the
construction in such streams of whatever structures the State laws might

\(^7\) For a brief survey of historical background of the Federal Power Commission starting
with colonial times, see CONOVER, FEDERAL POWER COMMISSION (1923). See also, KERWIN,
\textit{op. cit. supra} note 1; MEAD, WATER POWER ENGINEERING (2d ed. 1915) 14-16; WHITLOCK,
\textit{HISTORY OF THE CANAL SYSTEM OF THE STATE OF NEW YORK}; AMROD, A CONNECTED
VIEW OF THE WHOLE INTERNAL NAVIGATION OF THE UNITED STATES; POWELL, \textit{First
Canals in American Continent} (1910) 4 J. OF AM. HIST. 407-416.

\(^8\) Laws and Ordinances of New Netherlands, 1638-1674, p. 3 (citation from CONOVER,
\textit{op. cit. supra} note 7, at 3).

\(^9\) CONOVER, \textit{ibid.} at 4.

\(^10\) PA. STAT. AT LARGE (1722-1744) 35, PA. STAT. (West, 1920) §§ 6592, 6593.


\(^12\) Laws of New York, 1801, p. 300; 1822, p. 90; 1823, p. 132.

\(^13\) E. g.: Ill. Session Laws, 1824, p. 11; Me. Session Laws, 1834, pp. 592, 610, 744; Ore-
gon Session Laws, 1844, p. 86 (CONOVER, \textit{op. cit. supra} note 7, at 10); Laws of Territory of

\(^14\) CONOVER, \textit{op. cit. supra} note 7, at 13.

\(^15\) Resolved that "the states have the constitutional right and power to control and regu-
late the appropriation and use of the waters within their boundaries for all beneficial pur-
poses except navigation, and also the right and power to control and regulate the rates and
service of their public utilities." \textit{Hearings before the House Committee on Water Power},
65th Cong. 2d Sess., at 478; CONOVER, \textit{op. cit. supra} note 7, at 15.

\(^16\) See KERWIN, \textit{op. cit. supra} note 1, c. 3-5; CONOVER, \textit{op. cit. supra} note 7.
authorize.” Federal participation in waterway improvements during this period was chiefly limited to the making of reports, surveys, loans, and land grants. After the War the government’s attitude changed. Commencing with the act of June 26, 1866, a number of statutes were passed. Federal control of water-power was lodged in three departments of government. The Department of War regulated water-power on navigable rivers; the Department of Interior, water-power on public lands; and the Bureau of Forestry in the Department of Agriculture, water-power in national forests. In 1920 this distribution of administration was terminated, and the control of the three Departments over water-power was centralized in the Federal Water-Power Commission. The story of this progress toward centralization in the supervision of hydro-electric generation, and the development of federal policy toward interstate transmission of electricity, requires slower telling.

Federal control of inland waterways was not provided for in the Constitution. During the early days of the Republic legal opinion seems to have conceded that federal jurisdiction over maritime matters was confined to tide waters — a conception which was inherited from English law. Taney had not yet repudiated this anacronism as applied to our vast expanse of inland waters. Nor had legislative power over navigation been conceived

... authorization.
as flowing from maritime jurisdiction. These broadened powers were yet to emerge by the aid of interpretation from the legal lethargy which attends training in the law.

On the other hand the commerce clause of the Constitution was viewed as the keystone upon which federal power could be extended. This failure to appreciate the plastic qualities of maritime power, together with the paucity of inland navigation when the Constitution was formed, and the manifest interest in potential federal control of commerce, may have induced Webster to stake his argument on the commerce clause in Gibbons v. Ogden, which, unwittingly enough, was later to have far-reaching effect on federal control over hydro-electric generation.

In this case Chief Justice Marshall decreed that an exclusive monopoly granted to Livingston and Fulton for a period of thirty years to operate steam-propelled vessels on New York waters, was repugnant to the commerce clause and void. Webster saw in this clause the very origin of our present Constitution; and the court accepted his argument that navigators it unfit. If it is a public navigable water, on which commerce is carried on between different states or nations, the reason for the jurisdiction is precisely the same. (at 454).

"Nor can the jurisdiction of the courts of the United States be made to depend on regulations of commerce. They are entirely distinct things, having no necessary connection with one another, and are conferred in the Constitution by separate and distinct grants." Taney, C. J., in The Propeller Genesee Chief et al. v. Fitzhugh et al., 12 How. 443, 452 (U. S. 1851). See also, Jackson v. Steamboat Magnolia, 20 How. 296 (U. S. 1857); The Hine v. Trevor, 4 Wall. 555 (U. S. 1866); The Belfast, 7 Wall. 624 (U. S. 1868); The Eagle, 8 Wall. 15 (U. S. 1868); Ex parte Boyer, 109 U. S. 629, 3 Sup. Ct. 434 (1884); The Robert W. Parsons, 90 U. S. 17, 24 Sup. Ct. 8 (1903); 1 BENEDICT, ADMIRALTY (5th ed. 1925) 8-10; ETTING, ADMIRALTY (1879) 49-54; GOULD, WATERS (3d ed. 1900) §§ 66, 67; HUGHES, ADMIRALTY (2d ed. 1920) § 4.

Art. 3, Sec. 2, cl. 1 of the Constitution reads: "The judicial Power shall extend to all Cases of admiralty and maritime Jurisdiction." In re Garnett, 141 U. S. 1, 12, 11 Sup. Ct. 840, 842 (1890): "It is unnecessary to invoke the power given to Congress to regulate commerce with foreign nations, and among the several states, in order to find authority to pass the law in question. The Act of Congress which limits the liability of ship owners was passed in amendment of the maritime law of the country, and the power to make such amendments is coextensive with that law." See THOMPSON, FEDERAL CENTRALIZATION (1923) 230, 231.

2 WARREN, THE SUPREME COURT IN THE UNITED STATES HISTORY (2d ed. 1926) 54, 55. Art. 1, Sec. 8, cl. 3 of the Constitution: "The Congress shall have Power to regulate Commerce with foreign Nations, and among the several States, and with the Indian Tribes."

"The derivation of the power to regulate navigation from the commerce cause rather than from the admiralty clause was probably due to the feeling that a wider power would thus be secured to Congress." GOODNOW, SOCIAL REFORM AND THE CONSTITUTION (1911) 48.

See The Hine v. Trevor, supra note 24, at 562.

2 WARREN, op. cit. supra note 26.

Supra note 6. See historical account of the trial in WARREN, op. cit. supra note 26, c. 15, Cf. Vezie and Young v. Moor, 14 How. 568 (U. S. 1852). See The North River Steam Boat Co. v. Livingston, 3 Cowen 713 (N. Y. 1825). As early as 1796 Congress seems to have asserted its power over navigation by the improvement of harbors. See CONOVER, op. cit. supra note 7, at 16.

Gibbons v. Ogden, supra note 6, at 11.

WARREN, op. cit. supra note 25, at 70, 71. Connecticut and New Jersey practiced retrogression. No one with such an exclusive license could enter Connecticut waters with a steam vessel. If a New Jersey citizen was restrained under the New York law he was entitled to an ac-
gation is commerce, and that it was illegal to exclude from New York harbor a steam-propelled vessel operating under a federal coasting license. Maritime as distinguished from commercial jurisdiction was not adverted to; but federal power over interstate commerce as it pertains to "navigation within the limits of every State in the Union" was firmly entrenched.

But the expanded powers of the federal government under the ruling of *Gibbons v. Ogden* were not to be interpreted as leaving states impotent regarding their own navigable waters. In *Willson v. Blackbird Creek Marsh Co.* the company, in order to protect some marsh land from being overflowed, had erected a dam across a small navigable creek, under license from the State of Delaware. The defendants, who operated a sloop under a federal coasting license, broke the dam for which they were held liable in trespass in the state court. On review by the Supreme Court the judgment was sustained on the ground that Congress had passed no act under the commerce clause which related to navigation of this or other small creeks similarly located. Consequently there was nothing repugnant about the state act which empowered the Marsh Company to erect the dam.

Suppose, then, a state should authorize an obstruction of a navigable river such as the Hudson, by licensing the erection of a dam with lock, or of a draw-bridge. The latter problem was presented in the state case of *People v. Rensselaer & Saratoga R. R. Co.* The proceeding was in quo warranto and tested the power of the state to grant the license. In *Gibbons v. Ogden* the pretentions of the New York court for that state's exclusive control over its navigable waters had been thwarted. The *Saratoga* case, however, presented a different situation—although one not sanctioned by the *Blackbird Creek Marsh* case. The court reasoned that the power to license for damages with treble costs in N. J. See Webster's argument in *Gibbons v. Ogden*, *supra* note 6, at 4, 5. Ohio offered the use of its ports on Lake Erie to New York licensees only on the basis of reciprocity. See MacGill & Meyer, *The History of Transportation in the U. S. Before 1860* (1917) 106, 107.

53 *Gibbons v. Ogden,* *supra* note 6, at 197. It should be noted that the vessel involved was operating only on tide waters, i. e., between Elizabeth, New Jersey, and New York City.


56 15 Wend. 113 (N. Y. 1836).
the erection of bridges over navigable streams must exist somewhere, and since it had not been delegated to the federal government, the conclusion was inevitable that it remained with the state, subject to the qualification that the state must not license impediments which would essentially injure navigability. This requirement was satisfied by the provision for a draw. State autonomy, although humbled, had not been subdued.

