

PRESERVE THIS FOR REFERENCE.

THE
Farmers Friend

**GRAIN DRILL.**

MANUFACTURED BY THE
Farmers Friend Manuf'g Company,
DAYTON, OHIO.

FOR SALE BY

R. E. Gilbert
At *Wilmington Pa*

THIS MACHINE RECEIVED
THE CENTENNIAL GRAND PRIZE MEDAL AND DIPLOMA !

The Judges Recommended all its Peculiar Features as
Possessing Especial Merit.

SEE REPORT.

WARRANTY ON FARMERS FRIEND GRAIN DRILL.

In Consideration of an Order given for the **FARMERS FRIEND GRAIN DRILL**, the Company hereby agrees to warrant the said Grain Drill, for which said order is given, to sow Wheat, Rye, Oats, Barley, Clover, and Timothy regularly and evenly, also to cover well, providing always that the Drill is properly used, and under ordinary favorable circumstances, and to be well made of the best material.

An express condition of this warranty is, that the directions for using said Drill must be strictly followed. Should for any reason the Drill fail to perform as warranted, the agent shall at once be notified of the difficulty, and if the company fails to remedy the fault in a reasonable time, the Drill may be returned to Dayton, Ohio, or to their agent.

It is hereby further agreed that one day shall be deemed sufficient for a trial; and, if the Drill fails to perform as warranted, the purchaser shall be obliged to give notice at once. The absence of any information after said trial shall be conclusive evidence that the machine is accepted.

On receiving notice, we, or the agent, will go to remedy the difficulty which may prevent the Drill from performing as warranted, but when on examination the difficulty is found to be in the ground, seed, or manner of using the Drill, the person who ordered the machine shall pay the expenses of this visit, and this warranty shall cease.

FARMERS FRIEND MANUF'G COMPANY,
DAYTON, OHIO.

ALL IT IS REPRESENTED TO BE.

WESTFIELD, Union Co., Pa., Feb. 22, 1877.

Farmers Friend Manufacturing Company:

GENTS—The Farmers Friend Grain Drill, purchased of your agents, Riehl & Bro., last fall, has given the very best of satisfaction. Your feed rollers are so arranged that they form a double action in the cup, forcing out what would clog up a great many others—so-called force feed drills, and at the same time sucking the grain into the cup, thus securing the most reliable and perfect force feed I have ever seen. The Cone Gearing with which I can change the quantity by making the feed rollers revolve faster or slower without opening or closing the feed-cup, and can make a change without even stopping the team. Taking this and other improvements, all of which I deem it needless to mention, into consideration, the Farmers Friend stands without a rival. My father, who is a man of about seventy years of age, has also bought one of your drills from the above agents, and says he never saw its equal.

Yours truly,

DAVID GROSS.

1877 12 46

THE
FARMERS FRIEND

Manufacturing Company

Have been engaged for several years exclusively in the manufacture of Grain Drills. By giving their entire time and attention to this one object, and concentrating upon it the best mechanical skill, strictly honest workmanship, and a careful inspection of all the material used in the construction of their Drills, they are able to furnish the most reliable and satisfactory machine of its class ever offered to the public.

The constantly increasing demand for the FARMERS FRIEND DRILL is alone sufficient evidence of its unequalled merit, and is the company's reward for this earnest and untiring effort to produce a perfect machine. To meet this demand it was found necessary to enlarge the factory, and the Company have now facilities and a capacity for manufacturing unsurpassed.

The FARMERS FRIEND is known and sold in every state in the Union where wheat is sown, and large numbers are sold in Canada and some of the South American States, and in England, Germany, Norway, Sweden, and in some parts of Africa and the foreign trade is yearly increasing.

The FARMERS FRIEND is constructed to sow wheat and all other small grains, as well as corn, beans, and peas, and has attachments for sowing grass seed and artificial manures at the same time the grain is sown, or each separately.

In the all-important matter of the feed, it has a perfect and positive double force distributor, which delivers the grain evenly and regularly in any position in which it can be placed.

In simplicity of construction, in lightness of draft, and ease with which it can be operated and the quantity adjusted, it is unequalled.

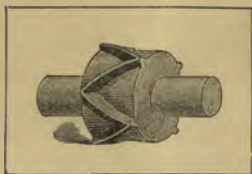
It has a perfect and ingeniously arranged Spring Hoe, which flies back into position upon coming in contact with any obstruction which would break a wooden pin.

For a full description and explanation of its many special and peculiar features and various attachments, we refer the reader to the several titles in the circular where they are given.

DOUBLE FORCE FEED.

