

BROWN ENDLESS CUTTER

MOWING MACHINE.

LIGHT DRAFT, EASY TO RIDE, SIMPLE, DURABLE, NOISELESS,
AND ENTIRELY NEW.

BROWN ENDLESS CUTTER COMPANY,

F. B. DOLE, Treasurer,

101 Commercial Street, Boston, Mass.



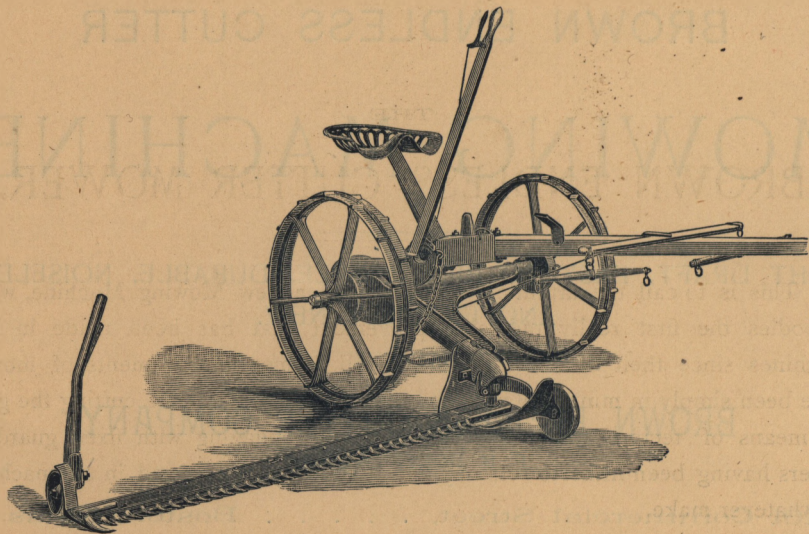
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THE
BROWN ENDLESS CUTTER MOWER.

This is to call the attention of farmers to a new Mowing Machine, which embodies the first really radical improvement that has been made in such machines since their first introduction. All former improvements of mowers have been simply in minor details, the great central principle of cutting the grass by means of reciprocating or vibrating knives engaging with fixed guards or fingers having been hitherto retained and practically unchanged in all machines of whatever make.

In the *Brown Endless Cutter Mower* this principle is done away with entirely, and a direct cut, operating continuously and always in the same direction, is substituted. This principle of a direct and uninterrupted action has been employed in machines for cutting all sorts of materials, from the hardest to the most yielding, and it has long been evident that its application to the cutting of grass and grain would effect a great and much-needed improvement in machines for this purpose.

In the mower which we now offer to the public, this desirable end has been attained to actual perfection. The inventor, Mr. James O. Brown, has had a long experience in farming and in the use of mowing machines, before he turned his attention to the problem which he has solved so successfully that we are confident he has left no room for further improvement in this direction, and we challenge the criticism of all practical farmers and mechanics upon the machine which embodies the result of his careful study and patient and costly experiments.

DESCRIPTION OF THE MACHINE.

In appearance the *Brown Endless Cutter Mower* does not differ very greatly from other mowing machines, though even the most careless observer could not fail to notice the greater lightness of the cutter-bar, and the comparative absence of the complicated arrangement of machinery for actuating the knives. It is mounted on two wheels 30 inches high, and set upon an axle 3 feet 11 inches long. The power is taken from the axle near the right wheel, by an enclosed gear, which is so placed as to leave the space between the wheels free of machinery, thus enabling large obstructions to pass under the axle. At this point, and within easy reach of the driver, is a lever for throwing the machine in or out of gear. From this gearing a straight shaft conveys the motion to another similarly enclosed gear at the inner end of the cutter-bar. *There is no crank nor pitman.* In the inside shoe, and connected with this latter gearing, is a toothed wheel giving motion to the cutters, which are attached to each other in the form of an endless chain, and cut always toward the driver, passing back along the back side of the cutter-bar, and under cover, to an adjustable pulley at the outer end of the bar.

