

TITLE LII. REGULATION OF STEAM-VESSELS.

CHAPTER ONE.

INSPECTION.

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What vessels are deemed steam-vessels. SEC. 4399. Every vessel propelled in whole or in part by steam shall be deemed a steam-vessel within the meaning of this Title.

28 Feb., 1871, c. 100, s. 1, v. 16, p. 440.

What vessels are subject to the provisions of this Title. SEC. 4400. All steam-vessels navigating any waters of the United States which are common highways of commerce, or open to general or competitive navigation, excepting public vessels of the United States, vessels of other countries, and boats propelled in whole or in part by steam for navigating canals, shall be subject to the provisions of this Title.

Ibid., s. 41, p. 453.

SEC. 4401. All coastwise sea-going vessels, and vessels navigating the great lakes, shall be subject to the navigation laws of the United States, when navigating within the jurisdiction thereof; and all vessels, propelled in whole or in part by steam, and navigating as aforesaid, shall be subject to all the rules and regulations established in pursuance of law for the government of steam-vessels in passing, as provided by this Title; and every coastwise sea-going steam-vessel subject to the navigation laws of the United States, and to the rules and regulations aforesaid, not sailing under register, shall, when under way, except on the high seas, be under the control and direction of pilots licensed by the inspectors of steamboats.

Vessels navigating coastwise and on the great lakes.

Ibid., s. 51, p. 455.

SEC. 4402. There shall be a supervising inspector-general, who shall be appointed from time to time by the President, by and with the advice and consent of the Senate, and who shall be selected with reference to his fitness and ability to systematize and carry into effect all the provisions of law relating to the steamboat-inspection service, and who shall be entitled to a salary of three thousand five hundred dollars a year, and his reasonable traveling expenses, or mileage at the rate of ten cents a mile, incurred in the performance of his duty.

Supervising inspector-general, qualifications and appointment of.

Ibid., s. 63, p. 458.

SEC. 4403. The supervising inspector-general shall, under the direction of the Secretary of the Treasury, superintend the administration of the steamboat-inspection laws, preside at the meetings of the board of supervising inspectors, receive all reports of inspectors, receive and examine all accounts of inspectors, report fully at stated periods to the Secretary of the Treasury upon all matters pertaining to his official duties, and produce a correct and uniform administration of the inspection laws, rules, and regulations.

Duties of supervising inspector-general.

Ibid.

SEC. 4404. There shall be ten supervising inspectors, who shall be appointed by the President, by and with the advice and consent of the Senate. Each of them shall be selected for his knowledge, skill, and practical experience in the uses of steam for navigation, and shall be a competent judge of the character and qualities of steam-vessels, and of all parts of the machinery employed in steaming. Each supervising inspector shall be entitled to a salary of three thousand dollars a year, and his actual and reasonable traveling expenses at the rate of ten cents a mile, incurred in the performance of his duty, together with his actual and reasonable expenses for transportation of instruments, which shall be certified and sworn to under such instructions as may be given by the Secretary of the Treasury.

Supervising inspectors, qualifications and appointment of.

28 Feb., 1871, c. 100, ss. 23, 62, v. 16, pp. 448, 457.

SEC. 4405. The supervising inspectors and the supervising inspector-general shall assemble as a board once in each year, at the city of Washington, District of Columbia, on the third Wednesday in January, and at such other times as the Secretary of the Treasury shall prescribe, for joint consultation, and shall assign to each of the supervising inspectors the limits of territory within which he shall perform his duties. The board shall establish all necessary regulations required to carry out in the most effective manner the provisions of this Title, and such regulations, when approved by the Secretary of the Treasury, shall have the force of law. The supervising inspector for the district embracing the Pacific coast shall not be under obligation to attend the meetings of the board oftener than once in two years; but when he does not attend such meetings he shall make his communications thereto, in the way of a report, in such manner as the board shall prescribe.

Meetings of board; assignment of districts.

Ibid., s. 23, p. 449.

The American Eagle, 1 Low., 425.

SEC. 4406. Each supervising inspector shall watch over all parts of the territory assigned to him, shall visit, confer with, and examine into the doings of the local boards of inspectors within his district, and shall instruct them in the proper performance of their duties; and shall, whenever he thinks it expedient, visit any vessels licensed, and examine into their condition, for the purpose of ascertaining whether the provisions of this Title have been observed and complied with, both by the board of inspectors and the master and owners. All masters, engineers, mates, and pilots of such vessels shall answer all reasonable inquiries, and shall give all the information in their power in regard to any such

Duties of supervising inspectors.

Ibid., s. 24, p. 449.

vessel so visited, and her machinery for steaming, and the manner of managing both.

Duties of supervising inspectors as to violations of law.

Ibid., s. 25, p. 449.

Supervision of local boards.

Ibid., s. 26, p. 449.

Supervision of districts not having inspectors.

Ibid., s. 27, p. 449.
27 Feb., 1877, c. 69, r. 19, p. 251.

Reports of supervising inspectors to board.

28 Feb., 1871, c. 100, s. 28, v. 16, p. 449.

Regulations as to furnishing information to local inspectors.

Ibid.

Regulations as to steamers passing each other.

Ibid., s. 29, p. 470.

Penalty for violation of regulations.

Ibid.

Number and salaries of local inspectors.

28 Feb., 1871, c. 100, s. 62, v. 16, p. 457.

SEC. 4407. Whenever a supervising inspector ascertains to his satisfaction that any master, mate, engineer, pilot, or owner of any steam-vessel fails to perform his duties according to the provisions of this Title, he shall report the facts in writing to the board of local inspectors in the district where the vessel was inspected or belongs; and, if need be, he shall cause the negligent or offending party to be prosecuted; and if the supervising inspector has good reason to believe there has been, through negligence or any other cause, a failure of the board which inspected the vessel to do its duty, he shall report the facts in writing to the Secretary of the Treasury; who shall cause immediate investigation into the truth of the complaint, and, if he deems the cause sufficient, shall remove any officer found delinquent.

SEC. 4408. The supervising inspectors shall see that the several boards of local inspectors within their respective districts execute their duties faithfully, promptly, and, as far as possible, uniformly in all places, by following out the provisions of this Title according to the true intent and meaning thereof; and they shall, as far as practicable, harmonize differences of opinion existing in different local boards.

SEC. 4409. The supervising inspector shall visit any collection-district in which there is at any time no board of inspectors, and within which steam-vessels are owned [and] [or] employed. Each supervising inspector shall have full power in any such district, or in any district where, from distance or other cause, it is inconvenient to resort to the local board, to inspect any steam-vessel and the boilers of such steamer, and to grant certificates of approval, and to do and perform all the duties imposed upon local boards.

SEC. 4410. Each supervising inspector shall report, in writing, at the annual meetings of the board, the general business transacted in his district during the year, embracing all violations of the laws regulating steam-vessels, and the action taken in relation to the same, all investigations and decisions by local inspectors, and all cases of appeal, and the result thereof; and the board shall examine into all the acts of each supervising inspector and local board, and all complaints made against the same, in relation to the performance of their duties under the law, and the judgment of the board in each case shall be entered upon their journal; and the board shall, as far as possible, correct mistakes where they exist.

SEC. 4411. The board of supervising inspectors shall establish such regulations as may be necessary to make known in a proper manner, to local inspectors, the names of all persons licensed under the provisions of this Title, the names of all persons from whom licenses have been withheld, and the names of all whose licenses have been suspended or revoked; also the names of all steam-vessels neglecting or refusing to make such repairs as may be ordered pursuant to law, and the names of all that have been refused certificates of inspection.

SEC. 4412. The board of supervising inspectors shall establish such regulations to be observed by all steam-vessels in passing each other, as they shall from time to time deem necessary for safety; two printed copies of such regulations, signed by them, shall be furnished to each of such vessels, and shall at all times be kept posted up in conspicuous places in such vessels.

