timate for the complete and perma-our important works, and results have nent improvement of the Missouri river will not probably exceed \$10, 000 per mile; provided liberal approat the time when works of channel rectification can be constructed to best advanaage.

I cannot too strongly emphasize the importance of considering seriously

By appropriating for small and decan be made, and the total expendithough appropriated in a lump to be- the irregularities are lost,

As soon as there exists a general improved more liberal appropriations may be expected, and with means to

In the fall of 79 it was 6,481 miles sary. from there to the delta of the Missis- ment works for detrital rivers. sippi. It is now about 1,900 miles doubt

Again, such a railroad without a multitude of radiating branches, would upon the sites of effects. only strike the Missouri river states at one point, while the river borders river by means of powerful dikes and

one entire side of them. Now in order to bring up the most recent and approved engineer practice in the improvement of detrital rivers, nel way to certain definite dimensions, practical rectification and stable regime may be secured. This involves and low water widths to approximately uniform dimensions, and in all cases a reduction of slope to approxi-

channels and the grade which it is of those principles has often failed. as follows:

water, 814. Per cent of elongation,

width may be increased, and in pense. any case the width at a bend | The first experiments upon the im-

the concentration of water on one side royal engineers. of the section. whole width is covered at high water,

low stage. In running from one of the bend the crossing, and though very wide it build up bars in the right places with

is so shallow that it is only with great | the aid of floating dikes. difficulty navigable.

The change of the cross-section

due to the difference of a surface gauge, but also to scour, and as well the change to low water is not simply owing to the fall of the surface, but also to the eleva-The base of the section will adjust in the stream by anchoring one end itself to many conditions imposed by slope velocity and its length, and it hangs in the water from upon the alteration of any one of the the surface to the bottom. independent factors, there follows a series of complicated phenomena.

bars forming that will impede navi-gation and disastrously deflect the cur-By the rapid accumulation thus

Our dykes cost from 40 cents to 81.90 per foot and revetments from 87 rent from its proper course.

In the winter the flow is quite uniform, and the bottoms are furrowed the new shore line like a corn field, and are, we might say, is swept along with it and deposited the velocity is in a measure over- cause, and not at the effect.

come by friction with bottoms first rush of water in the spring and their position properly depends upon their position properly depends upon By a series of gradual steps it leads to

If the floods are excessive as were those of this spring, the river takes a died. very much straighter course than though the floods were of an ordinary character.

The deposits are made in nooks and and much material sweeps through corners and in the heads of chutes, &c. unavoidable breaks in the work. In the later or usually the June

specific gravity. great importance. The channel way ing up the deflecting bar and new must be contracted and millions of shore lines. cubic yards of earth required to form cubic yards of earth required to form the new proper banks. Cannot the ed wire was made and suspended sim-

in correcting its own imperfection? of material in motion during the current and catch the submerged matfloods, cannot it be deposited where ter at all depths. it will do some good rather than let-

ing ugly bars? To properly govern the depositure of sand and silt in transit during a very uniform and solid bank was flood stages has been attempted in made

above the low stages. These new shores must be raised the improvement of the river as a work, so that in no event, the river as a work, so that in no event, the river may depart from a course of long flowing bends and straight reaches.

If the flow is allowed full liberty in and finally held by suitable mattrass fences or other devices until the matwork, so that in no event, the river tress, when required, can be put over avail? may depart from a course of long and carried up to above flood-height. If the flow is allowed full liberty in ducting operations on a large and sys- a broad reach it generally starts dig- to no more pressure from the weight of

pocket thus formed it shoots across to | ping or allowing it to settle. tached works no general improvement the other side and digs another there. ture becomes much greater than well conditioned bend is reached and

Now by confining the flow within narrow limits the danger of cutting will that the rivershall be completely pockets and short crossings is greatly diminished if not altogether overcome To sum up, the improvement works execute continuous and complete work, should consist in building up new satisfactory and substantial results shore lines by deposit from the river. In raising these deposits by sand The state of Kansas has been agita- catches or other suitable means till is this: ting the scheme of a government willows will grow upon them and freight railroad to the Atlantic sea finally in serving all shores against in-

by the channel, and 12,873 miles tions and present status of improve-

These works may be divided into from Omaha to blue water. A dou- two classes. The purely defensive ble track railroad from the Missouri and the aggressive and defensive comriver to New York City, Philadelphia bined. The former have been tried 1,500 miles. The cost per mile would where immediate action was required be five times as much as that for Mis- in preventing a disastrous erosion of souri river improvement without any bank fronting valuable property.

The attempt to mould a bad piece of revretments is not necessarily impracticable, but is generally inexpedient.

