

VEST POCKET MEMORANDUM

AND

ITEMS OF INTEREST.

• • •

WITH COMPLIMENTS
OF

Wm. Deering & Co.

GRAIN

AND

GRASS

CUTTING MACHINERY.

• • •

CHICAGO, U. S. A.

1891.

JANUARY.

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Health, Wealth and Contentment.

These are three things that everybody wants, and the greatest of these is Contentment. Buy a DEERING Binder or a DEERING Mower, and see if it does not make you *Healthier*.—Because it does the hardest part of the work. *Wealthier*.—Because it will save your crops and need few repairs. *Contented*.—Because you will be satisfied that you have the best.

Durability of Woods.

Experiments have lately been made by driving sticks made of different woods, each 2 feet long and $2\frac{1}{2}$ inches square into the ground, only $\frac{1}{2}$ of an inch projecting outwards. It was found that in five years all those made of Oak, Elm, Ash, Fir, Soft Mahogany, and nearly every variety of Pine were totally rotten. Larch, Hard Pine, and Teakwood were decayed on the outside only, while Acacia, with the exception of being also slightly attacked on the exterior, was otherwise sound. Hard Mahogany and Cedar of Lebanon were in tolerably good condition, but only Virginia Cedar was found as when put into the ground. This is of some importance to builders, showing what woods should be avoided and what others used by preference, in under-ground work. The duration of wood when kept dry is very great, as beams still exist which are known to be nearly 1100 years old, and Piles, driven by the Romans prior to the Christian Era have been examined of late and found to be perfectly sound after an immersion of nearly 2000 years.

Facts for Builders.

1000 shingles, laid 4 inches to the weather will cover 100 square feet of surface, and 5 pounds of shingle nails will fasten them on.

1-5 more siding and flooring is needed than number of square feet of surface to be covered, because of the lap in sliding and matching.

1000 laths will cover 70 yards of surface, and 11 pounds of lath nails will nail them on.

8 bushels of good lime, 16 bushels of sand, and one bushel of hair will make enough good mortar to plaster 100 square yards.

A cord of stone, 3 bushels of lime, and a cubic yard of sand will lay 100 cubic feet of wall.

5 courses of brick will lay 1 ft. height of chimney.

16 bricks in a course will make a flue of 4 inches wide and 12 inches long, and 8 bricks in a course will make a flue 8 inches wide and 16 inches long.

Cement. 1 bushel, and sand 2 bushels, will cover $3\frac{1}{4}$ square yards, 1 inch thick; $4\frac{1}{2}$ square yards $\frac{3}{4}$ of an inch thick; $6\frac{1}{2}$ square yards $\frac{1}{2}$ inch thick.

1 bushel of cement, and one of sand will cover $2\frac{1}{4}$ square yards 1 inch thick; 3 square yards $\frac{3}{4}$ of an inch thick, and $4\frac{1}{2}$ square yards, $\frac{1}{2}$ of an inch thick.

"A tool is but the extension of a man's hand and a machine is a complex tool. And he who invents a machine augments the power of a man and the well-being of mankind."

Henry Ward Beecher.

Dimensions of One Acre.

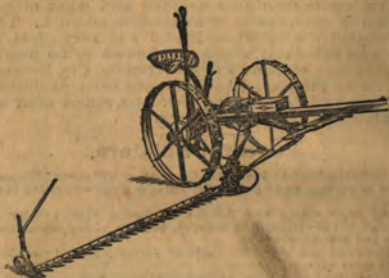
A square, whose sides are 12.649 rods, or 69.57 rods, or 208.71 feet long, contains one acre. Table of dimensions of rectangle containing one acre.

RODS.

1 x 160	1½ x 106⅔	2 x 80	2½ x 64
3 x 53⅓	3½ x 45 5-7	4 x 40	4½ x 35 5-9
5 x 32	5½ x 29 1-11	6 x 26⅔	6½ x 24 8-13
7 x 22 6-7	7½ x 21 ¼	8 x 20	8½ x 18 14-17
9 x 17 7-9	9½ x 16 16-19	10 x 16	10½ x 15 5-21
11 x 14 6-11	11½ x 13 7-11	12 x 13⅓	12½ x 12 4-5
			12 13-20 x 12 13-20

Salaries Paid to Heads of Governments.

