

THE "CASADAY"

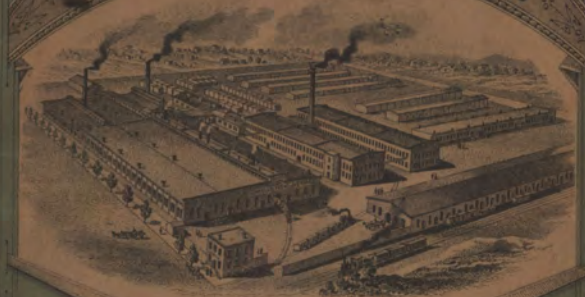


IN THE FIELD.

THE CASADAY SULKY PLOW

MANUFACTURED BY

OLIVER CHILLED PLOW WORKS



SOUTH BEND, INDIANA.

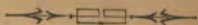
TESTIMONIALS FROM

[Redacted Name]

USING THE



OFFICE OF
Oliver Chilled Plow Works.



South Bend, Ind., September 1, 1880.

The Sulky Plow, as it has been made, has not been an unqualified success, possessing advantages which under favorable circumstances, cannot be questioned, its field of usefulness has been limited, and its merits weighted down by defects in principle and make-up, which have in a great measure hampered its success. Among the

OBJECTIONS TO THE SULKY PLOW,

as heretofore made, the following prevailing in a greater or less degree, will be recognized by those most conversant with it.

1st. *It is too unwieldy for small fields; cannot be turned at the corners, without lifting, and turning or backing, a slow, awkward operation, entailing loss of time which does not rest the team when turning on plowed ground, and tramps down the finished work at the corners.*

2d. *It lifts hard, especially if the tongue is pointing towards the plowed ground, causing the land-side to bind against the side of the furrow. The heavy furrow levers used, furnish evidence of this. To the man using them no evidence is needed. The addition of ratchets, triggers, spring pawls, and other "trappy" and short-lived devices, lately in vogue, for shifting the labor of lifting to the team, is further proof of this fact. The great drawback to all these horse-lifts is, when they are most needed, when the team is standing still, they are useless.*

3d. *It is difficult to back*, the heel of the land-side digging into the earth, unless the plow with its load, is lifted out, which is hard to do when the team is not in motion.

4th. *It is hard to guide*. The driver must keep a tight rein and close watch on team and plow, if he attempts to turn uniform furrows and *as the plow gives direction to the carriage*, instead of the carriage controlling the plow, a mistake in the set, adjustment or suction of the latter, a change in the level or position of the wheels, or plowing over rough surfaces, or in lands containing alternate hard and soft spots, causes the plow to pull in one direction, while the carriage has a tendency in the opposite. This results in a sideways slipping movement of the wheels, a grinding of the axles in the hubs, and side draft on the horses' necks.

5th. *It will not cut full depth in crossing a small hollow or dead furrow*, hence will not break rough, uneven prairie at a uniform depth.

6th. In starting in, or after passing an obstruction, it will not attain its full depth until it has plowed more than the length of its land-side.

7th. It plows out the last furrow in finishing a "land" in a very imperfect and slovenly manner.

8th. In riding over a stone or root the weight of carriage and driver is thrown on the beam of the plow.

9th. When lifted out the tip of the beam drops, throwing the traces and whiffle-trees against the horses' heels, where they are often stepped over in turning and backing.

Finally *it draws hard*, under certain conditions, *much harder* than a hand plow of the same size and shape. In the face of numerous fine spun theories and alleged dynamometer tests to the contrary, yet the hard naked fact remains that a very large majority of farmers who have used sulky plows in all kinds and conditions of soil, candidly admit that their teams labor harder than when doing the same work with hand plows. Further on we will offer conclusive reasons *why* the sulky plow, as it has been made, must distress the team more than a hand plow.

For these and other reasons, the sulky plow with all its merits, has been but a partial success, the defects which continued use develop, added to the fact that it grinds and twists out of shape and becomes loose in the joints, costs more, and is more expensive to keep in repair than a hand plow, has brought it into disfavor with many of the best farmers in the west. It is now no unusual sight to see, walking between the handles of their discarded hand plows, men whose costly sulky plows, after a year or two of service, are lying idle, buried in rust and rotting to pieces. That this state of affairs *does exist* is an undeniable fact.

Many of the closest reasoners in the farming community, (an industry which embraces more clear headed thinkers than manufacturers give it credit for) will tell you when asked, why they have thrown their sulky plows aside, that they want to use the sulky plow, but rather than subject their teams to the increased labor necessary to run it, they prefer to go back and trudge behind the handles, until the sulky plow, which is not hampered with this and other glaring defects, makes its appearance.

