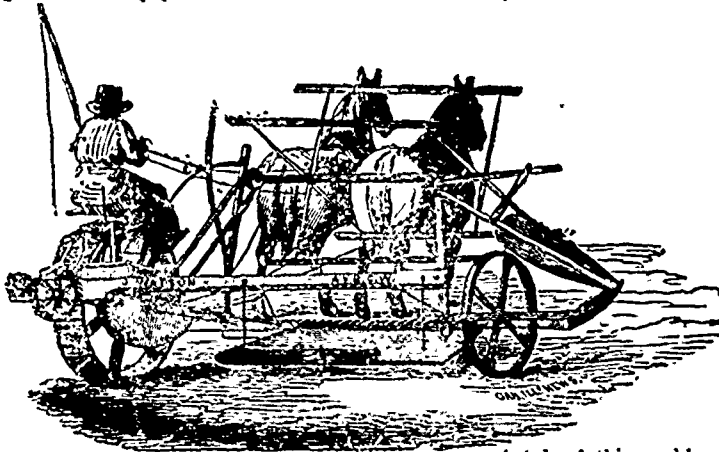


Agricultural Implements.

Tedders. (Continued).

The English Tedder.

In the present number we furnish an illustration of one of the most popular of English Tedders, "Howard's Patent," an almost perfect implement of its class, and one which combines in itself all the various improvements which experience has suggested for many years.



The fork-barrels are so arranged that clearing is all but impossible. The forks are mounted in sets of three, and placed in a zig-zag position, an arrangement which equalizes and more perfectly separates and distributes the crop.

The usual method of reversing the motion in double-action machines has hitherto been—either by loose sliding pinions by means of clutches on the fork-barrels, or by sliding the fork-barrels themselves—the last plan having the obvious disadvantage of altering the relative positions of the forks, and rendering the machine continually liable to clog. In the above implement the gearing is both strong and simple, and as the motion can be changed in an instant to the backward or forward action, by a simple eccentric movement of the main axle, the disadvantages alluded to are entirely obviated. For adapting the machine to the nature of the crop, a similar eccentric movement is also used for raising or lowering the fork-barrels from or to the ground. When once set for the forward action, no further change is required to use it with the backward action. Every part of the machine likewise which is liable to strain, is made of wrought iron, so that it may safely be removed to any distance without fear of breakage, or without being taken to pieces.

It can also be fitted up with a pole instead of shafts, and may be purchased of almost any width.

Reaping Machines.

Nearly all the remarks already made in connection with mowers are equally applicable to reapers.

They are in nearly all respects similar in construction, with these main differences, that the cutting speed of the reaper is considerably slower than that of the mower, and that the former is provided with various attachments for the delivery of the grain.

The earlier form of reaping machines had a platform behind for holding the grain as it fell, and likewise a reel worked by the machine, causing the cut grain to fall smoothly and evenly upon this platform. When a sufficient quantity had been thus collected, it was swept off by a second man stationed on the hinder part of the platform, and afterwards bound into a sheaf.

The principal objectionable points to this machine were: 1st, the draught, and 2nd, the absolute necessity of a second man to attend to the raking. Various self-raking contrivances have been used to obviate this labor, several of which have been made

to do excellent work, and are now coming into general use.

One of the first successful self-raking attachments was that used by Seymour and Morgan, of Rockport, N. Y. It swept across the platform in the arc of a circle, delivering the gavel at the side of the machine. The ordinary reel was used with these machines; but the objection to them was that the grain was seized for throwing off at a point behind the cutters.

An improvement was shortly afterwards introduced in the shape of reel-rakes, which struck the grain forward of the cutters. A series of sweeps or beaters were employed, combined with one or more rakes, the gavel being delivered from the platform at each circuit of the rake. At first, the horizontal motion of these arms prevented the driver from riding on the machine.

