



LEAP 1880 YEAR.

JANUARY.							MAY.							JULY.							SEPTEMBER.						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
1	2	3	4	5	6	7	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
8	9	10	11	12	13	14	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
15	16	17	18	19	20	21	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	22	23	24	25
22	23	24	25	26	27	28	22	23	24	25	26	27	28	29	30	31	22	23	24	25	26	27	28	29	30	31	
29	30	31	1	2	3	4	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
30	31	1	2	3	4	5	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19

FEBRUARY.							OCTOBER.						
S	M	T	W	T	F	S	S	M	T	W	T	F	S
1	2	3	4	5	6	7	1	2	3	4	5	6	7
8	9	10	11	12	13	14	8	9	10	11	12	13	14
15	16	17	18	19	20	21	15	16	17	18	19	20	21
22	23	24	25	26	27	28	22	23	24	25	26	27	28
29	30	31	1	2	3	4	29	30	31	1	2	3	4
5	6	7	8	9	10	11	5	6	7	8	9	10	11
12	13	14	15	16	17	18	12	13	14	15	16	17	18
19	20	21	22	23	24	25	19	20	21	22	23	24	25
26	27	28	29	30	31	1	26	27	28	29	30	31	1

MARCH.							NOVEMBER.						
S	M	T	W	T	F	S	S	M	T	W	T	F	S
1	2	3	4	5	6	7	1	2	3	4	5	6	7
8	9	10	11	12	13	14	8	9	10	11	12	13	14
15	16	17	18	19	20	21	15	16	17	18	19	20	21
22	23	24	25	26	27	28	22	23	24	25	26	27	28
29	30	31	1	2	3	4	29	30	31	1	2	3	4
5	6	7	8	9	10	11	5	6	7	8	9	10	11
12	13	14	15	16	17	18	12	13	14	15	16	17	18
19	20	21	22	23	24	25	19	20	21	22	23	24	25
26	27	28	29	30	31	1	26	27	28	29	30	31	1

APRIL.							JUNE.							AUGUST.							DECEMBER.						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
1	2	3	4	5	6	7	1	2	3	4	5	6	7	1	2	3	4	5	6	7	8	9	10	11	12	13	
8	9	10	11	12	13	14	8	9	10	11	12	13	14	8	9	10	11	12	13	14	15	16	17	18	19	20	
15	16	17	18	19	20	21	15	16	17	18	19	20	21	15	16	17	18	19	20	21	22	23	24	25	26	27	
22	23	24	25	26	27	28	22	23	24	25	26	27	28	22	23	24	25	26	27	28	29	30	31	22	23	24	
29	30	31	1	2	3	4	29	30	31	1	2	3	4	29	30	31	1	2	3	4	5	6	7	8	9	10	
5	6	7	8	9	10	11	5	6	7	8	9	10	11	5	6	7	8	9	10	11	12	13	14	15	16	17	
12	13	14	15	16	17	18	12	13	14	15	16	17	18	12	13	14	15	16	17	18	19	20	21	22	23	24	
19	20	21	22	23	24	25	19	20	21	22	23	24	25	19	20	21	22	23	24	25	26	27	28	29	30	31	
26	27	28	29	30	31	1	26	27	28	29	30	31	1	26	27	28	29	30	31	1	2	3	4	5	6	7	

INTEREST RULES.

This rule reckons 30 days to the month, or 360 days to the year.

Four per cent.—Multiply the principal by the number of days to run; separate the right-hand figure from the product, and divide by 9.

Five per cent.—Multiply by number of days, and divide by 72.

Six per cent.—Multiply by number of days; separate right-hand figure, and divide by 6.

Eight per cent.—Multiply by number of days, and divide by 45.

Nine per cent.—Multiply by number of days; separate right-hand figure, and divide by 4.

Ten per cent.—Multiply by number of days, and divide by 36.

Twelve per cent.—Multiply by number of days; separate right-hand figure, and divide by 3.

Fifteen per cent.—Multiply by number of days, and divide by 24.

Eighteen per cent.—Multiply by number of days; separate right-hand figure and divide by 2.

Twenty per cent.—Multiply by number of days and divide by 18.

WEIGHT PER BUSHEL OF VARIOUS PRODUCTS.

Barley	48 lbs.
Buckwheat, (In Pa.)	50 "
" (In Ky.)	52 "
" (In Mass.)	48 "
Blue Grass Seed	14 "
Brass	20 "
Beans	60 "

Corn, shelled	56 lbs.
" on the Cob	70 "
Clover Seed	60 "
Dried Apples, (In Pa.)	32 "
" (In Ills.)	31 "
" Peaches, (In Pa.)	33 "
" (In Ills.)	32 "
Flax Seed	56 "
Hemp Seed	48 "
Onions, (In Pa., Ky.)	57 "
" (In Mass.)	52 "
Oats, (In Ohio, Ill. and Mass.)	32 "
" (In Ky.)	33 "
" (Me. and Pa.)	30 "
Pears	64 "
Potatoes	60 "
Rye	56 "
Salt, (Syracuse)	56 "
" (Liverpool)	50 "
" (Turks Island)	76 "
Timothy Seed	45 "
Wheat	60 "
Bld. Flour weighs	196 "
" Salt "	280 "
" Beef "	200 "
" Pork "	200 "
" Fish "	200 "

300 Feet No. 20 Binding Wire, weighs 1 lb.

128 Cubic Feet, = 1 Cord of wood.
12 Dorens, = 1 Gross.
12 Gross, = 1 Great Gross.
4 Inches, = 1 Hand.
3 Inches, = 1 Span.

