1880

C. AULTMAN & CO.

CANTON, OHIO. U.S.A.

LEWIS MILLER. PRES.T JACOB MILLER. SUP.T
H. C. FOGLE. SEC.Y & TREA.S

JOHNS & CO. LITH. CLEVELAND. O.

HANDY FACTS AND FIGURES.

Most Advantageous Time for Cutting Wheat.

From a series of experiments made for the purpose, it appears that wheat cut two weeks before fully ripe, is superior to that cut at any other time; yielding more flour to the quantity of wheat, of better quality, and a gain of 14 per cent. in the weight of straw. Besides these, other advantages are, straw of better quality, and a better chance and saving in securing the crop. One experiment resulted as follows: Five cuttings were made from the same field.

No. 1 was cut a month before fully ripe, and yielded to the 100 lbs. wheat, 75 lbs. flour and 17 lbs. bran.

No. 2 was cut three weeks before ripe, yielded 76 lbs. flour and 16 lbs. bran.

No. 3 was cut two weeks before ripe, yielded 80 lbs. flour and 13 lbs. bran.

No. 4 was cut two days before ripe, yielded 75 lbs. flour and 14 lbs. bran.

No. 5 was cut when fully ripe, yielded 72 lbs. flour and 15 lbs. bran.

The bran from No. 3 was far superior to that of any other cutting.

Corn and Hogs.

From carefully conducted experiments by different persons, it has been ascertained that one bushel of corn will make a little over ten and a half pounds of pork—gross. Taking this result as a basis, the following deductions are made:

When corn costs 12½ cents per bu., pork costs 1½ cts per lb.

When corn costs 17 cents per bu., pork costs 2 cents per lb.

When corn costs 25 cents per bu., pork costs 3 cents per lb.

When corn costs 33 cents per bu., pork costs 4 cents per lb.

When corn costs 50 cents per bu., pork costs 5 cents per lb.

The following statement shows what the farmer realizes on his own corn, when in the form of pork:

When pork sells for 3 cents per lb., it brings 25 cents per bushel in corn.

To find the number of bushels in a box of grain, multiply its inside length, breadth and height together; multiply this product by 45 and divide by 56.

A TABLE OF DAILY SAVINGS AT COMPOUND INTEREST.

Per Day.	*Per Year.*	*In Ten Years.*	*In Fifty Years.*
$0 02¾	$ 10.00	$ 130.00	$ 2,900.00
05½	20.00	269.00	5,800.00
.11	40.00	520.00	11,600.00
.27½	100.00	1,300.00	29,000.00
.55	300.00	2,600.00	58,000.00
1.10	400.00	5,205.00	716,000.00
1.37	500.00	5,500.00	145,000.00

WEIGHT OF WOOD PER CUBIC FOOT.—Apple 49⅜ lbs; Ash 47; Beech 43; Birch 35; Box Wood 60; Cherry 42. Cork 15; Ebony 75; Hemlock 25; Log Wood 58; Maple 46; Oak 49; Pine 25; Walnut 38; Willow 36.

HUNDREDS of lives have been saved by the following very simple antidote for poison: A large tablespoonful of mustard mixed in a tumbler of warm water and swallowed as soon as possible, acts as an instant emetic.

WEIGHT OF METALS AND ALLOYS PER CUBIC FOOT.—Brass 500 lbs.; Bronze 528; Copper 548; Gold Hammered, 24 carat, 1217; Cast Iron 540; Wrought Iron 485; Lead 708; Mercury 968; Nickel Plate 509; Pure Silver 655; Steel 480; Tin 455; Zinc 437.

MECHANICAL RULE TO TEST CAST IRON.—A piece of cast iron ¼ inch square, 1 foot long, supported at each end, should bear 39 lbs. weight before breaking; a piece ⅛ of an inch will stand 135 lbs.; a piece ½ inch square and a foot long will bear 321 lbs.—this is the old English test.

EFFECT OF HEAT ON VARIOUS BODIES.—Ice melts at 32 degrees; Cast Iron 3379; Wrought Iron 3980; Lead 504; Brass 1900; Silver 1250; Gold 2590; Copper 2548, Zinc 740; Tin 421; Steel 2500. Human Blood FREEZES 25 degrees; Proof Spirit 7 below Zero; Sea Water 28; Strong Wines 20.

TEMPERING STEEL.—430 Degrees heat Steel assumes a faint yellow color, suitable for Hammer Faces and Drills. 570 degrees heat, Stee lassumes dull yellow color, suitable for hard Edges, Scissors, etc. 510 degrees heat, Steel assumes brown color with purple spots, suitable for Plane Irons, Knives, etc. 550 degrees heat, Steel assumes dark blue, strong, extremely hard Edges, Axes, Cutlery, etc. 600 degrees heat, Steel assumes greyish blue, verging on black, for Spring temper, Sword Blades, etc. If Steel is heated higher than this, the effect of hardening process is destroyed.

WEIGHT OF BUSHELS OF VARIOUS ARTICLES.—Wheat, beans, potatoes, clover seed, 60 pounds; corn, rye, flaxseed, onions, 56; corn on cob, 70; buckwheat, 52; barley, 48; hemp seed, 44; timothy seed, 45; castor beans, 46; oats 35; bran, 20; blue grass seed 14. A barrel of potatoes contains 2¼ bushels as sold in New York; one barrel flour, 196 pounds; pork and beef, 200 pounds.

ALLOYS.—Babbit Metal, 10 parts Tin; 1 Copper; 1 Antimony.
Bell Metal, 5 Tin; 16 Copper.
Brass, 5 Zinc; 25 Tin; 150 Copper.
Pewter, 100 Zinc; 17 Antimony.
Spelter, 1 Zinc; 1 Copper.
Statuary Bronze, 2 Zinc; 2 Tin; 90 Copper; 2 Lead.

To measure scantlings, joists, plank, sills, etc., multiply the width, the thickness and the length together (the width and thickness in inches and the length in feet), and divide the product by 12; the result will be the square feet. To measure boards, multiply the length in feet, by the width in inches, and divide the product by 12; the result will be the number of feet it contains.

A cord of stone, four bushels of lime and a cubic yard of sand will lay one hundred square feet of wall.

Eight bushels of lime, 16 bushels of sand and 1 bushel of hair make sufficient mortar to plaster 100 square yards.

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

To find the number of bricks required in building, multiply the number of cubic feet by 22½. The number of cubic feet is found by multiplying the length, height and thickness (in feet) together. Bricks are usually made 8 inches long, 4 inches wide, and two inches thick; hence it requires 27 bricks to make a cubic foot without mortar; but it is generally assumed that mortar fills 1-6 of the space.

TO MEASURE CORN IN THE CRIB.—Two cubic feet of sound dry corn in the ear will make a bushel of shelled corn. To get quantity of shelled corn in a crib of corn in the ear, measure length, breadth and height of corn crib, inside the rail; multiply first by second and product by third; divide result by two—giving bushels of shelled corn. Corn shrinks much in winter and spring and settles down.

To ascertain the weight of live cattle by measurement measure the GIRTH of the animal (in feet) by passing a cord around behind the shoulder-blade and under the fore legs; then measure the length along the back from the foremost part of the shoulder-blade to the hindmost part of the rump. Multiply the length by the girth, and if the animal measures less than 11 and more than 9 feet in girth, multiply the product of the length and girth by 42; this will give the weight in pounds. If it measures less than 9 and more than 7 feet in girth, multiply by 31; if less than 7 and more than 5 feet, by 23; if less than 5 and more than 3, by 16; if less than 3 feet, by 11.

THE following is a short and simple method for finding the net weight or price of hogs when the gross weight is given, and vice versa. It is generally assumed that the gross weight of hogs *diminished* by one-fifth, or 20 per cent. of itself, gives the net weight; and the net weight *increased* by one-fourth, or 25 per cent., equals the gross weight. To find the net weight, or gross price, multiply the given number by 8 (tenths). EXAMPLE.—A hog weighing 365 lbs. gross, will weigh 292 lbs. net; and pork at $3.65 net, is equal to $2.92 gross; 3b5 x 8 equals $2.92. To find the gross weight or net price, divide the given number by 8 (tenths). EXAMPLE—A hog weighing 348 lbs. net, weighs 435 lbs. gross; and pork at $3.48 gross equal to $4.35 net.

To find the number of cubic feet in a mow, multiply the length, width and depth together. Five hundred cubic feet of ordinary clover and timothy hay, packed under usual circumstances, will make a ton. Generally so many things have to be taken into consideration in calculating the weight of hay in bulk, it makes it difficult to ascertain it precisely. For instance, new mown hay, like red top, would probably not require 500 cubic feet for the ton. Timothy alone requires about 550; clover, 650; coarse meadow hay, 700 or more. After being stacked thirty days, the bulk will be decreased from 5 to 10 per cent Again it will vary in measurement according to the time it is cut. The government standard for a ton is 7½ feet; this gives 422 cubic feet.

To find the number of cubic feet in a stack, multiply the area of the base by one-third the perpendicular height.

ANNUAL DESCRIPTIVE CATALOGUE

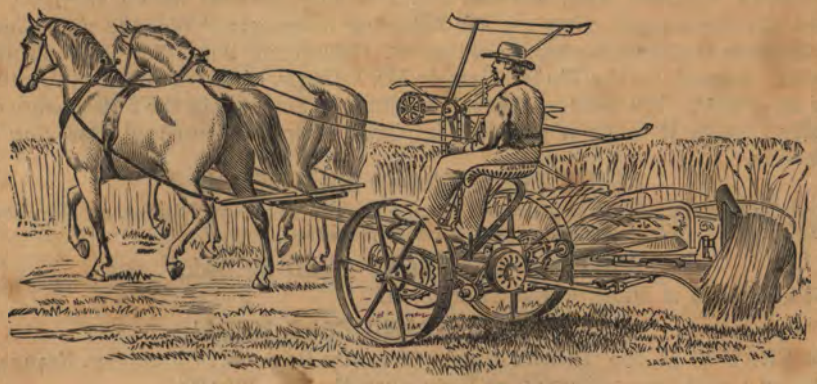
OF

Buckeye Harvesting Machines

MANUFACTURED BY

C. AULTMAN & CO.

CANTON, OHIO.



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JOHNS & CO. PRINT. CLEVELAND, O.

Grand Success of the Buckeye in 1879.

The Most Honorable Record of Medals and First Prizes ever Awarded to any one Machine in any single year.

THE following is a partial list of the Prizes won by our machines during the past season in Field Trials in competition with all the leading machines in the world:

THE FIRST PRIZE, GOLD MEDAL AND GRAND SPECIAL DIPLOMA OF HONOR.

At the Five Days' Trial held under the auspices of the Society of Agricultural Engineers (Ingenieros Agronomos) of Spain, at Madrid, July 8th, 9th, 10th, 11th and 12th. Among others present was the King of Spain, one of the patrons of the Society. The above trial was carried out to the minutest details, the machines being subjected to the severest tests in every possible condition of Crops and Land. Although all of the competing machines worked tolerably well, the Buckeye won the honors with 190 against 140 points, its chief superiority, according to the report, being, Lightness and Draft, Facility of Management, Simplicity of Construction and Great Regularity of Work. The Trial Binder used on this occasion was sold to the Society and five others were sold upon the field.

FIRST PRIZE, GOLD MEDAL,

At St. Colomb, England, Aug. 21st and 22d. The jury, assisted by an engineer, applied the severest tests. In their report they use the following language: "We, the undersigned, jury of the trial of Reapers and Self-Binders, held at St. Colomb on Aug. 21st. 1879, do hereby award the Gold Medal, designed for the Binder Class, to Mr. J. Curtis, of St. Colomb, for C. Aultman & Co.'s Self-Binding Harvester. We consider that said machine did its duty in the fullest sense of the word, and we firmly believe it to be a practical implement for the farm and deserving of our best recommendations."

FIRST PRIZE, GRAND GOLD MEDAL,

Given by the Society of Agriculture of France to the Buckeye Binder, at Rambouillet, June 22d, over McCormick, Wood, Osborne and all competitors.

FIRST PRIZE, GRAND GOLD MEDAL,

AND 150 FRANCS at Niort, France, July 27th.

FIRST PRIZE, GRAND GOLD MEDAL,

AND 200 FRANCS at the District Trial (Concours Regional) Chambery, France, May 31st.

THE FIRST PRIZE AND SPECIAL MEDAL, at Liaincourt, France, July 20th.

THE FIRST PRIZE at Seignelay France, Aug. 3d.

THE FIRST PRIZE, SILVER MEDAL, at Dumfries, Scotland, Aug. 9th.

THE FIRST PRIZE, SILVER MEDAL, at Middleton, Ireland, July 16th.

THE FIRST PRIZE, at Waterford, Ireland, July 30th.

THE FIRST PRIZE, GOLD MEDAL, AND 100 FRANCS, at Maromme, France, July 5th.

THE FIRST PRIZE, SILVER MEDAL, at Randan, France, Aug. 10th.

THE FIRST PRIZE, SILVER MEDAL for Mower at St. Colomb, England, July 28th.

THE FIRST PRIZE, at Melle, France, over Wheeler, Kirby, Champion, Johnston and 14 other competitors, May 25th.

THE FIRST PRIZE, GOLD MEDAL, at Rouen, France, July 6th.

THE FIRST PRIZE, SILVER MEDAL, at Amiens, France, July 6th.

THE FIRST PRIZE, DIPLOMA OF HONOR, for binder over McCormick and all competitors; and Second Prize and Silver Medal to Table Rake over 7 competitors, at Sable d'Olonne, France, July 13th.

SECOND PRIZE, SILVER MEDAL, over Wood, Champion and ten English and French machines, at Limoges, France, May 18th, 1879.

SECOND PRIZE, SILVER MEDAL, ver 13 competitors, at Lille, France, May 29th.

SECOND PRIZE, at Evreux, France, May 17th, over Wood, Johnston and 11 other machines.

