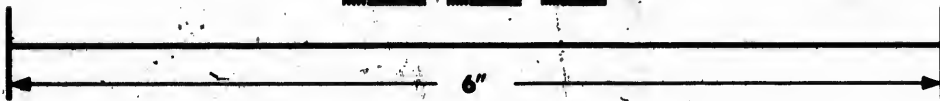
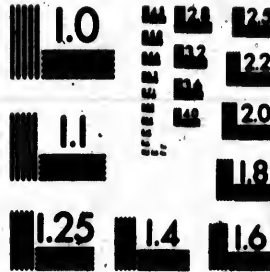


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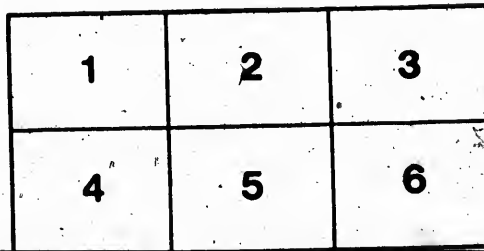
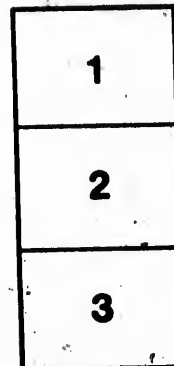
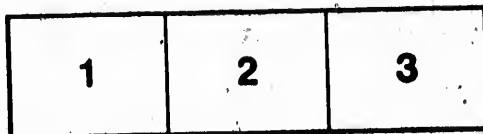
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DESCRIPTIVE CATALOGUE

OF

Threshing, Mowing and Reaping

MACHINES,

AGRICULTURAL IMPLEMENTS AND STOVES,

MANUFACTURED BY

JOHN WATSON,

Agc Agricultural Works,

AYR, ONTARIO.

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TORONTO:

GLOBE PRINTING COMPANY, 25 & 26 KING STREET EAST.

1871.

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## **TO THE FARMERS OF CANADA.**

GENTLEMEN,

I have again the pleasure of waiting upon you with my Illustrated Catalogue of Agricultural Machinery and Implements; and, while gratefully acknowledging the very liberal patronage received at your hands for a quarter of a century back, beg to assure you that no effort will be spared on my part to merit a continuance of your support, but that my whole aim in the future, as in the past, will be to keep you supplied with only the very best articles, well made, of good material, and at a fair, remunerative price. Guided by these principles in the past, I have always done a very satisfactory business both to myself and my customers, and am thus encouraged to pursue the same course in the future.

Fully alive to the important branch of Reaping and Mowing Machines, and the increasing demand for a reliable Self-Raking Reaper, I made a very careful scrutiny of those in use, and finally concluded to build the "Ayr Clipper" Self-Rake Reaper and Mower combined, of which a description will be found in the following pages. Feeling that however perfect in theory, a machine which is operated under so many varying circumstances requires to be tested *practically* before confidence is fully established in it, I only made a limited number for the first year, and placed them in all sections of the country. I am happy to add that the result has exceeded my most sanguine expectations. In no single case have they failed to give entire satisfaction.

I have likewise introduced "The Humming Bird" light Single Mower, for full description of which see following pages. I consider this decidedly the best Single Mower I have ever seen.

I will always continue to manufacture the "Ayr Combined Machine," with Self-Dropper or Platform—a machine which is calculated to do more work, with less expense, than any other in the market.

In Threshing Machines I continue to make my justly celebrated "Agitator." This Machine took the First Prize and Diploma at the Provincial Exhibition of 1870. It again carried off the First Prize at the Provincial Competitive Trial of Machines at Paris, on 20th July, 1871, when the machines were operated on the ground.

My Ten-Hors Pitt's Separator is offered with all the latest improve-



ments, and will be found equal, if not superior, to any other of the same class.

"Little Giant" Separators, capable of Threshing and Separating from 250 to 300 bushels per day, fitted with the latest improvements.

My "Farmer's Friend" Grain Drill is steadily increasing in popularity. It sows all kinds of grain with precision and regularity, and possesses peculiar features of excellence not found in others. A Grass Seed Sower is attached to each Drill.

Drag Saws, Sulky Hay Rakes, Straw Cutters, Root Cutters, Cultivators, Ploughs, and every kind of Agricultural Machine and Implement required by the farmer will be found at the "Ayr Agricultural Works" in great variety, and orders personally, or by mail or telegram, will receive prompt and careful attention.

The "Ayr Agricultural Works" are situated in the village of Ayr, only seven miles north of Paris Station, (the intersection of the Great Western and Grand Trunk Railways,) with which it has daily communication by stage, and the facilities for manufacturing are of the first order, embracing the latest and most approved iron and wood working machinery.

The Agents will be found trustworthy and honourable men, upon whose word reliance may be placed, and who are placed in a position to offer as favourable terms as can be obtained at the shop.

When ordering by mail or telegram, give the P. O. address and the station to which the goods are to be sent, together with the mode of conveyance. Repairs will, unless otherwise ordered, be forwarded by Express, C. O. D.

JOHN WATSON.

AYR AGRICULTURAL WORKS,  
Ayr, Ontario.

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THE AYR CLIPPER.

Always on the alert for the best kinds of labor-saving Machinery, and for improvements on those already in use, I have for some years been on the look-out for a reliable Self-Raking Reaper, and, after much careful investigation, have concluded to manufacture the **AYR CLIPPER**, taken from the *reaping Machine in America*, with some improvements adopted from the **AYR COMBINED MACHINE**, which long experience had proved to be valuable.

It is supplied with the *Johnson Self-Rake*, which has for several years held the first place among Rakes.

A few of the principal advantages claimed for this Machine may be briefly summed up as follows:—

It has no gear on the drive wheels: consequently, earth, grass, straw, &c., cannot clog it.



**AYR CLIPPER. (REAPING.)**

The guards are all laid with steel, presenting a keen cutting edge to the sickle, while the width of the section is such as to offer the most favourable angle for easy and perfect cutting.

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The mowing guards are of wrought iron, laid with steel, thus being stronger and more durable, while their peculiar shape enables them to pick up lodged grass in the most effective manner.

The cutter bar, both in reaping and mowing, is in front of the driver, enabling him to attend to his team and his work without unscrewing the socket of his neck, and preventing all danger of accidents.

The mowing cutter bar can be folded over the front of the machine when travelling.

The machine can be instantly thrown out of gear.

It throws itself out of gear when backing.

There is no side draught, and no pressure on the horses' necks.

The grain wheel is in line with the drive wheels, preventing any cramp when turning corners,—an advantage which cannot be obtained on any rear cut machine.

The self-raking attachment is easily applied or removed. It is driven by gear, instead of chains, making a strong, steady motion, with much less liability to get out of order. The boxes are all lined with babbit.



ATB CLIPPER. (MOWING.)

The arms answer the double purpose of reel and rake, and adapt themselves to all inequalities of grain, whether long or short. They can be adjusted in the most perfect manner to deliver the gavels regularly, while the driver can always prevent the delivery of a gavel at a corner.

The gavel is gathered into a bundle before being delivered, and is left in a compact form for binding.

The grain is delivered at the back of the machine, entirely out of the way of the team on the next round.

The rake head stands entirely out of the way of grain or straw.

The improved tilting table supplied on this machine, enables the driver, *while cutting*, to instantly drop the front of the platform to pick up lodged stuff.

The platform is connected with the machine at both the front and back of the frame, making a strong, steady connection, and doing away with the most objectionable feature of a rear cutting machine.

This machine is built of the very best material, and extra care has been exercised in fitting it up, with the view of making it *the standard Self-Raking Machine*.

I have full confidence in it, and would respectfully ask farmers who contemplate purchasing a first-class self-raking machine, to withhold their orders until they have an opportunity of examining and investigating the merits of the *AYR CLIPPER*.

## WARRANTY.

### THE "AYR CLIPPER" MOWER AND REAPER

Is warranted to cut grass or grain equal to the best work with scythe or cradle, at the rate of one acre per hour, with a pair of horses.

Every purchaser is allowed to cut two acres of grass or grain on trial; and in case anything proves defective, due notice must be given to me or my Agent, and time allowed to send a person to put it in order. If it does not work after this, and the fault is in the Machine, it will be taken back and the money refunded, or a perfect Machine will be given in its place, at the option of the purchaser. Continued possession of the Machine will be evidence of satisfaction.

The following testimonials from parties who have purchased and used the "Ayr Clipper" will show the estimation in which it is held by them:

WEST OXFORD, 20th July, 1871.

JOHN WATSON, Esq.,—Sir: I am very glad to inform you that the Machine ("Ayr Clipper") I purchased from you this season suits me well. I have cut about 60 acres of grass and 18 acres of wheat, in all of which it has exceeded my expectations. I have used an "Excelsior" Machine for five years, and am acquainted with other machines in the neighborhood, and am fully satisfied that I have never seen any machine that suits me as completely as the "Clipper".

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The draught is very light (less than the "Excelsior" which is a Self-Dropper); The Tilting Table alone is worth a great deal; in lodged grain it is indispensable to good work. To those wishing a first class machine I would say, buy the "Clipper."

Yours respectfully, GEORGE HERRICK.

BLENHEIM, 7th Aug., 1871.

J. WATSON, Esq., Agr.—Dear Sir: I was induced by your Agent to purchase one of your "Ayr Clipper" Combined Machines this season, and I am perfectly satisfied with its working. I was somewhat afraid I should not succeed with it on account of inexperience, but its perfect fitting made it quite easy. I would cheerfully recommend it to the public as a first class machine. I cut about 40 acres with it, and with no expense save for oil.

Yours truly, H. C. JOHNSON.

BURFORD, 24th JULY, 1871.

MR. J. WATSON, Agr.—Sir: I have much pleasure in stating to you that your "Ayr Clipper" Self Rake Reaper and Mower has given entire satisfaction. I have tried it in very rough fields on a bush farm. It cuts clean and throws off a good sheaf, but the decided advantage is the great ease with which you can (while the machine is in motion) raise or lower the Cutter Bar.

Respectfully yours, JOHN VIRTUE.

EAST OXFORD, 21st July, 1871.

JOHN WATSON, Esq.—Dear Sir: You ask me how the "Ayr Clipper" Machine purchased from you suits me. I am very glad to tell you that it works to my entire satisfaction. I have mowed about 19 acres of grass, about 3 acres of which was swamp land and very tall wild grass, which it cut without any sign of clogging or difficulty. I have not reaped much, but what I have done is such rough land that I hesitated to try to cut it with any machine, being full of deep furrows and crade knolls, and in all it has exceeded my expectations, putting off a very good sheaf, and working light on the team.

Yours truly, JOHN DAVIS.

BURFORD, 14th Aug., 1871.

JOHN WATSON, Esq.—Sir: I have used one of your "Ayr Clipper" Reapers and Mowers this past harvest, and am exceedingly well pleased with it as a Mower and Reaper. I believe there is none can cut cleaner or better, and the Johnson's Self Raking Attachment renders the machine complete. It is much preferable to the old plan of taking off the sheaves by hand. I can cheerfully recommend the "Ayr Clipper" to any who wish to purchase a first class machine.

Yours respectfully, E. W. PARNALL.

SOUTH DUMFRIES, 6th Sept., 1871.

MR. JOHN WATSON,—Sir: The Combined Machine ("Ayr Clipper") I purchased from you is a noble machine, wonderfully light on the horses. I am perfectly satisfied with it. It is better than you represented it to be. No person can cut by hand with scythe or cradle to equal it. It is, moreover, strong and substantial. I cut on some exceedingly rough ground and it performed splendidly. I cannot praise the machine too much.

Yours respectfully, ORIN MAUS.

WALINGHAM, 7th Sept., 1871.

J. WATSON, Esq.—Sir: I write to say that the Combined Machine ("Ayr Clipper") purchased through your agent has given me entire satisfaction in every particular. I can recommend it very strongly.

Yours truly, T. H. BARRETT.

WALSINGHAM, 6th Sept., 1871.

MR. WATSON,—Sir: Your "Ayr Clipper" purchased by me this season has proved itself a first-class Machine—I am very well pleased with it.  
Yours respectfully, GEORGE PITMAN.

WALSINGHAM, 7th Sept., 1871.

MR. WATSON,—Dear Sir: This is to certify that the "Ayr Clipper" I took from you on trial this season has given entire satisfaction. I gave it a test at a Mowing Match against seven of the best machines that could be produced, and took the *First Prize*. I can recommend it to any who want a Combined Machine.  
Yours truly, P. F. FICK.

WALSINGHAM, 7th Sept., 1871.

JOHN WATSON, Esq.—Dear Sir: The "Clipper" Mower I purchased from your Agent, Mr. Wm. Smith, has proved to be more than it was recommended to be. I mowed 38 acres, some of which would average 30 pine stumps to the acre. I broke one shoe in all my mowing. The workmanship is first class. I can recommend your "Ayr Clipper" to any brother farmer who is in want of a good machine.  
Yours, &c., THOMAS WATSON.

WALSINGHAM, 7th Sept., 1871.

MR. WATSON,—Dear Sir: I have much pleasure in giving my testimony in favor of your Combined Machine—"Ayr Clipper"—which I purchased from you this season. I found no difficulty in setting up and running your Machine, although it was my first experience. Those of my neighbors for whom I mowed and reaped, testify that my machine performed its work far better than any employed by them heretofore. I mowed 35 acres and reaped 50, much of the ground being quite new and rough, and my machine is now in good order, scarce anything giving way during the season. I greatly desire to advance the farmers' interests, and would recommend your machine to all wishing a good Combined-Machine.  
Yours truly, JOHN HOLTRY.