Various governments pay their chiefs as follows: The United States, \$50,000 a year; Persia, \$10,000,000; Russia, \$10,000,000; Siam, \$10,000,000; Spain, \$3,900,000; Italy, \$3,000,000; Great Britain, \$3,000,000; Morocco, \$2,500,000; Japan, \$2,300,000; Egypt, \$1,575,000; Germany, \$1,000,000; Saxony, \$700,000; Portugal, Sweden and Brazil, each \$500,000; France, \$200,000; Hayti, \$240,000; Switzerland, \$3,000.



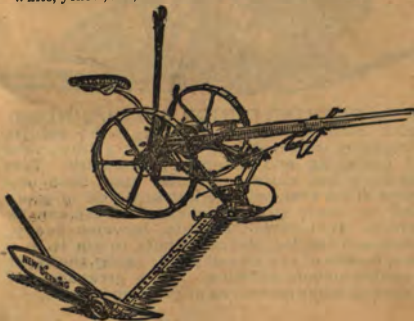
The **DEERING GIANT MOWER** is so called because it cuts a swath 5, 6 or 7 feet, while drawing almost as easy as a light mower. This is due, most of all, to the fact that the friction of the cutter bar is taken off the ground by a strong supporting spiral spring. In addition to this, it has all the desirable features that have made the **NEW DEERING MOWER** so popular with farmers. A boy can manage it and cut with it at least 20 acres a day.

The DEERING Knotter, the DEERING Main Frame, the DEERING Main Wheel, and the DEERING Reel, if compared with those on machines of other makes, will convince the most prejudiced that the DEERING is the machine to buy. Buy the best and obtain the cheapest.

HOW TO MIX INKS OR PAINTS FOR TINTS.

A larger quantity of the first-named color must always be used.

Dark green and purple make bottle green.
White and medium yellow make buff tint.
Red, black, and blue make dark brown.
Bronze blue, lemon yellow, and black make dark green.
White, medium yellow and black make drab tint.
White, lake, and lemon yellow make flesh tint.
Lemon yellow and bronze blue make grass green.
White and black make gray tint.
White and purple make lavender tint.
Red, black, and medium yellow make maroon.
Lake and purple make magenta.
Medium yellow and purple make olive green.
Medium yellow and red make orange.
White, ultramarine blue, and black make pearl tint.
White and lake make pink.
Ultramarine blue and lake make purple.
Orange, lake, and purple make russet.
Medium yellow, red, and white make sienna.
White and ultramarine blue make sky blue.
Ultramarine blue, black and white make slate.
Vermilion and black make Turkey red.
White, yellow, red, and black make umber.



The NEW DEERING MOWER cuts a swath of $4\frac{1}{4}$ and $4\frac{3}{4}$ feet. It is superior to all other light Mowers, in the following points: High wheels, wide tread, proper distribution of weight, even balance, carefully fitted shafts and gears, freedom from side-draft and neck-weight, great tilting capacity and, above all, powerful and durable cutting apparatus.

It requires 35 miles of wire to circulate the electric current through the telephone, electric light, and fire watch and alarm systems of **WILLIAM DEERING & COMPANY'S** mammoth works, and 5 miles of wire are required to make the circuit of the bells and enunciators in the main offices.

Table Showing the Cost of Smoking, with Six Per Cent Compound Interest Semi-annually.

From the Age of	Two Cigars a Day at 5 Cents each.		Three Cigars a Day at 5 Cents each.	
	Principal.	Prin. & Int.	Principal.	Prin. & Int.
20 to 25	\$ 182.50	\$ 209.21	\$ 273.75	\$ 313.95
20 to 30	365.00	490.39	547.50	745.74
20 to 35	574.50	868.25	821.25	1,314.72
20 to 40	730.00	1,376.08	1,095.00	2,081.16
20 to 45	912.50	2,058.44	1,368.75	3,110.74
20 to 50	1,095.00	3,094.99	1,642.50	4,494.41
20 to 55	1,277.50	4,367.46	1,916.25	6,353.87
20 to 60	1,460.00	6,078.73	2,190.00	8,855.02
20 to 65	1,643.50	8,378.52	2,463.75	12,215.36
20 to 70	1,825.00	11,469.25	2,737.50	16,216.37



The **DEERING JUNIOR STEEL BINDER**, with Steel Bundle Carrier, is noted for its simplicity, lightness of draft, durability, ease of operating and complete reliability. This machine has more and better steel than any other of the kind, will work in any kind of grain and on every ground where a binder can be driven. It elevates the grain, however heavy, damp and tangled, and never fails to tie it in a neat bundle of any size desired, using the least possible amount of twine. It is a great saver of time and labor as well as of grain and twine.

