

D. M. OSBORNE & CO.

Manufacturers of

HARVESTING MACHINERY,

Farm Implements and Binder Twine,

AUBURN, N. Y.

RAKE AND HARROW EDITION.

BRANCH HOUSES:

CHICAGO, ILLS.

PHILADELPHIA, PA.

KANSAS CITY, MO.

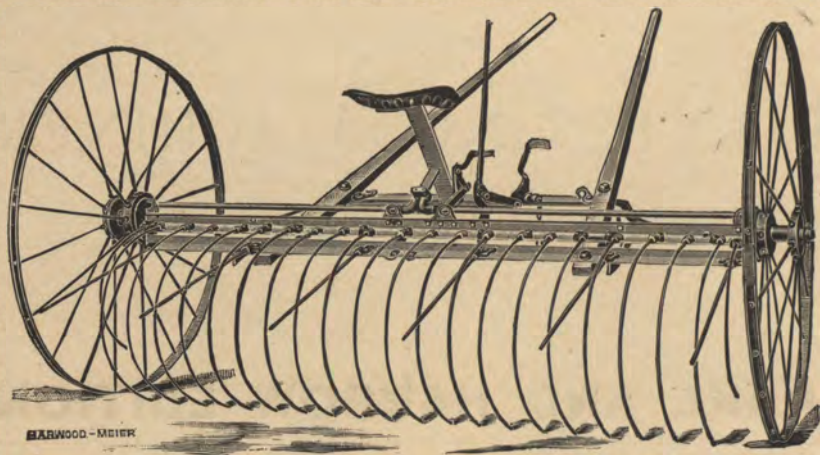
SALT LAKE CITY, UTAH.

ST. LOUIS, MO.

PORTLAND, OREGON.

DALLAS, TEXAS.

SAN FRANCISCO, CAL.



Osborne All-Steel Self-Dump Hay Rake.—Rear View.

Osborne All-Steel Self-Dump Hay Rake.

We wish to call attention to the cut on the opposite page of our All-Steel Hay Rake.

This rake, to be appreciated, should be seen, as it is impossible to do justice, either by a cut, or in print, to its many valuable qualities. As indicated by the cut, it is a model of neatness and simplicity, and though light, it is the strongest and most durable on the market; and, while we claim that it is the neatest looking rake built, we also claim, without fear of contradiction, that it is under all conditions the most practical rake at work, the easiest rider, the lightest draft and the simplest to operate of any rake built. It has been our purpose to put upon the market a rake excelled by none, and the unparalleled success that this rake has had during its brief history is positive proof of its superiority.

It has taken position in the front rank from the outset, and in competition with others has always come out ahead, whether on exhibition or in field trials, and on no occasion has it failed to perform its work in a highly satisfactory manner, and it operates so easily that even a child can work it without difficulty.

ADJUSTABLE SPRING SEAT can be shifted to accommodate any one, from a child to a man, making it an easy rider. The seat is placed half way between the wheels, not at one side of the centre as in some rakes.

WHEELS.—The wheels of this rake are fifty-four inches high, with strong channel steel rims one and one-half inches wide. They have twenty steel spokes each, which are screwed securely into the strong iron hubs with jam nuts on the hub. The spokes are up-set where they screw into the hub, making them larger and stronger at this point, thus preventing twisting or breaking.

The wheels on this rake are interchangeable, giving double wearing surface to the self-dumping device.

OUR FRAME is forged out of angle steel bar and takes the place of both cross bar and stub shafts, and does away with all wood work for these purposes, at the same time making it very convenient to change from shafts to pole, or *vice versa*. There are no joints in the corners of our frame, making it stiff and rigid.

GATHERING TEETH.—There are two short gathering teeth next to the wheels and fastened to the axle, which prevents the hay from sliding out at the ends of the rake, and also prevents it from rolling and twisting in upon the wheels, which is very annoying in other rakes, especially in raking light hay or scatterings.

THE AXLE is an angle steel bar $2\frac{1}{2} \times 2\frac{1}{2}$ inches. This feature is the greatest and most important improvement of the age in horse rakes, and is found only in the OSBORNE. It is impossible for this axle to rot, twist, shrink or sag, and being always in true line, the self-dumping device can never get out of order from these causes, while with a wooden or revolving axle, it is impossible to prevent this great fault.