OXONDAGA, 9th Sept., 1871.

JOHN WATSON, Esq., Ayr.—Dear Sir: Having purchased from you, through your Agent, one of your Combined Reapers and Mowers—"Clipper"—I desire to state that the machine is made of good material, and works well. It runs light and gives me entire satisfaction.  
Yours, &c., WILLIAM HUNTER.

BRANTFORD TOWNSHIP, 9th Sept., 1871.

J. WATSON, Esq.—Dear Sir: This is to certify that I have used the "Ayr Clipper" Combined Reaper and Mower, bought from you this year, and find it all that it was recommended to be. It stands its work well, is well put together, and is made of good material; and that I have been honorably dealt with by you and your Agent, I do not hesitate to recommend your machine in preference to any other.  
G. E. REDDIFORD.

BRANTFORD TOWNSHIP, 9th Sept., 1871.

JOHN WATSON, Esq.—Dear Sir: It is with pleasure that I hereby certify to the very excellent manner in which the Single Mower, (styled the "Ayr Clipper") which I purchased from your Agent, Mr. Wm. Campbell, performed its work under all circumstances. It runs light, is made of good material, finished in thorough workmanlike manner, and gives me entire satisfaction. I may also add that I am well pleased with the "Hills" Plough that I purchased at the same time.  
Yours truly, WILLIAM DUNCAN.

BRANTFORD TOWNSHIP, 9th Sept., 1871.

MR. WATSON.—Sir: Having purchased one of your Single Mowers—"Ayr Clipper"—I desire to state that it is made of good material, and well finished. I have used other machines, and have worked a great deal with different kinds of machinery, but have no hesitation in saying that this Mower is one of the best in use.

Yours respectfully, SAMUEL WEST.

MONTROSE FARM,

BRANTFORD TOWNSHIP, 11th Sept., 1871.

J. WATSON, Esq.—Dear Sir: This is to certify that the Combined "Ayr Clipper" we purchased of you this season we consider a first class Mower in every respect. We mowed in the field with other mowers, and found ours to draw lighter, while it was more convenient to handle, and cut as close as any. We reaped somewhere over 60 acres of grain with it, and like it well. We consider it a good self-rake reaper, well made, of good material, and well finished. It turns much easier than the Rear Bar Machine, and we consider the lever for raising and lowering a very great advantage in reaping. It is no trouble to do it while the machine is in motion. We recommend your machine to every farmer.

Yours truly, HORACE CHISHOLM,  
JOHN CHISHOLM.

EUPHEMIA, 11th Sept., 1871.

JOHN WATSON, Esq.—Dear Sir: I purchased one of your "Ayr Clipper" Combined Machines, and beg to say that I am well satisfied with its working, both in Reaping and Mowing, after taking off a large harvest with it, and think I can recommend them to the public to be as good as any I have seen work.

Yours truly, THOS. F. PURDEY.

HARWICH, 31st August, 1871.

MR. WATSON.—Dear Sir: The Ayr Clipper Machine I purchased from you suits me first rate; in fact, I think it the best Combined Machine yet in this section.

Yours respectfully, WILLIAM PICKERING.

EUPHEMIA, 4th August, 1871.

J. WATSON, Esq.—Sir: In reply to your request to know how the Machine I purchased from your Agent suits me, I will just say that I want no better, and will advise my neighbors to purchase the Ayr Clipper, as I am satisfied there is no better.

Yours, WILLIAM RALPH.

MORA, 11th Sept., 1871.

J. WATSON, Esq.—Dear Sir: The Combined Machine I purchased from your Agent this season suits me well as a Self-Rake. I am quite sure it cannot be beat by any in the market, and the facility with which the Cutter Bar, while at work, can be raised or lowered, would recommend it to any person understanding the working of a Reaping Machine.

Yours truly, PETER KING.

GORE OF CAMDEN, 1st Sept., 1871.

MR. WATSON.—Sir: You ask me to inform you how my Machine suits me. I am glad to say it has exceeded my expectations. I have cut about 40 acres of grass and grain with it, with no expense save for oil, doing all to my entire satisfaction. I know of no machine that I would take for the Clipper.

Yours, JOSEPH CRAFT.



MORNINGTON, 8th Sep., 1871.  
**JOHN WATSON, Esq.**—Dear Sir: In answer to your enquiry as to how I like the Ayr Clipper I bought from you, I am happy to say it has given entire satisfaction, both in Mowing and Reaping. It is well made and of good material, simple in construction and easily managed, and handy to change from Mower to Reaper.

Yours, **DAVID PUGH.**

WILMOT, 8th Sep., 1871.  
**Mr. WATSON**,—Sir: Your Agent, Mr. John G. Stauffer, has succeeded at last in selling me one of your Ayr Clippers; after trying it in heavy fall wheat on my own farm, I bought it at once. I have since cut barley and oats, and it has given entire satisfaction. Can work it with ease to myself and team. Will call and see you at the earliest opportunity.

Yours truly, **JACOB CRESSMAN.**

WILMOT, 6th Sep., 1871.  
 We, the undersigned, saw the Ayr Clipper at work on Mr. Jacob Cressman's farm, near New Dundee, in a heavy crop of wheat. It did its work very well indeed, making a clean cut, and delivering the grain out of the way of the team, and in good shape for binding. It also appeared light of draught and easily managed.

**ISAAC MASTER.  
 J. S. HOLLMAN.  
 LYMAN BEACH.  
 JOSEPH Y. SHANTS.  
 SAMUEL SHANTS.**

BLANDFORD, 9th Sep., 1871.  
**Mr. J. WATSON**,—Sir: Your Agent called to know how I got on with my "Clipper." I am glad to state that it suits me very well in both Mowing and Reaping. It is well made and finished, strong, easily managed, and readily changed from a Mower to a Reaper.

Yours truly, **WILLIAM BRASH.**

BLANDFORD, 9th Sep., 1871.  
 Dear Sir: The Clipper I bought from you this year has given very good satisfaction. It mows and reaps first rate, is light on the team, and easily changed from a Mower to a Reaper.

Yours, **JOSEPH C. HALLMAN.**

BLLENHEIM, August 31st, 1871.  
 We, the undersigned, were present and saw the Ayr Clipper at work, on the farm of Mr. John S. Huber, in a field of Oats, and have much pleasure in saying that it performed its work well, cutting the grain clean, and delivering the sheaves entirely clear of the horses, and in a good shape and condition for binding.

**GEORGE PERRY.  
 ARTHUR TEW.  
 MOSES BRICKER.  
 JOHN MOFFAT.  
 JACOB HUBER.**

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## EXTRA PARTS OF Ayr OLIPPER MOWER.

No.	\$ c.	No.	\$ c.
1A. Double Washer for Connecting Rod .....	0 10	93. Right-hand Spring Pawl...	0 50
9. Driver's Seat .....	1 25	94. Left-hand Spring Pawl....	0 50
30A. Driving Wheel .....	7 00	95. Latch Pin .....	0 05
51. Spar Pinion .....	0 75	96A. Axle Washer .....	0 05
52. Bevel Pinion .....	0 75	97. Blank Section .....	0 25
53. Bevel Wheel .....	3 00	98. Cutting Section .....	0 25
54. Internal Gear Wheel.....	2 00	99A. Lever Socket .....	1 00
55. Leading Wheel .....	1 00	100A. " Axle and Ratchet..	1 00
56. Roll and Bolt for Leading Wheel .....	0 50	135A. Back Hanger .....	1 00
57A. Right-hand Ratchet.....	1 25	151A. Lever Pawl .....	0 25
58A. Left-hand Ratchet.....	1 25	153A. " Handle .....	1 25
59. Crank Balance and Pin ...	2 00	153A. " Latch" .....	0 25
61. Composition Boxes .....	1 00	154. Axle, with Gear and Ratchets.....	10 00
62. Gear Shifter Axle.....	0 25	Axle, without Gear and Ratchets.....	4 50
63. " Guide .....	0 15	155. Short Shaft, with Gears...	5 00
64. " Handle .....	0 50	" " without Gears .....	2 00
65. " Clutch .....	0 75	156. Crank Shaft, with Balance and Pinion.....	5 00
67. Finger Plate .....	0 10	Crank Shaft, without Balance or Pinion .....	2 00
68. Guard Finger .....	0 50	159. Pin for Crank Balance....	1 25
68A. End Guard Finger.....	0 50	162. Scythe Button .....	0 10
69. Finger Bolt .....	0 10	163A. Finger Bar, drilled.....	7 00
71. Wrought Hinge Joint .....	4 00	" " with Guards .....	16 00
72. Main Seat Spring .....	1 75	" " " .....	20 00
74. Track Clearer Iron and Slide	1 25	164. Pole Strap .....	0 25
75. Track Clearer Slide.....	0 25	166. Spiral Spring, for Gear Shifter .....	0 20
Thumb Nut for Track Clearer Slide.....	0 05	170. Connecting Rod .....	2 00
Thumb Nut and Bolt for Clearer Slide.....	0 15	172. Back Seat Spring.....	1 25
76. Outside Shoe.....	2 00	176. Outside Shoe Spring.....	0 75
77. Lifting Chain, with Eye and Nut.....	1 00	189. Cap for Rear End of Crank Shaft .....	0 75
78. Gag Iron and Bolt.....	0 50	192. Brace for Crank Fender... 0 25	
80. Long Brace .....	2 00	195. Grass Guard .....	1 00
81. Short Brace .....	2 00	421A. Block on Front Timber... 0 50	
82. Front Hanger and Boxes ..	4 00	489. Wheel House .....	0 75
82A. Perpendicular Front Box..	2 00	490. Crank for Reaper Lever... 0 50	
83. Cross Hanger and Boxes Complete.....	4 00	491. Link Joint for Reaper Lever.....	0 25
84. Inside Shoe.....	2 00	492. Arc Joint for Reaper Lever 1 00	
86. Spring Key.....	0 05	493. Guide for Rear End of Bolt Socket for Reaper Lever.. 0 50	
87. Box at Rear End of Short Shaft.....	1 25	494. Socket for Reaper Lever.. 0 50	
88. Socket Wrench.....	0 25	495. Link Strap " " .....	0 25
89. Cap for Front End of Short Shaft.....	0 75	Section Rivets, per lb. ....	0 25
91A. Complete Scythe.....	5 00	Pole Complete.....	2 75
92. Crank Fender.....	0 75	Track Clearer Sticks, each	0 25

**EXTRA PARTS OF SELF-RAKE REAPER.**

No.		\$ c.
101.	Outside Wheel.....	2 50
102.	Roll and Bolt for Outside Wheel.....	0 75
108.	Support for Outside Wheel.....	1 00
327.	Scythe Button.....	0 10
400 A, or 472.	Rake Arm Check, with Roller.....	1 25
401 A, or 471.	Rake Arm Check, without Roller.....	0 75
402 A, or 475.	Rake Trip.....	0 15
404 A, or 451.	Small Switch....	0 50
405 A, or 450.	Large Switch....	0 50
406.	Outside Shoe.....	1 00
407 A, or 454.	Inside Shoe.....	2 50
407 1/2.	Plate on Inside Shoe.....	0 25
408 A, or 466.	Cam.....	2 50
411.	Socket Head for Rake Arms.....	2 75
412 A, or 452.	Yoke (1868).....	4 00
414.	Rake Slat Casting.....	0 10
416.	Claw on Back Timber....	0 15
419.	Shoe on Rake Guard.....	0 20
423.	Hinge on Platform for Brace.....	0 50
427 A, or 474.	Stand for Foot Lever.....	0 25
428 A, or 476.	Foot Lever.....	0 50
430 A.	Guard Finger, steel-lined.	0 50
436.	Back Brace, No. 2, or Harvester.....	1 25
437.	Chain for Back Brace.....	0 50
438.	Pulley on Pole for Trip Rope.....	0 40
441.	Steel Washer for 400 A....	0 10
442.	Roll for 400 A.....	0 25
443.	Spiral Spring for Small Switch, (404 A.).....	0 20
444 A.	Rod for Switch/Lever.....	0 10

No.		\$ c.
445 A.	Complete Scythe.....	6 00
447.	Knife Section.....	0 25
448.	Blank Section.....	0 25
440.	Half Blank Section.....	0 10
453.	Bevel Wheel.....	2 25
454 A.	Hinged Casting for Gears.....	4 00
457.	Mitre Wheel.....	1 25
458 A.	Coupling on end of Axle.....	1 00
459.	Mitre Wheel on Horizontal Shaft.....	0 75
460.	Large Cap on Horizontal Shaft.....	1 00
461.	Small Cap on Horizontal Shaft.....	0 50
462.	Universal Joint Block.....	0 25
463.	Bevel Pinion for Large Gear.....	0 75
464.	Tumbling Shaft.....	1 00
465 A.	Upper Guard for Mitre Gear.....	0 25
465 B.	Lower Guard for Mitre Gear.....	0 25
467.	Switch Lever Crank.....	0 25
468.	Switch Crank.....	0 25
469.	Switch Lever.....	0 50
473.	Pulley on Platform for Switch Rope.....	0 30
482.	Spiral Spring for Foot Lever.....	0 10
481.	Spiral Spring for Switch Lever, (469).....	0 10
485.	Upright Shaft.....	2 00
486.	Horizontal Shaft.....	1 00
487.	Wrist for Mitre Pinion... ..	1 00
488.	Bevel Washer for Rake... ..	0 05
469.	Wheel House on Foot-board, No. 2, or Harvester	0 75

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## Directions for Putting Up and Using

THIS

# AYR CLIPPER MOWER.

### Keep the Knives Sharp, and the Bearings Well Oiled.

1st. Insert the pins between the two long projecting timbers; haul it to the wide front timber and to the long projecting timbers.