In 1851, however, a case appeared which momentarily threatened to upset the spirit of conciliation which seemingly was developing. This litigation involved a bridge which had been erected over the channel of the Ohio River at Wheeling under authority of an act of the General Assembly of Virginia incorporating the bridge company. Pennsylvania feared that the span was not high enough to permit the safe passage of boats, and would interfere with the commerce of her canals and railroads. She accordingly sought to enjoin the maintenance of the bridge on the ground that it was a nuisance. While the damage to Pennsylvania was small by comparison, river traffic had by that time grown into a great business so that the court felt it "would be as unwise as it is unlawful to fetter, in any respect, this vast commerce." Although Congress had passed no special act interdicting obstructions on the Ohio River, it had ratified a compact entered into between Virginia and Kentucky upon the latter's entry into the Union, which provided that the use and navigation of the Ohio "shall be free and common to the citizens of the United States." The court considered that under present conditions navigation was not free.

37 Ibid. at 132: "I think I may safely say, that a power exists somewhere to erect bridges over waters which are navigable, if the wants of society require them, provided such bridges do not essentially injure the navigation of the waters which they cross. Such power certainly did exist in the state legislatures, before the delegation of power to the federal government by the federal constitution. It is not pretended that such power has been delegated to the general government, or is conveyed under the power to regulate commerce and navigation; it remains, then, in the state legislatures, or it exists nowhere. It does exist, because it has not been surrendered any farther than such surrender may be qualifiably implied—that is, the power to erect bridges over navigable streams, must be considered so far surrendered as may be necessary for a free navigation upon those streams. By a free navigation must not be understood a navigation free from such partial obstacles, and impediments as the best interests of society may render necessary." Quoted in Pennsylvania v. Wheeling & Belmont Bridge Co., 13 How. 518, 607 (U. S. 1851), dissenting opinion by Daniel, J.


39 Although the bridge did not conform to the height required by the original act, a subsequent act of the Virginia legislature declared that the actual height at which it was erected was lawful. Supra note 38, at 13 How. 558.

40 Ibid. 578.

41 The complete text reads (ibid. 565): "Congress have not declared in terms that a state, by the construction of bridges, or otherwise, shall not obstruct the navigation of the Ohio, but they have regulated navigation upon it, as before remarked, by licensing vessels, establishing ports of entry, imposing duties upon masters and other officers of boats, and inflicting severe penalties for neglect of those duties, by which damage to life or property has resulted. And they have expressly sanctioned the compact made by Virginia with Kentucky, at the time of its admission into the Union 'that the use and navigation of the River Ohio, so far as the territory of the proposed state, or the territory that shall remain within the limits of this Commonwealth lies thereon, shall be free and common to the citizens of the United States'. Now, an obstructed navigation cannot be said to be free . . .

"This compact, by the sanction of Congress, has become a law of the Union. What further legislation can be desired for judicial action?"
In 1854 the bridge was blown down and an injunction was served on the company against reconstructing it, but the order was ignored and the bridge was erected. Thereupon a motion was filed for sequestration of property, and another for an attachment of the officers of the company for contempt. Between these last two hearings, however, the situation changed, for the Bridge Company procured from the federal government an act which declared that the bridge was a part of the federal post-roads and lawful at its present site and elevation. This altered the complexion of the case, and the court decided—not without discord—that although the bridge might still be an obstruction in fact, it was no longer one in law. The motions were denied and the injunction was dissolved.

But even though the court reversed its position in these two hearings, it had set a precedent for declaring as a nuisance any bridge which might impede navigation. The law, however, was not settled at this point. In *The Passaic Bridges* an injunction was sought by wharf owners for the threatened obstruction of the Passaic River, which lay wholly within the state of New Jersey, by the erection of two bridges under state permit. Newark, at and below the point at which the bridges were to be erected, had been declared a port of entry, a fact which did not deter the court from deciding that this case was governed by *Willson v. The Black Bird Creek Marsh Co.*, and that if New Jersey cared to, she could close the river altogether. The bill was dismissed.

In *Escanaba Co. v. Chicago* federal power was further curtailed. The obstruction objected to was a Chicago ordinance which closed bridges in the

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43 *Ibid.* 18 How. at 430: "So far, therefore, as this bridge created an obstruction to the free navigation of the river, in view of the previous acts of Congress, they are to be regarded as modified by this subsequent legislation; and, although it still may be an obstruction in fact it is not so in the contemplation of law."

44 *3 Wall. 728, 793 (U. S. 1865):* "I see no reason why the state of New Jersey, in the exercise of her absolute sovereignty over the river, may not stop it up altogether."

The opinion in this case delivered by Justice Grier, was later affirmed by the Supreme Court by a divided bench, and no report entered.

45 In *Gilman v. Philadelphia*, 3 Wall. 713, 729 (U. S. 1865) Swayne, J., said: "It must not be forgotten that bridges, which are connecting parts of turnpikes, streets and railroads, are means of commercial transportation as well as navigable waters, and that the commerce which passes over a bridge may be much greater than would ever be transported on the water it obstructs.

"It is for the municipal power to weigh the considerations which belong to the subject, and to decide which shall be preferred, and how far either shall be made subservient to the other. The states have always exercised this power, and from the nature and objects of the two systems of government they must always continue to exercise it subject, however, in all cases, to the paramount authority of Congress, whenever the power of the states shall be exerted within the sphere of commercial power which belongs to the nation." See *Flanagan v. Philadelphia*, 42 Pa. 219 (1862). *Cf. Luxton v. North River Bridge Co.*, 153 U. S. 525, 530, 14 Sup. Ct. 891, 892 (1894).

city at certain hours, and limited to ten minutes the time during which they
might remain open at any one period. The State of Illinois had delegated
to Chicago the power of controlling bridges within its limits. The court
reasserted that the paramount power of the federal government to regulate
interstate commerce involves the control of the waters of the United States
which are navigable in fact, so far as may be necessary to insure their free
navigation, when by themselves "or their connection with other waters they
form a continuous channel for commerce among the states or with foreign
countries." It conceded, however, that the states retained powers of internal
police, and that the power to control bridges resides properly with the state
or municipal authorities. Hence the local government must yield to the
federal only when there is a conflict. The generally recognized doctrine is
that the commercial power of Congress is exclusive of state authority only
as to matters which, being of a national character, require uniform regula-
tion throughout the country.

In this case it was contended that the Northwest Ordinance by declar-
ing that "the navigable waters leading into the Mississippi and St. Lawrence,
and the carrying places between the same, shall be common highways, and
forever free," 47 supplied the federal interdiction which prohibited local con-
trol—an argument by no means new. 48 The court pointed out that on its
admission into the Union, Illinois could exercise "the same power over
rivers within her limits that Delaware exercised over Black Bird Creek and
Pennsylvania over the Schuylkill River." Free navigation contemplated in
the Ordinance did not prevent the construction of bridges or ferries. A
direct interference by the federal government was necessary before state
authority over construction or management of her bridges would be termi-
nated.

The court came to a similar conclusion regarding the erection of a
bridge in a state whose original charter provided that "all the navigable
waters of the said State shall be common highways, and forever free." 49
This clause was interpreted to refer to political rather than to physical ob-
structions, contrary to the interpretation of a similar clause in the Wheeling
case. Without some specific statute on the subject there was no federal law

47 Ordinance for the government of the territory of the United States Northwest of the
River Ohio, art. 4; Man维尔's Code, Laws of the Northwest Territory, p. xi; U. S. C. A.
Constitution (1928) pt. 1, at 23.
48 "Incorporations of bridges in such places have frequently been recognized by state
judicials as suitable exercises of power by States . . .
"In the States within what was governed by the ordinance of the Northwestern Terri-
tory, perhaps, this could not be done, as that ordinance declared that all navigable rivers
within it shall be 'common highways' . . . But I speak of states without any such restric-
tion." . . . United States v. The New Bedford Bridge, 1 Woodbury and Minot's Reports
49 Willamette Iron Bridge Co. v. Hatch, 125 U. S. 1, 5, 8 Sup. Ct. 811, 813 (1887). See
also Cardwell v. American Bridge Co., 113 U. S. 205, 5 Sup. Ct. 423 (1885); Hamilton v.
for the restraining of such erections, since there was "no common law of the United States which prohibits obstructions and nuisances in navigable rivers, unless it be the maritime law, administered by the courts of admiralty and maritime jurisdiction." 50 The first Wheeling Bridge case was explained on the grounds that the court had original jurisdiction because a state was a party, and so could invoke any applicable law whether state, federal or international. Consequently in that case the original obstruction was illegal both because it violated the terms of the compact and because "the bridge, so constructed, injuriously affected a super-riparian state [Pennsylvania] bordering on the river, contrary to international law." 51

It is interesting that the lead taken in the first of the Wheeling Bridge cases was repudiated during a period generally known for the expansion of federal power by the Supreme Court. 52 Perhaps the political pressure which entered that "unequal contest" 53 inveighed too heavily against the precipitant interjection by the court into matters of state and federal highway improvements. Railroads were coming into prominence. Compromises were necessary between the growing needs of land and water travel in the West. Federal control of bridges was no longer merely a corollary to its jurisdiction over navigation but was now a part of its expanding power over interstate commerce. Legislative censure and a change of personnel on the bench paved the way for a difference in the meaning of "free" navigation as the provision appeared in a compact between states, and in an ordinance or state charter. From a physical connotation the interpretation had shifted to a political one. The sophistry though obvious was harmless since it permitted the toleration of reasonable impediments. The "licensing of vessels, establishing ports of entry, imposing of duties upon masters and other officers of boats" 54 were of no greater moment in the West than in the East. 55 The court had become chary. Federal policy was taking form.