Recognizing the feed as one of the most important features of the Drill, the manufacturers of the Farmers Friend have given it the most careful attention, and have what is the culmination of many years experience and observation and which is the most successful and reliable feed for all kinds of grain, in any condition, that has ever been used.

The following cuts will aid to familiarize any one not acquainted with it.

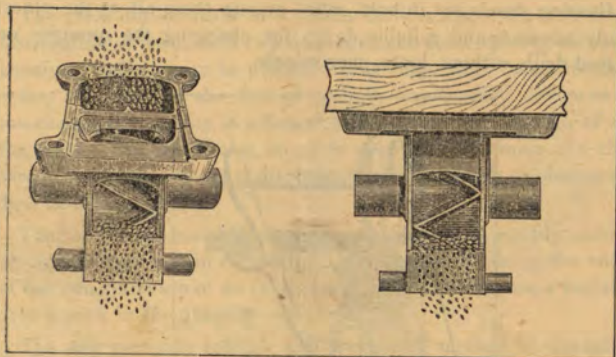


The first illustration shows the wheel itself, with a section of the shaft on which it revolves. It is cylindrical in shape, slightly concave, and has eight zigzag ribs on its surface, which elevate the grain and force it out. These alternating diagonal ribs working in conjunction, force the grain from either side of the cup toward the center, making the flow of seed continuous and regular, and from these two distinct actions or motions the term DOUBLE FORCE FEED is derived.

This peculiar formation has always received the commendation of unprejudiced minds, and a trial has always convinced the most skeptical of the merits that are claimed for it. The ribs do not serve as agitators, but as carriers for the grain which occupies the cavities formed by them and the space beneath in the cup, in its passage around the wheel; and they are so formed that at no point is the discharge of grain obstructed, but whether sowing a large or small quantity the flow is unceasing, and bunching or skipping an impossibility.

It is specially adapted for sowing oats, barley, and any bearded or trashy grain, as the feeder will draw in anything that comes to it; and as the ribs take it first from one side, and then the other, it is constantly forced forward toward the discharge opening.

The feeder revolves in a cup through which the grain is fed, as is shown in the following cut; it fills the entire space, and no grain can escape except as it is carried out by the feeder, and in this way all lost motion is avoided, and the same quantity will be sown irrespective of the position of the Drill.



Contrasting this form with the drills which feed from the side, the effect of changing the position of the Drill will readily be seen, as the grain can not fall away from the feeder, or accumulate on it, and sow more or less, but the relative position of the grain and feeder is always the same, so the feed can not vary. This was shown at the Centennial most conclusively, as will be seen by referring to the tables in another page, showing our Drill to have sown in the entire five tests as a drill would be used in the hands of a farmer, sometimes in one position and then in another, but *one pound four and three fifth ounces* more than it was set to sow, the tests representing ten bushels sown on five acres. In speaking of this form of a feed the CENTENNIAL JUDGES say:

“We unhesitatingly pronounce in favor of those drills which have a fixed feed roller occupying the entire space of the seed-cups.”

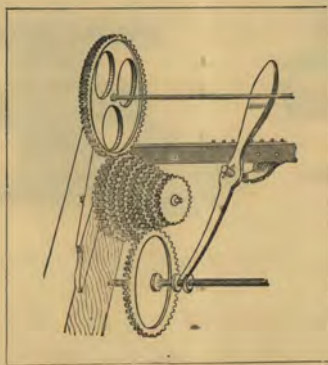
And in making the award, they recommend it as follows:

“For Force Feed Wheel, which is slightly concave, having eight zigzag ribs on its surface, filling the seed-cup and elevating the grain in a manner highly satisfactory.”

NOTE.—In some sections it is desirable to plant corn, peas, and beans with a drill. We have adapted our Drill to sow them as well as any other, but persons wanting their machine for this purpose *must specify it distinctly in their order.*

THE CONE GEARING

It is a fact that can not be successfully disputed that great accuracy of delivery in any given quantity can only be obtained by the use of gear-wheels. The use of these wheels in a cone is covered by a patent of B. Kuhns, and is applied only on the Farmers Friend. All other devices have been found deficient and unsatisfactory, and the Cone Gearing stands out in bold relief among them all as the oldest and only accurate and reliable device for changing the quantity on force feed drills without loose gear wheels.



It consists of change wheels graduated to sow half pecks, bolted together in a cone. The change is made by sliding a wheel by a lever into the wheel on the cone to sow the desired quantity. This is done behind the Drill, where a notched plate indicates what each wheel will sow.

In giving this Drill an award the Centennial Judges recommend it as follows :

“For clever or ingenious arrangement of change wheels clustered on a cone, so that change of quantity is effected with the greatest accuracy and ease, even whilst the work is in progress.”

