DRAINAGE.

A Proposed Law to Secure Drainage in Valley Districts.

A State Board of Drainage Commissioners Provided for.

How the Work is to be Done and Paid for---Details of a New System.

A Bill of Importance and Interest to the People of the State.

The following bill has been introduced in the Assembly by Mr. Brown of Yuba. Its purpose is to provide for a system of drainage in this State. The bill directs how drainage districts shall be formed, a State Drainage Commission appointed, its duties defined, sets out the duty of the State Engineer and of local engineers, how districts may be subdivided, how funds for drainage work shall be raised and disbursed, bonds issued, sold and redeemed, etc. The bill will be found to be of great interest. It is given in full:

The People of the State of California, represented in Senate and Assembly, do enact as follows:

Section 1. The Governor shall, within thirty days after the passage of this Act, and every four years thereafter, appoint three persons, who shall be known as the Board of State Drainage Commissioners, who shall have the power and perform the duties as hereinafter provided. They shall hold office for four years, or until their successors are appointed and qualified. They shall organize by electing one of their number as President, and shall appoint a Secretary, who shall not be a member of the Board. They shall take the usual oath of office, and shall each give a bond for the faithful performance of his duties, in the sum of ($25,000) twenty-five thousand dollars, to be approved and filed in the same manner as other official bonds of State officers. They shall have an office in the State Capitol, and shall each receive a compensation of ($300) three hundred dollars per month, to be paid at the same time and in the same manner as other State officers. They shall annually, on or before the first day of January of each year, report all their proceedings to the Governor, with the recommendations, estimates and reports of engineers and others connected with their operations. The Governor shall cause such reports to be printed, and shall communicate the same to the Legislature at each session.

Section 2. The term of office of the Secretary shall be at the pleasure of the Board, and he shall receive a salary of ($150) one hundred and fifty dollars per month, which, together with the necessary expenses of the office, shall be audited and allowed by the State Board of Examiners. Upon such allowance the State Controller shall draw his warrant upon the State Treasurer, who shall pay the same out of any money not otherwise appropriated.

THE OUTLINE OF WORK.

Section 3. For the purpose of promoting a complete system of drainage for the entire State, within thirty days after the organization of the Board of State Drainage Commissioners, or so soon thereafter as is practicable, the State Engineer shall submit to said Board a report or reports containing the results of his investigations as to drainage, accompanied with plans for a system of connecting system of drainage, having in view the control of debris from mining and other operations, the erection of embankments or dikes necessary for the protection of lands, towns or cities from inundation, and the construction of such engineering works as may be deemed advisable for the control, rectification or enlargement of river channels. He shall also make special examination with reference to the division of the State into drainage districts, each of which shall include a territory drained by one natural system of drainage, and shall report to said State Board of Drainage Commissioners the results of his examination, and shall from time to time propose boundaries for such districts, and recommend their formation.

DRAINAGE DISTRICTS.

Section 4. After the State Engineer has reported the boundaries and recommended the formation of one or more drainage districts, the Board shall proceed to consider the same, and may adopt, amend or reject said report; but if adopted by them, either in its original form or as amended, they shall, by resolution entered upon the record of their proceedings, declare the said territory to be and the same shall thereupon become a drainage district, and shall be known as Drainage District No. 1, 2 or 3, as the case may be, numbering the districts in the order in which they are formed; and they shall record, in a book to be kept for that purpose, the boundaries, which shall be clearly defined, with map accompanying, of each separate district, its number, and the date of its formation, and shall file for record with the Recorder of each county embraced or in part embraced in the district a copy of the same, which shall be deemed sufficient notice of the formation of said district to all county officers, and to all parties concerned, that said district has been formed.

Section 5. The three persons appointed by the Governor as State Drainage Commissioners, as provided in Section 1 of this Act, shall be ex officio members of and constitute a Board of Directors and Managers of each drainage district formed under the provision of this Act. They shall organize in each drainage district by electing one of their number as President, and shall have an office in and employ a Secretary for each district, who shall keep a record of all the transactions of said Board. They shall receive no compensation for their services as such Director.

Section 6. After the formation of any territory into a drainage district, the State Engineer, as soon as practicable after proper surveys have been made, shall submit to the Board of Directors of the district, plans, specifications and estimates of cost of work necessary in said district, in order to secure a proper system of drainage therefor.

ENGINEER'S REPORTS.

Section 7. All reports made by the State Engineer concerning the formation of any district, or any system of drainage therein, or the works necessary therefor, shall be accompanied by the concurring or dissenting opinions of the State Consulting Engineers and by that of the United States Engineers, should such engineers be appointed by the United States Government to make examinations in respect of the matters embraced in this Act.

Section 8. After the reports of the State Engineer, as aforesaid, giving plans, specifications and estimates of the cost of works, or any modifications or changes thereof, are made to the Board of Directors of the district, then the Board shall adopt, amend or reject the whole or any portion of such plans, or may refer them back to the State Engineer for further report.

HOW THE WORK SHALL BE DONE.