2d. Set No. 152A lever at the side of machine up straight. No. 77 chain from wrought hinge bar is hooked into No. 62A socket at bottom of lever.

3d. Attach finger-bar to the machine by the two bolts No. 100 at wrought hinge joint and No. 104 at short boxes, tighten the set screw in the long bolt, and fasten the short bolt with the spring key.

4th. Bolt No. 74 track clearer to No. 76 outer shoe; set No. 75 slide on same in the lower notch in the shoe, and screw the thumb-screw up tight. (For tall grass, the track clearer can be raised by setting No. 75 slide in the higher notch.)

5th. Slide No. 91 scythe in the guards. Raise the outer end of finger-bar until the angle is sufficient to allow the eye of scythe to pass beyond No. 84 inner shoe; insert the connecting rod into eye of scythe, and lay the bar again on the ground.

6th. Put lamp wicking in the oil cups, and use NONE BUT THE BEST sperm, lard, or machinery oil. BE SURE THAT EVERY PART IS WELL OILED (and that it is kept so), and you are ready to mow.

### DIRECTIONS FOR MOWING.

1st. In mowing, let your team walk moderately, and drive straight.

2d. To make good, clean work, drive out at the corners. Never commence a swath without having the guards clear of cut grass.

3d. The cutter bar can be raised over an obstacle by means of 152A lever at right hand of driver. To let the bar down again to the ground it is necessary, in grasping 152A lever handle, to close the hand on 152B latch, so as to press upon this latch and release the pawl.

4th. To sharpen the knives, grind them on an ordinary stone, on the bevel, or upper side, being careful to keep the long bevel on them. They can be whetted without being taken out of the guards.

5th. The bearings must be kept well oiled with good oil. Both ends of No. 176 connecting rod need frequent oiling, at No. 81 composition box, and at the end of rod which fits into eye of scythe. No. 85 roll in leading wheel must also be kept oiled; an oil-hole will be found on the inner side of No. 85 leading wheel. If your machine draws hard, you may be sure that it wants oiling, or that the knives are dull.

6th. To avoid breakage, you must see that the box nuts, especially, are screwed tight. It is very important that No. 62A perpendicular front box should be kept tight, to do which the set screw at under side of No. 62 front hanger must be screwed against it, and secured by screwing the nut on the set screw tightly against the side of the hanger. Pasteboard packing is placed in boxes Nos. 87, 89, and 102, and when the bearings are worn from use and require a closer fitting, a portion of this packing should be removed. Care should be taken not to fit the boxes so tightly as to cramp the shafting.

7th. If, by any means, the guard fingers should get bent out of line, they should be immediately brought back to their place with a hammer, as it is very necessary that the steel plates in the guard fingers, which form the bearing for the scythes to play through, should be perfectly in line. When the wear causes a play in the scythes, No. 102 scythe buttons, which are of malleable iron, must be hammered down to keep the scythes snug.

8th. The height of the cut is adjusted at the inner and outer shoes. No. 176 outside shoe spring can be set at any required height, and secured by the bolt. The bolt which attaches No. 84 leading wheel to No. 84 inner shoe works in a slot, and can be set at the height desired.

### TO FOLD THE BAR OVER THE FRAME FOR MOWING OR TRANSPORTATION

Loosen No. 78 track clearer slide, put your feet on No. 176 connecting rod, and bring No. 152 crank pin down to the lower side of No. 85 crank balance. Take hold of No. 74 outer shoe, and lean the bar against the frame; take No. 152A lever in the left hand and the track clearer in the right, bearing down on lever, and you will lay the bar over on the frame with but little exertion. When the bar is folded, turn the track clearer up straight; and set No. 75 slide in the notch in the bottom of the shoe. Throw No. 78 and 84 pawls out of gear, and you are ready to drive off. Remember always to throw the pawls out of gear when you fold the bar to drive off.

When driving on the road, oil the axle of the wheels; and it would be well to put wood plugs in the oil-holes in wheels, to prevent dust from getting on the axle.

To unfold the bar, rest the knives as far in the guards as they will go, set No. 152A lever up straight, let the bar slide down on the ground, take hold of the track clearer and ease it down. A little practice will enable you to fold and unfold it with great ease.



THE Ayr COMBINED MACHINE.

Years of unwearied application to the improvement of the Ayr COMBINED REAPER AND MOWER enables its maker to invite comparison between his own machine and those of all other makers on the continent, feeling confident that the Ayr Machine cannot suffer by the comparison.

The merits of the Ayr Combined Machine as a Reaper have been universally conceded; not only has it borne off the 1st Prize at many County and Provincial Shows, but it has successfully competed in the field, when pitted against other machines.

This, however, was not sufficient. The Combined Machine should be made as good a Mower as it has been admitted to be a Reaper. With



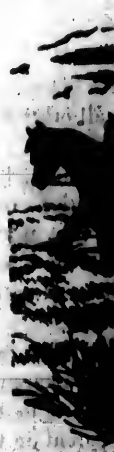
Ayr COMBINED MACHINE.—AS A SELF-DISCHARGER.

this view, the Cutter-Bar and adopting the be this end has be attached to the Reapers and M point of perfec

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this view, the maker has been, for years, experimenting upon the Steel Cutter-Bar and Drag Bar used on the "Ball's Ohio," with the object of adopting the better parts thereof. After some trouble and much expense this end has been gained, and both Steel-Cutter and Drag Bars have been attached to the Ayr Machine. As it stands, it rivals the best Separate Reapers and Mowers, surpassing, greatly, most Combined Machines in point of perfection.

In one respect it has a manifest advantage over many machines—the Cutter-Bar being placed in front of the driver, all danger, in the event of his being thrown from his seat, is done away with.

So satisfactory was the way in which it has bore the exceptionally severe strain upon it during the harvest past, that its maker feels assured the highest perfection has been reached, both for grass and grain; whilst the large demand for these machines this season is the best, and a very flattering proof of its popularity. The maker warrants "The Ayr Combined Machine" for 1871, to cut—whether it be grass or grain—as close, as well, and *as much* as any other Machine, Single or Combined, and with less labor to the team.

#### AS A PLATFORM MACHINE.

The merits of the "Ayr Combined" have been unquestioned. Among the merits claimed for it, the following are a few of the most prominent: 1stly.—The large Driving Wheel makes it light on the team. 2ndly.—The Operator can, by a lever within reach of his hand, raise the Finger Bar high enough to pass over any ordinary obstruction; or he



2 Ayr Combined Machine.—As a Mower.

- can lower it to pick up lodged grain. This can be done whilst the machine is cutting; by the same means the stubble can be cut to any desired height.
- 3rdly.—It is claimed that the peculiar shape of the guards gives the machine the power of cutting lodged grain, which would be missed by most other machines.
- 4thly.—The driver has it in his power to throw it instantly out of gear, if desirable.
- 5thly.—When backing, the machine *throws itself out of gear*.
- 6thly.—Each Section has two Guards, which gives double the amount of cutting-surface possessed by any other machine of the same speed, thus effectually preventing clogging on the guards.
- 7thly.—The Platform is hinged to the cutter-bar, and can thus be kept level, at whatever height the machine may be cutting.
- 8thly.—The Grain-Wheel being hung inside the Frame, prevents it from dragging down the standing grain.
- 9thly.—*It has no Side Draught whatever.*
- 10thly.—The Guards are of the best wrought iron, and are so driven into the beam, that a broken or bent tooth can be punched out or replaced in a few minutes.
- 11thly.—The Gear is quite beyond reach of any obstruction.
- 12thly.—All the Boxes and journals are easily to be reached, and may, therefore, be oiled *whilst the machine is in motion.*
- There are yet many important points left unmentioned, but, since it has some of them, at least, in common with other machines, an enumeration of these would be superfluous.

#### AS A SELF-DISCHARGER.

The "Ayr Combined Machine" is guaranteed by the manufacturer to do its work in an equally good, if not in a superior manner to all other Self-Dischargers made on the same principle.

After the chaff has been accumulated on the slatted platform, it is dropped off by a scuffle at the driver's feet, whilst the same action causes a swing bar to descend and catch the falling grain. Mark, that during this process, the chaff is being delivered. This, the simplest and most efficient plan of self-discharging in use, lays the chaff neatly, and with a space between, ready to hand.

If any complaint is raised, regarding the "Excelsior" and other Self-Dischargers, that when, because of peculiarities in the land, or unevenness of the crops, they could not well be used, the operator was forced to fall back upon the "cradle." This defect was markedly apparent in the cutting of oats, which are, usually, left for some time in the swath before

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being bound. The "Ayr Machine" is so arranged that, in such cases, one may remove the Discharger, substituting the Platform, or *vice versa*, in two minutes or less; nor is this change attended with material inconvenience, for all that is necessary is to remove the one from the Finger Bar and to substitute the other. There is no change of the Cutter Bar, or of any of the working parts of the machine needed.

The experience of former seasons has enabled the maker to render the "Ayr Combined Machine," as a Self-Discharger, still simpler and more efficient. It is now, in short, so simple in construction, and its operative parts are so well regulated, that a boy old enough to manage a span of horses can work it with ease. The Machine, moreover, is so well balanced that the weight on the horses' necks, varying in other machines from 45 to 80 lbs., has in this been reduced to only 10 lbs. This may be put down as the minimum weight attainable, being only just sufficient to keep the tongue well in the neck-yoke. The balance is preserved by shifting the seat from its place over the driving wheel to the back-rail, when Self-Discharging,—this change being effected by means of a Set-Screw.



THE Ayr MACHINE LEAVING THE FIELD.

The Swing Bar of the Self-Discharger, which is worked by the driver's foot, and catches the falling grain while the sheaf is being delivered, is so arranged in the "Ayr Combined Machine," that it can be used with the Platform. By this means the Raker is able to make a clean sheaf, without any of the straggling so common in nearly all machines,—a manifest advantage gained, as those must admit, who have been used to the pitch-



ing of grain from off a Reaping Machine. It was only after much and tedious observation and expensive experiments that these improvements were brought to their present perfection, but, when, after having passed successfully through many severe tests in the harvest field, the maker felt that these improvements had placed his "Self-Discharger" at the head of all others, these specialities of construction were deemed worthy of being placed under Patent Protection, and Letters Patent were issued on August 5th, 1865.

#### AS A MOWER,

The Ayr Machine is especially adapted, being brought before the public with many valuable improvements.

It was formerly held, and experiments showed, that it did not quite reach the same high position, as a Mower, which it always held as a Reaper. It has, therefore, been materially altered. By adopting a Steel Cutter Bar, with wrought iron steel-laid Guards, as well as a Drag-Bar and flexible Joint, after the model of "Ball's Ohio," this object has been gained. It is, now, equally well adapted to even and uneven ground surfaces, acting with perfect freedom, since the advantages peculiar to all the gearing parts of the Reaper have been carefully retained. The Long-Pitman is carefully retained in the Mower, and is of Steel, 4 feet long. The Machine is meant to cut 4 feet 3 inches in grass and 6 feet in stubble, the proportion shown by experience to be best suitable. In operation the team will undergo nearly the same amount of labour in each operation; still, of course, the lengths of cut would be varied to suit the tastes of purchasers.

In consideration, it will be understood that the "Ayr Combined Machine" is, in fact, two separate Machines for the price of one. That, as a "Self-Discharging" Machine, it will get up, and as effective as if it had been built solely as a Reaper. That, as a "Platform Reaper," it is the same machine which has been so popular and successful for years. As a "Mower," it is a Two-wheeled Machine, with flexible Steel Cutter-Bar, possessing all the improvements and advantages claimed for our best Mowing Machines. And, lastly, it is claimed that the change from a Platform to a Self-Discharging Reaper is accomplished in a very few minutes, and from a Reaper to a Mower in as short a space of time as can be attained, having regard to the indispensable demand upon it for efficient work of both kinds.

#### WARRANTY.

The "Ayr Combined Machine" is guaranteed, upon land free from obstructions, to cut from 8 to 10 acres of grass, or from 10 to 14 acres of grain per day. This is the estimate for one span of horses. When properly managed, it is warranted to do as good work as can be done with either cradle or scythe. Further, that it is to be well made, of good

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...not liable—except under misuse—to get out of order. In  
...where the machine fails to set up to its Warranty, it rests with the  
purchaser to notify the maker of the fact, allowing time to enable him to  
send a man to put it in order. Should it still not work, as warranted, it  
will be taken back, and the money or notes which may have been taken  
in payment will be refunded, or a new Machine furnished; this is to be at  
the option of the buyer. Continued possession of the Machine will be  
held as sufficient evidence of satisfaction.

SECTIONAL PARTS OF THE AYE COMBINED MACHINE.