When valuable interests are at stake and call for immediate aclet me outline the objects sought and tion it would be well to hunt up the the means of attaining them. First it motive causes of the disturbance, per- averted. is expected that by reducing the chan- haps a dozen miles up stream, and apply the remedy, but, nevertheless, the cause should be determined and means | tact below. instituted for its removal, together in nearly all cases reducing both high with its train of attendant irregular-

The purely defensive improvement works were suggested by the engineer mate uniformity.

The width of high and low water by different class, and the application

tending from Florence to Bellevue are rocks have sometimes been successful, tions. Depth, low water, 12; high water, great sums of money and under the three or four years until the regime of olution. but only upon the expenditure of Width, low water, 650; high most favorable conditions of proximity the stream becomes permanent. of permanent strata.

On the banks of eastern rivers, like

tainable, but should be approximated to way can be contracted by piles or rock Now is it not evident that we must as far as possible. In case bed rock is jetties at moderate expense, but on have a dike or revretment that will liable to interfere with the attainment the Missouri such work, if successful stand in all places, under all condiof the requisite depth the high water at all, involves great difficulty and ex-

will not probably be the provement of detrital rivers by a new same as in a straight reach, owing to method, were made in India by the

The problem to be solved resem-The stream in its normal condition bled closely those presented upon has a very wide and shallow section our own river, and the engineers recbetween limiting banks, and while the ognizing the fact that little was to be realized from dike work as an only a small part of it is occupied at immediate cause in deflecting the river in a desired direction, undertook to utilize the natural materials in

The island, tow head, or bar, often caused by a tree or mass of bushy drift from low to high water is not simply in the current charged with sediment, probably suggested the Brownlow Weed.

tion of the bottoms, called fill-back. a bush on a pole or rope, and is located

Now it is well known that the river will carry an amount of sediment that It is evident that if the channel depends upon its velocity. If the veway is confined between narrow limits locity is checked by any means, only labor and superintendence, \$22.00 so that this scour and fill back take that part of the initial sediment is over all per every foot. [A gentleplace in the bottom of the deep sec- carried past the interrupting medium men in the audience said they cost 860 day's quotations. Oats a cent higher: tion, there will be no danger of high which corresponds with the diminished a foot.

formed a bar or sand pit is thrown up, cents to \$3,00 per foot. which deflects the current and forms

The irregularities of a detrital set upon edge. Now, when the first stream may generally be traced to rush of water comes in the spring some primary cause, perhaps several floods, an immense volume of sand miles up stream, and the aggressive method of work seeks to correct the principally in the broad reaches, where fault by applying the remedy at the The heaviest bars are caused by the catching the water in a tub, it seeks

the rectification from the cause downward until the local disorder is reme-

The Brownlow Weed is good, but we have now something better. The weed dike is not homogeneous

It was noticed on the Missouri river rise, although much heavy matter is that a large amount of rootlets and

moved, a greater percentage of the grass, as well as willows, cornstalks, sediment is the light matter of low etc., from cutting were in transit during high stages, and the idea was Here we have evidently a factor of suggested of utilizing these in build-

natural forces of the stream be utilized | ilarly with the weed work by anchoring the ground and buoying the air ests If there is such an immense amount edge so that it would hang across the

The results obtained were most satting it go to worse than waste in form- isfactory and although at the first experiment so much matter was col-

The supports of the screen will be to prevent the flood from oming way have been secured the surface of drift. Besides, great tension is occathe new ground may be considerably sioned in the screen, and the drag at below the flood surface, but is far the anchorage is excessive.

The governing principle in revet ment is that of subjecting the banks ging into one bank and from the the mat than it will stand without slip-The old form of mattress was see

This goes on until some sharp and tional and made about 60 feet square, while all the work for the past two to, necessary to enable you to do this 17%c.

TEAS. Gonpawder, good, too No. years has been continuous and not exceeding generally ten inches in thickness. This ribband is launched from a boat and finely balanced with rock.

Now, having heard some of the "pros," let us consider as well a few "cons."

The first criticism that is usually made upon this new system of work is this:

Your work won t last. Why don't

Work!

Mr. Pease—Ten thousand dollars

A work!

Mr. Pease—Ten thousand dollars

The Mayor—What I want to get at is this: We here at Omaha expect to protect the river between Omaha and Council Bluffs.

Mr. Pease—That act means the improvement of the river in the vicinity of Omaha.

A voice—That is not what we expect to protect the river in the vicinity of Omaha.

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A voice—That is not what we expect to protect the river in the vicinity of Omaha. ceeding generally ten inches in thickness. This ribband is launched from a mile. a boat and finely balanced with rock.

made upon this new system of work

vasion whenever it may prove neces- secure like the Chicago & Northfrom the Omaha bridge to the Missouri objects desired let us trace the evolution way? Why don't you put in a revetwestern railroad dykes or like the rock ment entirely of rock, or where dykes are necessary, why don't you build them of timber and fasten them with piles and load them with rock?