Foul Air in Wells.

A good extemporized apparatus for removing carbonic acid gas from wells is simply an opened-out umbrella let down and rapidly hauled up a number of times in succession. The person who made and reports this experiment states that the effect was to remove the gas in a few minutes from a well so foul as to instantly extinguish a candle previous to the use of the umbrella.

When it is understood that it required 13,000 cars to handle the product of WILLIAM DEERING & COMPANY in 1890, some idea can be formed of the magnitude of their business, and the popularity of their machines.

legs 28 in
2 in on the Bot
3 in on the top
32 in long
20 $\frac{1}{2}$ long

WILLIAM DEERING & COMPANY could produce tons of letters received from farmers who have used their machines, praising their quality as compared with machines of other makes. Before you purchase a binder or mower, do yourself a favor by examining the "DEERING," or see one in operation.

Fine workmanship and the best materials more than make up any difference in price between the DEERING machines and those of other makes. With their enormous facilities, WILLIAM DEERING & COMPANY could make the machines of many of their competitors for much less than it costs to make the DEERING.

10,000,000 feet of lumber, or 1,200 car loads, and 24,000 tons of iron and steel were used in the DEERING Works in 1890. With the increased capacity there will be much more than this used during the season of 1891.

When you visit the DEERING agent, do not fail to ask him for a book entitled the "Whys and Wherefores," by Therefore Doso, Esq. This is something that will interest and instruct your entire family.

The **DEERING Twine Binders and Mowers** have been victorious in more legitimate American field trials than all other makes put together. In fact, the "DEERING" has never experienced defeat where the decision depended upon true merit.

It required 23,000 tons of coal, or 2,300 car loads of 20,000 lbs. capacity each, and 190 car loads of coke to keep the fires going in the great works of WILLIAM DEERING & COMPANY to turn out the required number of machines in the endeavor to satisfy the demand in 1890. Aside from this, five of the many large boilers in the works were supplied with fuel from the waste accumulated from the saws and planers in the establishment.



The DEERING Knotter is simplicity simplified. It is the surest and most economical device in existence, and the envy of all competitors.

There is no place so remote where grain and grass grow where repairs or extra parts cannot be found for the DEERING machines. In fact, there is no place where the DEERING machines have ever been sold, that extra parts are not carried on hand and ready for use in case of accident.

Experiments are Expensive.

You cannot afford to experiment with new machines or new improvements when you can profit by the expensive experience of somebody else. WILLIAM DEERING & COMPANY spend thousands of dollars each year on experimental work, and no machines or improvements leave their works until they have passed beyond an experimental state, and are, without doubt, an assured success.

The immense sales of 1889 were a warning to be prepared for great things during the season of 1890, and extensive preparations were made. The demand, however, exceeded even the utmost expectations, and it was necessary to refuse thousands of orders. For 1891, the capacity of the works has been so greatly enlarged that there need be no fear but that all orders will be filled, whatever the demand. The increased shipping capacity for 1891 will permit of the shipment each day of 60 car loads, containing 960 Binders and 2,400 Mowers.

