THE LAW

OF

WATER FOR IRRIGATION

IN

COLORADO,

BY

S. W. CARPENTER.

OF

THE DENVER BAR.
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Note—The references "G. S." are to the sections of the General Statutes of the State of Colorado, compilation of 1883.

The case of the Highland Ditch Company vs. Mumford, 3 Colo., 325, adopts the rule as to what constitutes "diligence," laid down in Ophir Silver Mining Company vs. Carpenter, 4 Nev., 534, cited on pp. 25, 29 of this work, at which points a reference to this case should be made.

The case of Lux vs. Haggin, just decided in the Supreme Court of California, 10 Pacific Rep., 674-784, contains (pp. 729, 730) an interesting review of the Colorado cases on the subject of priority by appropriation.

On page 30, for 43 Colo. read 43 Cal.
CHAPTER I.

INTRODUCTORY—WATER RIGHTS AT COMMON LAW.

The importance of the interests now depending upon the proper understanding and enforcing of the law of water for irrigation in this State, and the lack of any publication hitherto upon this subject, has induced the belief that a concise statement of the development and present status of this branch of our law will be acceptable, not only to the legal profession, but also to that large and constantly increasing class of our citizens who are primarily interested in the subject. It is therefore hoped that this work will prove useful as a presentation, in a clear and systematic form, of the more important features, at least, of a branch of our law hitherto accessible only in a tangled and confused array of constitutional and statutory provisions and court decisions, and thus subserve the agricultural interests of our State, as the various similar publications on our mining law have the interests of that other of our great local industries.

The law defining water rights in natural lakes and streams has always been an interesting study in those countries which draw their common (or non-statutory) law from the English fountain-head; but it is of especial importance in this State, where the dryness of the climate and the porous nature of the soil combine to make necessary an artificial substitute for the rain-fall of other localities. The English common law has
always been the general rule of guidance in the courts of this country, in so far as it is of a general nature and applicable to our institutions, and to the local requirements of the particular community, except where modified or repealed by legislative enactment, and this principle was incorporated in terms into our laws by the Legislature of 1861. (G. S. 197.)

At common law only those who held lands bordering on the natural stream or lake had the right to the use of the water, and they only to the extent of a reasonable use for their necessary purposes; and if they diverted the water they were obliged to return it to the stream, practically unimpaired in quantity and quality before it left their lands.

Judge Story, in a well-considered case in 4 Mason, 397, said: "Of a thing common by nature there may be appropriation by general consent or grant. Mere priority of appropriation of running water, without such consent or grant, confers no exclusive right. Our law assures to the riparian proprietor the right to use in common, as an incident to the land; and whoever seeks to found an exclusive use, must establish a rightful appropriation in some manner known and admitted by the law. Now, this may be by a grant from all the proprietors, or by a long exclusive enjoyment without interruption, which affords a just presumption of right."

The use of water for irrigation under this state of the law was of course impossible. In the case of Evans vs. Merriweather, 3 Scammon (Ill.) 496, the question of the use of water for irrigation is somewhat considered. Man's wants in regard to water are classed as natural and artificial. "Natural are such as
are absolutely necessary to be supplied in order to his existence. Artificial, such only as, by supplying them, his comfort and prosperity are increased. In countries differently situated from ours (Illinois) with a hot and arid climate, water is doubtless indispensable to the cultivation of the soil, and in them water for irrigation would be a natural want" (and therefore one for which the riparian proprietor would be justified in consuming it). "Here it might increase the products of the soil, but is by no means essential, and cannot therefore be considered a natural want. So of manufactures." Hence, "when the stream does not supply water more than sufficient to answer the natural wants of the different proprietors living on it, none of the proprietors can use the water for either irrigation or manufactures."

In this connection, see also "Angell on Water-courses," secs. 120-129.
CHAPTER II.

THE DEVELOPMENT OF THE WESTERN THEORY.

In the states and territories of the arid regions, however, the necessities of the mining and agricultural interests made the common law theory of the law of water wholly inapplicable to the needs and requirements of those communities, and from the very first encroachments were made upon it, both by courts and law-makers, until we may now say that, in Colorado at least, little trace of it remains.

Of this legislation, Mr. Pomeroy says, that it has "wholly abandoned and abrogated all the common-law doctrines regarding private property in streams and lakes and concerning the 'riparian rights' of 'riparian proprietors.' The statutes in express terms apply to all streams, as well those running through public lands as those bordered by the lands of private owners. No exception from their operation is made in favor of persons owning lands on the banks of a stream. Under these statues no proprietor derives any legal benefit or advantage from the fact that his land is immediately adjacent to a stream. Unless he has made an actual appropriation and diversion of its water for the use of his own land, he is liable to have, perhaps, the entire stream appropriated and diverted away for the benefit of a proprietor whose land is situated at any distance from the stream."

The foundations of the doctrines as to the rights in water gained by priority of appropriation, contrary to the rights of riparian owners at common law, were laid in the necessities of the placer-miners on the public domain. The public lands and streams were alike the property of the United States Government, and in the absence of a grant or license from the government, neither could be held by any person to the exclusion of another, except by some recognized "custom" or local usage. At an early date, however, the custom was established that priority of possession gave priority of right, both of land and water, as long as claimant made continuous use of the same for some beneficial purpose; and this custom the state and territorial courts at an early date recognized as giving a valid right to the appropriator for any beneficial use as against every one else but the United States.

Schilling et al. vs. Rominger, 4 Colo., 100.
Lobdell vs. Simpson, 2 Nev., 274.
Bear River Co. vs. N. Y. Min. Co., 8 Cal., 327.

The United States statutes, which recognize the various inchoate rights in land, under the various forms of mining locations, preemption claims, etc., were passed at an early date, and are familiar to all. In July, 1866, Congress passed an act expressly recognizing the right of preemption of water in the natural streams and lakes of the public domain.

U. S. Rev. Stat., 2339. Vested rights—Right of way.] Whenever, by priority of possession, rights to the use of water for mining, agricultural, manufacturing or other purposes, have vested and accrued, and the same are recognized and acknowledged by the local customs, laws and decisions of the
courts, the possessors and owners of said vested rights shall be maintained and protected in the same, and the right of way for the construction of ditches and canals for the purposes herein specified is acknowledged and confirmed.

In 1870 Congress further enacted:


All patents granted, or pre-emptions or homesteads allowed, shall be subject to any vested and accrued water rights, or rights to ditches and reservoirs used in connection with such water-rights, as may have been acquired under or recognized by the preceding section.

These acts have been held to be but the legislative recognition of a pre-existing right, and not the granting of a new right dating from the passage of the law, the formulating of a rule of construction which the courts would have applied without the passage of these laws.


Osgood vs. Eldorado Water Co., 56 Cal., 571.

Coffin vs. Left-Hand Ditch Co., 6 Colo., 446.

It will be noted, however, that these statutes apply only to streams lying wholly within the public domain; also, that they do not provide, as in the case of pre-emption of lands, how these rights in water shall be defined and secured. These matters are left wholly to the courts and legislatures of each community to determine in its own way; and the statutes cited operate, in this regard, merely as a relinquishment by the general government of rights which it might claim as lord of the public domain.

A full and able discussion of the development of the western law of water-rights generally may be found
in the Montana case of Atchinson vs. Peterson, 20 Wallace (U. S.), 507.

In this State the courts have from the first denied the existence of any private property in water, or the flow thereof, in riparian owners as such. In the case of Schilling et al. vs. Rominger, 4 Colo., 100, which was the first case in which our Supreme Court passed on this point, and in which the right accrued prior to the adoption of our State Constitution, the court held: “That the first appropriator of the water of a natural stream has a prior right, to the extent of his appropriation, is a doctrine that we must hold applicable in all cases respecting the diversion of water for the purpose of irrigation;” and they place their ruling on the grounds that, “in a country with a climate like ours, the right arises ex necessitate rei;” and hence the statute may be regarded as declaratory merely of the law of necessity in this respect, and as regulating the right thus acquired. Further, the U. S. statutes, just cited, were considered by our Supreme Court in this connection; and in regard to this, it was held in the case of Coffin vs. Left-Hand Ditch Co., 6 Colo., 447, that “the right to water in this country by priority of appropriation thereof . . . is entitled to protection as well after patent to a third party of the land over which the natural stream flows, as when such land is part of the public domain; and it is immaterial whether or not it is mentioned in the patent and expressly excluded from the grant.”

As will be seen, both at the adoption of our State Constitution in 1876, and by various statutes, mostly passed since that date, an attempt has been made to form a code of laws that will cover all questions that
may arise in regard to water-rights. Voluminous as these statutes are, they fail, as such attempts always do, in establishing anything like a complete system; and, as we shall see, for the settlement of many points resort will always have to be made by contesting claimants to the courts, and by the courts to the decisions of the older communities, like California and Nevada, in so far as the cases decided in those States may throw light on the question raised.
CHAPTER III.

PRIORITIES AND RIGHTS THEREUNDER.

Constitution of Colorado, Art. XVI

Sec. 5. Water Public Property.

The water of every natural stream not heretofore appropriated, within the State of Colorado, is hereby declared to be the property of the public, and is dedicated to the use of the people of the State, subject to appropriation as hereinafter provided.

Sec. 6. Diverting Unappropriated Water—Priority.

The right to divert unappropriated waters of every natural stream for beneficial uses shall never be denied. Priority of appropriation shall give the better right, as between those using the water for the same purpose; but when the waters of any natural stream are not sufficient for the service of all those desiring the use of the same, those using the water for domestic purposes shall have the preference over those claiming for any other purpose, and those using the water for agricultural purposes shall have the preference over those using the same for manufacturing purposes.

Section 5 and the first four lines of Section 6, above cited, are merely the enactment of what had been held to be the law prior to the adoption of the Constitution.

Schilling et al. vs. Rominger, 4 Colo., 100.
Coffin et al. vs. Left-Hand Ditch Co., 6 Id., 447.
Thomas vs. Guiraud et al., 6 Id., 530.

In the case of Coffin et al. the court said: "We conclude, then, that the common law doctrine, giving the riparian owner a right to the flow of the water in
its natural channel upon and over his lands, even though he makes no beneficial use thereof, is inapplicable to Colorado. Imperative necessity, unknown to the country which gave it birth, compels the recognition of another doctrine in conflict therewith, and we hold, that in the absence of express statutes to the contrary, the first appropriator of water from a natural stream for a beneficial purpose, has, with the qualifications contained in the constitution, a prior right thereto, to the extent of the appropriation.”

The “qualifications” referred to are the provisions for preferences, when the supply of water is insufficient for all, as provided in section 6 above.

To constitute a “natural stream,” it must appear that the water usually flows therein in a certain direction, and by a regular channel with banks or sides. It need not be shown to flow continually, and it may at times be dry; but it must have a well-defined and substantial existence.

Barnes vs. Sabron, 10 Nev., 217.

Where underground currents of water, flowing in well-defined channels, are shown to exist, the rules of law which govern the use of similar streams flowing upon the surface of the earth are applicable to them.

Hanson vs. McCrue, 42 Cal., 303.

G. S. 1711—Owners of Land on Streams Entitled to Use of Water.] All persons who claim, own or hold a possessory right or title to any land or parcel of land lying within the boundary of the State of Colorado, as defined in the Constitution of said State, when those claims are on the bank, margin or neighborhood of any stream of water, creek or river, shall be entitled to the use of the water of said stream, creek or river, for the
PRIORITIES AND RIGHTS.

The purpose of irrigation and making said claims available to the full extent of the soil, for agricultural purposes. [Sec. 1, p. 67, acts 1861—Sec. 1, p. 363, R. S.—Sec. 1372 (1), p. 515, G. L.]

In connection with the above, the court, in the case of Coffin et al. vs. Left Hand Ditch Co., 6 Colo., 447, after citing from the opinion in the case of Schilling vs. Rominger, 4 Colo., 103, the doctrine of priority by appropriation, proceed to say: "The Territorial legislature in 1864 expressly recognizes the doctrine. It says: 'Nor shall the water of any stream be diverted from its original channel to the detriment of any miner, mill-men or others along the line of said stream, who may have a priority of rights, and there shall be at all times left sufficient water in said stream for the use of miners and agriculturalists along said stream.' (Session laws of 1864, p. 58, § 32.) The priority of right mentioned in this section is acquired by priority of appropriation, and the provision declares that the appropriations of water shall be subordinate to the use thereof by prior appropriations. This provision remained in force until the adoption of the constitution; it was repealed in 1868, but the repealing act re-enacted it verbatim." (R. S., 1868, p. 126, § 32.) This clause was part of the "Corporations" act, and now stands in a broader form in G. S. 309. (See Ch. XVI.)

G. S. 1729—Vested Rights of Mill and Ditch Owners.

Nothing in this chapter contained shall be so construed as to impair the prior vested rights of any mill or ditch owner or other person to use the water of any such water course. [Sec. 1379 (8), p. 516, G. L.—Sec. 8, p. 364, R. S.—Same in substance as sec. 10, p. 69, acts 1861.
A prior appropriator of water on Government land has the prior right to its use, to the extent, in amount and time, of his first appropriation, and possibly to the extent to which he was at that time preparing to appropriate it.

Lehi Irr. Co. vs. Moyle et al., 9 West Coast Rep. (Utah), 798.

As to the location of the lands for the irrigation of which priority of right may be secured in the waters of a stream, the statutes just cited would seem to indicate that such priority could not be obtained by a settler in one valley to the use of the water of a stream in another valley; but the Supreme Court passed upon this very point, and held, that "the locus (or place) of application does not in any way effect the doctrine; and that a prior appropriator of water is entitled to it as against a subsequent settler upon the stream from which it is taken, although he carries it over an intervening divide, and uses it to cultivate lands adjacent to another stream."

Coffin vs. Left Hand Ditch Co., 6 Colo., 442.

Thomas vs. Guiraud et al., Id., 530.

As an incident to a priority, one has the right to enter the bed of a stream above his ditch and remove obstructions that may be so interfering with the course of the current as to prevent the water from entering his ditch, and may acquire an easement for this purpose in the adjoining lands; but the right thus acquired must be held to the narrowest limits compatible with the right to the use of the water.

Crisman vs. Heiderer, 5 Colo., 589.
We may then say in general that anyone who has acquired a right to the use of the water of a given stream, has the legal right to insist that it may flow down to his headgate unimpaired in quantity and in quality by the acts of anyone not prior to himself in time,—to such flow as will give him his full rights as existing at the time of any such subsequent appropriation.

Bear River Co. vs. N. Y. Min. Co., 8 Cal., 327. Mokelumne Hill Co. vs. Woodbury, 10 Id., 185.

The fact that the use of water for mining greatly deteriorates it for irrigation has long attracted the attention of farmers in this State. In Hill vs. Smith, 27 Cal., 476, it was held that in controversies of this nature, the question to be determined is, has the use and enjoyment of the water, for the purposes for which the first appropriator claims it, been impaired? If so, he has his remedy. The liability of persons so impairing the water is in no manner dependent on the question of negligence or want of skill. The reasons which in this regard underlie the common law rules, and the rules themselves, are still in force.

The following act was passed by the Legislature of 1885, looking to the securing of data on the question of the defiling of the streams by miners and others:

Sec. 1. Purification of Water—Commission.

By and with the consent of the Senate, the Governor shall appoint a Commission, consisting of two persons, as follows: One person engaged in farming in this State where irrigation is practiced, and one person engaged in mining in the State. Such Commission shall make practical and scientific tests and
experiments in attempting to settle and purify the water after being used by stamp mills and smelters, and shall report the results of such tests and experiments to the next General Assembly of this State; Provided, All scientific and chemical tests shall be made by the employes of the State School of Mines, without any expense to the State; Provided further, That the Commissioners shall receive no compensation, other than their actual expenses, which shall in no event exceed the sum appropriated by this act.

SEC. 2. The sum of six hundred dollars, or so much thereof as may be necessary, is hereby appropriated to defray the expenses incurred in carrying out the provisions of this act. [Session Laws, 1885, p. 260.

Injunction will lie to restrain the continuous wrongful diversion of water, at the instance of a prior appropriation thereof, though no actual damage is averred or proved, to prevent the wrongful act from ripening into a right.

Moore vs. Clear Lake Water Works, 8 West Coast Rep. (Cal.) 322.

A mere temporary or trivial irregularity in the flow of the water, such as does not cause actual injury to the prior appropriator below, will not be actionable; but if a sensible or positive injury be caused, such as would diminish the value of the water right, an action will lie, not only to recover damages, but to enjoin the further commission of the wrong.

Phoenix W. Co. vs. Fletcher, 23 Cal., 482.

Natoma W. Co. vs. McCoy, Id., 491.

A prior appropriator cannot object to the use by others of the water running in the stream when he is not using it; and one may divert the water above a prior appropriator and use it in passing, provided he
PRIORITIES AND RIGHTS.

If the first appropriator takes only a part of the quantity flowing in the stream, another may afterwards appropriate the remainder; and if the first appropriates the water only during certain days of the week, another may afterwards acquire an appropriation for the remaining days.

Smith vs. O'Hara, 43 Cal., 371.
Procter vs. Jennings, 6 Nev., 83.

The subject of priorities becomes important only when there is not water enough in the stream in question to supply the needs of all who desire to use therefrom. In the case of the smaller streams of the State, the capacity of which is easily ascertained, these questions have been for the most part already settled. As regards the larger creeks and rivers, however, from which many smaller ditches were taken out at an early date, and from which larger ditches have more recently been taken, it is easy to see that when the number of settlers under these latter require them to run their full capacity, the question of priorities, especially in a season of unusual drouth, may at once assume great importance. In any case it is of the greatest importance for those claiming water from any stream to see to it that their rights are properly established, in order that they may not find themselves some day suddenly left literally "high and dry."
CHAPTER IV.

PRIORITY—HOW SECURED.

G. S. 1720. New Ditches—Sworn statement must be filed—Contents—Map.

Every person, association or corporation hereafter constructing or enlarging any ditch, canal or feeder for any reservoir, for irrigation, and taking water directly from any natural stream, and of a carrying capacity of one cubic foot per second of time, as so constructed or enlarged, shall within ninety days after the commencement of such construction or enlargement, file and cause to be recorded in the office of the County Clerk of the County in which such ditch, canal or feeder may be situated, or if such canal, ditch or feeder be situated in any water district, in the office of the County Clerk of such [each] County in which such water district may extend, a sworn statement in writing, showing the name of such ditch, canal, or of the reservoir supplied by such feeder, the point at which the head-gate thereof is situated (if it be a new construction), the size of the ditch, canal or feeder, in width and depth, and the carrying capacity thereof in cubic feet per second, the description of the line thereof, and the time when the work was commenced, and the name or names of the owner or owners thereof, together with a map showing the route thereof, the legal sub-divisions of the land, if on surveyed lands, with proper corners and distances, and in case of an enlargement, the depth and width, also the carrying capacity of the ditch enlarged, with the width and depth of the ditch, canal or feeder as enlarged, and the increased carrying capacity of the same thereby occasioned, and the time when such enlargement was commenced, and no priority of right for any purpose shall attach to any such construction or enlargement until record is made. [Sec. 2, p. 162, acts 1881.]
PRIORITY—HOW SECURED.

G. S. 1721. Only Irrigation Ditches referred to in the last above section.

This act shall apply to and effect only ditches, canals or feeders used for carrying water for the purpose of irrigation, and for no other purpose whatever. [Sec. 3, p. 162, acts 1881.]

The requirements in case of an enlargement seem to presume that the requirements of a new construction have been complied with. If not, they should also be included in the statement for an enlargement.