THE CONE GEARING MAKES THEM SELL.

YORK, Pa., July 13, 1876.

The two Drills I bought of you have been thoroughly tested, and have given entire satisfaction. They deliver *oats* very regular, and farmers in this section think mine will yield more to the acre than any in the neighborhood. It is the most perfect Drill I ever saw, and this is the universal opinion of our entire community where it has been tested. *The “Cone Gearing” makes them sell very rapidly.*

JOHN C. SPANGLER.

The Cone Gear is Best.

The great desideratum in a Grain Drill is the even and accurate distribution of seed, each cup delivering the same quantity in whatever position the Drill may be placed. It is impossible to secure the necessary regularity in the flow of seed by any feeding device in which the change of quantity is effected by changing the position of any of the parts of the distributor, so as to enlarge or diminish the channel through which the grain is discharged, or by opening or closing a slide door in the seed cups.

That any such device is wholly unreliable will be readily understood on considering that in regulating a feed-cup or opening, the variation of but one sixteenth of an inch in the opening will cause a variation of over a peck in the quantity sown.

The only perfectly reliable and practicable method of changing the quantity, and at the same time securing the necessary regularity, is by having the feed-wheels so constructed as to fill the seed cups in which they operate, and causing them to revolve faster or slower by a series of cog-wheels. This was the turning point in the examination of drills at the Centennial Exhibition, where, after a thorough and protracted trial, all the new devices which have recently appeared failed, because of irregularity in sowing, or some other defect in construction, and the awards were granted only to those having cog wheels.

The great objection to a cog gear, however, is the inconvenience and trouble in making the changes, as the wheels have to be removed and new ones put on, which can only be done while the Drill is stationary. But the FARMERS FRIEND has successfully overcome this difficulty by the simple and ingenious arrangement of the wheels on a cone, and the change is effected by a lever handle, with the greatest accuracy and ease, even while the Drill is in motion, and it is positive and reliable under all circumstances.

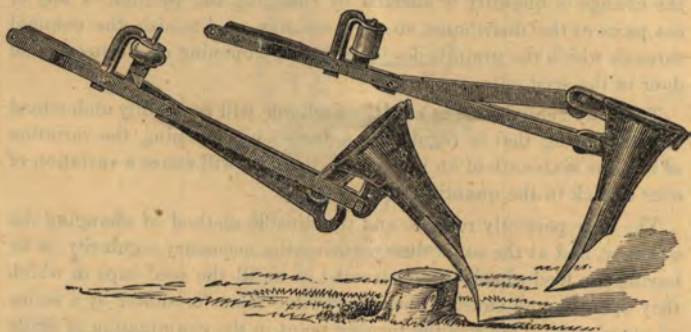
In speaking of the advantages of cog wheels over other devices the CENTENNIAL JUDGES say:

"We are firmly persuaded that the change of wheels, which is the original plan, is decidedly the more accurate, but it can only be effected when the drill is stationary, except in one instance: on the Farmers Friend the change of quantity can be made while the machine is in operation."

SPRING HOE.

We can not better describe the use of this improvement than to copy from the report of the CENTENNIAL JUDGES:

"A portion of the hoe frame is hinged so that in the event of coming in contact with a fast stone or tree root, a not unusual accident in many districts, the hoe flies back, and accident is avoided as soon as the obstruction is removed, or rather as soon as the machine is set free from the obstruction the hoe acted upon by the powerful rubber spring flies back into its place. *This is a very perfect and ingenious arrangement.*"



The above cut shows its operation. A lever with the rubber on one end, and a notch in the other connecting with the lever is pivoted in the drag-bar so the line of resistance is directly from the lever to the fulcrum, which makes a positive lock without affecting the gum-spring. A continuous strain can not break this lock, but when a quick, sharp blow or obstruction is met a small roller in the ear of the hoe moves out of the notch above referred to upon the lever, as shown, compressing the rubber, which throws the hoe back to its place when the obstruction is passed. These rubbers can be taken out in a moment, and by protecting from exposure be made to last much longer.

This is the only spring hoe in which the rubber does not have to hold the lever in position, and become weak and worthless with continued use; and it is the only one that received special mention at the Centennial. READ THE JUDGES' WORDS:

"The India Rubber Springs, in connection with the jointed hoe frames, intended to bring the hoe into position if thrown back by an obstacle, are cleverly or ingeniously arranged, so that during ordinary work no pressure on the rubber is possible."

PATENT REAR HOE SHIFTER.