Also the following honors, awarded to the Buckeye in the U. S at Field Trials and Fairs in 1879:

FIRST PREMIUM, beating Walter A. Wood, Wm. Anson Wood, front and rear cut Champion, Eureka and Warrior, at Minneola, L. I., N. Y, June 17th.

FIRST PREMIUM, beating Victor, Champion, and Walter A. Wood, trial by Co. Commissioners, Sullivan, N. H., July 1st.

FIRST PREMIUM and $10 at Dayton, O, Sept 25th, over five competitors.

FIRST PREMIUM and $5 to Binder, at Eaton, O., Oct. 4th.

FIRST PREMIUM and $5 to Combined Machine, at Eaton, O., Oct. 4th.

FIRST PREMIUM and $5 to Mower and Dropper, at Baltimore Co. Fair, Md., Sept. 12th.
FIRST PREMIUM, at same, to Buckeye Self-Binder.
FIRST PREMIUM, Table Rake, Rockville, Md, Sept. 7th.
FIRST PREMIUM, Table Rake, Mower and Self-Binder, at Worton, Md., Sept. 20th.
HIGHEST AWARD, Dover, Del, State Fair. Sept. 27th.
FIRST PREMIUM to Binder, Table Rake and Dropper, at Culpepper, Va.
FIRST PREMIUM and $5, Alexandria, Va.
FIRST PREMIUM to Self-Binder, Table Rake and Mower, Westminster, Md.
FIRST PREMIUM to Buckeye Binder, Columbus, Ind., Sept. 29th.
FIRST PREMIUM and $12 to Buckeye Harvesting Machines, Newcastle, Pa., Oct. 1st.
FIRST PREMIUM to Table Rake, Minerva, O., Sept. 23d.
FIRST PREMIUM, Buckeye Machines, at Wellsburg, W. Va., Sept. 18th.
FIRST PREMIUM, Mower and Table Rake, at Cannonsburg, Pa., Sept. 25th.
FIRST PREMIUM, Marietta, O., Sept. 4th.
FIRST PREMIUM, Athens, O., Sept. 26th.
FIRST PREMIUM to Buckeye Machines, Ironton, O., Sept. 18th.
FIRST PREMIUM AND BRONZE MEDAL to Combined Table-Rake, Pennsylvania State Fair, Philadelphia, Sept. 20th.
FIRST PREMIUM, Buckeye Binder, also to Table-Rake, Martinsburg, Pa, Oct 16th.
FIRST PREMIUM AND DIPLOMA to Self-Binder and Buckeye Table Rake, at Hagerstown, Md.
FIRST PREMIUM to Buckeye Self-Binder, Ohio State Fair, Columbus, Aug. 29th.
FIRST PREMIUM to Combined Reaper and Mower, Self-Binder, and to Mower. Newark, O., Oct. 3.
FIRST PREMIUM to Self Binder and Combined Reaper and Mower, Delaware, O., Sept. 26th.
FIRST PREMIUM to Reaper, Marysville, O., Oct. 3d.
FIRST PREMIUM to Binder, Combined Machine and Mower, Hartford, O., Sept. 5th.
FIRST PREMIUM to Combined Reaper and Mower, and Simple Mower, Pataskala, O., Sept. 26th.
FIRST PREMIUM to Combined Machine and Mower at Westerville, O.
FIRST PREMIUM to Table Rake Reaper, Mechanicsburg, O., Sept. 5th.
FIRST PREMIUM to Combined Machine, Dropper, Mower and Self-Binder, Wapakonetta, O., Oct. 10.
FIRST PREMIUM to Combined Reaper and Mower at Lancaster, O., Oct. 18th.
FIRST PREMIUM to Table Rake and Mower; Biggsville, Ill., Sept. 9th.
FIRST PREMIUM to Table Rake and Mower, Galesburg, Ill., Sept. 5th.
FIRST PREMIUM to Binder, Table Rake and Mower, Knoxville, Ill., Sept. 19th.
FIRST PREMIUM to Harvesting Machines, at Princeton, Ill., Sept. 19th.
FIRST PREMIUM to Combined Mower and Reaper, at Ottawa, Ill., Sept. 19th.
FIRST PREMIUM to Table Rake at Toulon, Ill., Sept. 29th.
FIRST PREMIUM to Buckeye Reaper at Bushnell, Ill., Sept. 29th.

We have on file reports of a large number of occasions upon which our machines, notably our Buckeye Binder, have beaten and kept the field against all competing machines. But our list is already long, and we submit it without farther addition, as incontestible proof, not only of the real, but of the *comparative* superiority of our Harvesting Machines.

That the First and Leading Prizes in Spain, France, England and America were all awarded to the Buckeye in the same year is a fact the significance of which is not likely to be overestimated.

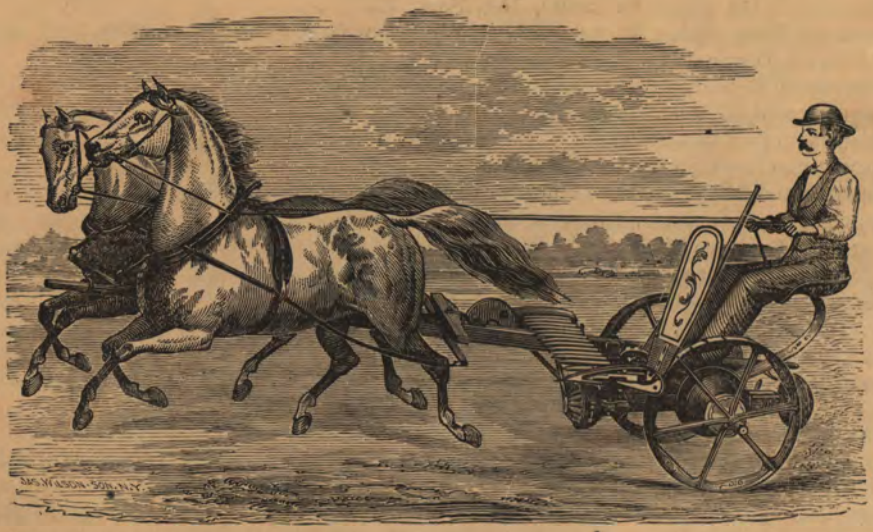
Honors to the Buckeye at World's Fairs.

The Buckeye entered the lists in the International Fairs held at Vienna in 1873, Philadelphia in 1876 and Paris in 1878, and in each case received the Highest Prizes awarded to machines of its class. The award at Philadelphia, four Medals of Merit and four Diplomas of Honor was the most comprehensive received by any Harvesting Machine. Also, in the absence of any decision actually awarding superiority to any machine the following testimonial from the binders at the Centennial Field Exhibition will be of interest to the public, and will aid in deciding which machine did the most satisfactory work. *Read the unanimous verdict of the binders:*

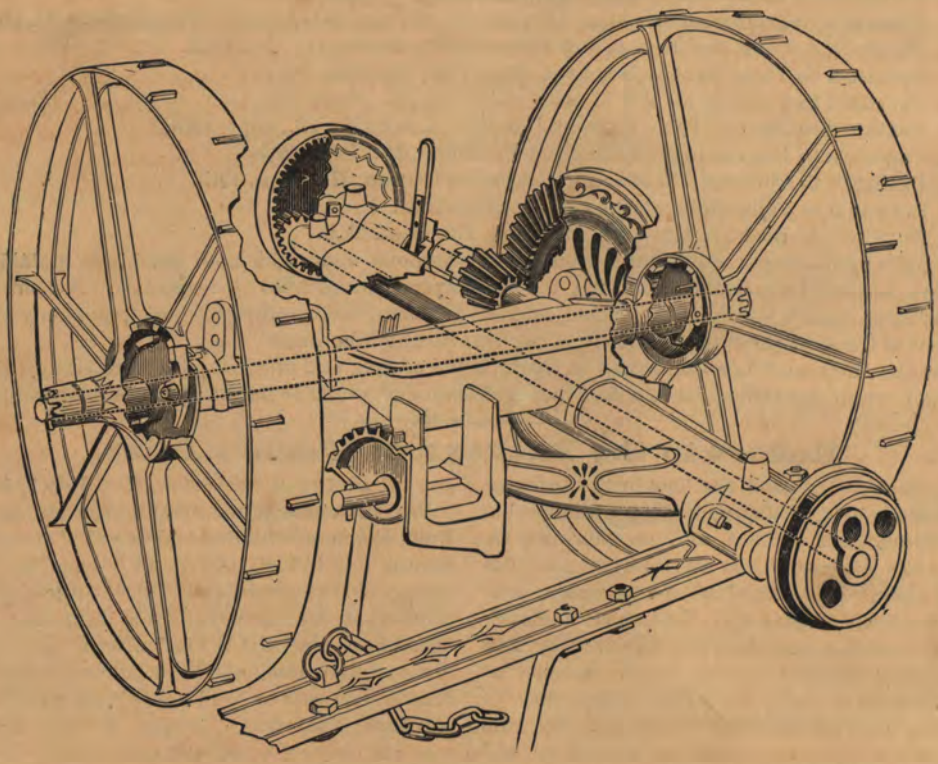
SCHENCK'S STATION, PA., July 7, 1876.

We, the undersigned, bound after all the Self-Rake Reapers exhibited and operated at the Centennial Field Trial, held on the farm of the Neshamany Park Association, and unhesitatingly pronounce the Buckeye Table-Rake Reaper as the easiest machine to bind after, it leaving the grain in such even condition and so compressed that it is as easy to bind three sheaves after the Buckeye Table-Rake Reaper as two sheaves made by any other self-rake machine.

HOWARD REED, OGDEN M. THORNTON,
R. G. SICKLES, THOMAS DANIELS,
EDWARD R. THORNTON, CHAS. CUMMING,
ANTHONY LEE.



BUCKEYE ON THE ROAD



BUCKEYE FRAME.

SHOWING HOW THE GEAR AND PAWLS AND RATCHETS ARE ENCLOSED AND PROTECTED.

Introduction.

ABUNDANT crops inaugurate the return of prosperity! Never, since the war has business been so brisk. We witness the evidences of improvement on every hand. Large areas of new and most productive land have been developed in the West; solid prosperity is the rule in the East and South; and healthy competition and improved methods are to be seen on every hand. Everywhere there is peace and plenty, and industrial thrift and activity.

Financially and industrially the pivotal movements of world-wide importance continue to hinge to an increasing degree upon agricultural products. While the late financial crisis was not due to a failure ot crops, it is equally true that a succession of good crops, furnishing the means of paying private and public indebtedness, has been the greatest single factor in bringing about the happy change. And without the aid of machinery it would have been impossible for the United States to have harvested more than one-quarter or one-third of the over four hundred millions of bushels of wheat produced last year. This fact places the mechanic and farmer on the same level of importance; the products of each are alike indispensable. As well might an army of soldiers undertake to fight their country's battles without arms as for the army of farmers to undertake the development of a country without Harvesting and Threshing Machines.

Very naturally those who have control of such an enterprise as ours take a profound interest in all subjects that pertain to the welfare of the agricultural interests of the country. It has been the study of practical men to promote that welfare. Long and busy lives have been spent in the effort to construct Harvesting Machines that would leave nothing to be desired by the farmer. We have always recognized that the destiny of the Buckeye interest, now of such vast proportions, depended entirely upon the verdict of the farmer. Hence, notwithstanding the continued approval of, and unabated demand for our machines, we allow no year to pass without profiting by all available tests to improve and add to the utility of our products.

The record made by the Buckeye in the hands of the farmer entirely sustains all the promises heretofore made in its favor, and fully warrants our claim of superiority over all other Harvesting Machines. In no machine are the features of Strength, Lightness, Efficiency, Durability and Safety united in such a simple and compact shape. No machine is so extensively employed the world over as the Buckeye. No machine is regarded with more favor by the farmer, or more disfavor by the agents of other machines, than the Buckeye. All these assertions can be supported by the most convincing proof.

The verdict of the past year furnishes a very striking illustration. Our entire stock of Buckeye Harvesting Machines and Self-Binders was engaged long before the close of the season. This is the newest, and, necessarily, the most complicated of our machines; but the Binder Attachment presents such an advantage in its superior simplicity over all other Binding Machines that it has gained the assured and leading place in the favor of the farmer.

Partly with a view to being able to supply the demand for these machines C. Aultman & Co. have just erected a new addition to their already extensive warks. The new building is of stone and brick, over three hundred feet long by fifty feet wide, and has a floor capacity of very large exent. This new structure will make available for use, in the construction of the Buckeye Harvester and Binder, such facilities and space, in our main works, as will, we trust, enable us to supply the wants of *all* our customers.

Our Buckeye Reapers, both Table Rake and Dropper, were never before in such demand. Notwithstanding the fact that we anticipated and prepared for a large business, yet after the earlier orders had been filled, and our warehouses emptied of the last machine, large orders continued to be received daily. By crowding our works to their utmost capacity we were enabled to fill only a very small proportion of the late orders. Some of our friends were compelled to purchase machines of other makes, while others have preferred to wait over another year rather than accept any other machine than the Buckeye. The disappointment and loss to our customers and to many of our agents, which it was out of our power to prevent, is sincerely regretted.

What we have just said of the favor shown to our Table Rake and Dropper, as evinced by the demand and sales, is equally true of the Buckeye Mower. The latter had long since seized upon the leading place in popularity with the farmer. We feel entirely safe in saying that not one of the score of new machines that are annually launched upon the farming public has even seriously threatened the claim of the Buckeye Mower to entire superiority.

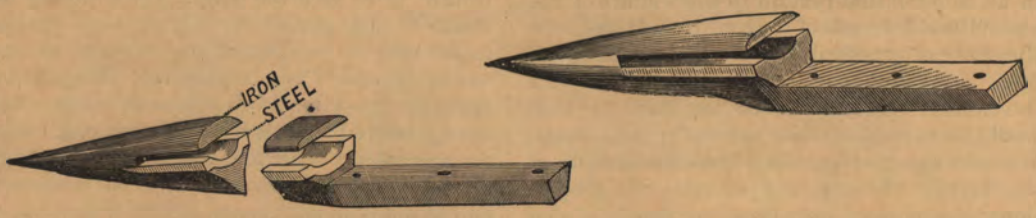
This continued and striking career of success is evidently due to three very good reasons, viz: Our original system of gearing combined the features of simplicity, safety, durability and ease of management more perfectly than in any other machine; careful and solid construction of the best materials, in addition to which we may add that, instead of resting upon their laurels and profiting by their reputation C. Aultman & Co. have striven, every year, not to cheapen, but to improve their machines by the addition of every convenience which careful experiment and thorough test could suggest.