Form of Statement under G. S. 1720.

The undersigned, proprietors of the . . . ditch or canal, in compliance with Section 1720 of the General Statutes of the State of Colorado, and for the purpose of securing to themselves the benefit of said section, hereby make the following statement for filing and record:

1. The name of our ditch or canal is the . . . ditch.

2. The head-gate of said ditch is situated on the . . . bank of (name of stream) in . . . County, Colorado, at a point (locate by reference to some well-defined landmark.)

3. The size of said ditch is . . . feet in width on the bottom, and . . . feet in width at high-water mark, and . . . feet in depth.

4. The carrying capacity of said ditch is . . . cubic feet of water per second of time.

5. The line of said ditch begins at the point above named as the location of the head-gate, and runs thence (describe the line) as will appear from the map of the said ditch annexed hereto, and made a part of this statement.

6. The work of construction of said ditch was begun on the . . . day of . . ., 18 . .

7. The names of the owners of said ditch are . . . .

Witness our hands and seals this . . . day of . . . .

A. D. 18 . .

[SEAL]

[SEAL]
PRIORITY—HOW SECURED.

STATE OF COLORADO, \{\}

. . . . . . County,

. . . . . . being first duly sworn on oath, says that he is one of the persons named as owners in the above statement; that he has read said statement, and that the same is true of his own knowledge.

Subscribed and sworn to before me this . . . day of . . ., A. D. 18 . . .

In case of an enlargement, put that word in place of "construction" in paragraph 1; and in place of 3, 4, and 6, as above, put:

3. The original size of said ditch or canal is . . . feet in width on the bottom, and . . . feet in width at high water mark on the same, and . . . feet in depth; and the size thereof, as enlarged, . . . feet in width on the bottom, and . . . feet in width at high-water mark on the same, and . . . feet in depth.

4. The original carrying capacity of said ditch or canal is . . . cubic feet of water per second of time, and the increased capacity thereof occasioned by such enlargement is . . . cubic feet of water per second of time.

6. The work on the enlargement of said ditch was begun on the . . . day of . . ., A. D. 18 . . .

It would seem that, under G. S. 1720, the date of the beginning of survey for the line of the ditch may be taken as the time of beginning work. In Parke \textit{v.s.} Kilham, 8 Cal., 77, \textit{held}, the line upon which a ditch is actually intended to be dug should be run within a reasonable time after the line of preliminary survey has been run, in order to make the right of the ditch-owners date back to the survey. What is a reasonable time must depend upon the circumstances of the case.

An allegation that a ditch carries a certain number of cubic feet of water, and that the flow is a given rate per second, without stating the duration of time within
which the named quantity of water passes, is not an allegation of the capacity of such ditch.

Moore vs. Clear Lake Water Works, 5 West Coast Rep. (Cal.), 177.

The carrying capacity of a ditch is to be measured by its capacity at the smallest point; but if the general size and capacity of the ditch indicate that more water is to be used than is turned into it at first, a reasonable time is to be allowed to remove obstructions or change the grade, in order that the ditch may be filled to its proper capacity.

Ophir S. M. Co. vs. Carpenter, 6 Nev. 393.
White vs. Todd's Water Co., 8 Cal., 443.

This act (G. S. 1720) merely adds to the general requirements necessary in order to secure a priority of appropriation on the part of ditch and reservoir owners. There must in all cases be a successful application to the beneficial use designed within a reasonable time from the commencement of the work, and the use of due diligence to this end.

Thomas vs. Guiraud, 6 Colo., 530.
Sieber et al. vs. Frink et al., 7 Id., 153.
Weaver vs. Eureka Lake Co., 15 Cal., 271.
Kimball vs. Gearhart, 12 Cal., 27.

There must also be a present \textit{bona fide} design or intention of applying the water to some immediate useful or beneficial purpose, or a present \textit{bona fide} contemplation of such a future application; otherwise no priority can be acquired, no matter how elaborate
and complete the structures built by the would-be appropriator. An attempted appropriation for merely speculative purposes avails nothing.

Weaver v. Eureka Lake Co., 15 Cal., 271.
Sieber et al. v. Frink et al., 7 Colo., 148.

An appropriator who duly gives notice, and while prosecuting the work with diligence, gives a second notice for the same water, does not thereby abandon his first claim or lose any of his rights thereunder.


If the capacity of an appropriator's ditch is greater than is necessary to irrigate his farming land, he must be restricted to the quantity actually needed for the beneficial uses to which he puts it; but if the water is diverted with due diligence for the purpose of irrigation, the rights of the appropriator are not necessarily limited to the amount of water actually used during the first or second year of the appropriator, or regulated by the number of acres then cultivated; but the object in view at the time the water was first appropriated, is to be considered in connection with the appropriation actually made.

White v. Todd's Valley Co., 8 Cal., 443.

In Dick v. Caldwell, 14 Nev., 167, appellant claimed "207 inches" of water, on the ground that he had diverted that amount for six years. The trial court awarded him a much less amount; to-wit: "the first right to water from the stream in question for the irrigation of fifty-seven acres of grain and vegetables,
and ten acres of grass." The appellate court held: "It is plain that he was entitled to no more, because during that whole period he did not cultivate or irrigate but that number of acres, and he could not have used beneficially any more water than was necessary to irrigate the same. He did not appropriate, in a legal sense, any water except such as he used beneficially. Turning water out of the stream for no useful purpose did not give him any additional rights. . . . Turning more water from the stream than he used was waste, not appropriation." To the same effect—

Simpson v. Williams, 18 Nev., 432.

The question of diligence will depend upon the nature of the country where the work is done, the length of the working season, the labor supply, the extent and magnitude of the works and the like, but not upon such matters as the illness or lack of pecuniary means of the builders. Unusual or extraordinary efforts are not required, but only such constancy and steadiness of purpose or labor usual with men engaged in like enterprises, such assiduity as will show a bona fide intention to complete the work within a reasonable time. It is a question of fact for the jury, and their verdict in general will be conclusive.

Osgood v. El Dorado, etc., Co., 56 Cal., 571.
Ophir Silver M. Co. v. Carpenter, 4 Nev., 534.

The true test of the appropriation of water is the successful application thereof to the beneficial use
designated, and the method of distributing or carrying
the same, or making such application, is immaterial.
Thomas vs. Guiraud, 6 Colo., 530.
Larimer Co. Res. Co. vs. People, 9 West Coast
Rep., (Colo.) 527.
Weaver vs. Eureka Lake Co., 15 Cal., 271.

In the first-named case the "diversion" had been
made in part merely by building a dam, which caused
the water to flow out over the fields. In the other it
was held that there "may be a constitutional appropri­
atation of water without it being at the instant taken
from the bed of the stream," the act relied on being
the formation of a reservoir by utilizing a natural
depression which included the bed of the stream,
without any diversion of the water.

G. S. 314. Shall Commence Work in Ninety Days—Complete in
Three Years—Forfeit.]
Any company formed under the provisions of this (cor­
porations) act, for the purpose of constructing any ditch, flume,
. . . . shall, within ninety days from the date of their certificate,
commence work on such ditch, flume . . . line as shall be named
in the certificate, and shall prosecute the work with due dili­
gence until the same is completed, and the time of completion of
any such ditch . . . line shall not be extended beyond a period
of two years from the time work was commenced as aforesaid;
and any company failing to commence work within ninety
days from the date of the certificate, or failing to complete the
same within two years from the time of commencement as
aforesaid, shall forfeit all right to the water so claimed, and the
same shall be subject to be claimed by any other company;
the time for the completion of any flume constructed under the
provisions of this act shall not be extended beyond a period of
four years; Provided, This section shall not apply to any ditch
or flume . . . constructed through and upon any grounds
owned by the corporation; and Provided further, That any
company formed under the provisions of this act to construct
a ditch for domestic, agricultural, irrigating . . . purposes, or any or either thereof, shall have three years from the time of commencing work thereon within which to complete the same, but no longer. [Sec. 296 (106) pp. 179-80, G. L.

G. S. 1727. [Wheels, etc., on Streams.]

All persons on the margin, brink, neighborhood or precinct of any stream of water shall have the right and power to place upon the bank of said stream a wheel or other machine for the purpose of raising water to the level required for the purpose of irrigation. [Sec. 8, pp. 68-69, acts 1861—Sec. 6, p. 364, R. S.—Sec. 1377 (6) p. 516, G. L.

The natural overflow of water upon the land would seem to give the owner of the land a valid claim to a priority, as appears from the following:

G. S. 1723. [Irrigation of Meadows.]

All persons who shall have enjoyed the use of the water in any natural stream for the irrigation of any meadow land, by the natural overflow or operation of the water of such stream, shall, in case the diminishing of the water supplied from such stream from any cause prevents such irrigation therefrom in as ample a manner as formerly, have right to construct a ditch for the irrigation of such meadow, and to take water from such stream therefor, and his, her or their right to water through such ditch shall have the same priority as though such ditch had been constructed at the time he, she or they first occupied and used such land as meadow ground. [Sec. 37, p. 106, acts 1879.

In view of all the foregoing considerations, the question may well be raised whether there can be a valid appropriation, which could be maintained as a priority against a subsequent bona fide appropriation, by persons or corporations, who, owning no lands themselves, build a ditch and, by making the record required by G. S. 1720, attempt to monopolize the water of a stream for the purpose of speculating in the needs of those who afterwards may settle on lands
naturally irrigable from such stream; or who, owning some lands, attempt to claim by appropriation more water than is needed for those lands, with the speculative intent aforementioned. Both the statutes and the decision in Golden Canal Co. vs. Bright, 5 West Coast Rep. (Colo.), 805, recognize the right of ditch corporations "to run the water of the stream or streams named in the certificate through their ditch;" and Art. XVI., sec. 8, of our Constitution, and G. S. 1738–1740, recognize their powers by providing for the regulation of their charges for water. (Ch. XI.)

But Art. XVI., sec. 6, of our Constitution says, that the right must be for a "beneficial use;" and G. S. 308 provides for the formation of companies "for the purpose of constructing a ditch for the purpose of conveying water to ... any lands." Let us now suppose that a corporation constructs a large ditch, and claims to appropriate the entire volume of water ordinarily flowing in it, in order to convey such water above a large unsettled tract over which it has no control; and that afterwards, and before such lands are settled up sufficiently to use such volume of water, a settler near such stream takes out a ditch from it to irrigate his lands. Could that company deny him priority as against their claim, on account of their indefinite prospect of an ultimate settlement of all the lands under their line? Or would their claim not be limited as against such settler, to the amount of water actually needed for such lands as were actually occupied under their line at the time of his settlement?

In all these considerations it is of the greatest importance to distinguish between a right to the water and a priority of right thereto.
CHAPTER V.

FROM WHEN PRIORITY DATES.

In the case of Sieber et al. vs. Frink et al., 7 Colo., 153, the Court says: "We accept the rule adopted in California and Nevada in this connection: 'although the appropriation is not deemed complete until the actual diversion or use of the water; still if such work be prosecuted with reasonable diligence, the right relates back to the time when the first step was taken to secure it.'"

Osgood vs. El Dorado, etc., Co., 56 Cal., 571.
Kimball vs. Gearhart, 15 Cal., 271.
Lehigh Irr. Co. vs. Moyle et al., 9 West Coast Rep. (Utah), 798.
Irwin vs. Strait, 18 Nev., 436.
Woolman vs. Garringer, 1 Mont., 535.

In Ophir Silver M. Co. vs. Carpenter, it was held: "If work is necessary to be done to complete the appropriation, the law gives a reasonable time within which to do such work, and protects the rights during such time by relation to the time when the first step was taken. When the work . . . is not prosecuted with diligence, the right to the use of the water dates from the time when the work is completed."

4 Nev., 534.

But see G.S. 1720, in this connection, since 1881.

In case the channel of any natural stream shall become so cut out, lowered, turned aside or otherwise changed from any cause as to prevent any ditch, canal or feeder of any reservoir from receiving the proper inflow of water to which it may be entitled from such natural stream, the owner or owners of such ditch, canal or feeder shall have the right to extend the head of such ditch, canal or feeder to such distance up the stream which supplies the same, as may be necessary for securing a sufficient flow of water into the same, and for that purpose shall have the same right to maintain proceedings for condemnation of right of way for such extension as in case of constructing a new ditch, and the priority of right to take water from such stream through such ditch, canal or feeder, as to any such ditch, canal or feeder, shall remain unaffected in any respect by reason of such extension; Provided however, That no such extension shall interfere with the complete use or enjoyment of any other ditch, canal or feeder. [Sec. 1, pp. 161-2, acts 1881.

The proviso, of course, means any other which has prior rights, and is but the enactment of the rule stated in Davis vs. Gale, 32 Cal., 26, and Sieber et al. vs. Frink et al., 7 Colo., 148, that "a change of the point of diversion on the same stream does not affect the priority acquired by the original appropriation, provided the quantity of water diverted remains the same, and no intervening appropriator is injured."

The rights of a purchaser under a verbal sale will date only from the time when he enters into possession.

Smith vs. O'Hara, 43 Colo., 37.

When a party fails to connect himself in interest with those who first cultivated the land and appropriate the water of a stream: Held, that his own first use of the water must be taken as the inception of his right.

Chiatovich vs. Davis, 17 Nev., 133.
CHAPTER VI.

PRIORITY — HOW LOST.

As we have seen (Ch. IV.) a priority may be lost by failure to comply with G. S. 1720; also by failure to use due diligence in pushing the work to completion, etc.

To acquire a right to water from the date of diversion, one must within a reasonable time employ the same in the business for which it was taken. A failure to use the water is competent evidence of an abandonment of the right thereto; and if continued for an unreasonable period, it creates a presumption of an intention to abandon; but this presumption is not conclusive, and may be overcome by other satisfactory proofs.

Sieber et al. vs. Frink et al., 7 Colo., 148.
Keeney vs. Carillo, 2 New Mex., 480.

Priority may also be lost by an adverse use of the water by another for a sufficient length of time to bring it within the Statute of Limitations, and acquiescence therein on the part of the former appropriator. Therefore injunction will lie in such case, without proof of actual damage.

Brown vs. Ashley, 16 Nev., 312.
A prior appropriator who for many years makes no use of the water, but allows another to construct a ditch and divert such water without notifying the latter of his prior appropriation, will be presumed to have abandoned the same.

Since the right held by an appropriator is an interest in land, an attempted *verbal* sale or transfer of his right operates as an abandonment of his priority, inasmuch as it conveys nothing to the other party, and at the same time shows an intent on his part to relinquish his interest.

Neither a change of the *point of diversion* on the same stream, nor a change in the *use* to which the water is put, will affect the priority of an appropriation, provided there be no change in the amount taken or the quality of the water when returned to the stream, and providing no intervening appropriator's rights be affected.

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Moore *vs.* Clear Lake, etc., 8 West Coast Rep. (Cal.) 322.

Smith *vs.* Logan, 18 Nev., 149.

Crandall *vs.* Woods, 8 Cal., 136.


Smith *vs.* O'Hara, 43 Cal., 341.

Barclay *vs.* Tiekele, 2 Mont., 59.

Sieber *et al*., *vs.* Frink *et al*., 7 Colo., 148.

Davis *vs.* Gale, 32 Cal., 26.
One may also appropriate water and return it to the natural stream and take it out again below, and the whole be regarded as one and the same appropriation. But it must be returned with the intent to recapture it below.

Davis vs. Gale, 32 Cal., 26.
Richardson vs. Kier, 37 Id. 263.

A priority may also be lost, as we shall see later (Ch. VII.) by failure to make the record required by statute of those who made valid appropriation prior to June 1, 1881.
CHAPTER VII.

THE JUDICIAL ESTABLISHMENT OF PRIORITIES.

As was shown in Ch. IV., G. S. 1720 provides for the establishment of record of all priorities in the case of ditches built after that act went into force, May 12, 1881. At the same session an act was passed partly repealing and partly supplementing an act of 1879, with the intent to provide for the ascertainment, record and settlement of priorities therefore claimed to have been secured.


For the purpose of hearing, adjudicating and settling all questions concerning the priority of appropriation of water between ditch companies and other owners of ditches drawing water for irrigation purposes from the same stream or its tributaries within the same water district, and all other questions of law and questions of right growing out of or in any way involved or connected therewith, jurisdiction is hereby vested exclusively in the District Court of the proper county; but when any water district shall extend into two or more counties, the District Court of the county in which the first regular term after the first day of December in each year shall soonest occur, according to the law then in force, shall be the proper court in which the proceedings for said purpose, as hereinafter provided for, shall be commenced; but where said proceedings shall be once commenced, by the entry of an order appointing a referee in the manner and for the purpose hereinafter in this act provided, such court shall thereafter retain exclusive jurisdiction of the whole subject until final adjudication thereof is had, notwithstanding any law to the contrary now in force. [Sec. 19, pp. 99-100, acts 1879.]
ESTABLISHMENT OF PRIORITIES.

G. S. 1763. Filing Statements of Claim—Ditch, Name, Description—P. O. Address.

In order that all parties may be protected in their lawful rights to the use of water for irrigation, every person, association or corporation owning or claiming any interest in any ditch, canal or reservoir, within any water district, shall, on or before the first day of June, A. D. 1881, file with the clerk of the District Court having jurisdiction of priority of right to the use of water for irrigation in such water district, a statement of claim, under oath, entitled of the proper court, and in the matter of priorities of water rights in district number . . ., as the case may be, which statement shall contain the name or names, together with the post-office address of the claimant or claimants claiming ownership, as aforesaid, of any such ditch, canal or reservoir, the name thereof (if any), and, if without a name, the owner or owners shall choose and adopt a name, to be therein stated, by which such ditch, canal or reservoir shall thereafter be known, the description of such ditch, canal or reservoir as to location of head-gate, general course of ditch, the name of the natural stream from which such ditch, canal or reservoir draws its supply of water, the length, width, depth and grade thereof, as near as may be, the time, fixing a day, month and year as the date of the appropriation of water by original construction, also by any enlargement or extension, if any such thereof may have been made, and the amount of water claimed by or under such construction, enlargement or extension, and the present capacity of the ditch, canal or feeder of reservoir, and also the number of acres of land lying under and being or proposed to be irrigated by water from such ditch, canal or reservoir. Said statement shall be signed by the proper party or parties. [Sec. 1, pp. 142-3, acts 1881.

G. S. 1764. Secretary of State make Publication—Publisher’s Certificate.

The Secretary of State shall, without delay, after the passage of this act, cause a certified copy of the foregoing section, giving the date of the approval of this act, to be published in one of the public newspapers published in such county in which part or portion of any water district is or shall be established by law at the time of such publication; and said section one shall be published, as aforesaid, once in each and every week continuously in said paper until said first
day of June, 1881, and in case in the meantime any one of said papers shall cease to be published, then such publication shall be made in some other paper in same county (if any), and on conclusion of such publication such publisher of such paper shall deliver to the Secretary of State his sworn certificate of publication in duplicate, showing that such publication has been made in his paper in compliance with the preceding section hereof, and stating the first and last day of such publication; and he shall thereupon be entitled to receive from the Secretary of State a certificate of the amount due him for such publication, on presentation of which to the Auditor of State he shall draw his warrant for the amount in favor of the holder on the State Treasurer, who shall pay the same according to law. [Sec. 2, pp. 143-4, acts 1881.