SEC. 4413. Every pilot, engineer, mate, or master of any steam-vessel who neglects or willfully refuses to observe the regulations established in pursuance of the preceding section, shall be liable to a penalty of fifty dollars, and for all damages sustained by any passenger, in his person or baggage, by such neglect or refusal.

SEC. 4414. There shall be, in each of the following collection-districts, one inspector of hulls and one inspector of boilers; who shall be entitled to the following salaries, to be paid annually, under the directions of the Secretary of the Treasury:

In the districts of New York and New Orleans, to a salary of two thousand and two hundred dollars a year each.

In the districts of Philadelphia, Baltimore, Buffalo, Saint Louis, Louisville, Cincinnati, Pittsburgh, San Francisco, Boston, Detroit, Chicago, Milwaukee, Huron, and Galena, to a salary of two thousand dollars a year each.

In the district of Michigan, to a salary of nine hundred dollars a year.

In the districts of Mobile, Memphis, and Cleveland, to a salary of one thousand five hundred dollars a year each.

In the districts of Willamette, New London, Norfolk, Charleston, Savannah, Galveston, Albany, Wheeling, Nashville, Portland, and Evansville, to a salary of one thousand two hundred dollars a year each.

In the districts of Puget Sound, Apalachicola, Oswego, Burlington, and Superior, to a salary of eight hundred dollars a year each.

And in addition, the Secretary of the Treasury may appoint in such districts, where their services are actually required, assistant inspectors, at a salary, for the district of New York, of two thousand dollars a year each; and for all other districts, at a salary not exceeding one thousand six hundred dollars a year each; and he may appoint a clerk to any such board at a compensation not exceeding one thousand two hundred dollars a year to each person so appointed. Every inspector shall be paid for his actual and reasonable traveling expenses, at the rate of ten cents per mile, incurred in the performance of his duty; together with his actual and reasonable expenses for transportation of instruments, which shall be certified and sworn to under such instructions as shall be given by the Secretary of the Treasury.

SEC. 4415. Whenever any vacancy occurs in any local board of inspectors, or whenever local inspectors are to be appointed for a new district, the supervising inspectors shall notify the collector or other chief officers of the customs for the district, and the judge of the district court for the district in which such appointment is to be made, who, together with the supervising inspector, shall meet together as a board of designators, and fill the vacant or new inspectorship. Such board, or the major part thereof, when designating an inspector of hulls, shall select a person of good character and suitable qualifications and attainments to perform the services required of inspectors of hulls, and who, from his practical knowledge of ship-building and navigation and the uses of steam in navigation, is fully competent to make a reliable estimate of the strength, sea-worthiness, and other qualities of the hulls of steam-vessels and their equipment, deemed essential to safety of life in their navigation; and when designating an inspector of boilers, shall select a person of good character and suitable qualifications and attainments to perform the services required of inspectors of boilers, who, from his knowledge and experience of the duties of an engineer employed in navigating vessels by steam, and also of the construction and use of boilers, and machinery, and appurtenances therewith connected, is [liable] [able] to form a reliable opinion of the strength, form, workmanship, and suitability of boilers and machinery to be employed without hazard to life, from imperfection in the material, workmanship, or arrangement of any part of such apparatus for steaming. No appointment of an inspector of hulls [or an inspector of boilers] shall be made without the concurrence of the supervising inspector. The [inspectors] [inspector] of hulls and the [inspectors] [inspector] of boilers thus designated, when approved by the Secretary of the Treasury, shall, from the date of designation, constitute a board of local inspectors.

SEC. 4416. No person interested, either directly or indirectly, in any patented article required to be used on any steamer by this Title, or who is a member of any association of owners, masters, engineers, or pilots of steamboats, or who is directly or indirectly pecuniarily interested in any steam-vessel, or who has not the qualifications and acquirements prescribed by this Title, or who is intemperate in his habits, shall be eligible to hold the office of either supervising or local inspector, or to discharge the duties thereof; and if any such person shall attempt to

3 Mar., 1873, c. 259, v. 17, p. 600.

Qualifications and appointment of local inspectors.

28 Feb., 1871, c. 100, s. 11, v. 16, p. 443.

27 Feb., 1877, c. 69, v. 19, p. 251.

What persons are not eligible as inspectors.

Ibid., s. 33, p. 451.

exercise the functions of the office of either inspector, he shall be deemed guilty of a misdemeanor, punishable by a fine of five hundred dollars, and shall be dismissed from office.

Inspection of
hulls

Ibid., s. 11, p. 443.

SEC. 4417. The local inspectors shall, once in every year, at least, upon application in writing of the master or owner, carefully inspect the hull of each steam-vessel within their respective districts, and shall satisfy themselves that every such vessel so submitted to their inspection is of a structure suitable for the service in which she is to be employed, has suitable accommodations for passengers and the crew, and is in a condition to warrant the belief that she may be used in navigation as a steamer, with safety to life, and that all the requirements of law in regard to fires, boats, pumps, hose, life-preservers, floats, anchors, cables, and other things, are faithfully complied with; and if they deem it expedient, they may direct the vessel to be put in motion, and may adopt any other suitable means to test her sufficiency and that of her equipment.

Inspection of
boilers.

Ibid.

SEC. 4418. The local inspectors shall also inspect the boilers of all steam-vessels before the same shall be used, and once at least in every year thereafter. They shall subject all boilers to the hydrostatic pressure; and shall satisfy themselves by thorough examination that the boilers are well made, of good and suitable material; that the openings for the passage of water and steam, respectively, and all pipes and tubes exposed to heat, are of proper dimensions and free from obstruction; that the spaces between and around the flues are sufficient; that the flues are circular in form; that the fire-line of the furnace is at least two inches below the prescribed minimum water-line of the boilers; that the arrangement for delivering the feed-water is such that the boilers cannot be injured thereby; and that such boilers and machinery, and the appurtenances, may be safely employed in the service proposed in the written application, without peril to life. They shall also satisfy themselves that the safety-valves are of suitable dimensions, sufficient in number, and well arranged; and that the weights of the safety-valves are properly adjusted, so as to allow no greater pressure in the boilers than the amount prescribed by the inspection certificate; that there is a sufficient number of gauge-cocks properly inserted, and, to indicate the pressure of steam, suitable steam-registers that will correctly record each excess of steam carried above the prescribed limit and the highest point attained; and that there are reliable low-water gauges; and that the fusible metals are properly inserted so as to fuse by the heat of the furnace, whenever the water in the boilers falls below its prescribed limits; and that adequate and certain provision is made for an ample supply of water to feed the boilers at all times, whether such vessel is in motion or not, so that in high-pressure boilers the water shall not be less than four inches above the top of the flues; and that means for blowing out are provided, so as to thoroughly remove the mud and sediment from all parts of the boilers, when they are under pressure of steam. In subjecting to the hydrostatic tests boilers usually designated and known as high-pressure boilers, the inspectors shall assume one hundred and ten pounds to the square inch, as the maximum pressure allowable as a working-power for a new boiler of forty-two inches in diameter, made in the best manner, of inspected iron plates, one-fourth of an inch thick, and of a quality required by law, and shall rate the working-power of all high-pressure boilers, whether old or new, according to their strength, compared with this standard; and in all cases the test applied shall exceed the working-power allowed, in the ratio of one hundred and sixty-five to one hundred and ten. In subjecting to the hydrostatic tests boilers usually designated and known as low-pressure boilers, the inspectors shall allow as a working-power for each new boiler, a pressure of only three-fourths the number of pounds to the square inch to which it has been subjected by the hydrostatic test, and for which it has been found to be sufficient. Should the inspectors be of the opinion that any boiler, by reason of its construction or material, will not safely allow so high a working pressure as is above described, they may, for reasons to be stated specially in their certificate, fix the working-pressure of such

boiler at less than three-fourths of the test-pressure. All boilers used on steam-vessels and constructed of iron or steel plates, inspected under the provisions of section forty-four hundred and thirty, shall be subjected to a hydrostatic test, in the ratio of one hundred and fifty pounds to the square inch to one hundred pounds to the square inch of the working steam-power allowed. No boiler or pipe, nor any of the connections therewith, shall be approved, which is made, in whole or in part, of bad material, or is unsafe in its form, or dangerous from defective workmanship, age, use, or other cause.