There was no uncertainty, however, about the power of Congress to revoke or amend the terms of a federal license. In Bridge Co. v. United States 56 the government by resolution gave its assent to the erection of a bridge across the Ohio River at Cincinnati, which was to be constructed according to the terms of charters from Ohio and Kentucky. The privilege of withdrawing consent was reserved in case the bridge should at any time

50 Willamette Iron Bridge Co. v. Hatch, supra note 49, at 8, 8 Sup. Ct. at 815.
51 Ibid. 15, 16. See also The Passaic Bridges, supra note 44, at 792. But cf. reasoning in The Wheeling Bridge Case, supra note 41.
52 See I Warren, op. cit. supra note 26, at 507-510; 3 ibid. at 353. See also A. H. Wintersteen, The Commerce Clause and the State (1889) 37 Am. L. Reg. 733, 736.
53 Greer, J., in The Passaic Bridges, supra note 44, at 791.
54 Supra note 41.
55 Supra, The Passaic Bridges, supra note 44.
become a substantial and material obstruction to the river. While construction was in progress Congress demanded certain alterations. These were complied with, and an action was brought for the additional expense. In denying liability the court relied partly on the revocation clause in the resolution, and declared that Congress had the power to say when a bridge became a nuisance. Since the company took the risk of revocation when it accepted congressional permission, there was no duty to pay. In later cases such withdrawal of assent under the River and Harbor Acts of 1890 and 1899 were declared lawful without entailing a duty to recompense, whether or not the power of revocation or amendment was expressly reserved.

As will appear later, this judicial policy which forbids a court to consider legislative motives or necessity for action, and which extends immunity to congressional caprice, has been a potent factor in the extension of federal power over water highways, and in the expansion of control over the hydroelectric industry.

By 1890 the line between federal and state jurisdiction over inland navigable waters was quite sharply drawn. Federal power championed by the commerce clause had been developed in a group of cases which chiefly involved the erection and licensing of bridges, the doctrine of which could be and was equally applied to dam construction. The dominance of federal control was established, but the exercise of state police power was not suppressed where the federal government remained inactive. Special legislation was required to vitalize federal supremacy. This defect was remedied when general federal supervision was introduced in the River and Harbor Act of 1890. With its passage the evolution of federal power and policy over river obstruction, begun with Gibbons v. Ogden, was crystallized. The states might still act, but under central tutelage. The commerce clause vindicated federal paternalism, and assured a unitary regulation of constructions when interstate commerce on navigable waters was involved. The reprisals

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Infra note 59.


26 Stat. 454 (1890), 33 U. S. C. A. § 401 (1926): "It shall not be lawful to construct or commence the construction of any bridge, dam, dike, or causeway over any port, roadstead, haven, harbor, canal, navigable river, or other navigable water of the United States until the consent of Congress to the building of such structures shall have been obtained and until the plans for the same shall have been submitted to and approved by the Chief of Engineers and by the Secretary of War: Provided, That such structures may be built under authority of the legislature of a state across rivers and other waterways the navigable portions of which lie wholly within the limits of a single state, provided the location and plans thereof are submitted to and approved by the Chief of Engineers and by the Secretary of War before construction is commenced" . . . See Dunn, Federal Control of Navigable Rivers (1914) 1 Iowa L. Bull. 107, 127.

It was held in Lake Shore & M. S. Ry. v. Ohio, 165 U. S. 365, 369, 17 Sup. Ct. 357, 359 (1897) that the Act of 1890 did not deprive the states of authority to bridge a navigable stream, but simply created "an additional and cumulative remedy to prevent such structures, although lawfully authorized, from interfering with commerce".
of 1824.\footnote{Supra note 32.} were no longer possible. National interest in water highways was actively represented and protected by congressional surveillance. The period of isolated state control subject to sporadic incursions of federal power was at an end, but the time for federal intervention in the interstate transmission of electric power was still in the future.

II

It was inevitable that the exercise of this expanding federal power should come into conflict with the interests of riparian property owners. In England the tide-water test for navigability carried with it ownership by the Crown of lands submerged under tide waters. Following the Revolution, the American sovereign states succeeded to the Crown’s title.\footnote{Pollard's Lessee v. Hagan, 3 How. 212, 230 (U. S. 1845); County of St. Clair v. Lovingston, 23 Wall. 46, 68 (U. S. 1874).} This was not surrendered to the newly-formed central government.\footnote{Murphy v. Ryan, 2 Ir. R. C. L. 143 (1868); Pearce v. Scholcher, 9 Q. B. D. 162 (1882); Orr Ewing v. Colquhoun, 2 App. Cas. 839 (1877); Reese v. Miller, 8 Q. B. D. 626 (1882); TIFFANY, REAL PROPERTY (1912) 1012.} Title to land submerged under non-tidal waters was, in England, prima facie in riparian owners.\footnote{Barney v. Keokuk; Illinois Cent. R. R. v. Illinois, both supra note 61.} In this country the final rejection of the tidal test for navigability was followed in some states by an extension of state ownership to lands under non-tidal navigable waters.\footnote{Shively v. Bowlby, supra note 61; McGilvra v. Ross, 215 U. S. 79, 30 Sup. Ct. 27 (1909).} This is the federal rule which the government applies in its territories.\footnote{Goodtitle v. Kibbe, 9 How. 471 (U. S. 1850); County of St. Clair v. Lovingston, supra note 62; Scott v. Lattig, 227 U. S. 229, 243, 33 Sup. Ct. 242, 244 (1912); United States v. Utah, 283 U. S. 64, 51 Sup. Ct. 438 (1931).} Newly created states succeeded to the rights of the United States;\footnote{Barney v. Keokuk, supra note 61; Hardin v. Jordan, 140 U. S. 371, 382, 11 Sup. Ct. 808, 812 (1891); Shively v. Bowlby, supra note 61; Scott v. Lattig, supra note 66; Port of Seattle v. Oregon & W. R. R., 255 U. S. 56, 63, 41 Sup. Ct. 237, 239 (1920).} but whether they adopted the American or the English rule of ownership of land under non-tidal but navigable waters, was classed as a matter of state law.\footnote{99 U. S. 635 (1878).}

In either event the riparian owner has suffered in his contests with federal power over navigation. In Transportation Co. v. Chicago\footnote{Martin v. Lessee of Waddell, 16 Pet. 367 (U. S. 1842); Barney v. Keokuk, 94 U. S. 324, 328 (1876); Illinois Cent. R. R. v. Illinois, 146 U. S. 387, 13 Sup. Ct. 110 (1892); Shively v. Bowlby, 152 U. S. 1, 48-50, 58, 14 Sup. Ct. 548, 566, 570 (1893); United States v. Holt Bank, 270 U. S. 49, 46 Sup. Ct. 197 (1925).} the city, as agent of the state in building a tunnel under the Chicago River, was declared immune from liability for damages to a riparian owner for temporarily cutting off access by water to his docks. Since there was no direct
encroachment on private property, there was no "taking" within the meaning of the constitutional prohibition.

The doctrine of this case was affirmed in *Gibson v. United States.* In the course of improving the Ohio River near Pittsburgh the government erected a dyke, which for the greater part of the marketing season substantially deprived Mrs. Gibson of the use of a boat-landing at her market-garden. As a result the value of her property was greatly reduced. A judgment for the defendant in the court of claims was affirmed on the ground that the interest of a riparian owner, whether title to the submerged land be in her or in the state, is subject to a servitude with respect to navigation in favor of the federal government.

The third case in this series involved a pier which was erected as a part of the Sault Ste. Marie canal across the front of certain shore property, thereby cutting off access by boats of greater than five feet draft. No part of the pier touched the plaintiff's shore land. By Michigan law the riparian owner held title to the submerged land on which the pier was constructed. A government official refused the shore owner the privilege of landing freight on the pier, whereupon the owner filed a suit in ejectment. Judgment for the defendant in the state court was affirmed, and the government's immunity was again placed on the authority of the commerce clause.

In the *Green Bay* cases the power of a state or the federal government to appropriate the water-power generated at a navigation project, came directly under review. Upon Wisconsin's admission into the Union, the federal government conveyed certain lands to it as financial aid in improving navigation on the Fox and Wisconsin Rivers. A dam with canal and locks was to be constructed. The state legislature provided that the water-power created by the contemplated improvement should belong to the state. Finding itself unable to complete the work, the state incorporated and conveyed all of its property to an improvement company, to which the Green Bay and Mississippi Canal Company was the successor. Afterwards the federal government took over the enterprise. In the transfer of property which was involved, some land and the water-rights which were received from the state were reserved by the company. Later, when the Kaukauna Water Power Company commenced to construct a sluiceway on its land in order to tap the water back of the dam for hydraulic purposes, the Canal Company obtained an injunction in the state court. The constitutionality of the state statute under which the Canal Company derived its exclusive ownership of the

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70 "Moreover, riparian ownership is subject to the obligation to suffer the consequences of the improvement of navigation in the exercise of the dominant right of Government in that regard." *Ibid.* at 276, 17 Sup. Ct. at 580.
water-power, thus brought in issue, was decided in the Supreme Court in favor of the petitioner.

The court admitted that it would be beyond the competency of a state to usurp the water-power of a stream for the sole purpose of leasing it for manufacturing without compensating riparian owners. It saw no sound reason, however, why any surplus water produced by the erection of a dam as a part of a navigation improvement, might not be appropriated without payment. Protection of navigation might necessitate the retention of control over the surplus water. Its rental might be efficacious in financing the undertaking. To reserve the water-power at dams erected under state permit as parts of public improvements, seemed to be the practice in New York, Ohio, Wisconsin and possibly in other states.