Section 9. After the adoption of the plans and specifications of the work to be done in any district, the Board of Directors of that district shall advertise for thirty days, in three newspapers of general circulation, published in the State, one of which shall be published in the city of San Francisco, and one in the district, if any newspaper be published therein, for bids for the construction of all or any portion of the works embraced in said plans; the said notice shall state that the plans and specifications of said works are on file in the office of the Board of Directors of the district, and can there be examined by any person who may so desire, and shall state generally the terms and the time in which the work shall be constructed, and that the right to reject any and all bids is reserved by said Board.

Section 10. All contracts shall be awarded to the lowest responsible bidder (if his bid be not deemed by the Board too high), and the contractor shall give a good and sufficient bond in not less than 25 per cent. of the estimated cost of the work contracted for; this bond, both as to its amount and the sureties thereon, shall be subject to the approval of the Board of Directors of the district, and and when so approved shall be filed in the office of the Board. Any member of the Board of State Drainage Commissioners, or State Engineer, or Consulting, Assistant or Resident Engineer, or any Superintendent of said works, or any employe of the Board of State Drainage Commissioners, of the Board of Directors of any drainage district, or of the State Engineer's Department, who shall be interested in any contract for the construction of any such works in any drainage district, shall be guilty of a felony.

CITIES AND TOWNS INCLUDED.

Section 11. Any drainage district may include within its boundaries any city, town or municipal corporation, any levee or reclamation district; and the Board of Directors of the district may purchase or condemn the right of way for any work necessary for the proper drainage of said district; may purchase or condemn material necessary for the work; may join, connect with, purchase or condemn levees, canals or any works constructed, and all such lands as may be by them deemed necessary to complete the system or plan adopted, whether the same be within or without the boundaries of the district, and may provide for connecting the system of drainage of one district with that of another, or of several other districts. And it is hereby declared that the use of the property (such as rights of way, lands, ditches, etc.,) which may be condemned, taken or appropriated under the provisions of this section and the succeeding section is a public use, and that such appropriation is for the public benefit.

Section 12. Whenever the Board of Directors for any drainage district cannot purchase or procure the right of way, or material needed for construction; or procure the consent to join or connect with any existing works; or purchase works already constructed; or purchase lands necessary for the construction of works and the completion of the system or plan adopted, from the owners, the said Board of Directors may in the name of the President of the Board proceed to condemn the same under the provisions of Title VII., Part III, of the Code of Civil Procedure, and amendments thereto which are now existing or may hereafter be made.

DIRECTION OF THE WORK.

Section 13. All works carried on under the provisions of this Act shall be executed under the direction of the State Engineer, and he may appoint and remove at his pleasure an assistant for each drainage district, who shall be styled Resident Engineer, and whose salary shall be fixed by the Board of Directors of the district. All work of the district shall be done under the immediate supervision of the Resident Engineer; and no work shall be paid for until accepted by him, and approved by the State Engineer.

Section 14. To provide funds for the system of works contemplated by this Act and for all expenses connected therewith (except those herein otherwise provided for), the Governor, Secretary of State and Attorney-General shall be ex officio members of and constitute a Board of Trustees for issuing bonds for each drainage district that may be organized under the provisions of this Act, in the manner hereinafter provided. The Governor shall be President of the Board. The Secretary of the State Drainage Commissioners, as provided in Section 1 of this Act, shall be ex officio Secretary of said Board of Trustees, but shall receive no compensation for services rendered as such, additional to that provided for in Section 2. The Board shall procure and adopt an official seal.

ISSUANCE OF BONDS.

Section 15. Immediately after the adoption of the plans, specifications and estimates of cost of any work, if it shall be determined to proceed with the same, the Board of Directors of the district shall file with the Board of Trustees mentioned in Section 14, a statement showing the estimated cost of the work, giving notice that they have determined to proceed with such work, and requesting that bonds of that drainage district be issued in pursuance with this Act. Said statement shall be filed in the office of said Trustees, who shall thereupon cause to be prepared bonds of that district to an amount not exceeding the estimated cost of the proposed work. Each bond thus prepared shall designate the number of the drainage district for which it is issued; shall state on its face that it is issued by authority of this Act; shall not be of a less sum than $500; shall be made payable twenty years after date, which date shall be inscribed upon its face; shall bear interest at the rate of 6 per cent. per annum, payable semi-annually on the 1st day of January and July of each year; both principal and interest shall be made payable in gold coin of the United States, at the office of the State Treasurer; it shall be signed by the President and the Secretary of the Board of Trustees, and have attached the official seal of said Board, and shall be countersigned by the President of the Board of Directors of the district for which it is issued. To each bond shall be attached forty coupons for the interest, which may be removed without mutilation of the bond. Each of these coupons shall contain the number of the bond to which it is attached, its own proper number (from 1 to 40), the period for which it is the interest voucher, and at its bottom the name of the President of the Board of Trustees, either written by him, engraved or lithographed. The bonds of each drainage district shall be numbered consecutively, and shall bear the same date, except as otherwise provided in Sections 21 and 22. The Board of Trustees shall keep a record of all such bonds issued, showing their number, date and amount, and shall prepare a copy of such record, which shall be filed with the State Controller. The Controller shall certify to the State Treasurer the number, amount and date of the bonds so issued, and the Trustees shall then deposit with the Treasurer the bonds so certified.