SEC. 4419. One of the safety-valves may, if in the opinion of the local inspectors it is necessary to do so, and the steam-registers shall, be taken wholly from the control of all persons engaged in navigating such vessel and secured by the inspectors.

SEC. 4420. In applying the directions of the preceding [section] [sections] to steamboats used exclusively for towing and carrying freight on the Mississippi River and its tributaries, the local inspectors shall substitute, for such boats, one hundred and fifty pounds of steam-pressure in place of one hundred and ten pounds for the standard pressure upon standard boilers of forty-two inches diameter, and of plates of one-quarter of an inch in thickness; and such boats may, on the written permit of the supervising inspector of the district in which such boats shall carry on their business for a period of twelve months from the seventeenth day of December, eighteen hundred and seventy-two, be permitted to carry steam above the standard pressure of one hundred and ten pounds, but not exceeding the standard pressure of one hundred and fifty pounds, to the square inch.

SEC. 4421. When the inspection of a steam-vessel is completed and the inspectors approve the vessel and her equipment throughout, they shall make and subscribe a certificate to the collector or other chief officer of the customs of the district in which such inspection has been made[,] in accordance with the form and regulations prescribed by the board of supervising inspectors. Such certificate shall be verified by the oaths of the inspectors signing it before the chief officer of the customs of the district, or any other person competent by law to administer oaths. If the inspectors refuse to grant a certificate of approval, they shall make a statement in writing, and sign the same, giving the reasons for their disapproval.

SEC. 4422. Upon the application of any master or owner of any steam-vessel employed in the carriage of passengers, for a license to carry gunpowder, the local inspectors shall examine such vessel, and if they find that she is provided with a chest or safe composed of metal, or entirely lined and sheathed therewith, or if the vessel has one or more compartments thoroughly lined and sheathed with metal, at a secure distance from any fire, they may grant a certificate to that effect, authorizing such vessel to carry as freight within such chest, safes, or compartments, the article of gunpowder.

SEC. 4423. Every collector or other chief officer of the customs shall retain on file all original certificates of the inspectors required to be delivered to him, and shall give to the master or owner of the vessel therein named three certified copies thereof; two of which shall be placed by such master or owner in conspicuous places in the vessel where they will be most likely to be observed by passengers and others, and there kept at all times, framed under glass; and the other shall be retained by such master or owner, as evidence of the authority thereby conferred.

SEC. 4424. Whenever any passenger is received on board any steam-vessel not having the certified copies of the certificate of approval placed and kept as required by this Title, or whenever any passenger steam-vessel receives or carries any gunpowder on board, not having a certificate authorizing the same, and a certified copy thereof placed and kept as required, or shall carry any gunpowder at a place or in a manner not authorized by such certificate, such steam-vessel shall be liable to a penalty of one hundred dollars for each offense. [See §§ 4474-4476.]

Control of safety-valves and steam-registers.

Ibid.

Amount of steam-pressure allowed freight-boats on Mississippi River, &c.

17 Dec., 1872, c. 4, s. 9, v. 17, p. 400.
6 Jan., 1874, c. 6, v. 18, p. 2.
27 Feb., 1877, c. 69, v. 19, p. 251.

Certificate of inspectors.

28 Feb., 1871, c. 100, s. 11, v. 16, p. 443.
27 Feb., 1877, c. 69, v. 19, p. 251.

License by inspectors to carry gunpowder.

28 Feb., 1871, c. 100, s. 12, v. 16, p. 445.

Disposal of certificates of inspection.

Ibid., s. 31, p. 450.

Penalty for carrying passengers or gunpowder contrary to law.

Ibid.

Punishment of
inspector certify-
ing falsely.

Ibid., s. 32.

Ferry-boats, ca-
nal-boats, yachts,
&c.

Ibid., s. 58, p. 456.

Tug-boats,
freight-boats, &c.

Ibid.

Construction of
boilers.

Ibid., s. 35, p. 451.

Punishment for
improper construc-
tion of boilers.

Ibid.

Inspection of
boiler-plates.

Ibid., s. 36

Stamping boiler-
plates.

Ibid., s. 37.

Punishment for
counterfeiting
stamps.

Ibid., s. 38, p. 452.

SEC. 4425. Every inspector who willfully certifies falsely touching any steam-vessel, as to her hull, accommodations, boilers, engines, machinery, or their appurtenances, or any of her equipments, or any matter or thing contained in any certificate signed and sworn to by him, shall be punished by fine of not more than five hundred dollars, or imprisonment for not more than six months, or both. [See § 4482.]

SEC. 4426. The hull and boilers of every ferry-boat, canal-boat, yacht, or other small craft of like character, propelled by steam, shall be inspected under the provisions of this Title. Such other provisions of law for the better security of life, as may be applicable to such vessels, shall, by the regulations of the board of supervising inspectors, also be required to be complied with, before a certificate of inspection shall be granted; and no such vessel shall be navigated without a licensed engineer and a licensed pilot.

SEC. 4427. The hull and boiler of every tug-boat, towing-boat, and freight-boat shall be inspected, under the provisions of this Title; and the inspectors shall see that the boilers, machinery, and appurtenances of such vessel are not dangerous in form or workmanship, and that the safety-valves, gauge-cocks, low-water alarm-indicators, steam-gauges, and fusible plugs are all attached in conformity to law; and the officers navigating such vessels shall be licensed in conformity with the provisions of this Title, and shall be subject to the same provisions of law as officers navigating passenger-steamers.

SEC. 4428. Every boiler manufactured to be used on steam-vessels, and made of iron or steel plates, shall be constructed of plates that have been stamped in accordance with the provisions of this Title.

SEC. 4429. Every person who constructs a boiler, or steam-pipe connecting the boilers, to be used on steam-vessels, of iron or steel plates which have not been duly stamped and inspected according to the provisions of this Title, or who knowingly uses any defective, bad, or faulty iron or steel in the construction of such boilers; or who drifts any rivet-hole to make it come fair; or who delivers any such boiler for use, knowing it to be imperfect in its flues, flanging, riveting, bracing, or in any other of its parts, shall be fined one thousand dollars, one-half for the use of the informer. Nothing in this Title shall be so construed as to prevent from being used, on any steamer, any boiler or steam-generator which may not be constructed of riveted iron or steel plates, when the board of supervising inspectors have satisfactory evidence that such boiler or steam-generator is equal in strength, and as safe from explosion, as a boiler of the best quality constructed of riveted iron or steel plates.

SEC. 4430. Every iron or steel plate used in the construction of steam-boat-boilers, and which shall be subject to a tensile strain, shall be inspected in such manner as shall be prescribed by the board of supervising inspectors and approved by the Secretary of the Treasury, so as to enable the inspectors to ascertain its tensile strength, homogeneity, toughness, and ability to withstand the effect of repeated heating and cooling; and no iron or steel plate shall be used in the construction of such boilers which has not been inspected and approved under those rules.

SEC. 4431. Every plate of boiler-iron or steel, made for use in the construction of steamboat-boilers, shall be distinctly and permanently stamped by the manufacturer thereof, and, if practicable, in such places that the marks shall be left visible when such plates are worked into boilers, with the name of the manufacturer, the place where manufactured, and the number of pounds tensile strain it will bear to the sectional square inch; and the inspectors shall keep a record in their office of the stamps upon all boiler-plates and boilers which they inspect.

SEC. 4432. Every person who counterfeits, or causes to be counterfeited, any of the marks or stamps prescribed for boiler-iron or steel plates, or who designedly stamps, or causes to be stamped falsely, any such plates; and every person who stamps or marks, or causes to be stamped or marked, any such iron or steel plates with the name or trade-mark of another,

with the intent to mislead or deceive, shall be fined two thousand dollars, one-half to the use of the informer, and may, in addition thereto, at the discretion of the court, be imprisoned not exceeding two years.