A line was drawn between cases where the dam is erected for the express or apparent purpose of obtaining a water power to lease to private individuals, or where in building a dam for a public improvement, a wholly unnecessary excess is created, and cases where the surplus is a mere incident to the public improvement and a reasonable provision for securing an adequate supply of water at all times for such improvement. . . . So long as the dam was erected for a bona fide purpose of furnishing an adequate supply of water for the canal and was not a colorable device for creating a water power, the agents of the state are entitled to great latitude of discretion in regard to the height of the dam and the head of water to be created; and while the surplus in this case may be unnecessarily large, there does not seem to have been any bad faith or abuse of discretion on the part of those charged with the construction of the improvement."

In subsequent litigation the rights of the Canal Company to surplus water not needed for navigation were directly contested. It was shown that only one per cent. of the flow was needed for the canal. This, the lower riparian owners claimed, was the extent to which water could be diverted from its natural course. The state superior court ruled that the Canal Company was entitled to all of the surplus, and was not required to allow any of it to flow over the dam. The ruling was reversed in the state supreme court which held that the limit of the right to divert without compensation was the need for navigation purposes. Beyond this amount the ordinary rule governed which protects lower riparian owners in the natural flow of water past their lands. The court admitted that it might not be feasible to measure the exact quantity of water necessary for navigation purposes, and that the surplus need not run to waste. But the salable power was that


which the dam produced by reason of the fall of water from its crest to foot. The company, however, was selling the power which was caused by cutting the canal. This was not incidental to the erection of the dam, but was generated for its own sake, and hence was illegal.

The state court held that the company's rights to water-power were measured by the original reservation by the state. The Canal Company contended that they were derived from the contract with the federal government for the sale of the dam, locks and canal. On appeal the Supreme Court decreed that the company was entitled to whatever rights the federal government might have to the incidental water-power. The reservation of this power in the deed to the government was as effective as if the company had first deeded its rights to the government and the latter had deeded them back in part payment. As the United States had entered the field, state authority had ceased; and since the federal government enjoyed the sole control of the property, it might determine where water could be withdrawn, and what was surplus. The court considered that both by state and federal acts all of the power produced by the dam and canal was to be used in defraying the expense of construction. To this the Canal Company was entitled. As a matter of fact the act by which the federal government took over the property provided for any damages which might be caused by loss of flowage.

In United States v. Chandler-Dunbar Water Co. the control of the federal government over water-powers on navigable streams was more firmly cemented. By state law the company was the owner of the land under St. Mary's River, Michigan, opposite its shore property. Under federal permit it had erected dams, dykes and forebays, and was engaged in the business of using and selling water-power. In a condemnation suit brought by the federal government to acquire land for use in improving the Sault Canal, an award of $550,000 was made for the estimated value of this water-power of which the company was to be deprived. The Supreme Court reversed the award. It admitted the company's ownership of the river bottom, but said that it was subordinate "to the public right of navigation, and however helpful in protecting the owner against the acts of third parties, is of no avail against the exercise of the great and absolute power of Congress over the improvement of navigable rivers."
Although the company was entitled to compensation for the shore land thus condemned, it was not the owner of the water-power. Use of this depended on suffrance, and the government had revoked the company's license. The court felt that it was unnecessary to consider whether in depriving the company of its privilege of using the river's power the government must pay in case it be found that all of the water was not needed for purposes of navigation. Since Congress had decided that this part of the river was necessary for navigation, the question was settled and the erection in the river of structures for hydraulic purposes was concluded. If the government should sell any excess power "which might result from the construction of such controlling or remedial works as shall be found advisable for the improvement of navigation", the company would have no legal ground for complaint since none of its property would be "taken" thereby. Any remuneration which might accrue to the government in this way, could not possibly concern the company. Thus far have logic and precedent carried us.

But the governmental immunity which was extended to a private corporation in the Green Bay cases, is not always assured by the granting of a federal license. In Ford & Son v. Little Falls Fibre Co., the Ford Company had obtained a permit from the Commission to utilize water-power from the Federal Dam on the Hudson River. The permit sanctioned the erection of flash boards "in the interests of navigation." This added construction raised the water of the Hudson and its navigable tributary, the Mohawk, where it impeded the production of power at a dam owned by the Little Falls Company. For this interference the latter obtained an injunction and damages in the New York court on the ground that the injury constituted a wrong by local law.

The Ford Company defended in the Supreme Court on the basis of an immunity represented by the license, and by the finding of the Power Commission that what was done was desirable and justified as a means of improving the Hudson River in aid of interstate commerce; and that even if the finding of the Commission was not conclusive, still in fact navigation was benefited by the use of flash boards. But these contentions were not sustained, and the state ruling was upheld on the ground that payment by federal licensees for damage done to the property of others was specifically contemplated by the terms of the Power Act.

In one class of cases the Supreme Court has declared that the erection of a dam for purposes of navigation may constitute a "taking" of property other than the shore on which the structure rests, so as to require compen-

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7 Supra notes 72 and 74.
77 280 U. S. 369, 50 Sup. Ct. 140 (1930); 249 N. Y. 495, 164 N. E. 558 (1928).
CONTROL OF SUPER-POWER

sation. This is where lands are actually overflowed by back-water. However, no liability attaches when the damage is merely consequential, as where flooding is the result of placing revetments in a river to prevent erosion, or where government levees have raised the level of water during floods thereby submerging nearby lands. That a person is compelled to expend money to protect his land from being overflowed does not necessarily create a case within the constitutional mandate.

The effect of the doctrine which these cases evolve is to grant to the riparian owner a right to the use of water-power dependent for its duration upon governmental suffrance and the requirements of navigation. In its control over interstate navigation the federal government is paramount. The privileges of original ownership are thus partially recouped by the states and the central government. However, since the limitations of the commerce clause early confined federal supervision to navigable waters, the recovery is not complete. In the Green Bay cases the inherent qualifications of the source of authority were manifested in a further requirement. The creation of power must not be the primary purpose for which a dam is constructed. It may be a subsidiary one, an incident to an improvement of navigation measured in terms of the need. Since it is clear that an improving company will erect a dam and lock mainly for the purpose of obtaining power, the interests of the government and of the licensed company will usually be nominally different. While this inconsistency will not in itself be fatal to the legality of a project so long as the government’s ostensible purpose is lawful, the problem involved is apparent.

In the course of developing federal jurisdiction in these cases, whether under the commerce or the admiralty clause, the significance of “navigability” rather than of “tide-water” as a test has required definition and explanation. It was not the intention of the federal government, as expressed through its courts, to include within the orbit of the term all that it connotes, but rather to give it a utilitarian meaning. A river must be navigable in

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92 See Dunn, op. cit. supra note 59, at 118, but cf. discussion of Osage and Boulder Dam cases, infra notes 104 and 117.
93 "It is not every ditch, in which the salt water ebbs and flows, through the extensive salt marshes along the coast, and which serve to admit and drain off the salt water from the marshes, which can be considered a navigable stream. Nor is it every small creek, in which
fact as a highway of commerce between different states or countries, since rivers although navigable, if wholly within the borders of a state and not a portion of an interstate route, are classed as waters of that state. Further, such waterways must be susceptible of navigation in their ordinary condition, and by customary "modes of trade and travel". However, the presence of shallows, rapids, falls or carrying places is not conclusive against jurisdiction, so long as in its natural state a river affords a channel for useful commerce. In establishing the fact of navigability the court does not consider itself bound by previous state holdings, but makes its own investigations. Nor is it decisive that a river is not then used for navigation, if it once was. But in settling the question of former use, vague reports or ancient hearsay are not controlling in the face of present evidence.

III

The extent to which the government may authorize the construction of power dams as an incident to flood control has never been defined. In the Mississippi River valley federal participation in this work was originally...
classed as improvement of navigation.\textsuperscript{59} It can hardly be said, however, that the government has confined its activities within the limits of the commerce clause.\textsuperscript{60} Advocates of federal aid have called attention to the railroads that have been inundated, bridges and federal property that have been destroyed, and the health that has been endangered by devastating floods. They have also argued that if the tendering of assistance to flood victims is a legitimate function under the "general welfare" clause, the prevention of hardships and suffering which attend such catastrophes is at least equally legitimate.\textsuperscript{61} Such an interpretation if extended logically would legalize the erection of federal dams for flood prevention on other than navigable rivers.

In the St. Lawrence region federal authority under the commerce clause is strengthened by the treaty-making power.\textsuperscript{62} Its use in this connection is not without precedent in the early treaties with the Indians which guaranteed to them fishing and water rights.\textsuperscript{63} But rather than restricting federal participation to international agreements, or to the subject of the first phase of this article, this expressly delegated function presages governmental intervention in any pact by which the distribution of electric power, whether hydraulic or fuel, is to be regulated by interstate agreement.\textsuperscript{64}

In the Niagara section federal power over hydro-electric generation is not apt to be associated with construction of dams. So far as actual participation of the government in navigation projects at this point is concerned, the cases of Scranton \textit{v.} Wheeler and \textit{United States v. Chandler-Dunbar Water Co.}\textsuperscript{65} serve as precedents, but many questions as yet undecided may arise.

In 1925 an interesting exchange of letters\textsuperscript{66} passed between Mr. Charles E. Hughes, then special attorney for the State of New York, and

\textsuperscript{59} Cubbins \textit{v. Mississippi River Comm.}, \textit{supra} note 80.

\textsuperscript{60} "But when the government departs from the policy of building levees and other public works for the purpose of commerce and navigation alone, and expressly entered the field of controlling floods for the protection and reclamation of private lands, then it became engaged in activities which make it responsible for the invasion of private rights": Kincaid \textit{v. United States, supra} note 80, at 607. Section 232 of the Mississippi Constitution provides that the commissioners of certain levee districts "shall have power to cede all their rights of way and levees and the maintenance, management and control thereof to the government of the United States."