DUMP-RODS.—Our oscillating dump-rods are made of high carbon steel and are reversible, both ends being forged alike so that either end can be used in the wheel, which is a very desirable feature in case of wear.

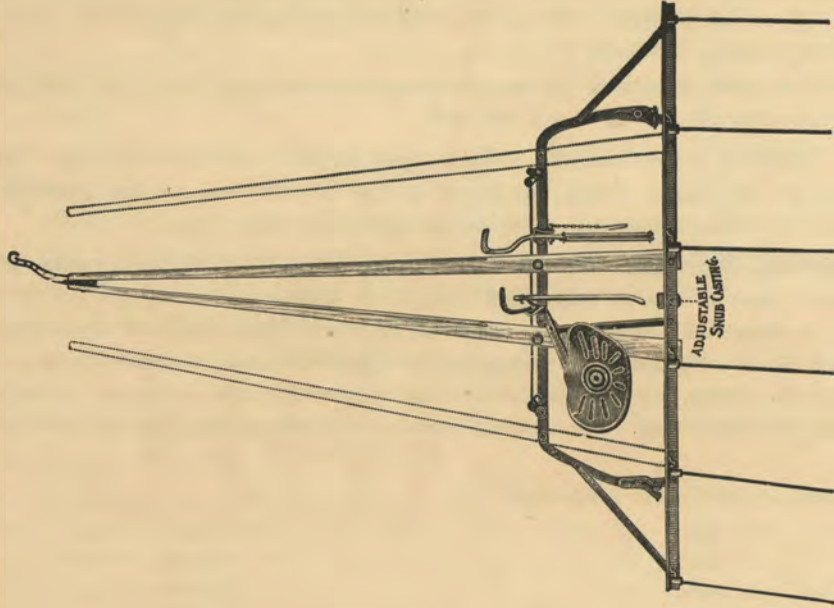
With our reversible dump-rods and our interchangeable wheels, we have a rake which will give double the wear and service of any rake built.

THE TEETH are all duplicates of each other; they are not rights and lefts. They are made of the best quality of steel, and shaped so they will run under the hay, gathering it clean without scratching the ground, which insures a very light draft.

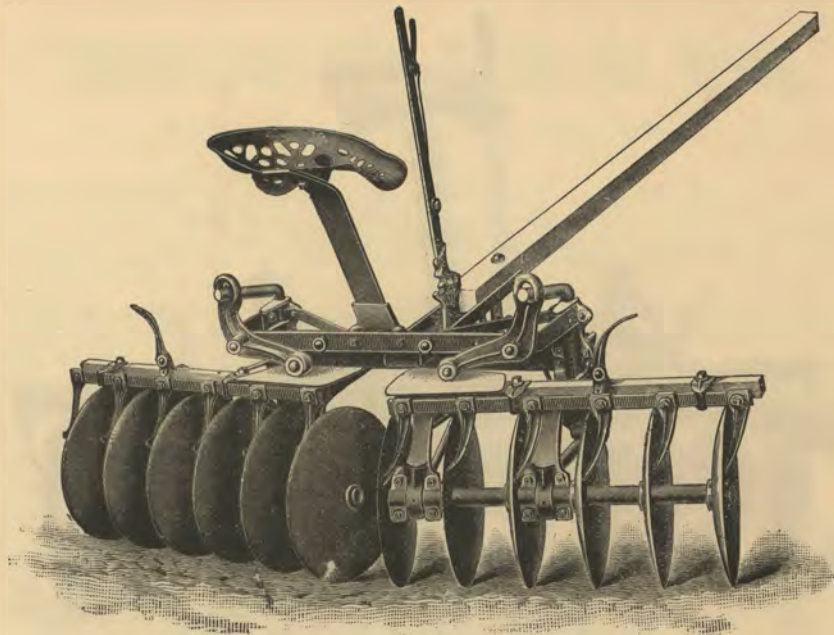
DUMPING DEVICE.—Our rakes dump from both wheels. It has a positive self-dumping device and will always dump when desired. In turning to the right or left, or in backing up, by means of a lock trip, the dump-rods do not lose their hold after being tripped until the rake head is lifted to its full height and has dumped its load. By means of our interchangeable snub casting, bolted to the steel cleaner bar, the teeth can be dumped at any desired height from the ground. The dumping parts are all made of steel and are positive and durable.