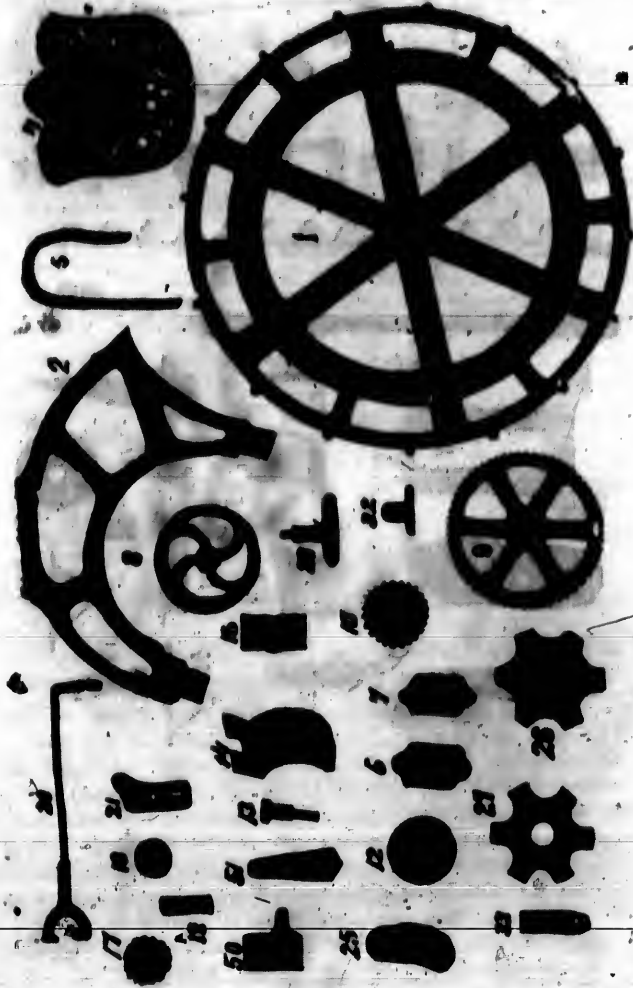
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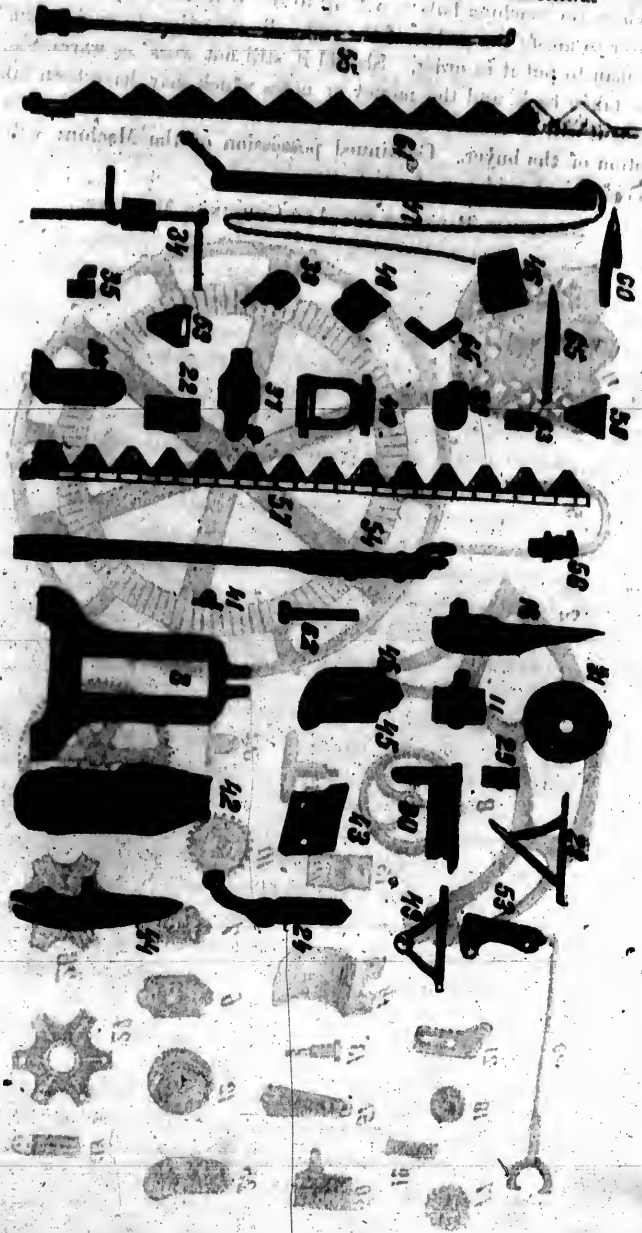
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SECTIONAL PARTS OF THE AYR COMBINED MACHINE.



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## SECTIONAL PARTS OF THE AYR COMBINED MACHINE

When ordering, be particular to give the number and name of the part wanted, and the year the Machine was made.

## EXPLANATION OF THE CUTS.

1. Drive wheel.....	\$10 00	35. Dropper crank bar.....	\$0 13
2. Main frame.....	2 00	36. Casting for dropper post...	0 63
3. Main hinge casting.....	1 50	37. Swing bar casting.....	0 50
4. Seat.....	1 00	38. Dropper gudgeon.....	0 25
5. Seat spring.....	1 00	39. Casting for dropper crank.....	0 50
6. Bevel spring socket.....	0 63	40. Treadle.....	0 50
7. Straight spring socket.....	0 50	41. Treadle box.....	0 10
8. Driving pulley.....	1 60	42. Main shoe for mower.....	2 00
9. Spur wheel.....	2 00	43. Cap for do.....	0 50
10. Spur pinion.....	1 00	44. Outside mower shoe.....	1 25
11. Top box of Pitman shaft...	1 00	45. Dragbar casting.....	0 75
12. Balance crank.....	1 50	46. Pole casting for dragbar...	0 75
13. Crank pin.....	1 00	47. Extension bar.....	2 25
14. Pitman sander.....	1 00	48. Extension bar casting.....	0 25
15. Drive wheel box.....	0 25	49. Bracket box for mower.....	1 25
16. Bevel pinion box.....	1 50	50. Ratchet casting.....	0 63
17. Bevel pinion.....	2 00	51. Mowing lever casting.....	0 60
18. Clutch.....	0 75	52.	
19. Spiral spring.....	0 75	53. Casting for grass divider...	0 25
20. Gear lever.....	1 50	54. Reaper pitman.....	1 00
21. Lever catch.....	0 25	55. Mowing pitman.....	2 00
22. } Spur wheel box and		56. Pitman box.....	0 75
23. } cap.....	0 75	57. Mowing sickle.....	5 00
24. Lever casting.....	0 75	58. Mowing section.....	0 25
25. Bevel crank shaft box.....	1 25	59. Heel blank.....	0 25
26. Grain wheel centre.....	1 00	60. Mower guard.....	0 40
27. Cap for do.....	0 25	61. Reaping sickle.....	0 00
28. Grain wheel axle.....	0 75	62. Sickle heel piece.....	0 50
29. Step casting.....	0 38	63. Sickle slide.....	0 13
30. Sickle guide.....	1 00	64. Reaping section.....	0 25
31. Reel pulley.....	0 75	65. Reaping guard.....	0 20
32. Casting for reel rail.....	0 13		
33. Grain shade casting.....	0 13		
34. Dropper crank.....	2 00		

\* In ordering, distinguish between the Reaping and Mowing Spur Gear.

## DIRECTIONS FOR USING.

The Ayr Machine will be shipped or delivered as a Mower, and the following are the directions for making it ready for the field.

Bolt the Tongue to the pole splice. Attach the Drag-bar to the Casting on the underside of the Tongue. Attach the Cutter-bar to the Drag-bar by means of the hinge-bolt. Fasten the one end of the Extension-Bar in the Casting under the Beam, and the other end to the main shoe of the Cutter-bar. Carry the chain back over the pulley to the lever. Pull out the Sickle sufficiently far to allow the end of the steel pitman to engage with the eye, then push to its place, and, with the Crank-pin, secure the box of the pitman in the hole nearest the centre of the Crank. Place the Double-tree in the iron strap under the tongue, and attach the draw-roads, the longest one next the Cutter-bar. Secure the Diver to the outside shoe with the key-bolt. Raise the Machine as high as possible,

by placing the notch of the lever in the highest notch of the quadrant. Overhaul all the nuts and see that none have worked loose. The chain should be quite slack when cutting, to enable the Cutter-bar to drop down into a furrow or other hollow ground. The height of stubble can be regulated by the Set-screw in the point of the main-shoe. When folding up the Cutter-bar place the small screw in its place in the main shoe, to prevent the Sickle from falling down.

#### To Change from a Mower to a Hand-Rake Reaper.

Remove the Cutter-bar, Dung-bar, Extension-bar and Pitman. Take off the wooden Wheel and remove the Rail and Shaft on which it is hung. Bolt the Reaping Cutting-bar under the Beam of the frame. Bolt the backrail to the frame and to the corner post, with the iron brace in its place. Hang the wooden Wheel on the cast iron journal inside the frame. Attach the wooden pitman to the sickle, and secure it with the crank-pin in the outside hole of the crank. Hook the Platform to the back part of the Cutter-bar, and place it at the proper height by means of the chain rods behind. Set the Beel in the required position, being careful that it is set parallel with the Cutter-bar, and put on the belt. Place the seat in the casting over the Driving Wheel. The small shadeboard is fastened to the guide casting, with the point placed in the staple on the side of the tongue. Remove the gear wheel and pinion, and replace by the other pair. The machine can be set at any height, or raised and lowered by means of the lever. Should there be the least tendency to side draught, take up a link on the Draw-rod next the Cutter-bar.

#### To Change from a Hand-Rake to a Self-Discharger

Remove the platform, bolt the Dropper post to the Beam, and, having set the castings at the desired height to suit the grain, attach the Swing-bar, set the slatted platform in its place, shift the small crank shaft so that the square on the shaft will enter the socket on the platform casting, and secure with the set screw. The Long rod connects the crank next the platform with the ball on the Swing-bar, the short rod connects the other crank with the Treadle. Place the seat on the back rail immediately behind the Treadle. The Swing-bar can be made to take any desired sweep by shifting the ball on the Swing-bar iron, or by shifting the ball in the holes of the rod; and by shifting the short rod on the Treadle, the sweep of the platform may be increased or diminished. Should it be necessary to replace the Hand-Rake platform, the Dropper Post and small Crank Shaft need not be removed, and if required the Swing-bar may be used when hand raking.

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THE HUMMINGBIRD.

LIGHT SINGLE MOWER.

This Machine is designed to meet the increasing demand for a light Single Mower, and is built as light as a due regard for strength and durability would warrant.

It is a Front-Cut Machine with a leading wheel, the connection between the Frame and Cutter-Bar being very strong and substantial, a diagonal Brace from the rear part of the frame adding strength to the whole.

The Frame is made of Tubular Iron, all cast in one piece, thus giving the greatest strength attainable, at the same time presenting a compact-elegant appearance to the Machine.

The shafts all run in Pipe Boxes, dispensing altogether with the use of bolts, and rendering it impossible for the shafts or gears to get out of line with each other.

The Gearing is very compact, thoroughly protected and very accessible. The Gear Shifting Lever is, so placed as to be very easily operated by either the hand or foot.

The Cutter Bar is raised by the Lever with remarkable ease, and is folded over the front of the frame when travelling, this operation being performed with so much ease that the driver can raise the bar and fold it over the machine without leaving his seat.

For beauty of model and simplicity of construction it is unequalled by any machine of this class, and is so greatly superior in all respects that it cannot fail to meet with a ready sale wherever it is examined by the Farmer.

At the Competitive Trial of the Provincial Association, on the 19th July, 1871, "The Humming Bird" cut as clean a swath as any machine on the field, and performed its work in the most unexceptional manner. In fact the verdict of public opinion on the ground was almost unanimously in its favor, and nothing could have prevented its being placed First, were it not that the judges, with unexampled stupidity, ruled it out, after allowing it to be operated and tested with the other Mowers without raising any objection.

The following Testimonials, from responsible Farmers who witnessed it at work, speak for themselves :

BRADFORD TOWNSHIP, 11th Sept., 1871.

JOHN WATSON, Esq.,—Dear Sir: I was present at the Mowing Match held on Mr. Capron's farm, near Paris, in July last, and it affords me much pleasure to bear testimony to the very excellent manner in which your Hummingbird Single Mower performed its work. It was certainly a very light draught, simple in its construction, and I think would be a serviceable machine. If I were in want of a Single Mower, I would certainly purchase the "Hummingbird."

Yours truly, ROBT. H. SNIDER.

S. DEMERIZ, 11th Sept, 1871.

MR. WATSON,—Dear Sir: I was present at the trial of Agricultural Implements held at Paris last July. I saw the different Mowers at work, amongst them the "Hummingbird" which I believe to be a good Single Mower, easy of draught, and at the same time doing its work equal, if not superior, to any Mower I have seen. This is my judgment of Mowing Machines after an experience of fourteen years.

Yours truly, JOHN CLUMP.

I corroborate the foregoing opinion of Mr. Clump.—HORACE CAPRON.