To this body of men as well as those of their neighbors who have been deterred from buying sulky plows, by the examples before them, we would say: *We are ready to supply you with the plow you have been waiting for.*

The Casaday Sulky Plow,

A cut of which, in its perfected form, appears on the opposite page, has been in use in the States where it was first introduced the past three or four years, as yet it is almost unknown outside of this limited territory, solely because the demand for it there, has been beyond our capacity to supply. We have lately erected large buildings for its manufacture on an extended scale, with the design of bringing it to the general notice of the farmers of the country. Its remarkable success in a more crude and imperfect shape than it now appears in, fully justifies us in investing a large fortune in its manufacture and sale.

A glance at the cut shows that this daring and original conception is a radical departure from all established ideas regarding the sulky plow. It is like nothing that has preceded it, striking out a new path of its own, distinct and independent. Its inventor early discovered that many of the most serious defects of the sulky plow arose from the use of a single part, and that *a part that does no work*, the bar or landside. After repeated but vain attempts to modify the defects arising from the use of this part, he at last hit on the happy expedient of *cutting it away entirely*.

The working parts of a CASADAY SULKY PLOW are simply a mouldboard and share. To take the place, and perform the duty of the cast off landside, the furrow wheel of the truck is



inclined inwards at the bottom at an angle of about 30 degrees, its rim revolving in the corner formed by the side and bottom of the furrow, as seen in the cut on back of cover. This is all there is to Mr. Casaday's invention, but the results arising from this bold stroke are surprising.

How to overcome or reduce the grinding friction of the landside on the side and bottom of the furrow has been *the* stumbling block of all sulky plow makers. Many profess in *theory* to carry the weight and side pressure producing this friction on the wheels. In *practice* not one of them do it.

It requires no hair-splitting argument to show that the "CASADAY" carries the weight of plow, frame, earth and driver, and the side pressure of the furrow, on its wheels. It *must* do it, there is nothing but the wheels to put this weight and pressure on, the plow proper having neither side or bottom to rest on, nothing touches the side or bottom of the furrow but the coulter and the *edge* of the share.

We will not insult the intelligence of our readers by any arguments proving that a given weight can be rolled over the ground on wheels with much less power than it can be dragged, or that the weight and side pressure of lifting and turning a furrow, can be overcome with less labor if put on wheels running on lubricated axle spindles, than if rested on a bar of metal three feet long, dragging and grinding against the side and bottom of a furrow. The only open question is—how much of this friction is there? Is there enough to make any material difference in draft after the greatest possible percentage of it has been overcome?

Here, again, the facts are too obvious to require argument. Every farmer *knows* that all the friction of lifting and turning the furrow settles on the landside; this is why, next to the share, the landside is the first part to wear out.

This friction, heavy as it is on a hand plow, is on a sulky plow *much greater*. We know this assertion is in direct contradiction of the claims made by makers of sulky plows, but no amount of plausible sophistry will stand against one or two stubborn facts, apparent to every owner of a sulky plow:

1st. The bar or landside wears out much quicker than that of a hand plow.

2d. An examination of the side and bottom of a furrow made by a sulky plow shows, that in hard, dry ground, the earth pressed by the bar is packed firm and solid; every grain of sand or gravel, and every small stone is driven firmly into it, leaving a smooth compact polished surface, while the track of the landside is covered by a fine, dusty powder, ground off the furrow. In soft ground, especially of a spongy nature, the observer can see the bank of the furrow spring outwards, like a rubber ball, after the heel of the landside passes.

In smooth, light work, following a straight furrow with a well broken team, careful driver, and plow in perfect order, this landside friction is reduced to its minimum, but the absence of any of these conditions (and they are seldom found together) adds to the labor of the team.

Considered in relation to its swaying motion from side to side, the sulky plow is a lever, the tongue forming the long end, the landside the short, and the wheels the fulcrum. When-

ever the horses crowd towards the plowed ground, or the land wheel rides up and down over rough spots, or the team follows a crook in the furrow, or when from any other cause the tongue is crowded towards the plowed land, the heel of the landside is forced solidly against the side of the furrow, adding greatly to the friction and causing a grinding movement of the axles in the hubs. When the ground is dry, hard and rough, or the plow is dull or lacks suction, and can only be held down to its depth by *forcing* it in with the lever, throwing the weight of truck and driver on the beam, relieving the wheels so one or both of them can be easily turned backwards while the team is in motion, or when, as often happens, the wheels are lifted clear of the ground entirely; then, indeed, the landside sulky *becomes a veritable "Horse-killer,"* and its owner discovers that something has gone wrong. He was led to believe that it would draw as easily as his walking plow of the same size, and it did seem to in the smooth, light work it was tried in when he bought it, but the conditions have changed, and so has the action of the plow.