SEC. 4433. The working steam-pressure allowable on boilers constructed of plates inspected as required by this Title, when single-riveted, shall not produce a strain to exceed one-sixth of the tensile strength of the iron or steel plates of which such boilers are constructed; but where the longitudinal laps of the cylindrical parts of such boilers are double-riveted, and the rivet-holes for such boilers have been fairly drilled instead of punched, an addition of twenty per centum to the working-pressure provided for single-riveting may be allowed: *Provided*, That all other parts of such boilers shall correspond in strength to the additional allowances so made; and no split-calking shall in any case be permitted.

Pressure of
steam allowable.

Ibid., s. 39.

SEC. 4434. No boiler to which the heat is applied to the outside of the shell thereof shall be constructed of iron or steel plates of more than twenty-six one-hundredths of an inch in thickness, the ends or heads of the boilers only excepted; and every such boiler employed on steam-vessels navigating rivers flowing into the Gulf of Mexico, or their tributaries, shall have not less than three inches space between and around its internal flues.

Thickness of
boiler-plate, and
space between
flues.

Ibid.

SEC. 4435. The feed-water shall be delivered into the boilers in such manner as to prevent it from contracting the metal, or otherwise injuring the boilers. And when boilers are so arranged on a vessel that there is employed a water-connecting pipe through which the water may pass from one boiler to another, there shall also be provided a similar steam-connection, having an area of opening into each boiler of at least one square inch for every two square feet of effective heating-surface contained in any one of the boilers so connected, half the flue and all other fire-surfaces being computed as effective. Adequate provision shall be made on all steam-vessels to prevent sparks or flames from being driven back from the fire-doors into the vessel.

Feed and con-
necting pipes.

Ibid.

SEC. 4436. Every boiler shall be provided with a good, well-constructed safety-valve or valves, of such number, dimensions, and arrangements as shall be prescribed by the board of supervising inspectors, and shall also be provided with a sufficient number of gauge-cocks and a reliable low-water indicator that will give alarm when the water falls below its prescribed limits; and in addition thereto there shall be inserted, in a suitable manner, in the flues, crown-sheet, or other parts of the boiler most exposed to the heat of the furnace when the water falls below its prescribed limits, a plug of good Banca tin.

Safety-valves,
fusible plugs, &c.

Ibid.

SEC. 4437. Every person who intentionally loads or obstructs, or causes to be loaded or obstructed, in any way or manner, the safety-valve of a boiler, or who employs any other means or device whereby the boiler may be subjected to a greater pressure than the amount allowed by the certificate of the inspectors, or who intentionally deranges or hinders the operation of any machinery or device employed to denote the state of the water or steam in any boiler, or to give warning of approaching danger, or who intentionally permits the water to fall below the prescribed low-water line of the boiler, and every person concerned therein, directly or indirectly, shall be guilty of a misdemeanor, and shall be fined two hundred dollars, and may also be imprisoned not exceeding five years.

Punishment for
obstructing safety-
valves, &c.

Ibid., s. 40.

SEC. 4438. The boards of local inspectors shall license and classify the masters, chief mates, engineers, and pilots of all steam-vessels. It shall be unlawful to employ any person, or for any person to serve as a master, chief mate, engineer, or pilot on any steamer, who is not licensed by the inspectors; and any one violating this section shall be liable to a penalty of one hundred dollars for each offense.

Licenses of offi-
cers by inspectors.

Ibid., s. 14, p. 446.

SEC. 4439. Whenever any person applies to be licensed as master of a steam-vessel, the inspector shall make diligent inquiry as to his character, and shall carefully examine the applicant, as well as the proofs which he presents in support of his claim, and if they are satisfied that his capacity, experience, habits of life, and character are such as to warrant the belief that he can be safely intrusted with the duties and responsibilities

License of cap-
tain.

Ibid., s. 15.

of the station for which he makes application, they shall grant him a license authorizing him to discharge such duties on any such vessel for the term of one year; but such license shall be suspended or revoked, upon satisfactory proof of bad conduct, intemperate habits, incapacity, inattention to his duties, or the willful violation of any provision of this Title.

License of chief mate.

Ibid., s. 16.
27 Feb., 1877, c. 69, v. 19, p. 251.

SEC. 4440. Whenever any person applies for authority to be employed as chief mate of steam-vessels, the [*inspector*] [inspectors] shall require satisfactory evidence of the knowledge, experience, and skill of the applicant in lading cargo, and in handling and stowage of freight, and shall examine him as to his knowledge and ability in navigation and managing such vessels, and all other duties pertaining to his station; and if satisfied of his qualifications and good character, they shall grant him a license, authorizing him to perform such duties for the term of one year; but such license shall be suspended or revoked upon satisfactory proof of bad conduct, intemperate habits, unskillfulness, or want of knowledge of the duties of his station, or the willful violation of any provision of this Title.

License of engineer.

28 Feb., 1871, c. 100, s. 17, v. 16, p. 446.
17 April, 1874, c. 107, v. 88, p. 30.
27 Feb., 1877, c. 69, v. 19, p. 252.

SEC. 4441. Whenever any person applies for authority to perform the duties of engineer of any steam-vessel, the [*inspector*] [inspectors] shall examine the applicant as to his knowledge of steam machinery, and his experience as an engineer, and also the proofs which he produces in support of his claim; and if, upon full consideration, they are satisfied that his character, habits of life, knowledge, and experience in the duties of an engineer are all such as to authorize the belief that he is a suitable and safe person to be intrusted with the powers and duties of such a station, they shall grant him a license, authorizing him to be employed in such duties for the term of one year, in which they shall assign him to the appropriate class of engineers; but such license shall be suspended or revoked upon satisfactory proof of negligence, unskillfulness, intemperance, or the willful violation of any provision of this Title. Whenever complaint is made against any engineer holding a license authorizing him to take charge of the boilers and machinery of any steamer, that he has, through negligence or want of skill, permitted the boilers in his charge to burn or otherwise become in bad condition, or that he has not kept his engine and machinery in good working order, it shall be the duty of the inspectors, upon satisfactory proof of such negligence or want of skill, to revoke the license of such engineer and assign him to a lower grade or class of engineers, if they find him fitted therefor.

License of pilot.

28 Feb., 1871, c. 100, s. 18, v. 16, p. 447.
17 April, 1874, c. 107, v. 88, p. 30.

SEC. 4442. Whenever any person claiming to be a skillful pilot of steam-vessels offers himself for a license, the inspectors shall make diligent inquiry as to his character and merits, and if satisfied, from personal examination of the applicant, with the proof that he offers that he possesses the requisite knowledge and skill, and is trustworthy and faithful, they shall grant him a license for the term of one year to pilot any such vessel within the limits prescribed in the license; but such license shall be suspended or revoked upon satisfactory evidence of negligence, unskillfulness, inattention to the duties of his station, or intemperance, or the willful violation of any provision of this Title.

License of captain or mate as pilot.

28 Feb., 1871, c. 100, s. 18, v. 16, p. 447.

State regulation of pilots.

Ibid., s. 51, p. 455.

Flanders v. Tripp, 2 Low., 15.

SEC. 4443. Where the master or mate is also pilot of the vessel, he shall not be required to hold two licenses to perform such duties, but the license issued shall state on its face that he is authorized to act in such double capacity.

SEC. 4444. No State or municipal government shall impose upon pilots of steam-vessels any obligation to procure a State or other license in addition to that issued by the United States, or any other regulation which will impede such pilots in the performance of the duties required by this Title; nor shall any pilot-charges be levied by any such authority upon any steamer piloted as provided by this Title; and in no case shall the fees charged for the pilotage of any steam-vessel exceed the customary or legally established rates in the State where the same is performed. Nothing in this Title shall be construed to annul or affect any regulation established by the laws of any State, requiring vessels entering or leaving

a port in any such State, other than coastwise steam-vessels, to take a pilot duly licensed or authorized by the laws of such State, or of a State situate upon the waters of such State.