Our rakes are built in the following sizes:

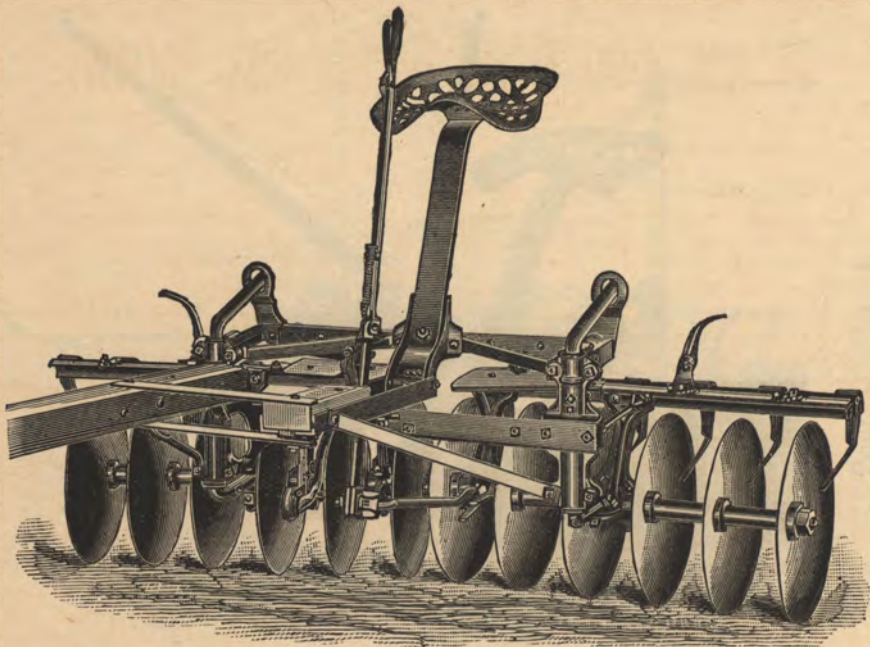
8 feet,	-	-	-	-	-	-	-	-	22 teeth.
8 feet,	-	-	-	-	-	-	-	-	27 teeth.
10 feet,	-	-	-	-	-	-	-	-	26 teeth.
10 feet,	-	-	-	-	-	-	-	-	32 teeth.



Pole Attachment.



Osborne Steel Frame Flexible Disk Harrow.—Rear View.
THE ONLY PERFECTLY FLEXIBLE DISK HARROW ON EARTH.



Osborne Steel Frame Flexible Disk Harrow.—Front View.
SHOWING THREE-HORSE ATTACHMENT.

Osborne Steel Frame Flexible Disk Harrow.

THE ONLY PERFECTLY FLEXIBLE DISK HARROW ON EARTH.

THE GANGS of our Flexible Harrow are entirely independent of each other and one gang can be raised to a height of ten inches without changing the position of the other gang, which allows the harrow to adapt itself perfectly to all conditions of the ground, doing equally good work on the highest ridge or in the deepest furrow, and being perfectly flexible each disk will cut an equal depth at all times.

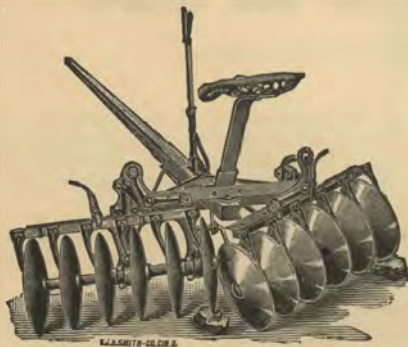
THE DRAFT of this harrow is from the centre of the axle, and being perfectly balanced there is no weight on the horses' necks, nor any side draft, which will at once be recognized as a desirable feature.

THE SCRAPERS of each gang are connected together and are all worked at one time by a lever within easy reach of the foot, by which they can be brought into contact with each disk to clean its surface, and then instantly removed, thus avoiding friction.