SALE OF BONDS.

Section 16. So soon as the bonds of any drainage district are deposited with the State Treasurer, he shall advertise in three daily papers of general circulation, one of which shall be published in the city of San Francisco, one in the city of New York, and one in some other city, at the Treasurer's discretion, for a time not less than thirty nor exceeding sixty days, that he will receive bids for the purchase of all or any portion of said bonds up to some day (which shall be twenty days after the date of the last daily advertisement hereinbefore provided for), when the bids will be opened in the presence of the Board of Trustees and an award made to the highest bidder or bidders, provided the bid or bids shall not be less than ninety-five per cent. of par value, and the fractional part of the coupon unmatured and not detached from the bond. It shall be the duty of the Board of Trustees to be present when these bids for the sale of bonds are opened, which shall be done at the office of the State Treasurer, at the specified time.

CONSTRUCTION FUND.

Section 17. The State Treasurer shall receive and place all moneys from the sale of bonds of each district to the credit of a fund to be known as the "Construction Fund" of the particular Drainage District No. 1, 2, 3, etc., as the case may be, for which the bonds were sold, and shall file, within five days after such sale, lists of bonds sold, showing the numbers of the bonds sold and the amount of money realized therefrom, one with the State Controller, and one with the Board of Directors of that district; accompanying said lists the Treasurer shall add his sworn statement that the money for the bonds so sold has been placed to the credit of the fund before mentioned.

Section 18. The State Engineer, in making his estimates of cost of works in any drainage district, shall include the salaries and expenses of the Resident Engineer for such district and those of his local assistants. He shall also include in such estimates the probable cost of the purchase or condemnation of property necessary for the system of drainage, and shall likewise include all incidental expenses appertaining to that particular district.

Section 19. The cost of all the works contemplated in this Act, embracing all contracts, purchases or condemnations of property, and all proper salaries and incidental expenses, shall be paid out of the construction fund of the particular drainage district for which said works are constructed. Proper vouchers, in duplicate, for all such expenditures for each district shall first be countersigned by the Resident Engineer of the district, then approved by the State Engineer, and then submitted to the Board of Directors at their regular meetings, who shall thereupon audit and allow all just and proper claims and certify the original voucher for the same to the State Controller. The Controller shall thereupon draw his warrant upon the State Treasurer for the amount thus certified, payable out of the construction fund of the proper district. The provisions of law requiring claims to be approved by the State Board of Examiners before a warrant shall be drawn by the Controller therefor shall not be applicable to claims presented under the provisions of this Act.

Section 20. The State Treasurer is hereby authorized and required to pay all warrants drawn by the State Controller upon the construction fund of any drainage district out of such fund.

SECTIONIZING DISTRICTS.

Section 21. Whenever it may be determined by the Board of Directors of any drainage district, acting under the advice and suggestions of the State and Consulting Engineers that the necessary drainage works for the district can best be executed by dividing them into sections, to be completed at different periods of time, then, and in such case, the issue of bonds of the district herein provided for shall be made in amounts to cover the separate estimates of expenditures in pursuance with such divisions. And the bonds issued from time to time to meet such expenditures shall bear date so as to run twenty years from the date of the proposed expenditures under such divisions. But in all other respects they shall be considered as bonds of the first issue. And the mode and manner of their preparation, issue and sale, the custody and disbursement of the proceeds thereof, shall be the same as provided for with bonds of the first issue. The provisions of this Act for a sinking fund (as hereinafter provided) for the redemption of bonds, shall be so applied as to cover the change of time in the date and maturity of any bonds issued.

INSUFFICIENT ESTIMATES.

Section 22. In case in any drainage district the original estimates of the cost of the works made by the State Engineer should prove insufficient for the completion of such works, then additional estimates of the amount of such deficiency shall be made in the same manner in which the original estimates were made, which shall be filed with the Board of Directors of the district. If the additional estimates are approved by the Board of Directors, then notice of them shall be given to the Board of Trustees in the same manner as directed for original estimates. Bonds dated at the time these additional estimates are made shall then be prepared, issued and sold in the same manner as bonds of the first issue, and the provision of Section 21 shall equally apply to the additional bonds contemplated in this section.

Section 23. The State Treasurer shall, on the first day of January of each year, report to the Board of Directors of each drainage district the amount and number of outstanding bonds issued for that district.

ASSESSMENT AND LEVY TAX.