In the first place our brush revetments are very lasting, and I hope or Baltimore would not be less than generally in cases of great urgency that the people of Omaha have not ment because of the demoralized condition of the upper work. The The works are comparatively small damage is really slight and can easily and detached and are applied usually be repaired. The great danger of a disastrous erosion of bank lies in the

possibility of undercutting. The stratum of quicksand underly ing the surface material when exposed to swift currents washes out and down tumbles the upper layer.

Let the lower bank be well pro tected and the principal danger is be conducted from fifteen miles above The Omaha work has been damaged only above the ice line, while it is in-

The life of brush, when exposed alternately to heat and cold, wet and dryness, is from three to four years, tion to be held at the Bluffs next but when always under water it will week, and on motion a committee, last too long.
On the Missouri river it is customa-

deemed advisable to work for in the Omaha and Council Blufts reach, ex- brush mattresses loaded with large third is exposed to unfavorable condi-

The rock work on your front has

Our dikes as revetment systems are not perfect yet. Only four years have been spent in study and experiment

upon the river.

There has been no literature to draw from-not a single book that

pools to another a reef is formed in the way of sand and selt sediment to Important governing principles have

Rock at contract prices costs here from \$1.50 to \$2.25 per cubic yard. The U. P. revetment has not less than eight cubic yards of rock per lineal foot. Say this costs \$15.00 for rock, \$2.00 for brush, and \$5.00 for

work could be done at rock and pile figures.

Small works, however finely constructed are in great danger of being cut out and only a pier of rock is safe when there is a well conditioned and permanent river for miles above. We claim for our work that its

principles are broad and more than all systematic. In many cases immediate local action is necessary, but is it not much better to break a horse in the first place than to provide him with a smaffle bit and kicking bar

Upon the conclusion of the address Mr. Pease said he was prepared to answer any questions asked him and made lengthy explanations by aid of the map.

The mayor said: "What we are most interested to know is how to protect our river front to keep water out of our bottom lands. I judge you are not here to answer this question."

"These appropriations, said Mr. Pease, "are not intended to protect private interests nor overflow, but to limit the channel provided for navigation and to protect corporate inter-

Mr. Gibson-"How long do you expect that bank at the bridge would be in construction?"

getting the appropriation. It might to \$3.75.

vate enterprise that will make a dyke creamery, scarce, 20c.

Mr. Pease-"Yes." Mr. Blickensderfer 'As I understand, the protection which you de bridge is one which takes it away After the new shore lines have been from the present government work acquired they will be raised by sand entirely. For that purpose the pres-

Mr. Blickensderfer-What was the

object of placing it there now object of placing it there now of Mr. Pease—To protect the front of Omaha and to keep the giver from going further away.

Mr. Blickensderfer—What would you suppose the expense would amount you suppose the expense would amount of the suppose the suppose the expense would amount of the suppose the suppos

A voice-That is not what we ex-

pected. The Mayor-We have an idea that the interests of Iowa are of much more importance to the government than are the interests of Nebraska. We believe these appropriations would be very beneficial for lows and of very little benefit to Nebraska. Believing this idea correct we want to be in-

formed?

Mr. Pease—As regards the benefit done Iowa there is nothing more beneficial than to Nebraska. What has DRIED FRUITS—Choice halves. condemned the government revet- eficial than to Nebraska. What has been done has been to preserve the integrity of the shore.

The Mayor-Have you any objection to stating the amount of the appropriation?

Mr. Pease-It was \$30,000. The Mayor - As I understood it was to be spent between Council Bluffs and

Omaha! Mr. Pease-The act read, "in the vicinity of Omaha." The work will to twenty miles below. When there is a fault in the river at a particular point it is seldom good policy to attempt to remedy it at the immediate

spot. That is why we began below. The mayor mentioned the convenconsisting of Mr. W. J. Broatch, Mr. ry to protect the banks by mattrass work about 100 feet wide from the top of the bank. Of this 89 50; do in half bbls, 5 25; smalls, in bbls, 12 00; do, in half bbls, 6 50; gherkins, in bbls, 13 50; do, in half bbls, 7 25. Shane, and as alternates, Col. C. S. Chase, Mr. John Evans, Mr. N. Mer-

riain, Mr. E. C. Hancock, Mr. A. L. Strang, Mr. E. P. Her, was apointed.

Strang, Mr. E. P. Her, was apointed.

Mr. Allen offered the following resolution.

That a committee composed of engineers of the city of Omaha, the U.
P. and B. & M. rail roads, the engineer of the city waterworks, also a committee of citizens composed of CANDLES—Boxes, 40 lbs, 16 oz. 8s, 13c; boxes, 40 lbs, 16 oz. 8s, 13c; boxes, 40 lbs, 16 oz. 6s, 13c; boxes, 40 lbs, stood well, because the bedrock and P. and B. & M. rail roads, the engi-The depth to give the requisite cross-section can, it is thought, always be obtained by the scour due to the increased concentration, though the point should in all cases be determined by the scour due to the point should in all cases be determined by the scour due to the point should in all cases be determined by the scour due to the point should in all cases be determined by the scour due to the permanent character of the city waterworks, also a permanent character of the city waterworks, also a permanent character of the city waterworks, also a permanent character of the permane point should in all cases be determined by bed-rock soundings on the proposed channel line.