The market for our machinery has steadily increased from year to year, until now the limits of our trade are only bounded by the limits of the world's grain and grass-growing territory; and we find our shops, which are the largest in the world, again almost inadequate to meet the vast and growing demand upon us for our world-famed machines. In all parts of Europe, from both sides of the English Channel to the shores of the Black Sea; in Southern Africa, in Mexico, and South America; in Australia, and New Zealand; may now at the proper season be found, in the agricultural districts, many McCormick machines gathering the crops, and daily building up for us new friends and new customers.

For the season of 1879 we manufactured more machines than ever before, during any one year, and yet could not fill our orders in many parts of our own country, the superiority of our machines giving them the preference over all others, and farmers willingly paid us more for them than they were asked for similar implements of other make.

For the season of 1880 we are now very actively engaged pushing forward the work at our manufactory, with a view of getting out every machine that our great facilities can produce, so that we may be able to accommodate, as far as possible, every man who desires to purchase a McCormick machine for his next season's use; and with a favorable spring we confidently expect to realize the largest year's sales within the history of our business.



THE MCCORMICK REAPER OF 1847.

We shall make such improvements to our machinery this year as have been found necessary, in order to overcome some disadvantages that were apparent to us last summer, and think that our machines of 1880 will unquestionably be admitted by all unbiased judges, to be the nearest to perfection of any that have yet appeared in the market.

Full descriptions of all styles of machines we make will be found further along in this pamphlet; together with the claims we make for them as to points of superior merit; and we wish the farmer may carefully study every feature of these implements for himself; read the testimonials we print herewith, from prominent farmers; learn what their neighbors or friends who own them think of them; then call on our agents and see for themselves our latest improved McCormick machines, after which the farming public will, we think, concede the fact that the best machine in the market is that made by their old and tried friends, the

MCCORMICK HARVESTING MACHINE CO.



THE MCCORMICK REAPER WORKS, BURNED OCTOBER 9TH, 1871.

THE McCORMICK REAPER WORKS.

IN RETROSPECTIVELY glancing over the history of the manufacture of harvesting machinery, it seems almost incredible that fifty years should effect such a marvelous change in the manner of cutting both grain and grass; and today we can scarcely imagine how our predecessors ever managed to raise and harvest enough for the support of their own households, considering the primitive means they employed to till the soil and gather their products. Consider for an instant the plow, the harrow, the flail, the reaper-hook and the scythe of fifty years ago, in comparison with the sulky plow, the grain drill, the threshor and separator, the mower, and the Harvester and Self-Blender of the present day, and behold what a wondrous stride has been made in the results which now one man's labor is able to achieve.

Fifty years ago the McCormick machine was but a rude experiment, manufactured in a small log work shop, on the old McCormick homestead farm, in Rockbridge County, Virginia. To-day the McCormick Reaper Works is one of the largest manufacturing establishments in the world; and the fame of the McCormick harvesting machinery has spread to all parts of the globe, for wherever grain or grass is a part of the commercial product of any country, there those implements are found indispensable to the agricultural community.

From 1831 to 1845 a limited number of McCormick Reapers were built each year, in shops on the old homestead farm, and were much improved in construction as a familiarity with the requisites for success became more and more understood. Not however until 1845-6 did they begin to become generally known; during those two years they were manufactured at Brockport, New York, and in 1847 both at Chicago, Illinois, and Cincinnati, Ohio; since 1848 they have been built in this city exclusively.

From a capacity for the production of about 500 machines in 1847, our shops were extended and enlarged, until at the time of the great Chicago fire of October 9 and 10, 1871 (when they were burned to the ground), they were capable of producing, when taxed to their utmost, 10,000 machines per year. Our entire works, machinery and stock of material having been totally destroyed by the fire of 1871, we immediately decided upon the removal of their location, from the old situation near the mouth of the Chicago River (which is now very near the heart of the great city) to their present site, corner of Western and Blue Island Avenues, about five miles distant. Immediately after the fire we have referred to we erected temporary sheds upon our old site, which we moved into in February, 1872, and there manufactured 3,000 machines for that season's trade. The latter part of July, 1872, we first broke ground for the foundation of our present works, and they were all completed and occupied by us on the first of the following February; and within their walls we manufactured and completed, for the season of 1873, over 10,000 reaping and mowing machines.

Our present works are located at the corner of Western and Blue Island Avenues, being in the extreme southwestern portion of the city, where we have all the advantages and facilities afforded by direct railroad connection with every railway that runs into Chicago, so that we receive in our own yard, on board cars, most of the material that comes to us over the railroad lines; and our machines are shipped, without ever being loaded upon a wagon, from our works to all parts of the world. We can load as many as seventeen cars from our platform at one time; and in the shipping season, the machines taken away from our works each day comprise a railroad by themselves. The south branch of the Chicago River affords us 1,200 feet of dockage, where vessels bringing us lumber and iron, unload the same upon our own premises. The Blue Island Avenue line of street cars, running within a hundred yards of the factory gate, affords an easy mode of access to our shops from the center of the city; and the Twenty-sixth Street Station of the Pan Handle Railroad brings passengers almost as near.

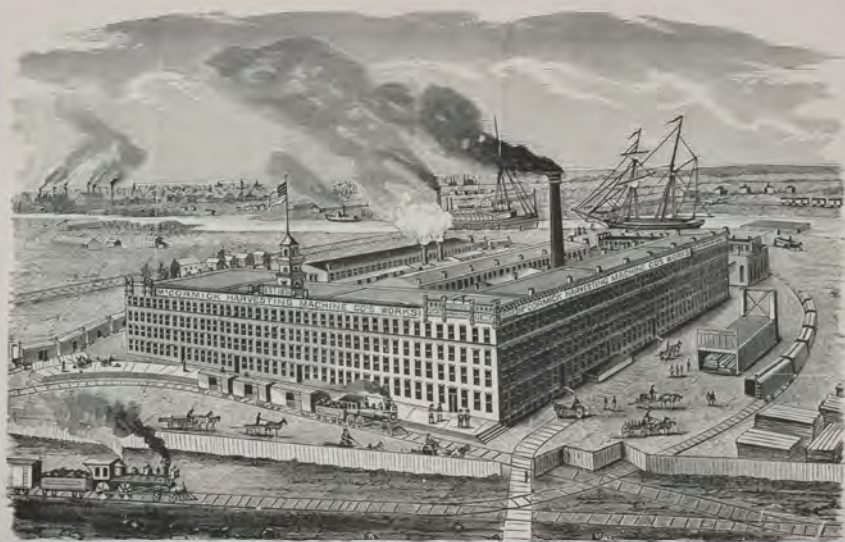
The entire area of our grounds comprises twenty-two acres, about three acres of which is covered by buildings; the balance is used for railroad tracks, lumber yards, and for the storage of coal, coke, charcoal, pig iron, and other articles required to be in easy access of the factory.