The cutters are of finely-tempered steel, $1\frac{3}{4}$ x $1\frac{3}{8}$ inches in size, and each one is securely fastened to a forged steel link, the links being joined together in sections of six, which are attached to each other so as to form an endless chain. Any one of these sections may be detached from the chain and another substituted for it, by the farmer himself in the field, without the use of tools and without stopping the machine over two minutes.

The cutter-bar is made of a well-tempered saw-plate, $\frac{1}{8}$ inch thick and $5\frac{1}{2}$ inches wide, with teeth projecting $1\frac{1}{2}$ inches, running into the guards and forming the guard-plate. The cutter-bar is further strengthened by a corrugated spring steel centre-plate through its entire length.

The guards, or fingers, are of steel, each one fastened to the cutter-bar by a single bolt, and very easily removed or replaced. They are placed only $1\frac{1}{2}$ inches apart, but are so much smaller and lighter than those used in reciprocating cut machines, that the entire weight of a set of them is very much less. These guards are of a peculiar and greatly-improved form, curving upward from the cutting point nearly to the end, and then dropping to a level, thus enabling them to pass easily through lodged or heavy grass, the grass sliding *downward* to the knives, instead of having to be forced *upward* to them. The top of the guards over the cutters is open and so curved as to turn the cut grass away from the cutters, preventing all liability to clog. The upper surface of the cutter-bar is covered with a smooth steel plate, composed of two parts hinged together so as to allow free access to the cutters when necessary, and permitting the cutter-bar to pass without obstruction under the cut grass.

Both the inside and outside shoes are fitted with adjustable wheels, which can be raised or lowered, so as to cut at any height that may be desired, and the inside shoe is hinged to the main frame in such a manner as to permit the cutters to operate freely at whatever angle the cutter-bar may be placed. A lever at the right hand of the driver permits the cutter-bar to be raised instantly and easily to avoid obstructions of any kind. The cutter-bar can be folded across the machine when not in use.

ITS ADVANTAGES.

Among the many points of advantage presented by the *Brown Endless Cutter Mower* over other mowing machines, may be mentioned the following:

THERE IS NO PITMAN ROD.

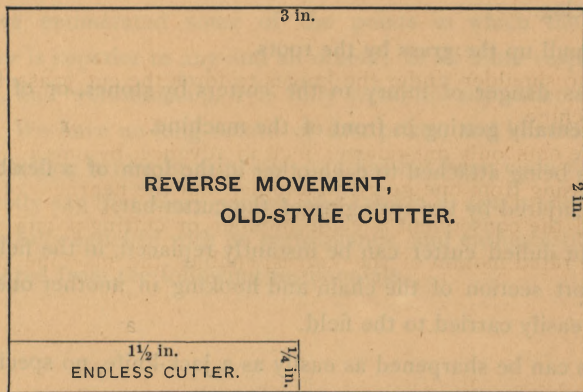
The mechanism is simple, easy to understand, easy to run, and easy to keep in order.

The cutters are actuated by simple gearing instead of by a crank motion, thus insuring steadiness of operation and easy riding,—the latter being a most important consideration.

The cutting being all in one direction, inward toward the wheels, the cutter-bar can be made very light, as it does not have to stand the outward thrust of the knives which accompanies every turn of the crank in reciprocating-cut machines. This same consideration also greatly reduces the side draft, making much easier work for the horses.

There is no shoulder under the knives to force the cut grass forward in the way of the machine.

Each knife cuts only one-quarter inch in advance, by one and a half inches in width, in passing from one guard to another, but the nearness of the guards to each other and the consequent greater number of cutting-points, together with the much more rapid motion of the knives, enables the machine to work easier than any other.



The above diagram shows the great difference in the surface cut by the old-style cutter and the Brown Endless Cutter at each movement of the knife from one guard to another.

It can not clog.

It will not pull up the grass by the roots.

There is less danger of injury to the cutters by stones, or of injury to any person by accidentally getting in front of the machine.

The cutters being attached to each other in the form of a flexible chain, are not liable to be injured by the springing of the cutter-bar.