The reduction in slope should in all cases be carried as far as practicable. This method will not work to detrital rivers because permanent strata is rarely found above a depth of forty feet from the water of study, but it should probably not fall short of 2½ times the width and maybe greater.

Connecting reaches between bends should be asstraight as possible.

These conditions may not all be attributed by bed-rock soundings on the proposed channel line.

The reduction in slope should in all cases be determined by bed-rock soundings on the proposed channel line.

This method will not work on detrital rivers because permanent strata is rarely found above a depth of forty feet from the water surface.

The length to be given to radius of fall short of 2½ times the width and maybe greater.

Owing to the light and unstable character of these banks and beds, should be as straight as possible.

These conditions may not all be attributed in the river all you might put in a dozen rock quarries before your revertment would stop settling—as long as the current was swept beside it.

The piers of our Missouri river bridge have to go to bedrock before as the purpose of making a careful investigation of the river channel for the purpose of making a careful investigation of the river channel for the purpose of making a careful investigation of the river channel for the purpose of making a careful investigation of the river channel for the purpose of making a dozen rock quarries before your deverment would stop settling—as long as the current was swept beside it.

The piers of our Missouri river bridge have to go to bedrock before with such further recommendations as they may each for the purpose of making a careful investigation of the river channel for the purpose of making a dozen rock quarries before your days of the bends of the purpose of making a dozen rock quarries before your

## FINANCE AND COMMERCE.

FINANCIAL. MONEY AND STOCKS.

New York, June 13.
Money closed at 2½@3 per cent. Echange closed steady at \$4.84½@4 86½.
Governments closed firm; currency 6 31 bid; 4's coup, 118 bid; 4½'s coup,

## Omaha Wholesale Market.

OFFICE OF THE OMARA BEE, ? Monday Evening, June 13, 1881. is dull; not much doing. Potatoes 5 cents and eggs le lower. In the drug market we note 5c advance in caster oils, all other markets remain unchanged. On account of large shipments of strawberriea expected in from the east to-morrow, the prices were expected to go very low. The live took market remains unchanged and very title doing.

Live Stock.

Cattle—We quote as follows: Choices. The first steers, 1,3006; 1,600, 81,500; 7½; Fruit of the loom, 22; Fruit of the loom, 23; Fruit of the loom, 24; Fruit of the loom, 25; Fruit of the loom, 26; St. Fruit of the loom, 26; Fruit of the loom, 27; Fruit of the loom The grain market to-day was unsettled, Our dykes cost from 40 cents to Saturday's prices. The provision market Given an appropriation like those note 5c advance in casteroils, all other we have had lately and how much markets remain unchanged. On account

dred pounds.

Hogs We quote as follows: Light packers, 85 006:5 25; medium mixed packers, 85 006:5 25; extra choice heavy,

Local Grain Dealings. WHEAT, -Cash No. 2, 912c; Cash No. ,851; rejected 65c; BARLEY,—Cash No. 2, 99c; No. 3, 73c; RYE.—Cash, 87c; COBN.—Cash No. 2, 30c. OATS.—Cash, 30c.

82 80@3 60; patent, 84 00@5 50; winter wheat straight grade, 83 25@3 75; patent, 84 00@4 75; graham rye, \$2 25; Wheat, 82 RYE FLOUR-\$3 25. MILLSTUFFS—Bran, per cwt. 60c; screenings, per cwt. 70a:80c; shorts, per cwt.70c; chopped feed, per cwt. 75c; meal bolted, yellow, 80c; white, 81 00. POTATOES—Per bushel, peach blows,

FLOUR-Spring wheat, straight grade,

and red, 64; Regatta shirting, 54; Simp-son's mourning, 7; Simpson's alpaca finish COTTON DUCK-Boston X dyed brown, net, 10ic; Boston XX dyed brown 12i; Boston XX dyed brown 12j; Boston XXX dyed brown 12 i; Boston 10 oz dyed brown, 16; Royal (8 oz) 29 inch, 11; Stark, (8 oz), 13; Stark, (10 oz), 16i; Stark, (8 oz), colored, 14i; Stark, (10 oz), 17i. Mr. Pease—"That depends entirely POULTRY—Live chickens per dozen, upon the time you gentlemen take in \$3.00 to \$3.25; old, spring chickens, \$3.50

take five or six years."