If the revolving wheel of the "CASADAY" did not register on the dynamometer, a reduction of a single pound of draft, below the grinding bar of the landside, in smooth, light work, yet the fact that in the every day service of the farmer, whether in light or heavy, wet or dry, smooth or rough, level or rolling lands, it has no pressure, strain or friction to overcome, beyond the actual service of lifting and turning the furrow, it would still do a seasons plowing with far less distress to the team, than the landside sulky, or, in other words, *turn over more ground with the same labor.* All the pressure of the furrow being *at all times* on the wheels, neither careless driving, crooked furrows, hard ground or rough sur-

faces, can throw any twisting, binding strain on team or plow, or dead weight on the beam.

At first designed to lighten draft only, it was soon found that the removal of the landside relieved the sulky plow of other serious defects, and gave to the "CASADAY" a number of valuable working features.

Among these are :

THE PLOW GUIDES ITSELF. By this we mean that once adjusted to the work, as long as the furrow horse walks in the furrow, *it will turn whatever width it is set for, no more, no less*, and keep doing it until it is changed to take more or less land, *whether there is a driver on the seat or not*. At first sight this statement sounds rash; on examination it will be readily understood.

Having no landside to resist it, the pressure on the mouldboard causes the plow to draw into land. If there was nothing to stop this tendency it would continue to pull sideways. This is what occurs when starting at the end of a furrow, if the inclined wheel is away from the corner. As soon as the weight of the earth comes on the mouldboard the plow draws toward "land," and continues to do so until the furrow wheel meets the angle of the furrow; there it rests, the side pressure on the plow holding it snugly in place, and the plow moves straight ahead, turning whatever ground there is between the coulter and furrow wheel.

What is the result? The plow turns furrows of the same width from one end of the field to the other; it will not turn 12 inches here, 18 inches a hundred feet beyond, and 15 inches fifty feet further on. If it is set for 16

inches it will turn 16 inches now, 16 inches tomorrow, and 16 inches next week. If the driver wants more or less "land," he gets it by moving his furrow wheel in or out on the frame. If he opens his first furrow straight—and he *can* do that to perfection with the "CASADAY"—the plow itself will keep the furrows straight until the field is finished. Uniform work does not depend on skillful driving. As long as the lead horse follows the furrow, a tight rein need not be drawn on the team. Any boy who can turn the team at the corners can do as regular, even work as the most skillful plowman. On some of the large farms of Minnesota one driver manages two CASADAY PLOWS, walking alongside and turning the teams at the corners. And this is not the only gain; *turning the same width furrows always, the plow does more work in a day.*

IT WILL TURN SQUARE CORNERS WITH THE PLOW IN THE GROUND.* In a field free from obstructions the plowman can commence either in the middle or at the fence (the plow turns in either direction with equal ease), and *finish the field without once lifting the plow out* if he desires, turning square corners, and *plowing the corners out as deep as the rest of the work.* The landside being out of the way, the plow comes round on the pivot formed by the edge of the share, with so little strain that it can be done *with the neck-yoke unbolted from the tongue*, cutting off a great deal of lost time at the corners.

IT IS EASIER HANDLED than the landside sulky, there being no landside pressure against the side of the furrow to overcome, it lifts with remarkable ease. Owing to the ease with which it turns corners, lifting is seldom necessary, but when required, a slight pressure on the lever

throws the plow out. A horse-lift on the "CASADAY" would be a very useless appendage.

IT WILL PLOW ROUGH, UNEVEN GROUND, AT A UNIFORM DEPTH. Having no heel to rest on, the plow follows the wheels down into a hollow or dead furrow, and plows it out at full depth, *a feature not found in any other plow, hand or sulky.* It is the only plow that will break rough prairie at an even depth. Where the landside sulky will cut through a knoll or elevation at twice the required depth, and miss the little hollow beyond entirely, the "CASADAY" breaker goes over the same ground, cutting out the slice as deep in the one place as in the other.

THE ADJUSTABLE MOULDBOARD of the "CASADAY" is an entirely new feature, and a valuable one. The forward head of the post or standard is pivoted under the beam, the rear head, slotted crosswise; by loosening the bolts the plow can be turned on the pivot sideways, giving the heel more or less boldness or turn, as the character of the work requires. With the same plow the operator can give the furrow a sharp, quick, pitching movement, or a slow, easy roll. In short, he can adjust the plow so it will do its work *as he himself thinks it should be done*, an advantage every practical farmer will appreciate. This is one of the features which make the "CASADAY" the most perfect prairie breaker in existence.