A broken or dulled cutter can be instantly replaced, in the field, by merely unhooking a short section of the chain and hooking in another one, of which a number can be easily carried to the field.

The cutters can be sharpened as easily as a jack-knife, no special machinery being required.

It makes no difference in the running of the machine, at what angle the cutter-bar is elevated.

It runs with less noise than any other machine.

We have enumerated some of the points in which the *Brown Endles Cutter Mower* is superior to any and all others; in all other respects, of material, construction, and workmanship, it is fully equal to any other mowing machine ever made. We have no long record of first prizes, and immense sales to boast of, for our machine is new in principle, and has not been upon the market. But we can honestly say that every person who tried it or saw it tried in the field last summer, was fully satisfied with its performance, and enthusiastic in its praise, as may be gathered from the following testimonials.

TESTIMONIALS.

FITCHBURG, MASS., July 1, 1885.

Brown Endless Cutter Co., Boston, Mass.

GENTLEMEN : I bought a field of grass on sandy and poor soil, which I have never seen cut with any machine except the Brown Endless Cutter. The grass was very dry, wiry and thin, not enough to steady any machine that was ever built, and I supposed the Brown Endless Cutter would slide over it, without cutting it, as I have seen many other machines do. But it did not; it cut it as clean and as neat as any lawn-mower I have ever seen. I also saw it work satisfactorily in very heavy grass, and think it will work in any place where any other machine can work, and many places where others will not.

It is I think a great success over all other machines now in use, for it is a very light draft and no lost motion to overcome, and is cutting all the time. When in gear, it draws as easy as most machines when out of gear. The principle I think is right, and I am confident it will be universally used in the future.

Yours truly,

F. H. WHITCOMB,
Mechanic, Fitchburg.

FITCHBURG, July 3, 1885.

To the Brown Endless Cutter Co., Boston,

GENTLEMEN: After several days of trials with your Endless Cutter, I am prepared to make a statement of my observations. I have used most all kinds of machines for years, have rode them and repaired them, and understand how they work, and I am convinced that your machine is superior to all others now in use. I put my young horse into your machine, and mowed acres with her and she showed no fatigue. It draws very easy and cuts the grass even and clean. I have tried it in short, dry June grass, in tall herds grass, and in heavy, wet, lodged clover, and in every possible way, and in each case the result was the same. It does not clog; lays the grass even; it does not shake the driver, and it did not tire me as other machines have done.

I believe it is the right principle and will readily be adopted by the farmers.

Very truly yours,

FRANKLIN S. LOVELL.

QUINCY, MASS., June 9, 1885.

The Brown Endless Cutter Co., Boston,

GENTLEMEN: By invitation I was present at a trial of your mowing machine. It was operated by at least three different men, and drawn by one horse. It cut clean and nice in grass that other men said they could not mow with their machines. I was well pleased with its execution.

A. CHURCHILL.

FITCHBURG, July 15, 1885.

GENTLEMEN:

I am glad to state that I was present at a trial of your Endless Cutter Mowing Machine this afternoon, and was much pleased with its operation. In this trial of about one-half hour between 3 and 4 P. M., the machine was drawn by one horse working in the hot sun without apparent effort, and did not sweat even under the harness.

I believe your steady motion Endless Cutter to be a great improvement over all crank motion vibrating machines, and should be adopted by all practical farmers. I am a machinist and entirely disinterested in any mowing machine. In this machine the power seems to be used to cut the grass and not to shake the machine to pieces.

Yours truly, JOHN A. NUTTER,
Fitchburg, Mass.

FITCHBURG, July 8, 1885.

Brown Endless Cutter Co., Boston:

By invitation I was present at a trial of your mowing machine, and I feel free to state that I think your movement is a great improvement over the reverse motion now in use. It was easily drawn by one horse, and cut a clean swath without clogging in any way, and I think it will readily be adopted by the farmers.

L. H. GOODNOW.

MT. WOLLASTON FARM, QUINCY, June 6, 1885.