Mr. Gibson—"Then it is to be priBUTTER—Choice, 124; poor, no market;

APPLES Baldwin's repacked, \$5.00 104; Bates minton dress styles, 114; Earl-ston, 94; Glasgow checks and fancies, 10; HONEY Extracted, first-class Califrnia strained, 10c. ORANGES Terrents repacked, per

COLORED CAMBRICS, G. D. & box, \$6 00; Palermo, per box, \$6 50. Misinos, per box, \$7 00; Imperials, per box, 5; Garner, 5; Hooksett, 5; Keystone, ave finish, 5½ Red Cross, 5, ROLLED CAMBRICS—G & Co, 6½ S. 88 00.
LEMONS Fancy repacked per box, \$5 00; good repacked, \$4 50.
STRAWBERRIES Good shipping ent government work would be of no avail."

STRAW BERGIES COST SIMPLING SOUT BERGIES S2 50:23 75.

GOOSEBERGIES In light receipts:

totable at 10c per qt. VEGETABLES - All kinds in demand,

21½; cheap, 9@9½; medium, 9@10½; No. 1 St. Louis, 14; Candle wick, 25; Carpet chain, and 5 þly, 20½ \$21½; Colored carpet chain, per lb, 26;

Peas, common, pur case, 1 75; peas, choice, per case, 4 50. Blackberries, 2 lb, per case,

240; strawberries, 24b, per case, 3 256/3 75; raspberries, 24b, per case, 2 7 56/3 00.

Dansons, 2 lb, per case, 2 25. Bartlett pears per case, 3 00@400. Whortleber-

LEAD Bar, 81 65, MATCHES Per caddie, 82c.

land do, \$3.00; Church's, \$3.00; Keg soda, 46:44c. STARCH. Pearl, 3jc; Silver Gloss, 79 5eSc; Corn Starch, 9c; Buffalo Silver

peaches, new crop, 7 jc; Evaporated Apples, 50 lb boxes, 9 jc; Michigan, 5 jc; New York † apples, 5 jc; St. Louis No. 1, 5c; Prunes, old, 6c; new, 6 j@7c; Currants, 7@7 jc; Blackberries, new, 10c, CHEESE—Full Cream, 11 jc; Part

Skin, 10c.

WOODENWARE—Two hoop pails, 1 85; three hoop pails, 2 10; No. I tubs, 9 00; No. 2 tubs, 8 00; No. 3 tubs, 7 00; pioneer washboards, 1 85; Double Crown-2 75; Globe Washboard, 2 50; Well buck, COTTON YARM—Cotton yarns, 20\(\frac{7}{60}\)

34 in, 371: Pequa, 28 in, 321. DRUGS AND CHEMICALS.-Acid, Carbolic, 60c; Acid, Tartaric, 85c; Balsam Copabia, per lb, 70c; Bark, Sassafras, per lb, 13c; Calomel, per lb, 75c; Cinchonia, PROVISIONS—Breakfast bacon, 11c; choice lard, 114c; dried beef, 134c; should-ers, canvassed 7c; hams, canvassed 114c; bacon, sides, 104c. NEW PICKLES—Medium, in barrels, 1b. 13c; Calomel, per lb. 75c; Cinchonia, per oz. 95c; Chloroform, per lb. 95c; Dover's powders, per lb. \$1 40; Epsom salts, per lb. 4c; Glycerine, pure, per lb. 35@ 40c; Lead, Acctate, per lb. 22c; Carbon oil, 110°, per gallon, 11½c; do 150°, per gal, 13½c; Oil, Castor, No. 1, per gal, \$1 00. Oil, Castor, No. 2, ner gal, 90c; Oil, Olive, per gal, \$1 50; Opium, \$6 20; Quinine, P. & W. & R. & S. per cs. \$2 60; Patassium, Indian per lb. bbls, 13.50; do, in half bbls, 7.25. VINEGAR—Pure apple extra, 18c; pure apple, 15c; Prussing pure apple, 15c. HOMINY—New, \$3.80 per bbl., \$3.00 Sas; Opinin, 86 29; Quinine, P. & W. & R. & S., per oz, 82 60; Potassium, Indine, per Ib, 82 60; Salaem, per oz, 35c; Sulphare of Morphine, per oz, \$4 25; Sulphur flour, per Ib, 5c; Strychnine, per oz, \$1 40@1 60. BEANS-Medium, hand picked \$3.00

Horses and Mules. The market is brisk and all grades are elling well at a slight advance in prices. The demand for good horses exceeds the supply considerably. Prices range as fol-

Fine single drivers, \$150, to 300.; Extra draft horses, \$175, to 225.; Common draft horses, \$100, to 150.; Extra farm horses, \$110, to 125.; Common to good farm horses, 810. to \$100.; Extra plugs, \$60. to 75.; Common plugs, \$20. to \$40. MULES.—15 to 15½ hands (extra), \$125. to 150.; 14½ to 15 hands, \$100. to 140.; 14 to 14½ hands, \$75. to 100.; 13½ to 14 hands, \$60. to 75.