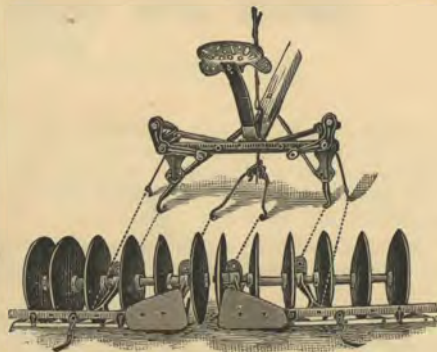
THE HAND LEVER is within easy reach for changing the angle of the disks, thus regulating the depth of the cut, and can be operated without stopping the team.

THREE-HORSE EVENERS.—Every farmer knows that in using three horses, in order to avoid all side draft, the middle horse must be hitched in front of the centre of the harrow. We have the most practical and perfect arrangement for setting the pole over to one side to accomplish this object of any harrow made.

END THRUST OR PRESSURE.—Owing to the construction of our frame and the use of our equalizing arms, the end thrust or pressure keeps the inner ends of the gangs down, causing them to conform to the ground under all conditions and doing equally good work at all times.



Flexible Harrow Over a Stone.



Gangs Detached from Frame.

Its Journals are protected from the dirt.

Its Equalizing Arms, with end thrust pressure on them, prevents it from humping or buckling in the centre.

It conforms to uneven surfaces perfectly.

It has Steel Seat and Spring, making it easy riding.

It can be made rigid if desired.

We claim the "OSBORNE FLEXIBLE" will do any work possible for a disk harrow, and do it well.

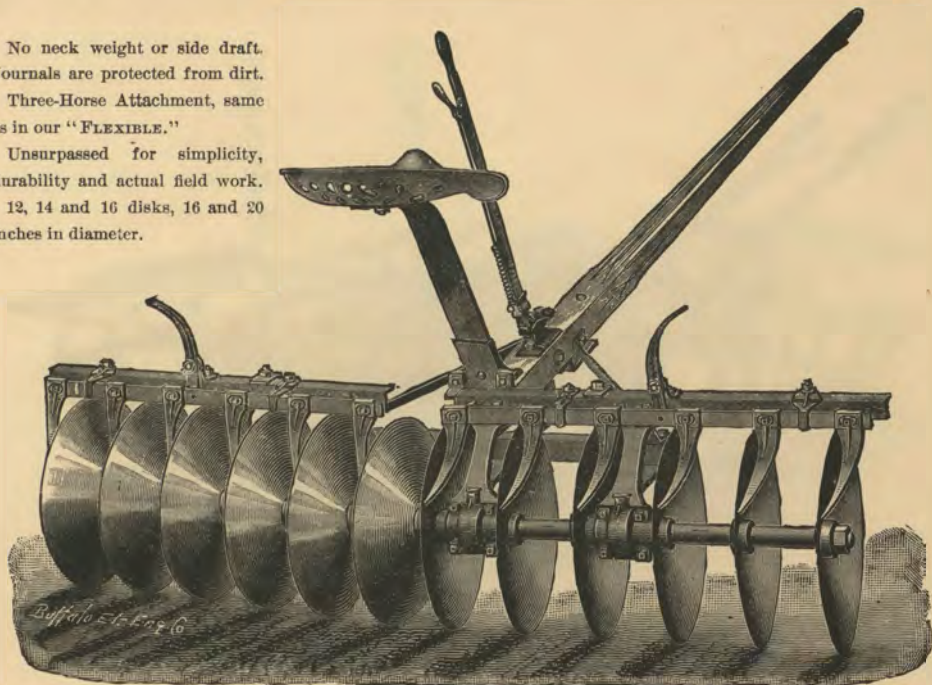
Made with 12, 14 and 16 disks, 16 and 20 inches in diameter.

No neck weight or side draft.
Journals are protected from dirt.