Section 24. The Assessors of the several counties embraced in whole or in part in any drainage district shall be ex officio Assessors of the district for the portion of said district inclosed in their respective counties, and each such Assessor shall annually assess and make a duplicate assessment book of all the property of that portion of the county of which he is Assessor, embraced within such drainage district, and shall deliver the said duplicate assessment book at the same time and in the same manner and to the same officer or Board that he delivers the assessment book made for the purpose of State and county taxation; and the assessment so made shall be equalized at the same time and by the same officers or Board, as assessments made for State and county taxes are equalized. The said duplicate assessment Book shall be treated in all respects by the State and county officers the same as the assessment book made for State and county purposes. When the said assessment has been finally equalized by the proper authority, as hereinbefore provided, it shall be the duty of the Auditor of the county in whole or in part embraced in any drainage district, on or before the first day of October of each year, to forward by mail or express to the Board of Directors of said district, at their office, a statement showing the total value of all property embraced in said duplicate book, after the same has been properly equalized as before stated.

Section 25. In order to provide for the payment of the principal and interest of all bonds issued under the authority of this Act, it shall be the duty of the Board of Directors of each drainage district to prepare on some day during the month of October of each year a statement showing the whole amount required to pay the interest on the bonds outstanding of said district for such year, and to provide for a sinking fund for the redemption of said bonds, as hereinafter especially provided, and also showing the amount of taxable property in said district, computed from the statement or statements of the Auditor or Auditors of the county, or counties, embraced in whole, or in part, in said district. And the said Directors shall at the same time levy a tax upon all property in such drainage district sufficient to pay the interest upon the outstanding bonds of that district for the year, and to create a sinking fund for the redemption of the bonds of the district as required by this Act. They shall levy said tax annually until all the said bonds, both principal and interest, shall have been paid.

COLLECTION OF TAX.

Section 26. So soon as the tax provided for in Section 25 shall have been levied on the property in each drainage district, the Board of Directors levying the same shall at once notify the Auditor of each county in which any portion of any drainage district is embraced, of the tax and rate so levied; and each of said Auditors shall compute and enter upon the duplicate assessment book of each district the respective sums to be collected, in the same manner that he makes computation and entry upon the assessment book for State and county purposes, and shall turn the same over to the Tax Collector at the same time and in the same manner that he does the assessment book for State and county purposes. The Tax Collectors shall collect said tax, or taxes, at the same time and in the same manner that they collect State and county taxes; and all laws for the enforcement and collection of State and county taxes now in force, or hereafter enacted, shall be applicable to the enforcement and collection of all taxes in this Act provided for. The Tax Collectors shall pay the same over to the County Treasurer at the same time and in the same manner as State and county taxes are paid. The County Treasurer shall pay the same over to the State Treasurer at the same time and in the same manner as State taxes are paid. And the State Treasurer shall place the same to the credit of the proper fund, to be known as "Interest and Sinking Fund of Drainage District No. 1, 2, 3," etc., as the case may be.

Section 27. In case any drainage district is organized after the time provided by law for making assessments for State and county purposes, then the Board of Directors of such districts shall, if they deem it available so to do, notify the Auditor or Auditors of the county or counties embraced in whole or in part in said districts, and thereupon each of said Auditors shall make a copy of the last assessment book of that county for State and county taxation, as finally corrected and equalized by the proper authority, of all the property in the county embraced in said district, and shall immediately thereafter prepare and forward, by mail or express, to said Directors, a statement showing the total valuation of the property thus assessed and included in said copy; the said Directors shall thereupon, some day before the 1st day of November of that year, after they have received the notice from the State Treasurer, stating the amount of bonds of that district which have been sold, prepare a statement showing the amount of interest which will become due on said bonds for the ensuing year, and shall, at the same time, levy a tax upon all property in said drainage district sufficient to pay the interest upon said bonds for the year. They shall then notify the Auditor or Auditors of the county or counties embraced in part or in whole in the district, of the tax and rate so levied. The Auditor of each county so notified shall thereupon compute and enter upon said copy of the assessment book this tax, in the same manner that he does taxes for State and county purposes. The said copy shall then be turned over to the Tax Collector, and the taxes embraced in same shall be collected and finally paid over to the State Treasurer in the same manner, and at the same times, as fully stated in the preceding section of this Act; and such taxes contemplated by this section shall in a like manner be a lien upon the property embraced in said copy of the assessment book.

Section 28. The Auditors of the counties embraced in any drainage district shall be allowed a reasonable compensation for making the duplicate assessment books, as provided for in Section 24, or for making copies of the assessment books, as provided for in Section 27; and these claims for compensation shall be audited and allowed by the Directors of each drainage district, and shall be paid in the same manner as other claims against the district.

PAYMENT OF INTEREST.

Section 29. The State Treasurer is hereby authorized to pay the interest and principal of the bonds of each drainage district as they become due, out of the "Interest and Sinking Fund" of the district, which is hereby pledged for that purpose.