Cigars and Tobaccos, CIGARS.—Seeds, \$15,00; Connecticut. \$25.00; Mixed, \$35.00; Seed Havana, \$50.00; lear Havana, \$75,00

Clear Havana, 875.00.

TOBACCO — PLUG. — Golden Rule, 24 lb, 56c; Spotted Fawn, 57c; Our Rope, 68c; Star, pounds, 24 lb, butts, 56c; Horse Shoe, pounds, 24 lb, butts, 56c; Purity, 24 lb, butts, 52c; Queen Bee, 24 lb, butts, 53c; Gilt Edge, pounds, 24 lb, butts, 57; Army and Navy pends 54; Bullior; pends Hungarian, 81 15. HEDGESEED—Osage orange, 1 to 5 HEDGESEED—Osage orange, 1 to 5 bushels, 85 00; osage orange, 10 bushels or over, 84 50; honey locust, per lb., 35c; per 100 lbs., \$25 00.

FISH—Family white fish, 90 lb hf bbls, 6 00; Si 60; No. 1 white fish, 90 lb hf bbls, 6 00; No. 1 white fish, in 10 lb kits, 1 00; family 10 lb kits, 75c; New Holland herring, per keg, 1 20; Russian sardines, 75c; Columbia river salmon, per 100 lbs, 8 00; George's Bank castish for Gan London and Si Granulated Blackwells Purham, 16, 33c. Granulated Blackwells Purham, 16, 35c. No. 1 white fish, 90 lb hf bbls, 6 00; No. 1 white fish, in 10 lb kits, 1 00; family 10 lb kits, 75c; New Holland herring, per keg, 1 20; Russian sardines, 75c; Colum-bia river salmon, per 100 lbs, 8 00; George's Bank codfish, 6c; Gen, boncless codfish; 75c; honoless fish, 43c l

There has been no literature to draw from—not a single book that draw from—not a single book that draw from—not a single book that would be a guide is written.

What has been done has been determined by systematic experiment. The possibilities are by no means exhausted as it is fully recognized that few things can be so well done but that they can be done better. Important governing principles have determined however.

Now how about rock and piles versus brush and wire from the financial stand point.

I am not advised as to the cost of either the Northwest dykes or the U. P. revetment, but I know they must have been very expensive.

I have built similar work with the railroad dykes upon Lake Michigan which cost from \$38 to \$860 per linear foot. A successive of the cost of either the Northwest dykes or the four. Preventment, but I know they must have been very expensive.

I have built similar work with the railroad dykes upon Lake Michigan which cost from \$38 to \$860 per linear foot. A successive of the cost of either the Northwest dykes or the foot. Preventment, but I know they must have been very expensive.

I have built similar work with the railroad dykes upon Lake Michigan which cost from \$38 to \$860 per linear foot. A successive of the contract prices costs here.

Now how at court rail relations being generally current at the close. The advance as companed with \$3 - \text{Lineal} \text{ finite and the decline was fully recovered and prices further advanced, the highest even when the financial stand point.

I am not advised as to the cost of either the Northwest dykes or the U. P. revetment, but I know they must have been very expensive.

I have built similar work with the railroad dykes upon Lake Michigan which cost from \$38 to \$86 per linear foot. Generally contract the financial stand point.

The demand for money to-day was fairly approached by the contract of the province of th

hingles, \$3.75, No. 2, \$3.00; No. 3, \$2.50.

Lath, 84 00. Building Material. LIME- Per barrel, 81 35; bulk per bu., 35c. Cement, bbl, \$2.50. Iowa plaster, bbl, \$2.75. Hair per bu, 25c. Tarred felt 160 lbs, \$3.50. Straw board, \$4.00.

Dansons, 2 lb, per case, 2 25. Bartlett pears per case, 3 0o@4 00. Whortheberries per case, 2 50. Egg plums, 2 lb per case, 3 30; do, choice, 2 lb, per case, 4 50. Green gages, 2 lb per case, 3 30; do choice, 2 lb per case, 4 50. Pine Apples, 2 lb, per case, 3 50@4 50. Peaches, 2 lb per case, 3 10; do 3 lb, case, 3 60@4 20; do, (pie), 3 lb, per case, 2 60; do pie, 6 lb, per dozen, 2 80. EUCE—Casellas 63@7c. Longiana, 52.

Morris Run Blossburg, \$12; Whitebreast

lump, 86; Whitebreast nut, 86; Iowa lump, 86; Iowa nut, 86; Rock Springs, 88. Hides, Furs, Etc.