A disastrous fire would mean not only a loss of your orders. Therefore, the factory with the orders with. It is a well-known fact that the fire department of the city of Chicago, where the works of W. L. & Co. further protect themselves and their customers by being organized and maintain their own private fire department consists of seven hose cart companies and six ladder companies. 135 fire plugs inside the buildings, 1 thousand feet of hose, are conveniently situated and constantly renewed through 9.0 feet of ten-inch pipe, 1,550 feet of one-inch pipe. Located throughout the works are automatic sprinklers, also 1,200 fire buckets and 200 barrels of preventive is worth a pound of cure."

in money, but would at least delay the filling
the best fire protection is the safest to place your
best fire protective service in the world is that
WILLIAM DEERING & COMPANY are located. To
us, WILLIAM DEERING & COMPANY have
service. The DEERING Fire Department con-
sists of four companies, supplied with 30,000 feet of fire
hose, 100 fire plugs, and 29 double fire plugs out-
fitted with water at a high pressure, sent
in six-inch pipe, and 2,950 feet of three and four
inch pipe, 40 chemical machines and 2,000 automatic
machines kept always filled with water or sand. "An

Over \$2,000,000 was expended by WILLIAM DEERING & COMPANY for hemp, manilla and sisal fibre during the past year. In their own Twine Works, this material was made into twine enough to go around the earth more than 90 times, or five times to the moon and back. WILLIAM DEERING & COMPANY cannot afford to sell poor twine, for they have the reputation of their machines at stake as well as their reputation as twine manufacturers.

For the convenience of their customers, and for the prompt supply of machines and extra parts to their thousands of local agents in every part of the United States, **WILLIAM DEERING & COMPANY** have 88 branch houses and distributing warehouses located at the best railroad centers and with ample facilities for promptly filling your orders.

Seventeen carloads, or 325,000 pounds of paper are used by WILLIAM DEERING & COMPANY in their annual catalogues that are distributed throughout the length and breadth of the country. This is only one item, and comprises only a small portion of the advertising matter issued by them. They have their own printing office, where much of this work is done.

The **DEERING** Mowers are manufactured in the following widths of cut: 3 ft. 6 in., 4 ft., 4 ft. 6 in., 5 ft., 6 ft., and 7 ft. The frames are made in proper proportion to the length of cut. **WILLIAM DEERING & COMPANY** do not practice economy by putting a 6 ft. bar on a 4 ft. frame.

Many solid trains filled with machines and run on special time schedules were sent out from the works of WILLIAM DEERING & COMPANY during the past season. The largest single shipment ever made in the history of Chicago, was shipped by WILLIAM DEERING & COMPANY in one of these solid trains. The entire annual product of some concerns that style themselves "competitors," would not fill any one of these solid trains which left the works of WILLIAM DEERING & COMPANY every few days during the past season.

Workmanship, Proportions, Finish, Balance, Draft. Compare these points in the DEERING machines with any other machine in the market. Notice the levers on the DEERING machines, how easily they are operated, and how easy to get at! You could not base your judgment of what machine to buy on a better foundation than on these points alone; and a careful comparison will convince you that you want the "DEERING."

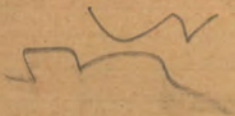
Ask your neighbor, who has a **DEERING** Binder or Mower what machine he would buy if he had need of another. Ask your neighbor who has a machine of another make what machine he wishes he had bought and will buy next time. Compare the "**DEERING**" with any other machine, and ask yourself which machine to buy, and you will find but one answer to these questions, and it will be the "**DEERING.**"

You cannot do good cutting with a poor knife. The school-boy knows this, and trades his old jack-knife for a better one. The knife or cutting apparatus on any grain or grass cutting machine is a very important part. Only the best material and best workmanship should be employed. In order to insure perfection, WILLIAM DEERING & COMPANY have their own knife works, where they make all the knives and sickles used on their machines.

The reason that the paint on DEERING machines looks brighter and lasts longer than that used by other manufacturers, is due to the fact that WILLIAM DEERING & COMPANY grind their own paint in pure linseed oil. 249,000 gallons of oil are annually used in the DEERING works.

Electricity is the greatest wonder of modern science. In the great works of WILLIAM DEERING & COMPANY this giant force has been pressed into service. The wires of twenty-five telephones connect the different departments, bringing the most distant within speaking distance. Electric bells do the work of messenger boys; and the brilliant illumination of forty large electric arc lights and 2,500 incandescent electric lamps turn night into day.

Seven miles of railway tracks in the DEERING works are necessary to handle the material coming in and the machines going out. 40 horses are also in use for the same purpose.



2,000 to 3,000 degrees of heat, kept up for 6 to 15 days are required to properly anneal malleable iron.