SEC. 4445. Every master, chief mate, engineer, and pilot, who receives a license, shall, before entering upon his duties, make oath before one of the inspectors herein provided for, to be recorded with the certificate, that he will faithfully and honestly, according to his best skill and judgment, without concealment or reservation, perform all the duties required of him by law.

Oath of licensed officers.

Ibid., s. 56, p. 456.

SEC. 4446. Every master, mate, engineer, and pilot who shall receive a license shall, when employed upon any vessel, place his certificate of license, which shall be framed under glass, in some conspicuous place in such vessel, where it can be seen by passengers and others at all times; and for every neglect to comply with this provision by any such master, mate, engineer, or pilot, he shall be subject to a fine of one hundred dollars, or to the revocation of his license.

License to be exhibited.

Ibid., s. 18, p. 447.

SEC. 4447. When any licensed officer is employed on a steamer in a district distant from any local board of inspectors, such inspectors, or the supervising inspector of the district, may grant a renewal of his license, without such licensed officer being personally present, under such regulations as the board of supervising inspectors shall prescribe.

Renewal of officer's license.

Ibid., s. 56, p. 456.

SEC. 4448. All officers licensed under the provisions of this Title shall assist the inspectors in their examination of any vessel to which such licensed officers belong, and shall point out all defects and imperfections known to them in the hull, equipments, boilers, or machinery of such vessel, and also shall make known to the inspectors, at the earliest opportunity, all accidents or occurrences producing serious injury to the vessel, her boilers, or machinery; and in default thereof the license of any such officer so neglecting or refusing shall be revoked.

Licensed officers to assist inspectors in examinations.

Ibid., s. 54, p. 456.

SEC. 4449. If any licensed officer shall, to the hinderance of commerce, wrongfully or unreasonably refuse to serve in his official capacity on any steamer, as authorized by the terms of his certificate of license, or shall fail to deliver to the applicant for such service at the time of such refusal, if the same shall be demanded, a statement in writing assigning good and sufficient reasons therefor, or if any pilot or engineer shall refuse to admit into the pilot-house or engine-room any person whom the master or owner of the vessel may desire to place there for the purpose of learning the profession, his license shall be revoked, upon the same proceedings as are provided in other cases of revocation of such licenses.

Revocation of officer's license for refusal to serve, &c.

Ibid., s. 55, p. 456.

SEC. 4450. The local boards of inspectors shall investigate all acts of incompetency or misconduct committed by any licensed officer while acting under the authority of his license, and shall have power to summon before them any witnesses within their respective districts, and compel their attendance by a similar process as in the United States circuit or district courts; and they may administer all necessary oaths to any witnesses thus summoned before them; and after reasonable notice in writing, given to the alleged delinquent, of the time and place of such investigation, such witnesses shall be examined, under oath, touching the performance of his duties by any such licensed officer; and if the board shall be satisfied that such licensed officer is incompetent, or has been guilty of misbehavior, negligence, or unskilfulness, or has endangered life, or willfully violated any provision of this Title, they shall immediately suspend or revoke his license.

Investigation of conduct of officers.

Ibid., s. 19, p. 447.

SEC. 4451. The chief officer of the customs for the district shall pay out of the revenues received under the provisions of this Title such fees to the United States marshal for his services, and to any witness, so summoned, for his actual travel and attendance, as shall be officially certified to by any inspector hearing the case, upon the back of such summons, not exceeding the rate allowed for fees and to witnesses for travel and attendance in any circuit or district courts of the United States. [See §§ 829-848.]

Payment of marshal and witnesses.

Ibid.

SEC. 4452. Whenever any board of local inspectors refuses to grant a license to any person applying for the same, or suspends or revokes the

Appeal to supervising inspector.

Ibid., s. 20, p. 447. license of any master, mate, engineer, or pilot, any person deeming himself wronged by such refusal, suspension, or revocation, may, within thirty days thereof, on application to the supervising inspector of the district, have his case examined anew by such supervising inspector; and the local board shall furnish to the supervising inspector, in writing, the reasons for its doings in the premises; and such supervising inspector shall examine the case anew, and he shall have the same powers to summon witnesses and compel their attendance, and to administer oaths, that are conferred on local inspectors; and such witnesses and the marshal shall be paid in the same manner as provided for by the preceding section; and such supervising inspector may revoke, change, or modify the decision of such local board; and like proceedings may be had by any master or owner of any steam-vessel in relation to the inspection of such vessel, or her boilers or machinery, by any such local board; and in case of repairs, and in any investigation or inspection, where there shall be a disagreement between the local inspectors, the supervising inspector, when so requested, shall investigate and decide the case.

Re-inspections
and notice for re-
pairs.

Ibid., s. 21, p. 448.

SEC. 4453. In addition to the annual inspection, the local inspectors shall examine, at proper times, steamers arriving and departing to and from their respective ports, so often as to enable them to detect any neglect to comply with the requirements of law, and also any defects or imperfections becoming apparent after the inspection aforesaid, and tending to render the navigation of the vessels unsafe; and if they shall discover any omission to comply with the law, or that repairs have become necessary to make the vessel safe, the inspectors shall at once notify the master, in writing, stating in the notice what is required; and if the master deems the requirements unreasonable or unnecessary, he may apply for a re-examination of the case to the supervising inspector, as provided in the preceding section. All inspections and orders for repairs shall be promptly made by the inspectors, and, when it can be safely done in their judgment, they shall permit repairs to be made where those interested can most conveniently do them.

Penalty for fail-
ure to make re-
pairs upon notice.

Ibid.

SEC. 4454. If any master or owner of any steamer shall refuse or neglect to comply with the requirements of the local inspectors, made in pursuance of the preceding section, and shall, contrary thereto and while the same remains unreversed by the supervising inspector, employ the vessel by navigating her, the master and owner shall be liable to a penalty of five hundred dollars for each offense, one-half for the use of the informer; for which sum the vessel itself shall be liable, and may be seized and proceeded against by libel in any district court having jurisdiction; and the master and owner, and the vessel itself, shall, in addition thereto, be liable for any damage to passengers and their baggage which shall occur from any defects as stated in the notice prescribed by the preceding section. [See § 5344.]

Effect of decisions
by inspectors.

Ibid.

SEC. 4455. The inspectors of one district shall not modify or annul the doings of the inspectors of another district in regard to repairs, unless there is a change in the state of things, demanding more repairs than were thought necessary when the order was made. Nor shall the inspectors of one district license a person coming from another district, if such person has been rejected for unfitness or want of qualifications.

Inspection in dis-
tricts not having
inspectors.

Ibid., s. 22.

SEC. 4456. The local boards of inspectors, when so requested in writing by any master or owner, shall, under the direction of the supervising inspector, inspect steamers in other collection-districts where no such board is established; and if a certificate of approval is not granted, no other inspection shall be made by the same or any other board until the objections made by such local board and unreversed by the supervising inspector of the district, are removed. Nothing in this section shall impair the right of the inspectors to permit such vessel to go to another port for repairs, if in their opinion it can be done with safety.

Records and re-
ports by local in-
spectors.

Ibid., ss. 13, 61,
pp. 445, 457.

SEC. 4457. The local inspectors shall keep a record of certificates of inspection of vessels, their boilers, engines, and machinery, and of all their acts in their examination and inspection of steamers, whether of approval or disapproval; and when a certificate of approval is recorded,

the original shall be delivered to the collector or other chief officer of the customs of the district. They shall also keep a like record of certificates authorizing gunpowder to be carried as freight by any steamer carrying passengers, and of all licenses granted to masters, mates, pilots, and engineers, and of all refusals of the same, of all suspensions and revocations of license, of all refusals, suspensions, or revocations of which they shall receive notices from other districts; and shall report to the supervising inspector of their respective districts, in writing, their decisions in cases of refusal of licenses or of the suspension or revocation thereof, and all testimony received by them in such proceedings. They shall also report promptly to such supervising inspector all violations of the steamboat-laws that come to their knowledge. They shall also keep an accurate account of every steamer boarded by them during the year, and of all their official acts and doings, which, in the form of a report, they shall communicate to the supervising inspector of the district, at such times as the board of supervising inspectors, by their established rules, shall direct.