Section 30. The rate to be estimated by the Board of Directors of each drainage district for paying the interest and for the redemption of the bonds in each drainage district shall be annually for the first ten years after the date of each bond an amount sufficient to pay the interest on the outstanding bonds; and for the ensuing ten years (or the ten years prior to the maturity of the respective bonds) shall be a sufficient amount to pay accruing interest and the following percentage of the principal of the bonds issued and recurring from the respective date of each bond, to wit: For the eleventh year, five per cent.; for the twelfth year, six per cent.; for the thirteenth year, seven per cent.; for the fourteenth year, eight per cent.; for the fifteenth year, nine per cent.; for the sixteenth year, ten per cent.; for the seventeenth year, eleven per cent.; for the eighteenth year, thirteen per cent.; for the nineteenth year, fifteen per cent.; for the twentieth year, sixteen per cent.

SURRENDER OF BONDS.

Section 31. Whenever there shall be in the "Interest and Sinking Fund" of any drainage district a surplus of $5,000 or more, over and above the interest to be paid from that fund for the ensuing year, the State Treasurer shall give notice for thirty days in two daily newspapers of general circulation, one of which is published in the city of San Francisco, and the other in the city of New York, stating the amount of such surplus, and that on a certain day (which shall be thirty days after the date of the last daily advertisement) sealed proposals will be received at his office for the surrender of bonds of the district (giving its number); no bids to be received exceeding par and accrued interest. At the time stated in said notice he shall open the proposals tendered and accept the lowest bid or bids (if they are at par or less, with the accrued interest), and shall pay and retire said bonds, up to the extent of said surplus. Should proposals not be offered at the time stated to so exhaust said surplus on hand for redemption, the Treasurer shall at once publish for thirty days, in a daily newspaper of general circulation published in the city of San Francisco, that he will redeem certain bonds of drainage district (designating the number), commencing with the highest number outstanding, and stating in numerical order the next highest numbers, up to the amount of surplus in hand for redemption; the interest upon said bonds shall cease, and from and after that time no interest shall be allowed on such bonds.

Section 32. When any bond or coupon, authorized by this Act, is paid, the State Treasurer shall write or print the word "canceled," the date of payment, and his signature, upon its face.

RESPONSIBILITY OF OFFICERS.

Section 33. All officers acting under the provisions of this Act, and their bondsmen, are hereby made responsible for the collecting, safe keeping and proper accounting of the taxes and funds intrusted to them in the manner hereinbefore provided for, in accordance with the laws regulating their duties and responsibilities in connection with State and county funds.

Section 34. This Act shall take effect and be in force from and after its passage.

THE HOUSEHOLD.

HOME ADORNMENT AND DOMESTIC ECONOMY—ALL AROUND THE HOUSE.

[Correspondents of this department will not be limited in their epistles, but conciseness is preferable, and but one side of a page must be written upon. Questions pertinent to this department will be answered in this column.]

Some Secrets of a French Kitchen.