Having been engaged in the manufacture of Agricultural Implements nearly a generation, long enough to have witnessed the establishment of many competing houses—and the failure and the extinction of very many more—we naturally take both pride and pleasure in referring to the record made by C. Aultman & Co. in the history of this industry. We feel warranted in doing this, inasmuch as such an uninterrupted career of success furnishes to our patrons a more valid guarantee of square dealing, and of the real value of our machines, than any number of printed pages could do. The indispensable conditions of such a career must ever be: machines that are safe and easy to handle, and which the farmer knows that he can rely upon after he has entered upon his harvest.

But it is not of the unparallelled success of the Buckeye in previous years that we wish to speak. We are able to present the most remarkable proofs of the Buckeye's success in the harvests of 1879, and these will be very much more tothe point with our farmer readers. Aside from the great demand for our machines in this country, to which we have already referred, and which is, after all, the most unequivocal test of real merit that could be adduced, a considerable number had been exported to dealers in agricultural machinery in Europe, whose attention had been arrested by the reputation of the Buckeye. There it was also placed in competition with other machines from all parts of the world at various trials and fairs. We are sure that our readers will be interested in learning the result, which was, in short, the most brilliant series of triumphs ever awarded to any one machine in any single year. A partial list of these prizes, printed on another page, will give the reader an idea of the vigorous and triumphant style in which the Buckeye seized upon the first place and the highest honors in the competitions and field trials of 1879.

The reader will see in these facts the substantial and undeniable proofs of the superior merits we have claimed for the Buckeye Reaping and Mowing Machines. We can say, without danger of refutation, that no make of machine in this country, or in the world, can show such a long and uniform record of successes as the Buckeye. It is, therefore, with entire confidence that we appeal to the farmer to examine and personally inspect either one of our machines. We ask no more. Accept no empty vaporings. Do not be misled by high-sounding claims, or by guarantees *which are not expected to be fully carried out;* but make it a point to see and try the Buckeye for yourself. "Be sure you are right —then go ahead."

BUCKEYE GUARDS.



Guard Fingers should be so constructed, and bear such relation to the knife or sickle, as to assist largely in the cutting. To secure this object we have given much attention in this direction. and after years of experiment, have discovered that the guard used by us is by far the most durable. and secures the cleanest and most effective cutting. The Buckeye Guards are made of the very best wrought iron, lined with steel, They have a shear cut, and you observe by the above illustrations, are concaved or dug out in the centre; otherwise they would cut down at the edges, and become higher in the centre, thus destroying the shear cut.

Much ado has been made over guards manufactured from solid wrought iron with sawed-out slot, and then case-hardened. This class of guards has the merit of economy to the manufacturer, and for a short time will answer the purpose, but can not have durability.

THE HIGHEST PRIZES OF AMERICA.

THE FOUR GRAND GOLD MEDALS.

The four great field trials of Harvesting Machines—held in 1857 at Syracuse, N. Y., in 1866 at Auburn, N. Y., in 1870 at Mansfield, O., and in 1876 at Lafayette, Ind.—were the most important ever known in this or any other country.

The U. S. Agricultural Society's Medal

Was awarded to the Buckeye at Syracuse. All the machines of consequence were represented, and all were of the early, cumbrous models, with one wheel and rigid bar, except the Buckeye, which first showed to the world a machine with two wheels, double-hinged bar, and its matchless system of gears. In the entire history of Harvesting Machinery there has been no event so important, no prize so truly honorable.

The N. Y. State Agricultural Society's Medal.

This was also truly a National contest. Three weeks were consumed in testing the fifty-nine machines entered for the prize. In making the award of the Grand Gold Medal to the Buckeye, the judges sum up its record in the following language:

"The record of the Buckeye is interesting in view of the fact that it was the pioneer in the path of the great improvements that have popularized Mowing Machines, and made them a necessity to every farmer. It took the prize at the Great National Trial of Mowers and Reapers at Syracuse, in 1857, and at once sprang into great popularity The result of this trial clearly shows that it still keeps the forward rank which it won at Syracuse, and at many other subsequent trials, and that it is still as worthy the patronage and confidence of the public as it has been in any preceding portion of its history."

The Ohio Medal.

This was the third trial of a National character and was, in many respects, the most complete trial ever held in this country. Upwards of one hundred machines contested and the merits of each machine were fully developed. Perfection, in the scale of merit used, was represented by the following figures: Quality of work, 40; Simplicity of Construction, 10; Durability, 15; Facility of Management, 10. In the final addition of the opinions of the judges the Buckeye was triumphant at every point and received the Gold Medal.

Indiana State Board of Agriculture's Medal.

This was the fourth and last of these great National Field Trials. In awarding the Highest Prize to the Buckeye Mower and Reaper the Committee say: "This is a front cut, and uses what is called the *Table-Rake*, which makes a very compact and even gavel, deposits it nearly square across the line of cut. This gavel is more compact than that of any other machine on trial. There was no grain wasted by dribbling over the side. The tilting arrangement is very convenient and efficient, both ends of cutter-bar moving alike in accommodating to low patches or down grain; it clears its down grain well.

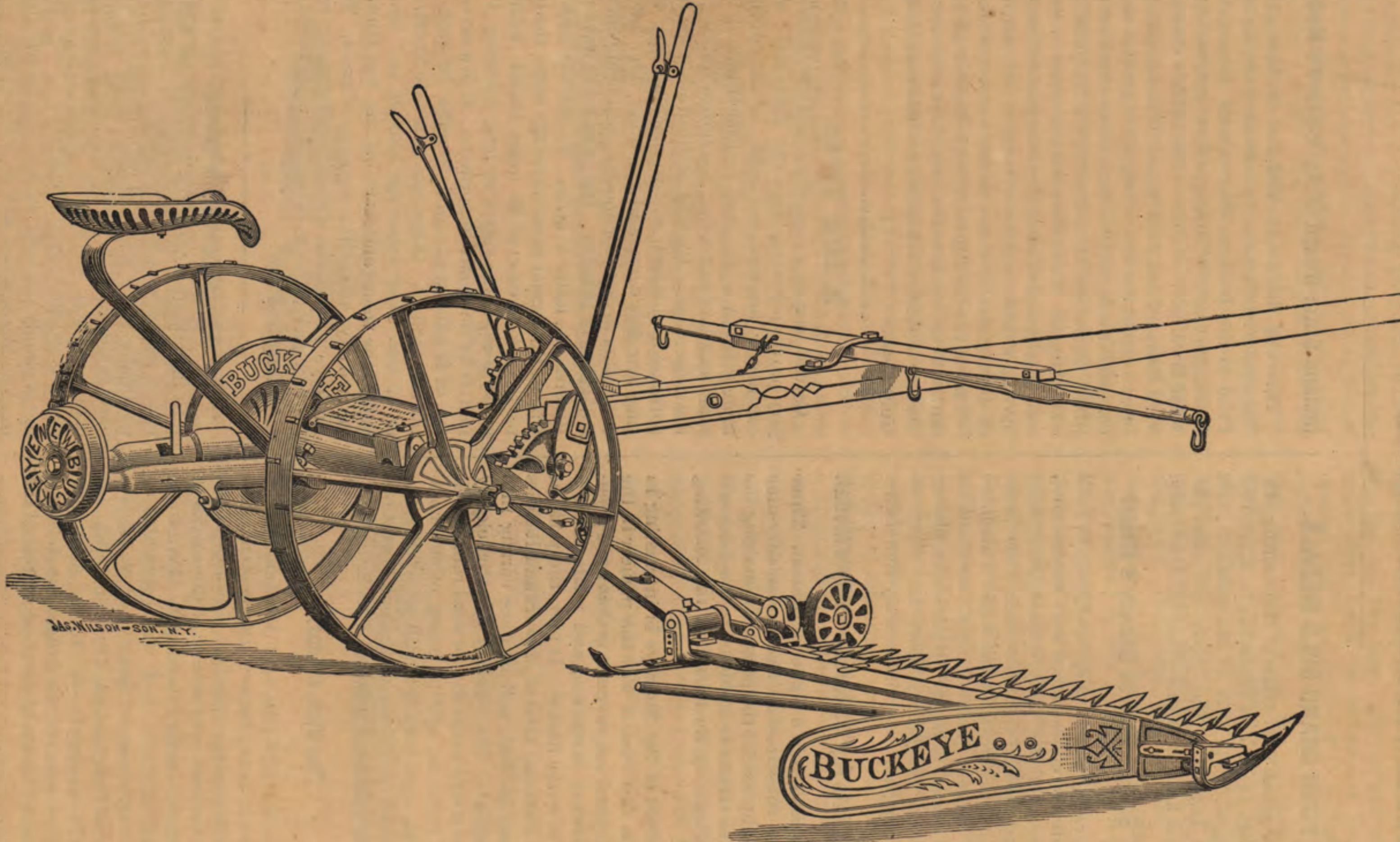
Taking the machines as they have been presented to us, *the Buckeye was the best combined Reaper and Mower*, and we award it the Grand Gold Medal.

A Big Item.

Careful trial by a competent and disinterested jury proves positively that the Table Rake will cut nearly fourteen per cent., or one-seventh more grain in a day than reel-rakes having the same length of cutter-bar, the horses walking at the same speed. By way of illustrating the importance of this fact, let two machines, one cutting four feet wide, and the other five, follow each other in grain for one day, each being drawn a distance of 24 miles: the former will have cut 12 acres, the latter 15 acres. To cut 100 acres of wheat, the former must travel 200 miles, the latter 160. A saving of 40 miles travel, with a heavy load, at the end of so long a journey, is a matter of no small importance. It is a saving, too, of 40 miles walking, or 10 miles for each of the four binders. It is a saving, also to the farmer of two days' labor for himself and team, and of the wages and board of the four binders for two days, in cutting 100 acres of grain, The Buckeye Table-Rake, with ordinary driving, will cut one foot wider than any reel-rake having same length of bar.

Duplicate Parts.

In the manufacture of the Buckeye we maintain a perfect system of duplication. We keep on hand at our works, and with our agents in all parts of the country, a complete stock of duplicate parts, from the original wood frame of 1857 to the New Buckeye of the present. Each casting is plainly marked, so that the farmer need be at no loss to know how to order repairs.



THE NEW BUCKEYE LIGHT MOWER NO. 1—Not Combinable.

GENERAL DESCRIPTION OF THE BUCKEYE.

The Buckeye Machines are made as—
MOWERS,
Combined Mower and Reaper—TABLE RAKES,
Combined Mower and Reaper—DROPPERS,
Hand-Binding Harvester—HARVESTERS,
Self Binding Harvester—BINDERS,
INDEPENDENT REAPERS.

The Buckeye Mower.

THE FRAME.

The main frame of the Buckeye is tubular, almost entirely dispensing with bolts, and is of great strength. Being cast in one piece, there is no wood to shrink and swell, and no bars and bolts to be twisted out of line. In the carefully lined boxes of this solid frame the machinery plays with a precision, ease and power that is absolutely impossible on any other frame in use.

The frame is firmly braced with wrought iron, combining the strength of wrought iron with the rigidity of cast iron.

GEARING.

The advantages of simplicity, combined with sound mechanical principles, are strikingly illustrated in the Buckeye gearing. The first, or slow motion, is obtained by a bevel gear; and the second, or fast motion, by a straight or spur gear Only four cog-wheels are required, and these are carried high off the ground. All are encased, and obviate the danger of accidents, several of which, of the most painful character, have occurred during the past year, in some cases resulting in the death of the drivers of machines having exposed gearings in the drive-wheels.

COUPLING-BAR.

The attachment of the cutter-bar to the frame by means of a double-hinged coupling-bar is one of the invaluable and imperishable inventions first introduced into the world by the Buckeye. The use of this coupling permits the cutter-bar to hug the ground, cutting closely and evenly over knolls and ridges, as well as through ditches and furrows. When not at work the bar can be folded over the tongue, in front of the driver, making the Buckeye the most portable machine in existence.

THE CUTTER-BAR,

On the Buckeye Mower is made of cold-rolled iron. It costs more than steel, and is stronger and stiffer. In fact, it is the only material from which a perfect Mower-bar can be made.

THE GUARDS

Used by us are, we are firmly convinced by the very best of reasons, *the best in the world.* They are made of the very best wrought iron, faced with steel. The face of the guard is concave, giving it a cutting edge, and making the guard self-sharpening In addition, the shape of the guard admits of sharpening better than other guards, when it is required.

CUTTER-BAR IN FRONT.

The Buckeye has its cutter-bar in front of the drive-wheels. Every consideration requires that the cutting apparatus should be in front, but none more imperatively than the vital consideration of *safety* to the driver It also insures a lighter draft, as has been demonstrated at all important trials. The balance is perfect. There is neither side-draft nor pressure on the horses' necks. This form of construction also admits of firm supports to the reaper platforms, both before and behind the driving-wheels, which is impossible in other machines. The grain wheel may thus be in line with the driving-wheels, which is a great advantage in turning, over other machines. And, finally, all the operations of the machine are under the driver's eye, and more completely within his control than is possible on other machines.

THE PITMAN AND ITS CONNECTIONS.

The high rate of speed required of the PITMAN ROD demands that the greatest possible degree of directness, steadiness and uniformity should be given to its movements. In all these respects the Buckeye pitman, made of the best steel, possesses extraordinary merit. The crank-wheel and double-hinged bar always move in unison, so that the throw of the knife through the guards is never varied by the rise and fall of the cutter-bar. The wrist and hook afford very large and parallel bearings, insuring the least amount of wear. The end of the pitman, fitting in the eye of the cutter-bar, is held in place by a flange on the inside shoe, so that keys, nuts, springs, ratchets and other insecure devices are dispensed with.