The convenience of having something to zigzag the hoes without going in front of the Drill is no longer questioned, but owing to the additional cost of most of those in use many drills are made without such an arrangement. *Every Farmers Friend* has a Patent Rear Shifter on it that can not be excelled for simplicity and durability and strength.

One half the drag-bars are attached to the frame and one half to a movable bar. To the latter is attached an iron bar that passes to the rear of the Drill, where it fastens on a cross-piece in the frame by a stationary pin that goes through a hole in the bar. All that is necessary to shift the hoes is to raise this bar out of the pin, and push it forward until the pin comes in another hole in the bar and fastens itself.

SWINGING CUP OR RECEIVER.

Our Swinging Cup or Receiver, to which the gum tubes are attached, has been much improved, and as now arranged can be readily taken off and again replaced. At the lower point of the feed cup are two small projecting arms, over which the receivers hook and fasten themselves without the aid of spring or bolt. The arrangement is so simple and the results so important as to have won the special commendation of the Centennial Jurors. The tubes last much longer if taken off and protected from the weather.

THE LAND MEASURE.

It not only measures the land, but enables you to tell whether the Drill is sowing the desired quantity per acre, or not. This is very important, and a drill without a land measure is imperfect.

THE GRASS SEEDER.

This is placed in the rear of the hopper, but can be used in front also, if desired, and can be taken off entirely if not wanted for use.

DRAFT AND DELIVERY OF FERTILIZER.

SCOTTSDALE, N. Y., May 2, 1877.

Farmers Friend Manufacturing Company, Dayton, Ohio:

Gentlemen—Of the Drills bought of you this spring, only one remains unsold. Two of the Combined Fertilizer Drills have been started, and I find them of very light draft, and the delivery can not be surpassed. The Cone Gearing looks as if you supply a long-felt deficiency. Yours truly,

HENRY L. HALL.

SOWING FERTILIZERS.

The question of using commercial manures, bonedust, ashes, plaster, or other fertilizers, for enriching and strengthening the soil, has for several years received the attention of farmers in all the older states, where a succession of crops has so exhausted the strength of the land that the production is not as abundant as when the soil was new, and possessed of the properties that brought the grain to a full and rich maturity. Experience has shown that the use of fertilizers in such soils has been productive of larger and better crops, and such results have led to their extensive use and a demand for a machine to deposit it in the ground with the grain, so as to get the greatest good from the smallest amount. To supply this demand, a Farmers Friend Fertilizer, or combined machine, has been made, possessing all the improvements that experiment has shown to be necessary.

The box for the fertilizer is in the rear of the grain box, and is made with a concave bottom, which is lined with zinc that will not corrode.

THE AGITATOR, or distributor, is simply a rod of half round iron, made to vibrate with a rocking motion across the bottom, and is made to scrape the openings through which the fertilizer is sown, to keep them open and make a uniform delivery. Above this agitator are projecting arms that move through the box, above the center, keeping the fertilizer from bridging or packing.

THE GEARING is simply a large wheel on the shaft, and a small one with a crank that rocks the agitator, all securely protected from the dirt.

THE INDEX LEVER, by a simple movement, opens and closes the cavities through which the fertilizer is sown, and there is also a hand lever by which the agitator can be thrown out of gear without stopping the Drill, so the fertilizer can be sown only where it is needed.

The agitator can be taken out in a few minutes if for any reason it should be desirable to do so.

The Grass Seeder is in the rear, but can be used in front if desired.

It will sow any kind of grain, fertilizers, or grass seed, at the same time, or any one separately.

It is made and finished second to none, in any size, for the uniform price of \$25.00 above the cost of a plain Drill.

Its draft is but little more than a plain Drill, the gearing and agitator being so simple, and it is warranted to work in a satisfactory manner.

SOME REASONS FOR BUYING A Farmers Friend Drill.

It made more points at the Centennial than any other, and was one of the four drills out of fourteen that got an award.

It can not vary in seeding, whether on the level or hillside, and whether driving fast or slow.

It will always sow any given quantity every time it is set to sow that quantity, and no mistake can be made.

It cracks no grain, and will not clog up in the cups, which are in full view of the driver.

It will sow *any kind of grain, large or small, light or heavy*, with perfect regularity.

The amount of seed per acre is changed in any desirable quantity by cog wheels, but without changing loose gears.

It sowed but *one pound four and three fifth ounces* more than it was set to sow, in a test representing ten bushels sown on five acres of every variety of surface.

There is no weight on the horses' necks.

It has the best spring hoe for rough and stony land.

The land measure or surveyor is accurate, and is a valuable attachment.

The grass seeder can be taken off when not in use, and can be used in the front or rear.

The gum tubes can be taken off instantly, so they can be preserved by putting in the hopper every night.