G. S. 1765. Secretary's Certificate—When Filed—Effect.] The Secretary of State shall file one of said duplicate certificates of publication with the clerk of the District Court having jurisdiction of priority of rights to use of water for irrigation in the proper water district, certifying officially that such publication therein mentioned was duly authorized by him, and said clerk shall file the same with the statement of claim provided for in section one hereof, and such certificate of such publisher or any additional certificate of same publisher to same fact in case of loss of the original, shall be proof of the proper publication of said section in the paper therein mentioned. Said Secretary of the State shall also certify to such clerk of the several district courts having jurisdiction of said priorities of right to use of water for irrigation throughout the State, the names of the newspapers, and of the county in which he caused such publication to be made, and that the duplicate certificate of publication of the publisher, as herein required are [is] on file in his office, and said certificate shall be sufficient proof of the publication of said section one hereof, as by this act required. [Sec. 3, p. 144, acts 1881.

PROCEEDINGS IN COURT.

G. S. 1766. Moving Court to Proceed—Order—Evidence—Examination—Proofs—What Facts—Decree—Certificate of Clerk.] When, at any time after the first day of June, A. D. 1881, any one or more persons, associations or corporations, inter-
established as owners of any ditch, canal or reservoir in any water district shall present to the District Court of any county having jurisdiction of priority of rights to the use of water for irrigation in such water district according to the provisions of (sec. 19, G.S., 1762) an act entitled an act to regulate the use of water for irrigation and providing for settling the priority of rights thereto, and for payment of the expenses thereof, and for payment of all costs and expenses incident to said regulation of use, or to the judge thereof in vacation, a motion, petition or application in writing, moving or praying said court to proceed to an adjudication of the priorities of rights to use of water for irrigation between the several ditches, canals and reservoirs in such district, the court, or judge thereof in vacation, shall, without unnecessary delay, in case he shall deem it practicable to proceed in open court, as prayed for, by an order to be entered of record upon such motion, petition or application, appoint a day in some regular or special term of said court, for commencing to hear and take evidence in such adjudication, at which time it shall be the duty of the court to proceed to hear all evidence which may be offered by or on behalf of any person, association or corporation, interested in any ditch, canal or reservoir, in such district, either as owner or consumer of water therefrom, in support of or against any claim or claims of priority of appropriation of water made by means of any ditch, canal or reservoir, or by any enlargement or extension thereof in such district, and consider all such evidence, together with any and all evidence, if any, which may have been heretofore offered and taken in such district in the same matter by any referee heretofore appointed under the provisions of said act above herein mentioned, and also the arguments of parties or their counsel, and shall ascertain and find from such evidence, as near as may be, the date of the commencement of such ditch, canal or reservoir, together with the original size and carrying capacity thereof as originally constructed, the time of the commencement of each enlargement or extension thereof, if any, with the increased capacity thereby occasioned, the time spent, severally, in such construction and enlargement, or extension and re-enlargement, if any, the diligence with which the work was in each case prosecuted, the nature of the work as to difficulty
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of construction, and all such other facts as may tend to show the compliance with the law, in acquiring the priority of right: claimed for each such ditch, canal or reservoir, and determine the matters put in evidence, and make and cause to be entered a decree determining and establishing the several priorities of right, by appropriation of water, of the several ditches, canals and reservoirs in such water district, concerning which testimony shall have been offered, each according to the time of its said construction and enlargement, or enlargements or extensions, with the amount of water which shall be held to have been appropriated by such construction and enlargements, or extensions, describing such amount by cubic feet per second of time, if the evidence shall show sufficient data to ascertain such cubic feet, and if not, by width, depth and grade and such other description as will most certainly and conveniently show the amount of water intended as the capacity of such ditch, canal or reservoir, in such decree. Said court shall further order that each and every party interested or claiming any such ditch, canal or reservoir, shall receive from the clerk, on payment of a reasonable fee therefor, to be fixed by the court, a certificate under seal of the court showing the date or dates and amounts of appropriations adjudged in favor of such ditch, canal or reservoir, under and by virtue of the construction, extension and enlargements thereof, severally; also specifying the number of said ditch and of each priority to which the same may be entitled by reason of such construction, extension and enlargements. [Sec. 4, pp. 144-5-6, acts 1881.

G. S. 1767. Copy of Decree, Authority of Commissioner—Recording Copy—Evidence.] The holder of such certificate shall exhibit the same to the water commissioner of the district when he commences the exercise of his duties, and such water commissioner shall keep a book in which shall be entered a brief statement of the contents of such certificate, and which shall be delivered to his successor, and said certificate, or statement thereof in his book, shall be the warrant of authority to said water commissioner for regulating the flow of water in relation to such ditch, canal or reservoir. Said certificate shall be recorded, at the same rates of charges as in cases of deeds of conveyance,
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in the records of each county into which the ditch, canal or reservoir, to which such certificate relates, shall extend; and said certificate, or said record thereof, or a duly certified copy of such record, shall be prima facie evidence of so much of said decree as shall be recited therein, in any suit or proceeding in which the same may be relevant. [Sec. 5, pp. 146-7, acts 1881.


Notice shall be given by the clerk of said court, of the time so appointed, by publishing the same in one public newspaper in such county into which such water district may extend; which notice shall be so published in such paper once in each week until four successive weekly publications shall have been made, the last of which shall be on a day previous to the day appointed as aforesaid. Said notice shall contain a copy of said order, and shall notify all persons, associations and corporations interested as owners in any ditch, canal or reservoir in such water district, to appear at said court at the time so appointed, and file a statement of claim under oath, in case no statement has been before filed by him, her or them, showing the ditch, canal or reservoir, or two or more such, in which he, she or they claim an interest, together with the names of all the owners thereof, which statement may be made by any one of the owners of such ditch, canal or reservoir for and in behalf of all; and also that all persons interested as owners or consumers may then and there present his, her or their proofs for or against any priority of right of water by appropriation sought to be shown by any party by or through any such ditch, canal or reservoir (either as owner or consumer of water drawn therefrom). Ten printed copies of said notice shall also be posted in ten public places in such water district, not less than twenty days before the day so appointed, which copies shall be so posted by the party or parties moving the adjudication. [Sec. 6, p. 147, acts 1881.

G. S. 1769. Proof of Publication—Of Posting Copies—Entry by Clerk.]
publication to have been made in accordance with the provisions of section three of this act, which certificates shall be procured by the party or parties moving the adjudication, at his or their expense, and on said certificate being filed, the clerk shall enter the amount of the printer's fee therefor as costs advanced by the party procuring the same, which sum shall be counted to his, her or their credit in distribution of costs. Proof of the posting of said printed copies shall be made by the affidavit of some credible person, certified to be such by the clerk or other officer administering the oath, showing when, where and how said copies were posted. [Sec. 7, pp. 147-8, acts 1881.

G. S. 1770. Notices Served on All Parties—How Served—Notice by Mail.] The party or parties moving such adjudication shall cause a printed or written copy of the notice aforesaid, published as aforesaid, to be served on every person, association or corporation shown by the statement of claim on file, as provided in section one hereof, which service shall be made within ten days from the time of the first publication by the clerk, by any credible person certified by said clerk or referee to be such, by delivering such copy as aforesaid to the person to be served, if such person, by due diligence can be found in the county of his residence. If such person cannot be found, as aforesaid, then, by leaving such copy at his or her usual place of residence, if he or she have such residence, in charge of some person of the age of fourteen years or over, there residing; and on any corporation, by delivering the copy to the president, or vice-president, or secretary, or treasurer thereof, or the manager or superintendent in charge of their ditch, canal or reservoir, or authorized agent or attorney, or by leaving such copy at the office or usual place of business of such corporation, and the proof of such service shall be made by affidavit of the person or persons serving said copies, showing when and how such service has been made on such party. In case of parties not served in any manner as aforesaid, the clerk shall deposit in the post-office, duly enclosed in an envelope with the proper postage stamp thereon, a copy directed to the address of such party, shown in the statement of claim aforesaid, filed by him or her under section one hereof. [Sec. 8, pp. 148-9, acts 1881.
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DECREES.

G. S. 1771. Court Number all Ditches—Reservoirs—Number Appropriations.

The court, in making such decree, as aforesaid, shall number the several ditches and canals in the water district, concerning which adjudication is made, in consecutive order, according to priority of appropriation of water thereby made by the original construction thereof, as near as may be, having reference to the date of each decree as rendered, and shall also number the reservoirs in like manner, separately from ditches and canals, and shall further number each several appropriation of water consecutively, beginning with the oldest appropriation, without respect to the ditches or reservoirs by means of which such appropriations were made; whether such appropriation shall have been made by means of construction, extension or enlargement, which number of each ditch, canal or reservoir, together with the number or numbers of any appropriations of water held to have been made by means of the construction, extension or enlargement thereof, shall be incorporated in said decree and certificate of the clerk, to be issued to the claimants, as provided in section one of this act, so as to show the order in priority of such ditch or canal, and of such reservoir, and also of such successive appropriation of water pertaining thereto, for the information of the water commissioner of the district in distributing water; such numbering to be as near as may be having reference to date of decrees as rendered. [Sec. 9, p. 149, acts 1881.

REFEEES.

G. S. 1772. When Court may Appoint Referee—What Referred.

If for any cause the judge of said court shall deem it impracticable or inexpedient to proceed to hear such evidence in open court, he shall, instead of the order mentioned in section four of this act, make and cause to be entered of record an order appointing some discreet person, properly qualified, a referee of said court, to whom shall be referred the statement of claim aforesaid on file in said matter, the matter of taking evidence and reporting the same, making an abstract and findings upon the same, and preparing a decree in said adjudication; and also in case of any water district in
which a referee has been heretofore appointed, and evidence
taken by him under the provisions of the act, the title of
which is recited in section four of this act; such evidence so
already taken, together with the abstract thereof, and report of
the referee who took the same, shall be also referred to said
referee, to be appointed as aforesaid, and he shall proceed
with his duties as hereinafter provided, first taking an oath [of]
office, such as is required to be taken by referees in other
cases under the provisions of the code of civil procedure.
[Sec. 10, pp. 149-50, acts 1881.

REFEREE'S NOTICE.

G. S. 1773. Contents of Notice—How Published—Posting Copies.
Said referee shall prepare and publish a notice containing
a copy of the order appointing him, in which notice he shall
appoint a time or times, and place or places, suitable and con­
venient for the claimants in such water district, at which he will
attend for the purpose of hearing and taking evidence touch­
ing the priority of right of the several ditches, canals and
reservoirs in said district, and notifying all persons, associa­
tions and corporations interested as owners or consumers of
waters [water] to attend by themselves, their agents or attor­
neys, at the times and places appointed in said notice, and
notifying such owners to then and there file a statement of
claim in case such statement has not been already filed under
the provisions of section one hereof, such as mentioned in
section six hereof, and present their proofs touching any
priority of right claimed by them for any ditch, canal or reservoir
in said district, which notice shall be published in the same
manner and times, and in all respects according to the provi­sions
for publication of the newspaper notices mentioned in
section six of this act, and proof of such publication shall be
made in the same manner as is provided in section seven of
this act; and he shall also post ten or more printed copies of
such notice in ten or more public places in said district, which
copies shall be so posted at least twenty days before the time
of commencing to take said evidence. [Sec. 17, p. 150, acts
1881.

G. S. 1774. Proof of Posting Notices.
Proof of the posting of said copies shall be made by the
affidavit of said referee or other person certified by him to be
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a credible witness, which shall show when, where and how the said copies were posted, and shall be filed by him with his report. [Sec. 12, p. 151, acts 1881.

PROCEEDINGS BEFORE REFEREE.

G. S. 1775. Who May Offer Evidence—Former Evidence.]

Said referee shall attend at the times and places mentioned in his said notice, for the purpose therein mentioned; and all persons, associations, choosing to do so, and being interested as owners of or consumers of water from any ditch, canal or reservoir in said district, and may also attend by themselves, their agents or attorneys, before said referee, at some one or more of said times and places so appointed, and shall have right to offer any and all evidence they may think advisable for their interests in the matter to be adjudicated, as well in districts in which evidence has been heretofore taken as in other districts. All such evidence as has been heretofore taken, if any, in such district, shall be kept present by said referee, subject to inspection by any party desiring to examine the same for purposes of the investigation. [Sec. 13, p. 151, acts 1881.

G. S. 1776. Powers and Duties of Referee—Books and Records—Evidence.]

Said referee shall have power to administer oaths to all witnesses, and to issue subpoenas for witnesses and subpoenas duces tecum, which subpoenas may be served by any party, or constable, or sheriff, or deputy sheriff, and may require witnesses to appear at any of the places appointed by said referee for taking evidence. He shall permit all witnesses to be examined by the parties calling them respectively and to be cross-examined by any party interested, and he shall take all testimony in writing and note all objections offered to any part of the testimony taken, with the cause assigned for the objection, and shall proceed in all other respects as in case of taking depositions. He shall certify all books and papers offered by any one in his own behalf, and preserve them with the testimony offered concerning the same, and in case of books and papers offered in evidence, which shall not be under the control of the party desiring the evidence for which such books may be offered, said referee shall make a true copy of
the parts demanded and certify the same, and preserve the same, together with the evidence offered concerning the same and concerning said books and papers, as part of the evidence in the matter. [Sec. 14, pp. 151-2, acts 1881.

G. S. 1777. Refusal to Produce Books or Papers—Effect.]

No person, association or corporation wilfully refusing to produce any book or paper, if in his or their power to do so, when rightfully demanded for examination and copying, shall be allowed the benefit of any testimony or proofs in his, her or their behalf, in making final adjudication, if the court shall be satisfied, from all the evidence shown concerning such refusal, that the same was wilful. [Sec. 15, p. 152, acts 1881.

G. S 1778. What Facts to be Ascertained by Proofs.]

Said referee shall also examine all witnesses to his own satisfaction, touching any point involved in the matter in question, and shall ascertain as far as possible the date of the commencement of each ditch, canal or reservoir, with the original size and carrying capacity thereof, the time of the commencement of each enlargement thereof, with the increased carrying capacity thereby occasioned, the length of time spent in such construction or enlargement, the diligence with which the work was prosecuted, the nature of the work as to difficulty of construction, and all such other facts as may tend to show compliance with the law in acquiring the priority of right claimed for such ditch, canal or reservoir; and upon all the facts so obtained shall be determined the relative priorities among the several ditches, canals and reservoirs, the volume or amount of water lawfully appropriated by each, as well as by means of the construction, as by the enlargements thereof, and the time when each such several appropriations took effect. [Sec. 16, p. 152, acts 1881.

G. S. 1779. Disturbing Proceedings—Penalty.]

Every person present before said referee at any time when he shall be engaged in hearing testimony, who shall wilfully disturb the proceedings; and every person who shall wilfully refuse or neglect to obey any subpoena issued by said referee, when his lawful fees shall be tendered him for his attendance before the referee, shall be guilty of contempt of the court appointing such referee, and on complaint, under
oath of the referee or other person, before the said District Court, or judge thereof in vacation, may be brought before the court or judge and dealt with accordingly. [Sec. 17, pp. 152-3, acts 1881.]

G. S. 1780. Fees of Witnesses—By Whom Paid.] Every witness who shall attend before said referee under subpoena, by request of any party, shall be entitled to the same fees and mileage as witnesses before the District Court in the county in which he shall so attend, and shall be paid by the party requiring his testimony. [Sec. 18, p. 153, acts 1881.

G. S. 1781. Duties of Referee—Rights of Parties—Adjournment—Notice. The said referee shall take all the testimony offered, and for that purpose shall give reasonable opportunity to all parties to be heard, and may at any place, when the time limited thereat shall expire, adjourn the further taking of testimony then proposed or desired to be offered to the next place in order, according to his said published appointments, and at the last place may continue until all testimony shall be taken or make further appointments at any former place or places as may seem best and most convenient for all parties, giving reasonable notice thereof. [Sec. 19, p. 153, acts 1881.

REFEREE'S REPORT.

G. S. 1782. Referee Shall Examine all Testimony—Numbering—Findings—Decree.] Said referee, upon closing the testimony shall proceed to carefully examine the same, together with all testimony and proofs which may have been heretofore taken by any former referee in the same district. if any such shall have been taken, under the provisions of said act, the title of which is recited in section four of this act; he shall make an abstract of all the testimony and proofs in his possession concerning each ditch, canal and reservoir separately, and shall number each ditch and canal in order, and likewise each reservoir, each class consecutively, and also number the several appropriations of water shown by the evidence, all in manner and form as provided in section nine hereof, and shall make a separate finding of all the facts connected with each ditch, canal and reservoir, touching which evidence shall have been offered; and he
shall prepare a draft of a decree in accordance with his said findings, in substance the same as the decree mentioned in section four of this act, and conformable also to the provisions of section nine hereof, so far as the same are applicable, which decree, so prepared by him, shall be returned with his report to the court, and he shall file his report with said evidence, abstract and findings, and said decree, with the clerk of the court, and inform the judge of so doing without delay. [Sec. 20, pp. 153-4, acts 1881.

G. S. 1783. Filing Report—Court Proceed to Determine—Exceptions—Approval—Entry.]

Upon the filing of said report the court, or judge thereof in vacation, shall cause an order to be entered setting some day in a regular or special term of said court as soon as practicable, when the court will proceed to hear and determine the report, at which time any party interested may appear himself or counsel, and move exceptions to any matter in the findings or decree made by said referee, and after hearing the same the court shall, if the decree reported be approved, cause the same to be entered of record, or otherwise such modifications thereof, or other decree as shall be found just and conformable to the evidence and the true intent of this act, and to so much of any and all former laws of the State as shall be adjudged consistent herewith. [Sec. 21, p. 154, acts 1881.

GENERAL PROVISIONS.

G. S. 1784. Failure to Offer Evidence—Water Commissioner disregard Claims until, etc.—Party obtain Decree and present Certificate.]

No claim of priority of any person, association or corporation, on account of any ditch, canal or reservoir, as to which he, or she, or they, shall have failed or refused to offer evidence under any adjudication herein provided for, or heretofore provided by this act, the title of which is recited in section four hereof, shall be regarded by any water commissioner in distributing water in times of scarcity thereof, until such time as such party shall have by application to the court, having jurisdiction, obtained leave and made proof of the priority of right to which such ditch, canal or reservoir shall be justly
entitled, which leave shall be granted in all cases upon terms as to notice to other parties interested, and on payment of all costs, and upon affidavits or petition sworn to, showing the rights claimed, and the ditches, canals and reservoirs, with the names of the owners thereof against which such priority is claimed, nor until a decree adjudging such priority to such ditch, canal or reservoir has been entered, and certificate, such as mentioned in section four hereof, shall have been issued to claimant and presented to the water commissioner. [Sec. 22, pp. 154-5, acts 1881.

G. S. 1785. Rights of Parties against Referee for Neglect, Oppression, etc.

Every party interested shall have the right to complain to the court of any act of wilful neglect or oppression on the part of the said referee in exercising his powers under this act, whereby such party shall have been aggrieved, either by refusal of said referee to hear or take evidence offered, or by preventing reasonable opportunity to offer such evidence; and the court may order such proceedings in the premises as will give redress of the grievance, at the cost of said referee, if he appear wilfully in fault; otherwise, in case of accident or mistake, costs shall be awarded as to the court shall seem just [Sec. 23, p. 155, acts 1881.


The District Court, or judge thereof in vacation, shall have power to make all orders and rules consistent with this act which may be found necessary and expedient, from time to time during the progress of the case, for carrying out the intent of this act, and of all parts consistent therewith of the said act, the title of which is recited in section four hereof; as well touching the proceedings in court as of the acts and doings of said referee, for the purpose of securing to any party aggrieved by the acts of said referee or any proceeding of the court, opportunity for redress; and this act shall be construed liberally in all courts, in favor of securing to all persons interested the just determination and protection of their rights. [Sec. 24, p. 155, acts 1881.]
G. S. 1787.  Party must File Claim before offering Evidence.]  
No persons, associations or corporation representing any ditch, canal or reservoir, shall be permitted to give or offer any evidence before said referee until he, she or they shall have filed a statement of claim in substance the same in all respects as is required to be filed under the provisions of section one hereof.  [Sec. 25, p. 155, acts 1881.