The different manufacturing buildings are located in the shape of a rectangle, having a frontage to the north and south of 350 feet, and to the east and west of 460 feet; and contain a floor surface of almost seven acres.

The main building, occupying the north and west fronts, is five stories high (including the basement), and 60 feet in width, comprising ten rooms, 150 x 60; five rooms, 100 x 90; and fifteen rooms, 100 x 60 feet. The wood-working, the iron-working and finishing, the painting and varnishing, and the storage departments are all situated in this main building.

The east front is occupied by the foundry and core room, a building 245 x 90 feet, with a truss roof, 45 feet high, and a cupola building, 30 x 90 feet, three stories high.

In the center of the court is a building, 40 x 270 feet, three stories high, with a cellar



THE McCORMICK REAPER WORKS. BUILT IN 1872.

which is used for the *repair department*, as well as departments for milling and cleaning castings, sickle making and grinding, canvas apron manufacturing, brass casting, and japanning.

Between the center building and the west wing is situated the *engine and boiler house*, 40 x 60 feet (with a smoke stack 163 feet high), within which is a vertical condensing engine of 300 horse power, which drives the machinery of the entire establishment, being supplied with steam from five locomotive (or flue) boilers, each eighteen feet long and five feet in diameter. The entire works are heated by steam in the winter time by two of these boilers.

On the south front of the rectangle is the *blacksmith shop*, 60 x 100 feet, with a truss roof 36 feet high, where bolt and forging machinery, drop and trip hammers, furnaces and blacksmith fires are engaged converting raw iron and steel into the multifarious shapes required in manufacturing the various McCormick machines.

In the various departments of these extensive works, we employ a great multiplicity of machinery, embracing the most improved wood and iron-working machines of the present day, which turn out an infinite variety of the very best finished work that the demands of the times require. We have constantly at work from five to seven hundred employes in the different branches of these works, embracing blacksmiths, machinists, lathe men, carpenters, pattern makers, moulders, painters, laborers, and foremen of the various departments; and in some seasons of the year we work a double force, keeping our factory going both night and day. Many of these men have been with us for twenty, and some for even thirty years.

The material we use in the construction of all our machines, is the very best that can be purchased in the markets of the world. We buy our bar iron direct from one of the largest rolling mills in the United States, and are particular as to its quality, being the finest that can be produced; while for portions of machines requiring extra strength and toughness, we use extra refined iron, or Norway iron, whichever we find best adapted to the purpose. For our castings we melt three varieties of pig iron, thus producing a compound iron, embracing the different qualities of strength and toughness necessary, and at the same time getting a smooth casting, which will bore easily and admit of a smooth, or if necessary a high finish. Our malleable iron castings are all manufactured just adjoining our premises, by the largest establishment of the kind in the West; and as to their quality, we know, from many severe tests we have made, that no better castings are made anywhere, both as to material and finish. The most of our steel is manufactured expressly for us in Pittsburgh, Pa., where the science is now brought to as great a perfection as in Sheffield; and from tests made of Sheffield and Pittsburgh steels, side by side, we know that what we use cannot be excelled by any foreign manufacturers. Chicago is to-day the greatest lumber market in the world; consequently we do not have to go outside of our own city to purchase cargoes of the finest lumber that was ever put into a machine; yet we have nearly all our lumber cut at the mills in Michigan, Indiana, and Wisconsin, to the proper sizes, length, etc., we require; and have the same piled and seasoned generally about a year, before manufacturing it into parts of our machines. The cotton duck we use in the manufacture of harvester aprons, we have made at the mills in New England especially for our use, and know that a superior article is not, and cannot be produced. The paints, oils, and varnishes we use, we take great pains in thoroughly testing, and even analyzing, in order that we may get the best articles of the kind that can be bought. Then, please consider, when you have taken in all the above facts, that we pay spot cash for everything we buy, while all other manufacturers buy on from four to six months' time; thus dealers are always anxious to sell to us, and we buy the best material at the lowest market prices.

The Repair Department of our factory is a very extensive business in itself, embracing as it does the parts of all machines made by us for nearly twenty years; all of which are kept by stock system, as that we can tell in a moment how many duplicate pieces we have of any machine manufactured within the time named; and any part that is wanted for repairing any McCormick machine can be produced at an instant's notice.

Since our Self-Binder has been placed upon the market, the business of supplying binding wire for it has grown into enormous proportions; the amount of wire we purchased for our last season's supply was over twenty-eight hundred tons; and for 1880 that amount will be largely increased; so that this new department, in itself, is a very extensive business, and requires an enormous cash capital.

Our general business office was removed from the works the first of last September, and is now in the McCormick Building, which is located on the corner of Randolph and Dearborn Streets, just one block from our new City Hall. We have telephonic communication between the office and the works, over a special line of our own, so that one can from the office, at any moment, talk with any one at the works just as readily as though he were there in person.