\textsuperscript{61} \textsc{Frank, The Development of the Federal Program of Flood Control on the Mississippi River (1930)} c. V.


\textsuperscript{64} \textit{U. S. Constitution, Art. 1, Sec. 10, cl. 3}; \textit{Olson, The Colorado River Compact (1926)} 65-70.

\textsuperscript{65} \textit{Supra} notes 71 and 75.

Mr. O. C. Merrill, executive secretary for the Federal Power Commission. The New York Power Commission had licensed the Lower Niagara River Power and Water Supply Company to take water from the Maid of the Mist pool below Niagara Falls for the purpose of generating electric power, which was to be used solely in New York State. No dam was proposed. The intake would not interfere with navigation, and the water to be extracted would not exceed an amount allotted in 1909 to American users in a treaty with Great Britain. A federal license was necessary, and the correspondence concerned the conflicts in federal and state authority which seemed to be raised by the terms of the license.

The first of these letters concerned the provisions for supervision of plant construction which Mr. Hughes, as spokesman for the attorney general of New York, felt should be confined on the part of the federal government to such features as might affect navigation. Beyond this he thought that these matters were purely of state concern. The provision for annual charges was disputed on the ground that in this case no land or property of the United States was involved. It was "the position of the attorney general of New York" that in this instance the state should derive any benefit which might come from taxation.

Objection was made to the amortization and recapture clauses. The New York license contained a similar provision for recapture, and the state's contention was that "neither the Congress nor your commission has constitutional authority to provide in the manner contemplated for the recapture, taking over, maintenance and operation of the project works under consideration, situated wholly within the state of New York and devoted to the development, use, furnishing and sale of power within that state, simply because they constitute a water-power development and without regard to proper federal purposes and compliance with constitutional requirements." Such recapture would not be incidental to the protection of navigation and would be an invasion of New York's constitutional authority.

A similar objection was made to another article which subjected rates and service of the petitioning company to the supervision of the commission.

In his answer Mr. Merrill called attention to the purpose of the company to draw 19,500 cubic feet of water per second from a navigable portion of the Niagara River, and to the terms of an international treaty and statutes which required federal authorization for such a project. The possible effect on navigation and the international character of the stream were sufficient to justify calling for approval of plans and the insertion of a time limitation within which the project must be completed. The requirements were in accordance with either specific statutes or consistent congressional policy. In matters of construction the state and federal governments enjoyed concurrent powers, but it should be assumed that each had the public interest
in view, and that coöperation would not be difficult. As to annual charges, neither the purpose nor the terms of the Federal Power Act contemplated the derivation of revenue from such projects. The issuing of a license would in no way interfere with the collection of state revenue. 97

Regarding the recapture clause: 98 "It is the opinion of the Commission that the provisions of section 14 of the Federal water power act respecting acquisition by the United States of properties under license are not, and were not intended to be, of themselves, a grant of authority to acquire such properties for the United States. It seems elementary that the United States may acquire private property for a public use, and that what constitutes a public use must be interpreted in the light of the constitutional powers of Congress as possessed at the time the property is to be taken. Unless during the next fifty years Congress shall be given, through amendment of the Constitution, authority to acquire property for purposes not now authorized its rights of recapture when a license expires will be limited to the same purposes for which such right might now be constitutionally exercised namely, for government purposes." Further, the act seemed to contemplate the possibility of recapture by a state, so that the inclusion of this clause in the federal permit did not militate against a similar one in the state permit.

Coöperation of the federal with state authority was stressed in the matters of recognition of assignees and rates. In the former instance the commission's approval was dependent upon prior state sanction. In the latter its control of interstate rates was not disputed, and control of intrastate rates depended upon the absence of state supervision. 99 New York's assumption of regulation eliminated the possibility of present conflict. In any event exercise of federal intervention was purely discretionary and confined to constitutional authority.

The attitude of the Power Commission as set forth in Mr. Merrill's letter may be consoling to states and to industry, but does it announce an enduring policy? To any assurance that the government will not enter the business of generating and distributing power on a commercial basis, Muscle Shoals looms as a query. The recent veto of the Norris bill 100 sheds no light on the constitutional phases of the subject. Should Congress

97 Prior to the enactment of the Power Act the requirement of tolls from a licensee was strenuously fought by advocates of states' rights. In 1913 the inclusion of such a provision in a license to The Connecticut River Company, which was not adverse to it, led to the rejection of the bill in Congress. The omission of such charges figured prominently in the vetoes of the James River and the Rainey River bills by President Roosevelt, and of the Coosa River bill by President Taft. See Kerwin, op. cit. supra note 1, at 80-85, 114-142.
98 See Fox River Paper Co. v. Railroad Comm. of Wisconsin, 274 U. S. 651, 47 Sup. Ct. 669 (1927) for a state license which contained a recapture clause with no provision for compensation.
99 This phase of the Power Act is discussed at p. 182.
100 U. S. Daily, March 4, 1931, at 1.
as a matter of political economy consider it feasible to experiment with the recapture clause in one of the numerous federal permits, the success of the venture from a legal standpoint may depend more upon the choice of the project and the conditions under which it is taken over than upon the need for a constitutional amendment within fifty years. It is precarious to generalize. The commerce clause is probably still capable of stretching to include a favorable case. Legitimate ends and appropriate means may have their bearing, and the property clause in the Constitution should not be overlooked.

The constitutionality of the Federal Water Power Act has been attacked in a few cases, but as yet the Supreme Court has avoided expressing itself in a direct issue. In 1922 the State of New York filed an action to test the validity of the statute, but later withdrew it. In the same year a federal district court sitting in Alabama declared the act to be constitutional. In that instance a licensee proceeded under section 21 to condemn land on the Coosa River. The statute was assailed as an invasion of state power to regulate hydro-electric generation, transmission and distribution, and as an attempt to put the government into business. The court referred to Chief Justice Marshall's rule for constitutional interpretation and found that the enactment was for the improvement of navigation—a legitimate end under the commerce clause ever since the case of Gibbons v. Ogden. While it would be palpably beyond constitutional limits for the government to embark in the business of generating and selling electricity, yet the cases of United States v. Chandler-Dunbar Co. and Green Bay & M. C. Co. v. Patten Paper Co. demonstrated that this act is within the orbit of federal power.

In New Jersey v. Sargent the state sought to enjoin the enforcement of the Power Act in so far as it interfered with control by the state of power projects located within its borders. The court refused to pass judgment on the clauses involved on the ground that the petitioner had failed to show any present interference with state operations. Hence no actual controversy had arisen between the two governments regarding any "right, privilege, immunity or duty" asserted under a particular federal license. It admonished, however, that in considering the act one must keep in mind the commerce clause under which federal power for the improvement of interstate navigation is superior to state authority.

In 1930 the State of Missouri attempted to enjoin the giant Osage River hydro-electric project at Bagnell Dam which, it alleged, was being

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101 U. S. Constitution, Art. 4, Sec. 3, cl. 2.
104 Supra notes 75 and 74.
erected for the sole purpose of generating electricity for profit. Backwater from the dam would inevitably overflow public roads, school districts and the county seat of Camden County. The submergence would extend for a distance of one hundred miles, would divide Camden County into three segments each inaccessible to the others, inundate its jail and courthouse, destroy rich farm lands which were the chief taxable assets of the county, and would produce unsanitary conditions. Although the Osage River and its tributaries were navigable, of late years the volume of river traffic was negligible and seasonable. The court admitted that if the dam should be constructed "for the prime and sole purpose of generating electricity for commercial purposes, and not for its influence upon navigation, then the subject-matter would not be within the power of the Congress or within the jurisdiction of this court." However, it found that navigation would be extensively benefited. And since the degree of necessity was within the legislative discretion as distinguished from judicial cognizance, the means were appropriate, and the jurisdiction of Congress over interstate navigation was well established, a ruling against the injunction followed.

Thus the doctrine of *Gibbons v. Ogden* progresses, for if determining the necessity of a project is a congressional prerogative, it seems difficult to foretell where a court will apply the *dictum* in *Kaukauna Water Power Co. v. Green Bay & M. C. Co.* and hold that the erection of a dam is a "colorable device for creating a water power." If this theory is maintained, the size of a dam will come to be as insignificant a factor as the size of a power plant seems to be when no dam is involved, and when the function of a federal license is that of protecting a present commerce rather than encouraging an improvement of navigation. Certainly the prospect of increased navigability of the Osage River loses its significance in the public mind in view of the electric service to be supplied to two large cities and several hundred miles of territory.

IV

Control over innavigable streams is complicated in the west by the presence of vast areas of public lands. Before statehood both legal ownership and political control of these tracts were in the federal government. The decisions leave somewhat in doubt the extent to which political power over this property was surrendered when states were created. The doctrine of prior appropriation of water-rights, adopted in some of these newer states, has received the sanction of both Congress and the Supreme Court.

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107 Supra note 72. The point was passed over in the Ford case, supra note 77.

108 According to an account which appeared in *The New York Times*, March 22, 1931, at E5, 400,000,000 kw.-hrs. of power will be generated annually and supplied to Kansas City, 121 miles away, to St. Louis, 136 miles distant, and to various mines.