WM. DEERING CO. make their own malleable iron, and know that it is the very best. Whereas, other concerns buy their malleables, and contend against the same difficulties that WM. DEERING & CO. have overcome by making all the malleable iron for their machines and being sure of its quality.

NUMBER OF TREES REQUIRED PER ACRE.

4 feet apart each way.....	2,720
5 " ".....	1,742
6 " ".....	1,200
8 " ".....	680
10 " ".....	430
12 " ".....	325
15 " ".....	200
18 " ".....	135

Politics of the Presidents.

The subjoined table will be found interesting as a reference:

Name.	Inauguration.	Politics.
George Washington.....	April 30, 1789.....	Unanimous.
John Adams.....	March 4, 1797.....	Federal.
Thomas Jefferson.....	March 4, 1801.....	Democrat.
James Madison.....	March 4, 1809.....	Democrat.
James Monroe.....	March 4, 1817.....	Democrat.
John Quincy Adams.....	March 4, 1825.....	Federal.
Andrew Jackson.....	March 4, 1829.....	Democrat.
Martin Van Buren.....	March 4, 1837.....	Democrat.
William Henry Harrison.....	March 4, 1841.....	Whig.
John Tyler.....	April 6, 1841.....	Whig.
James K. Polk.....	March 4, 1845.....	Democrat.
Zachary Taylor.....	March 5, 1849.....	Whig.
Millard Fillmore.....	July 9, 1850.....	Whig.
Franklin Pierce.....	March 4, 1853.....	Democrat.
James Buchanan.....	March 4, 1857.....	Democrat.
Abraham Lincoln.....	March 4, 1861.....	Republican.
Andrew Johnson.....	April 15, 1865.....	Republican.
U. S. Grant.....	March 4, 1869.....	Republican.
R. B. Hayes.....	March 5, 1877.....	Republican.
James A. Garfield.....	March 4, 1881.....	Republican.
Chester A. Arthur.....	Sept. 20, 1881.....	Republican.
Grover Cleveland.....	March 4, 1885.....	Democrat.
Benj. Harrison.....	March 4, 1889.....	Republican.

How to Measure Corn in Crib, Hay in a Mow, Etc.

This rule will apply to a crib of any kind. Two cubic feet of sound, dry corn in the ear will make a bushel shelled. To get the quantity of shelled corn in a crib of corn in the ear, measure the length, breadth, and height of the crib, inside of the rail; multiply the length by the breadth and the product by the height; then divide the product by 2 and you have the number of bushels in the crib.

To find the number of bushels of apples, potatoes, etc., in a bin, multiply the length, breadth and thickness together, and this product by 8, and point off one figure in the product for decimals.

To find the amount of hay in a mow, allow 512 cubic feet for a ton and it will come out very nearly correct.

The entire floor space contained in the works of WM. DEERING & CO., if estimated in running feet, would amount to 8,460,000 feet, or over 160 miles.

Nutrlment in Different Kinds of Food for Animals.

There is in Every 100 Parts by Weight of—	Flesh-forming Material, viz., Gluten, etc.	Warmth giving and Fattening Material, viz.		Bone-making Material or Mineral Substance.	Husk or Fiber.	Water.
		Fat or Oil.	Starch			
Beans and Peas	25	2	48	2	8	15
Oatmeal	18	6	63	2	2	9
Middings 3rds or fine Sharps	18	6	53	5	4	14
Oats	15	6	47	2	20	10
Wheat.....	12	3	70	2	1	12
Buckwheat.....	12	6	58	1½	11	11½
Barley	11	2	60	2	14	11
Indian Corn.....	11	8	65	1	5	10
Hempseed.....	10	21	45	2	14	8
Rice	7	A trace	80	A trace	...	13
Potatoes	6½	...	41	2	...	50½
Milk.....	4½	3	5	¾	...	86¾

Chinese Method of Preserving Grapes.

The Chinese have a method of preserving grapes, so as to have them at their command during the entire year. The method adopted consists in cutting a circular piece out of a ripe pumpkin or gourd, making an aperture large enough to admit the hand. The interior is then completely cleaned out, the ripe grapes are placed inside, and the cover replaced and pressed in firmly. The pumpkins are then kept in a cool place, and the grapes will be found to retain their freshness for a very long time. A very careful selection must be made of the pumpkin, the common field pumpkin, however, being well adapted for the purpose in question.