The next improvement therefore caused the rakes, after passing the platform, to rise in a nearly vertical position, thus passing the driver freely. The following cut represents the latest

style of this machine, which appears to be a general favorite:—

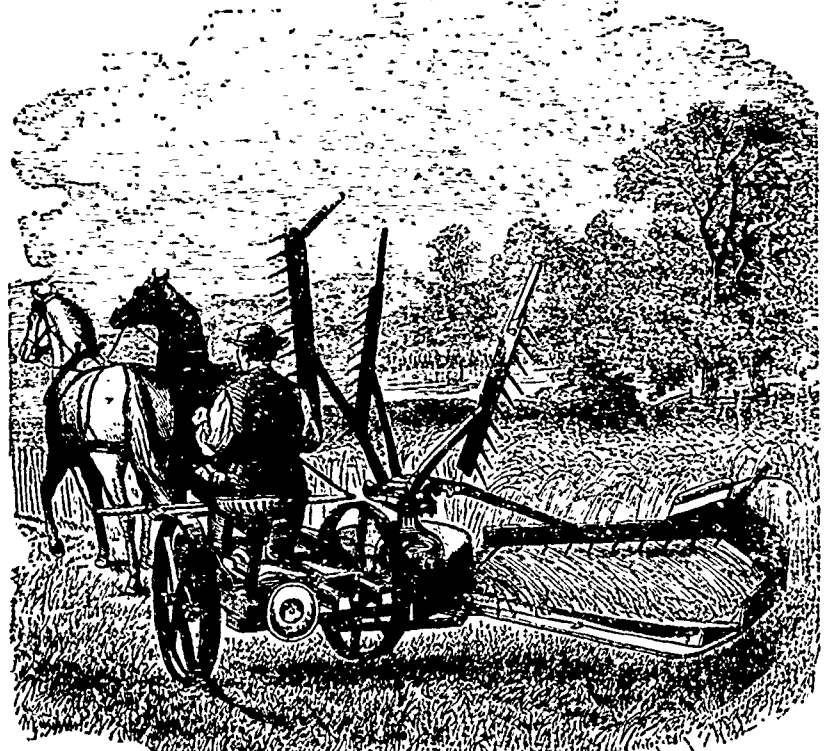
rakes employed at a time. Others are furnished with rake-heads for each of the arms, which are so arranged that they dip low into the grain, forward of the cutters, and afterwards rise in passing over the platform. To discharge the grain in this case, the driver uses a latch-cord and lever, so that the path in which the rake travels is changed by opening a switch or gate, permitting one of the rakes to pass low enough to sweep the platform.

The dropper is a simple contrivance, consisting of a light slatted platform which holds the gavel until it is large enough, and then suddenly drops at the will of the driver, who operates it by means of an attachment which he works by his foot. The dropper is a great favorite with many farmers, as the grain drops immediately behind the machine, and thus the binders are kept up to their work.

Several machines for binding grain have been invented, possessing considerable merit, but so far, they do not appear to be adapted to general use. One of the principal of these is "Marsh's Harvester," which is so constructed that two men can bind as fast as the machine cuts. The binders stand on a small platform with a guard, and the cut grain is carried up by an endless apron to a platform where each man alternately makes his band and receives and binds his sheaf.

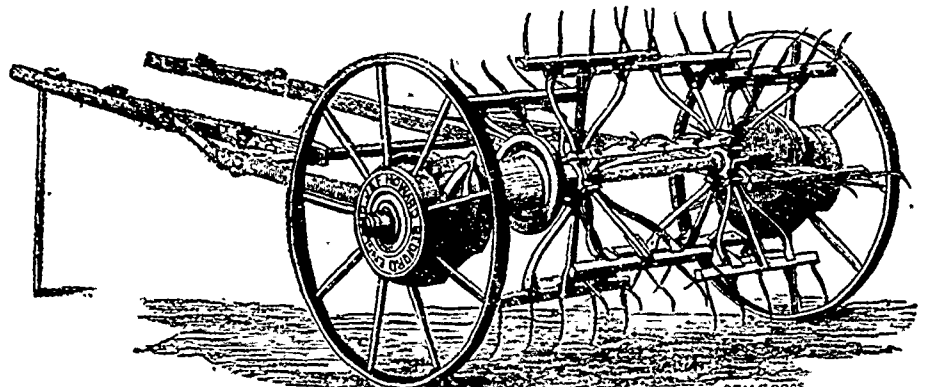
"Headers" are reaping machines used for cutting the heads only off wheat, leaving most of the straw standing.

They are usually driven by four horses, and are



There are various modifications of this class of rakes, made by different inventors. Some have beaters and rakes combined, and deliver one or more gavels at each revolution, according to the number of

thrust forward, ahead of them. A waggon runs alongside to take the heads as they are cut. Headers are used only on very extensive wheat areas, and a difference of opinion exists as to their real value.



THE ENGLISH TEDDER.

SCALE DROPS