G. S. 1788.  Re-Argument—Review—Limitation two years.]  
The District Court, or judge thereof in vacation, shall have power to order, for good cause shown, and upon terms just to all parties, and in such a manner as may seem meet, a re-argument or review, with or without additional evidence, of any decree made under the provisions of this act, whenever said court or judge shall find from the cause shown for that purpose by any party or parties feeling aggrieved, that the ends of justice will be thereby promoted; but no such review or re-argument shall be ordered unless applied for by petition or otherwise within two years from the time of entering the decree complained of.  [Sec. 26, p. 156, acts 1881.

APPEALS.

G. S. 1789.  Who May Appeal—Statement—Approval—Contents—Order—Bond—Conditions.]  
Any party or parties representing any ditch, canal or reservoir, or any number of parties representing two or more ditches, canals or reservoirs, which are affected in common with each other by any portion of such decree, by which he or she or they may feel aggrieved, may have an appeal from said District Court to the Supreme Court, and in such case the party or parties joining, desiring an appeal, shall be the appellants, and the parties representing any one or more ditches, canals or reservoirs affecting in common adversely to the interests of appellants shall be the appellees.  The party or parties joining in such appeal shall file a statement in writing, verified by affidavit properly entitled in such cause in the District Court, which statement shall show that the appellants claim a valuable interest in the ditch, canal or reservoir, or two or more of such, which are affected in common with each other by some portion of said decree; also stating the name or names, or otherwise the description of the same, and
the name or names, or otherwise the description of any one or
more other ditches, canals [or] reservoirs, which by said
decree derive undue advantage in respect of priority as against
that or those represented by appellants; and also setting
forth the name or names of the party or parties claiming such
other one or more ditches, canals or reservoirs, affected in
common by said decree adversely to the interest of appellant
or appellants, and praying that an appeal be allowed against
such other parties as appellees. If the court or judge in vaca-
tion, on examination, find such statement in accordance with
the statements of claim filed by the parties named as appel-
lees, mentioned in section one of this act, he shall approve the
same and make an order to be prepared and presented by the
appellants allowing the appeal and showing the name or names
of the appellants and appellees, with the name or names or
description of the one or more ditches, canals or reservoirs
claimed by the party or parties appellant and appellee, as
shown by their several statements of claim filed as aforesaid,
before the taking of testimony, and fix the amount of the
appeal bond, which bond shall be executed by one or more of
appellants, as principal or principals, and by sufficient securi-
ties, and approved by the court or judge in vacation, and shall
be conditioned for the payment of all costs which may be
awarded against the appellants or any of them in the Supreme
Court. [Sec. 27, pp. 156-7, acts 1881.

Section 1 of this act referred to last above is G. S. 1763.

G. S. 1790. Copy of Order served on Appellees—Publication posting
copies—Proof.]
The order last aforesaid shall be entered of record, and
the appellant or appellants shall cause a certified copy thereof
to be served on each of the appellees, by delivering the same
to him or her, if he or she may be found, or otherwise serving
the same in manner the same as may be at the time provided
for serving summons from the District Court by the laws then
in force, and shall also cause the said order to be published in
the same manner as the notices required to be published by
the referee mentioned in section eleven of this act, and proof
of the publication in any newspaper shall be the same as in
case of said referee's notice, and proof of the posting of the
ten printed copies in the district shall be by affidavit of the
parties posting the same, with the certificate of the clerk of the District Court appealed from, that the affiant is a known and credible person. [Sec. 28, p. 157, acts 1881.

1791. Transcript to be Filed in Six Months—Bill of Exceptions.

The appellant or appellants shall file the transcript of record of the District Court with the clerk of the Supreme Court at any time within six months after the appeal shall be allowed as aforesaid. Only so much of the decree appealed from, and so much of the evidence as shall effect the appropriations of water claimed by means of the construction or enlargement or re-enlargement of the several ditches, canals and reservoirs mentioned in the order allowing the appeal, need be copied into the bill of exceptions. [Sec. 29, pp. 157-8, acts 1881.

G. S. 1792. Costs in Supreme Court.

The Supreme Court, on dismissal of such appeal, or on affirming or reversing the parts of the decree appealed from, in whole or in part, shall award costs, as in its discretion shall be found and held to be equitable. [Sec. 30, p. 158, acts 1881.

G. S. 1793. Supreme Court amend or make new Decree, or remand with Instructions.

The Supreme Court, in all cases in which judgment is rendered, and any part of the decree appealed from is reversed, and in which it may be practicable, shall make such decree in the matters involved in the appeal as should have been made by the District Court, or direct in what manner the decree of that Court should be amended. [Sec. 31, p. 158, acts 1881.

G. S. 1794. Filing proof of Service and Notice—Sixty Days—Supreme Court make Rules.

The said proof of the service and publication of said order allowing the appeal shall be filed with the clerk of the Supreme Court within sixty days after the making of said order, and if not so filed the Supreme Court shall, on motion of the appellee or any of the appellees, at any time after such default in filing said proof, and before the said proof shall be filed, dismiss such appeal, and if the transcript of record be not filed within the time limited by section twenty-nine of this act, such appeal shall, on motion, be dismissed. After the filing of the record and proof of service aforesaid, the cause
ESTABLISHMENT OF PRIORITIES.

on appeal shall be proceeded with as the rules of the Supreme Court, or such special rules as said court may make in such cases, and their order from time to time thereunder may require. Said court shall have power to make any and all such rules concerning such appeals as may be necessary and expedient in furtherance of this act, as well as to preparation of the case for submission as to supplying deficiencies of record, if any, and for avoiding unnecessary costs and delay. [Sec. 32, p. 158, acts 1881.

G. S. 1795. Court may Dismiss Referee—Vacancy—New Appointment.

The district court, or judge thereof in vacation, in case of the death, resignation, illness, absence or other disability of the referee hereby provided for, or for any misconduct in him, or other good cause to such judge appearing, shall appoint such other properly qualified person in his stead as he shall deem proper, who shall proceed without delay to perform all the duties of his office, as herein pointed out, which shall remain unperformed by his predecessor in office. [Sec. 33, p. 159, acts 1881.

WHAT SUITS ALLOWED—LIMITATION.

G. S. 1796. Suits must be brought in Four Years—Injunctions in what cases—What Districts—Commissioner's Duty.

Nothing in this act or in any decree rendered under the provisions thereof, shall prevent any person, association or corporation from bringing and maintaining any suit or action whatsoever hitherto allowed in any court having jurisdiction, to determine any claim of priority of right to water, by appropriation thereof, for irrigation or other purposes, at any time within four years after the rendering of a final decree under this act in the water district in which such rights may be claimed, save that no writ of injunction shall issue in any case restraining the use of water for irrigation in any water district wherein such final decree shall have been rendered, which shall effect [affect] the distribution or use of water in any manner adversely to the rights determined and established by and under such decree, but injunctions may issue to restrain the use of any water in such district not affected by such decree, and restrain violations of any right thereby established, and
the water commissioner of every district where such decree shall have been rendered shall continue to distribute water according to the rights of priority determined by such decree, notwithstanding any suits concerning water rights in such district, until in any suit between parties the priorities between them may be otherwise determined, and such water commissioner have official notice by order of the court or judge determining such priorities, which notice shall be in such form and so given as the said judge shall order. [Sec. 34, p. 159, acts 1881.

G. S. 1797. After Four Years Suit Barred.] After the lapse of four years from the time of rendering a final decree, in any water district, all parties whose interests are thereby affected shall be deemed and held to have acquiesced in the same, except in case of suits before then brought, and thereafter all persons shall be forever barred from setting up any claim to priority of rights to water for irrigation in such water district adverse or contrary to the effect of such decree. [Sec. 35, p. 160, acts 1881.

G. S. 1798. Compensation of Referee—How Paid—His Duty to keep Account.] The referee appointed [as provided] in this act shall be paid the sum of six dollars per day, while engaged in discharging his duties as herein provided, and also his reasonable and necessary expenses and mileage at the rate of ten cents for each mile actually and necessarily traveled by him in going and coming in the discharge of his duties as such referee, which said per diem allowance, expenses and mileage shall be paid out of the treasury of the county in which such water district shall lie, if it be contained in one county, and if such water district shall extend into two or more counties, then in equal parts thereof, shall be paid out of the treasury of such county into which such district shall extend. He shall keep a just and true account of his services, expenses and mileage and present the same from time to time to the District Court, or judge in vacation, verifying the same by oath, and the judge if he find the same correct and just, shall certify his approval thereof thereon, and the same shall thereupon be allowed by the Board of County Commissioners of the county
in which said water district shall lie, but if said [water district] extend into two or more counties, he shall receive from the clerk of the District Court separate certificates, under seal of the court, showing the amount due him from each county, upon which certificate the Board of County Commissioners of the respective counties shall allow the same on presentation thereof. [Sec. 36, p. 160, acts 1881.]

1799. Repeal.]

All laws and parts of laws heretofore in existence inconsistent with the provisions of this act, shall be and the same are hereby repealed. [Sec. 37, p. 160, acts 1881.]

1800. Sheriff not serve Writ outside his County.]

Nothing herein contained shall be construed to authorize any sheriff to serve any writ outside the limits of his own county, or give effect to any record by way of notice or otherwise, in any county other than that in which it belongs. [Sec. 35, p. 106, acts 1879.]

1801. Fees of District Clerk—How audited—Paid.]

The fees of the clerk of the District Court for a service rendered under this act shall be paid by the counties interested in the same manner as the fees of the water commissioners, upon the said clerk rendering his account, certified by the district judge to the board or boards of county commissioners of the county or counties embracing the water district in case of which the services shall have been rendered. [Sec. 43, p. 108, acts 1879.

Session Laws, 1885. Evidence.]

Whenever testimony shall or may be taken in any district created by this act for the purpose of procuring a decree as to appropriation of water and priorities thereof, under the statutes of this State, any testimony therefore taken before any former referee may be introduced, and shall be received as evidence. [Sec. 28, p. 259.

The intent of these acts was that, in combination with G. S. 1720, the matter of priorities would become entirely a question of record, in so far as there might be any question as to the date or amount of appropri-
ation; and in most of the water districts in which the question of priorities has assumed importance the law was promptly complied with. One hundred and two pages of State Engineer Nettleton's report for 1885 are devoted to giving the names of the ditches whose owners have complied with the law for the establishment of priorities. They are arranged by water districts, and show, in tabular form, the name of the ditch, the stream from which the water is diverted, the order of priority, the date of appropriation, the number of cubic feet of water per second appropriated to each priority, the summation of appropriations of each ditch or canal, and the number of cubic feet of water previously appropriated. In a few districts, however, the farmers have failed to act in the matter, some through indifference, others under the advice of counsel that the law is unconstitutional. This latter point has never been passed on directly by our Supreme Court; but in Dorr vs. Hammond, 7 Colo., 79, a point of procedure under the act was passed upon, the court apparently not having thought of any constitutional objection as existing; and in view of the importance which the question may some day assume in all the districts, it will hardly be advisable to "chance it" on this ground.

In an adjudication by a referee, under the statute as to priority of water rights, the decree may be modified for error of the referee in his judgment upon the weight of the testimony.

Dorr vs. Hammond, 7 Colo., 79.

The report above referred to contains (pages 30–45) a very interesting and suggestive resume of the working of this law in the various districts in which it has
been complied with; and we may add that it is, as a whole, a veritable mine of data and general information on the subject, and a monument to the efficiency of the officer who prepared it.
CHAPTER VIII.

RIGHT OF WAY AND SERVITUDE.

Constitution of Colorado.

Art. II., Sec. 14. When Private Property may be taken for Private Uses.

Private property shall not be taken for private use unless by consent of the owner, except for private ways of necessity, and except for reservoirs, drains, flumes or ditches, on or across the lands of others, for agricultural, mining, milling, domestic or sanitary purposes.

Art. II., Sec. 15. Compensation for Property taken.

Private property shall not be taken or damaged for public or private use without just compensation. Such compensation shall be ascertained by a Board of Commissioners of not less than three freeholders, or by a jury when required by the owner of the property, in such manner as may be prescribed by law, and until the same shall be paid to the owner, or into court for the owner, the property shall not be needlessly disturbed, or the proprietary rights of the owner therein invested [divested]; and whenever an attempt is made to take private property for a use alleged to be public, the question whether the contemplated use be really public shall be a judicial question, and determined as such without regard to any legislative assertion that the use is public.

Art. XVI., Sec. 7. Right of Way for Ditches, etc.

All persons and corporations shall have the right of way across public, private and corporate lands for the construction of ditches, canals and flumes, for the purpose of conveying water for domestic purposes, for the irrigation of agricultural lands, and for mining and manufacturing purposes, and for drainage, upon payment of just compensation.
The above sections entirely eliminate the question of "public use" in condemnation proceedings for irrigation purposes.

The "Eminent Domain" act, incorrectly printed as part of the "Code of Civil Procedure" in the compilation of 1883, "provides a complete system of procedure for the taking or damaging of private property, and determining the compensation therefor, when the same is authorized by law. It complies with the constitution in providing for a Board of Commissioners or jury, but is a special proceeding, and differs in many respects from our ordinary civil action."

Tripp et al. vs. Overocker et al., 7 Colo., 72.

G. S. 309. Right of way—Of water—Crossing—Priority.]

Any ditch company formed under the provisions of this (corporations) act shall have the right of way over the line named in the certificate. [Sec. 275 (85), p. 171, G. L. (The full text of this § may be found in ch. XVI.)

G. S. 1712. Right of way of Owners near Streams.]

When any person owning claims in such locality (on the bank, margin or neighborhood of any stream) has not sufficient length of area exposed to said stream to obtain a sufficient fall of water to irrigate his land, or that his farm or land used by him for agricultural purposes is too far removed from said stream, and that he has no water facilities on those lands, he shall be entitled to a right of way through the farms or tracts of lands which lie between him and said stream, or the farms or tracts of lands which lie above or below him on said stream, for the purposes hereinbefore stated. [Sec. 2, p. 67, acts 1861—Sec. 2, p. 362, R. S.—Sec. 1373 (2), p. 515, G. S.

Said purposes are for the availing himself of the use of the water of such stream on his claim. (G. S. 1711., ch. II.)

In Yunker vs. Nichols, 1 Colo., 551, a case decided in 1872, this right was held to exist in favor of those
holding lands so situated as to make it necessary to cross the lands of others, independent of any statutory provisions. The court, Hallett, C. J., says: "When the lands of this Territory were derived from the general government, they were subject to the law of nature, which holds them barren until awaked to fertility by nourishing streams of water, and the purchasers could have no benefit from the grant without the right to irrigate them. It may be said that all lands are held in subordination to the dominant rights of others who must necessarily pass over them to obtain a supply of water to irrigate their own lands, and this servitude arises, not by grant, but by operation of law."

G. S. 1713. Extent of such Right of Way.

Such right of way shall extend only to a ditch, dyke or cutting sufficient for the purpose required. [Sec. 3, p. 67, acts 1861—Sec. 3, p. 363, R. S.—Sec. 1734 (3), p. 515, G. L.]

G. S. 1715. Condemnation of Right of Way.

Upon the refusal of the owners of tracts of land or lands, through which said ditch is proposed to run, to allow of its passage through their property, the person or persons desiring to open such ditch may proceed to condemn and take the right of way therefor (under the provisions of the "Eminent Domain Act"). [Sec. 1376 (5), p. 516, G. L.]

G. S. 1716. Only one Ditch if practicable.

No tract or parcel of improved or occupied land in this State shall, without the written consent of the owner thereof, be subjected to the burden of two or more irrigating ditches constructed for the purpose of conveying water through said property to lands adjoining or beyond the same, when the same object can feasibly and practicably be attained by uniting and conveying all the water necessary to be conveyed through such property in one ditch. [Sec. 1, p. 164, acts 1881.]
G. S. 1717. Shortest Route must be taken.]

Whenever any person or persons find it necessary to convey water for the purpose of irrigation through the improved or occupied lands of another, he or they shall select for the line of such ditch through such property the shortest and most direct route practicable upon which said ditch can be constructed with uniform or nearly uniform grade, and discharge the water at a point where it can be conveyed to and used upon the land or lands of the person or persons constructing such ditch. [Sec. 2, p. 164, acts 1881.

G. S. 1718. Owner must permit Others to Enlarge.]

No person or persons having constructed a private ditch for the purposes and in the manner hereinafter provided, shall prohibit or prevent any other person or persons from enlarging or using any ditch, by him or them constructed, in common with him or them, upon payment to him or them of a reasonable proportion of the costs of construction of said ditch. [Sec. 3, p. 164, acts 1881.

Of secs. 1716 and 1718 our Supreme Court says: "We think it was competent for the Legislature to adopt § 1716 aforesaid; it does not conflict with the constitutional provisions granting a right of way for the construction of ditches; but while recognizing the privilege, it simply undertakes to regulate the exercise thereof so as to inflict the least possible inconvenience and injury upon the owner of the servient estate. Sec. 1718 is in most respects a complement of § 1716. But in so far as the latter undertakes to limit or direct the compensation to be paid for the property, it is clearly unconstitutional and void. The right to enlarge and use the ditch of another already constructed will be enforced in the same manner and under the same law as the right to take or damage any other kind of private property."

Tripp et al. vs. Overocker et al., 7 Colo. 72.
Right of way and the right to condemn the same are also given by G. S. 1719 (ch. V.), when the head of a ditch is to be extended up stream.

G. S. 1727. Right of Way to owners of Wheels, etc.] The right of way shall not be refused by the owner of any tract of land upon which it is required (by those who wish to place wheels upon the bank of a stream), subject of course to the like regulations as required for ditches, and laid down in sections hereinbefore enumerated. [Sec. 8, pp. 68-9, acts 1861—Sec. 6, p. 364, R. S.—Sec. 1377 (6), p. 516, G. L.

G. S. 338. Ditch, etc., Company may Condemn real estate needed.] If any corporation formed under this (corporations) act for the purpose of constructing a ..... ditch ..... shall be unable to agree with the owner for the purchase of any real estate required for the purposes of any such corporation or company, or the transaction of the business of the same, or for right of way, or any other lawful purpose connected with or necessary to the operations of such company, such corporations may acquire such title in the manner provided by law. [Sec. 304 (114), p. 182, G. L.

G. S. 339. Entry on land to Survey, etc.] Any company formed under the provisions of this act for the purpose of constructing a ..... ditch ..... may cause such examination and survey as may be necessary to the selection of the most advantageous route, and for such purpose, by its officers, agents or servants, may enter upon the lands of any person or corporation, but subject to liability for all actual damages which shall be occasioned thereby. [Sec. 305 (115), p. 183, G. L.

As to the nature of the estate which may be acquired by condemnation, there is nothing in the constitution, the statutes, the court decisions, the general theory of the law of the "Eminent Domain," or the reason of things to indicate that any higher estate can be obtained than that absolutely necessary to enable the owner of the prospective ditch to build the
same and keep it in repair. No more can be taken than is necessary for the accomplishment of the object, and if the language of the act admits of a construction which will leave the fee in the owner, subject to the easement, it will be so construed.

Mills Eminent Domain, §49.
Washington Cemetery vs. Prospect Park Ry., 68 N. Y., 59.