INCREASED WEAR OF SHARES is another of the "CASADAY's" strong points. By the aid of a slotted joint, connecting the tongue and beam, the driver adjusts the bottom suction of the

share to the required pitch in any kind of work, from the lightest to the hardest, and can correct any tendency of the plow to run too deep or too shallow. While the share is new and sharp, or the ground is in easy plowing condition, the bottom suction can be reduced; as the share becomes dull, or the ground hard, the suction may be increased, gradually. This feature being under the entire control of the plowman, he need give the plow only the degree of suction required. This gives the share greater life, by preventing the quick rounding up of the edge, resulting from too much suction, or from the plow running on its nose, while on the other hand it enables the plowman to obtain the required pitch in hard ground, which will *pull* the plow in the moment the lever is opened. For this reason the "CASADAY" will work in rough, stony lands where the landside sulky cannot be used. By removing the upper curved bar from the foot of the lever, the plow raises in the frame when passing over a buried stone, without disturbing truck or driver, sinking to its full depth the moment the edge of the share passes.

FINISHING THE LAST FURROW is one of the weak points in all landside sulkys, which can only remove it by cutting down below the preceding one, deep enough to give the landside a bearing, and prevent the plow slipping sideways. The ditch left by this operation is not only unsightly, but a source of annoyance to the farmer, and danger to his machinery. The "CASADAY" turns out the last furrow as shallow as the driver desires; its inclined wheel running against the corner holds the plow as firmly in place there, as at any other point in the field—whatever unplowed land remains is lifted out clean.

Minor Advantages of the "Casaday."

When the plow is lifted, the traces and eveners, instead of dropping down, are raised several inches.

In backing there is no landside to dig into the ground.

The change from two to three horses is made by loosening a single bolt.

With either two or three-horse teams the plow has such entire freedom from side draft, that it will run without a neck-yoke.

Every ounce of weight can be taken off the horses' necks.

The inclined furrow wheel is adjustable, and can be set at the exact angle which in resisting the side and bottom pressure, pulls the wheel downwards lengthwise of the spoke, so that it plays as freely on the axle as the land wheel, shows no more evidence of wear, and can be set upright for driving on the road.

A heavy compression spring, guarded by stops, allows the land wheel to play over small knobs and other surface obstructions without disturbing the plow.

Construction.

The frame is made strong, solid and compact; the rolling coulter is fitted with chilled cone bearings, the wear of which can be taken up to prevent "wabbling." The wheels made of iron or wood, as preferred—the latter warranted for one year—are fitted with movable hub-boxes, easily and cheaply replaced, and have screw caps and dust-bands, which prevent leakage of oil and exclude dust. The beam is made of a straight piece of selected hickory, will neither

bend or twist out of shape, and in case of accident can be replaced by the owner. The absence of a landside, relieving the plow from strains or twists, prolongs the life of frame and plow.

The plow is fitted with mouldboards made of the highest grade of iron centre steel, or of Oliver's famous Chilled Metal, as preferred. Shares either steel or cast, both fitting the same plow. Adjustable weed hooks are furnished to order. The plow is also fitted with Oliver's patent Jointer, the value of which is too well known to require any recommendation here.

IN CONCLUSION—If the claims herein put forth for this implement are *based on facts*, it must be apparent to every reader of this little book that the CASADAY SULKY PLOW is destined to mark a new era in the history of plow making. To those who are acquainted with the position we occupy, as the leading manufacturers of hand plows in the world, we need scarcely say that self interest alone, would deter us from endangering the reputation we enjoy as plow makers, by wild assertions on paper, which we could not support in the field. To those who are strangers to us we can only say, the best evidence we can offer you of our sincerity is this, wherever the "CASADAY" is on sale the dealer is authorized by us to submit every claim we make to actual test on your own farms, the buyer to be the sole judge of its merits; if it fails to sustain the claims we make for it, it will remain our property. We make this offer believing as we do that the CASADAY SULKY PLOW will do more and better work, and a greater variety of it, with less labor on team and driver, and with less expense, than any plow on wheels.

Respectfully,

OLIVER CHILLED PLOW WORKS.

The "Oliver Chilled" Plow.

(See Cut on Next Page.)

This famous implement presents features, in its history, unparalleled in the annals of the trade.

Ten years ago it was an uncertain experiment, derided and laughed at by plow makers, and regarded with suspicion and distrust by farmers.

To-day it is in use on half a million farms, over five hundred men, three-quarters of a million dollars in money, and acres of buildings and machinery are constantly engaged in its production, its name has become a household word among the farmers of 20 states, and its superiority acknowledged by a number of weak imitations of its shape, and material, fathered by the same plow makers who one short decade back, sneeringly pronounced it "a fraud and a humbug."

In durability, lightness of draft, ease of management, range and quality of work, economy in repairs, and all that goes to make up a perfect "GENERAL PURPOSE" plow, it retains the same degree of superiority which has made it

THE MOST SUCCESSFUL PLOW OF THE AGE.

 Every plow sold under a rigid warranty. For circulars, prices, terms, &c., address,

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