The construction of the Buckeye permits the pitman, having parallel bearings at the ends, to control the knife, holding it to its work. Other machines use a knuckle, or ball-and-socket joint, which gives the pitman no control of the knife, except to push it back and forth. The points of the knife-sections are thus left to be pushed up and down, and to become cramped by any movement of the finger-bar. A swivel-joint, at such an important connection, will not be tolerated by any well-posted farmer.

The box at the crank end is not in the pitman, but *in the crank-wheel.* With this arrangement no amount of wear can cause any loss of motion or knocking, because the pressure which forces the knife in both directions comes, all the time, *against the same part of the box.*

LEVERS.

The TILTING LEVER—attached at the rear of the tongue, on the main frame—is very easily handled by the operator, who, by this means, raises and lowers the points of the guards without cramping the pitman or knife, or throwing any of the points out of line.

The LIFTING LEVER—a powerful one—is located at the side of the frame. With it the operator can raise the cutters over obstructions with remarkable ease.

PAWLS AND RATCHETS are a great convenience. When not at work the drive-wheels can be completely disengaged, and move as freely as cart wheels. These, also, are completely enclosed.

The LEADING WHEEL on the inside shoe, and a spring sole on the outer shoe, regulate the height of cutting to suit the work in hand. The danger of clogging is entirely obviated, and the cut grass is left in the best possible shape for drying.

We offer the Buckeye to the farmer, not as a perfect machine, but our claim that it is nearer perfect than any other machine yet constructed is sustained by a record of unexampled successes in the past, and will, we are fully convinced, be triumphantly vindicated by the verdict of the farming public in the future.

THE BUCKEYE TABLE RAKE.

THE general form of the Table-Rake may be learned from our illustrations. After looking at these the reader need not be told that this is the simplest form of Reaper in the market. The cutter-bar is in front—an arrangement that has saved scores of lives, judging by the very frequent occurrence of accidents and death to those using rear-cut Reapers.

This also allows the platform to be supported both in front and behind the main frame and drive-wheel. The switch, or grain-wheel, is in line with the drive-wheels, which is a very great advantage in turning. There is another advantage in the fact that the driver has his work immediately at his side, and in plain view, and does not have to look to the rear, as with the rear-cutting Reapers.

The Table-Rake is superior in its mechanical construction—of light draft, moving with a steady, even motion, and not jarring to the team, like the lofty plungers that keep up such a vibrating racket, and vex the even gait of the horses.

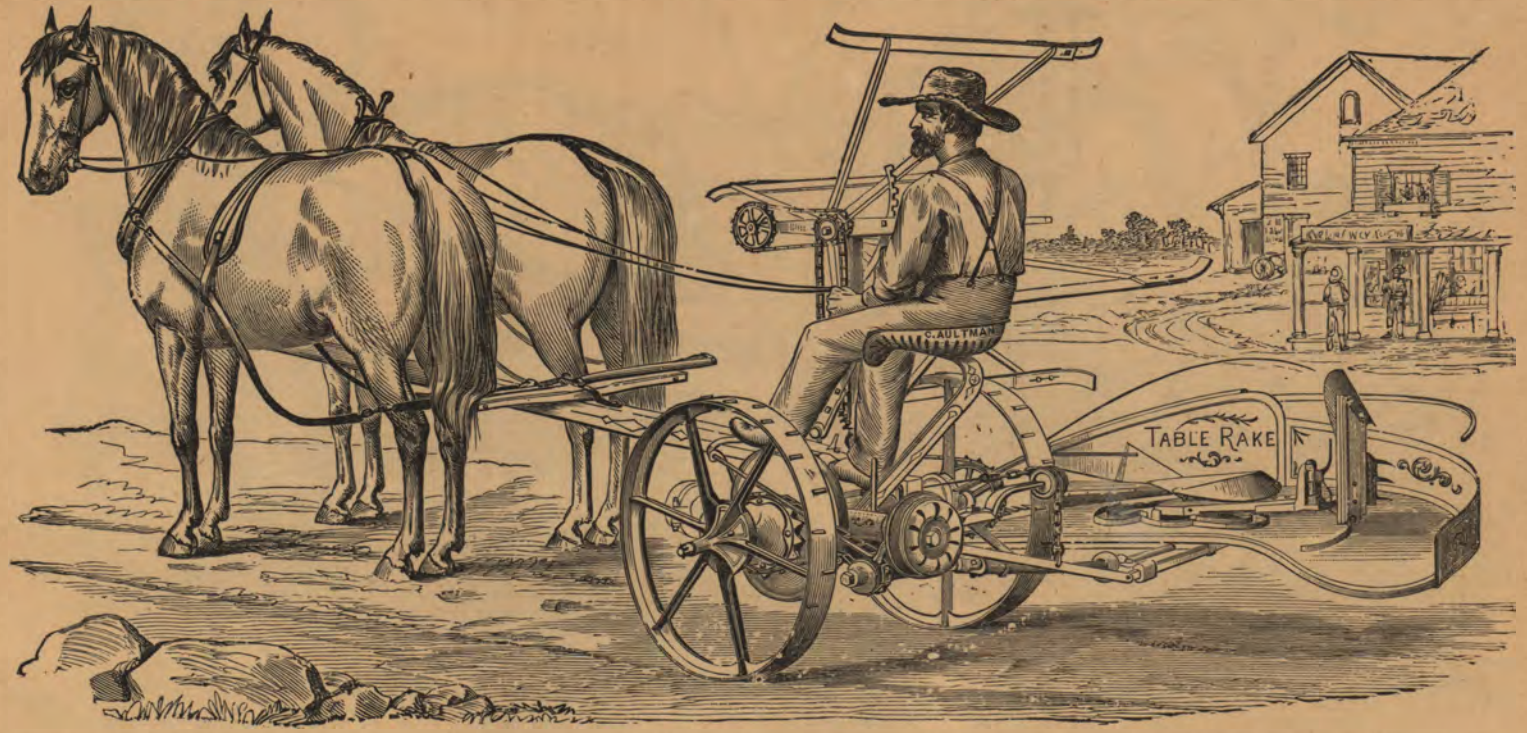
It allows the use of the overhanging reel, just as it is found on the dropper—a great advantage over Reel-Rakes, as it is easily and instantly adjusted by the driver for all kinds of grain. The rake itself requires no adjustment for the different conditions of grain. It discharges the gavels in much better condition for the binders than any other Reaper. Four men will bind easier and better after the Table-Rake than five men after the old-fashioned, revolving Paddle-Rakes.

It is an admitted fact that Reel-Rakes cannot make a decent bundle, even in straight-standing grain. The motion of the reel at the outside shoe is much faster than at the inside shoe. Owing to this defect, part of the grain is thrown diagonally across the platform. The Table-Rake puts the grain squarely upon the platform, compresses it into a neat bundle, and delivers the latter in excellent shape for binding.

The Table-Rake has also many other points of superiority: The rake may be stopped at any moment, and the sheaf carried as far as desired; this is impossible on the Reel-Rake. The reel is driven by sprocket wheels and chain instead of the old-fashioned reel chain. In raising and lowering the bar, both ends are raised and lowered alike, while other Rakes raise or lower one end of the bar twice as much as the other end.

The Table-Rake is not an incongruous conglomeration of bought-up patents, but it is one of those happy thoughts which, like the Buck eye Mower, has proved itself a supreme blessing to mankind, as thousands of farmers will gladly testify. As there are many other machines that can be made with much less expense, and therefore profitably sold at lower prices, our Reaper has, in this field, to encounter a kind of competition to the demands of which we are often unable to make the required concession. A due regard to the real interests of our patrons, and to the permanent reputation of the machines manufactured by us, forbids any abatement in the standard of excellence at which we have always aimed. We have always used the best materials, and exacted the most careful workmanship.

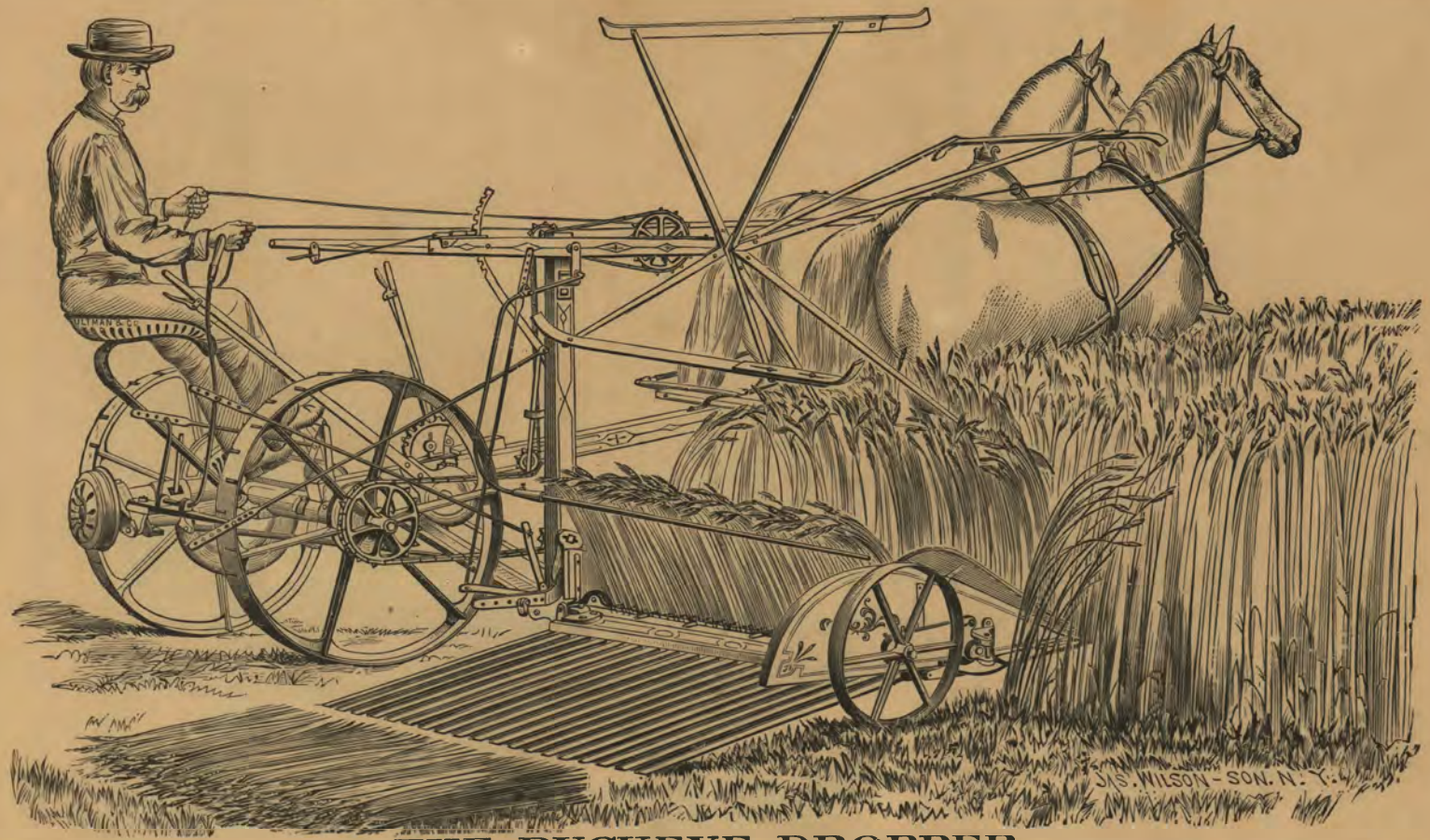
And i this course has lost us some customers, it has gained us many more from among the ranks of those thrifty and always well-to-do farmers who profit by the maxim that "the best is always the cheapest." For every successful farmer knows—and many know at the cost of heavy losses and bitter experience—that the low-priced, and no particular-priced articles, are the dearest in the end. Therefore we do not offer the Buckeye Table-Rake as the cheapest Reaper; but the record of the machine in the field, the testimony of the farmers who have used it, and of the binders who have followed it, conclusively sustain a far more important claim—IT IS THE BEST REAPER IN THE FIELD.



THE BUCKEYE TABLE RAKE.

THE BUCKEYE TABLE RAKE REAPER IN DOWN AND TANGLED GRAIN.

We unhesitatingly claim for the Table Rake that in lodged and tangled grain it does better and cleaner work than any other Reaper that we know of. In no single particular has the Table Rake made such fast friends as in its ability to save tangled crops in the best possible shape. The farmers say: "We never had worse grain to cut, and never saw better work in lodged grain." "The tilting lever, to throw the points of the guards down, is just the thing to take up lodged grain." "My grain was all down flat, but the Table Rake went right along and took it up clean." "I cut in down grain, and took it up so clean that you could not tell where the grain had been down." We confidently assert, as the universal opinion of those who have used our Reaper, that no machine equals the Table Rake in laid crops.



THE BUCKEYE DROPPER.

The unabated and continued demand for this form of harvesting machine warrants us in regarding the *Buckeye Dropper* as a machine of the standard and staple class. With farmers who do not raise very large crops it is a great favorite, because

It is the simplest form of reaper. It is the easiest to handle. Its work is equal to the best, and it is the least expensive.

With the Buckeye as a Dropper, the Driver is enabled to drop the gravel at the proper time—just as one of the wings has delivered its grain, thereby enabling the cut-off rod to get in the open space thus made by the reel wing, without scattering any grain.

Again, the Buckeye being a front cut machine, the platform is under the eye of the driver, thus sparing him the straining and tiresome effort of constantly looking behind to ascertain the size of the gavel whilst his eyes should be upon the horses, and looking out for obstructions.