**EXTRA PARTS OF HUMMINGBIRD MOWER.**

No.	\$ c.	No.	\$ c.
1A. Double Washer for Connecting Rod.....	0 10	712. Spiral Spring for do. ....	0 05
2. Driver's Seat.....	1 25	713. Inside Shoe.....	2 00
50A. Driving Wheel.....	0 00	714. Outside Shoe, with Spring	2 25
57A. Right-hand Ratchet.....	1 25	714. Spring for Outside Shoe..	0 75
58A. Left " ".....	1 25	715. Scythe Button.....	0 10
61. Composition Boxes.....	1 00	716. Guard Finger.....	0 50
69. Finger Bolt.....	0 10	716A. End " ".....	0 50
75. Track Clearer Slide.....	0 25	716. Plate for Guard Finger...	0 10
Thumb Nut and Bolt for Slide.....	0 15	719. Leading Wheel.....	1 00
Thumb Nut for Slide.....	0 05	719. Roll and Bolt for Leading Wheel.....	0 50
86. Spring Key.....	0 05	720. Folding Iron on Pole.....	0 30
93. Right-hand Spring Pawl.....	0 50	722. Lever Ratchet and Axle..	1 00
94. Left " " " ".....	0 50	723. Lever Socket.....	1 00
95. Linch Pin.....	0 05	730. Long Brace.....	1 50
96A. Axle Washer.....	0 05	731. Short " ".....	2 00
151A. Lever Pawl.....	0 25	732. Connecting Rod.....	2 00
153A. " Handle.....	1 25	734. Lifting Chain.....	0 75
153. " Latch.....	0 25	735. Crank Fender.....	0 50
159. Pin for Crank Balance.....	1 25	736. Main Seat Spring.....	1 50
680. Track Clearer Iron with Slide.....	1 25	737. Disk " ".....	0 50
700. Frame.....	10 00	738. Wrought Hinge Joint.....	4 00
701. Lid of Tool Box.....	1 00	739. Grass Guard.....	1 00
702. Foot Plate.....	0 50	743. Finger Bar, drilled.....	6 00
708. Shield for Bevel Wheel..	1 00	" " with Guards.....	15 00
704. Bevel Wheel.....	3 50	" " " ".....	20 00
705. Internal Gear and Bevel Pinion.....	4 00	744. Complete Scythe.....	5 00
706. Spur Pinion.....	0 75	745. Knife Section.....	0 25
707. Shipper Casting.....	0 50	746. Blank " ".....	0 25
709. " Slide.....	0 25	748. Axle with Gear and Ratchets.....	10 00
709. " Handle.....	0 75	Axle without Gear and Ratchets.....	3 50
710. Axle Clamp.....	0 50	750. Crank Shaft, with Balance	4 25
711. Crank Balance with Pin..	2 00	" " without ".....	2 00
712. Button for Tool Box....	0 10		

TO FOLD THE BAR FOR MAKING OF THE WHEELS

*[Faint, mostly illegible text, likely technical instructions or a continuation of the parts list.]*



# Directions for Putting Up and Using THE HUMMINGBIRD MOWER.

## Keep the Knives Sharp, and the Bearings Well Oiled.

- 1st. Put in the pole which is attached by two bolts to the frame.
- 2d. Bolt lever axle ending No. 752 to pole, just imaginees of the forward bolt which attaches pole to frame. Put lever against No. 753 on lever axle No. 753, and secure with linchpin; hook lifting chain No. 754 to lever-socket.
- 3d. Attach finger-bar to the machine by the two bolts, No. 740 at wrought hinge joint, and No. 761 at short brace, tighten the set screw in the long bolt, and stretch the short bolt with the spring key.
- 4th. Bolt No. 699 track cleaver to No. 714 outer shoe; cut slide on same in the notch in the shoe, and screw the thumb-out up tight.
- 5th. Slide No. 744 scythe in the guards. Raise the outer end of finger-bar until the angle is sufficient to allow the eye of scythe to pass beyond No. 719 inner shoe; insert the connecting rod into eye of scythe, and lay the bar again on the ground.
- 6th. Attach No. 729 folding iron to pole by four screws, and attach oil can holder to pole just in front of lever, where the holes are bored for it.
- 7th. Put lamp wick in the oil cups, and use pure **BUTTER** sperm, lard, or machinery oil. **BE SURE THAT EVERY PART IS WELL OILED** (and that it is kept so), and you are ready to mow.

## DIRECTIONS FOR MOWING.

- 1st. In mowing, let your team walk moderately, and drive straight.
- 2d. To make good, clean work, drive out at the corners. Never commence a swath without having the guards clear of cut grass.
- 3d. The outer bar can be raised over an obstacle by means of 185A lever at right hand of driver. To let the bar down again to the ground it is necessary, in grasping 185A lever handle, to close the hand on 185C latch, so as to press upon this latch and release the pawl.
- 4th. To sharpen the knives, grind them on an ordinary stone, on the bevel or upper side, being careful to keep the long level on them. They can be whittled without being taken out of the guards.
- 5th. The bearings must be kept well oiled with good oil, particularly those at front and rear end of crank shaft. Each end of No. 729 connecting rod need frequent oiling, at No. 61 composition box, and at the end of rod which fits into eye of scythe. No. 729 or 730 scythe head must be frequently oiled through the hole in the plate on the top of it. No. 719A roll in leading wheel must also be kept oiled; an oil-hole will be found on the inner side of No. 719 leading wheel. *If your machine draws hard, you may be sure that it wants oiling, or that the rollers are dull.*
- 6th. If, by any means, the joint fingers should get bent out of line, they should be immediately brought back to their place with a hammer, as it is very necessary that the steel plates in the guard fingers, which form the bearing for the scythe to play through, should be perfectly in line. When the wear causes a play in the scythe, No. 719 scythe bottoms, which are of malleable iron, must be hammered down to keep the scythe snug.
- 7th. The height of the cut is adjusted at the inner and outer shoes. No. 714 outside shoe spring can be set to any required height, and secured by the bolt. The bolt which attaches No. 719 leading wheel to No. 719 inner shoe works in a slot, and can be set at the height desired.

## TO FOLD THE BAR FOR MOVING OR TRANSPORTATION.

- Loosen track cleaver slide. Take hold of No. 714 outer shoe, and lean the bar against the folding iron on pole; take No. 185A lever in the left hand and the track cleaver in the right, bearing down on lever, and you will lay the bar over on the pole with but little exertion. When the bar is folded, turn the track cleaver up straight, and set slide in the notch in the bottom of the shoe. Throw Nos. 62 and 61 pawls out of gear, and you are ready to drive off. *Remember always to throw the pawls out of gear when you fold the bar to drive off.*
- When driving on the road, oil the ends of the wheels; and it would be well to put wood plugs in the oil-holes in wheels, to prevent dust from getting on the axle.
- To unfold the bar, push the knives as far in the guards as they will go, set 185A lever up straight, let the bar slide down on the ground, take hold of the track cleaver and ease it down. A little practice will enable you to fold and unfold it with great ease.

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THE AGITATOR

## THE AGITATOR.

## SEPARATING THRESHING MACHINE.

I offer to the public this Separator, which is calculated to produce a revolution in this class of machinery. I claim on behalf of this machine, that it has facilities for separating and saving the grain which it is impossible to apply to other styles of Separators; that, while its capacity for threshing is equal to that of any other machine, it is simpler in its construction, more durable, easier managed, and lighter on the team.

A candid examination of the machine cannot fail to convince any person of its vast superiority, and such an examination is cordially invited. It would, of course, be folly to expect, nor is it expected, that parties who are interested in the manufacture or operation of the PITT'S style of Machine, should admit the superior qualities of this one, until such admission is forced upon them by the force of public opinion.

With the view of thoroughly testing these machines before entering largely into their manufacture, trials were appointed at different points, advertisements issued, and the machine was operated in wheat, oats, barley and peas, in the presence of large crowds of spectators; and, notwithstanding that the parties operating it had had no experience with the machine, it gave the most unbounded satisfaction in each and every case, as the testimonials herewith submitted will amply testify. Even Threshers who were present, and who are running other machines, pronounced it almost faultless—an admission that speaks volumes in its favor.

The following brief description will give some idea of the difference between this machine and those commonly in use.

## THE CYLINDER

Is built on an improved plan, with the teeth distributed equally over all the bars, causing it to run steadier, and feed much more regularly, while it retains its balance much better. It is made 31 inches long, 16½ inches in diameter, and weighs 270 lbs.; the teeth are made of iron imported specially for the purpose, and the whole is mounted on a steel shaft, and nicely balanced.

## IMPROVED CONCAVE REGULATOR.

This ingenious device consists of two Concave Ends, with a disc working in each; a square iron rod passes through these two discs, and is operated by means of a handle at the feeder's hand, retained in place by a ratchet and pawl; the iron being turned operates the discs and causes the concave to rise or fall as may be desired, *both ends rising and falling together*; keeping the concave always parallel with the cylinder. This arrangement gives the Thresher the most complete control over the con-

care, and enables him to raise or lower it while the machine is running. It will at once recommend itself to Threshers, who can readily perceive the advantage of having it.

#### THE AGITATOR.

Immediately on leaving the Cylinder the straw is received on a long box or trough, about six inches deep, with the bottom formed of slats set edgewise, in the manner of Venetian blinds, through which the grain passes. It is furnished with a succession of agitating Fingerbars, with long projecting fingers in each. The box or trough is moved, with a vertical motion, by means of a crank shaft, and, by a simple arrangement on the ends of the Fingerbars, the vertical motion of the trough communicates to them a motion very like that of a pitchfork in the hands of a person pitching straw after the old open cylinder, in order to separate the grain from it. Having passed over one set of these fingers, the straw is immediately received upon a second set, where it undergoes a similar process, and so on over the whole series, the consequence being that, when it reaches the Stacker, there is not a kernel of grain left in the straw.

The grain falls through the slatted bottom of the upper trough or section, into a second one, with a close smooth bottom, reaching from under the concave to about the middle of the shoe, and with sufficient of a decline to carry the grain freely to the shoe. This second or lower section has likewise a vertical motion, and that part of it which overhangs the shoe is perforated with holes through which the grain is delivered evenly and regularly over the Riddles.

The two sections move in opposite directions, one going forward while the other goes backward. They thus counterbalance each other so that no jar is caused to the machine.

#### THE SHOE

Is much larger and more capacious than in other machines, and the peculiar manner in which the grain is distributed on the sieve gives it greatly increased advantages. There is plenty of blast and plenty of sieve room to take care of all the grain that can be got through a machine, and there is no "poking" or "scraping." When properly set it will run for hours or days without any particular attention.

#### TIGHTENER PULLEY.

The belts on this machine are only four in number, three of which are of no special moment. The fourth or main belt, leading from the cylinder to the crank-shaft and fan, is a broad substantial belt, and is supplied with a *Tightener Pulley* operated by a lever at the feeder's side, by means of which he can tighten it to suit him, without unlacing or stopping the

machine; it likewise enables him, in cases of emergency, to stop the whole machine back from the cylinder.

#### IT IS BEHIND OVER.

The machine, from the cylinder to the stacker, is enclosed, so that no straws, chaff or dirt can work out anywhere except at the rear end. This will be found quite an advantage in the case of threshing stacks outside, and when moving the machine in wet weather.

#### IT LEAVES NO LITTERING.

When "the job" is done, the ground under and around the machine is as free from litter as when commenced. There is no "cleaning up" process, and the possibility of getting a stone, a chunk of wood, or a stray wrench through the cylinder is avoided.

#### NO DUST THROWN OUT.

The feeding part is so constructed that no dust is thrown out into the feeder's face. The dust is all carried through the machine with the straw; consequently the thrasher is not called upon to swallow his "peck of dirt" too early in life.

#### THE DRAFT.

The machine is lighter of draft than any ten horse separator built on any other principle. This is accounted for by the simplicity of its construction and the decrease in the number of shafts, pulleys, and other working parts, reducing the friction to the lowest practical point.

#### THE OLD AND THE NEW.

In the ordinary (Pitt's) style of separator the straw and grain, after leaving the cylinder, are received on the "canvas apron," which carries them rapidly along with a gliding, still motion, in the course of which the straw while passing below the "beater" receives a sharp blow and is then carried over the "picker roller," to the second rake, which passes it on to the stacker. It will thus be seen that from the cylinder to the stacker the only points which tend to separate the grain from the straw are the beater and picker roller; the consequence being that in the very best of those machines a greater or less quantity of grain is carried off in the straw.

In the *Agiator* the straw, after leaving the cylinder, passes over a series of agitating fingers extending the whole length of the machine, each set of which tosses it up in the most effective manner, so that when it reaches the stacker the straw is entirely free from grain.

In the former machine there are 4 shafts, 1 canvas belt, 1 picker, 1 slatted belt, 26 pulleys and 4 belts required for *merely separating the grain*, apart from the fan, elevator and screw; while in the "Agitator," the separation is much more effectively done by means of the oscillating trough or box and fingers, driven by one crank—thus dispensing with all those shafts, pulleys &c., and *not requiring an engineer to drive it or keep it in running order.*

#### THE CHAFF.

My "Agitator" is so arranged that the stackers can be attached either above or below the shoe, and either save the chaff or carry it with the straw into the stack.

I formerly published Testimonials from some of our most influential Farmers who had examined this machine at work, and could now add largely to the number were it requisite; but having taken the FINEST PRIZES at the Provincial exhibition of 1870, and again at the Provincial Competitive Trial at Paris on 19th July, 1871, I deem Testimonials unnecessary to establish the excellence of the "Agitator."



WATSON'S IMPROVED TEN-HORSE PITT'S SEPARATOR

I have been engaged in the manufacture of Threshing Machines for upwards of ten years, and have given much attention to this branch of my business. I have improved upon them wherever I considered an improvement was necessary, being always guided by a careful and thorough examination of the machines when at work; and I now claim that my Pitt's Separator is fully equal to any other machine of the same pattern in the country. They are furnished either with gear or belts to suit purchasers, and are made of the very best materials, well put

together, securely fastened at the joints, and strongly braced; the boxes, where necessary, lined with babbit metal; and the whole got up in the most substantial manner throughout. The cylinder is built on a new principle, with steel shaft, nicely balanced and furnished with teeth of the best refined iron, imported for the purpose. The whole machine is finished in a neat and workmanlike manner, and has a good appearance.