The "Eminent Domain" act, §6, says that the petitioner shall become "seized in fee" of the lands, etc., but the constitution does not give power further than to "take private property;" and in view of the strict rules of construction in such proceedings, no greater interest in the property would be allowed to be taken than the necessities of the petitioner required; indeed, the petitioner might not want more than an easement.

U. S. Rev. Stat., 2339 (Ch. II.), provides for right of way as between two settlers on the public domain.

An interesting question suggests itself here, as to what are the rights of settlers on government land, in this connection, before obtaining patent. As we have seen, Congress has by various enactments granted rights of way and water in the public lands and streams, and that any one who takes land from the government takes it subject to any valid appropriation or easement to which it may be subject at the time his title attaches. This time is held to be the date of the issuing of his patent thereto, and that there is no relation back of his rights to the time of his settlement or filing.
Lands may be condemned for reservoir purposes in the same manner as provided by law for the condemnation of lands for the right of way for ditches. (G. S. 1724, cited in ch. IX.)

The case of the South Boulder D. & R. Co. vs. The Community D. & R. Co., now pending on appeal in our Supreme Court, involves the question of the right of one such corporation to condemn for its own use the reservoir site of another. Such an action was begun by appellant against appellee and others, both companies being at the time engaged in the construction of their works, the South Boulder Company claiming prior rights under G. S. 309 and 1720, whereupon the Community Company procured a perpetual injunction against the condemnation proceedings in the Boulder County District Court, from which judgment the appeal was taken.
CHAPTER IX.

RESERVOIRS.

G. S. 1724. Right to Water—Right of Way—Embankments.]

Persons desirous to construct and maintain reservoirs for the purpose of storing water, shall have the right to take from any of the natural streams of the State and store away any unappropriated water not needed for immediate use for domestic or irrigating purposes; to construct and maintain ditches for carrying such water to and from such reservoir, and to condemn lands for such reservoirs and ditches in the same manner provided by law for the condemnation of lands for right of way for ditches; Provided, no reservoir with embankments or a dam exceeding ten feet in height shall be made without first submitting the plans thereof to the County Commissioners of the county in which it is situated, and obtaining their approval of such plans. [Sec. 38, pp. 106-7, acts 1879.

G. S. 1725. Conducting Water in Natural Streams.]

The owners of any reservoir may conduct the water therefrom into and along any of the natural streams of the State, but not so as to raise the waters thereof above ordinary high water mark, and may take the same out again at any point desired, without regard to the prior rights of others to water from said stream; but due allowance shall be made for evaporation and scapage, the amount to be determined by the commissioners of irrigation of the district; or if there are no such commissioners, then by the County Commissioners of the county in which the water shall be taken out for use. [Sec. 39, p. 107, acts 1879.

G. S. 1726. Damages.]

The owners of the reservoirs shall be liable for all damages arising from leakage or overflow of the waters therefrom, or by floods caused by breaking of the embankments of such reservoirs. [Sec. 40, p. 107, acts 1879.
RESERVOIRS.

See Ch. X. as to the nature of this liability.

Subject to the rights of others, one may utilize the bed of a non-navigable stream upon the public domain as a reservoir for the purpose of storing and preserving the water, even though an actual diversion from the bed of the stream does not take place until a subsequent date.

CHAPTER X.

DUTIES, LIABILITIES AND PENALTIES.

As we shall see (ch. XI.), ditch owners are obliged to furnish water to persons owning lands under them, under certain circumstances.

U. S. Rev. Stat., 2339. Damages.] Whenever any person, in the construction of any ditch or canal, injures or damages the possession of any settler on the public domain, the party committing such injury or damage shall be liable to the party injured for such injury or damage.

G. S. 312. Keeping Ditch in Repair.]
Every ditch company organized under the provisions of this (corporations) act shall be required to keep their ditch in good condition so that the water shall not be allowed to escape from the same to the injury of any mining claim, road, ditch or other property; and whenever it is necessary to convey any ditch over, across or above any lode or mining claim, or to keep the water so conveyed therefrom, the company shall, if necessary to keep the water of said ditch out or from any claim, flume the ditch so far as necessary to protect such claim or property from the water of said ditch. [Sec. 278, 188, pp. 172-3, G. L.

G. S. 1726. Liability for Damages.]
The owners of reservoirs shall be liable for all damages arising from leakage or overflow of the waters therefrom, or by floods caused by the breaking of the embankments of such reservoirs. [Sec. 40, p. 107, acts 1879.

G. S. 1728. Maintaining Embankments—Tail Ditch.]
The owner or owners of any ditch for irrigation or other purposes shall carefully maintain the embankments thereof, so that the waters of such ditch may not flood or damage the
DUTIES, LIABILITIES AND PENALTIES.

premises of others, and shall make a tail ditch so as to return
the water in such ditch with as little waste as possible into the
stream from which it was taken. [Sec. 7, p. 36, R. S., with
first clause, amendment 1872—p. 144, sec. 1, second clause—
sup. by sec. 2, p. 78, acts 1876.

As to the requirement of a "tail ditch," the rule
laid in Coffin _et al. v._ Left Hand Ditch Co., 6 Colo.,
443, that the water may be carried across a divide and
used in another valley, would make this part of the
statute nugatory in such a case.

As to the nature of the liability of ditch and reser-
voir owners under the sections above cited, and especi-
ally G. S. 1726, in so far as they may change the common
law liability under like circumstances, there has been no
decision of our Supreme Court. The liability in such
cases at common law has been considered in several Cal-
ifornia cases. In Hoffman _v._ Tuolumne etc. Co., 10 Cal.,
413, which was an action brought to recover damages
caused by the breaking of defendant's dam; the right
to recover was based upon an allegation that the dam
was built in a careless and insufficient manner. It was
held that such claim presented a good cause of action,
if the bad construction was the proximate cause of the
damage. But a charge that, "If the jury believed that
the defendant could have constructed the dam in a
better or more substantial manner, so as to prevent its
breaking, then the defendant was liable," was held
erroneous, as stating the defendant's duty and liability
too broadly. It was held, that the question is not
what the defendant could possibly have done, but
what discreet and prudent men should ordinarily do
in such cases, where their own interests are to be
affected. In Wolfe _v._ St. Louis, etc., Co., 10 Cal., 541,
the test was held to be, that care and caution which ordinarily prudent men use in like instances in their own affairs. The English rule in such cases makes the ditch or reservoir owner an insurer of the safety of the property of others against all possible injury occasioned by his structures, irrespective of any question of negligence, and even though caused by an unusual storm or "act of God." Mr. Pomeroy says in this connection: "While the English doctrine is extreme in one direction, it may well be doubted whether this rule ["reasonably prudent"] does not go too far in the other extreme and impose an insufficient liability upon the owners of water works. Since these structures are necessarily dangerous to neighboring proprietors, and since the injury caused by their accidental bursting and overflow is necessarily great, it would seem just that these owners should be required to use all reasonably possible means in their construction and management to prevent accidental injuries thereby. I would venture to suggest that the rule as laid down by the trial court in the case of Hoffman vs. Tuolumne etc. Co., above quoted, would be more reasonable and just to all the parties interested, than the one finally adopted by the court. These dams, reservoirs and other structures, in their essentially dangerous nature, have some analogy, at least, to railways, and the same test of liability might, under their respective circumstances, be appropriately applied to each."

2 West Coast Rep., 165.

In Burbank vs. West W. etc. Co., 13 Nev., 431, it was held that defendant was bound to provide against such floods as had occurred within his knowledge.
It was also held in Trale vs. Sears etc. Co., 12 Cal., 555, that the doctrine of contributory negligence could not apply to an injury caused by such negligence of the defendant; that a want of reasonable care on the plaintiff's part could not be set up to such an action.

Reverting now to G. S. 1726, it may be suggested that the rule as to the necessity of proof of negligence under it should be the same as that under G. S. 2804, which fixes the liability of railway companies for killing stock, the language, "shall be liable for damages," being the same in both. In A., T. & S. F. R. R. Co. vs. Lujan, 6 Colo., 338, the only decision thus far on this statute in our Supreme Court, the railroad company assigned for error, that there was no proof of negligence on their part, thus directly raising the question under consideration; but all that there is in the report to indicate the opinion of the court on this point is: "The testimony as to the manner in which the horse was killed, though somewhat conflicting, is sufficient to sustain the finding and judgment of the County Court." An examination of the abstract and briefs show that the railroad company denied that there was any evidence, first, to show that the horse was killed by them; or, second, that there was any negligence on their part; and as there certainly was no evidence whatever of any negligence, the court may be said to have meant by its decision that no proof of negligence is necessary; and this is the rule followed by our nisi prius courts generally in such cases.

G. S. 1730. Crossing highways—Bridge.)

Any ditch company constructing a ditch, or any individual having ditches for irrigation, or for other purposes, wherever the same be taken across any public highway or public traveled
road, shall put a good substantial bridge, not less than fourteen feet in breadth, over such water course where it crosses said road. [Sec. 10, p. 364, R. S.—Sec. 1381 (10), p. 516, G. L.]

G. S. 1731. Ditch must be Bridged in Three Days—Duty of Supervisor.

When any such ditch or watercourse shall be constructed across any public traveled road, and not bridged within three days thereafter, it shall be the duty of the supervisor of the road district to put a bridge over said ditch or watercourse, of the dimensions specified in section ten of this chapter, and call on the owner or owners of the ditch to pay the expenses of constructing such bridge. [Sec. 11, p. 364, R. S.—Sec. 1382 (21), p. 517, G. L.]

Sec. 10 referred to in last above section is G. S. 1730.

G. S. 1732. Proceedings against Owner for Payment—Damages.

If the owner or owners of such ditch refuse to pay the bill of expenses so presented, the supervisor may go before any justice of the peace in the township or precinct, and make oath to the correctness of the bill, and that the owner or owners of the ditch refuse payment; and thereupon such justice of the peace shall issue a summons against such owner or owners, requiring him or them to appear and answer to the complaint of such supervisor in an action of debt for the amount sworn to be due, such summons to be made returnable and served, and proceedings to be had thereon as in other cases; and in case judgment shall be given against such owner or owners, the justice shall assess, in addition to the amount sworn to be due as aforesaid, the sum of ten dollars, as damages arising from the delay of such owner or owners, such judgment to be collected as in other cases, and to be a fund in the hands of the supervisor of roads, for the repairs of roads in such precinct or district. [Sec. 12, p. 365, R. S.—Sec. 1383 (12), p. 517, G. L.]

G. S. 2988. Allowing Water to Waste on Roads.

No person or persons, or corporation . . . . shall cause waste water, or the water from any ditch, road, drain or flume or other place, to flow in or upon any road or highway
so as to damage the same, and any such person or persons or corporation so offending or violating any of the provisions of this section or any of the sections of this act, for which there is no specific penalty provided, shall pay a fine of not less than ten dollars, nor more than three hundred dollars for each offense, and a like fine of ten dollars for each day that such obstruction shall be suffered to remain in said highway, and shall also be liable to any person or persons or corporation in a civil action for any damages resulting therefrom; and it shall be the duty of the road overseer in the district in which such violation shall occur, to prosecute any person, persons, corporation or corporations violating the provisions of this act. [As amended, p. 326, Session Laws, 1885.]

G. S. 2990. Bridging Ditch at Road-Crossing.] Any person or persons, corporation or company, owning or constructing any ditch, race, drain, or flume, in, upon or across any highway, shall keep the highway open for safe and convenient travel by constructing bridges over such ditch, race, drain or flume; and within five days after any ditch is constructed across, in or upon any highway at any point thereof so as to interfere with or obstruct such highway, the person or persons owning or constructing such ditch, shall erect a good and substantial bridge of not less than twenty feet in width across the same, which shall thereafter be maintained by the county; Provided, That all such bridges which shall be of greater length than twenty feet shall be constructed as herein provided, and thereafter maintained in proper condition for safe travel by the owner or owners of said ditch. Any person or persons, corporation or company, constructing any ditch, race, drain or flume, in, upon or across any highway, and failing to keep the highway open for safe and convenient travel, as in this act provided, shall forfeit the sum of twenty-five dollars to the county for each and every day of failure to keep the same open for safe and convenient travel as aforesaid. And any person or persons, corporation or company, who shall fail to erect a good and substantial bridge across any ditch, race, drain or flume, within five days after the same is constructed in, upon or across any highway, and keep the same in proper condition and repair, as herein provided, shall forfeit the sum of twenty-five dollars to the county for each and every
DUTIES, LIABILITIES AND PENALTIES.

Day of failure to erect such bridge and keep the same in repair, as aforesaid, together with the cost of constructing there a good and substantial bridge, or making necessary repairs, which the road overseers of the district shall at once proceed to build or repair, and such party or parties so neglecting shall also be liable in damages to any person or persons damaged by such neglect. [As amended, Session Laws, 1885, p. 324.]


The owner of any irrigating or mill ditch shall carefully maintain and keep the embankments thereof in good repair, and prevent the water from wasting. Sec. 1, p. 78, acts 1876—Sec. 1385 (1), p. 518, G. L.

G. S. 1734. Running Excess of Water Forbidden.

During the summer season it shall not be lawful for any person or persons to run through his or their irrigating ditch any greater quantity of water than is absolutely necessary for irrigating his or their said land, and for domestic and stock purposes; it being the intent and meaning of this section to prevent the wasting and useless discharge and running away of water. [Sec. 2, p. 78, acts 1876—Sec. 1386 (2), p. 518, G. L.

G. S. 1735. Penalty for Violation of this Act.

Any person who shall willfully violate any of the provisions of this act, shall, on conviction thereof before any court having competent jurisdiction, be fined in a sum of not less than one hundred (100) dollars. Suits for penalties under this act shall be brought in the name of the people of the State of Colorado. [Sec. 3, p. 78, acts 1876—Sec. 1387 (3), p. 518, G. L.

G. S. 1736. Owner keep Head-Gate—Size of Timbers.

That the owner or owners of every irrigating ditch, flume or canal, in this State, shall be required to erect and keep in good repair a head-gate at the head of their ditch, flume or canal. Such head-gate, together with the necessary embankments, shall be of sufficient height and strength to control the water at all ordinary stages. The frame-work of such head-gate shall be constructed of timber not less than four inches
square, and the bottom, sides and gate or gates, shall be of plank not less than two inches in thickness. [Sec. 1, p. 165, acts 1881.

G. S. 1737. Liability of Owner for Neglect, Refusal.] Owners of all ditches shall be liable for all damages resulting from their neglect or refusal to comply with the provisions of section one (G. S. 1736) of this act. [Sec. 2, p. 165, acts 1881.

Ditch owners are also required to construct and maintain a weir or measuring device at the heads of their ditches. (Ch. XIV.)

G. S. 1755. Interfering with Head-gate, etc.] Every person who shall wilfully open, close, change or interfere with any head-gate or water box, without authority, shall be guilty of a misdemeanor, and on conviction thereof shall be fined not less than fifty dollars, nor more than three hundred dollars, and may be imprisoned not exceeding sixty days. [Sec. 44, p. 108, acts 1879.

G. S. 1759. Destroying Head-gate, Bank, etc.] Any person or persons who shall knowingly and wilfully cut, dig, break down or open any gate, bank, embankment or side of any ditch, canal, flume, feeder or reservoir in which such person or persons may be a joint owner, or the property of another, or in the lawful possession of another or others, and used for the purpose of irrigation, manufacturing, mining or domestic purposes, with intent maliciously to injure any person, association or corporation, or for his or her own gain, unlawfully, with intent of stealing, taking or causing to run or pour out of such ditch, canal, reservoir, feeder or flume, any water for his or her own profit, benefit or advantage, to the injury of any other person, persons, association or corporation, lawfully in the use of such water or of such ditch, canal, reservoir, feeder or flume, he, she or they so offending shall be deemed guilty of a misdemeanor, and on conviction thereof shall be fined in any sum not less than five dollars nor more than three hundred dollars, and may be imprisoned in the county jail not exceeding ninety days. [Sec. 1, p. 163, acts 1881.
DUTIES, LIABILITIES AND PENALTIES.

G. S. 1760. Jurisdiction of Justices of the Peace.]

Justices of the Peace shall have jurisdiction of all offenses under the provisions of this act (G. S. 1759), saving to any party defendant the right to be tried by a jury, as in other criminal cases before such justices now provided for by law; and also the right to appeal, in manner and form as by law now, or hereafter to be provided for by law, in criminal cases before such justices. [Sec. 2, p. 163, acts 1881.

Session Laws 1885. Trespass.]

Every person who shall wilfully commit any trespass by entering upon the improved or enclosed land of another, without the permission of the owner thereof, with intent to cut, injure or destroy any dam, dyke or embankment kept or maintained for the purpose of storing water in any lake, creek or reservoir, shall, upon conviction therefor, be punished by imprisonment in the county jail not less than ten days nor more than one year, or by a fine not less than fifty dollars and not more than one thousand dollars, or by both such fine and imprisonment. [P. 165.

G. S. 903. Malicious Mischief.]

If any person shall unlawfully, wantonly, wilfully or maliciously, cut down, break down, level, demolish or otherwise destroy or damage any bridge, embankment, mill dam or ditch, being the property of another; . . . . where the value of the personal property destroyed or injured shall exceed twenty dollars, shall on conviction be punished by imprisonment in the State penitentiary not more than five years, or by a fine not exceeding one thousand dollars; or where the value of the personal property destroyed or injured shall be twenty dollars or under, shall, on conviction, be punished by a fine not exceeding one hundred dollars, or imprisonment in the county jail not more than three months, or both such fine and imprisonment, in the discretion of the court. [As amended Session Laws 1885. p. 167.

As embankments, etc., are not personal property, however, the foregoing product of our Senator-makers would hardly inspire much terror in a would-be vandal. But see next section.
DUTIES, LIABILITIES AND PENALTIES.

G. S. 315. Malicious Mischief.]
Any person who shall willfully or maliciously damage or interfere with any ditch, flume, or any of the fixtures, tools, implements, appurtenances or any property of any company which may be organized under the provisions of this act, upon conviction thereof before any court of competent jurisdiction in the county where the offense shall have been committed, shall be deemed guilty of a misdemeanor, and shall be punished by fine or imprisonment, or both at the discretion of the court, said imprisonment not to exceed one year, and said fine not to exceed five hundred dollars, which fine shall be paid into the county treasury for the use of the common schools, and said offender shall also pay all damages that any such corporation may sustain, together with costs of suit. [Sec. 297 (107), p. 180, G. L.

G. S. 382. Polluting Stream or Ditch.]
If any person or persons shall hereafter throw or discharge into any stream of running water, or into any ditch or flume in this State, any obnoxious substance, such as refuse matter from slaughter house or privy, or slops from eating-houses or saloons, or any other fleshy or vegetable matter which is subject to decay in the water, such person or persons shall, upon conviction thereof, be punished by a fine not less than one hundred dollars nor more than five hundred dollars for each and every offense so committed. [Sec. 1, acts 1874, p. 99—Sec. 165, p. 307, G. L.—In force Feb. 13, 1874.

G. S. 3259. Damage to Ditches, etc., by persons floating timber.]
That it shall be lawful for any person or persons to float any and all kinds of timber, such as saw logs, ties, fencing poles or posts and firewood down any of the streams of this State; Provided, that any person or persons desiring to float any such timber down said streams shall first execute a bond running to the people of each county through which such timber is floated, in a sum sufficient to cover all damages that may be done to any bridges, dams or irrigating ditches that are now or may hereafter be constructed in or across any streams of this State; such bond to be approved by the Board of County Commissioners of the county or counties through which such timber is to be floated. [Sec. 1856 (1), p. 643, G. L.