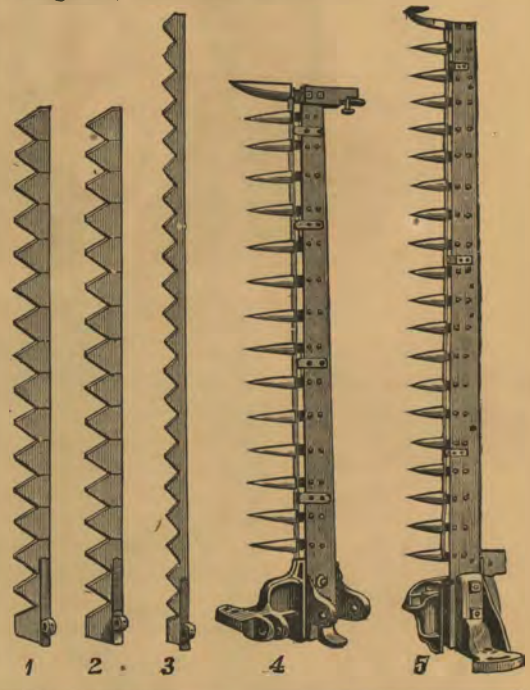
OUR COMBINED MACHINES.

In all the ups and downs of the machine business the Buckeye Combined Reaper and Mower has ever gained a wider and wider sphere of usefulness. Each machine is built as a mower, but is so made that a self-raking attachment or dropping attachment can be added in a few minutes. These attachments can be set to work automatically, and they are under the control of the driver as completely as the mower itself.

Some manufacturers furnish with their so-called combined machines, only two knives and one finger-bar, subjecting them to the double duty of mowing and reaping. It is a well known fact that the cutting apparatus, while it is the most costly part of the machine to make, is the first to wear out. The gearing or power, if used with ordinary care, will outlast, at the least, two complete sets of cutting apparatus. Is it not then evident that the farmer who buys a so-called combined machine with only one finger-bar, which he puts to the double work of mowing and reaping, will be compelled after a time to go to the expense of a new cutting apparatus, which he must pay for at the price usually charged for repairs?

A greater width of cut is also desirable in reaping than is possible in mowing, and this can only be had by the use of two finger-bars. Do not allow yourself to be deceived in this important item. *Do not pay the price of a combined machine and be turned off with only one finger-bar; a great saving indeed to the manufacturer, but a still greater loss to the farmer.*

We print the following cuts for the purpose of showing at a glance, the completeness of the cutting apparatus which is furnished with each Combined Buckeye Reaper and Mower, viz.: Nos. 1 and 2, Mowing Knives; No. 3, Reaping Sickle; No. 4, Finger-Bar for Mowing; and No. 5, Finger-Bar for Reaping, besides extra sections and guard, with rivets for repairs.



Which is the cheapest Machine for me to buy?

The farmer who has a thorough knowledge of all the machines in the market will be compelled to give his answer in favor of the TABLE RAKE, for the following reasons:

It will save him from one to three bushels of grain per acre over any other machine, on account of its ability to deliver all the cut grain in the gavels, without scattering or wasting any:

It always dispenses with one, and generally with two binders during harvest, while the highest prices have to be paid, besides making it much easier work for those who do the binding:

The saving on horse flesh, in the hot weather, over the cumbrous reel rakes is equal to the saving of another man:

The superiority of the Table-Rake in gathering and saving laid and tangled crops is universally conceded by experienced farmers. The Buckeye makes very fair sheaves in crops, where the reel rakes would leave a bunch or straw without any resemblance to a sheaf:

The greater simplicity and controllability of the Table-Rake must be evident to every man:

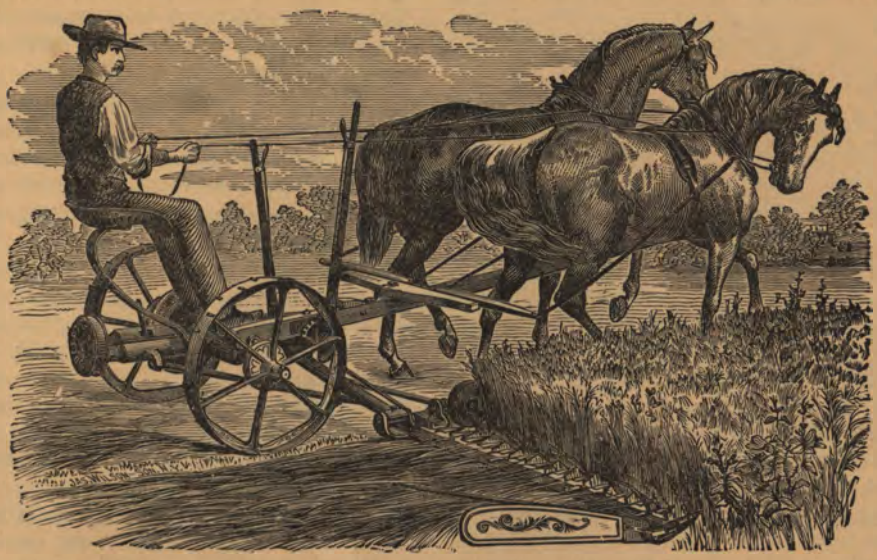
Directions for Ordering.

When you order machines or repairs, be particular to mention the following:

1. Town, County and State to which they are to be shipped.
2. Whether by freight or express.
3. When repairs are wanted, give the number on each casting
4. Whether for "IMPROVED BUCKEYE," "NEW BUCKEYE," TABLE RAKE, DROPPER, HARVESTER or BINDER, and the number of the machine.
5. Your post-office address.

Repairs for machines will be kept on hand by Agents, and all orders for machines or repairs will receive prompt attention.

A LOT OF OLD BUCKEYES ON THE WITNESS STAND.



SOME FACTS ABOUT DURABILITY.

IF the "survival of the fittest" is the crowning indication of superiority and real merit, then, by "Nature's stern decree," the Buckeye is indeed without a rival. There have been many failures—glaring departures from fundamental mechanical principles—embraced in various machines offered to the farmer. Generally they were fraught with vexation of spirit to both maker and buyer, and doomed to failure and speedy extinction. Of all the machines that were manufactured a quarter of a century ago, not one survives to-day except the Buckeye. Of all the houses engaged in such manufacture twenty-five years ago, C. Aultman & Co. only remain. Not only so, but the foremost rank which the novelty and superiority of the Buckeye at once achieved has been more than maintained; each succeeding year has extended the field of its triumphs, until it is now everywhere recognized as the leading Harvester of the world—the universally accepted standard by which the merits and defects of other machines are measured.

During the period referred to, great changes have occurred. The Buckeye has gone through with them, and been greatly modified; but the essential principles that made its fame cannot be changed, because the stern verdict of Nature, in decreeing the "survival of the fittest," has pronounced them CORRECT!

The term "durability" has, in this connection, a much more comprehensive meaning than is usually accorded to it. To have genuine durability, a machine must not only be able to endure prolonged use, but must also be capable of performing the work which it was bought to do, to the satisfaction of the purchaser, as compared with all competing machines. We claim for the Buckeye just this kind of durability; and, inasmuch as this old and hackneyed claim is now meaningless and void without any proof to sustain it, we ask the reader to consider the following facts:

——ISAAC S. REED, of Casey, Illinois, has a Buckeye Dropper that he has used for twelve years, cutting with it more than 2,000 acres of grain and grass. It is a very good machine to-day. He has never bought any repairs for it, excepting one pitman wrist, since he owned it. It has cost him but fifty cents for repairs in twelve years.

——JAMES H. ABBOTT, Dupont, Ind., says: "I have used a Buckeye for seventeen years, and it is good yet, and mows well. Last June I bought the Improved Buckeye, with Table-Rake. I need not say that I think it compares favorably with other machines. I know that it is far superior to all that I have seen, both in good work and ease of draft, and especially in durability."

——A dealer at Carrollton, Mo., writes: "I had fifty or more calls to-day for Champion, Clipper, Russell and Excelsior repairs, and not one call for Buckeye repairs. There must be about two hundred Buckeyes in Carroll County, and I don't average in sales $20 worth of repairs per year. Why don't you build the Buckeye so it will break, and wear out, too?"

——Patrick K. Deneen, Mazomanie, Wis. "I own a combined machine that has cut, at least, one hundred and fifty acres a year for nine years, and I am willing to go into a field trial with any new-fangled machine with my 'old stand-by.' After nine years of hard service, an ordinary observer would not notice the wear on the bevel pinion. It is the best made machine I have ever seen. Were I to buy a new machine to day, nothing but a *Buckeye* would answer my purpose."

——Joseph Miller, Paoli, O., Dec„ 4, 1879. "I used the Junior Buckeye for fourteen years, doing a great deal of mowing besides my own. I now have the New Buckeye, which is much more light and simple. I don't know of its equal in any respect."

——L. S. McClaren, Paint Valley, Holmes Co., Ohio, Aug. 12, 1879, says: "I have an old Buckeye that has cut the nineteenth harvest, and done it in good order, and I don't know but what it would last for the next fifty years; but I want a machine that one hand can manage. I think the gears in the old machine are as good as the day it was bought. I have looked at a good many machines, and don't find any that I like as well as the old Buckeye. What is the price of the new machine?"

——H. Woodburn, of Washington, O., says: "I used a Buckeye for fourteen years, and then sold it for $40.

——Andrew Pfoffenberger, Scottsburg, Ind., says: "I have run the Buckeye for fifteen years, and it did more good work than any machine in this part of the country. I have now got one of your latest Improved, which gives all and more satisfaction than any other make in this section."

——Clinton Griffith, Owensboro, Ky., July 3d, says: "I have a Combined Buckeye, and have used it for seventeen years, and it worked well in cutting meadow last year."

——J. B. Baldwin, Blanchester, O., July 5th, says: "I sold John Barry, near this place, a Buckeye Mower in 1858, with which he has cut ever since from 75 to 150 acres each year, and is doing good work yet. He was in to-day to get some sections. His repairs have not cost him $5 outside of sections. Buckeyes never pass away with the consumption."

——John Soper, Grass Lake, Mich., has a Buckeye which he bought in 1860, and which has done good service every year since.

——H. R. Whittlesey, Waterford, Erie Co., Pa., has a Buckeye which he bought in 1862. He says: "In the whole time I do not remember having to stop but once for repairs, and that was caused by carelessness." His average cutting was from 60 to 80 acres per year.

——F. R. Buckley, Clayton Co., Iowa, says that he has had his Buckeye fifteen years, and that he has wanted to buy a better machine than his old Buckeye is yet, if he could find one, but so far has not succeeded.

——Fred. Hoover, Argos, Ind., has a Buckeye which was made in 1861. He says that the only thing ever broken about it was the shoe, "and that was by accident."

——Elijah Odell, Iowa Falls, Iowa, has a Buckeye which was made in 1857. He says: "The first few years machines were scarce, and this machine was kept in constant use from the commencement to the close of each season. The first five years it probably did as much work as the majority of machines do in fifteen years." But, for all the wear, Mr. Odell refuses to part with the machine, preferring to keep it as a relic, and he adds, "it does its work good enough."

——J. G. Wilson, writes from Charleston, Ill.: "I have found here an old Buckeye, No. 5. It is in good shape, and has cut thousands of acres. It was used up to last year, and now the owner buys a new one. I think this old machine has cut more acres than any machine in the world."

——Hugh Barkley, Rice's Landing, Pa., says: "Please send set of guards by express for wood-frame Buckeye. This machine has been in use over twenty years, and I think it is good for twenty years more."

——Hon. H. S. Bundy, Reed's Mills, O., says: "I purchased one of your Buckeyes, and have cut over three hundred acres this year. I have been acquainted with your machine for many years, having had one in use myself for more than ten years. My experience induced me to buy this one, and my confidence is by no means diminished. It is a number one machine, and I could ask nothing better."

——Ransom Franklin, Salem, Ind., Dec. 30, 1878, says: "I bought one of your Mowers, with which the Dropper can be attached. I cut about fifty acres of grass the first harvest; the work was done very well. The draft is light, and I think does a little better work than any other machine with which I am acquainted.

P. S.—My father used one of your combined machines for eighteen years, cutting each harvest from seventy five to one hundred acres of grass and grain, and, when sold, it still did good work. R. F."

——James Dones, Madeira, Hamilton Co., O. bought a Buckeye in 1857, and cut with it each year since, an average of one hundredand fifty acres of grass and grain. It is apparently good for some years' use yet. His total expense for repairs had been less than $5

——Wm. F. Younker, Parkersburg, Iowa, has a Buckeye which he bought in 1862. He said, in 1875: It is as good as new, and can't to-day be beat in grass or grain."

——Jacob Miller, Jr., Schanck's P. O., Morrow Co., O., Jan. 6, 1879, says: "I have an old Buckeye that has been in use sixteen years, and it mows well yet. The Buckeye is the 'go' in this neighborhood."

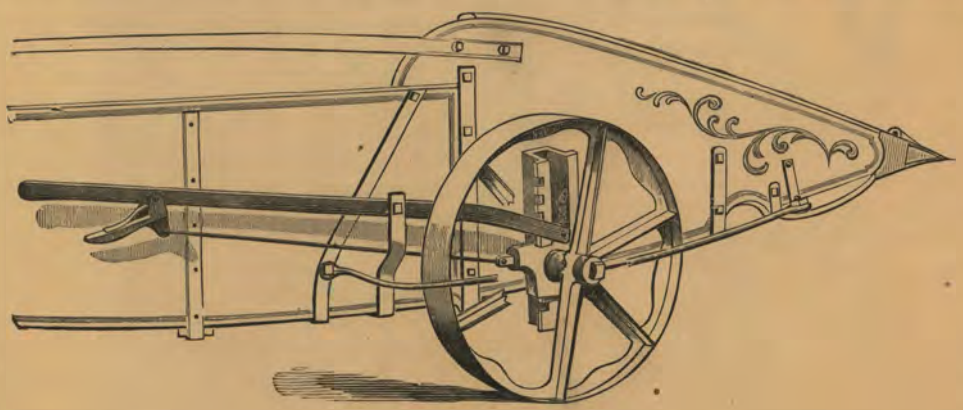
——Day & Son, Felicity, O., June 19, 1879, say: "Eleven years ago we sold our first Buckeye machine (Senior Dropper). The party buying it of us (Mr. George W. Day) has cut all his grass and grain, and for all his neighbors—and, in fact, it always has had a hot harvest. Mr. Day is rather a good and enterprising farmer, and wishes to keep up with the times. To-day he sold out his old Senior—not because it was worn out, for it is good for several years yet. Now he wants one of the Improved. This makes the third Buckeye he has owned in his life-time. Our people, up here, when they get a good thing, have a disposition to stick to it."