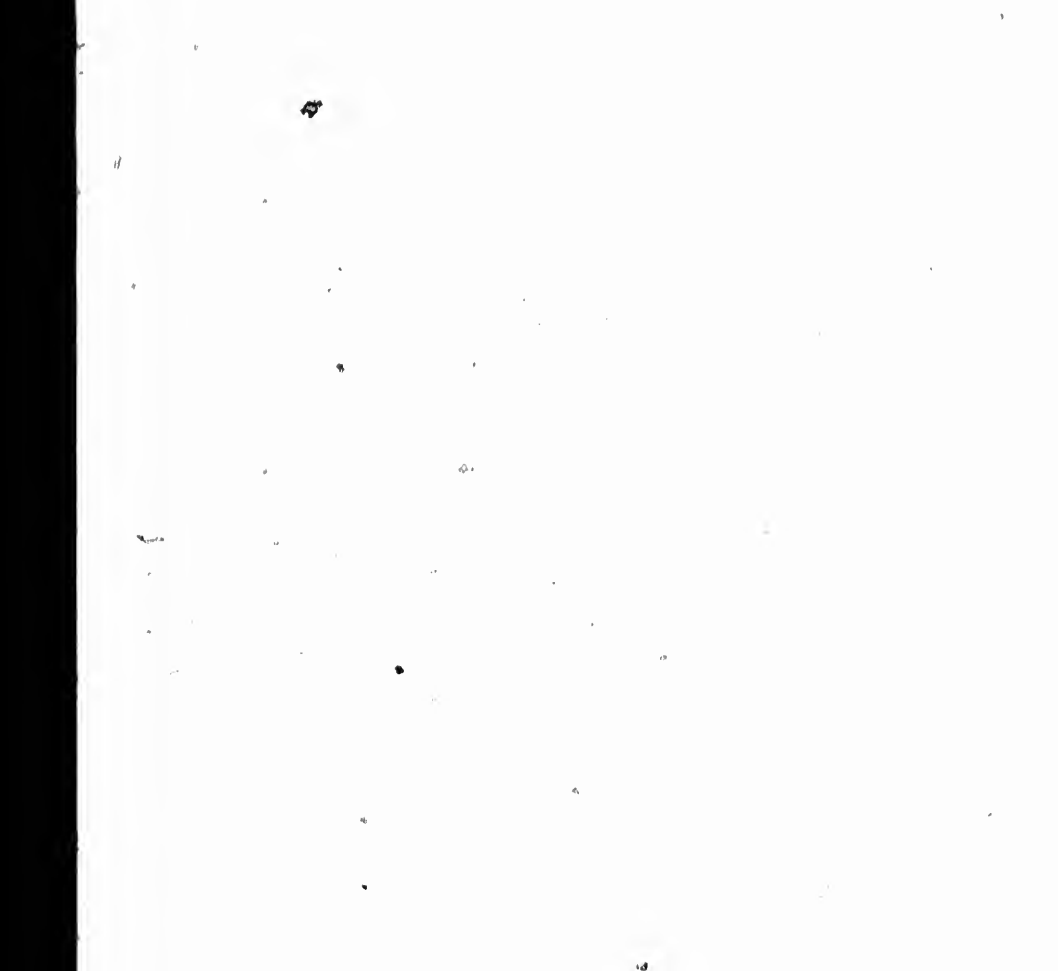
SELF-REGULATING SEPARATOR

### THE LITTLE GIANT.

This Machine has now been before the public for four years. It is mounted on two wheels, can be readily moved to any required position on the barn floor, and takes up very little more room than a Fanning

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Mill. It is very simple in its construction, and not liable to get out of order when fairly used. It has no canvas belt, but is operated by a succession of crank shafts and slats, thoroughly shaking the straw, and is capable of threshing from 200 to 250 bushels of wheat of an ordinary crop per day. It is strongly and substantially-made, the wearing parts protected by sheet iron, and the shoe has no side shake. It is quite a favourite in certain sections of the country, its low price placing it within reach of almost every farmer; but from its small capacity in comparison with other machines, it is not likely to come into very general requisition. I have recently obtained, from the patentee, his latest improvements on these machines, and will furnish them with these improvements added.



FARMER'S HORSE POWER.

This Machine is got up especially for Farmers' use, and is calculated for two, four or six horses. It is very compact, light, substantially built, and easily stored. It is designed for driving a Straw-Cutter or other light work on the farm, and will be found well adapted for that purpose.



*"PITTS" HORSE POWER, (with Watson's Improvement.)*

### PITTS HORSE POWER.

It is now universally admitted that Pitt's Horse Power, when properly constructed, and of good material, is the best Power in use where eight or ten horse power is required. It requires, however, considerable knowledge of them to be able to construct them properly; and the only reason why they have failed, in any case, to give satisfaction, is a deficiency of such knowledge in the manufacturer. I have made these Powers for a great number of years, and am free to admit that it was only by costly experience

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I was taught how to properly construct them, and how necessary it was that the utmost care should be exercised in fitting the several parts; but having attained that knowledge, I felt so satisfied with its operation that I have got an entirely new set of patterns made for it, with improved facilities for getting the castings true, and have full confidence that, in supplying my Improved Pitt's Power, I am furnishing the best in the country.

They are built of the best materials, with steel pins or journals through the bevel wheels, strong, substantial and durable, and as it is essential they should be put and kept in perfect running order, the utmost care is taken to have them properly adjusted when leaving the shop, and full instructions for keeping it in running order, accompany each machine.

I supply these for eight or ten horses, and with Layer Boxes or Draw Rods to suit purchasers, and the Tumbling Rods are furnished with slip-knuckles and rings into which the bolts are rivetted, leaving no bolt heads, nuts or other protuberances which have been the means of so many serious and fatal accidents in connection with Threshing Machines.



CARTER'S PATENT DITCHING MACHINE

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Before giving some description of this important agricultural implement, it may be well to glance for a moment at its history and its object. For a long time there has been required among the cultivators of the soil on a large scale, some means by which furrows could be made at a reasonable cost, prior to the laying down of the tiles for drainage. The old method of digging trenches for the laying of the drain-pipes is manifestly slow, cumbrous and expensive. In the absence of some easily available machine there have been and still are large tracts of valuable land lying waste and unproductive. It has in consequence been the aim of various inventors to devise some implement by which a furrow of sufficient depth and width could be made for the reception of drainage tiles.

The Patentee, Mr. Carter, after experimenting for several years, has produced this Implement, bearing his name; it has been in operation in various parts of Canada and the United States, and has proved itself admirably adapted for the purposes for which it is designed.

#### A DESCRIPTION OF THE MACHINE.

The first principle of the machine is a large flange wheel full of prongs. It is four feet in diameter and eight inches wide. The wheel is girded partly by a semi-circular spade, pointed and lined with steel, and made adjustable so that it can be opened or lowered at the desire of the operator. There is a truck in the rear of the wheel on which the driver stands. He has a handle in his hand and can raise the spade that follows the wheel. The frame of the truck and the handles hang on the axle of the large wheel in a flexible condition.

The ditching machine is drawn by four horses, though sometimes two are sufficient. Having been set in motion in a straight line across a tract of land, it cuts the earth the depth of two and a half inches the first time it crosses. If the earth is wet it will go a greater depth—three and a half or four inches. The earth that is caught up by the semi-circular spade is made to go up the hollow part of the large wheel, and on reaching the top it is thrown out by a large spout or funnel. It falls on the side of the furrow. The operation is repeated until the ditch is at a sufficient depth. The large wheel being very flexible, sinks lower and lower till a depth of three feet is attained, which is as deep as is ever required. The furrow measures fourteen inches on the top and eight at the bottom. It makes a clean, uniform and straight ditch through the soil.

The amount of work done by the machine is its principal recommendation. It will cut a furrow of from 200 to 250 rods in length, three feet deep, in one day, if the soil is moist. If it is dry, the distance will be from 100 to 150 rods. In wet land, for which it is intended, it will do the work of twenty men.

Recent Improvements by the Patentee on the Ditching Machine, manufactured at the *Ayr Agricultural Works* render it complete.



This being a comparatively new Machine, I subjoin Testimonials from Gentlemen (well known) who have purchased and used it or who have seen it at work.

The Machine is simple in construction, very strong, and not liable to get out of order. It will work satisfactorily in the hardest, as well as the toughest and most adhesive clay soils; will also work admirably in sandy and light soils.

Two men and from two to four horses are required to work it, according to the nature of the soil.

Weight for shipment, 1400 lbs.

#### WARRANTY.

That they are well built, of good material, and capable of cutting from 100 to 200 rods of ditch, three feet deep, 11 inches wide at top and 8 inches at the bottom, per day. The purchaser to have the privilege of cutting 30 rods of ditch, as a trial of the machine. If it should not work well, he shall notify me immediately, and allow me time to send a person to put it in order. If it cannot then be made to work satisfactorily, it will be taken back and considered no sale.

*Messrs. Carter & Stewart, proprietors of Carter's Ditching Machine.*

*Gavra.*—In connection with my neighbour, Mr. Ezekiah Dancé, we purchased, this spring, one of Carter's Ditching Machines, and in justice to the merits of the machine, and thinking I may be doing my brother farmers a great service, (many of whom understand the benefits arising from draining, also the difficulties and cost of getting it done by hand), I have much pleasure therefore in making known the result of my experience so far in Machine draining. With the said machine, two pairs of horses, and my own labor, I have cut more ditch in one hour, suitable for laying the tile, than any three men I have ever employed have done for me in a day—the work being performed in a much easier and more workmanlike manner. I have cut over 150 rods of ditch, 30 inches deep, ready for the tile, in less than six hours working time (the soil being a heavy clay), and on trial, to test the capabilities of the Machine, have cut a ditch 30 rods in length, and 30 inches deep, in 45 minutes—making at the rate of 400 rods per ten working hours. I have made, with the Machine, drains with sharp curves as easily and speedily as straight ones. I have also cut ditches 3 feet 3 inches deep with the machine after a few hours' practice without any difficulty. I found the Machine as easily handled as a

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plough, and very little heavier on the team, and with a little practice. I had no difficulty in leveling the bottom of the ditch ready for the tile. I found, on careful reckoning, that the first six hours' work of the Machine had earned for me a sum of money equal to one year's interest on the cost, and after three days' work, had earned for me more than sufficient to pay the cost of my half share. I can therefore say with confidence, that the Machine has worked far beyond Mr. Dancer's and my expectations, and far beyond the guarantee given with the Machine, and I feel justified in recommending the said Machine to all parties who contemplate underdraining.

ROBERT BALLAN,

12th Concession of South Dorchester,  
County of Elgin.

*Messrs. Carter & Stewart, Proprietors of Carter's Ditching Machine.*

GENTLEMEN,—I hereby certify that I am well pleased with the Ditching Machine purchased from you this spring. It performs the work much faster and better than I expected, and far beyond the guarantee given with the machine. A few days ago I gave it a severe test in hard pan—so hard that the spade made very little impression on it—and it cut a ditch 80 rods long and 25 inches deep in less than three hours. I have no hesitation in calling the machine one of the most useful, if not the most useful, and best paying implement invented for farmers.

ZEDEKIAH DANCE,

12th Con., South Dorchester, Co. of Elgin.

*To the Editor of the Farmer's Advocate.*

SIR,—As you are anxious to know the result of all new implements and seeds supplied by you, and as many farmers do not know much about Carter's Ditching Machine, I beg to state that, having given it a fair trial this spring, I have found the results to be most satisfactory, both to myself and to every one that has seen it working. I have tried it in hard clay ground and in stony and gravelly land; in both places it did its work efficiently. I also put it in a wet, sticky clay, like putty, and it made a ditch there, although it did not work as well as in the hard dry land. Every one that saw it at work was highly pleased with it. Many wished me to ditch for them, but my time is occupied on my own farm. I can safely say it is a good and efficient implement, and it only requires to be known to bring it into general use.

GIDDEON DECKE, Westminster.

*Messrs. Carter & Stewart, Proprietors of Carter's Ditching Machine.*

GENTLEMEN,—This is to certify that I used one of Carter's Ditching Machines last fall and in the spring of the present year, and can confidently recommend it as one of the best implements of the kind I have seen. With a little experience the bottom of the ditch can be made quite level and ready to lay the tile. With two pairs of horses, a driver, a man to hold the machine, a ditch one hundred and fifty rods in length, from two and a half to three feet in depth can easily be cut in a day. The machine being all constructed of iron is most durable, and not liable to break or get out of repair.

CRATHAM, Aug. 30, 1870.

ABNER D. MCKELLAR, M. P. P.

I hereby certify that Carter's Patent Ditching Machine has been in operation on the grounds of the Buffalo Central Park, for the past week, and its capacity for performing the work for which it is intended was thoroughly tested on a soil composed of extremely tough clay, mixed with cobble stone. It cut 1,200 yards of ditch 2½ feet deep, ready for Bottoming and Levelling, in two working days, the same amount of ditch left in the same shape, requiring

forty and one half days' labor for one man. I estimate the relative difference between the cost of ditching by hand labor and by Machine as thus:

Cutting 1,200 yards of ditch by hand:		\$61 00
1 man 40 1/2 days' labor at \$8 per day.....		
Cutting 1,200 yards of ditch by Machine:	\$3 00	
2 days' wages of operator at \$1 1/2.....	20 00	
2 " 2 teams and drivers at \$5.....		\$25 00
Saving by Machine on 1,200 yards ditch.....		\$36 00

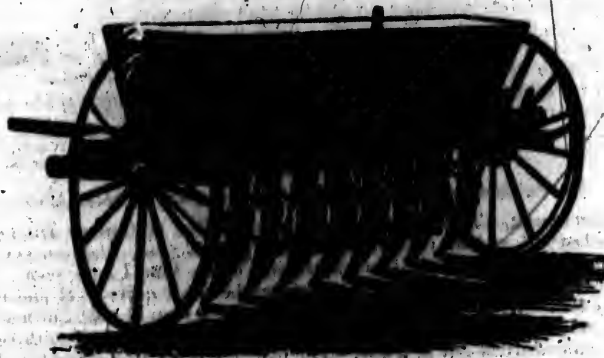
This test was made upon what I consider the most difficult part of the ground, and I can add that the operation of the machine was a complete success, and therefore its best recommendation. (Signed) GEORGE TROOP,  
Overseer of Work on Central Park.