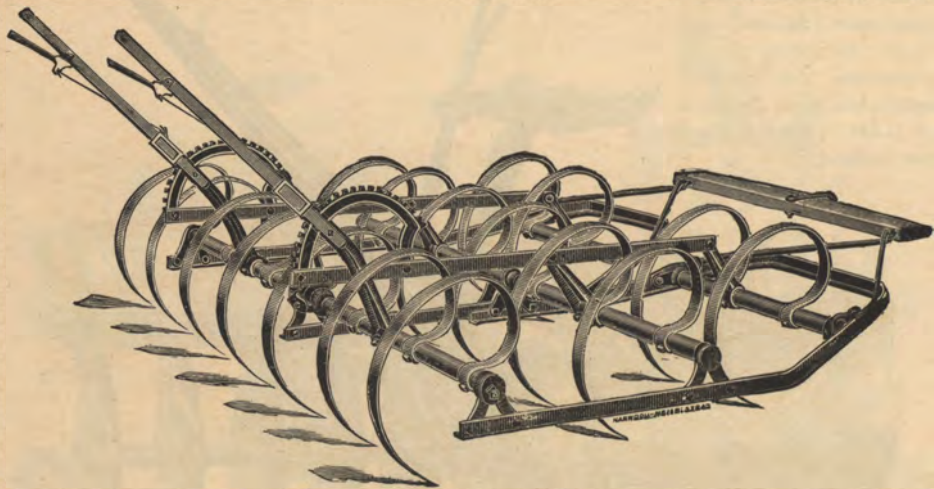
Three-Horse Attachment, same
as in our "FLEXIBLE."

Unsurpassed for simplicity,
durability and actual field work.

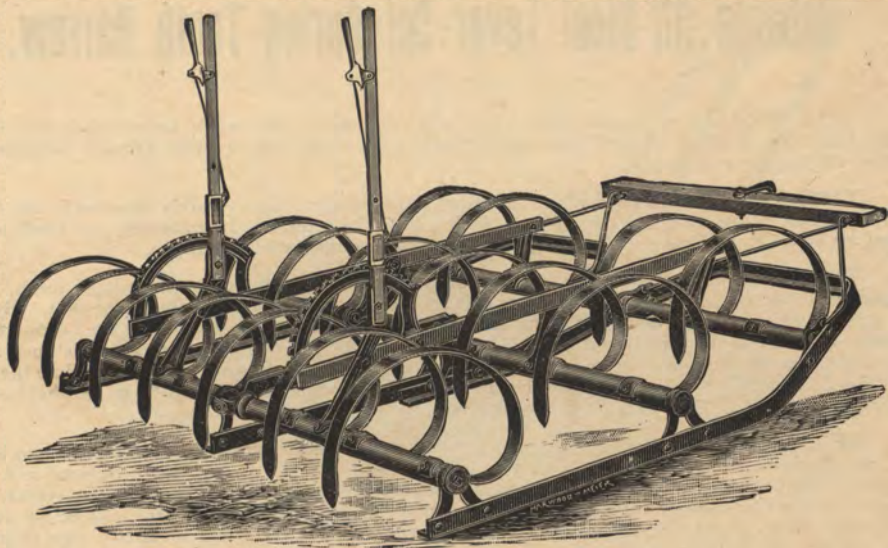
12, 14 and 16 disks, 16 and 20
inches in diameter.



Osborne Steel Frame Rival Disk Harrow.—Rear View.



Osborne All-Steel Lever Set Spring-Tooth Harrow,
TILTED FOR WORKING.



Osborne All-Steel Lever Set Spring-Tooth Harrow,
TILTED FOR DUMPING OR FOR TRANSPORTATION.

Osborne All-Steel Lever Set Spring-Tooth Harrow.

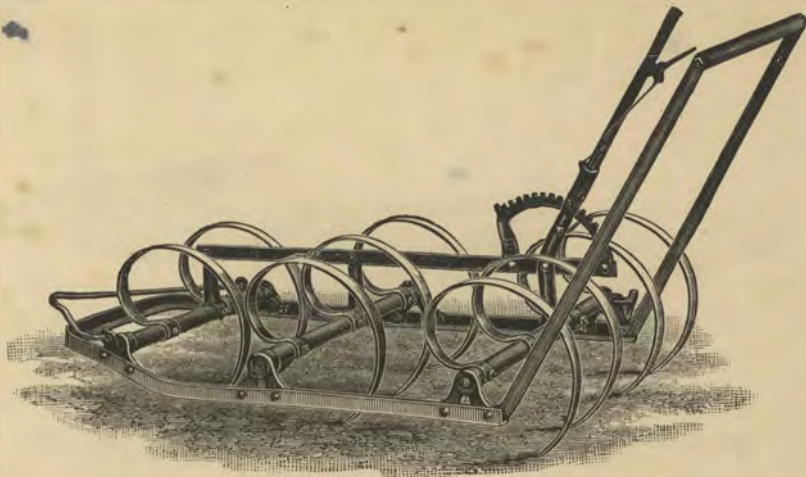
THE FRAME of each section is one piece of angle steel, much heavier than heretofore, and made of very high carbon steel, and formed so as to give the greatest strength possible and make the harrow run steady.