Its hoes *shift farther than others*, and a rear shifter is put on every Drill, so you need not go in front to do it; and when shifted the swinging bar has three points of support, making it stronger and better.

It is better than any drill that was ever made without gears; will sow better, make more accurate changes, last longer, and give better satisfaction with continued use.

The hoes have long steel points, which make better furrows, and scour better than others, and are formed with special reference to clearing themselves of trash.

The frame is made half an inch heavier than others, has four cross rails, is put together with mortise and tenon, and with the entire Drill, is made with a view to durability as well as to please the eye. In construction and finish, compare it carefully with any other.

THE Farmers Friend Grain Drill

AT THE
CENTENNIAL EXHIBITION.

The display of drills at the Centennial Exhibition was confined exclusively to the American Section, but here the entries were numerous, every American manufacturer being represented. The machines were subjected to a severe test, the result of which is given in the following pages, together with a full account of the manner in which the trial was conducted, and the method adopted for awarding prizes, to which we ask the special attention of our readers.

It will be noticed that in our tables showing the result we give the standing of each drill in every position in which it was tried, and also the *average* of each in all the tests made. This we consider the most impartial exhibit of the result that can be made, as it shows exactly what each drill will do in the field, where the inequalities of the ground would throw it into all the various positions in which it was tried by the JUDGES. These tables have been prepared with much care, and, being taken from the original records, are reliable.

The FARMERS FRIEND was sent to the Centennial, not only for exhibition, but also to be placed in competition, and we can refer to its record here given with feelings of pride, for it not only stands justly at the head of the list, but, as will be observed, every prominent feature of the Drill was especially mentioned in the diploma and commended.

Its peculiar and simple construction, its lightness and elegant finish, commanded the attention of both Foreigners and Americans, and its many advantages over the other drills on exhibition was the subject of general remark.

The *Agricultural Gazette*, of London, England, the leading agricultural journal of Great Britain, recently published a valuable and carefully prepared series of articles embracing a description of the best machines in each class at the Centennial. The representative of the *Gazette* after a critical examination of all the drills exhibited, selected the FARMERS FRIEND as the "nearest approach to perfection in its department," and in a letter published April 9. 1877, he gives a full illustrated description of the FARMERS FRIEND, and pronounces it "decidedly the best Grain Drill shown at Philadelphia." The *Gazette* is the organ of the Royal Agricultural Society, of which its editor is secretary, and gives especial prominence to the department of agricultural machinery.

THE American System of Awards!

The method of awarding prizes, adopted by the United States Centennial Commission, has given greater satisfaction, perhaps, than that of any other of the World's Fairs ever held.

The examinations and trials were all conducted by juries made up of gentlemen of unblemished character, selected by their respective governments for their especial fitness and experience in the several departments they were sent to represent.

The machines were all subjected to a careful and searching test; the judges noting, as they proceeded, the points of merit they found in each, or the defects, if the machine proved unsatisfactory.

The standard fixed was high, but all machines coming up to the standard were recommended by the judges as worthy of award. To all machines so recommended the Centennial Commission issued a grand prize medal and diploma. The medals are in bronze, and all alike, but the diplomas contain all the points of merit reported by the judges, so that the excellence of one machine over another is determined by the number and importance of the meritorious points found in the diploma.

Take as an illustration the class to which the grain drills belong. Fourteen drills were entered for competition. After "*the most exhaustive test ever made in America*," four only were found able to pass the test, and up to the high standard of excellence fixed by the committee. The others all failed, either on account of irregularity or inaccuracy in sowing, or because of some defect in principle of construction, and therefore recommendation was withheld.

Of the four successful machines, two are manufactured in Dayton, Ohio, and the other two in the state of New York. No others were awarded premiums of any kind. On another page will be found the report or recommendation of the judges of the Farmers Friend Drill, on which the award was granted. From the great number of important points spoken of as found in this drill, its excellence may be determined, and the careful and thorough work of the judges discerned.

The Trial of Drills at the Centennial.

The examination lasted several days, and the drills were tested in five different ways,—1st. On the level. 2d. With the right wheel elevated. 3d. With the left wheel elevated. 4th. Going down hill. 5th. Going up hill. The grain as it passed through the tubes was taken up in *separate boxes* and weighed. Thus the variation between the hoes could be detected, while altogether it must make the desired quantity. The judges directed that the drills be set to sow two bushels (120 pounds) to the acre, and the test to be in one eighth of an acre; so that each drill to make the exact amount required must sow one eighth of a bushel, or 15 pounds.