To the Brown Endless Cutter Co.,

I gave permission for a trial of your machine in what I call the severest tests that could be made, and was present with many others. The machine was easily drawn by one horse; cut the grass clean and even; did not clog in any way, and was pronounced by all present to be a great success. I would feel safe in purchasing one for our own use.

JOSEPH W. DEMEN,
Foreman, J. Q. ADAMS.

BOSTON, Aug. 28, 1885.

Brown Endless Cutter Co., Boston:

Some time in July last my attention was called to your improved cutter, and I went to see it work in a field of heavy grass. I have seen it work in various kinds of grass at different times since, and at every trial it has proved to be a perfect working machine. I have often seen it operated by one or two men who happened to be present, and they haul it quite a distance, cutting a nice swath as though it was hauled by a horse.

It must be accepted by all practical men as the right principle, and will be received by all first-class farmers as one of the greatest improvements since the introduction of mowing machines.

JOHN GALVIN, Supt. Austin Farm.

QUINCY, MASS., June 13, 1885.

The Brown Endless Cutter Co., Boston.

I was invited to operate one of your Endless Cutter Machines in a field of heavy orchard grass. I have driven several kinds of machines for years, with one and two horses, and can truly say that your machine runs much easier and with much less noise than any I have ever used. My impression was very favorable, and I would not hesitate to order one of the machines if they were in the market.

GARDNER B. GLOVER,
Foreman, J. Q. A. FIELD

QUINCY, MASS., June 9, 1885.

Brown Endless Cutter Co.,

GENTLEMEN: I was present at a trial of your machine on the farm of John Q. Adams. I rode the machine and closely watched its execution in both thick and thin grass, and from what I have seen I am convinced that it must ultimately take the lead, for the following reasons: there is no clogging of the machine; runs easily and with less noise; can be easily adjusted to all kinds of grass, and the knives are much better protected from rocks, etc.

PRESTON P. KITTREDGE.

PORTSMOUTH, N. H., July 2, 1886.

Brown Endless Cutter Co.,

GENTLEMEN: During this month I have had an opportunity of testing the strength and working qualities of your Endless Cutter Mowing Machine. I find the machine amply strong enough for a pair of horses that weigh twenty-six hundred pounds. The draft is very light compared with that of other machines. It cuts the grass off evenly, and does not disturb the roots, which I think is of great value to the farmer. I am convinced that it is the right principle, and will be adopted. The one-horse Endless Cutter cut the grass the prettiest and smoothest of any machine that I ever saw.

(Signed)

WM. L. PHILBRICK,

Foreman of Frank Jones' Farm.

PORTSMOUTH, N. H., July 24, 1886.

Brown Endless Cutter Co.,

GENTLEMEN: During the present haying season I have driven a pair of horses in the field of Hon. Frank Jones, cutting on an average ten or twelve acres per day. I have used the Buckeye part of the time, and the Brown Endless Cutter the balance, and your machine hauls much easier. It does not shake either machine or driver. It does not tire one to ride it; it cuts the grass very evenly, and does not pull the roots. I have mowed at least forty acres with it, and my horses never showed any fatigue. I have used it in very heavy lodged grass, and in most all kinds of grass, and believe it is the only true principle by which grass or grain should be cut.

(Signed)

GEO. W. HUCKINS.

PORTSMOUTH, N. H., July 26, 1886.

Brown Endless Cutter Co., 101 Commercial Street, Boston, Mass.

GENTLEMEN: Within the last four weeks I have used one of your Endless Cutters in the field on the farm of Hon. Frank Jones. I have used many machines and understand how they work, and I can say that your machine hauls much easier, and cuts the hand-somest swarth of any machine I ever saw. It does away with all of that shaking and vibrating motion common to all other machines. I believe it is the right way to cut the grass, as it does not pull the roots, but cuts it off square, and leaves the stubble in its natural position. I have mowed at least thirty acres with your machine this year.

(Signed)

WILLIE R. CLARK.

PORTSMOUTH, N. H., July 26, 1886.

Brown Endless Cutter Co., 101 Commercial Street, Boston, Mass.