THE TOOTH BARS are made of heavy round steel pipe, securely fastened to the frame by malleable boxes, carrying the bars $3\frac{1}{2}$ inches from the ground. In fastening our teeth to the bar, we do away with all clips, curved seats, and other complicated fastenings.

THE TEETH are securely fastened directly to the bar by one bolt; and the tooth, when fastened to the bar, curls two-thirds around it and does not cause any strain on the bolt. By this fastening great strength is acquired, as the bar itself acts as a strong shoulder and supports the tooth, at the same time holding it tightly. The position of the teeth to each other is such as to give the greatest amount of service with the least amount of draft, and at the same time they are arranged in such a manner as to steady the harrow and compel each tooth to do its share of the work, and they do not trail one another.

SET LEVER.—By means of this lever, the teeth in either section of the harrow can be set to cut any desired depth, even if the harrow is in motion; this will at once be recognized as a very valuable feature, as it is often necessary to harrow one portion of the field deeper than others. By means of this lever also, the points of the teeth can be raised eight inches off the ground for dumping trash when necessary, and at the same time the body of the teeth is carried free from the ground, allowing rubbish to pass freely from under the harrow. With this lever no time is lost, as is the case with harrows where you must stop to clean them, as well as to adjust each tooth separately.

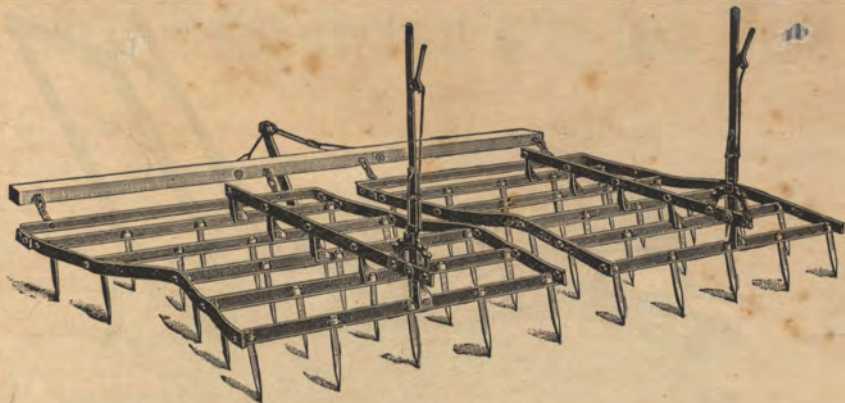
Made with 15, 17 and 23 teeth, also in one section with handles for use in vineyards and hopyards.



One Section of Spring-Tooth Harrow.

FOR USE IN VINEYARDS AND HOPYARDS.

In response to a continued demand made upon us for a small harrow for use in Vineyards and Hopyards, etc., we present herewith a cut of one section of our All-Steel Lever Set Spring-Tooth Harrow, with handles attached, which makes not only a very desirable harrow for such purposes but a very convenient tool to have on every farm.



Osborne Steel Frame Lever Set Peg-Tooth Harrow.

By means of its levers it can be used as a straight pulverizing harrow, or as a slanting tooth smoothing harrow. The beams are made of steel angle bars, five beams in each section, and five teeth in each bar.

The frame is so constructed as to give strength and stiffness, and also prevents the teeth from tracking each other. By means of a simple locking device the beams or tooth bars are easily removed and replaced without taking the frame apart, or otherwise disturbing the harrow, and is altogether a harrow which is unequalled for convenience, simplicity and durability.

The harrow is made in two sections with 50 teeth; three sections with 75 teeth; four sections with 100 teeth.