——"Col. Tom Crutchfield will cut his grass this season with a Buckeye Mower which he purchased twenty years ago, and has used every season since."—*Chattanooga Commercial.*

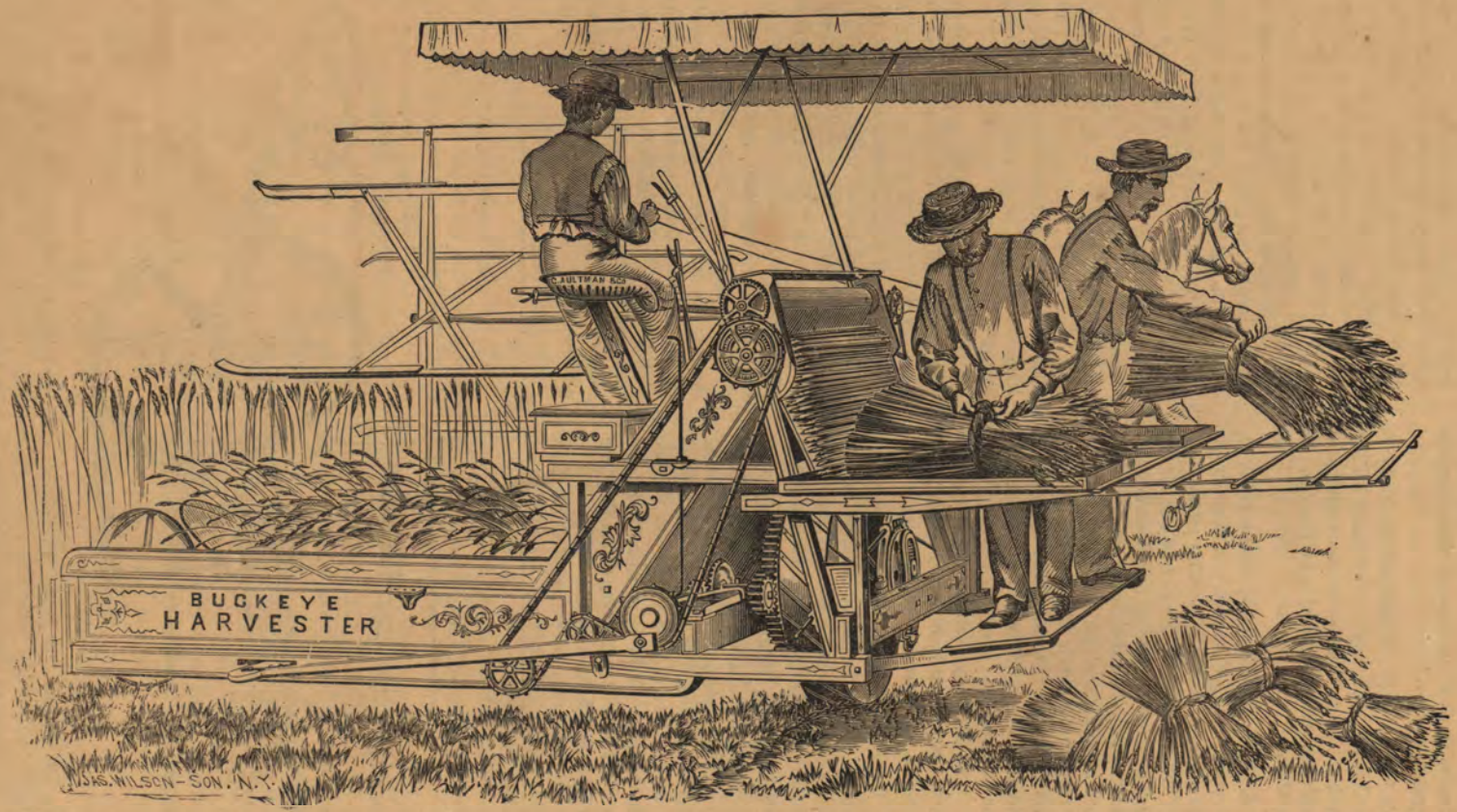
——D. W. Thompson, Edenton, O., says: 'In 1862 we purchased a Combined Buckeye. Last spring we bought another, with Table-Rake. These do the work on our farm of 300 acres. Last season we had the old and new Buckeyes at work side by side The new machine runs some lighter. As to comparative durability we will tell you in about fifteen years."

——From J. H. Gill, Pres. of the First National Bank, Mt. Pleasant, O.—"*To Whom it May Concern*—Manufacturer, Agent or Farmers: This will certify that I purchased a Buckeye Mowing Machine (I think it was July, 1858) from Joseph Kithcart, Esq., Agent, and paid for it $117; run the machine five years, cutting grass and grain to the extent of from 150 to 200 acres per year, without having machine repaired in any manner by mechanics. I then sold said machine to G. W. Drake for $100; he run it two years on same farm, cutting about same number of acres per annum. He then sold it to Henry Heberling, Esq, for $100. Mr. Heberling run it on the same ranch, and cut about same amount, for the term of five years, and then, at public sale, the machine was sold to G. K. Jenkins, I think, for $80. During the time (12 years) the machine was run in the hands of Gill, Drake and Heberling, it cut at least 2,000 acres of grass and grain."

——Hon. C. C. Adams, present Probate Judge of Carroll County, Ohio, writes us as follows Nov. 26, 1879: "In the summer of 1863 I purchased one of your Mowing Machines (Buckeye Junior), which I used, with but slight repairs, until the last year. During all that time it did its work well, on my farm of some 300 acres, and considerable on other farms for my neighbors; then it was not broken, but worn out. Prior to the harvest of last year (1879) I bought of your Agent, Mr. Stenger, another of your Machines (Medium), and put it on my farm, in the hands of my son—P. W. Adams—who is at this time running the farm, who says that it does its work to perfection, and is all that could be desired as a Mower."



The above cut shows the lever for raising and lowering the outer end of the Table Rake Platform. Taken in connection with the Lifting Lever, at inner end, it will be seen that the entire platform can be placed at any desired height with ease, and in a moment's time. The convenience of this arrangement in reaping over uneven land and in tangled grain will be apparent.



THE BUCKEYE HARVESTER.

THE BUCKEYE HARVESTER.

While the demand for our Hand-Binding Harvester has fallen off considerably the last two years, owing to the large number of farmers who prefer the Buckeye Self-Binding Harvester, the former has lost none of its well-deserved popularity. The Buckeye Harvester has made a record with which we ought to be perfectly satisfied, for it has never failed to give entire satisfaction to its owner.

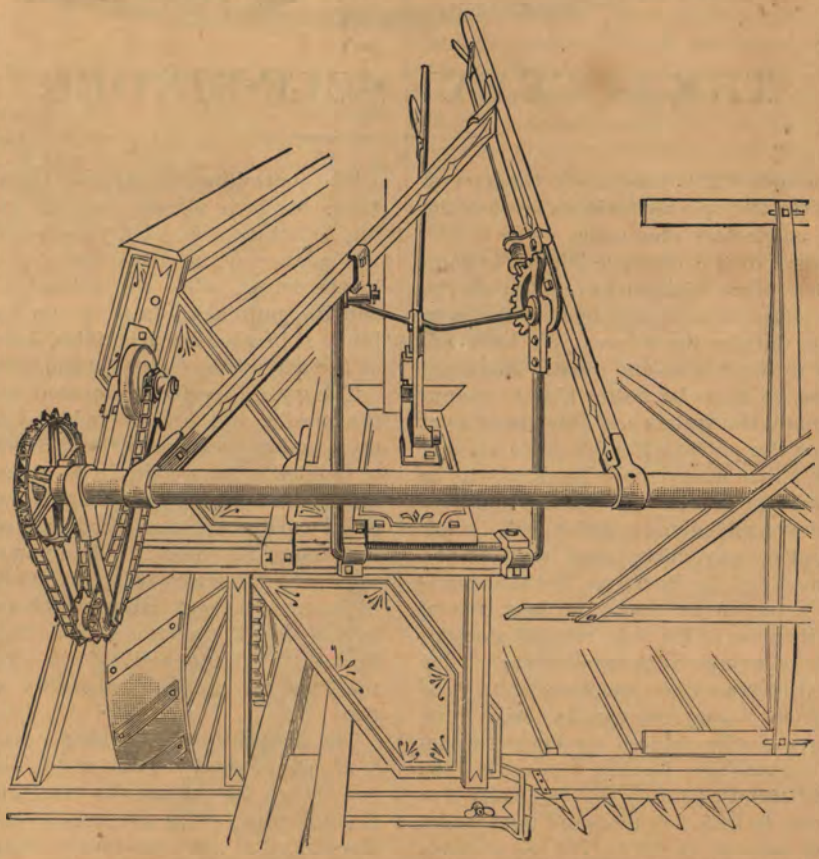
This machine will be substantially the same as last year, no change having been suggested that could be called an improvement. The Adjustable Double Canvas Elevator works perfectly. The Tilting Lever and Reel are superior to those used on any other form of Harvesters. The Binder's Table is folded by one man, without removing a bolt, so that the Harvester will pass an eleven-foot gate. The gearing is the simplest possible, the frame is very strong, and the draft very light. Two horses are sufficient, and it is easy on horses and binders. It can be used in wet or dry weather, in long or short grain, and always gives entire satisfaction.

The large drive-wheel, though light, will be found equal to all the work required of it. Iron cleats on the rim add greatly to its tractile power. It is all of iron.

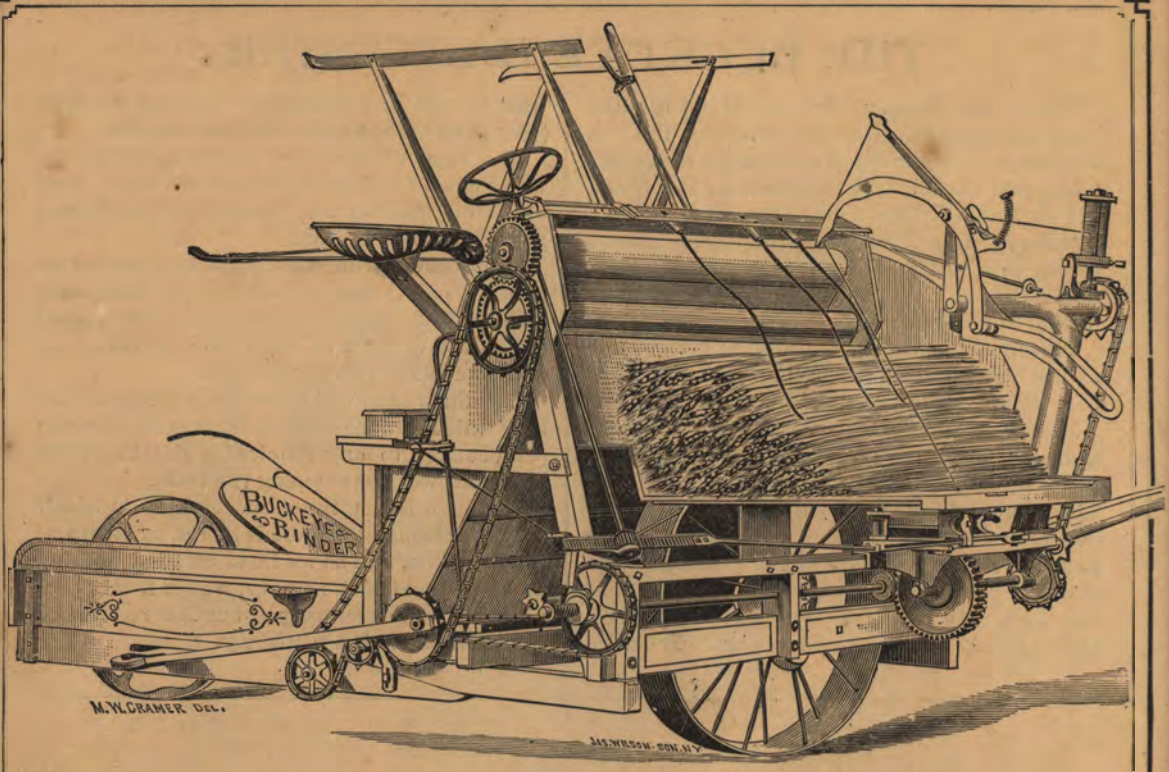
The worm-gear hoisting apparatus (see cut on another page,) has proven a most acceptable addition. By means of this gear, with a short crank, the driver can easily raise or lower the entire machine in a few seconds.

The illustration will show the principle of the reel, which can be moved horizontally or perpendicularly to any required point to do the best work without stopping the team.

We have taken the utmost pains to admit only the strongest materials in the make-up of this machine, and as we have omitted nothing that could add to its utility, we are firmly convinced of the superiority of our Harvester, and can recommend it accordingly.



DOUBLE LEVER FOR OPERATING HARVESTER AND BINDER REEL.



THE BUCKEYE SELF-BINDER.

THE conduct of this machine in the harvest of 1879 makes up a record in its favor of the most satisfactory character.