To begin with, there are certain delicious little cake-loaves, called, I believe, "tortolong"—at least, that was Babette's name for them—which I have never met with in England, but which will be remembered gratefully by many of our friends who have resided in France. They are exceedingly light and delicate, and usually make their appearance in the form of linked rings or figures of 8 with the early morning's coffee or noonday chocolate. I believe there are several inferior members of this particular section of the "petits pains" family; but here is Babette's own method of making the very best kind, and I do not see any reason why Jane or Betsy should not be able, with a little practice and a few failures, to turn out as tempting a batch now and then for the benefit of those who enjoy such dainty, light things in preference to slices from our very solid and satisfying British half-quartern or somewhat unwholesome penny roll; Babette set to work with, for instance, three pounds of flour, half a pound of butter, six ounces of powdered sugar, and a dozen eggs, mixing the whole most thoroughly, and not forgetting to scatter about a "suspicion" of salt (those were her own words). I must leave you to find out what quantity this represented. When she had stirred it all to her heart's content—mind, this was not done very soon—she proceeded to roll the dough into a long, thin, sausage-like shape, and cut it into lengths of about four inches. These she bent into rings, which she linked two and two together, neatly joining the ends by folding over and pressing them lightly into one. Then when some half a dozen were ready for the oven, as I thought, Babette cooly flung them into a large stew-pan half full of boiling water, which stood ready on the fire. They at once sank out of sight, but presently reappeared floating on the bubbling surface. She at once whisked them out with a flat spoon, and popped them into a bowl of cold water, where she left them to soak while she went on rolling, twisting and linking more rings and eights, which, one at a time, were dropped into the boiling stew-pan, then in cold water, where they were allowed to remain in soak. "But, Babette, why don't you finish them?" I asked, seeing her turn away presently as though her task was finished. The bonne explained that they were finished as far as to-day went. To-morrow, before madame's breakfast time, she would take them out of their cold bath, drain them as dry as possible in a sieve, put them on that thin sheet of iron which slipped so easily into the oven, and let them bake until they were of that pretty light brown which madame admired so much. The oven must be very hot, and she (Babette) must watch closely to see that they puffed and grew big and light enough; for if at all overdone or burned they would be detestable and unpresentable—a disgrace which, according to the energetic old lady's account, she could never survive for one little moment. Another thing which Babette made to perfection was the sweet-smelling, delicate and tempting "brioche"—that nearest French representative of the English bun and the Scotch cookie, but a refined representative, being neither puffy, brown nor indigestible. They are beginning to take their place in the best English confectioners'. On the Continent they are found everywhere, and much favored by our countrymen, who generally know a good and wholsome thing when they get it, and why they should not get this particularly good thing at home as well as abroad, at their own tables as well as in a shop, I cannot quite see. At any rate I will do my best to make this excellent little cake loaf better known by telling you how old Babette proceeded when she meant to give us brioches for breakfast or luncheon next day, as the dough, when mixed, has to stand at least twelve hours before baking. First she provided herself with, let us say, one pound and a half of flour, one pound of good butter—a thing which Babette was always most particular about—twelve ounces of sugar, rather over one ounce of German yeast, a little salt, and about ten eggs. She spread about a fourth of the flour upon her board, and, having dissolved the yeast in enough tepid water to mix the flour into a paste, she poured this into it, and kneaded it thoroughly into a stiff ball of dough, which she then scored with a knife and placed in a large pan, which, having covered, she put in a warm place to ferment, or, as the bakers call it, to set the sponge, while she proceeded to mix the rest of the ingredients. The remaining flour was now spread on her board, and a well or hollow place made in it, into which she put the sugar and salt, mixed together in a little cold water; then the butter and eggs followed the rest, to be stirred or worked together by Babette's strong fist, who rubbed and rolled and passed the whole most carefully through her hand that no ugly lumps should remain unnoticed to tell of a careless cook. By the time all this was sufficiently mixed, the "sponge," which had risen and spread and puffed up to three times its original size, was pronounced ready for use, and spread on the paste, with which it was carefully mixed and kneaded, then the whole lump placed upon a cloth spread in a large wooden bowl, over which a handful of flour had been shaken, more flour scattered on the top, and the whole being covered with a towel, the bowl was set in a cool corner and left to work as it would. Our ancient bonne usually made this her evening's employment; and as she was an early riser, the sweet little loaves were ready for us by breakfast time, although the dough had first to be again turned out of its protecting cloth and bowl to have flour shaken over and under it, and to be then doubled and folded, and pressed and rolled, and knuckled into all kinds of forms and shapes; then to be put back into its bowl and left to its own devices for some three hours, after which Babette again found time and energy to double and fold, and knead and knuckle, until the paste was full of small bubbles, and felt like a large piece of soft, white, elastic pudding, and then was ready to be fashioned into ordinary double-ball-shaped brioches of every-day life, or fashioned into rings, twists, or fancy shapes, and brushed over with water and egged, so that when baked they should assume that light brown, tempting color which it was the old lady's pride to see them assume.—[Cassell's Magazine.

Receipts.

FRANCATELLI'S FRICANDEAU (CONDENSED).—Take that part of the leg called the cushion lying immediately under the udder or fatty covering, and lard it closely with strips of fat bacon. Stew the bottom of a pan that has a tight cover with sliced carrot, onion and celery, a faggot of parsley and green onion; cover these with thin layers of fat bacon; on these place the fricandeau, moisten with stock to reach up to the larding, place buttered paper over the top and cover with the lid. Simmer slowly for about three hours, during which time it must be frequently basted with its own liquor; when nearly done remove the paper and the lid in order that the larding may dry. Serve on a dish with green peas and pour a little gravy in the dish with the peas and fricandeau.

SNOWDEN PUDDING.—Prepare one pound of sponge-cake batter in the following manner, to be baked in a thin sheet: To one pound of eggs (weigh in the shell), put one pound of pulverized white sugar and ten ounces of flour. Flavor with the juice and grated rind of a fresh lemon, or if that is not accessible, a teaspoonful of pure extract of lemon. When baked, and while hot, spread over the cake a layer of some nice preserves, strawberry or raspberry jam being specially nice for the purpose. Make it into a roll as neatly as possible, and strew with powdered sugar. Serve with sweet sauce.

APPLE CHEESE.—Peel and quarter a quantity of apples, stew them with a little water, a good deal of sugar, the thin rind of a lemon and a few cloves, or a stick of cinnamon. When quite done pass them through a hair sieve; and to one quart of the puree thus obtained add half a packet of gelatine, dissolved in water; mix well, pour into a mold, and when set, turn it out and serve with a custard poured about it. It is well to remember that the puree must be thoroughly well sweetened and flavored to carry off the insipidity of gelatine.

CRANBERRY DUMPLING.—One quart of flour, one teaspoonful of soda and two teaspoonfuls of cream of tartar sifted together. Mix into a soft dough with sweet milk; roll the dough out very thin in oblong shapes, and spread over it one quart of cranberries picked and washed clean. Add half a pound of sugar sprinkled over evenly. Fold over and over, and then tie in a pudding-cloth and put into a steamer, where let it cook over a steady fire for an hour, with faith, never looking into the pot. Serve with sweet wine sauce or sugar and cream.