But there are limitations to state power. One of these is imposed by the commerce clause. Another is that "in the absence of a specific authority from Congress a state cannot by its legislation destroy the right of the United States, as the owner of lands bordering on a stream, to the continued flow of its waters; so far at least as may be necessary for the beneficial uses of the government property." 110

The connotations of this dictum are abundant. Federal authority under the territory and property clause 111 has been held sufficient to justify the reservation of waters from an innavigable stream for the benefit of an Indian Reservation, and to exempt them from appropriation under state law. 112 It probably likewise justifies the establishment of the Reclamation Act of 1902. 113 But does it support the theory that federal as distinguished from state law governs water-rights in innavigable streams located on public lands?

The western states are not in agreement. According to the "California" doctrine 114 the extent to which the federal government has recognized local customs and state law as controlling rights secured in the national domain has been purely a matter of acquiescence, ratified by the Acts of 1866 and 1870. 115 Plenary power remains intact. Legal interests in public land or water are derived from the government as proprietary owner rather than from the states as political sovereigns. On the other hand priority states contend that their sovereignty extends to all the waters within their borders. Such provisions are contained in state constitutions. 116

The "California" doctrine was advanced by federal attorneys in Wymoming v. Colorado, 117 in which case the government appeared as an intervener. The court did not deem it necessary to pass on the point. It decided,


114 Lux v. Haggin, 69 Cal. 215, 10 Pac. 674 (1886); Hough v. Porter, 51 Ore. 318, 95 Pac. 532 (1903); Willey v. Decker, 31 Wyo. 496, 514, 73 Pac. 210, 214 (1903); Sheppard, The Question of Federal Disposition of State Waters in the Priority States (1914) 28 Harv. L. Rev. 270; Niles, The Swing-Johnson Bill and the Supreme Court (1930) 3 Rocky M. L. Rev. 1, 18; Olson, op. cit. supra note 94, at 118-124; Long, Irrigation § 74.
115 Supra note 109.
116 Colorado Constitution, art. xvi, § 5; Wyoming Constitution, art. 1, § 31.
though, that as between two states which had adopted the theory of priority as a part of their constitutions, that doctrine should prevail to prevent upper riparian owners in one state from diverting the waters of an innavigable stream to another water-shed, whereby depriving lower riparian owners in the other state of their prior appropriations. In decreeing thus the court expressly denied imposing "a policy of its own choosing on either state."

In *Kansas v. Colorado*118 federal attorneys made the more pretentious argument that as an incident to sovereignty the federal government should have plenary power to administer "and control ... irrigation on interstate streams." But the court thought differently, and held that however desirable federal reclamation of arid lands might be, this was not among the enumerated powers. Although under the property and territory clause the government could make "all needful rules and regulations", it could not "override state laws in respect to the general subject of reclamation. While arid lands are to be found mainly if not only in the Western and newer States, yet the powers of the National Government within the limits of those states are the same (no greater and no less) than those within the limits of the original thirteen, and it would be strange if, in the absence of a definite grant of power, the National Government could enter the territory of the states along the Atlantic and legislate in respect to improving by irrigation or otherwise the lands within their borders. Nor do we understand that hitherto Congress has acted in disregard to this limitation."

That such humility presages little in a contest between the state and the federal government as to control of a federal water-power project located on government land, was shown in the recent case of *State of Arizona v. State of California et al.*,119 which involved the constitutionality of the Boulder Dam Project Act. Here again the court had an opportunity to express its attitude toward the vastly increasing intervention of the federal government in irrigation and power projects. The grounds for federal action though individually tenuous were multiple. The interstate compact by which all of the interested states except Arizona protected their water rights in the Colorado River called for federal indorsement.120 The dam was to be located on federal property. Irrigation of public land was involved. Flood control was of serious importance.121 The history of a former sporadic and necessarily limited use of the river for transportation purposes when railroads and highways were largely undeveloped, availed to augment the possibilities of federal control for the improvement of inter-

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120 *See* Niles, *op. cit. supra* note 114; Olson, *op. cit. supra* note 94.
121 For argument in support of public land reclamation, see brief of Colorado, New Mexico and Nevada in support of motion to dismiss, p. 15. The destruction of transcontinental railroads was advanced in the reply brief of California, p. 11.
state commerce. Extra-legal issues concerned the advisability of federal construction of a regional irrigation and hydro-electric project, too intricate for states to handle by themselves.

The federal government did not comply with an Arizona statute which required written approval by certain state officials before any dam could be erected within the state. Although the statute specifically applied to constructions by the federal government, the Supreme Court held that the United States was not bound by it. The holding was rendered upon a motion to dismiss a bill for an injunction, which was alleged to admit the averment that the Colorado River was not navigable in fact. The court brushed this argument aside and took judicial notice of the navigable character of the river.

The bill further alleged that the "recital in said act that the purpose thereof is the improvement of navigation is a mere subterfuge and false pretense", and that the main purpose for the construction is to use the waters of the river for agriculture and power purposes. To this the court answered: "Into the motives which induced members of Congress to enact the Boulder Canyon Project Act this court may not inquire . . . The act declares that the authority to construct the dam and reservoir is conferred among other things, for the purpose of 'improving navigation and regulating the flow of the river.' As the river is navigable and the means which the act provides are not unrelated to the control of navigation . . . the erection and maintenance of such dam and reservoir are clearly within the powers conferred upon Congress. Whether the particular structures proposed are reasonably necessary is not for this court to determine . . . And the fact that purposes other than navigation will also be served could not invalidate the exercise of the authority conferred, even if those other purposes would not alone have justified an exercise of congressional power." The court found "no occasion for determining now Arizona's rights to interstate or local waters which have not yet been, and which may never be, appropriated."

The opinion strains the dictum in the Green Bay case. Or does it completely ignore it? Size is imperative. Silt which annually washes down the Colorado in thousands of cubic feet, will be intercepted. A dam of ordinary size would soon be useless. But not this leviathan. Its service is assured for at least three hundred years. There is economy in size, and practical necessity. Navigation will be benefited for many generations—

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1 Supra note 72.
2 "It is estimated that each year enough silt is carried by the waters of the Colorado to cover a six hundred and forty acre farm to the depth of one hundred thirty-seven feet." Olson, op. cit. supra note 94, at 3. The rate is approximated at 137,000 acre feet per year in the brief of the Secretary of the Interior, in support of the motion to dismiss, p. 29; while at p. 54 it is estimated that "more than 300 years would be required to fill the entire reservoir" with silt.
and irrigation and electrical generation will be made possible. Of what effect is a dictum when the motives of Congress will not be investigated?

In addition to the cases which have been discussed, two others have a bearing on the legality of western private hydro-electric projects. In *United States v. Rio Grande Co.* the federal government successfully enjoined the erection of a dam in an innavigable portion of the Rio Grande River because of the effect which a contemplated diversion of water for irrigation at that point would have on navigation in the lower portion of the river. And in *United States v. Central Stockholders Corp. of Vallejo* the government sought to enjoin actions brought by the defendants in a California state court, to restrain a federal licensee from impounding water in a reservoir located miles above navigation in the Sierra Nevada Mountains at the head-waters of the San Joaquin River. The federal bill was dismissed the court observing: "It will be noticed in this connection that there is rail transportation generally available in the San Joaquin Valley, as well as a great system of paved highways leading to different points of the state. The contention that the erection of storage dams in the mountains is, or was intended to be, in aid of navigation seems to be contradicted by the facts alleged and shown. Such dams, in the results of their operation, cannot, in the view I take of the case, have a 'real or substantial relation to the control of navigation'."

It is true that in the Osage case the river was navigable in fact at the dam site. The court there refused to consider the degree of necessity for improving existing navigability. In the Rio Grande and Vallejo cases the effect on navigation of projects located in the upper and innavigable reaches of rivers, had first to be established before the federal government would have jurisdiction. If the objective and realistic reasoning of the Vallejo case had been applied in the Osage case, the principal purpose for which the license was granted could not have been suppressed. However, in view of Justice Brandeis' opinion in the Boulder Dam case, as long as the avowed purpose of Congress is "not unrelated to the control of navigation", the chief objective for licensing or erecting a dam seems to be an insignificant factor in determining the constitutionality of a desirable project. When a river is clearly navigable according to legal tests, there seems to be little left of the Green Bay dictum.

In the Vallejo case large acreages in a semi-arid climate were being deprived of beneficent flood waters because of a dam erected for hydro-electric purposes, and navigation was improved by the reservoir incidentally

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125 43 F. (2d) 977, 980 (N. D. Tex. 1930).
126 *Supra*, note 105.
127 *Supra* note 72.
if at all. In the Osage case, a gigantic industrial project was at stake. In the Boulder Dam case a single dissenting state stood in the way of a vast reclamation project. But it is just such conflicting interests which create constitutional law.

V

Government control over super-power reaches its second phase upon the generation of electricity, but the distribution of control remains a problem between state and federal governments. Through the device of definition electricity has been included within the orbit of interstate commerce, first as a means of sending telegraph messages and later as a commerce of electric power.

Such a process of definition yields to the central government a direct interest in an ever increasing amount of electrical business. In 1926 of the 68,145,217,000 kw.-hrs. which were generated in the United States, 6,171,530,837 kw.-hrs. or 9.06 per cent. were transmitted between states. Of these, 72 per cent. were among fourteen states. An additional 1,127,073,792 kw.-hrs. crossed the Canadian and Mexican borders, making a total of 7,298,604,630 kw.-hrs. of international or interstate transmission in which the government was potentially interested under the commerce clause.