The successes of the Buckeye Binder, in competition with other Binders have been so frequent and complete as to remove all doubt in regard to our duty in the future. We have added largely to our works and greatly increased our facilities, so as to be better able to manufacture enough Harvesters and Binders to meet the wants of the public. For we have already been notified that many more Binders will be wanted than last year; and, with the improvements we have added, no question will be left in the mind of any fair-minded man of the great superiority of the Buckeye. Notwithstanding all the experiments that have been made, wire holds its place as the only reliable material for binding sheaves with machinery. The growth of this branch of machinery may be gathered from these figures: In 1875 three hundred tons of wire sufficed for the consumption of all the machine Binders made; in 1876, twenty-eight hundred tons; in 1877, sixty-five hundred tons; in 1878, ten thousand tons, and a much larger amount in 1879. The use of binding wire last year more than equaled the entire wire production of the country ten years ago.

The controlling recommendations of the Harvester we have already referred to. The Binding Attachment is quickly and easily added, and the balance of the entire machine is easily kept by the driver, who, single-handed and alone, cuts his grain at the rate of one acre per hour, binds it in good-sized bundles, delivering it out of the way of the horses on the next round.

The grain is perfectly elevated, and falls under the needle, and is all saved and firmly bound up, whether wet or dry, long or short, straight or tangled. Tangled grain is all cut, bound up and saved as cleanly as straight grain. No machine ever made such good and easy work in the care of laid crops. When you add the saving to the farmer by being able to dispense with high-priced harvest hands, which are often hard to get—also, the saving in boarding and worry to both the farmer and his wife—the reasons for the Buckeye Binder's popularity are very evident.

The simplicity of our Binder has ever given it the preference. The twister and two small levers used for holding the wire—all operated by a single cam—with the needle, constitute substantially all the machinery there is of the Binder. No. 20 annealed steel wire is used. This wire will bind a large sheaf, and it can be bound

as tight as the strength of the wire will admit of. Bundles can be made small or large, and bound more or less tightly, at the will of the driver. The Buckeye breaks no wire while binding, and no Binder has a tension so simple and easy of adjustment. The separation of the bundles is as complete as it can be made, and at the same time avoid all danger of shelling and waste of grain.

But one tie is made in the wire. The Buckeye uses less wire than other machines, and very much less than the machines requiring two long twists on the same sheaf. The grain saved by this Binder will pay for the wire used. (By actual measurement of the wire wasted or consumed in making the twist, by seven of the leading Binders, it was found to range from 4¼ inches to 6 inches. The last is the amount used by a machine making two twists. The Buckeye used the least wire of all—viz: 4¼ inches. All the other machines wasted from 4⅜ to 6 inches.)

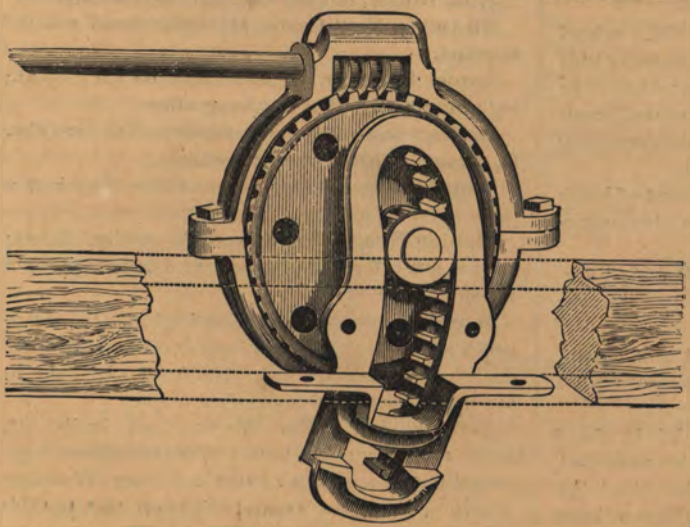
Band Cutters.

The figure above shows the form of the Band Cutter furnished with the Buckeye Binder. The jaws are so shaped that when the wire band is cut, at threshing, one end of the cut band is held fast until withdrawn from the straw. By the careful use of this implement every particle of wire can be certainly removed from the wheat and straw.

Wire for Binding.

Binder Wire is shipped in boxes, each containing ten spools. Each spool holds between 15 and 16 pounds of No. 20 steel wire, making from 155 to 160 lbs. of wire in a box. The usual allowance per acre of ordinary grain is three pounds, but the amount used will vary largely for light and heavy grain, and also according to the size of bundles and tightness of band; large bundles and tight binding being, of course, most economical of wire.

The cost of wire is not included in the price of the machine, but a stock will be kept on hand by our agents. It is sold only by the box and for cash.



The convenience of this "Worm Gear" for raising and lowering either the Harvester or Binder, will be apparent at a glance. The shaft in the upper part of the cut, to which the gear is attached, extends to the back part of the machine. At the back end is a crank with which the driver may easily p ace the machine at any desired height without any loss of time.

WORM GEAR FOR RAISING AND LOWERING HARVESTER AND BINDER.

Some Facts in regard to Comparative Safety and Danger with Machines which every Farmer should Weigh.

Every year adds to our solicitude for the safety of the machines that we put into the hands of the farmer. We have always emphasized our claim that the Buckeye is the safest of all the Harvesting Machines. Whether this is a matter of grave importance or not we will leave to the reader after he has read the following list of accidents which we never have published before.

Not one of these accidents could have happened with the Buckeye, because all the machines upon which they occurred were rear-cuts, or machines with exposed gearings. And if the reader continues to be skeptical let him send for our pamphlet entitled: "Front-cuts against Rear-cuts," in which are printed a long list of accidents in previous years and this subject is treated more at length than is possible in this circular:

Rev. R. Robertson, Farmer City, Ill., fell before the Knife of Champion Reaper, both sides of face torn off, one knee torn into a jelly, one arm nearly sawed off.

A German, named Kaelin, near Louisville, Ky., fell on knife of Champion and was so badly cut to pieces that he lived but a few minutes.

A hired man on farm of Michael Depler, Upper Sandusky, O., fell in front of Champion Mower and was terribly mangled, flesh on one leg frightfully cut and one finger cut off.

James Alexander, Kennett Square, Pa.; one of the sweep rakes became loose and struck him on the back of the neck drawing him around in front of the knife which was in motion. Fortunately the horses stopped at the word or he must have been terribly cut.

George W. Casner, near Decatur, Ill., wheel of Wood mower dropped into ditch throwing him face downwards so that his leg was caught in the exposed gearing on the drive wheel, flesh torn from calf and half way up his thigh severing the femoral artery and causing death.

Mr. Miller, near Celina, O., fell in front of knife of Champion and had both his legs terribly mangled.

Cyrus Wilson, Greenfield, O., fell off Champion in front of knife and was seriously cut, owes his life to a quiet team.

James Erick, Hunterton, Ind., fell off Champion Reaper, killed, his body being lacerated in a sickening manner.

Mrs. Winters, Gayville, Iowa, fell in front of Champion Mower Knife, terribly mangled, three toes cut off of one foot. She lifted the cutter-bar over her body or must have been killed.

Mr. Painter, near Greensburg, Pa., using an Aetna Machine, arm cut off, and leg and foot badly cut. Died after one week.

William Hughes, Table Grove, Ill., fell from McCormick, Reaper and was killed by the knives.

James Abernethy, near neighbor of Hughes, fell off a Champion, but horses stopped at the "whoa", got off with a few gashes in the hand,

W. W. Carey, Mitchell, Iowa, fell before knife of a Champion machine and had arm cut off.

Mr. Stangel, Michicott, Wis., fell before knife of a Wheeler machine and was cut in hips and side.

Taylor Dilworth, Glenmore, Pa., fell before knife of a Champion machine, cut through the palm of right hand, three fingers and thumb of the right hand and two fingers on the left cut nearly off.

Lawson Calhoun, Canaan township, Madison Co., O., fell in front of Champion Mower Bar, flesh of right arm badly lacerated, some of the bones fractured and a fearful flesh wound in the thigh

A son of Wm. Norris, Lamoille, Ill., fell before bar of Champion, and had left arm cut off above elbow and face horribly mutilated.

John Charlton, of South Strabone Township, Pa., ankle badly mangled.

Michael Sullivan, of South Grove Township, Ills., arm cut to pieces, shoulder dislocated, collar bone broken, flesh cut from thigh, leaving one hip bare to the bone; no hope of recovery.

John Gee, of Daviess Co., Mo., lost right arm.

J. L. Nutter, of Clay Co., Mo., lost a hand.

Eli Davis, New Castle, O., right hand cut off at wrist.

Daniel Springer, of Erie, Monroe Co., Mich.; leg amputated; died not long after.

Mr. Eagleson, of Green Township, Harrison Co., O., dragged thirty yards; lost a leg.

Wm. Hazelton, near Friendsville, Ill., lost a leg.

Mahlon Nye, of Sweetland Township, Iowa; knives cut off point of elbow, and guards pierced his side.

James Brown, near Bloomington, Ill., dragged forty rods; left arm unjointed at shoulder, flesh torn from right arm and from his body in several places. No hope of recovery.

S D. Rieman, of Fort Wayne, Ind., badly cut, and lived only a few hours. This accident happened near Lagro, Ind., not far from Warsaw, where in 1875, Mr. Daniel Wiltrout lost his life by being thrown from a "Rear-Cut."

A son of George Jassman, of Yankton Co., Dakota, was badly cut and injured.

James Russell of Washington Township, Ind, narrowly escaped death, or maiming for life. Horses stopped just as the knives reached his hand, which was slightly cut.

A man working for Henry Miller, of Middleourg, lost an arm.

James Rogers, of Providence, Delaware Co., Pa; arm cut nearly off.

Eli Shoop, Berrysburg, Dauphin Co., Pa., lost two of his fingers and part of his clothing.

Thos. Abercrombie, Shell Rock, Iowa, frightfully mangled, so that it took the doctor three hours to dress his wounds.

Clement Thompson, near Forest City, Iowa; arm cut nearly off.

Thos. Durkin, Libertyville, Ill.; right arm cut off, head badly mangled, left arm and legs terribly mutilated.

Son of John Jacobs, of Wayne Township, Jones Co, Ia; thrown in front of the sickle, but the heel of the boy's shoe caught in the gearing and stopped the machine, saving him from being frightfully cut.

A farmer, writing to us of one of these dreadful tragedies says: "From that time the owners of the "(rear cut)" machine would not ride it or permit their boys to ride it but did their mowing and reaping walking and driving." We feel profoundly grateful that no such reproach as that ever has been or can be made against the *Buckeye.*

Old Friends.

We are continually being made aware of the fact that the Buckeye has no better friends or stauncher advocates than its old friends. There are thousands of farmers who are still using Buckeyes bought ten, fifteen and even twenty years ago. Very naturally they become attached to a machine that has rendered such faithful service. But the best of friends must part, and these same farmers will soon be looking around for a new machine. To all such we would say: Do not discredit the Buckeye by a comparison of your old machine with the light and graceful devices that continue to appear and disappear from year to year. How do you think the latter would stand the "banging" your staunch old Buckeye got among the old stumps, stones and fence-rows of fifteen years ago?

Before allowing yourself to "go back on" an old and true friend take a look at our illustrations, or what is better, call at our nearest agency and take a look at the Buckeye equipped with all the late improvements. You will find that the Buckeye is not only lighter, but even more durable than formerly; also that in respect to ease of control, simplicity, perfection of work and safety it has retained all those features which have gained for it the lasting friendship of the farming public.

Warranty to Purchasers.

Our Buckeye Mower, or either of our Buckeye Reapers, is each warranted to the purchaser as follows:

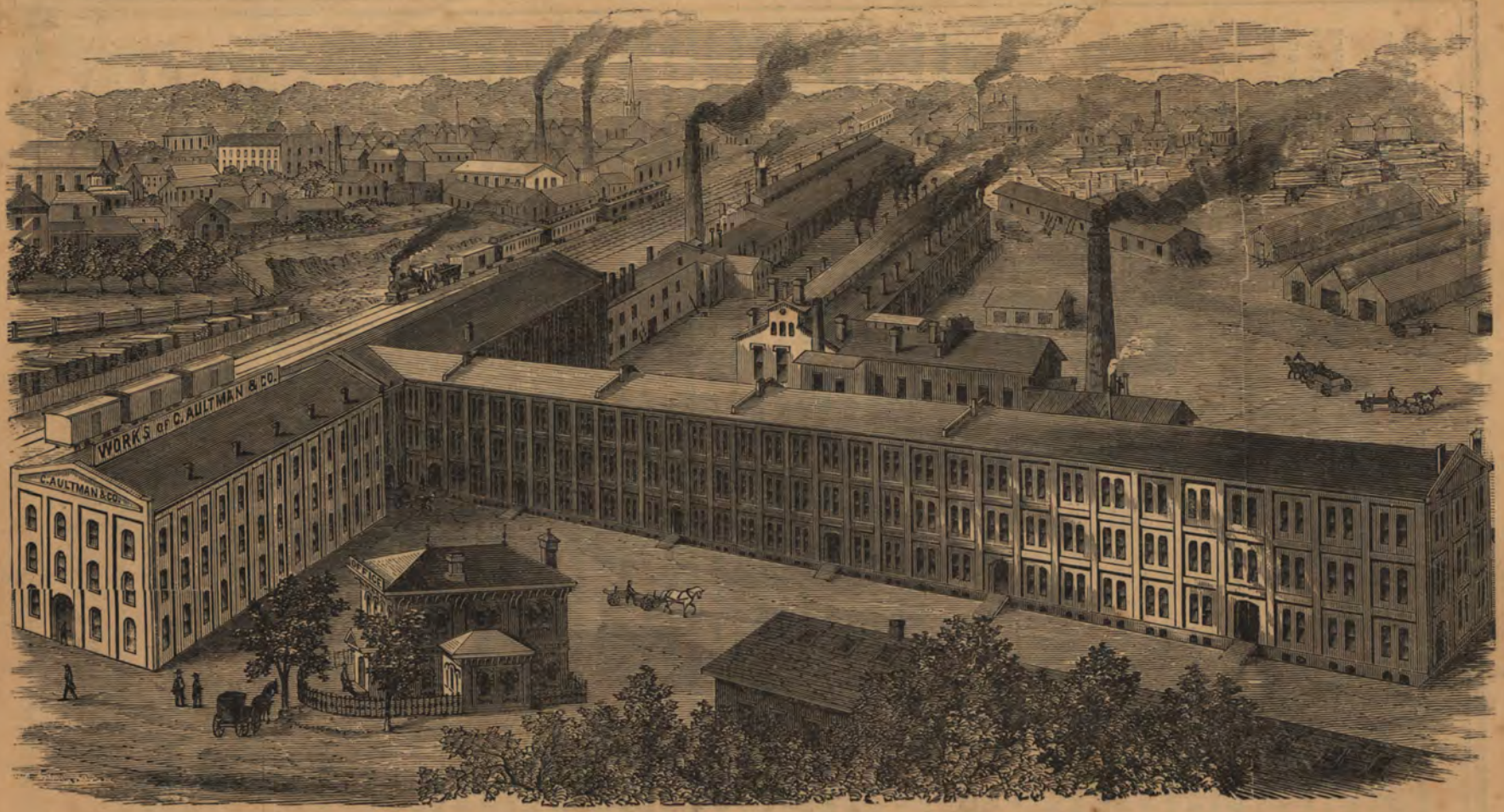
1. That with proper management it will cut one acre per hour, or ten or twelve acres per day, of either grass or grain, in a workmanlike manner, with one pair of horses.