BATH BUNS.—Half an ounce of German yeast made into a sponge as for plain buns; half a pound of flour and a quarter of a pound of butter; mix the whole lightly together with six yolks of eggs and a little milk. When proved and ready, work in a quarter of a pound of rough broken loaf sugar; lay them out on a buttered baking sheet in the shape of a rock, put a few comfits on the top of each, and bake in a sharp oven.

TO ROAST A FILLET OF VEAL.—Take out the bone, fill the space with a fine force-meat, and let the fat be skewered quite round; stuff it also well under the skin with bread, sage, chopped onions and parsley, as much depends on the quantity and flavor of the stuffing. Cover the fat with buttered paper and roast at a distance from the fire, or if it is baked in an oven bake slowly, basting often until it is thoroughly done. Serve with melted butter.

ORANGE SNOWBALLS.—Boil some rice for ten minutes; drain and let cool; pare some oranges, taking off the thick, white skin; spread the rice in as many portions as there are oranges on pudding or dumpling cloths; tie the fruit (surrounded by the rice) separately in these, and boil for an hour; turn out carefully on a dish; sprinkle with plenty of sifted sugar; serve with sauce or sweet cream.

BREAD-AND-BUTTER PUDDING.—Make a batter of five eggs and a pint of milk; add a little salt before the eggs are put in. Have several slices of bread about as thick as for toasting and spread butter thickly on them. Butter a pudding dish, and put in a layer of bread and butter until the dish is nearly three-quarters full. Flavor the batter with nutmeg; pour over and bake.

TO REMOVE OLD PAINT.—Slake three pounds of stone quicklime in water, and add one pound of American pearlash, making the whole into the consistence of paint. Lay over the old work with a brush, and let it remain for from 12 to 14 hours, when the paint is easily scraped off.

VEAL CUTLETS.—Have them about three-quarters of an inch in thickness, fry a light brown, garnish with parsley and rolls of thin sliced, nicely fried bacon. Or dip them in the yolk of an egg dredge them with bread crumbs, fry in butter or nice drippings, garnish with parsley and serve.

HOW CELLULOID IS MADE.

Dr. W. H. Wahl tells in the *Journal of Industry* what celluloid is and how it is made. Briefly defined, celluloid, he says, is a species of solidified collodion, produced by dissolving gun-cotton (pyroxylin) in camphor with the aid of heat and pressure. The gun-cotton is ground in water to a fine pulp in a machine similar to that used in grinding paper pulp. The pulp is then subjected to powerful pressure in a perforated vessel to extract the bulk of the moisture, but still leaving it slightly moist for the next operation. This consists in thoroughly incorporating finely comminuted gum camphor with the moist gun-cotton pulp. With this mixture any coloring required can now be incorporated. The next step is to subject the mass to powerful pressure in order to expel from it the remaining traces of moisture and incidentally to effect also the more intimate contact of the camphor with the pulp. The dried and compressed mass is next placed in a mold, open at the top, into which fits a solid plunger. A heavy hydraulic pressure is brought to bear upon the plunger, and at the same time the mixture is heated by means of a steam jacket surrounding the vessel to a temperature of about 300° Fahrenheit. When the mass is taken out of the press it hardens, and acquires the extraordinary toughness and elasticity which are the distinguishing characteristics of this remarkable product. Celluloid is very largely used as a substitute for ivory, which is imitated with great success. Tortoise shell, malachite, mother of pearl, coral and other costly and elegant materials, are also so successfully imitated that an expert can hardly detect the original from the copy. Celluloid is also used as a substitute for porcelain in the manufacture of dolls, which will stand a good deal of rough usage without breaking. Quite recently, too, it has been combined with linen, and used for shirt-bosoms, cuffs and collars.

The Springfield *Journal* says that instead of there being two lions in the Illinois woods, as reported by the St. Louis *Post-Dispatch*, it was only a little "lyin'" in the columns of that paper.

OUTDOOR AMUSEMENTS.

ITEMS OF INTEREST TO THE LOVERS OF FIELD SPORTS.

[In this department, as the head indicates, we propose to make record of current sporting events. Communications to the paper concerning such matters should be addressed to the "Outdoor Amusement Department."]