Salaries of the United States Army and Navy Officers.

ARMY.		NAVY.	
General.....	\$13,500	Admiral	\$13,000
Lieutenant-General.....	11,000	Vice-Admiral	9,000
Major-General.....	7,500	Rear-Admiral.....	6,000
Brigadier-General.....	5,500	Commodore.....	5,000
Colonel	3,500	Captain	4,500
Lieutenant-Colonel	3,000	Commander	3,700
Major	2,500	Lieutenant-Commander..	2,800
Captain	2,000	Lieutenant	2,400
Regimental Adjutant....	1,800	Master.....	1,800
First Lieutenant	1,600	Ensign.....	1,200
Second Lieutenant.....	1,400	Midshipman,.....	1,000

Buy a DEERING Binder, and let your 12-year-old boy do your harvesting. He can handle the DEERING as well as the hired man.

Number of Plants for an Acre of Land.

Dist. apart.	No. of Plants.
3 inches by 3 inches.....	696,960
4 " " 4 "	392,040
5 " " 6 "	174,240
9 " " 9 "	77,440
1 foot by 1 foot	43,560
1½ feet by 1½ feet.....	19,360
2 " " 1 foot.....	21,780
2 " " 2 feet.....	10,890
2½ " " 2½ feet.....	6,960
3 " " 1 foot.....	14,520
3 " " 2 feet.....	7,260
3 " " 3 feet.....	4,840
3¾ " " 3¾ feet	3,555
4 " " 1 foot	10,890
4 " " 2 feet	5,445
4 " " 3 feet.....	3,630
4 " " 4 feet.....	2,722
4½ " " 4½ feet.....	2,151
5 " " 1 foot.....	8,712
5 " " 2 feet.....	4,356
5 " " 3 feet	2,904
5 " " 4 feet	2,178
5 " " 5 feet	1,742
5½ " " 5½ feet.....	1,417

The approximate breadth of a river or other stream may be determined by means of the brim of a hat. The person desiring to ascertain this fact must place himself at the edge of one bank of the river and lower the brim of his hat till he finds the edge just cuts the other bank; then, after placing the hand under the chin, so as to steady his head and keep it in exactly the same position, he must turn round steadily till he faces some level ground on his own side of the river and observes when the edge of the peak again meets the ground. The measure of this distance will be the breadth of the river.

How to Cut or Bore Glass.

Any hard steel tooth will cut glass with great facility when kept wet with camphor dissolved in turpentine. A drill bow may be used, or even the hand alone. A hole may be readily enlarged by a round file. The ragged edges of glass vessels may also be thus easily smoothed by a flat file. Flat window glass can readily be sawed with a watch-spring saw by the aid of this solution. In short, the most brittle glass can be wrought almost as easily as brass, by the use of cutting tools kept constantly wet with camphorated oil of turpentine.

One dollar loaned one hundred years at compound interest would amount to the following sum :

24 per cent	\$2,351,799,404.00
18 "	15,145,207.00
15 "	1,174,405.00
12 "	84,675.00
10 "	13,809.00
6 "	340.00
3 "	19.25
1 "	2.75

Nothing so evidently proves esteem as imitation. All machines made are more or less imitations of the DEERING.

How to Make a Will.

A duty which every man owes to his family is the making of a will. An instrument of this kind can be drawn by any intelligent person, and will be admitted to probate in all courts, provided the document is in writing, and signed at the end by the testator, or some person in his presence and by his direction, in the presence of two witnesses at least, who must subscribe and attest the will in his presence. The signature must be so placed at, after, following, under or beside or opposite the end of the will that it shall be apparent that the testator intended to give effect by the signature to the writing signed as his will. A provision of this kind will save annoyance and expense, and prevent litigation.

A Stock Broker's Technicalities.

A Bull is one who operates to depress the value of stocks, that he may buy for a rise.

A Bear is one who sells stocks for future delivery, which he does not own at the time of sale.

A Corner is when the Bears cannot buy or borrow the stock to deliver in fulfillment of their contracts.

Overloaded is when the Bulls cannot take and pay for the stock they have purchased.

Short is when a person or party sells stocks when they have none, and expect to buy or borrow in time to deliver.