SEC. 4458. Before issuing any license to any steamer, the collector or other chief officer of the customs for the port or district, shall demand and receive from the owners thereof, as a compensation for the inspections and examination made for the year, the following sums, in addition to the fees for issuing enrollments and licenses now allowed by law, according to the tonnage of the vessel: For each steam-vessel of one hundred tons or under, twenty-five dollars; and in addition thereto, for each and every ton in excess of one hundred tons, five cents. Each master, chief engineer, and first-class pilot, licensed as herein provided, shall pay for every certificate, granted by any inspector or inspectors, the sum of ten dollars; and every chief mate, engineer, and pilot of an inferior grade shall pay, for every certificate so granted, the sum of five dollars. Such fees shall be paid over to the chief officer of the customs in such manner and under such regulations as shall be prescribed by the Secretary of the Treasury.

SEC. 4459. Every supervising and local inspector of steamboats shall execute a proper bond, to be approved by the Secretary of the Treasury, in such form and upon such conditions as the Secretary may prescribe, for the faithful performance of the duties of his office, and the payment in the manner provided by law of all moneys that may be received by him.

SEC. 4460. The Secretary of the Treasury shall procure for the several supervising inspectors and local boards of inspectors such instruments, stationery, printing, and other things necessary for the use of their respective offices as may be required therefor.

SEC. 4461. The salaries of the supervising inspector-general, of all supervising inspectors, local inspectors, assistant inspectors, and clerks, provided for by this Title, together with their traveling and other expenses when on official duty, and all instruments, books, blanks, stationery, furniture, and other things necessary to carry into effect the provisions of this Title, shall be paid for, under the direction of the Secretary of the Treasury, out of the revenues received into the Treasury from the inspection of steam-vessels, and the licensing of the officers of such vessels, which revenues, or so much of them as may be necessary for these purposes, shall be permanently appropriated therefor.

SEC. 4462. The Secretary of the Treasury shall make such regulations as may be necessary to secure the proper execution of this Title.

Fees.

Ibid., s. 60, p. 457.

Bonds of inspectors.

Ibid., s. 67, p. 458.

Instruments, stationery, printing, &c., for local boards.

Ibid., s. 65.

Payment of salaries and expenses.

Ibid.

Regulations to be made by Secretary of the Treasury.

Ibid., s. 65.

CHAPTER TWO.

TRANSPORTATION OF PASSENGERS AND MERCHANDISE.

| Sec. | Sec. |
|--|--|
| 4463. Officers and crew of passenger-steamers. | 4484. Stairways and gangways on river-steamers carrying passengers on main deck. |
| 4464. Number of passengers allowable. | 4485. Accommodation of deck-passengers. |
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Officers and crew of passenger-steamers.

28 Feb., 1871, c. 100, s. 14, v. 16, p. 446.

Number of passengers allowable.

Ibid., s. 48, p. 454.

Penalty for carrying too great a number of passengers.

Ibid.

Special permit for excursions.

Ibid.

Lists of passengers.

Ibid., s. 49.
27 Feb., 1877, c. 69, v. 19, p. 252.

SEC. 4463. No steamer carrying passengers shall depart from any port unless she shall have in her service a full complement of licensed officers and full crew, sufficient at all times to manage the vessel, including the proper number of watchmen. But if any such vessel, on her voyage, is deprived of the services of any licensed officer, without the consent, fault, or collusion of the master, owner, or any person interested in the vessel, the deficiency may be temporarily supplied, until others licensed can be obtained.

SEC. 4464. The inspectors shall state in every certificate of inspection granted to steamers carrying passengers, other than ferry-boats, the number of passengers of each class that any such steamer has accommodations for, and can carry with prudence and safety.

SEC. 4465. It shall not be lawful to take on board of any steamer a greater number of passengers than is stated in the certificate of inspection; and for every violation of this provision the master or owner shall be liable, to any person suing for the same, to forfeit the amount of passage-money and ten dollars for each passenger beyond the number allowed.

SEC. 4466. If any passenger-steamer engages in excursions, the inspectors shall issue to such steamer a special permit, in writing, for the occasion, in which shall be stated the additional number of passengers that may be carried, and the number and kind of life-saving appliances that shall be provided for the safety of such additional passengers; and they shall also, in their discretion, limit the route and distance for such excursions.

SEC. 4467. The master of every passenger-steamer shall keep a correct list of all the passengers received and delivered from day to day, noting the places where received and where landed, which record shall be [opened] [open] to the inspection of the inspectors and officers of the customs at all times; and the aggregate number of passengers shall be furnished to inspectors as often as called for; but on routes not exceeding one hundred miles, the number of passengers, if kept, shall be sufficient.

SEC. 4468. Every master of any passenger-steamer who fails, through negligence or design, to keep a list of passengers, as required by the preceding section, shall be liable to a penalty of one hundred dollars.

Penalty for failure to keep passenger-list.

28 Feb., 1871, c. 100, s. 49, v. 16, p. 454.

SEC. 4469. The penalties imposed by sections forty-four hundred and sixty-five and forty-four hundred and sixty-eight shall be a lien upon the vessel in each case; but a bond may, as provided in other cases, be given to secure the satisfaction of the judgment.

Recovery of penalties.

Ibid.

SEC. 4470. Every steamer carrying passengers or freight shall be provided with suitable pipes and valves attached to the boiler, to convey steam into the hold and the different compartments thereof, to extinguish fire; and every stove used on board of any such vessel shall be well and securely fastened, so as to prevent it from being moved or overthrown, and all wood-work or other ignitable substances about the boilers, chimneys, cook-houses, and stove-pipes exposed to ignition, shall be thoroughly shielded by some incombustible material, in such a manner as to leave the air to circulate freely between such material and wood-work or other ignitable substance; and before granting a certificate of inspection, the inspector shall require all other necessary provisions to be made throughout such vessel to guard against loss or danger from fire.

Precautions against fire.

Ibid., s. 2, p. 440.

SEC. 4471. Every steamer permitted by her certificate of inspection to carry as many as fifty passengers, or upward, and every steamer carrying passengers, which also carries cotton, hay, or hemp, shall be provided with a good double-acting steam fire-pump, or other equivalent apparatus for throwing water. Such pump or other apparatus for throwing water shall be kept at all times and at all seasons of the year in good order and ready for immediate use, having at least two pipes of suitable dimensions, one on each side of the vessel, to convey the water to the upper decks, to which pipes there shall be attached, by means of stop-cocks or valves, both between decks and on the upper deck, good and suitable hose of sufficient strength to stand a pressure of not less than one hundred pounds to the square inch, long enough to reach to all parts of the vessel and properly provided with nozzles, and kept in good order and ready for immediate service. Every steamer exceeding two hundred tons burden and carrying passengers shall be provided with two good double-acting fire-pumps, to be worked by hand; each chamber of such pumps, except pumps upon steamers in service on the twenty-eighth day of February, eighteen hundred and seventy-one, shall be of sufficient capacity to contain not less than one hundred cubic inches of water; and such pumps shall be placed in the most suitable parts of the vessel for efficient service, having suitable well-fitted hose to each pump, of at least one-half the vessel in length, kept at all times in perfect order, and shipped up and ready for immediate use. On every steamer not exceeding two hundred tons, one of such pumps may be dispensed with. Each fire-pump thus prescribed shall be supplied with water by means of a suitable pipe connected therewith, and passing through the side of the vessel so low as to be at all times under water when she is afloat; and no fire pump thus provided for shall be placed below the lower deck of the vessel. Every steamer shall also be provided with a pump which shall be of sufficient strength and suitably arranged to test the boilers thereof.