The following table gives the result in each test and the average of all the different tests:

No.	NAME OF DRILL.	On the level $\frac{1}{8}$ of an acre.....		Right side elevated, $\frac{1}{8}$ of an acre.....		Left side elevated, $\frac{1}{8}$ of an acre.....		Down hill, $\frac{1}{8}$ of an acre.....		Up hill, $\frac{1}{8}$ of an acre.....		Average in the tests.....	
		lbs.	oz.	lbs.	oz.	lbs.	oz.	lbs.	oz.	lbs.	oz.	lbs.	oz.
1	Farmers Friend..	15	6	15	5½	15	6¼	13	5¾	16	5½	15	2 3-5
2	Champion	14	11½	15	½	14	5½	13	9	15	13¼	14	11 1-5
3	Superior	15	8	15	6½	14	13¼	15	1½	16	2	15	6 1-5
4	Empire	14	15½	15	¼	16	¼	14	2¼	18	6¾	15	11 2-5
5	Keller.....	14	4¾	13	14½	13	12	13	12¾	14	½	13	15 1-5
6	Buckeye	16	3	17	4¼	14	9¼	13	12½	18	14	16	2 1-5
7	McSherry	16	4½	16	3¼	16	3	14	6¾	17	11¼	16	2 2-5
8	Favorite	18	2½	18	7¼	17	15½	17	13½	18	15¾	18	4 2-5
9	Hoosier	19	10	20	9½	20	10	18	9¾	21	3¾	20	2 1-5
10	Canada Drill	20	10¼	21	2¾	And was then abandoned by the judges.							

By multiplying the average given above by eight the result is what each drill sows to the acre in the various positions it must meet in the field, when set to sow two bushels per acre.

1.	FARMERS FRIEND.....	2 Bushels,	1 Pound,	4 3-5 Ounces.
2.	Champion.....	1 "	57 "	9 3-5 "
3.	Superior.....	2 "	3 "	1 3-5 "
4.	Empire	2 "	5 "	11 1-5 "
5.	Keller.....	1 "	51 "	9 3-5 "
6.	Buckeye	2 "	9 "	1 3-5 "
7.	McSherry.....	2 "	9 "	3 1-5 "
8.	Farmers Favorite.....	2 "	25 "	3 1-5 "
9.	Hoosier	2 "	41 "	1 3-5 "

Prize Medal and Diploma.

United States Centennial Commission,

INTERNATIONAL EXHIBITION, 1876, PHILADELPHIA.



The United States Centennial Commission announce the following Report as the basis of the Award to the

Farmers Friend Manuf'g Co.,
OF DAYTON, OHIO,
for Grain and Seed Drill.



REPORT NO. 235.

- 1st. **Workmanship.** *For excellence of manufacture and material.*
- 2d. **The Cone Gearing.** *For clever or ingenious arrangement of change wheels clustered on a CONE, so that change of quantity is effected with the greatest accuracy and ease, even whilst the work is in progress.*
- 3d. **The Feed Wheel.** *For Force Feed Wheel, which is slightly concave, having eight zigzag ribs on its surface, filling the seed-cup and elevating the grain in a manner highly satisfactory.*
- 4t. **The Seed-Cup for Corn and Peas.** *The bottom of the Seed-Cup being hinged can be enlarged or opened by removing a pin, and also cleaned out.*
- 5t. **The Tubes.** *The conductors from the seed-cups to the coulters are removable, and can be replaced by*
- 6t. **The Broadcast Pans, (or Mouths,)** *Thus securing varying utility.*
- 7t. **The Spring Hoe.** *The India Rubber Springs, in connection with the jointed hoe frames, intended to bring the hoe into position if thrown back by an obstacle, are cleverly or ingeniously arranged, so that during ordinary work no pressure on the rubber is possible.*

JUDGES.

JOHN COLEMAN, President Royal Agricultural Society, England.
J. P. REYNOLDS, Secretary Illinois State Agricultural Society.
JAMES BRUCE, Farmer, Oregon, U. S.
E. OLDENDORFF, Prest. Depart'm't of Agriculture, Argentine Republic.
DON FERMIN ROSSELLO, Spanish Commissioner.
P. D. PAES LEME, Member Brazilian Commission,
EKEDA KENZO, Japanese Commissioner.

A. T. GOSHORN, Director General.
J. R. HAWLEY, President.

Attest: J. L. CAMPBELL, Secretary.

Circular an unsere Deutschen Farmer!

Wir erlauben uns ihre Aufmerksamkeit zu lenken auf die Vorzüglichkeit unserer Drills. Die Merkwürdigkeiten an dieser Maschine sind die Cone Gearing oder Verschiebungs-Geschirr und Double Force Feed (Doppelter Treibfütterer,) welche die Drill berühmt machten und Tausende derselben kamen dadurch im Gebrauch nicht allein in jedem Weizen-Staat der Union, sondern auch im Auslande.