GENTLEMEN: For the past week I have been driving a pair of light horses and using one of your Endless Cutter Machines in a field of very heavy grass.

I have used the Buckeye and the Champion Machines and took my horses off of one of them and hitched to your Machine; I was surprised at the ease with which they hauled it. I have driven your Machine twelve hours a day, and have never seen my horses sweaty. It does not shake me; it handles perfectly; small stones do not effect the cutting edge. The stubble looks smooth and even after the grass is cut. I think the draft is one-third easier than any other Machine. It is easily repaired in the field. Any one can use it, as it is simple in construction. It will cut out the ditches better than any machine I ever saw.

(Signed)

JOHN MURPHY.

PORTSMOUTH, N. H., July 27, 1886.

Brown Endless Cutter Co.,

GENTLEMEN: I have used your Machine to mow several acres this season and find that it works easier than any other machine I ever handled. I mowed several ditches with it, and it did its work as clean as on even ground. It is the easiest machine for horses and driver that I ever rode upon; in every instance it has done its work in a perfect manner.

(Signed)

C. S. HAYES.

NORTH HAMPTON, N. H., July 29, 1886.

Brown Endless Cutter Co.,

GENTLEMEN: One day last week my attention was called to the working of one of your two horse Endless Cutters in a large field of very heavy grass. It was the first time I had ever seen one operated, and I followed it very closely around the field for nearly two hours. The machine worked in a perfect manner while I was present; it was driven across, and along ditches, and the work was done in a highly satisfactory manner. There were stones on the land, of all sizes and shapes, and they did not affect the cutting edge, I picked up two of the ugliest and threw them in front of the cutters repeatedly, and the cutter bar ran over them without damage to the knives, as easily as though they were not there. I believe they would have ruined the knives of any other machine I ever saw. I drove it myself, and I can say that it is the easiest machine that I ever rode. The draft is very easy; a pair of light horses did not sweat after being driven for hours in the hot sun, cutting a swath four feet six inches wide. It cuts the grass in the best possible manner and leaves the roots in their natural position, which I believe is of great importance. I have been a farmer for more than fifty years, and can only testify of the working of the machine as I saw it, it seemed to me perfect. The principle of cutting is the most natural, and I think will prove a great saving of power, and will accomplish more and better work than any mower I have ever seen.

(Signed)

JOHN F. FRENCH.

PORTSMOUTH, N. H., July 27, 1886.

Brown Endless Cutter Co., 101 Commercial Street, Boston, Mass.

GENTLEMEN: Sometime in June last my attention was called to the Portsmouth Machine Shop where I was informed they were building your Endless Cutter. I have been a farmer all my life and am well acquainted with the working of most all kinds of machines, having sold them for years. Your machine was brought into my field where the grass would average more than two tons to the acre, and a pair of my light horses were hitched to it. To my surprise it did not clog but cut the grass evenly, and worked well in the ditches, and over the uneven ground. It handles very easily. There were small stones in the land, and they did not affect the cutting edge in the least. Many people have been to see it work, and all pronounce it a great success, and an improvement over all vibrating machines. The draft is very light, and my horses do not seem tired after hauling it all day. It is easily repaired in the field in case of accident. It must be universally adopted by the farmers, as it is the only true principle by which grass or grain should be cut; leaving the roots in their natural position.

I consider it the most perfect piece of machinery that I ever saw for a Farmers' use, and one of the greatest improvements since the introduction of the Mowing Machine.

(Signed)

CHARLES N. HAYES.

SALEM, MASS., August 8, 1886.

*F. B. Dole, Esq., Treas. Brown Endless Cutter Co.,
101 Commercial Street, Boston, Mass.*

DEAR SIR: I have tried the Endless Cutter Mowing Machine you sent me and am highly pleased with it. The draft is light; the cutting even. I have never seen it clog; and it did its work equally well in fields of timothy and salt marshes. I have seldom seen a new invention which so thoroughly fulfilled the promises made for it.

(Signed)

GEO. B. LORING.

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