Fire-pumps and hose.

Ibid., s. 3.

SEC. 4472. No loose hay, loose cotton, or loose hemp, camphene, nitroglycerine, naphtha, benzine, benzole, coal-oil, crude or refined petroleum, or other like explosive burning fluids, or like dangerous articles, shall be carried as freight or used as stores on any steamer carrying passengers; nor shall baled cotton or hemp be carried on such steamers unless the bales are compactly pressed and thoroughly covered with bagging of similar fabric, and secured with good rope or iron bands; nor shall gunpowder be carried on any such vessel, except under special license; nor shall oil of vitriol, nitric or other chemical acids be carried on such steamers except on the decks or guards thereof, or in such other safe part of the vessel as shall be prescribed by the inspectors. Refined petroleum,

Dangerous articles not to be carried on passenger-steamers.

Ibid., s. 4, p. 441.
27 Feb., 1877, c. 69, v. 19, p. 252.

Union Ins. Co. v. Shaw, 2 Dill., 14; U. S. v. The C. B. Church, 1 Woods, 275.

which will not ignite at a temperature less than one hundred and ten degrees of Fahrenheit thermometer, may be carried on board such steamers upon routes where there is no other [*practical*] [*practicable*] mode of transporting it, and under such regulations as shall be prescribed by the board of supervising inspectors with the approval of the Secretary of the Treasury; and oil or spirits of turpentine may be carried on such steamers when put up in good metallic vessels, or casks or barrels well and securely bound with iron and stowed in a secure part of the vessel; and friction-matches may be carried on such steamers when securely packed in strong tight chests or boxes, the covers of which shall be well secured by locks, screws, or other reliable fastenings, and stowed in a safe part of the vessel at a secure distance from any fire or heat. All such other provisions shall be made on every steamer carrying passengers or freight, to guard against and extinguish fire, as shall be prescribed by the board of supervising inspectors, and approved by the Secretary of the Treasury. [See §§ 4278-4280, 5353-5355.]

Penalty for unlawfully carrying cotton or hemp.

28 Feb., 1871, c. 100, s. 4, v. 16, p. 441.

License for use of petroleum in the production of motive-power.

Ibid., p. 442.

Mode of packing dangerous articles.

Ibid., s. 5.

Punishment for unlawfully shipping dangerous articles.

Ibid.

Watchmen on passenger-steamers.

Ibid., s. 6.

Punishment for failure to keep watchmen.

Ibid.

Fire-extinguishers.

Ibid.

SEC. 4473. Every bale of cotton or hemp that shall be shipped or carried on any passenger-steamer, without conforming to the provisions of the preceding section, shall be subject to a penalty of five dollars, and shall be liable to seizure and sale to secure the payment of such penalty.

SEC. 4474. The Secretary of the Treasury may grant permission to the owner of any steam-vessel, to use any invention or process for the utilization of petroleum or other mineral oils or substances in the production of motive-power, and may make and enforce regulations concerning the application and use of the same for such purpose. But no such permission shall be granted, unless upon the certificate of the supervising inspector of steamboats for the district wherein such vessel is registered, and other satisfactory proof that the use of the same is safe and efficient; and upon such proof, and the approval of such certificate by the Secretary of the Treasury, a special license for the use of such process or invention shall issue under the seal of the Treasury Department. [See § 4424.]

SEC. 4475. All gunpowder, nitro-glycerine, camphene, naphtha, benzine, benzole, coal-oil, crude or refined petroleum, oil of vitriol, nitric or other chemical acids, oil or spirits of turpentine, friction-matches, and all other articles of like character, when packed or put up for shipment, shall be securely packed and put up separately from each other and from all other articles; and the package, box, cask, or other vessel containing the same shall be distinctly marked on the outside, with the name or description of the article contained therein.

SEC. 4476. Every person who packs or puts up, or causes to be packed or put up for shipment, any gunpowder, nitro-glycerine, camphene, naphtha, benzine, benzole, coal-oil, crude or refined petroleum, oil of vitriol, nitric or other chemical acids, oil or spirits of turpentine, friction-matches, or other articles of like character otherwise than as directed by the preceding section, or who knowingly ships or attempts to ship the same, or delivers the same to any such vessel as stores, unless duly packed and marked, shall be deemed guilty of a misdemeanor, and punished by fine not exceeding two thousand dollars, or imprisonment not exceeding eighteen months, or both; one-half of the fine to go to the informer, and the articles to be liable to seizure and forfeiture. [See §§ 4278-4280, 5353-5355.]

SEC. 4477. Every steamer carrying passengers during the night-time shall keep a suitable number of watchmen in the cabins, and on each deck, to guard against fire or other dangers, and to give alarm in case of accident or disaster.

SEC. 4478. For any neglect to keep the watchmen required by the preceding section, the license of the officer in charge of the vessel for the time being shall be revoked; and every owner of such vessel who neglects or refuses to furnish the number of men necessary to keep watch as required, shall be fined one thousand dollars.

SEC. 4479. The board of supervising inspectors may require steamers carrying either passengers or freight to be provided with such number and kind of good and efficient portable fire-extinguishers as, in the judgment of the board, may be necessary to protect them from fire when

such steamers are moored or lying at a wharf without steam to work the pumps.

SEC. 4480. Every steamer carrying passengers shall be provided with wire tiller-ropes, or iron rods or chains, for the purpose of steering and navigating the vessel, and shall employ wire bell-pulls for signaling the engineer from the pilot-house, together with tubes of proper size so arranged as to return the sound of the engine-bells to the pilot-house, or other arrangement to repeat back the signal. But on any such vessel navigated by the mariners' compass, so much of such wire rope or chain may be dispensed with and disused as shall influence or disturb the working of the compass.

Wire tiller-ropes, bell-pulls, &c., for passenger-steamers.

Ibid., s. 10, p. 443.

SEC. 4481. Every steam-vessel navigating rivers only, except ferry-boats, freight-boats, canal-boats, and towing-boats, of less than fifty tons, shall have at least one good substantial boat with lines attached, and properly supplied with oars, and kept in good condition at all times, and ready for immediate use; and in addition thereto, every such vessel carrying passengers shall have one or more metallic life-boats, fire-proof, and in all respects good and substantial boats, of such dimensions and arrangements as the board of supervising inspectors by their regulations shall prescribe, which boats shall be carried in the most convenient manner to be brought into immediate use in case of accident. But where the character of the navigation is such that, in the opinion of the supervising inspector, the metallic life-boats can be dispensed with, he may exempt any such vessel from carrying the same; or may require a substitute therefor, at his discretion.

Boats for river-steamers.

Ibid., s. 7, p. 442.

SEC. 4482. Every such steam-vessel carrying passengers shall also be provided with a good life preserver, made of suitable material, for every cabin passenger for which she will have accommodation, and also a good life-preserver or float for each deck or other class passenger which the inspector's certificate shall allow her to carry, including the officers and crew; which life-preservers or floats shall be kept in convenient and accessible places on such vessel in readiness for immediate use in case of accident.

Life-preservers for river-steamers carrying passengers.

Ibid., s. 8, p. 443.

SEC. 4483. Every such steam-vessel carrying passengers, of two hundred tons burden or less, shall also keep at least eighteen fire-buckets and two water-barrels, and shall have not less than four axes; and every such steamer of over two hundred tons, and not less than five hundred tons burden, shall carry not less than twenty-four buckets, four water-barrels, and six axes; and every such steamer of over five hundred tons shall carry not less than thirty-five buckets, six water-barrels, and eight axes. The buckets and barrels shall be kept in convenient places and filled with water, to be in readiness in case of fire, and the axes shall be kept in good order and ready for immediate use. Tanks of suitable dimensions and arrangement, or buckets in sufficient number, may be substituted for barrels.

Fire-buckets, axes, &c., for river-steamers carrying passengers.

Ibid.