We look for a large business during the season of 1880, and are prepared to run our works night and day if necessary, using every endeavor to meet the great demand for our machinery that we have every reason to believe we shall realize; and we trust that our friends who are in need of any implement in our line, will give us, or our agents, an early call, and have their orders entered for the same as soon as possible.



THE McCORMICK HAND-BINDING HARVESTER AT WORK.

THE McCORMICK HARVESTER.

THIS machine requires three men to operate it: one to drive, and two to bind the grain delivered to them on the table, as shown in the working cut on opposite page.

We have been building it since the season of 1875, and it has met with very marked success in the harvest fields, wherever it has been introduced, and it has been proven time and again to be superior to all other machines of its type, by reason of the improvements we have added to it from year to year.

We claim for it many qualities of superiority over any other similar machine, and enumerate the most prominent of them for the benefit of the farming public, as follows:

Its balance is very nicely adjusted, so that there is no weight on the horses' necks.

Its tongue (unlike some others) is so situated as that the high horse does not have to be driven into the standing grain in order to secure a full cut for the sickle.

It has a nine-inch face drive wheel (all other makes have but seven inch), which, in soft ground is a great advantage, making it almost impossible to mire the machine down; and on hard smooth ground it affords greater traction, and thus is a greater security against slipping where the grain is heavy and lodged.

It is furnished with a serrated-edged grain sickle, which has long been conceded to be the best cutting edge for grain, as the saw teeth, with a slow motion, cut the dry stalks even better than a smooth-edged knife with a high motion; and thus a great saving in power is secured.

Where a farmer wishes a smooth-edged knife with his harvester, for flax cutting, in addition to the sickle which we furnish, we will provide him with the same at a slight extra charge.

The sickle of the McCormick Harvester is driven from the center, instead of from the end, which insures a longer stroke, and requires less power. Where practicable, this mode of driving the sickle is always preferable.

It has chains for driving purposes, which device of our introduction is far superior to the belts formerly in common use. There can be no slipping and jerking with chains, which is the great trouble with the belt system. Then too, belts get hard, shrink, and wear entirely out, long before any wear is perceptible on chains; besides when a chain link breaks a new one is very quickly substituted, and the farmer experiences no delay.

It has canvas elevating and platform aprons, for carrying the cut grain from the platform to the binders' table. The belts with nails or hooks, and all the other apparatus used for this purpose, are sadly defective, in that they shell and beat out the ripe grain, clog badly in heavy and damp cutting, get out of order, and are in other ways unfit for the purposes for which they are used. Canvas aprons never clog in the heaviest cutting or dampest weather; nothing can be sifted through them or lost upon the ground where they are used, for which reasons they are the cleanest and best for the purpose of any devices that have yet been introduced.

Our Harvester has an adjustable reel, which can be thrown forward or back, up or down, in order to conform to the requirements of long or short, leaning or down grain; and by its use all kinds of grain can be successfully reeled upon the platform; and the machine enabled to cut where with the old fashioned stationary reel the grain could not be saved. In fact, grain that has been looked upon by the farmer as beyond the power of any machine to cut and save, has been successfully harvested by the McCormick Harvester, by the use of its tilting apparatus and adjustable reel. We were the first to introduce this improvement, and today we have the simplest and most efficient adjustable reel in use.

By the use of the tilting lever the points of the guards of the McCormick Harvester can be thrown up or down, to conform to the unevenness of the ground in going up or down hill, or for picking up down and tangled grain. This lever is in easy reach of the driver, and can be quickly and easily manipulated.

We have made a change in the width of the iron strap over front end of sway bar, making it now four inches wide; so that trash will not collect under the canvas, back of the sickle, thus remedying whatever trouble from clogging has heretofore been experienced from that source.

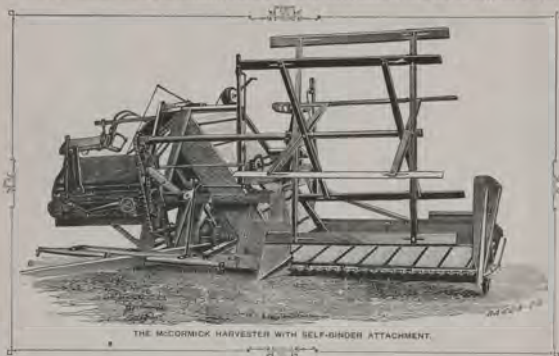
The binders' stand on our Harvester is much superior in its arrangement to that of any other similar machine, as it is self-adjusting; so that no matter how the machine may be tilted, by means of the tilting lever, the platform on which the binders work remains level, making it much easier for the men to perform their labor.

Ask any man who has ever bound on a McCormick machine, what he thinks of our adjustable table, in comparison with the rigid tables used on other machines, and you will get a verdict every time in favor of the McCormick.

Another great feature we claim is, that the owner of a McCormick Harvester can, at any time, have the McCormick Self-Binder Attachment put on his machine, and thus secure for himself the most perfect grain-harvesting implement in the world.

THE MCCORMICK SELF-BINDER ATTACHMENT.

THREE seasons have now passed since the McCormick Self-Binder was first introduced in the American harvest fields, and its fame has already spread around the world, while its many merits are being discussed in the wheat-raising sections of nearly every country upon the globe. It has demonstrated not only the possibility of automatically binding grain into sheaves, but also the great advantage possessed by the Self-Binder over every other known way of harvesting the cereal crops of the world; and wherever introduced, it has been found to be the greatest labor-saver and the most economical implement that human genius has yet produced. It saves the labor of two men, and their boarding, over the hand-binding harvester; besides, by reason of the cleanliness of its work, it saves more than enough grain to pay for the wire bands; while no reckoning can be made of the profit it is to the farmer by reason of his being able to work it overline, early and late, in all kinds of cutting and weather, to suit his own convenience, when and where farm hands could not be depended upon.



THE MCCORMICK HARVESTER WITH SELF-BINDER ATTACHMENT.