2. We allow the purchaser, if desired, to cut two acres of grass, or, with the reaper, two acres of grain, on trial; and in case anything proves defective, due notice must be given to our agent, or to us, and time be allowed to put it in order. If, after this, it will not work, and the fault should be in the machine, it will be taken back, or the defective part be replaced, or the money refunded.

Considerable noise has been made about millers sustaining more or less injury in grinding wire-bound wheat. If any such inconvenience ever really existed, it has been so completely remedied that it exists no longer. Wheat bound with wire commands as high a price, and is as acceptable to millers as any other. The use of magnets to remove from wheat all bits of wire is the remedy referred to. The valuable service rendered by magnets in removing, not only pieces of wire, but particles of iron, nails, and other metallic substances, is rendering their introduction quite common.

TESTIMONIALS.

We are having printed, in pamphlet form, a number of testimonials received from purchasers of our machines last year. We will take pleasure in mailing the same to any address, upon request. Farmers who are desirous of reading the experiences of persons who have bought Buckeyes, expressed in their own language, are invited to send for this pamphlet.



MOWER AND REAPER WORKS OF C. AULTMAN & CO.,

CANTON, OHIO,

UNITED STATES OF AMERICA.

HANDY FACTS AND FIGURES.

RATES OF POSTAGE.

Following are the postal rates on all mailable matter:

	Each ½oz.
Letters to all points in the U. S.	3 cents
Drop Letters, taken at office	1 cent
" " free Delivery	2 cents
Postal Cards	1 cent
Registered Letters, in addition to postage	10 cents

One cent for each two ounces, and for each fractional part thereof, must be paid on the following: Pamphlets, occasional publications, transient newspapers, magazines, books, periodicals, handbills, posters, sheet music (printed), prospectuses, maps, proof sheets, corrected proof sheets, and regular publications designed primarily for advertising purposes or for free circulation at nominal rates.

The rate for the following is *one cent for each ounce*, or fraction thereof: Printed cards and blanks, prints, Chromos, lithographs, engravings, photographs and stereoscopic views, book manuscripts, unsealed circulars, seeds, cuttings, bulbs, roots and scions, flexible patterns, samples of ores, metals, minerals and merchandise, sample cards, photographic paper, letter envelopes, postal envelopes and wrappers, unprinted cards, plain and ornamental paper, cardboard or other flexible material, and all other mailable matter of the Third Class not herein enumerated.

UNMAILABLE MATTER.—No article of glass, or contained in glass, can be placed in the mails, and all liquids, poisons, chemicals, sugar, live animals, sharp-pointed instruments, etc., likely to injure their contents or the person of any officer of the Post Office department, and all obscene literature, pictures, disloyal devices, lottery and gift concert advertisements, are positively excluded from the mails.

The *Town, County and State* are required to be plainly written on all matter deposited in the mails.

COMPARATIVE SIZES OF COUNTRIES.

England is equal in size to North Corolina. Greece is equal to West Virginia.

Indiana, Ireland, Scotland and Portugal are of equal size.

Maryland, Belgium, Switzerland, Holland and Denmark are all about the same size.

Norway is as large as Wisconsin and Minnesota.

Sweden is as large as New York, Pennsylvania, Ohio and Indiana.

Spain is as large as Illinois, Wisconsin and Minnesota.

France is as large as New York, Pennsylvania, Ohio, Indiana and Kentucky.

Germany is about the same size as France.

Austria is as large as France and Illinois.

The Russian Empire is double the size of the United States.

The Turkish Empire is half as large as the United States.

DIVISION OF LAND.

The average size of farms in the United States is about 150 acres.

In France there are ten million land owners. Of these 50,000 average 750 acres each, 200,000 average 75 acres each, 4,000,000 average 17½ acres each and 5,000,000 have less than 17½ acres.

Germany has seven million land owners, and the division is proportionately much the same as in France, though the averages are somewhat larger.

Three-fourths of the 40,000,000 of acres contained in England, Scotland and Ireland, are owned by 10,000 persons.

MEASUREMENT OF AN ACRE.

To aid in arriving at accuracy in estimating the amount of land in different fields, we give the following table. A field of any of these dimensions contains one acre:

5	yds wide	by	968 yds long.	60½	yds wide	by	80 yds long
10	"	"	484 "	110	"	"	44 "
20	"	"	242 "	120	"	"	40.3 "
40	"	"	121 "	220	"	"	22 "
80	"	"	60½ "	240	"	"	20.17 "
70	"	"	69.1 "	440	"	"	11 "

☞To lay off a square acre of land: measure 209 feet for each side of the square; it contains an acre to within an inch.

To find the number of acres in a body of land, multiply the length by the width (in rods), and divide the product by 160; the result will be the answer in acres and hundredths. When the opposite sides of a piece of land are of unequal length, add them together and take one half for the mean length or width; multiply this by the depth and divide by 31½. This will give the result required.

DISTANCES ROUND THE WORLD.

	Miles.
New York to San Francisco, (Railroad)	3,304
San Francisco to Calcutta, (Steamship)	9,980
Calcutta to Bombay, (Railroad)	1,230
Bombay to Marseilles, (Steamship)	5,500
Marseilles to Havre, (Railroad)	575
Havre to New York, (Steamship)	3,140
Total	23,729

BUSINESS LAW.

Ignorance of the law excuses no one.

An agreement without consideration is void.

Signatures made with a lead pencil are good in law.

A receipt for money paid is not legally conclusive.

The acts of one partner bind all the others.

A contract made with a minor is void.

A contract made with a lunatic is void.

Principals are responsible for the acts of their agents.

Agents are responsible to their principals for errors.

Each individual in a partnership is responsible for the whole amount of the debts of the firm.

A note given by a minor is void.

Notes bear interest only when so stated.

It is not legally necessary to say on a note "for value received."

A note obtained by fraud, or from a person in a state of intoxication, cannot be collected.

If a note be lost or stolen, it does not release the maker; he must pay it.

Rothschild, the founderof the world-renowned house of Rothschild & Co., ascribed his success to the following:

Never have anything to do with an unlucky man.

Be cautious and bold.

Make a bargain at once.

Table Showing Difference of Time at 12 O'clock (Noon) at New York.

New York	12.00 M.	Boston	12.12 P. M.
Buffalo	11.40 A. M	Quebec	12.12 "
Cincinnati	11.18 "	Portland	12.15 "
Chicago	11.07 "	London	4.55 "
St. Louis	10.55 "	Paris	5.05 "
San Francisco.	8.45 "	Rome	5.45 "
New Orleans	10.56 "	Constantinople	6.41 "
Washington	11.48 "	Vienna	6.00 "
Charleston	11.36 "	St. Petersburg	6.57 "
Havana	11.25 "	Pekin, night	12.40 A.M.

Market Prices of Gold during the Suspension of Specie Payments.

The following table, compiled from the official registry, shows the highest and lowest prices of gold each year since 1862:

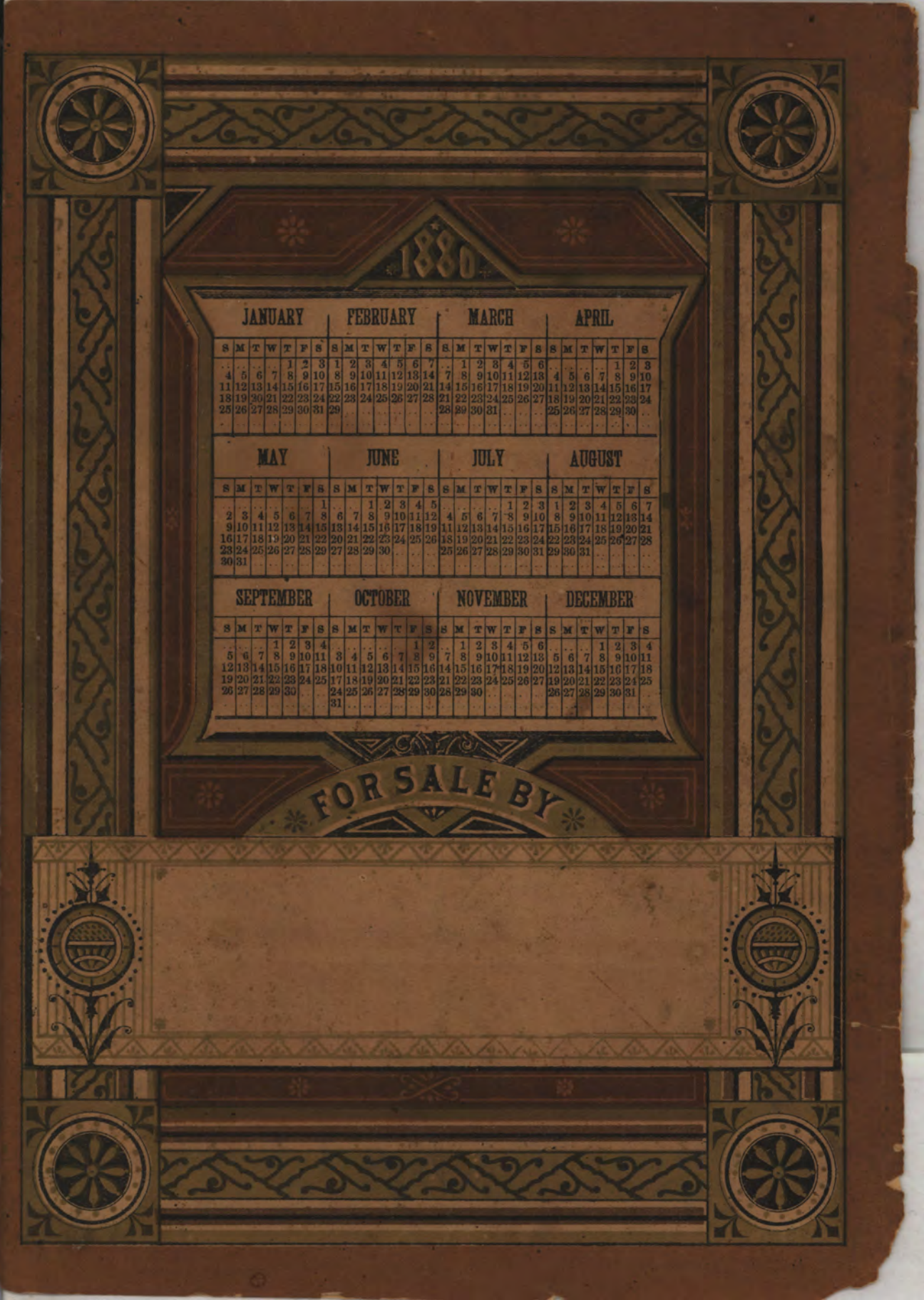
	Highest.		Lowest.	
1862	134	Dec. 4.	100	Jan. 11
1863	172⅛	Feb. 26.	122⅛	Aug. 25.
1864	285	July 12.	151⅛	Jan. 9.
1865	233¾	Jan. 4.	128⅝	May 11.
1866	167¾	June 18.	125	March 24
1867	146⅜	Sept. 12.	132	Jan. 3.
1868	150	Aug. 6.	132½	Nov. 6.
1869	162⅛	Sept. 24.	119⅛	Dec. 30.
1870	123⅜	Jan. 10.	110	Nov. 4.
1871	115⅝	Sept. 23.	108¾	Dec. 23.
1872	115⅝	Aug. 5.	108¾	Jan. 11.
1873	119⅛	April 12.	106¼	Nov. 6.
1874	114⅜	April 15.	109	July 28.
1875	117⅝	Oct. 5.	111¼	Jan. 15.
1876	115	March 3.	107	Dec. 9.
1877	107⅛	April 17.	102⅛	Oct. 6.
1878	102⅞	Jan. 2.	100	Dec. 17.

Simple Rule for Accurately Computing Interest at any given Per Cent. for any Length of Time.

Multiply the *principal* (amount of money at interest) by the time reduced to days; then divide this product by the quotient obtained by dividing 360 (the number of days in the interest year) by the per cent. of interest, and the quotient thus obtained will be the required interest.

ILLUSTRATION.

Require the interest of $462.50 for one month and eighteen days, at 6 per cent. An interest month is 30 days; one month and eighteen days equal 48 days, $462.50 multiplied by 48 gives $222.0000; 360 divided by 6 (the per cent. of interest) gives 60, and 222.0000 divided by 60 gives you the exact interest, which is $3.70. If the rate of interest in the above example were 12 per cent., we would divide the $222,0000 by 30 (because 360 divided by 12 gives 30); if 4 per cent., we would divide by 90; if 8 per cent., by 45, and for a like manner for any other per cent.


1880
JANUARY
FEBRUARY
MARCH
APRIL
MAY
JUNE
JULY
AUGUST
SEPTEMBER
OCTOBER
NOVEMBER
DECEMBER
FOR SALE BY