The inclusion of power transmission within the concept of commerce has the additional value of analogizing the scope of the federal control in gas and oil cases to this field of utility service. A consideration of a group of these cases is illustrative. In 1907 the legislature of Oklahoma attempted to prevent the exporting of natural gas. The construction of pipe lines was limited to local corporations on the condition that they would not export gas nor sell to other corporations or persons “engaged in transporting or furnishing natural gas to points, places or persons outside of this state.” The power of eminent domain and the use of the highways were restricted to such local corporations. The motive for the legislation was clearly to preserve the natural wealth of the state for home consumption. However, in a consolidated action brought by certain individuals and foreign corporations to test the constitutionality of the act, this objective

228 Pensacola Tel. Co. v. Western Union Tel. Co., 96 U. S. 1 (1877); Western Union Tel. Co. v. Foster, 247 U. S. 105, 38 Sup. Ct. 438 (1917).


230 Bulletin No. 68 of the Bureau of Business Research of Harvard University. “The percentage of generated power exported from Alabama is 25 per cent., from South Carolina 31 per cent., from Georgia 38 per cent., from West Virginia 43 per cent., from Iowa 48 per cent., from Idaho 63 per cent., and from Vermont 94 per cent. The percentage relation of power imported to power generated within the state is 29 per cent. in North Carolina, 37 per cent. in Arkansas, 38 per cent. in Rhode Island, 40 per cent. in Kentucky, 75 per cent. in Maryland, 98 per cent. in Mississippi, 116 per cent. in Missouri, 121 per cent. in Utah, and 126 per cent. in Nevada.” Federal Power Comm. Ann. Rep. 1928, at 13.

231 Session Laws of 1907, c. 67.

CONTROL OF SUPER-POWER

did not meet with sympathetic reception by the majority of the Supreme Court. They saw in such a provincial policy a precedent for Pennsylvania to appropriate its coal supply, "the Northwest its timber, and the mining states their minerals." The opinion distinguished between legislation intended to prevent the waste of natural gas, and this which sought to restrict the market where an owner of private property might vend it. Once gas was reduced to possession it was likened to a chattel. The court held that the statute was unconstitutional in its efforts to prevent foreign corporations from exporting gas, and in unfairly discriminating against them by forbidding their crossing highways, since local corporations engaged in intrastate sale of gas might do so. A previous holding of the court which sustained the power of a state to prevent the exportation of fresh water was explained on the basis of the limited common-law interests of a riparian owner.

A different phase of the problem of preferring home consumers was litigated by the states of Pennsylvania and Ohio in an action to enjoin the enforcement by West Virginia of a statute which required that all gas companies within the state must meet local demands for gas regardless of their commitments elsewhere. Large investments of capital were involved and a vast business was endangered. As a consequence the law was held to impose too great a burden on interstate commerce despite the succinct dissenting opinion of Mr. Justice Holmes to the effect that a state should be able to regulate the sale of gas before it becomes a part of an interstate stream, and to give "a preference to its inhabitants in the enjoyment of its natural advantages."

In both of these cases the choice lay between state individualism and a phase of economic nationalism. To this end Mr. Justice Holmes' analogies to the power of a state to prevent the sale of unripe citrus fruit ultimately destined for interstate commerce, and to the constitutionality of state game laws, although technically skilful are not convincing unless one agrees with him in the policy of state isolation. In his concurring dissent in the West Virginia case Mr. Justice Brandeis offered the enormity of the task of allocating the equitable disposition of West Virginia gas among the six states which were then using it, as a cogent reason for the court refusing to provide an equitable disposition. Granting the practicality of the argument, it might still be sounder to solve the enigma by allowing the producers to seek a national market on the basis of economic return, than by artificially preferring the people of a state thus naturally endowed to those in states less fortunately blessed.

The illiberal view which Mr. Smith, then governor of New York, expressed in 1923 on the subject of local consumption of hydro-electric power to be produced on the St. Lawrence, met with a rejoinder in the broader vision of Governor Pinchot of Pennsylvania. In a letter to Mr. Smith, Governor Pinchot outlined his aim for “giant power” to transcend state lines, and called upon New York to share its water-power with the fuel power generated at Pennsylvania mines. A similar local policy in Maine which seeks to draw industries into the state by preventing the exportation of hydro-electricity is equally objectionable.

Dual control of interstate transmission of electricity led to an allocation by the Supreme Court of zones within which states may determine rates of sale. As hitherto, the precedents came from the analogous field of natural gas cases. Experience with railroad litigation was also available. In 1918 the receiver of the Kansas Natural Gas Company obtained an injunction against the Kansas Public Utilities Commission restraining it from establishing rates of sale to consumers of gas supplied by his corporation. The gas was chiefly imported from Oklahoma and was sold to local distributing companies on the basis of two-thirds the gross receipts from consumers. The court reversed the ruling for the reason that the “interstate movement ended when the gas passed into local mains.” The state commission, therefore, had power to establish rates to consumers.

This avenue of escape was not available in Pennsylvania Gas Co. v. Public Service Commission wherein a Pennsylvania company exported gas a distance of about fifty miles from its source of supply in that state, and sold direct to consumers in New York state. Clearly this was interstate commerce in light of all precedents. However, relying upon the Minnesota rate cases the court held that the New York Public Service Commission had jurisdiction to establish rates to consumers. Local interest was considered a sufficient basis for transgressing upon the federal domain, since in this instance the central government had not acted.

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182 "I am credibly advised that a strong and determined propaganda is now being spread in support of a plan to divert the electrical energy from our border streams to territory outside the state. This we must resist with all the power we can bring to our command." Quoted from a message to the New York legislature in Kerwin, op. cit supra note 1, at 285.

183 "Such a system must transcend state lines and is likely to become nation wide. The new art of electric transmission is already so developed that the giant power system with which we are immediately concerned should now include all power producers and consumers in the northern section of the United States and should perhaps draw upon resources of water power in Canada." Letter from Governor Pinchot to Governor Smith, quoted in Kerwin, ibid. 287.


187 See editorial in ELECTRICAL RECORD, April 1923, p. 201.


191 "This local service is not of that character which requires general and uniform regulation of rates by congressional action, and which has always been held beyond the power of
These two cases were later supported in *Missouri v. Kansas Gas Co.* wherein the court denied to the Kansas Commission power to determine rates at which importing companies might sell to local distributing companies. The absence of federal supervision was not considered to be an invitation for local control. The burden on interstate commerce was direct in this case, not indirect and local as in the preceding ones.

With the decisions in these natural gas cases the pioneering was performed and the way cleared for the *Attleboro* case. The Narragansett Electric Lighting Company of Rhode Island was engaged in the manufacture and sale of electricity. About three per cent. of its output was delivered under a twenty-year contract to the *Attleboro* Company for distribution in Massachusetts. The Rhode Island Commission found that the rates charged in this comparatively small contract were proportionally too low, and so worked a hardship on Rhode Island customers of the Narragansett Company. To avert the local injury the Commission raised the rates to the *Attleboro* Company on the theory that this was primarily a matter of local concern in which the federal government should not interfere. It was an effort to carry the doctrine of the *Pennsylvania Gas* case a step further than the majority of the Supreme Court would permit. Although the sale of electricity took place at the state line, it was not contended that this altered the interstate character of the transaction; nor was it denied that the transmission of electricity from one state to another was interstate commerce. Neither Massachusetts nor Rhode Island had jurisdiction of such a contract.

The doctrine of these cases renders it less necessary for the federal government to enter the field of interstate rate-making in the sale of electric current than in the railroad service. In the latter the carriers deal directly with the consumers throughout the country and a national interest is at stake. In the former, state control of distributing companies, whether themselves producers or merely distributers of current, potentially at least, offers a solution for governmental supervision. Prices to consumers of the States, although Congress has not legislated upon the subject. While the manner in which the business is conducted is part of interstate commerce, its regulation in the distribution of gas to the local consumers is required in the public interest and has not been attempted under the superior authority of Congress." Pennsylvania Gas case, *supra* note 139, at 31.

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"It seems clear, therefore, that Congress thought of the control of electric utilities as a local problem and that the imposition of a superior authority would be needed only in the event of disputes between states. Doubtless it was recognized that electric power must of necessity be used in the immediate vicinity of its production and that its transportation lacks the complicated interstate relations affecting large groups of states, as in the case of railroad transportation. Being a local problem it was considered that its control might best be attended by local responsibility and local opinion." *Fed. Power Comm. Ann. Rept.* 1929, at 5, 6.

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See editorial comment in (1929) 19 NAT. MUN. REv. 155 to the effect that unless public utility regulation improves public ownership threatens.
electricity as of gas depend upon local conditions which require considerable particularity. Yet the refusal of the federal government to regulate interstate rate contracts of carrying companies, and of the courts to permit states to do so, leaves a growing field within which there is no effective supervision, and where the industry is left to the precarious device of self-discipline.\textsuperscript{147}

Should centralized control of interstate rate-making ever be decreed for electrical manufacturers, greater inroads will probably be made into state jurisdiction. The rule of the \textit{Pennsylvania Gas} case may be repudiated. Intrastate rates which have a deleterious bearing on interstate ones will probably be sacrificed on an analogy to the Shreveport rate case.\textsuperscript{148}

Another potential incursion into state control of electric rates lies in the federal jurisdiction of hydro-electric projects situated on navigable streams. The Federal Power Act\textsuperscript{149} requires as a condition to granting a license, that as long as the state in which the licensee operates has no commission or agency for local control, it shall submit to federal supervision of intrastate as well as of interstate rates and service. Such is the tortuous course of the commerce clause. The reservation in favor of state juris-

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\textsuperscript{147} "Under a multitude of Supreme Court decisions, the states have no power to regulate, prohibit or burden directly the transmission of property like gas, oil and electricity between the states, or to disturb such inter-state commerce by regulation of rates or prices, except by the clumsy device of compacts between the states. . . .

"The railroads, pipe lines, telegraph, telephone and radio service, airships, buses and trucks are lawfully subject to Federal control when engaged in interstate business. The water-power development of our streams is covered by the Federal power act.