The material we use in its construction is the very best that can be procured. The castings are made as light as possible, with the especial view to strength and durability. Parts that are subjected to extra strain, are made of the best malleable or refined iron.

We fit and put together the working parts of all Binders, and then run them by machinery at the shop, before they are packed for shipment; thus we know that every one of them is properly adjusted when it leaves our works; and, if properly put together, cannot fail to do good work in the field. If farmers will follow the directions we send with each machine, there need be no more trouble experienced in starting a Self-Binder than a Mower.

The McCormick Automatic Binder Attachment is bolted to the McCormick Harvester in the place of the hand-binders' table and platform, and accomplishes the work of the two men on that machine. A few of its prominent features may be enumerated as follows:

The reciprocating motion of our machine has been found to be the best, by all odds, for the purposes of a Self-Binder, as it secures better separation, less scattering, and makes even, squarer bundles than any other; while the manner of its delivery of the bound bundle upon the ground, is pre-eminently superior to that of any other machine in the market.

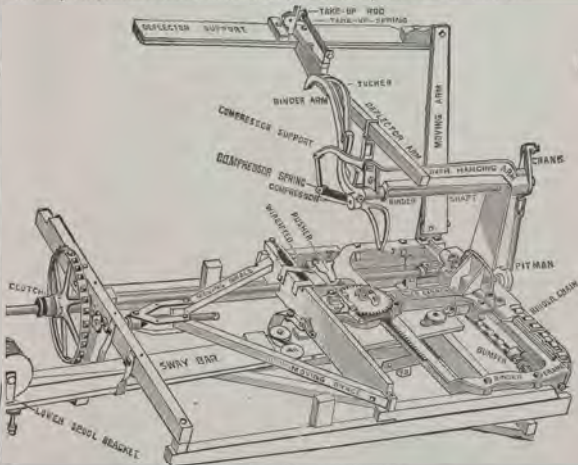
We have found it to be a great advantage to use two spools for binding, instead of one, as by this means we do away with the plungers, hooks, or clamps used by all other Self-Binders; and thus we obviate the endless troubles experienced by all those machines, by reason of those complicated contrivances constantly wearing, breaking, and getting out of order.

We have the right to build a single spool Binder, but the double spool being so much simpler and better, we use it in preference; and as we own the patent for the double spool device, other manufacturers of necessity must use the single spool.

With two spools, as we use them, two twists are made by the same twister wheels, at the same time, each time a sheaf is bound—the one to bind the sheaf, and the other to hold the two ends of the wire together. The same wheels that make the twist, cut the wire off. We use the very best of tool cast steel for the twister wheels and plates, and it being very hard they wear a long time—much longer than any other device that is made for the same purpose.

We have a new tension arranged for the upper spool, which will be self-regulating so that the driver will not hereafter be compelled to keep a constant watch upon that spool in order to secure tight binding. This is a valuable feature, and will be appreciated by our friends.

The mode of compressing the sheaf is a point of great value in our Binder, as it is thus held tightly whilst the wire is placed around it and securely twisted; accordingly the entire strain in tight binding is not put upon the wire, but the arms securely holding the sheaf, relieve it of any excess of a tension strain until after the twist is securely made and the wire cut off.



THE MCCORMICK SELF-BINDER ATTACHMENT.

The sheet-iron deflectors we use for covering up the grain as it passes out from the elevating aprons, are used only on the McCormick Binder, and are features of great worth in the matter of bringing the grain to the machine in good shape for nice sheaves. Especially are they valuable in windy weather, as their protection keeps the straw from being blown in every direction, and enables the machine to make the bundles as square and even as in calm weather.

There is no other self-binder made that has the record of three successful seasons in the field, and we defy any other manufacturers to point to their self-binders of 1877 and 1878, and show them to be in as good condition for 1880, with as little expense for repairing, as the McCormick. Our 1877 Binders did just as good work in 1879 as in 1877, thus proving to be the best and most durable machine in the market.

Other prominent features relating to the McCormick Binder Attachment we refer to on a following page, under the heading of "The McCormick Harvester and Binder."



THE MCCORMICK HARVESTER AND BINDER AT WORK

THE McCORMICK HARVESTER AND BINDER

THIS machine in 1879 fulfilled all that we had expected of it, and proved to be the greatest labor-saving and the most perfect machine that has ever yet entered a harvest field. The long list of gold medals and first premiums it has won, is the best evidence of the esteem in which it is held by the judges of not only our own country, but also those of the first countries of Europe, and likewise of Australia and New Zealand; while the great and increasing demand upon us for them, evinces their wonderful popularity with the farming community.

This machine requires but one man to operate it; while two good horses will readily draw it all day long, yet we furnish a three-horse evener, so that three horses abreast may be hitched to it, if desirable. Our three-horse evener for 1880 is entirely different from that which we used last year, and the farmer will find it to be a most perfect device for the purpose.

We can furnish either a five or six-foot cut machine, as may be preferred, with our Self Binder Attachment, and with the larger size, and a good team, a man should cut down and bind into bundles, on the average, an acre per hour.

The material used for binding is No. 20 annealed wire, and is furnished by us to the farmer in spools that weigh twenty pounds each. Two of these spools are required to run each machine, and from two to four pounds of wire, according to the heaviness of the straw and the size of the bundles made, will bind an acre of grain. The tighter the tension, and the larger the sheaves, the less wire per acre will be required.

The operation of the Binder may be described briefly as follows: The grain having been cut, and carried up between the elevators, falls upon the table of the Automatic Binder, and the curved binding arm (which is attached to the end of a cast-iron overhanging bracket), moving forward with the machine across the table, descends, carrying the wire with it, and places the same around the sheaf which has been separated by the descending arm; then the machine moving backward across the table, draws the bundle in the same direction, and the twister wheel, beneath the table (into which the wire was placed when the arm had closed tightly down), revolving, twists the wire and cuts it off, when the bundle being completed, the previous one is pushed off the table by it, and the curved arm raising leaves the sheaf just made on the outer edge of the table, and again moves forward for a new one. No matter in what shape the grain comes to the machine, it will be bound into bundles, and thus the Self-Binder will work where hand-binding would be utterly impossible.