Water sold by the inch by any individual or corporation shall be measured as follows, to-wit: Every inch shall be considered equal to an inch square orifice under a five-inch pressure, and a five-inch pressure shall be from the top of the orifice of the box put into the banks of the ditch to the surface of the water; said boxes, or any slot or aperture through which such water shall be measured, shall in all cases be six inches perpendicular, inside measurement, except boxes delivering less than twelve inches, which may be square, with or without slides; all slides for the same shall move horizontally, and not otherwise; and said box put into the banks of ditch shall have a descending grade from the water in ditch of not less than one-eighth of an inch to the foot. [Sec. 2779 (3), pp. 926-7, G. L.—Sec. 3, p. 638, R. S.—Amd. sec. 1, pp. 308-9, acts 1874 and 1877.

G. S. 3478. Illegal Measurement.

All persons for the purpose of weighing or measuring goods, wares, merchandise, water or other articles actually sold by him, not in accordance with this chapter, shall be deemed guilty of a misdemeanor, and upon conviction thereof may be imprisoned not exceeding one year, or fined not exceeding one thousand dollars at the discretion of the court in which the conviction shall be obtained. [Sec. 2785 (9), p. 928, G. L.—Sec. 9, p. 309, acts 1874.

By omitting the words, "for the purpose of," the intent of the Legislature in enacting the foregoing section may probably be arrived at.

See State Engineer's comment, ch. XVIII.

For penalty for disturbing proceedings before referee see G. S. 1779 (ch. VII).
CHAPTER XI.

THE PURCHASE AND SALE OF WATER.

Colo. Const., Art. XVI, Sec. 8. County Commissioners fix rates for Water.

The General Assembly shall provide by law that the Boards of County Commissioners in their respective counties shall have power, when application is made to them by either party interested, to establish reasonable maximum rates to be charged for the use of water, whether furnished by individuals or corporations.

The corporations act (ch. XVI), provides for the formation of corporations for the purpose of constructing ditches to convey water to lands to be used for irrigating, and empowers such a corporation to run the waters of the stream, from which it takes, through its ditch; and—

G. S. 311. When Corporation must Furnish Water.

Any company constructing a ditch under the provisions of this act shall furnish water to the class of persons using the water in the way named in the certificate, in the way the water is designated to be used, whether miners, mill men, farmers, or for domestic use, whenever they shall have water in their ditch unsold, and shall at all times give the preference to the use of water in said ditch to the class named in the certificate; the rates at which water shall be furnished to be fixed by the County Commissioners, as soon as such ditch shall be completed and prepared to furnish water. [Sec. 277 (87,) p. 172, G. L.

G. S. 1738. Regulating Charges—Proceedings before County Commissioners.

The County Commissioners of each county shall, at their regular January session in each year, hear and consider any and all applications which may be made to them by any party
or parties interested in procuring water for irrigation by purchase from any ditch or reservoir furnishing and selling water, or proposing to furnish water for sale, the whole or upper part of which shall lie in such county, which application shall be supported by such affidavit or affidavits as the applicant may see proper to present, showing reasonable cause for such board to proceed to fix the price of water to be thereafter sold from such ditch or reservoir, and [if] such Board of Commissioners shall, upon examination of such affidavit or affidavits, or from the oaths of witnesses in addition thereto, find that the facts sworn to show the application to be in good faith, and that there is reasonable grounds to believe that unjust prices are, or are likely to be, charged for water from such ditch or reservoir, they shall enter an order fixing a day, not sooner than forty days thereafter nor later than the third day of the [next] regular session of their board, when they will hear all parties directly or indirectly interested in said ditch or reservoir, or in procuring water therefrom for irrigation, who may appear, as well as all the testimony by witnesses, or depositions taken on notices as hereinafter provided, touching the said ditch or reservoir, and the cost of furnishing water therefrom, at which time all persons or corporations interested in said ditch or reservoir, as well as all interested in obtaining water therefrom, or in lands which may be irrigated therefrom, may appear by themselves, their agents or attorneys, and said commissioners shall then proceed to take action in the matter of fixing such price of water, provided the applicant shall, within ten days from the time of entering such order, cause a copy thereof, duly certified, to be delivered to the owner of such ditch or reservoir, if it be owned by one person, or each of the owners, if it be owned by several persons, or to the president, secretary or treasurer of the company, if it belongs to a corporation or association having such officers, or if such owner cannot be found, he shall cause such copy to be left at his usual place of residence, with some person or member of his family residing there, and over fourteen years of age, and if such ditch officer cannot be found, he shall cause such copy to be left at the office or place of business of the company of which he is such officer, or at his residence, if such company have no place of business, and if such ditch is owned by several owners, not an incorporated
company, it shall be sufficient to serve such notice by delivering one such copy each to a majority of them, and such applicant shall make affidavit of the manner in which such copy or copies have been served. Depositions mentioned in section one hereof, to be used before said commissioners, shall be taken before any officer in the State authorized by law to take depositions, upon reasonable notice being given to the opposite party of the time and place of taking such depositions. [Sec. 1, pp. 94-5-6, acts 1879.

G. S. 1739. Powers and duties of Board — Subpoenas — Compulsion — Adjournments — Examination — Facts — Order — Proviso as to Contracts.]

Said board shall hear and examine all legal testimony or proofs offered by any of the parties interested, as before mentioned, as well concerning the value of the construction of such ditch and reservoir as the cost and expense of maintaining and operating the same, and all matters which may affect the just price and value of water to be furnished therefrom; and they shall have power to issue subpoenas to witnesses and compel their attendance, which subpoenas shall be served by the sheriff of the proper county when required; and also to compel the production of books and papers required for evidence in as full and ample a manner as the District Court now has. They may adjourn the hearing from time to time to further the ends of justice or suit the general convenience of parties. Upon hearing an [and] considering all the matters and facts involved in the case, the Board of Commissioners shall enter an order naming and describing the ditch or reservoir with sufficient certainty, and fixing a just price upon all water to be thereafter sold, which price shall not be thereafter changed oftener than once in two years; Provided, That no price so fixed shall effect [affect] the rights of parties, or their lawful assignees or grantees, who may have contracts with the company, association or person owning such ditch or reservoir, or their lessees, grantees or successors, nor the rights of such owners, lessees or grantees under such contract, nor shall it in any way affect or hinder the making of such contract. [Sec. 2, p. 96, acts 1879.
Q. S. 1740. Right to continue Purchasing Water—Tender of Price—Stockholders—Rights.)

Any person or persons, acting jointly or severally, who shall have purchased and used water for irrigation for lands occupied by him, her or them, from any ditch or reservoir, and shall not have ceased to do so, for the purpose or with the intent to procure water from some other source of supply, shall have a right to continue to purchase water to the same amount for his, her or their lands, on paying or tendering the price thereof fixed by the County Commissioners as above provided; or, if no price shall have been fixed by them, the price at which the owners of such ditch or reservoir may be then selling water, or did sell water during the then last preceding year. This section shall not apply to the case of those who may have taken water as stockholders or shareholders after they shall have sold or forfeited their shares or stock, unless they shall have retained a right to procure such water by contract, agreement or understanding, and use between themselves and the owners of such ditch, and not then to the injury of other purchasers of water from or shareholders in [the] same ditch. [Sec. 3, pp. 96-7. acts 1879.

In Golden Canal Co. v. Bright, 5 West Coast Rep., 805, G. S. 1738-1740 were passed upon in several phases.

It was held that the act is not obnoxious to the constitutional objection that more than one subject is treated of, or is expressed in its title. The act was passed in pursuance of Art. XVI., sec. 8, of the Constitution, just cited, and in this regard the court say: "It is plain that the object of the law, as declared in its title, is the regulation of the use of water for irrigation. But it is only by the outlay of large sums of money in constructing and maintaining canals or ditches that the business of agriculture in portions of the State can be extensively and successfully carried on. The average farmer is often too poor to make
the expenditure necessary in maintaining and operating a ditch of his own; besides, it is almost always a matter of economy to convey water long distances through a single large main and then distribute it to the consumers by means of small laterals. Consequently, individuals and corporations like respondent engage in the business of building and operating these mains, and furnishing water to farmers along the line thereof. If these persons or corporations were entirely uncontrolled in the matter of prices, it requires no prophetic vision to see that injustice and trouble would follow. If allowed to speculate in that which is properly a part of the public domain, and protected in the possession thereof, it is exceedingly appropriate that they should be subjected to reasonable regulations in connection therewith."

In Price vs. Riverside Land, etc., Co., 56 Cal., 430, it was held, that a corporation organized under statutes similar to our own, for the purpose of furnishing water for irrigation, etc., "has impressed upon it a public trust—the duty of furnishing water, if water it has, to all those who come within the class or community for whose alleged benefit it has been created. Every such corporation may exercise, on behalf of the public, the power of eminent domain; and no man or company of men, incorporated or otherwise, can take the property of a citizen for his or their own exclusive benefit. So plain a proposition cannot require elaboration. The power—in its nature a public power—and the public duty are correlative. The duty exists without any express statutory words imposing it, wherever the public use appears."
It was further held, in the Golden Canal Co.'s case, that a ditch-owner may make reasonable rules, subject to statutory provisions, to be observed by himself and the consumer, in the sale and distribution of water from his ditch. But under G. S. 1740, a prior purchaser has an affirmative right to continue his purchase of water, and he is not compelled as a condition precedent to the exercise of this right, to acknowledge the equity of all the rules adopted by the ditch-owner. If the rule is fair and reasonable, his obedience thereto will be enforced regardless of the prior approval; but the reasonableness thereof is a matter to be determined in some proper tribunal.

It was further held, that a prior purchaser of water, although he has not made his application therefor within the time prescribed by a rule of the ditch-owner, does not forfeit his right to have water furnished him, if he does so afterwards, while the ditch-owner is able to grant his request. Such right does not depend upon the fact that the applicant has no other source from which to obtain the water desired.

It was further held, that mandamus will lie to enforce rights under this statute.

It was further held, that no appeal lies from the decision of the Board of County Commissioners fixing rates to be charged and paid for water; and the court add: "We may fully agree with counsel, that a review of the decision of the Board of County Commissioners in the premises ought to be provided for. There is opportunity for gross injustice to the ditch-owners, on the one hand, or the consumers on the
other, according as the interest or the inclination of the commissioners might dictate. But our duty is to construe the statute, not to enact it; and as the law now stands, no appeal from such decisions is provided for. Therefore respondent's attempted appeal from the order mentioned in this case fixing the rates, was of no avail."

_Certiorari_ will lie to the action of the commissioners if they exceed their jurisdiction.


In Daly _vs._ Cox, 48 Cal., 127, it was held that an act providing that a Board of Water Commissioners who have power to divide the water of a certain stream, did not prevent those who considered themselves aggrieved by such action from applying to the court for relief in case of injustice on the part of such commissioners. The court said: "We are satisfied that it was not intended to confer upon them a mere arbitrary discretion in the apportionment of water, to be exercised in utter disregard of the rights of proprietors. They are merely agents selected for the public convenience to regulate the distribution of water according to the rights of the parties in interest. But they are not above the law, and have not the power to distribute the water according to their whim or caprice, regardless of the rights of those entitled to it." It would seem that remedy might be had in like manner in the case of arbitrary action of commissioners in fixing rates.
CHAPTER XII.

WATER DISTRICTS AND DIVISIONS.

G. S. 1741.]

The lands now irrigated, or which be hereafter irrigated from ditches now taking water from the following-described rivers or natural streams of the State of Colorado, are hereby declared to constitute irrigation districts. [Sec. 5, p. 97, acts 1879.

G. S. 1742.]

District Number One shall consist of all lands irrigated from ditches from the South Platte River, between its intersection with the State line of Colorado and Nebraska, and the mouth of the Cache-la-Poudre.

G. S. 1743.]

District Number Two shall consist of land irrigated from ditches taking water from the South Platte River and its tributaries, excepting Big Thompson, St. Vrain and Clear Creek, between the mouth of Cache-la-Poudre and the mouth of Cherry Creek.

G. S. 1744.]

District Number Three shall consist of all lands irrigated from ditches taking water from the Cache-la-Poudre and its tributaries.

G. S. 1745.]

District Number Four shall consist of all lands irrigated from ditches taking water from the Big Thompson and its tributaries.

G. S. 1746.]

District Number Five shall consist of all lands irrigated from ditches taking water from the St. Vrain Creek and its tributaries, except the Boulder, its tributaries, and Coal Creek.
G. S. 1747.]

District Number Six shall consist of all lands irrigated from ditches taking water from the Boulder and its tributaries, and Coal Creek.

G. S. 1748.]

District Number Seven shall consist of all lands irrigated from ditches taking water from Clear Creek and its tributaries.

G. S. 1749.]

District Number Eight shall consist of all lands irrigated by ditches taking water from Cherry Creek, Plum Creek and Platte River, and their tributaries, except Bear Creek, above District Number Two, and below the forks of the North and South branches of the Platte River.

G. S. 1750.]

District Number Nine shall consist of all lands irrigated by ditches taking water from Bear Creek and its tributaries.

G. S. 1751.]

District Number Ten shall consist of all lands irrigated from ditches taking water from the Fountain and its tributaries; Provided, That said district shall not extend beyond the limits of El Paso County.

Session Laws 1885, p. 256.]

Sec. 4. District Number Eleven shall consist of all lands irrigated from ditches or canals taking water from that part of the Arkansas River lying in Chaffee County; also all lands irrigated from ditches and canals taking water from the tributaries to the said portion of the Arkansas River.

Sec. 5. District Number Twelve shall consist of all lands irrigated from ditches and canals taking water from that part of the Arkansas River lying in Fremont County; also all lands irrigated from ditches or canals taking water from the tributaries of said portion of the Arkansas River, except Grape Creek and its tributaries.

Sec. 6. District Number Thirteen shall consist of all lands irrigated from ditches or canals taking water from Grape Creek and its tributaries.
WATER DISTRICTS AND DIVISIONS.

SEC. 7. District Number Fourteen shall consist of all ditches or canals taking water from the Arkansas River in Pueblo County; also all lands irrigated by ditches or canals taking water from the tributaries of said Arkansas River in said county, [except] the St. Charles and its tributaries, and the Huerfano and its tributaries.

SEC 8. District Number Fifteen shall consist of all lands irrigated from ditches or canals taking water from the St. Charles and its tributaries.

SEC 9. District Number Sixteen shall consist of all lands irrigated from ditches and canals taking water from the Huerfano and its tributaries.

SEC. 10. District Number Seventeen shall consist of all lands irrigated from ditches and canals taking water from that part of the Arkansas River lying in Bent County; also all lands irrigated from ditches or canals taking water from the tributaries of said portion of the Arkansas River, except the Apishapa and its tributaries, and the Purgatoire and its tributaries.

SEC. 11. District Number Eighteen shall consist of all lands irrigated from ditches and canals taking water from the Apishapa and its tributaries.

SEC. 12. District Number Nineteen shall consist of all lands irrigated from ditches or canals taking water from the Purgatoire and its tributaries.

SEC. 13. District Number Twenty shall consist of all lands irrigated from ditches or canals taking water from that part of the Rio Grande River lying in Rio Grande County; also all lands irrigated from ditches or canals taking water from the tributaries of said portion of the Rio Grande River, which shall include the Piedra, Spring and Gato Creeks.

SEC. 14. District Number Twenty-one shall consist of all lands irrigated from ditches or canals taking water from the Alamosa and La Jara Creeks and their tributaries.

SEC. 15. District Number Twenty-two shall consist of all lands in the State of Colorado irrigated from ditches or canals taking water from Conejos Creek and its tributaries.
SEC. 16. District Number Twenty-three shall consist of all lands irrigated from ditches and canals taking water from that portion of the Rio Grande River which forms the western boundary of Costilla County; also all lands watered by ditches or canals taking water from the tributaries to said portion of the Río Grande River, excepting the Culebra and Costilla Creeks and their tributaries.

SEC. 17. District Number Twenty-four shall consist of lands irrigated from ditches or canals taking water from the Culebra Creek and its tributaries, and as much of the lands as lie in the State of Colorado as are irrigated from ditches or canals taking water from the Costilla Creek and its tributaries.

SEC. 18. District Number Twenty-five shall consist of all lands irrigated from ditches or canals taking water from the San Luis Creek and its tributaries.

SEC. 19. District Number Twenty-six shall consist of all lands irrigated from ditches or canals taking water from the Saguache Creek and its tributaries.

SEC. 20. District Number Twenty-seven shall consist of all lands irrigated from ditches or canals taking water from Tuttle, Carnero, La Garita and all other creeks and their tributaries which have their sources of water supply in the La Garita mountains, and flow eastward into the San Luis valley.

SEC. 21. District Number Twenty-eight shall consist of all lands irrigated from ditches or canals taking water from the Tomichi and its tributaries.

SEC. 22. District Number Twenty-nine shall consist of all the lands lying in the State of Colorado irrigated from ditches or canals taking water from that part of the San Juan River and its tributaries which lie above the junction of the San Juan River and the Rio Piedra, and including the Rio Piedra.

SEC. 23. District Number Thirty shall consist of all lands lying in the State of Colorado irrigated from ditches and canals taking water from that part of the Río Las Animas River and its tributaries which lie in Colorado.

SEC. 24. District Number Thirty-one shall consist of all lands in the State of Colorado irrigated from ditches or canals
taking water from the Los Piños River and its tributaries which lie in Colorado.

Sec. 25. District Number Thirty-two shall consist of all lands in the State of Colorado irrigated from ditches or canals taking water from that part of the Rio Las Animas River and its tributaries which lie in Colorado.

Sec. 26. District Number Thirty-three shall consist of all lands lying in the State of Colorado irrigated from ditches or canals taking water from the La Plata River and its tributaries which lie in Colorado.

Sec. 27. District Number Thirty-four shall consist of all lands lying in the State of Colorado irrigated from ditches or canals taking water from the Rio Mancos and its tributaries.

It will be noticed that districts Thirty and Thirty-two are the same.

The act of 1879, by which the first ten districts were created, also provides: “Other irrigation districts may be formed from time to time by the Governor, on petition of parties interested.” Several districts were formed under this power, and commissioners appointed; and these new districts were incorporated into the new act.

G. S. 1882.]

For the better regulation of the distribution of water for irrigation among the several ditches, canals and reservoirs into which such water may be lawfully taken in times of scarcity thereof, the water districts now or to be hereafter established by law shall be constituted into water divisions, as follows:

G. S. 1883.]

All water districts now or hereafter to be formed, consisting of lands watered from the South Platte River and its tributaries, shall constitute water division number one, and be named the South Platte Division.
All water districts now or hereafter to be formed, consisting of lands watered from the Arkansas River and its tributaries, shall constitute water division number two, and be named the Arkansas Division.

All water districts now or hereafter to be formed, consisting of lands watered from the Rio Grande River and its tributaries, shall constitute water division number three, and be named the Rio Grande Division.

All water districts now or hereafter to be formed, consisting of lands in the State of Colorado watered by the San Juan River and its tributaries, shall constitute water division number four (4), and be named the San Juan Division.

In the present state of the laws, these "divisions" are of no practical importance whatever.
CHAPTER XIII.

WATER COMMISSIONERS, AND THE DISTRIBUTION OF WATER.