SEC. 4484. Every such steam-vessel carrying passengers on the main-deck shall be provided with permanent stairways and other sufficient means, convenient to the passengers, for their escape to the upper deck, in case of the vessel sinking or of other accident endangering life; and in the stowage of freight upon such deck, where passengers are carried, gangways or passages, sufficiently large to allow persons to pass freely through them, shall be left open both fore and aft of the vessel, and also to and along the guards on each side.

Stairways and gangways on river-steamers carrying passengers on main deck.

Ibid., s. 9.

SEC. 4485. The captain or mate of every such steam-vessel carrying passengers upon the main-deck shall assign to all deck-passengers, when taking passage, the space on deck they may occupy during the voyage, and such space shall not thereafter be occupied by freight, nor overcrowded by other persons, nor shall freight be stowed about the boilers or machinery, in such a manner as to obstruct or prevent the engineer from readily attending to his duties.

Accommodation of deck-passengers.

Ibid.

SEC. 4486. For every violation of the provisions of the two preceding sections the owners of the vessel shall be punished by a fine of three hundred dollars.

Penalty for not providing proper accommodations for passengers.

Ibid.

River-steamers to be anchored when navigation is unsafe.

Ibid., s. 42, p. 453.

Brown v. Gage et al., 1 Woods, 401.

SEC. 4487. On any steamers navigating rivers only, when, from darkness, fog, or other cause, the pilot or watch shall be of opinion that the navigation of the vessel is unsafe, the vessel shall be brought to anchor, or moored as soon as it can prudently be done: *Provided*, That if the person in command shall, after being so admonished by either of such officers, elect to pursue such voyage, he may do the same; but in such case both he and the owners of such steamer shall be answerable for all damages which shall arise to the person of any passenger, or his baggage, from such causes in so pursuing the voyage, and no degree of care or diligence shall in such case be held to justify or excuse the person in command, or the owners.

Life-boats, &c., on ocean, lake, and sound steamers.

Ibid., s. 52, p. 455.

SEC. 4488. Every steamer navigating the ocean, or any lake, bay, or sound of the United States, shall be provided with such numbers of life-boats, floats, rafts, life-preservers, and drags, as will best secure the safety of all persons on board such vessel in case of disaster; and every sea-going vessel carrying passengers, and every such vessel navigating any of the northern or northwestern lakes, shall have the life-boats required by law, provided with suitable boat-disengaging apparatus, so arranged as to allow such boats to be safely launched while such vessels are under speed or otherwise, and so as to allow such disengaging apparatus to be operated by one person, disengaging both ends of the boat simultaneously from the tackles by which it may be lowered to the water. And the board of supervising inspectors shall fix and determine, by their rules and regulations, the kind of life-boats, floats, rafts, life-preservers, and drags that shall be used on such vessels, and also the kind and capacity of pumps or other appliances for freeing the steamer from water in case of heavy leakage, the capacity of such pumps or appliances being suited to the navigation in which the steamer is employed.

Penalty for failure to provide life-boats, &c.

Ibid.

SEC. 4489. The owner of any such steamer who neglects or refuses to provide such life-boats, floats, rafts, life-preservers, drags, pumps, or appliances, as are, under the provisions of the preceding section, required by the board of supervising inspectors, and approved by the Secretary of the Treasury, shall be fined one thousand dollars.

Water-tight bulk-heads in lake-steamers carrying passengers.

Ibid., s. 53.
27 Feb., 1877, c. 69, § 19, p. 252.

SEC. 4490. Every sea-going steamer, and every steamer navigating the great northern or northwestern lakes, [carry] [carrying] passengers, the building of which shall be completed after the twenty-eighth day of August, eighteen hundred and seventy-one, shall have not less than three water-tight cross-bulk-heads, such bulk-heads to reach to the main-deck in single-decked vessels, otherwise to the deck next below the main-deck; to be made of iron plates, sustained upon suitable frame-work; and to be properly secured to the hull of the vessel. The position of such bulk-heads and the strength of material of which the same shall be constructed shall be determined by the general rules of the board of supervising inspectors.

Use of instruments for security of life.

28 Feb., 1871, c. 100, § 11, v. 16, p. 445.

SEC. 4491. No kind of instrument, machine, or equipment, for the better security of life, provided for by this Title shall be used on any steam-vessel which shall not first be approved by the board of supervising inspectors, and also by the Secretary of the Treasury.

Barges carrying passengers.

Ibid., s. 46, p. 453.

SEC. 4492. Every barge carrying passengers, while in tow of any steamer, shall be subject to the provisions of this Title relating to fire-buckets, axes, life-preservers, and yawls, to such extent as shall be prescribed by the board of supervising inspectors; and for any violation of this section the penalty shall be two hundred dollars, recoverable one-half for the use of the informer.

Liability of master and owners for damage to passengers.

Ibid., s. 43.
Sherlock et al. v. Alling, adm., 93 U. S., 99.

SEC. 4493. Whenever damage is sustained by any passenger or his baggage, from explosion, fire, collision, or other cause, the master and the owner of such vessel, or either of them, and the vessel shall be liable to each and every person so injured, to the full amount of damage if it happens through any neglect or failure to comply with the provisions of this Title, or through known defects or imperfections of the steaming-appa-

ratus or of the hull; and any person sustaining loss or injury through the carelessness, negligence, or willful misconduct of any master, mate, engineer, or pilot, or his neglect or refusal to obey the laws governing the navigation of such steamers, may sue such master, mate, engineer, or pilot, and recover damages for any such injury caused by any such master, mate, engineer, or pilot. [See § 5344.]

SEC. 4494. Every master or commander of any steam-vessel carrying passengers shall keep on board of such vessel at least two copies of the provisions of this Title, to be furnished to him by the Secretary of the Treasury; and if the master or commander neglects or refuses to do so, or shall unreasonably refuse to exhibit a copy of the same to any passenger who asks for it, he shall be liable to a penalty of twenty dollars.

Two copies of this Title to be kept on each passenger-steamer.

Ibid., s. 50, p. 455.

SEC. 4495. Every steam-vessel of the United States, in addition to having her name painted on her stern, shall have the same conspicuously placed in distinct, plain letters, of not less than six inches in length, on each outer side of the pilot-house, if it has such, and in case the vessel has side-wheels, also on the outside of each wheel-house; and if any such steamboat be found without having her name placed as required, she shall be subject to the same penalty and forfeiture as provided by law in the case of a vessel of the United States found without having her name, and the name of the port to which she belongs, painted on her stern.

Name of steamer to be exhibited.

Ibid., s. 50, p. 455.

SEC. 4496. All collectors, or other chief officers of the customs, and all inspectors within the several districts, shall enforce the provisions of this Title against all steamers arriving and departing.

Duties of customs officers.

Ibid., s. 30, p. 450.

SEC. 4497. Every collector, or other chief officer of the customs, or inspector, who negligently or intentionally omits any duty under the preceding section, shall be liable to removal from office, and to a penalty of one hundred dollars for each offense, to be sued for in an action of debt.

Penalty for omission of duty by customs officer.

Ibid.

SEC. 4498. No license, register, or enrollment shall be granted, nor any other papers be issued, by any collector or other chief officer of the customs, to any vessel propelled in whole or in part by steam, until he shall have satisfactory evidence that all the provisions of this Title have been fully complied with.

Registry, enrollment, &c., denied to vessels not complying with the law.

Ibid., s. 1, p. 440.

SEC. 4499. If any vessel propelled in whole or in part by steam be navigated without complying with the terms of this Title, the owner shall be liable to the United States in a penalty of five hundred dollars for each offense, one-half for the use of the informer, for which sum the vessel so navigated shall be liable, and may be seized and proceeded against by way of libel in any district court of the United States having jurisdiction of the offense.

Penalty for failure to comply.

Ibid.

SEC. 4500. The penalty for the violation of any provision of this Title, not otherwise specially provided for, shall be a fine of five hundred dollars, recoverable one-half for the use of the informer.

Penalty in cases not provided for.

Ibid., s. 68, p. 458.