Where grain stands well, nothing could excel the evenness of the sheaves, and they are found to be much nicer to handle and stack than hand-bound sheaves; never coming loose.

By means of the tilting lever and the adjustable reel the worst of down grain can be picked up, cut and bound by this machine, where otherwise it would have to be abandoned.

The sheaves being gently pushed off the table drop upon the ground, and there is no shelling of dead-ripe grain, as is the case with some other Binders; thus too the separation is made between two bound bundles, and results in no scattering, as is experienced where a bound bundle is separated from unbound grain.

It is a real pleasure for a farmer to follow this machine, and observe the clean work it does; absolutely nothing worth mentioning is left on the ground; and a horse-rake is no earthly use in the field after a McCormick Harvester and Binder has gotten through.

By a crank at the driver's right hand, the Binder is quickly changed for short or long grain, so as to bind every sheaf in the center; and by means of a foot trip he can instantly stop the binding apparatus, thus regulating the size of the bundles for either light or heavy grain; yet where the grain is heavy enough the machine may be allowed to run continuously, making a bundle every twelve and a quarter feet.

Where the McCormick Harvester and Binder is properly put together and started, no trouble need be experienced throughout the entire harvest, and the operator will not have to leave his seat, excepting to oil the machine occasionally; as it will move along without breaking a wire, or making a skip, day in and day out.

Under the heads "The McCormick Harvester," and "The McCormick Self-Binder Attachment," the prominent features of this machine will be found to be further set forth.

Taking all the points we have mentioned into consideration, together with the further fact of our Binder's simplicity, durability, ease of management and perfect working, and above all the vast saving of labor and grain that its use assures, we think any reasoning practical farmer will concede at once that the McCormick Harvester and Self-Binder is the most valuable machine that has ever yet been offered by any manufacturer to the farming public.



THE MCCORMICK ADVANCE SELF-RAKE REAPER AT WORK.



THE ADVANCE AS A MOWER.

MCCORMICK ADVANCE

IF THERE can be any virtue claimed for a machine by reason of a good and well-founded record gained in the harvest fields of eleven consecutive seasons, we can certainly claim a great deal of true merit for our McCormick Advance, Combined Reaper and Mower; as it has, ever since the harvest of 1860, been each year making new friends and winning new victories, on account of the most excellent work it always performs, either in grain or

grass. We have sold a great many thousand of these machines in years gone by, and our patrons in all parts of the United States have expressed to us their appreciation of its various meritorious points by volumes of written letters; and wherever we have sold an Advance we feel quite certain that we have a friend to whom we may unhesitatingly refer any one who is desirous of making inquiries concerning it. The working of this machine in the harvest fields of 1879 was all that we could possibly wish for; and, as in previous years, it frequently demonstrated that it was entirely master of the situation, in the most difficult kinds of cutting; for, where other machines would be compelled to pull out and give up the job, this old stand-by would slash down the grain or grass, to the great satisfaction of all interested parties.

The McCormick Advance is a two-wheeled, wood frame, rear-cut, Self-Rake Reaper and Mower Combined. It requires two horses to run it, and is a light, easy-running machine, well balanced, and has no side draft. It is, in reality, two machines combined in one; having two bars, of essentially different construction, to suit the work required of either a Reaper or Mower: the one a five-foot bar, supplied with malleable fingers and a serrated-edged sickle, for grain; the other, a thin cold-rolled iron bar, four feet wide with wrought iron fingers, steel lined, for grass. We furnish two grass knives with each mowing bar.

This machine is also provided with two pinions, one for use in reaping, and the other for mowing; thus providing a slow motion for the machine as a Reaper, and a quick motion for it as a Mower.

As a Self-Rake Reaper, this machine will cut and deliver the grain in sheaves upon the ground in very fine shape, as its rake, revolving with the reel, acts as a reel fan, squarely striking the grain ahead of the sickle, and thus making the separation in the standing grain, does not create any scattering as the rake moves across the bar.

By means of a crank (which may be seen in the cut) at the driver's right hand, the points of the guards and the reel may be thrown down to pick up lodged or leaning grain; and by the use of this contrivance the very worst kind of lodged or tangled grain cannot escape the sickle.

As a Mower, the Advance is a rear cut, jointed bar machine; with a strong, quick motion, which is very quickly gotten up, requiring no backing in order to start in the heaviest kind of cutting. It is next to impossible to clog it down, and to show its strength and power, purchasers have informed us that they have cut down patches of hazel brush with their machines, without breaking them in the least.

The material we use in this machine, like all machines of our manufacture, is the very best for the purposes to which each part is put, that can be procured. The guards of the Mower are refined iron, steel lined; and of the Reaper, malleable iron, of a very superior quality. The material in the various steel parts is of the very best that the world produces; the castings are made of mixed iron, which produces the various qualities necessary to combine the greatest strength and wear; the wood parts are made of the best selected timber that comes into our great Chicago Lumber Market.

We can, without any hesitancy, guarantee the McCormick Advance to be, so far as strength, durability, and good work are concerned, as fine a machine as the market affords.



THE McCORMICK IRON MOWER AT WORK.

THE McCORMICK IRON MOWER:

THE Hand and Self-Binding Harvesters having in the last few years come into such general favor, it became necessary for us to provide a light, efficient Mower as a companion machine, most of our customers having grass as well as grain to cut; and our old Prize Mower (although an excellent machine in many respects) had become rather out of date. Thus we put ourselves to work on the task of bringing out a machine that would be different from anything in the field, and one that would overcome all the imperfections of other grass-cutting machines; and after long and careful study of the subject, we decided on the combination which we call the McCormick Iron Mower.