"But the interstate transmission of electric power, though growing by leaps and bounds in magnitude and importance, is still in the twilight zone in which the states are unable to assume control, while the Federal power although it has been asserted, has not yet been exercised. Interstate commerce in electric current is still outside of either state or Federal control.

"The Federal Trade Commission reports that in 1928 the electric current moving over 946 crossings of state boundaries by electric transmission lines amounted to 14,500,000,000 kilowatt hours. The National Electric Association reports in round numbers 6,171,000,000 in 1926, 8,920,000,000 in 1928 and 10,856,000,000 in 1929.

"If we accept these lower figures, the actual interstate movement of electric power has increased more than 75 per cent. in the three-year period from 1926 to 1929, and its relative importance to the total power consumption of the country more than 31 per cent. In certain states today imported current amounts to from one-half to three-quarters of the local consumption. . . .

"I wish to express my firm conviction based on no little practical experience, that the question of the public utilities cannot be settled by the individual states acting alone; that the effort to settle it by individual states acting alone is hopeless from the start; that the problem is essentially national in its character and that it can be solved only under the leadership and by the action of the Nation itself, assisted and supported, of course, by the co-ordinated action of the individual states." Governor Pinchot's address at the Governors' Conference, June 2, 1931, reported in The New York Times, June 3, 1931, at 1, 2.

"The jurisdiction of the Federal Power Commission in cases of interstate transmission of power by its licensees, their subsidiaries or customers, may be invoked 'upon complaint of any person aggrieved' or 'upon the request of any state concerned'; or the commission may act on its own initiative. No complaint of any person has yet been filed; . . . ."

"While the commission is given authority to initiate action under the provisions of section 19, the volume of other work requiring its attention would hardly permit of its taking the initiative, even if such a procedure were advisable." \textit{Fed. Power Comm. Ann. Rep.} 1928, at 11, 12.


\textsuperscript{149} 41 STAT. 1073, 19 (1921), 16 U. S. C. A. § 812 et seq. (1927).
diction when a proper body for that purpose has been organized, may avoid a present clash of state and federal governments over the ultimate location of power.150 However, if the courts should sustain this extension of federal supervision as a condition to granting a license, it is difficult to see why the existence or non-existence of state activity in the field should qualify the scope of such federal power. It would certainly be contrary to the analogous theory that although the federal government is silent, a state may not regulate purely interstate rates of gas or electricity.151 Yet if the federal power should be recognized but not be so qualified, the future usurpation of this field of utility supervision would be limited only by congressional volition.152

VI

The steady trend toward centralization which has accompanied the development of nation-wide business is not a matter of conjecture.153 The portend of future usurpation of state power and the means by which it may be accomplished are obvious from a study of the judicial technique employed in the past. We have always had a certain amount of governmental supervision of power generation. The shift has been more from state to federal control than from laissez faire to paternalism. Each generation has announced a new political synthesis for which it has found constitutional sanction, but which has really been an adaptation of the Constitution to changing conceptions of economic, political and social needs.

In 1787 American business was as provincial as the thirteen isolated communities which were struggling to amalgamate into a firmer federation. The problems which confronted the American pioneer statesmen who drafted the Constitution were necessarily contemporaneous, and gifted vision could not possibly have anticipated the trenchant demands which growth and change would levy. Nor could any formal utterance suffice to guide future generations. The form of the Constitution remains but the

150 See letters of Mr. Hughes and Mr. Merrill, op. cit. supra note 96.
152 For an interesting survey of the electric-power industry see REPORT OF THE ELECTRIC-POWER INDUSTRY (1927) by the U. S. Fed. Trade Comm.
153 “Many will regret the Federalist tendencies of these judicial pronouncements. Many will regret that economic tendencies take no heed of state lines, that our Federal Union becomes less federal each decade, that our local governments are losing vitality, that our Constitution is becoming grotesquely bent to fit new situations; yet, the sober fact remains that the well-being of the people demands that we adapt ourselves and our institutions to the newer tendencies.” Kerwin, op. cit. supra note 1, at 102.
154 “This extension of federal activities has not come about because of a disregard for the rights of the states or because of desire on the part of the central government to usurp. A centralized control over a number of activities has been made necessary because of the complexities of modern life. It is now largely interstate. Consequently in the exercise of its powers conferred by the commerce clause the federal government regulates a greater number of activities.” Thompson, Federal Centralization 331.
plasticity of its words has offered the solution. Its elemental tenets are constantly being metamorphosed in an endeavor to preserve the fabric but warp the design to meet the needs of the unforeseen.

Nowhere is this growth more clearly exposed than in the application of the commerce clause to the erection of a power dam on an inland watercourse. It is a reality little dreamed of in 1787 when such control was purely local. The problem of licensing a Massachusetts grist mill has become that of assuaging an indignant state in the erection of a Boulder Dam. The course may have been via a Fulton steamer, the Wheeling Bridge, and a canal on the Fox River, but it has been constantly onward. If the Federal Power Act continues to be circumspectly administered, can its constitutionality be doubted today?\(^5\)

It is academic to speculate what the framers of the Constitution would have done had super-power control been a national issue when the government was formed, or if Chief Justice Marshall had sat in a case involving an interstate power project on an innavigable intrastate stream. However, one is tempted to such contemplation since it is Marshall, or probably more accurately Webster, whom we must credit with choosing the commerce clause as the dialectical foundation in *Gibbons v. Ogden*. There were greater possibilities in the maritime clause. Had sentiment desired and fortuitous events dictated the selection of that clause as the basis for expansion of central control over inland waters, federal jurisdiction over super-power might have been broader than it is today. National needs have caused the extension of maritime control far inland and have divorced it from the taint of the sea, yet it retains in its new form the limiting test of "navigability in fact," and because of its association with commerce, an interstate flavor which is exotic.

There was nothing sacrosanct about such limitations. If nationally minded men had early envisaged conservation and control of water-power as a federal function, power development could have been defined as maritime as is bridge-control, and admiralty jurisdiction could have been extended to innavigable streams as easily as to navigable ones. But agitation for federal conservation of water-power sources came after the law had crystallized. So we are told that an electrical project, which does not materially affect navigation, located on the innavigable upper waters of a Sierra Nevada stream, is beyond the federal province. It is much a matter of history, or perhaps of constitutional behaviorism expressed as biological growth.

Control over sources of hydro-electric generation although only partially allocated to the federal government, is in itself quite substantial. In 1930 of the 42,816,213 hp. installed capacity of stations in public utility

\(^{54}\) Cf. Shields, *op. cit. supra* note 102.
service, 11,144,233 hp. were devoted to water-power generation, and 31,671,980 hp. to fuel power. The total capacity of plants operating under federal license was 2,608,868 hp. which constituted about 24 per cent. of the total capacity. However, the distribution of water-power sources is not uniform. About two-thirds of them are located in the eleven Rocky Mountain and Pacific Coast states, which consume 17 1/2 per cent. of the total electric production, while the central states, which consume 38 per cent. of the gross output, have about 11 per cent. of the potential water-power. This disparity between demand and supply turns many manufacturers to the use of fuel power.

Where federal control of electrical power will end is more a question of predicting trends of political theory than of interpreting constitutional phrases. It is in this light that the occasional rebuff which courts have accorded federal expansion of jurisdiction over rivers and power sources, is readily explained. The decisions have contained little that was inevitable, except when the words of the Constitution have been too plain to admit of explanation. The language of the courts has been conciliatory toward the states. The tone of the annual reports of the Federal Power Commission is one of state solicitude. When one remembers that, starting with Gibbons v. Ogden, the entire process of constitutional interpretation of federal power over inland waters has consisted in the usurpation of what had hitherto been a state function, and that the local exigencies of many problems still advise a reliance upon state administration, this compromising attitude is understandable.

Federal activity has advanced further in the control of hydro-generation of electricity than in the regulation of interstate transmission. In the latter field the government has been content to mark out the spheres for state jurisdiction. While it jealously asserts the existence of federal power, it refuses to prescribe interstate rates or to permit the states to do so. Yet, save in cases of clear violation of prerogative, state supervision is courted. Slight interference is even tolerated. Should the future dictate the use of

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225 Fed. Power Comm. Ann. Rep. 1930, at 5, 6. "It is of interest to note that about 80 per cent. of all the capacity operating under Federal Power Commission license is confined to four states—Alabama, California, Maryland, and New York. . . . The installations in a dozen states comprise 97 per cent. of the total and in 27 states there are no plants whatever operating under the authorization of the act. It is apparent from these figures that the effect of the legislation so far has been of somewhat sectional rather than broad national significance." Ibid. 5.


227 "Another factor of far-reaching importance affecting water-power development is the improvement of steam-plant design. . . . With the most favorable water-power sites already in service it is obvious that new projects must undergo the most critical comparison with equivalent steam capacity, particularly in regions where cheap fuel supplies are available." Ibid. at 3, 4.

interstate pacts as the solution for super-power control, whether of state or privately owned projects, the benevolent hand of the federal government will doubtless be seen in its favorite paternal capacity—that of offering authoritative assistance, but not of usurping state initiative. If, however, the development of super-power is to remain primarily a function of "big business", federal control may become more direct. This is in the realm of speculation, but hardly of constitutional limitation.

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160 "With various regional pacts agreed to, there might be formed a federation of power regions supervised by the National Government. In such a case, Congress would have to assume the responsibility of seeing to it that such interstate agreements were in all respects in line with the public welfare and would be expected to approve or disapprove such agreements with that idea in view." Kerwin, op. cit. supra note 1, at 103.