Sil. A.A. Gold medal, 10; Androscoggin, A.A. Gold medal, 10; Androscoggin, L. 9; Blackstone, 8\(\gamma\) to 9\(\gamma\); Blackstone, A.A. 6; Boott, R. 6 Boott, E. 7; Cabot, 12; Cabot, 11; Cabot, 8\(\gamma\); Dwight Anchor, 10\(\gamma\); Fruit of the loom, 10\(\gamma\); Hills, 9\(\gamma\); Lonsdale, 91; Lonsdale Cambrie, 13; Nassan, 6\(\gamma\); New York mills, water HIDES-Green batcher's hide, 65; green York mills, 13; New York mills, water twist, 14; Pepperell, 11; Pepperell, 12; Pepperell, 27; Pocahontas, 9; Pocahontas, 8; Senote, half bleeched, 8; Utiea; extra heavy, 11; Wamsuttas, 13; Wamsutta cambeavy, 11; Wamsuttas, 13; Wamsuttas, at 4 (cut scored and one grub, classed two-third rate, birds rate,) branded hides 16 per cent. off. Coon skins, No. 1, 45c; No. 2, 30c; No. 3, 20c; No. 4, 10c. Mink, No. 1, 50c; No. 2, 30c; No. 3, 15c; No. 4, 5c. Fox. No. 1, 60c; No. 2, 25c. Skunk, No. 1, black, 65c; short stripe, 40c; narrow stripe, 25c; broad stripe, 10c. Tallow, 5‡. PRINTS-Albion fancies, 61c; Albion FRINTS—Albion fancies, 6½c; Albion solid colors, 6; Albion indigo, blue and white, 9; American, 6½; Shirting, 6; Carleton, 6; Cocheco, 7; Cocheco shirtings, 6; Freeman, 8 robe, 6; Freeman's pink, 6; Freeman's block, 5½; Hamilton fancies, 6, Hamilton red, 8; Merrimack, F. pink, 7; Merrimack purples, 7; Merrimack printed piques, 7½; Richmond fancy, 6½; Richmond double pinks, 7; Richmond German, blue and red, 6½; Revatta shirting, 5½; Simp-

Merino unwashed, light, 14@16c; heavy, 13@15c; medium unwashed, light, 18@20c; tub-washed, choice, 32c; fair, 30c; dingy and w., 28c; burry, black and cotted wools

2(a.Gc less.

SHOT.—Shot, \$1.90; Buck shot, \$2.15; Oriental Powder, kegs, \$6.40; do., half Pork—72s 6d.

GINGHAMS Amoskeag, He: Bates, kegs, \$3.48, do., quarter kegs, \$1.87; Blasts minton dress styles, 114; Earls ing, kegs, \$3.35; Fuse, per 100 feet, 50c. Paints, Oils and Varnishes,

PAINTS IN OIL. White lead, Omaha P. P., 7c; white lead, O. P. & C. Co., pure, 6c; Marseilles green, 1 to 5 lb cans, 20c; French zinc, green seal, 12c; French zinc, ROLLED CAMBRICS—G & Co, 64; S.
S. & Sons, 64; High colors, 1 cent more
DRILLS—Adriatic, 84; Appleton, 8;
Augusta, 74; Boott Bleached, 9; Pepperell; 84; Stark, A. 84.
SILESIAS—Blackburn, 94; Capitol, 15;
Coin, 11; Lonsdale, 9.
WIGANS—Berlin, 64c; Garner, 7; Rose, 8; Calcedonia, X.X., 114; Calcelonia, X., 115; Calcelonia, X., 114; Calcelonia, X., 115; Calcelonia, X., 115; Calcelonia, X., 116; Calcelonia, X., 116; Calcelonia, X., 117; Calcelonia, X., 118; Calcelonia, X.

or, O H O, 36 in, 20; Falls company, O B DENIMS.—Amoskeag, 16ch; Amoskeag 9 oz, 19. Beaver Creek, A A, 14½; Beaver Creek, C C, 12½; Franconia, XXX, 15; Fredonia, B, 12½; Old York, double weight, C CAEVIOTS.—Amoskeag, 111a. Creek C C, 123; Franconia, XXX, 15; Fradonia, B, 124; Old York, double weight,
16; Otis, 125; Old York,
16; Otis, 125; A, 11½c; Good A, 11½c; Prairie Extra Collision of the College College

X X, 15; Stevens, T F D, 14½. Bleached one cent bigher.

RUSSIA.—X X X, 14c; X X, 13; M, 125; A; 114; B, 11; D, 9½; E, S½; F, 7½.
CARPET WARPS.—Anchor, 20c; Broadway, 20; Cottage, 20; Golden Ball, ex fine, 23; Peerless, 21; Washington, 21; White Star, 21; White Star, col sred, 24.

TWEEDS.—Allen, Cubans A, 19; Allen, Cubans B, 16; Belgian, 20; Cocheco, 55; Coventry, 31.

len, Cubans B, 16; Belgian, 20; Cocheco, 55; Coventry, 31.