The operation of this machine during the harvest of 1879 was highly satisfactory to us; and although that season was its first in the hands of the farmers, yet the immediate favor it met with, on account of the self-apparent perfection of the principles it embodied, proved to us the wisdom of our placing so large a number of them in the field.

Although we manufactured upwards of three thousand of these Mowers last season, which we thought would be an abundant supply for the first year, yet the demand for them was so far in excess of our most sanguine expectations that we were compelled to refuse hundreds of orders, on account of our utter inability to meet the great popular wave of favor with which they were at once received by the agricultural public.

This machine now fills a place in the catalogue of our implements that is indispensable with the onward march of progress, and attests that we are ever awake to the necessities of the farming public, and are resolved to still retain for ourselves the distinction of leading the world in the latest improvements which genius can devise.

The McCormick Iron Mower is a four-feet front cut, jointed bar, iron frame machine, and weighs, complete, when put together ready for the field, 580 pounds. The following prominent points of merit we call especial attention to:

The gearing (as will be seen by cut on the next page) is simple in construction, and at the same time powerful and very durable; it is enclosed in a cast iron case, so as to be entirely secure from the effects of rain, mud or dust, and thus requires less care, wears longer, and is more free from rust than it would be were it exposed, as in other styles of Mowers. The frame being entirely of cast and wrought iron, lasts much longer than any wood-frame machine, and is not injured by the changes of wet or dry, hot or cold weather.

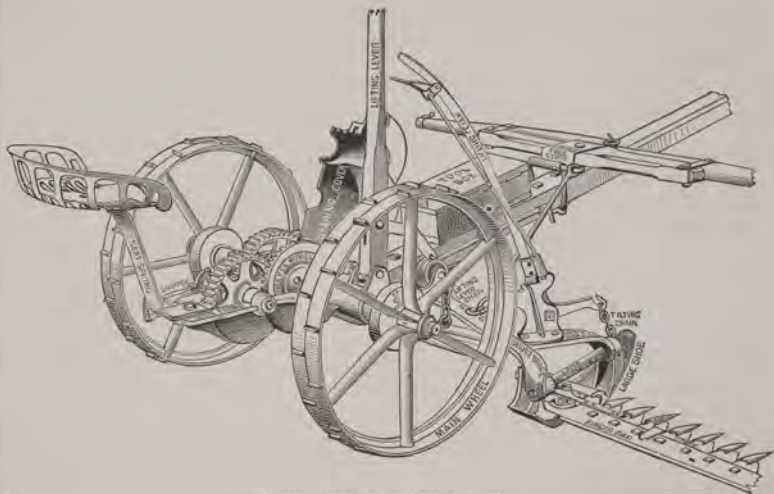
The draft of the horses is, by a new device, brought to bear directly upon the cutting apparatus through an iron draft rod, connecting the double-tree strap to the finger-bar brace; and in this manner we overcome all the objection to a front cut, for there can be no such thing as raising the wheels of our Iron Mower off the ground in heavy, bad cutting, which would be the effect were the draft of the team brought to bear upon the tongue.

The draft of this machine is quite light, and besides it makes but very little noise when at work.

The finger bar is made of the best of cold rolled iron, rolled expressly for us, and is tough, strong and as light as it can be made for the purpose.

The fingers are malleable iron, steel lined, giving them a wearing as well as a sharp cutting edge. They are bolted to the finger bar, so that they can be readily removed or interchanged, by the use of a wrench.

We furnish two knives with each Mower, the sections of which are made from the finest of section steel; the backs are Norway and the knife heels malleable iron. These knives we can guarantee to be all that a perfect Mower knife should be.



SKELTON VIEW OF THE MCCORMICK IRON MOWER.

Both the inside and outside shoes are malleable iron, and are accordingly much lighter, as well as more durable, than the cast iron shoes commonly used on mowing machines.

The cutter bar has a rolling motion, given it by means of a roller on the end of the long connecting pin, which works up and down in the front end of the inside shoe. By this device the bar conforms itself to the unevenness of the ground, and always cuts a close stubble.

By means of the tilting lever the points of the guards can be thrown up or down; and with the lifting lever the bar may be raised bodily from the ground, in order to pass over any rocks or other obstructions; thus, by means of these two levers, the cutting apparatus is entirely under the control of the driver, and may be instantly changed, as occasion may require.

The new improved pitman box has several features that will at once be conceded to be of great worth for a grass cutting machine; it is light, yet at the same time very strong and durable; it has no bolts to work loose and drop out, and yet can be quickly taken off and put on; the wrist pin being covered up by having a cap screwed over it, there can be no trouble from the whirling of grass; the oil cup is large, thus saving much trouble in not needing such frequent attention, and is also so arranged that no oil can be wasted.

Another most valuable feature is that the crank shaft box is bored large, so that a babbit metal thimble is inserted, in which the shaft works; this thimble when worn can be easily removed and replaced by a new one. This will be readily seen to be a great improvement over the common cast iron bored box.

The motion is gotten up very quickly, so that no backing is necessary when starting the machine in the most difficult kind of cutting; nor can it be clogged down in the worst of grass or clover, its power and quick action being such that the guards will be cleared by every vibration of the knife.

The material we use is in every particular the very best that can be procured, and each part of any one machine is an exact duplicate of the same part of any other; so that if one Mower works well, they all must work correspondingly well, if properly put together.

The McCormick Iron Mower has all the advantages of a rear-cut machine, and besides secures the perfect safety of the driver, which is such a desideratum in any grass-cutting machine. We are manufacturing, and shall have for sale for the season of 1880, a large number of these excellent implements, and wish that farmers who have not yet examined into their merits, may call upon our agents and see for themselves the points we claim for the McCormick Iron Mower.