BUFFALO, May 20th, 1871.

LONDON, ASYLUM, Aug. 14th, 1871.

W. WILD, Esq.—My dear Sir: I willingly bear testimony to the value and efficiency of the Carter's Ditching Machine purchased from you. Last year we drained fourteen (14) acres with it for our garden in very stony ground. In clear ground, whether sand or clay, it works well and rapidly, and saves labor to a large extent. Next year I shall be better able to give you the cost of draining by the machine, compared with hand labor, as I have nearly fifty acres to finish this year. Neighboring farmers who could join in the purchase of one, would soon save the cost of it. I made a drain two hundred (200) yards long, three (3) feet deep in four hours.

I remain, yours truly, HENRY LANDOR,  
Supt. Lunatic Asylum, London, Ont.



### "FARMER'S FRIEND" GRAIN DRILL.

The Grain Drill, although introduced in the Canadas a number of years ago, has only within a very short time taken that prominent place among Agricultural Implements to which its importance fairly entitles it. This tardiness in placing this implement in its proper position arose partly from the inferior class of Drills which were in a manner forced upon

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our Canadian farmers—low prices and long credits being the inducements held forth in numerous instances to get rid of an article which too often proved but a source of trouble to the purchaser.

The advantage of drilling over broadcast sowing is now an established fact, as well recognized as is the superiority of the Reaping Machine over the Reaping Hook, and the only consideration is to select the best and most reliable Drill.

There are certain principles of construction without which no Drill can be depended upon.

1st.—It should be simple and easily operated.

2nd.—It should be strongly and substantially built.

3rd.—It should have two sets of runs or feeds; one for wheat or small grain, and a larger one for oats and other coarse grains; experience having demonstrated that the two different classes of grains cannot be successfully sown with the same set of feeds.

4th.—It should be so arranged that if the Drill should be stopped it will commence sowing immediately upon being started again, otherwise blanks will be left in the field wherever the Drill may be stopped.

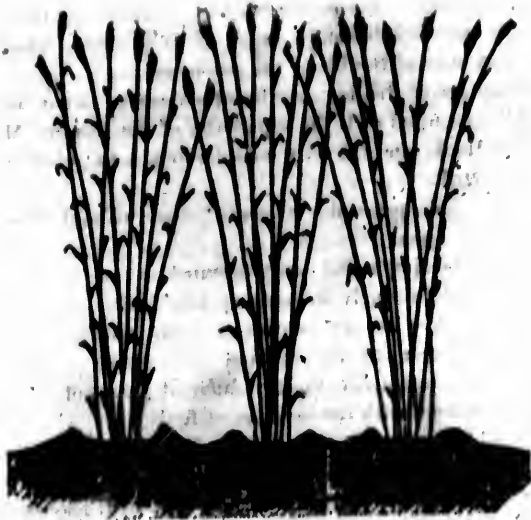
5th.—It should be capable of sowing any required quantity, within the ordinary range, and sow with precision and regularity.

The *Farmer's Friend* Grain Drill manufactured by me embraces all these principles, and has, moreover, the following points to recommend it.

The Gearing arrangement is such that the act of raising the Tubes throws it out of gear; consequently it stops sowing the instant the Tubes are raised, and when the Tubes are again lowered into the ground it commences sowing.

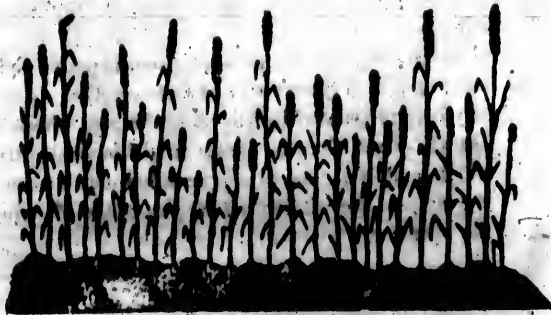
The Axles are of Wrought Iron, turned and accurately fitted to the Hubs of the Wheels.

It sows, accurately, any desired quantity from three to eight pecks of Wheat, and from three to sixteen pecks of Oats or other coarse grain per acre, the quantity being regulated by changing the gear wheels on the end of the Drill. It will plant Corn or Beans in drills by shutting off the intermediate tubes, and will sow to any required depth; can be thrown instantly out of gear, and the whole working part of the Machine is within easy reach of the operator.



DRILLED WHEAT.

In drilled wheat the plants are stronger and more healthy, the heads larger, and more uniform in size and height, better filled, ripen earlier, and not so liable to rust, the reason being that the grain is planted regularly and at a uniform depth, comes up together, it is not so much affected by drought, it is better nourished and protected, and has a free circulation of air between the rows.



BROADCAST WHEAT.

These cuts represent the growth of drilled and broadcast wheat. In broadcast wheat the plants are of unequal height, the heads very unequal, some well filled while others are empty, some nearly ripe and

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others in blossom, while they are more liable to rust, on account of not ripening as early as the drilled wheat. The reason is obvious. When grain is sown broadcast and harrowed in, some are covered too deeply and are late; some are covered at a proper depth, and these are found, on examination, to be the strongest plants, with the best heads. Some are not covered deep enough, and come sickly and weak (a short plant and a poor head,) on account of the moisture having been taken up by evaporation from their roots, while a good many are not covered at all, and, of course, are lost.

**SEPARATE PARTS OF THE FARMER'S FRIEND GRAIN DRILL.**

No.		\$	C.	No.		\$	C.
1.	Hub Gear Wheel.....	1	00	54.	Grass Seed Gear Shifter...	0	38
4.	Peck Wheel.....	0	75	41.	Ground Tube.....	2	00
5.	" ".....	0	75	"	" Point.....	0	38
6.	" ".....	0	50	46.	End Plate, Right Hand...	1	50
7.	" ".....	0	50	48.	Back Roller Rack, R. H..	1	00
8.	" ".....	0	50	49.	" " " L. H..	1	00
9.	" ".....	0	50	52.	" " Lever Socket	0	38
12.	Front Feed Spout.....	0	37	54.	" " Gear.....	0	75
13.	Notch Plate.....	0	50	55.	" " Pawl.....	0	50
14.	Back-Feed Spout.....	0	75	60.	Shifter Block.....	0	15
15.	Grain Lever.....	1	00	62.	Back Roller Jaw.....	0	35
	Spring.....	0	25	64.	Double Gear Feed Wheel.	1	00
20.	" " Shifter Cam.....	0	40	65.	End Plate, Left Hand....	1	50
24.	Distributor.....	1	00	87, 88.	Box Braces (each).....	0	37
31.	Grass Seed Cam.....	0	50	100.	Casing.....	0	75
32.	" " Lever Holder..	0	50		Sheet Iron Tubes, per set of 3...	0	45
33.	" " Box Support.....	0	15		Wheel Hub.....	2	00

**DIRECTIONS FOR USING GRAIN DRILL.**

1. FOR WHEAT, RYE, BUCKWHEAT, &C.—Slide the bottom to the right end of the Grain Box, opening the small runs, and place the Shifter Block at the left end of the Grain Bottom.
2. FOR BARLEY, OATS, CORN, BEANS, &C.—Slide the bottom to the left end of Grain Box, opening the large runs.
3. PLACE THE GEAR WHEEL on the end of the square shaft, when the following quantities per acre will be sown:

	WHEAT.	BUCK- WHEAT.	OATS.	BARLEY.	PEAS.	BEANS.	CORN.
	PECKS.	PECKS.	PECKS.	PECKS.	PECKS.	PECKS.	PECKS.
Wheel No. 4.....	4	4	8	10	8	8	8
" 5.....	5	5	10	12	10	10	10
" 6.....	6	6	12	14	12	12	12
" 7.....	7	7	14	16	14	14	14
" 8.....	8	8	16	18	16	16	16

4. TO DRILL CORN IN TWO ROWS, 4 FEET APART.—Use the large runs and shut off the hoppers you desire with the sheet iron feedovers, when the Drill will sow as follows: No. 4, 7 quarts; No. 5, 10 quarts; No. 8, 16 quarts. THE ABOVE QUANTITIES are got by using the intermediate wheel, No. 64, on the Grain Lever, with the larger wheel next the Lever.

5. To Sow Less QUANTITIES than the foregoing, reverse the intermediate wheel, No. 64, on the Lever, so that the smaller portion will be sent the lower, when the wheels will sow one-half the above quantities.

6. To INSURE ACCURACY in distributing, the grain must be well cleaned.

7. THE DIRECTION is regulated by the pitch of the Tubes, throwing the points forward, causing them to run deeper, and "vine vane."

When sowing Grass Seed, place the index finger, by means of the handle, at the different marks, when it will count as follows: No. 1, four and a half lbs.; No. 2, six lbs.; No. 3, seven and a half lbs.; No. 4, ten lbs.; No. 5, twelve and three-fourth lbs. per acre, and so on.

### GRASS SEED SOWER.

When desired, a Grass Seed Sower is attached to the Drill, which sows the Grass Seed in any quantity from four and a half pounds to half a bushel per acre, broadcast, behind the Machine, more evenly and regularly than can be done by hand. It can be quickly thrown out of or in gear, or removed entirely when not required.

### PLASTER AND GUANO SOWER.

This attachment is furnished with the Drill when ordered, and can be operated the same time as the Grain and Grass Seeds, or separately. It is simple, efficient, and easily detached.

### DRAG SAWING MACHINE,

For two horses, designed for butting logs, cutting cordwood, stave timber, heading, &c., &c. This Machine can be loaded on a waggon or sleigh, and moved about very handily,—is fitted with a Logway and Gigging apparatus. The whole Machine is easily managed, and gives very good satisfaction.

By removing the Saw and Pitman, this power can be applied to a Straw-Cutter or other light work, by means of a belt from the fly-wheel. I likewise manufacture

### DRAG SAWS FOR EIGHT HORSES,

Intended to be attached to a Pitt's or other Horse Power. This Machine is furnished with a Self-Gigging arrangement, and is strongly and substantially built, capable of doing a large day's work.

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DRAG SAVING MACHINES FOR STEEPLANDS

APPLIED TO A STRAW-CUTTER



LOCK-LEVER SULKEY HAY RAKE.

This Implement is now almost indispensable where Mowing or Reaping machines are used. It rakes off the Meadow or the Stubble field in the most perfect manner, paying for itself, usually, in the course of one season.

The construction of my Sulkey Hay Rake is of the simplest description. The Teeth, made of the best quality of steel and thoroughly tempered and tested, are raised and lowered by a lever at the hand of the operator, who rides comfortably on his seat, having nothing to attend to but his horse. The Lever on my Sulkey Rake is so arranged that, when the Teeth are lowered, it locks itself, and remains so until it is operated by the driver to discharge its load. It can be worked by a boy with ease, and the spring on the teeth enable them to enter into the inequalities of surface and make a very clean job. For raking stubble fields it has par-

particular advantages, picking up the straggling straws from among the foggage in a manner unequalled by the Wooden Horse Rake or even by the Hand Rake.



**IRON FRAME CHOPPING MILL.**

**FOR CHOPPING OATS, PEAS, CORN AND OTHER FEED STUFFS.**

The importance of stock feeding and of preparing the feed for them has, of late years, produced a great variety of Chopping Mills. The above represents what is now generally conceded to be the best Mill in the Market. It is mounted on a substantial Iron Frame strongly braced, which obviates any vibration of the Machine when at work.

The Grain is fed to two fluted rollers, driven at different speeds and grinding against each other, the feed being regulated by a Thumb-screw, and the fineness of the meal, being also regulated by Set Screws to suit the operator.

The Rollers are estimated to last for a length of time, and when worn dull can be re-cut at a trifling cost. It is fitted with a Fly-wheel, is driven either by Belt or Rods as may be desired, and is capable of cutting from 20 to 30 bushels per hour, according to the power used.

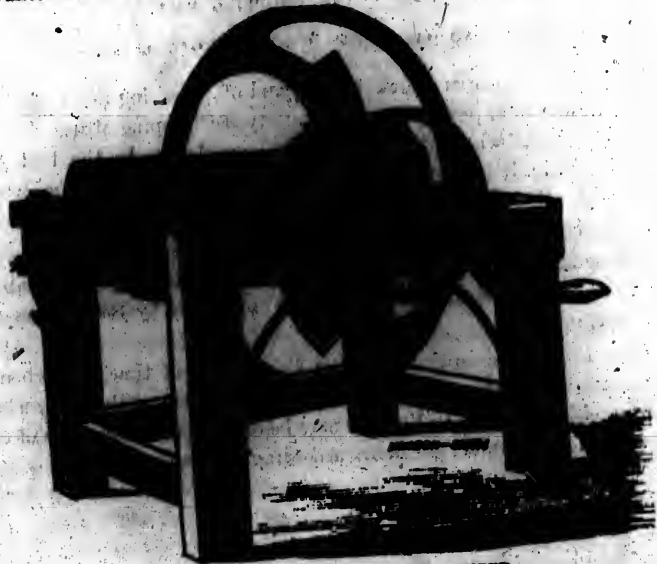






WOODEN FRAME CHOPPING MILL.