VELOCITY OF A RIFLE BULLET.—Prof. Robert Spice, the Brooklyn chemist and physicist, appeared last evening at the Cooper Institute in a lecture on projectiles. The great hall was crowded in every part—many standing in the aisles. When the well-known face of Mr. Cooper appeared the audience, as usual, gave him a very hearty welcome, and the applause was renewed when, on the introduction of Prof. Raymond, the lecturer came forward. The task which Prof. Spice was to accomplish was to determine the actual velocity of a rifle bullet fired across the stage. The distance measured on the platform was 33 feet, which the lecturer explained was shorter than usual, as the ordinary distance used in determining this question was about 200 feet. To carry this performance out he had secured the co-operation of Lieutenant E. L. Merriam, of the Brooklyn Thirteenth Regiment, who has gained some reputation at the Creedmoor Range, as evidenced by the medals which he wore. In the first place Prof. Spice explained the apparatus to be used. He called the attention of the audience to a mahogany base, twelve inches by fifteen inches, on which were placed two levers which carried bent wires to make marks on a piece of smoked glass underneath the points. One of these wires connected with a pendulum attached to an Atwood machine, vibrating seconds. By means of electric currents the lever connected with the pendulum came down on the glass precisely at the beginning of each second, making a series of lines separated by spaces somewhat similar to the old Morse alphabet. Consequently the distance from the beginning of one line to the beginning of the next represented a second of time. The second lever, exactly opposite, had a spring attached to one end, which kept the point off the glass. It also had two electro magnets, one at each end, which had electric currents passed through of different strength—the weaker current tending to pull the lever down on the glass; the stronger current tending to keep it elevated. In addition to this, the current from the stronger magnet passed through a loose wire resting on two globules of mercury, and immediately in front of this wire was to rest the muzzle of the rifle. The weaker current passed through a precisely similar loose wire, also on two globules of mercury, which wire was placed thirty-three feet distant from the first wire. Lieutenant Merriam now came forward and loaded his rifle. It was a regular Creedmoor, 45 caliber, 34 inch barrel, and placed in it a cartridge containing a 450 grain ball and 45 grains of powder, explaining that this was not a full charge. He then took his position. The object was to shoot away the wires on the mercury. A box of sand was placed to receive the ball. The pendulum above described was then set in motion. On its striking the fifth second the plate of smoked glass was drawn along by the descent of a weight on the top of a column of sand which ran out of a tube. On the sixth second, Lieutenant Merriam pulled the trigger and both wires vanished. On the first wire being broken the point of the corresponding lever descended on the glass, but immediately rose again by the action of a spring, when the bullet broke the second wire. The consequence of this was that the point connected with this lever scraped a very short line on the smoked glass; while the other point, being kept down during the swing of the pendulum, scraped a longer space. Then the glass was withdrawn and placed in the stereopticon, projecting a magnified image of the line on the screen. The relative lengths of these lines were ascertained, thus obviating any source of error in measuring the minute lines of the smoked glass. This method of measuring the lengths was claimed to be original by the Professor. On this measurement it was found that the shorter line was five inches long, and the other line nine feet two inches. These numbers were brought down to the common fraction of inches, the result giving 110 inches for the longer space. It was then ascertained how many times the former was contained in the latter, and the fraction thus obtained was clearly the fraction of a second that the bullet took to pass from one wire to the other—that is 1:22 of a second. Multiplying the distance between the wires (33 feet) as above, by the denominator of the above fraction, the velocity of the bullet in feet was obtained, namely 726 feet in a second. The result was long applauded, and the lecturer, to make matters sure, determined to repeat the experiment. The second attempt was equally successful. Professor Spice then proceeded to give illustrations or experiments of the well-known magician, showing how science and art are resorted to to deceive the senses. His performances and explanations were of great interest to his hearers.—[N. Y. Tribune.

DEMORALIZED HUNTERS.—A. L. Thiel, C. H. Woods, J. F. Fordham, J. R. Robinson and Chas. Cochran, the "boss" nimrods of town, started out for a hunt on Wednesday. The start was made in fine style, their guns were bright, and the dogs were as frisky as kittens. When the ground was reached they separated and beat the bushes to fill up their game bags in approved manner. They walked miles and miles without finding game enough to satisfy a city clerk, and the few birds seen were wilder than March hares, so that only about twenty were bagged by each of these crack shots. During this day's sport both men and dogs were utterly demoralized by the unaccountable movements indulged in by the quail, which we are assured would have upset the nerves of anyone seeing them for the first time. Every person who has hunted these birds knows that when first disturbed they seek safety in running, and that only when closely pursued do they fly. The manner of their flight is also well known, and no sound is dearer to a sportsman's ear than the sharp whirr—rr—rr made by the active wings of this swift bird. But on this day, without exception, the quail seemed to have discovered a new wrinkle, and when hard pushed they would spring straight up like a sky-lark to a great hight without noise, and then begin a series of frantic evolutions that can only be compared to a demoralized tumbler pigeon. This would be kept up for some seconds, when all of a sudden the bird would gather its energies for a final effort and mount the clear skies until out of sight. This startling innovation proved most discouraging to the hunters, and after awhile their hands refused to pull the trigger. But the effect was still more noticeable on the thoroughbred dogs, who, after seeing the birds perform in this crazy manner, dropped their tails in abject fear, and lying down at the feet of their masters they refused to point. Kicks and beatings failed to move them, so the hunters gave it up as a hopeless task and came home, utterly fagged out with the long walk, the slim show of game, the whaling of crestfallen dogs, and with new ideas of the capabilities of the California quail in practicing self-protection.—[Chico Enterprise.

SPORTSMAN'S CLUB.—This would be a good time to organize a sportsman's club. It is the spawning season for trout, and about this time every year, large numbers of them are caught in spite of the law for such cases provided. We would suggest the formation of a club for the purpose of protecting fish and game of all kinds during the spawning and breeding season. This club could offer rewards for the arrest and conviction of violators of the law, and very soon the taking