Abbildungen des Fütterers sind an einer andern Seite zu sehen, welche eine gute Idee der Construction zeigen. Der Fütterer hat acht Zickzack-Rippen an seiner Oberfläche, welche das Getraide heraus drängen oder tragen. Seine Umwälzungen operiren feldförmig, und die Saat nimmt bei Passirung die Höhlungen in Anspruch, welche die Rippen und der Raum unter dem Fütterer verursachen und füttert in unterbrochener Weise. Die genaue Construction säet irgend welches Getraide ohne sich anzuhäufen, denn er füttert von allen Punkten seiner Oberfläche sehr regelmäßig, wie auch immer die Richtung der Drill sein mag.

Die Quantität der Saat so gesäet, ist regulirt bei den „Cone Gearing.“ Dieses ist ebenfalls abgebildet auf einer andern Seite. Um halbe Becks zu säen ist einfach die Veränderung der Räder nöthig angebolzt im Regel und die Quantität verändert sich beim Wechsel eines Gleit-Rades mit einer Hebel. Die Veränderung wird vollzogen ohne irgend eine Lösung und ohne das Gespann anzuhalten. Es ist viel leichter als irgend eine Veränderung ohne „Gears“ indem wir die Quantität ausrechnen bei den Drehungen der Fütterer, welches am besten ist, indem bei Regulirung oder Oeffnung eines Fütterungs-Wechlers die Veränderung eines ein sechszehntel Zolles es über ein Beck vermanigfaltigen. Diese Drill kommt schwerlich außer Ordnung, indem die Stellung des Fütterers niemals verändert und nichts gelöst wird; nichts kann sie abnutzen.

Es war die erste „Force Feed“ (Kraft Fütterer) Drill, welche die Quantität veränderte ohne die Zug-Räder zu lösen. Dieselbe hat sich stets als gut bewiesen und ist heute die einzige Drill, mit welcher man solche Veränderung machen kann und dies macht sie zu der zuverlässigsten, dauerhaftesten und accuratesten Drill in der Welt.

Es ist die einzige Drill mit Verschiebungsgeschirr, doppelt Kraft-Fütterer, und Patent Hebungsgassen-Veränderer, und ist garantirt von den Fabrikanten, daß er alle beanspruchten Vortheile erfüllt.

Wir lenken die Aufmerksamkeit auf diesen speciellen Vortheil, indem sie überaus wichtig sind. Auf der entgegengesetzten Seite werden kurz einige Vortheile derselben erwähnt. Wir versichern Allen welche Geschäfte mit uns zu thun gedenken, vollkommen Zufriedenheit bitten achtungsvoll um eine Examining und einen Versuch mit der Drill

Farm & Freund Manufaktur Co., Dayton, O.

Einige Gründe

für Ankauf einer

Farmer's Friend Drill.

Sie erhielt mehr Auszeichnungen auf der Weltausstellung als irgend eine andere und war eine von den Vieren aus vierzehn, welche eine Belohnung erhielten.

Sie ist nicht verschieden in Sämereien, weder in der Ebene noch am Abhang eines Hügels, ganz gleich ob man schnell oder langsam treibt.

Sie säet immer eine gegebene Quantität wenn gestellt zu derselben, kein Fehler kann vorkommen.

Sie quetscht kein Getraide und keine Verklozung in den Bechern kann stattfinden; der Treiber hat genaue Uebersicht derselben. Sie säet jede Sorte Getraide, groß oder klein, leicht oder schwer, mit auszeichneter Regelmäßigkeit.

Der Betrag des Samens per Acker kann gesetzt werden zu irgend einer wünschenswerthen Quantität durch Kammräder ohne Veränderung des Geschirrs.

Sie säet nur 1 Pfund und 4 3/5 Unzen mehr als nöthig zum Säen bei ein Probe-Säen auf 5 Acker jeder Boden Verschiedenheit.

Kein Gewicht auf der Pferde Nacken.

Sie hat die besten Sprungfeder Hacken für steinigen Boden.

Der Landmesser oder Aufseher ist accurat und ein wichtiges Attachment.

Der Grassäer kann, wenn nicht im Gebrauch, abgenommen und vorne oder hinten benutzt werden.

Die Gummi Röhren können geschwind entfernt und alle Abend zum Einsetzen des Trichters aufbewahrt werden.