G. S. 1714. Allotment on alternate Days.]

In case the volume of water in said stream or river shall not be sufficient to supply the continual wants of the entire country through which it passes, then the County Judge of the county shall appoint three Commissioners as hereinafter provided, whose duty it shall be to apportion in a just and equitable proportion a certain amount of said water upon certain or alternate weekly days to different localities, as they may in their judgment think best for the interest of all parties concerned, and with due regard to the legal rights of all. [Sec. 4, p. 68, acts 1861—Sec. 4, p. 363, R. S.—Amd. sec. 1, p. 158, acts 1870—sec. 1375 (4), p. 515, G. L.

This section has, however, been superseded by the following provisions, adopted in 1879:


There shall be one Water Commissioner for each of the above-named districts, and for each district hereafter formed, who shall be appointed by the Governor, to be selected by him from persons recommended to him by the several Boards of County Commissioners of the counties into which water districts may extend, and the Water Commissioner so appointed shall hold his office until his successor is appointed and qualified. The Governor shall, by like selection and appointment, fill all vacancies which may be occasioned by death, resignation or continued absence from the district, removal or otherwise. Said County Commissioners may, from time to time, recommend persons to be appointed as above.
provided, and the Governor may at any time remove any Water Commissioner in his discretion. [Sec. 16, pp. 98-9, acts 1879.

**G. S. 1753. Oath of Office within ten days.**

That within ten days after his appointment, and before entering upon the duties of his office, such Water Commissioner shall take and subscribe the oath of office prescribed by the constitution of this State. [Sec. 17, p. 99, acts 1879.

**G. S. 1754. Duty of Water Commissioners—Open and shut Head­gates.**

It shall be the duty of said Water Commissioners to divide the water in the natural stream or streams of their district among the several ditches taking water from the same, according to their prior rights of each respectively; in whole or in part to shut and fasten, or cause to be shut and fastened, by order given to any sworn assistant, sheriff or constable of the county in which the head of such ditch is situated, the head­gate of any ditch or ditches heading in any of the natural streams of the district, which, in a time of a scarcity of water, shall not be entitled to water by reason of the priority of the rights of others below them on the same stream. [Sec. 18, p. 99, acts 1879.

**G. S. 1756. Pay of Commissioners—Duty to keep Accounts—How Paid.**

The Water Commissioners herein provided shall be each entitled to pay at the rate of five dollars per day for each day he shall be actually employed in the duties of his office, not to exceed eighty days in any one year, to be paid by the county or counties in which his irrigation district may lie. Each Water Commissioner shall keep a just and true account of the time spent by him in the duties of his office, and shall present a true copy thereof, verified by oath, to the Board of Commissioners of the county in which his district may lie, and said Board of Commissioners shall allow the same; and, if said irrigation district shall extend into two or more counties, then such Water Commissioner shall present his account for his said services, verified as aforesaid, to the Board of County Commissioners of each county into which such district extends, and each Board of County Commissioners shall allow an equal part thereof. [P. 254, acts 1885.
G. S. 1757. Commissioner appoint Assistant—Oath—Pay.

Said Water Commissioner shall have power, in case of emergency, to employ a suitable assistant to aid him in the discharge of his duties. Such assistant shall take the same oath as the Water Commissioner and shall obey his instructions, and shall be entitled to three dollars per day for every day he is so employed, not to exceed twenty-five days, to be paid upon the certificate of the Water Commissioner, in the same manner as provided for paying Water Commissioners. [Sec. 41, p. 107, acts 1879.]

G. S. 1758. Commissioner begin Work when called on.

Said Water Commissioners shall not begin their work until they shall be called on by two or more owners or managers, or persons controlling ditches in their several districts, by application in writing, stating that there is necessity for their action; and they shall not continue performing services after the necessity therefor shall cease.

The following is a list of the Water Commissioners at this date, with their residence and date of appointment, as far as the same may be made with any degree of accuracy from the records in the offices of the Governor and State Engineer, the uncertainties in this regard arising from the negligence of appointees in qualifying and in giving notice of acceptance, resignation, etc. For many of the districts no appointments have ever been made.

II. Edwin L. Baldwin, 1882; A. C. Todd, 1884; Evans.
III. B. S. LaGrange, 1883; Greeley.
IV. William Roper, 1883; Loveland.
V. John Kitely, 1880; Richard Ransom, 1885; Longmont.
VI. Wm. A. Davidson, 1879; Hiram Prince, 1880; Canfield.
VII. G. W. Siegler, 1880; J. W. McKay, 1882; Denver.
VIII. A. A. Curtis, 1881; Sedalia.
IX. Chas. H. Montgomery, 1885; Littleton.
We cite the following from the State Engineer's report for 1885, on the subject of the efficiency and working of the laws in regard to priorities and Water Commissioners:

"The establishment of the office of Water Commissioner has had a most beneficial effect on the practice of water division of streams which were supposed to be entirely appropriated. The constant attendance, and intelligent supervision of the Water Commissioners, has had a marked influence in reducing the number of water quarrels amongst irrigators.

"Like smuggling in England in the olden time, irrigation seems to have the singular power of turning honest, law-abiding citizens, in all other relations of life, into truculent, bellicose rioters, as soon as their real or fancied rights as water users are interfered with. Many men, whose word is their bond, who, in all other relations with their fellowmen, are model neighbors and citizens, and who would not allow themselves to be guilty of stealing (as generally understood,) will deprive their neighbor of water without a scruple. A reason for this may be found in the long-held idea that air and water were the free gifts of God to all men, and the lack of a notion that there could be such a thing as a right to the water of a running stream. The present law has the great virtue of clearly and decisively providing for adjudicating priority of right to the use of the natural waters, and the full and complete
enjoyment of the quantity; and the order of priority so adjudicated is secured to the beneficiary by the powers given to the Commissioner for the enforcement of the law. The mere fact that a man, in whom the neighborhood have confidence, is constantly attentive to the distribution of the water, has a great moral effect. Misunderstandings and disputes relative to water, are settled by him in their incipiency, and good feeling is maintained between appropriators.

“But a few years ago, the march of the whole body of irrigators of a neighborhood, into the up-stream country to shut down head-gates, and compel the “up-streamers” to let water pass, was not an uncommon occurrence. But now the whole matter is regulated; the “shot-gun power” has given place to law and order; the decisions of the courts, when put into practical effect by the acts of the Water Commissioner, will be enforced by the whole power of the State.

“The ill feeling and wrong notions, engendered by years of no law, takes time to eradicate; but it is confidently affirmed that the present irrigation law, as far as it goes, is certainly working wonders in most of the irrigation districts of the State. This is not only the opinion of this office, but that of many who strenuously opposed the law when first proposed, and the State is fortunate in having taken the first bold step forward in a direction which the whole body of appropriators approve as right.”

G. S. 1722. Pro rata Division among Owners.] If at any time any ditch or reservoir from which water is or shall be drawn for irrigation shall not be entitled to a full supply of water from the natural stream which supplies the same, the water actually received into and carried by such ditch, or held in such reservoir, shall be divided among all the consumers of water from such ditch or reservoir, as well as the owners, shareholders or stockholders thereof, as the parties purchasing water therefrom; and parties taking water partly under and by virtue of holding shares, and partly by purchasing the same, to each his share pro rata, according to the amount he, she or they (in cases in which several consume water jointly) shall be then entitled, so that all owners and purchasers shall suffer from the deficiency arising from the cause aforesaid each in proportion to the amount of water which he, she or they should have received in case no such deficiency of water had occurred. [Sec. 4, p. 97, acts 1879.
CHAPTER XIV.

STATE ENGINEER.

G. S. 1807. Governor shall Appoint—May Remove—Office—Salary.]
The Governor shall appoint a State Hydraulic Engineer, who shall hold his office for the term of two years, or until his successor may be appointed and qualified. The Governor may at any time, upon good cause shown, remove said State Engineer. Said State Engineer shall have general supervision over the water companies [commissioners] of the different water districts in the State. He shall have his office at the State capitol, in an office to be provided for him by the Secretary of State, and be subject to his direction and control; who shall also furnish him with suitable furniture, postage, and such proper and necessary books and instruments as will best enable him to discharge the duties of his office. He shall be paid a salary of two thousand dollars per annum, payable quarterly by the State Treasurer, on warrants drawn by the State Auditor. No person shall be appointed as such Hydraulic Engineer who is not known to have such theoretical knowledge and practical skill and experience as shall fit him for the position. [Sec. 6, pp. 119-20, acts 1881.

G. S. 1808. Engineer shall Measure Streams—Collect facts—Report on Reservoirs—Record.]
Said State Engineer shall make, or cause to be made, careful measurements and calculations of the maximum and minimum flow in cubic feet per second of water in each stream from which water shall be drawn for irrigation, as may be best for affording information for irrigating purposes, commencing with those streams most used for irrigation; also to collect facts and make report as to a system of reservoirs for the storage of water, their location, capacity and cost; and he shall keep proper and full records of his work, observations and calculations. [Sec. 7, p. 120, acts 1881.
STATE ENGINEER.

G. S. 1809—Oath—Bond—Condition.

Said State Engineer shall, before entering on the discharge of his duties, take and subscribe an oath before some officer authorized by law to administer oaths, to faithfully perform the duties of his office, and file with the Secretary of State said oath and his official bond, in the penal sum of two thousand dollars, with sureties to be approved by the Secretary of State and conditioned for the faithful discharge of the duties of his office, and for delivering to his successor or other officer authorized to receive the same, all moneys, implements, books and other property belonging to the State then in his hands or under his control, or with which he may be legally chargeable as such officer. [Sec. 8, pp. 120-1, acts 1881.


Said State Engineer will have power to employ assistants at an expense not to exceed one thousand five hundred ($1,500) dollars in any one year, who shall be paid out of any moneys appropriated for that purpose, on certificate of said State Engineer, showing the services rendered and the amount therefor [thereof], and on presentation of such certificate to the State Auditor by the person entitled thereto, he shall issue his warrant on the State Treasurer for the amount thereof, to be paid out of any appropriation aforesaid, and not otherwise. [Sec. 9, p. 277, acts 1883.

G. S. 1811. Annual Report—When to be made.

Said State Engineer shall prepare and render to the government [Governor] yearly and oftener, if required, full and true reports of his work, touching all the matters and duties devolving upon him by virtue of his office, which report shall be delivered at the time when the reports of other State officers are required by law to be made, in order that they may be laid before the General Assembly at each regular session thereof. [Sec. 10, p. 121, acts 1881.

G. S. 1812. Shall measure Ditches' Feeders—Reservoirs.

Said State Engineer shall, on request of any party interested, on payment of his per diem, charges and reasonable expenses, measure and ascertain the carrying capacity of any ditch, canal, or feeder, or any reservoir, hereafter constructed or enlarged, and give to the party or parties requiring his
services an official certificate of the size and carrying capacity of such ditch, canal, or feeder, in cubic feet per second, as he shall find it to be at the time of measuring the same. [Sec. 11, p. 121, acts 1881.

G. S. 1813. Owners of Ditches shall construct Weirs—State Engineer shall compute Water per second.]

For the more accurate and convenient measurement of any water appropriated pursuant to any judgment or decree rendered by any court establishing the claims of priority of any ditch, canal, or reservoir, the owners thereof shall construct and maintain, under the supervision of the State Engineer, a measuring weir or other device for measuring the flow, in cubic feet per second, the water at the head of such ditch, canal or reservoir, or as near thereto as practicable. The State Engineer shall compute and arrange in tabular form the amount of water that will pass such weir or measuring device in cubic feet per second, at the different stages thereof, and he shall furnish a copy of a statement thereof to any Water Commissioners having control of such ditch, canal, or reservoir. [Sec. 12, pp. 121-2, acts 1881.]
CHAPTER XV.

PROPERTY IN WATER—ITS NATURE.

It has never been settled whether the owner of a ditch owns the water which he has appropriated and diverted, or has merely the exclusive right of use in it. Certainly it would seem that in the case of an irrigation ditch, the intent being to consume the water and not return it, the ditch owner would own the water which he has appropriated. Before it reaches his head-gate he has only a right to its use; he can therefore maintain an action for damages against anyone who interferes with his right, and he may enjoin any continued interference; but he cannot waive the tort and sue in contract for the value of it, in case of a wrongful diversion.

Parks C. & M. Co. vs. Hoyt, 57 Cal., 44.
Kidd vs. Laird, 15 Cal., 161.
McDonald vs. Askew, 29 Cal., 100.
Coffin et. al. vs. Left Hand Ditch Co., 6 Colo., 446.

The appropriator's right to have the water flow in the natural stream to the head of his ditch is an incorporeal hereditament appurtenant to his ditch.

L. K. River Co. vs. King's R. Co., 60 Cal., 408.

The ditch itself is of course land, and so if a ditch is built to bring water to a certain tract, the ditch is not appurtenant to the land, and a deed of the land.
"and all the appurtenances thereunto belonging," would not convey the ditch, though it would the water right.

Reed vs. Spicer, 27 Cal., 61.
Quirk vs. Falk, 47 Cal., 453.

One who enters into possession of a ditch use for appropriating water, under a verbal sale made to him of the same, does not succeed to the rights of the settler so as to claim the benefit of the latter's prior appropriation of the water flowing in the same, but must date his appropriation from the time he enters into possession.

Smith vs. O'Hara, 43 Cal., 371.

Ditches and water rights, being realty, must be conveyed, like other real property, by deed.
Smith vs. O'Hara, 43 Cal., 371.
Lobdell vs. Hall, 3 Nev., 507.
Barclay vs. Tiekele, 2 Mont., 59.

General words granting a ditch convey the channel, the right to the water by which it is supplied, and the ditches which convey the water to it.
Ellison vs. Jackson, 12 Cal., 542.

In Schilling et al. vs. Rominger, 4 Colo., 100, it is held, that "parties by their joint acts may acquire common rights to appropriate water unaffected by the Statute of Frauds;" but on a careful examination of the case, it is found not to be in conflict with the general propositions above stated as to the necessity of a deed.

Persons who build an irrigation ditch upon government land, thereby become the owners of the ditch, and remain such as long as they use the ditch for
irrigation purposes; but when they cease to use such ditch for transporting the water, the title to it reverts to the government, or to the party who may in the meantime have acquired the government title in fee to the land over which the ditch passes. If the owner of such a ditch, for years, without objection, allows other persons, settlers along the ditch, to take water therefrom for irrigation, and to assist in keeping the ditch in repair, he will be estopped by his conduct from denying such persons the use of the water and ditch as they had been accustomed to use them.

Lehi Irr. Co. vs. Moyle, 9 West Coast Rep. (Utah), 798.

Water, when collected in reservoirs or pipes, or diverted into a ditch, and thus separated from the original source of supply, is personal property, and is then as much the subject of sale—an article of commerce—as ordinary goods and merchandise.

People ex rel. Heyneman vs. Blake, 19 Cal., 579.
Parks C. & M. Co. vs. Hoyt, 57 Cal., 44.

In an action to recover damages to obstruction of flow, evidence may be given to show that in consequence thereof the owners of the ditch have lost customers.

Natoma Water Co. vs. McCoy, 23 Cal., 490.

A water right, secured by, appropriated for, and used upon lands upon which the appropriator is a trespasser, does not become appurtenant unto the said land.

Smith vs. Logan, 18 Nev., 149.
CHAPTER XVI.

DITCH AND RESERVOIR COMPANIES.

G. S. 308. What Certificate must contain.]

Whenever any three or more persons associate under the provisions of this act to form a company for the purpose of constructing a ditch for the purpose of conveying water to any mines, mills or lands, to be used for mining, milling, or irrigating of lands, they shall, in their certificate, in addition to the matters required in section two of this (corporations) act, specify as follows: The stream or streams from which the water is to be taken out; the point or place on said stream at or near which the water is to be taken out; the line of said ditch, as near as may be; and the use to which the said water is to be applied. [Sec. 274 (84), p. 171, G. L.

G. S. 309. Right of Way and Water.]

Any ditch company formed under the provisions of this act shall have the right of way over the line named in the certificate, and shall also have the right to run the water of the stream or streams named in the certificate through their ditch; Provided, That the line proposed shall not interfere with any other ditch whose rights are prior to those acquired under this act and by virtue of said certificate, except the right to cross by flume; nor shall the water of any stream be diverted from its original channel to the detriment of any person or persons who may have priority of right. [Sec. 275 (85), p. 171, G. L.

G. S. 310. Assessment of Stock.]

Any corporation owning any ditch or canal for conveying, or reservoirs for storing, water for irrigation purposes, and the capital stock being fully subscribed and paid up, and when such corporation shall have no income sufficient to keep its ditch, canal or reservoir in good repair, such corporation shall have power to levy an assessment upon the capital stock
DITCH AND RESERVOIR COMPANIES.

thereof, to be levied pro rata on all the shares of stock, payable in money or labor, or both, for the purpose of keeping the property of such corporation in good repair, and for the payment of any claim against said corporation not otherwise provided for. But no such assessment shall be made unless the question of making such assessment shall first be submitted to the stockholders of such corporation at an annual meeting, or at a special meeting called for that purpose, and a majority of the stockholders either in person or by proxy voting thereon, shall vote in favor of making such assessments; and an action may be maintained to recover any assessment against any delinquent shareholder as provided in section five of this act. [Sec. 276 (86), p. 172 G. L.]

G. S. 313. Consolidation.]
Companies organized under the laws of this State, holding ditches or canals by virtue of their organization, which derive their supply of water for their respective ditches or canals from the same head-gate or gates, or the same source or sources of supply, may consolidate their interests and unite their respective companies under one name and management, by filing a certificate of that fact in the office of the Secretary of this State, and a counterpart thereof in the office of the Recorder of the county or counties in which such ditches or canals are situated; which certificates shall be signed by the Presidents of the companies so uniting, with the common seals of the companies affixed thereto, and shall set forth the fact of such union of interests, and give the name of the new company thus formed. [Sec. 1, acts 1876, p. 68—omitted in G. L.]

The other sections of the corporations act under this heading will be found in their appropriate places under the various sub-divisions of this work: Sec. 311 on p. 76; Sec. 312 on p. 65; Sec. 314 on p. 26; Sec. 315 on p. 74.

In view of the looseness and indifference to common law and statutory requirements which characterizes corporate management generally in this State, it may be well, in this connection, to add that

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the rules and laws prescribing duties, liabilities and penalties apply to corporations equally with individuals, whether corporations are expressly named as such or not; also that the same remedies in damages for torts or breach of contract, in mandamus to compel performance, and in proceedings in quo warranto for dissolution for non-performance, are available against ditch and reservoir companies as in like cases against any other class of corporations.

In Chapter IV. we considered the case of ditch companies in respect of the claim of appropriation of water beyond the needs of the lands under their ditch actually requiring water. But, though such a company may not have power to claim effectively more than it can beneficially use; yet, if it has by its charter assumed the duty to the public of carrying the water of the stream named in its certificate for the purpose of irrigating lands lying under its ditch, (and this is regularly the case), it will be compelled to perform this public duty. Therefore any settler under the ditch of such a company has the power to compel it to carry the water of the stream named through its ditch to a point from which he can convey it by lateral to his land, on the payment of just compensation, just as a railway company running near his land would be obliged to carry his freight. The water in the stream is, by the constitution, the property of the public, subject to appropriation for a beneficial use; the means by which the appropriation is effected is immaterial (p. 26); and the settler in question makes the appropriation needed for his land, contemplating to take it from the stream in question at the point where the head-gate of the
company's ditch is situated, and to run it through their ditch down to his land.