OUR REPAIR DEPARTMENT:

WHILE the McCormick machines are more durable, and require less repairing than those of any other make, yet repairs will be needed, sooner or later, for the very best implement that can be put together; this then being the case, we desire to call attention to our system of carrying constantly on hand, at our works, a large and complete assortment of every thing that may be needed, to repair any machine made by us during a period of twenty years back. We also keep in the hands of our local agents, throughout all parts of the country, large and well assorted stocks of such parts of our machines as may be required for particular localities; thus the farmer can generally get any broken piece duplicated near home, without being caused any delay or annoyance by reason of having to send hundreds of miles to the shops for the same.

Every farmer should overhaul his machine as early in the spring as possible, and see what repairs, if any, he shall need, before starting in on his season's work, then call upon the agent and get them. Or, if such agent is short of the required parts, he will have ample time to send to headquarters for them, and the farmer will be prepared to enter upon his season's campaign promptly, when his crops are ready for the sickle.



THE MCCORMICK IMPERIAL AT WORK.

LONG MEASURE.

Inches.	Feet.	Yards.	Fathoms.	Rods.	Furlongs.	Miles.
12	1					
36	3	1				
72	6	2				
198	16½	3½	1			
7,200	600	200	110	40	1	
63,360	5,280	1,760	880	320	8	1

72 inches=1 Link.

100 Links=1 Chain.

80 Chains=1 mile.

SQUARE MEASURE.

Square Links.	Square Feet.	Square Yards.	Square Rods.	Square Roods.	Square Acres.	Square Miles.
36	1					
144	4	1				
484	121	13	1			
35,000	10,890	1,210	40	1		
100,000	43,560	4,840	160	4	1	
4,000,000	27,878,400	3,097,600	102,400	2,560	640	1

A CONVENIENT LAND MEASURE.

5 Yards x 968	Yards	=1 Acre.
10 " x 484	"	=1 "
15 " x 322½	"	=1 "
20 " x 242	"	=1 "
30 " x 161½	"	=1 "
40 " x 121	"	=1 "
60 " x 80	"	=1 "
60 Feet x 726	Feet	=1 Acre.
100 " x 435½	"	=1 "
120 " x 363	"	=1 "
150 " x 333½	"	=1 "
180 " x 290	"	=1 "
200 " x 217½	"	=1 "
440 " x 99	"	=1 "

The following cylinders will be found useful as containing almost exactly the measures set opposite them.

1 Gall.	1½ inches Diameter	3 inches deep.
1 Pint, 3½	"	3 " "
1 Quart, 3½	"	6 " "
1 Gallon, 7	"	6 " "
8 " 14	"	12 " "
10 " 14	"	15 " "
1 Bushel, 18½	"	8 " "

BOARD MEASURE.

In board measure all boards are assumed to be 1 inch in thickness.

Breadth Inches.	Area of a lineal foot	Breadth Inches.	Area of a lineal foot	Breadth Inches.	Area of a lineal foot
¼	.021	4½	.354	8½	.688
½	.042	4¾	.375	8¾	.708
¾	.063	5	.396	9	.729
1	.083	5½	.417	9½	.75
1½	.104	5¾	.438	9¾	.771
2	.125	6	.458	10	.792
2½	.146	6½	.479	10½	.813
3	.167	6¾	.5	10¾	.833
3½	.188	7	.521	11	.854
4	.208	7½	.542	11½	.875
4½	.229	7¾	.563	11¾	.896
5	.25	8	.583	12	.917
5½	.271	8½	.604	12½	.938
6	.292	9	.625	13	.958
6½	.313	9½	.646	13½	.979
7	.333	10	.667	14	1.

Area of a lineal foot multiplied by length in feet will give superficial contents in square feet.

Example.—What is superficial contents of a board 1 foot 3½ inches wide, 21 feet long? 1 foot 3½ = 1.313 x 21 = 27.5 square feet.

DRY MEASURE.

2 Pints=1 Quart.	
8 " = 4 " =1 Gallon.	
16 " = 8 " =2 " =1 Peck.	
64 " = 32 " = 8 " =4 " =1 Bushel.	

CONTENTS (BOARD MEASURE) OF ONE LINEAL FOOT OF TIMBER.

Breadth in Inches.	THICKNESS IN INCHES.												
	2	3	4	5	6	7	8	9	10	11	12	13	
16	2.67	4.	5.33	6.67	8.	9.33	10.67	12.	13.33	14.67	16.	17.33	
15	2.5	3.75	5.	6.25	7.5	8.75	10.00	11.25	12.5	13.75	15.	16.25	
14	2.33	3.5	4.67	5.83	7.	8.17	9.33	10.5	11.67	12.83	14.	15.17	
13	2.17	3.25	4.33	5.42	6.5	7.58	8.67	9.75	10.83	11.92	13.	14.08	
12	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	
11	1.83	2.75	3.67	4.58	5.5	6.42	7.33	8.25	9.17	10.08	11.	12.	
10	1.67	2.5	3.33	4.17	5.	5.83	6.67	7.5	8.33				
9	1.5	2.25	3.	3.75	4.5	5.25	6.	6.75					
8	1.33	2.	2.67	3.33	4.	4.67	5.33						
7	1.17	1.75	2.33	2.92	3.5	4.08							
6	1.	1.5	2.	2.5	3.								
5	.83	1.25	1.67	2.08									
4	.67	1.	1.33										
3	.5	.75											
2	.33												

To ascertain contents of a piece of timber. Find in the table the contents of one foot and multiply by the length in feet of the piece.

Example.—What is the contents of piece of timber 10 x 11.20 ft. long? .917 x 20 = 18.34 feet ft. ft.



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GENERAL AGENT
FOR
McCORMICK
HARVESTING
MACHINE CO.