Seine Hacken-Schieber sind weiter als bei anderen und ein Hinterchieber ist an jede Drill angebracht um nicht nach vorne gehen zu brauchen; und wenn der Schwung-Sperrbaum fortgeschoben, zeigen sich drei Punkte zur Unterstützung, welche sie stärker und besser machen.

Sie ist besser als irgend eine jemals ohne Geschirr gemachte, säet besser, macht mehr accurate Veränderungen, hält sich länger und giebt bessere Zufriedenheit im fortwährenden Gebrauch.

Die Hacken haben lange Stahl-Zinken, welche bessere Furchen machen und besser säubern als andere; und sind ausgestattet mit vorzüglichen Einrichtungen zum Selbstreinigen von Unrath.

Der Nahme ist 1/2 Zoll schwerer gemacht als andere; hat vier Kreuzschienen, wird zusammengefest durch Zapfenlöcher und Pinnen mit den vollständigen Drill und ist mit Umsicht und Dauerhaftigkeit sowohl als auch dem Auge zu gefallen, gemacht. In Construction und Zurichtung kann dieselbe mit irgend einer andern verglichen werden.

The Best is the Cheapest!

RETAIL PRICE LIST

8	Hoe, 8 inch Drill with Grass Seeder.....	\$ 80 00
8	" 9 " " "	83 00
9	" 7 " " "	85 00
9	" 8 " " "	88 00
10	" 6 " " "	90 00
10	" 7 " " "	90 00
11	" 6 " " "	95 00
12	" 6 " " "	100 00

Any size Drill with Fertilizer Attachment, \$25.00 extra.

" " " Spring Hoe, \$1.00 per hoe extra.

Payable one half October, 1877, and one half a promissory note maturing January 1, 1878, with interest from October 1, 1877.

The Drills are delivered free on board the cars at Dayton, but the freight must be paid by the purchaser on receipt of the machine.

No Drills are sent out on commission, and all ordered and shipped must be promptly settled for on terms of the agreement.

Defective castings will always be replaced free of charge, but any broken from other causes must be paid for at a slight advance above cost of production to cover expenses of handling. A price-list of extras can be had upon application to us or our agents.

In regard to freight, we are always able to make low rates, as seven distinct lines of railroad diverge in every direction from Dayton, which gives us the benefit of competing rates to nearly every point, and facilities for shipping not enjoyed by any Drill manufacturer outside of this city.

Orders from strangers must be accompanied with the cash or satisfactory reference.

Orders for this Drill should be given as early as possible, as the demand for it is very great, and when so many wait until they need them before ordering, some must be disappointed or delayed, although our capacity and facilities for manufacturing and shipping are unsurpassed.

Any one wishing to purchase this Drill, and not knowing of an agent for it, should address Farmers Friend Manufacturing Co., Dayton, Ohio, who will refer them to their nearest agent, or correspond with them direct.

DIRECTIONS FOR USING

Farmers Friend Grain Drill

The quantity seeded is regulated by measurement, not by weight, counting 32 quarts to the bushel.

To make the change for seeding the amount of grain required, throw the cone-wheel out of gear by either raising the lift-bar or pressing on the lever in the rear of the cone and to which it is attached, and move the shifting-lever into the notch indicating the number of pecks wanted to be sown to the acre.

WHEAT, RYE, OR CLEAN BARLEY.

Notch 4	will sow.....	4	pecks.
" 5	"	5	"
" 5½	"	5½	"
" 6	"	6	"
" 6½	"	6½	"
" 7	"	7	"
" 8	"	8	"

FOR SOWING OATS OR MORE BARLEY.

Remove the small or loose cog-wheel, between the cone and the lever to which it is attached, and adjust the larger one which you will find in the hopper-box.

Notch 6	will sow.....	2	bushels, 1 peck.
" 6½	"	2	" 2 "
" 7	"	2	" 3 "
" 8	"	3	"

THE SPRING HOE: Put the rubber springs on the stem, and place it in the holder; then press on the other end of the lever until the latch on the notch comes in the roller in the ear of the hoe. Take the rubbers out and put them in the hopper when through seeding, and they will last much better.

Did not Vary One Pint from Directions.

LEMBURY, Northumberland Co., Pa., Feb, 26, 1877.

Richl & Bro., Lewisburg, Pennsylvania:

GENTS—I am perfectly satisfied with the Farmers Friend Grain Drill bought of you last season. I sowed forty bushels of wheat part of which was rakings, full of gravel, that my neighbors said it would be impossible to sow, but found it quite different. It sowed right along and the exact quantity as indicated in the directions. I put in two bushels to the acre. It did not vary one pint. I tried it with all kinds of grain, and it is the farmer's friend indeed.

Yours truly,

R. T. HOOVER.