KENTUCKY JEANS.—American Doe, 40c; Abbotsford, 11½; Agenoria, 27½, Balkan, 13½; Buckeye, 18; Bunker Hill, 9½; Calcutta, 13½; French Tweed, 15; Golden Fleece, 25; Hugo Doe, 30; Indian Creek, 9; Mohican, 15; Model doeskin, 17½; North Adams, 27½, Thurlow, 15; Table Rock, 18.

SHIRTING FLANNELS.—Assabet Rob Roy, 3-4, 37½; Assabet French plaids, 50; Blue Ridge, 21; Cocheco; 37½; Carondalet, 32½; Fairmount, 18; Green Ridge, 22½; Pequa, 34 in, 37½; Pequa, 28 in, 32½.

Lem rates, \$2.80 play steel, east, 7½; Lem rates, \$2.80 play steel, per gallon, 10c; crates, 10c; crates, 10c; crates, 10c; crates, 10c; crates, 10c; crate

Iron, rates, \$2.80; plow steel, cast, 7½c; cast tool do, 15@20 wagon spokes, do set, 3.00; hubs, per set, 1.25; fellocs, sawed dry, 150; tongues, each, 75@85c; axles, each, 75œ; square muts, per lb, 7@11c; washers, per lb, 8@18c; rivets, per lb, 11c; coil chain, per lb, 6@12c; malleable, 8½c; iron wedges, 6c; crowbars, 6c; harrow teeth, 4c; horseshoes, per keg, 5 00; spring steel, 7@8c. steel, 7628c.

NAILS—10 to 20d, 3 25;78 to 10, 3 50; 6d, 3 75; 4d, 4 00; 3d, common, 4 75; 3d, fine, 6 25; clinch, all sizes, 5 00; 6d, casing, 4 50; 8d casing, 4 25; 10d casing, 4 00; 10d

half kegs, 10c extra. ALCOHOL—187 per cent, \$2.16 per wine gallon, extra California spirits, 187 per cent at 1.18 per proof gallon triple refined spirits, 187 per cent, \$1.16; per proof gal re-distilled whiskies, \$1.00@1.50; fine blended, \$1.502@2.0, V. fine blended, \$1 50@2 50; Kentucky bour-bons, \$2 00@7 00; Kentucky and Pennsylvania ryes, \$2 00@7 00. BRANDIES—Imported, \$6 00@16 00;

finish, 4 50; 8d finish, 4 75; 6d finish, 5 00;

iomestic 1 4064 00. GINS-Imported, 4 50@6 00; domestic, 406.3 00, RUMS Imported, 4 5066 00; New 1 706.3 50: England, 2 000rd 00; domestic, 1 50003 50; PEACH AND APPLE BRANDY—

175@4 00. CHAMPAGNES—Imported per case, 12 000 26 00@ 34 00; American, per case, 12 00@ CLARETS-Per case, 4 50@16 00. WINES—Rhinewine, per case, 6 00@20 00; Catawba, per case, 4 00@7 00.

## Sr. Louis, June 13. Receipts of cattle 2,100, hogs 7,12,5 sheep 680. Hogs unchanged.

St. Louis Live Stock-

MARKETS BY TELEGRAPH. Chicago Produce.

CHICAGO, June 13. On 'Change the grain markets were firmer and higher. The receipts of grain were 29,200 bushels by canal and 1,207 car loads by rail, embracing 336 of wheat, 636 of corn, 227 of oats, 6 of 'ye and 2 of bar-

33c. Granulated—Blackwells Durham, 16 oz 46c; Dukes Durham, 16 oz 46c; Dukes Durham, 16 oz, 45c; Seal of North Carolina, 16 oz, 46; Seal of Nebraska, 16 oz, 38c; Lone Jack, 4 oz, linen bags, per lb, \$1.35; Marburgs Puck, 2 oz, tin foil, 55c; Dog Tail, 65c.

10ads by rail, embracing 336 of wheat, 636 oz oz, 53c oz, 53

Rye—Ruled dull but firm; demand limited; No. 2, \$1 01, cash; \$1 02 June; 88 July; 80 August; 79! September. Barley Steady; offerings small, but more or less inquiry for all grades; No. 2 \$1 10@1 12 for cash; \$1 18 for Septem-

ber; No. 3, quotable at 86c. Pork—Light demand, offerings small and

Corn June, firm and closed with 45c bid; July, 45c; August, 45ge bid; September, 46ge; year, 43ge; total sales, 2,025,000

Oats—June closed at 38%; July and August, 2%; September, 27%; total sales, 415,000 bu. Rye June, \$1 00; July, 87; August, 80]c; otal sales, 5,000 bu.

Pork—Higher; July closed at \$16 35;
August \$16 52 bid; year, offered at \$14 00,
with \$13 80 bid; total sales, 1,750 bbls.

Liverpool Produce.

LIVERPOOL, June 13, Flour-American, 9s@11s.
Wheat-Winter, 9s@9s 7d; white, 8s 10d
@9s 6d; spring, 9s@9s 4d; club, 9s 7d@ Corn-4s