This Machine is on precisely the same principle as the preceding, but is mounted on a wooden frame, and is driven by belt only.



THE IMPROVED POWER STRAW CUTTER.

This Machine has been before the public for a number of years, several hundreds of them being in operation, and in no single instance

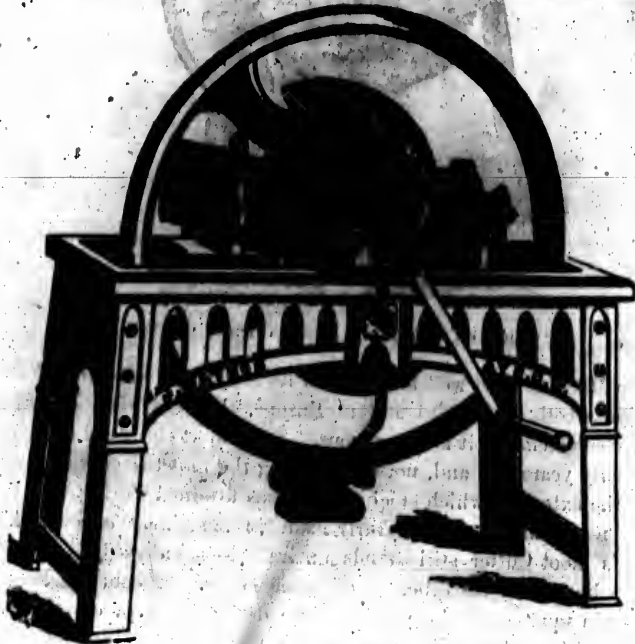
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have they failed to give the most entire satisfaction. They are strongly built, well fitted, and capable of cutting one ton per hour with ease, into lengths of  $\frac{3}{4}$ ,  $\frac{1}{2}$ , or  $\frac{1}{4}$  inch, as may be desired, by changing the gear wheels—can be instantly thrown out of gear—fitted with the best quality of English knives imported direct, and have the mouth-piece laid with cast-steel.

They are used for threshing peas—an operation which they perform admirably, leaving the pea straw chopped up in the best possible manner for feeding.

These Machines are furnished in different sizes to suit purchasers.



NO. 1 IMPROVED HAND STRAW CUTTER.

A Machine of high reputation in England, from whence it was recently imported. It has a cast iron frame with brass bearings for the principle shafts, and is supplied with Gregory's patent delay motion, which causes the feed to stop while the knives are cutting. It is calculated for hand-power, and is very compact.



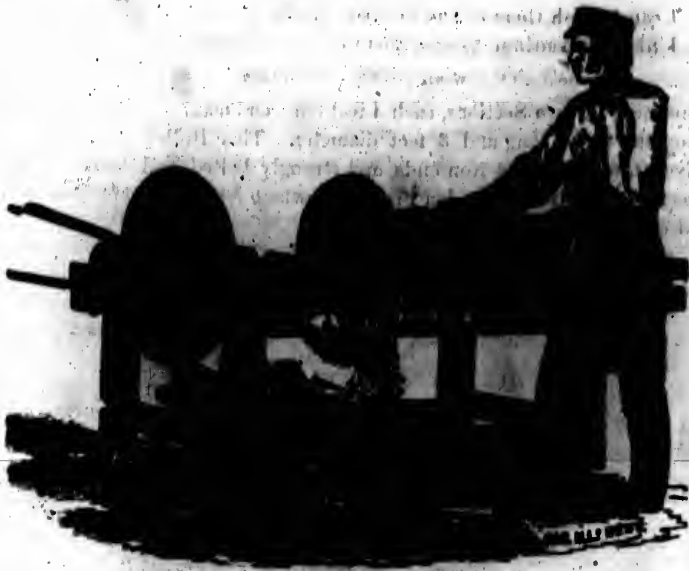
"GARDNER'S" DOUBLE ACTION ROOT CUTTER.

This Machine is so well known, and its reputation established on so firm a basis both in America and in Europe, that anything said in the way of recommending it is superfluous. It stood at the head of its class over twenty years ago, and, notwithstanding the impetus given to inventors by the extent to which stock feeding has attained during that time, and the many improvements yearly made in machinery of every kind, Gardner's Root Cutter still stands unrivalled—acknowledged superior, wherever known, to any other of the same class. It cuts in slices for cattle, or in squares for sheep, as may be desired—drives easy and cuts fast, and will, under ordinary usage, cut for several years without any expense for repairs.

I take special pains to get these Machines up in first class order, the knives are imported from the best English Markets, and the alicing knife is secured in the centre to prevent it from springing when cutting.

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CIRCULAR SAW.

I furnish Circular Saws, with any size of plate from twenty to thirty inches. They are mounted on a strong, substantial wooden frame, and fitted with balance wheel and sliding table complete.



IRON FIELD ROLLER.

My Field Roller is made of Cast Iron Sections, one foot each in length, and twenty-seven inches diameter. It is mounted on a strong wooden frame, and weighs, made as they generally are, of seven sections, 1,200 lbs. gross weight; the weight is, however, in proportion to the width of the roller, and can be increased, at pleasure, by any heavy substance placed on the platform. The number of sections acting independently of each other, prevents it from damaging the surface of the soil when turning, while the material of which it is made is not liable to wear or decay.

I can furnish them of any desired length.  
I likewise continue to manufacture a

**WOODEN FIELD ROLLER,**

Consisting of Two Sections, each 4 feet long, and making the Roller, when complete, 8 feet long and 3 feet diameter. This Roller is composed of staves, fitted into cast iron ends and strongly bolted and braced. It is mounted in a strong Wooden Frame, the whole forming a very substantial and efficient implement.



**IMPROVED TURNIP AND SEED SOWER.**

This Implement is an Improvement on a Scotch pattern—is drawn by one horse, and sows two rows at a time. It has two Concave Iron Rollers in front, sliding on a shaft. These Rollers shape the Drills and follow them whether parallel or otherwise, carrying the Sowing Tooth along with

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them, and thus dropping the seed always in the centre of the Drill. Two Iron Rollers follow in rear of the Machine, covering the seed and pressing the soil. The sowing apparatus consists of two Tin Canisters mounted on a shaft and enclosed in Cast Iron Cases. They are driven by a belt off the shaft on which the back Rollers are fastened. Thus when the back Rollers are raised, to turn the machine at the end of the Furrow, the sowing ceases until they are again let down. The quantities sown are regulated by holes of various sizes in the circumference of the Canisters. This will be found a first-class, reliable Implement, for sowing Turnips, Carrots, Beets, Mangold, &c., &c.

In addition to the foregoing, I am under arrangements with the Patentee, manufacturing

#### "THAIN'S PATENT" SEED SOWER,

The sowing-principle of which is similar to the other, but the frame is of wrought iron, and the canisters are driven, independently of each other, by friction directly from the front roller.



#### WEEDER AND SCUFFLER.

My Weeder and Scuffler is an indispensable article in the Turnip, Potato and Corn Fields, as it answers the double purposes of a weeder and a double mould plough. It will cut the weeds, throwing them into the centre between the rows, and by reversing the side-ploughs it will lay the soil to the plants equal to any plough. The wings carrying the side-ploughs are hinged at the front, and can, by an iron strap for that purpose, be set and kept at any required width.

I manufacture various patterns of Scufflers, in addition to the above, with three, five, and seven teeth, and with steels of several shapes, to suit all kinds of soil or work.

#### CULTIVATORS

Of Ideas and other favorite patterns, and of different styles of construction.

#### JOHNSON'S PATENT CHAMPION VIBRATING CULTIVATOR.

By arrangement with the Patentee, I manufacture this Implement,

which is so arranged that the teeth can be placed on it to suit the operator. It has an extension axle, allowing the wheels to be set at any desired distance apart. A set of Gang Ploughs can be supplied with it when required, which take the place of the Cultivator Teeth, so that it can be used either as a Cultivator or a Gang Plough.

**WOODEN FRAME GANG PLOUGHS.**

With four Steel Mould Ploughs, securely fastened on a strong wooden frame, turning four furrows at once—the depth being regulated by setting the wheels.

**IRON FRAME GANG PLOUGHS.**

Composed of a cast-iron frame, mounted on large wheels, and carrying three cast-iron ploughs, and provided with a tongue or pole. This is a very popular Gang Plough wherever it has been used.



YANKEE No. 22 JOINTER, (Two or Three Horses.)

A good serviceable Jointer Plough for two or three Horses, with Cast Beam and Mouldboard.

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THE AYR JOINTER.—(THREE HORSE.)

A strong, substantial Jointer, or Double Shear Trench Plough, fitted with wheel and skimmer, and calculated for three horses.



HILL'S PATENT PLOUGH.

Having secured the right to manufacture this justly celebrated Plough; I am prepared to supply orders for it to any extent.

Hill's Plough has attained a Provincial reputation, possessing as it does, the peculiar advantage of being equally serviceable as a Jointer and Sod Plough.

I have now had several years' experience with these Ploughs, having made and sold some hundreds of them, and am confirmed in my opinion, previously expressed, that there is no better Plough in the Canadian Market,—being adapted for all kinds of work, it invariably gives satisfaction in every case.

I can furnish these Ploughs with Wooden or Iron Beams, and with Steel or Cast Iron Mould-boards, to suit purchasers.

Having purchased the exclusive right for the Province of Ontario, to apply McSherry's Patent Wrought Iron Beam, I have attached it to the Hill's Patent Plough, making one of the most complete Ploughs in the Province. I will be prepared to supply these either as Jointers or Sod Ploughs, in any desired quantities.

This Plough is steadily increasing in popularity, the demand every succeeding season being largely in excess of the former year. I have sold numbers of these Ploughs in almost every Township of Western Canada,



and have never known of any instance in which they have failed to give satisfaction. I question much whether there is now in the Dominion a more deservedly popular Plough than "Hill's Patent" with the "McSherry" Iron Beam. In addition to the foregoing, I manufacture a large and varied assortment of the best and most approved

### PLOUGHS,

Embracing amongst others the following:—"Barrowman," (Scotch), "Wilkie," (Scotch), "Murray," "Gray's Improved," "McSherry," "Britannia," "Morley Improved," "Model," "Gem of Ayr," "Continental," "Scotch Canadian," "Black Swan," &c., &c., comprising Ploughs suitable for all kinds of work and all kinds of soil.

### SUBSOIL PLOUGHS,

For following after an ordinary plough, and stirring up the subsoil, leaving it in a pulverized state, to be covered by the surface soil of the next furrow. This Plough does not bring the cold subsoil to the surface, but loosens it and renders it porous.

### STOVES.

Although not engaged in the manufacture of Stoves, I keep on hand an assortment of the best Cooking, Parlor and Box Stoves in the market, which I am prepared to sell at a very small advance on cost.

### CASTINGS.

My Castings are universally acknowledged to be unsurpassed in the market. This gratifying result is obtained from the quality of the iron used in their manufacture. I am daily shipping Plough Castings by railway to all parts of the country, and have supplies established at various points.

Light and Ornamental Castings furnished of superior finish and on short notice.

Fan Mill Castings of various patterns. I supply these to some of our most extensive manufacturers, who previously imported their castings from the United States.

### REPAIRS

Receive prompt attention, and are expeditiously and substantially done on reasonable terms.





# AYR AGRICULTURAL WORKS!

*AYR, GUY., 1st Oct., 1872.*

TERMS.—TWO MONTHS. INTEREST AFTER THAT TIME AT 1 PER CENT. PER ANNUM.

IN CONSEQUENCE OF THE GREAT ADVANCE IN THE PRICE OF IRON AND  
OTHER STOCKS, IT HAS BECOME NECESSARY TO SLIGHTLY INCREASE  
PRICES. THE FOLLOWING ARE THEREFORE THE PRICES AT WHICH MACHINES  
WILL BE DELIVERED AT PARS STATION UNTIL FURTHER NOTICE.

AYR CLIPPER, COMBINED MACHINE.....	75.00
HUMMING BIRD MOWER.....	60.00
GRAIN DRILL, (8 TUBE,).....	75.00
DO. DO. WITH TUBE SHIFTER.....	80.00
DO. COMBINED WITH GUANO, PLASTER OR PHOS- PHATE SOWER.....	105.00
GRAIN CRUSHER.....	45.00
DO. WITH GEARING ATTACHMENT.....	55.00
"VICTOR" CHOPPING MILL.....	30.00
"STRAW CUTTER, 12 1/2 INCH FOR POWER.....	65.00
DO. 10 1/2 INCH FOR HAND OR POWER.....	64.00
DO. 9 1/2 INCH FOR HAND.....	62.00
"CONTINENTAL" HAND STRAW CUTTER.....	50.00
†BOOT CUTTER, GARDNER'S.....	55.00
DO. DO. WITH EXTRA HEAVY FLY WHEEL.....	52.00
DO. CANT'S, WITH FLY WHEEL.....	15.00
TURNIP DRILL, WOOD FRAME.....	22.00
DO. IRON FRAME.....	20.00
FARMERS' HORSE POWER AND JACK, 1 @ 4 HORSES.....	60.00
FIELD ROLLER.....	52.00
HILL'S PATENT PLOUGH, WRO'T. BEAM, STEEL MOULD.....	18.00
DO. DO. CAST MOULD.....	16.00
STEEL LANDSIDE EXTRA.....	1.00
JOINTER ATTACHMENT EXTRA.....	2.00

\*Straw Cutter.—1st Provincial Price, 1870, 71 and 72.  
†Boot Cutter.—1st Provincial Price, 1868, 69, 70 and 71.