Long is when a person or party has a plentiful supply of stocks.

A Pool or Ring is a combination formed to control prices.

A Broker is said to carry stocks for his customer when he has bought and is holding it for his account.

A Wash is a pretended sale by special agreement between buyer and seller, for the purpose of getting a quotation reported.

A Put and Call is when a person gives so much per cent. for the option of buying or selling so much stock on a certain day, at a price fixed the day the option is given.

A Popular Fiction About Steel.

Many people imagine that by blowing their breath on the blade of a knife they can tell whether the blade is steel or pot-metal. Now, a person's breath will adhere to a pot-metal blade and fade away the same as on steel, but nine out of ten men don't know this, and that is the reason why so many people carry inferior pocket-knives.

Amount of Barbed Wire Required for Fences.

Estimated number of pounds of barbed wire required to fence space or distance mentioned, with one, two, or three lines of wire, based upon each pound of wire measuring one rod (16½ feet.)

	1 Line.	2 Lines.	3 Lines.
1 square acre.....	503½ lbs.	101½ lbs.	152 lbs.
1 side of a square acre..	123½ "	25½ "	38 "
1 square half acre.....	36 "	72 "	108 "
1 square mile.....	1,280 "	2,560 "	3,840 "
1 side of a square mile.	320 "	640 "	960 "
1 rod in length.....	1 "	2 "	3 "
100 rods in length.. ...	100 "	200 "	300 "
100 feet in length.....	6 1-16 "	12½ "	18 3-16 "

Hay Measure.

About 500 cubic feet of well settled hay, or about 700 of new mown hay, will make a ton. To estimate amount of hay in mow—Ten cubic yards of meadow hay weigh a ton. When the hay is taken out of old stacks, 8 or 9 yards will make a ton. Eleven or twelve cubic yards of clover, when dry, make a ton.

Estimates of Materials.

$3\frac{1}{2}$ barrels of lime will do 100 sq. yards plastering, two coats.

2 barrels of lime will do 100 sq. yards plastering, one coat.

$1\frac{1}{2}$ bushels of hair will do 100 sq. yards plastering.

$1\frac{1}{4}$ yards of good sand will do 100 sq. yards plastering.

$\frac{1}{8}$ barrel of plaster (stucco), will hard finish 100 square yards plastering.

1 barrel of lime will lay 1,000 brick. It takes good lime to do it.

2 barrels of lime will lay 1 cord rubble stone.

$\frac{1}{2}$ barrel of lime will lay 1 perch rubble (es. $\frac{1}{4}$ c'd to perch).

To every barrel of lime estimate about $\frac{5}{8}$ yards of good sand for plastering and brick work.

Durability of a Horse.

A horse will travel 400 yards in $4\frac{1}{2}$ minutes at a walk, 400 yards in 2 minutes at a trot, and 400 yards in 1 minute at a gallop. The usual work of a horse is taken at 22,500 lbs. raised 1 foot per minute, for 8 hours per day. A horse will carry 250 lbs. 25 miles per day of 8 hours. An average draught-horse will draw 1,600 lbs. 23 miles per day on a level road, weight of wagon included. The average weight of a horse is 1,000 lbs.; his strength is equal to that of five men. In a horse mill moving at 3 feet per second, track 25 feet diameter, he exerts with the machine the power of $4\frac{1}{2}$ horses. The greatest amount a horse can pull in a horizontal line is 900 lbs.; but he can only do this momentarily, in continued exertion, probably half of this is the limit. He attains his growth in 5 years, will live 25, average 16 years. A horse will live 25 days on water, without solid food, 17 days without eating or drinking, but only 5 days on solid food, without drinking.

How to Engrave on Eggs.

The art of engraving on eggs is very puzzling to the uninitiated, but in reality it is very simple. It merely consists in writing upon the egg shell with wax or varnish, or simply with tallow, and then immersing the egg in some weak acid, such, for example, as vinegar, dilute hydrochloric acid or etching liquor. Wherever the varnish or wax has not protected the shell, the lime of the latter is decomposed and dissolved in the acid, and the writing or drawing remains in relief.

TAG IS ATTACHED

TO ALL GENUINE



DEERING

BINDER TWINE