Should the corporation refuse to perform this duty it would seem, from the position taken by the Supreme Court in the case of Golden Canal Co. v. Bright, 5 West Coast Rep., 805, that mandamus would lie, on proper showing, to compel its performance. Certainly if the duty does not exist, quo warranto proceedings for the forfeiture of its charter would lie. The question of what would be "reasonable compensation" is raised in the case of Wheeler v. Northern Colo. Irr. Co., now pending in our Supreme Court, brought to test the question as to the right of such companies to demand not only an annual payment, but also a gross sum in cash for a water right or for the privilege of buying the water for a given term of years. This, however, would seem to be merely a question as to whether the annual payment, plus the annual value of the water right, is or is not more than the company is reasonably entitled to for the service performed (p. 81).

[Form]

ARTICLES OF INCORPORATION OF THE . . . DITCH COMPANY.

Know all men by these presents, That we (three or more names), residents of the State of Colorado, have associated ourselves together as a corporation under the name and style of The . . . Ditch Company for the purpose of becoming a body corporate and politic under the laws of the State of Colorado, and in accordance with the provisions of the laws of said State, we hereby make, execute and acknowledge this certificate in writing of our intention to become a body corporate under and by virtue of said laws.

First—The corporate name of our said corporation shall be The . . . Ditch Company.

Second—The objects for which our said company is formed and incorporated are to construct, maintain and operate
a ditch or canal for conveying water for domestic purposes and irrigation, in the county of . . . . . . , and State of Colorado, and to construct and maintain and operate lateral or branch irrigating ditches from the said main ditch of the company, to such localities in the counties of . . . . . . as will enable our company to use or dispose of the water conducted through its main line for the purposes herein set forth.

To supply the stockholders of our company with water for the purposes above mentioned, and to sell, rent or lease any surplus thereof or rights thereto for the uses and purposes above mentioned.

To acquire, hold and use such premises along the line of our said ditch as may be necessary for the right of way therefor or in the construction or maintenance thereof or laterals.

To borrow money for the needs of our said work, to issue securities therefor in the name of our company, and to pledge the property, rights and franchises of our said company in security therefor.

To do any or all things that may be incident or conducive to the attainment of the aforesaid objects or any of them, or to the usual powers of corporate bodies.

Third—Our corporation shall exist for the term of twenty years, commencing from the date of execution of these articles.

Fourth—The capital stock of our company shall be . . . thousand dollars, divided into . . . . shares of . . . . dollars each, which shall be issued non-assessable for the purpose of providing the capital necessary for the construction of said ditch and laterals, the purchase of rights of way and rights of water therefor, and for providing the capital for carrying on the business of this company.

Fifth—The affairs and management of our said company shall be under the control of . . . . directors, and the names of those who shall as directors manage the affairs of our company for the first year, and until their succeessors are duly elected and qualified, are . . . . . . . . . . . . .

Sixth—The officers of our said corporation shall be a President, a Vice-president, a Secretary and a Treasurer.

Seventh—The use to which the said water is to be applied is for domestic purposes, and the irrigation of lands along the line of said ditch and the laterals thereof.
Eighth—The source from which the water is to be taken to supply said ditch and laterals is . . . creek, at a point in the county of . . . State of Colorado, on the . . . bank of said stream, about . . . feet from, etc.

Ninth—The line of said ditch is as follows, to-wit: Beginning at a point designated in paragraph eighth of these articles; thence running, etc. (describing the route generally according to the survey.)

Tenth—In the management of the business of our company the directors thereof are hereby empowered, and shall have authority without prejudice to or derogation from their general powers under these articles:

To do all things necessary to carry into effect the powers specified in these articles, and in general to manage the property and transact the business of this company in such manner and upon such conditions as they may deem expedient and beneficial and for the best interests of the company.

To make such prudential by-laws as they may deem proper and necessary for the management, conduct and control of the affairs, business and property of the company.

Eleventh—The principal business of our company shall be carried on in the county of . . . , State of Colorado, and the principal office for the transaction of said business shall be kept in the city of . . . , in said State, but an office of the company may be kept at any point without the State of Colorado which the directors of the company may appoint, and meetings of the company and its directors may be held at such office without the State.

In Witness Whereof, We hereunto set our hands and seals, this . . . day of . . . , A. D. 188 . . .

[SEAL]  [SEAL]  [SEAL]

STATE OF COLORADO, } ss.

I, . . . . . . . , a . . . . . . . . in and for the said county, do hereby certify that on this day personally appeared before me . . . . . . . . . . . . . . , to me known to be persons whose names are subscribed to
the foregoing articles of incorporation, and acknowledged to me that they signed, sealed and delivered the said instrument of writing as their free and voluntary act for the uses and purposes therein mentioned.

In Witness Whereof, I have hereunto set my hand and official seal, this . . . day . . . , A. D. . . .

If the object of the incorporation is to form a company for supplying water to its stockholders only, and with no intention of selling water to others, the following changes in the foregoing form should be made:

Second—The objects for which our said company is formed and incorporated are to constructed, maintain and operate a ditch or canal for conveying water for domestic purposes and irrigation for use upon the lands of the stockholders of this company only, in the county of . . . and State of Colorado, and to construct, maintain and operate lateral or branch irrigating ditches from the said main ditch of this company to such localities in the county of . . . as will enable our company to use or dispose of the water conducted through its main line for the purposes hereinbefore set forth.

Omit the second paragraph of article Second.

Seventh—The use to which said water is to be applied is for the domestic purposes and the irrigation of the lands of the stockholders of this company along the line of said ditch and laterals thereof.

Such modification as is above suggested is important in connection with the subject of taxation, for which see the next chapter.
CHAPTER XVII.

TAXATION.

Const., Art. X., Sec. 3. When Free from Taxation.

Ditches, canals and flumes owned and used by individuals or corporations for irrigating lands owned by such individuals or corporations, or the individual members thereof, shall not be separately taxed so long as they shall be owned and used exclusively for such purposes.

G. S. 1761. When Free from Taxation.

All ditches used for the purpose of irrigation, and that only when the water is not sold for the purpose of deriving a revenue therefrom, be and the same are hereby declared free from all taxation, whether for State, county or municipal purposes. [Sec. 1, p. 143, acts 1872—Sec. 1384 (1), p. 517, G. L.

G. S., 2815—Identical with Const., Art. X., Sec. 3.]

The above-cited Constitutional provision (to which the statutes add nothing) is a remarkable example of discrimination in favor of a particular industry which can be justified only on the ground that the encouragement of wholly private ditch enterprise is of vital interest to the prosperity of the State; and it goes far beyond the immunity granted mining property in that it is perpetual, while the latter will expire July 1, 1886. The Constitution says that such ditches shall not be "separately" taxed, that is, there need be no return of their value to the assessor, and the latter may not assess them; but there seems to be nothing to prevent the lands which are benefited by having the right of water from such ditches appurtenant...
to them from being assessed at a correspondingly higher valuation, so that in the end the result would be practically the same. If direct taxation is to be avoided, however, the agreement between the parties building the ditch, or the articles of incorporation, if built by a company of land-owners, should carefully eliminate the idea of any intention of selling water to outsiders, and the form given in Chapter XVI. would have to be modified accordingly, as therein suggested.
CHAPTER XVIII.

THE MEASUREMENT AND DUTY OF WATER.


Water sold by the inch by any individual or corporation shall be measured as follows, to-wit: Every inch shall be considered equal to an inch square orifice under a five inch pressure, and a five inch pressure shall be from the top of the orifice of the box put into the banks of the ditch to the surface of the water; said boxes or any slot or aperture through which such water shall be measured shall in all cases be six inches perpendicular, inside measurement, except boxes delivering less than twelve inches, which may be square, with or without slides; all slides for the same shall move horizontally, and not otherwise; and said box put into the banks of ditch shall have a descending grade from the water in ditch of not less than one-eighth of an inch to the foot.

The State Engineer, in his report for 1885, page 52, says in this connection:

"The necessity for a practical standard, or unit, of measure of water is very urgent; one that is simple, positive and adapted to all classes of ditches and canals, and readily understood by all agriculturists, whether small gardener or large farmer. At present we have no unit of measure in universal use throughout the State. All recent legislation regarding irrigation water requires measurements to be expressed in cubic feet per second. This is a correct system, being definite, but the "inch" system is probably more extensively used than any other; and it is astonishing how many ways there are of delivering water under this method, and of estimating its real volume. This unit of measure, known throughout the State as the 'statutory inch,' is defined in section 3472 of the Gen-
eral Statutes of Colorado, as follows, viz: 'Every inch shall be considered equal to an inch square orifice under a five-inch pressure, and a five-inch pressure shall be from the top of the orifice of the box put into the banks of the ditch to the surface of the water, said boxes or any slot or aperture through which such water shall be measured shall in all cases be six inches perpendicular, inside measurement, except boxes delivering less than twelve inches, which may be square, with or without slides; all slides for the same shall move horizontally, and not otherwise; and said box put into the banks of ditch shall have a descending grade from the water in ditch of not less than one-eighth of an inch to the foot.' Section 3478 in same chapter makes it a misdemeanor for any person to sell water by the inch, and measure it by any other device than the one described above, with a penalty attached, viz: 'Upon conviction thereof may be imprisoned not exceeding one year, or fined not exceeding one thousand dollars, at the discretion of the court.' According to this law, where water is sold by the inch, no box can be over six inches perpendicular height. Although the inch method of measuring has been in use since the first irrigation in the State, yet scarcely two people measure it alike, or understand what an inch of water really is; and many a good citizen has inadvertently subjected himself to the penalty of the law. The statutory inch answers very well as a unit of measure for small volumes of water, providing the legal pressure and all other requirements are maintained, but it is quite well understood by irrigators and others, that the legal box can be placed in a ditch, and so manipulated as to deliver quantities of water differing over fifty per cent., either more or less, as suits the interest of the party controlling the box. At the present day, such large quantities are sometimes required to be measured, that the statutory inch is found to be impracticable, as well as inaccurate; for example, in Weld County, a canal company sells ninety-two cubic feet of water per second, delivered in one lateral ditch. If this amount of water was sold by the inch, and measured by a legal box, it would require to be forty-nine feet one inch long, with a height of six inches, and this is impracticable.

"The referees in some of the water districts, in making up their findings, have experienced much difficulty in reducing
MEASUREMENT AND DUTY OF WATER.

To one unit of measure the various statements of water appropriators, and this office has experienced a like difficulty. Most of the statements made in filings were made in perfectly good faith, but the capacities of the ditches were, in many cases, given in inches of cross-section instead of statute inches. For example, a ditch five feet wide by twenty inches deep, would have an area of twelve hundred square inches instead of statute inches, claimed for it, without reference to velocity, or to fall per mile. This was done without any intention to claim more than was due. Many disputes and misunderstandings arise about the exact amount of water due for an 'inch.' To settle the matter, it would be well to have the flow of water through the legal orifice (as specified in existing contracts) defined in specific quantity, in specific time, and, for the future, cubic feet, per second of time, substituted for the inch system, which measures water through boxes of impracticable dimensions, unsuited to the modern practice of irrigation.

The following is the method employed by many of our leading engineers for calculating the capacity of a ditch in cubic feet per second:

Let $C$ represent the cross section of the flowing body of water; $P$ the wet perimeter, or sum of the bottom and side lines of the cross-section; $F$ the fall in a given distance; $D$ the said given distance; $X$ the capacity. Then—

$$X = 100 \cdot \frac{C}{P} \cdot \left(\frac{C}{F} \cdot \frac{F}{P} \cdot \frac{D}{X}\right)$$

This formula makes no allowance for crookedness of ditch, seepage, evaporation, or other elements that may retard the flow to a greater or less extent, and thus reduce the result; and on the average twenty or twenty-five per cent. should be allowed therefor.

It seems that the amount of water which may be claimed by a ditch appropriation is to be measured by the capacity of the ditch at its smallest point.
As regards the efficiency or 'duty,' of water we cannot do better than make the following citation from State Engineer's report, 1885:

"At the present day, it is impossible to define the full duty of water in Colorado, as no trustworthy data can be had, and it is doubtful if this duty can ever be precisely accomplished. There are very many factors of this subject to be considered, such as the nature of the soil, the 'lay' of the land, subsoil, the kind of crop grown, the skill of the irrigator, climatic conditions during the crop season, etc. Although this duty cannot be clearly defined, it is very apparent that in almost every section of Colorado the amount of water used in irrigation can be considerably reduced. Except in a few instances, where necessity has forced the practice of economy, it has not been necessary to restrict the use of water to anywhere near the minimum quantity required to raise a crop.

"Powell, in his 'Lands of the Arid Region,' says, 'one second foot of water will irrigate 80 to 100 acres in Utah,' but 'many of the farmers will not admit that so great a tract can be cultivated by this unit. In the early history of irrigation in this country the lands were over-supplied with water, but experience has shown that irrigation is most successful when the least amount of water is used necessary to a vigorous growth of the crops; that is, a greater yield is obtained by avoiding both scanty and excessive watering; but the tendency to over-water the lands is corrected only by extended experience.' Colonel Baird Smith, in his report on Italian irrigation, states that 'the general average area irrigated by each cubic foot of water, 'per second,' throughout Lombardy, amounts to 70.2 acres.'

"Probably one of the main causes of the general ignorance of the duty of water is the absence of a definite system of measurement that can be practically applied. In pioneer days the 'miner's inch' was the standard, and an 'inch to the acre' was a common estimate of the duty of water."
MEASUREMENT AND DUTY OF WATER.

"If the statutory inch be considered equal to 45 cubic inches discharged per second, 38.4 of these inches are equal to one cubic foot per second, and this would be equal to 38.4 acres, per cubic foot, per second, which would be a very low duty. Since the building and operating of large canals on the co-operative system, some attention has been given to the question of the best methods of dividing the waters of a canal, equitably, among shareholders; but this operation had the division only in view, with reference to actual quantity, and the owners of such canals have no direct interest in determining the exact quantity of water required to irrigate a stated area. The later organized canal companies, which disposed of water in perpetuity, or yearly, by quantity, or by the acre irrigated, have necessarily been compelled to make estimates of the duty of water. These estimates have been based on the experiences of the old irrigators, calculations being made of the discharge of their ditches or dividing boxes, expressed in either statutory inches or cubic feet per second and this quantity compared with the land cultivated for a series of years. On these determinations have been based the first really practical estimates of the duty of water in Colorado, expressed in a tangible form. These estimates range from 50 to 55 acres per cubic foot per second, and this is the generally recognized duty at the present time.

"Many of the canal companies formulate rules and make contracts which are detrimental to the interests of the State, inasmuch as no inducement is held out to the purchasers to use water with economy in irrigation. This is more especially so when water is furnished for a stipulated price per acre, and a maximum quantity agreed upon; also, when the water is sold in perpetuity, with the contract so worded that the benefits derived by the use of less than the maximum named quantity shall inure to the canal company. Contracts for water should be for absolute quantities, and, then, if the purchaser can farm with less, by skillful and careful use of his water, the value of his surplus, which he might use on other land, or sell to those who need it, will be a premium to strive for. If such contracts were in general use, we might look for a large and rapid increase of the duty of water."
CHAPTER XIX.

CITIES AND TOWNS AS DITCH OWNERS.

G. S. 3312. May Construct Reservoirs, Ditches, etc.]

The city council and board of trustees in towns shall have the following powers:

Seventy-second—They shall have power to construct public wells, cisterns and reservoirs in the streets and other public and private places within the city or town, or beyond the limits thereof, for the purpose of supplying the same with water; to provide proper pumps and conducting pipes or ditches; to regulate the distribution of water for irrigating and other purposes, and to levy an equitable and just tax upon all consumers of water for the purpose of defraying the expense of such improvements.

Seventy-third—They shall have the right and privilege of taking water in sufficient quantity for the purpose hereinbefore mentioned, from any stream, creek, gulch or spring in the State; Provided, That if the taking of such water in such quantity shall materially interfere with or impair the vested right of any person or persons or corporation heretofore acquired, residing upon such creek, gulch or stream, or doing any milling or manufacturing business thereon, they shall first obtain the consent of such person or persons, or corporation, or acquire the right of domain by condemnation, as prescribed by the Constitution and laws upon that subject, and make full compensation or satisfaction for all the damages thereby occasioned to such person or persons or corporation.

Seventy-fourth—When it shall be deemed necessary by any municipal corporation to enter upon or take private property for any of the above uses, the same shall be examined, appraised, and the damages thereon assessed, and the proceedings in connection therewith shall be in all respects
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the same as is now or may hereafter be provided by general law for the taking of private property for public or private use. [Sec. 2655 (14), pp. 879-92, G. L.

G. S. 3417. May Lease or Purchase Canal.] Any incorporated town or city in this State shall have power to purchase or lease any canal or ditch already constructed, or which may hereafter be constructed, and all the rights, privileges, franchises of any person or persons, or corporations owning the same or having any interest or right therein, and to hold or operate the same in the same manner as the persons or corporation from whom the same may be purchased or leased might otherwise do; Provided, such purchase or lease shall be made for the purpose of supplying, by said ditch or canal, water for the use of said city or town; And, provided, further. That a majority of the qualified electors of such city or town, who shall vote at any regular election which may be held for the election of town officers, shall vote in favor of said purchase. [Sec. 1, p. 198, Acts 1879.

G. S. 3418. Obligations—Repair—Management.] Any town or city making such purchase or lease shall thereby assume all obligations and other duties which by law devolve upon the owner or owners of such ditch or canal, of whom the same may be purchased or leased by virtue of this act, and shall have power to repair, improve or enlarge the same, or any flume, dam or gate connected therewith, and for such objects may levy and collect taxes in the same manner as other taxes are levied and collected by law. The management of such ditch or canal shall be under the control of the board of trustees or council, as the case may be, of such city or town. [Sec. 2. pp. 198-9, Acts 1879.

A municipal corporation will of course have the same general rights and be subject to the same general liabilities and duties as any other owner of a ditch or reservoir.
CHAPTER XX.

DITCHES ON STATE LANDS.

G. S. 2724. Sale of Arid Lands conditioned on the Construction of Ditches, etc.

For the purpose of encouraging cultivation and the making of irrigation ditches, the State Board of Land Commissioners are hereby authorized to sell at public sale, at not less than the appraised value, [not more] than one-half of any tract of arid land belonging to the State, except the school land, in alternate quarter sections as nearly as may be, to any responsible person or corporation, on condition that said person or corporation dig an irrigation ditch in such location, and of sufficient capacity to furnish water for the entire tract. All contracts for the sale of State lands under the provisions of this section shall be drawn by the Attorney General, and signed by the Governor and the Secretary of the Board, in behalf of the State, and by the other parties in interest; and in no case shall the titles to any of said lands pass from the State until such ditch is completed in a manner satisfactory to the State Board, and the purchasers have given, in addition to such price as may be fixed by the State Board, a suitable contract or agreement, secured by a sufficient bond, that they will furnish water for the remaining portion of the tract of land, as aforesaid, at not to succeed [exceed] such rates as the State Board may agree. Upon the fulfillment of the above conditions patent may issue for not more than one-half of said tract, and the remaining portion of said tract may be subsequently disposed of in the same manner as other State lands. [Sec. 8, p. 226, Acts 1881.

G. S. 2744. Sale of Lands conditioned on the Construction of Ditches, etc.

The State Board of Land Commissioners may sell in parcels of not more than five thousand acres, at public sale, at
not less than its appraised value, any of the lands granted to the State for public improvements, under the act approved September 4, 1841, conditioned upon the location of colonies thereon, or the construction of extensive lines of ditches covering such lands; *Provided,* That not more than one-half of any one section of land shall be sold, in alternate half sections; *And, provided, further,* that every alternate one-half section unsold shall not be sold for three years thereafter. [Sec. 2196 (22), p. 728, G. L.]

THE END.
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