

New Inventions.

Patent Sleigh.—Collecting Agents.

A correspondent writing from western Pennsylvania, informs us that an agent is traveling through that region, endeavoring to collect damages for the infringement of a patent for placing the dash-board on the outside of the raves of sleighs, and inquires of us if any such patent has ever been granted. For the benefit of all concerned, we would state that Moses Miller obtained a patent in 1846 for an improvement in sleighs, the nature of which is fully exhibited in the claim here annexed:—

"What I claim, is the manner of combining the dash-board with the raves or framework of the sleigh; the dash-board being affixed on the outside of the raves, thereby admitting of its being widened out so as to constitute wings, whilst under the peculiar arrangement set forth it may be disconnected for the purpose of repair, and replaced at pleasure. To this manner of combining the dash-board with the raves I limit my claim."

Improved Reaper and Mower.

The single engraving here presented exhibits very clearly the harvesting machine invented by Mr. B. F. Ray, of Baltimore, Md., and for which Letters Patent were granted February 5, 1856. Foreign patents for this invention—the English dated February 18th, and the French April 3rd, of the present year—have also been secured through our Agency.

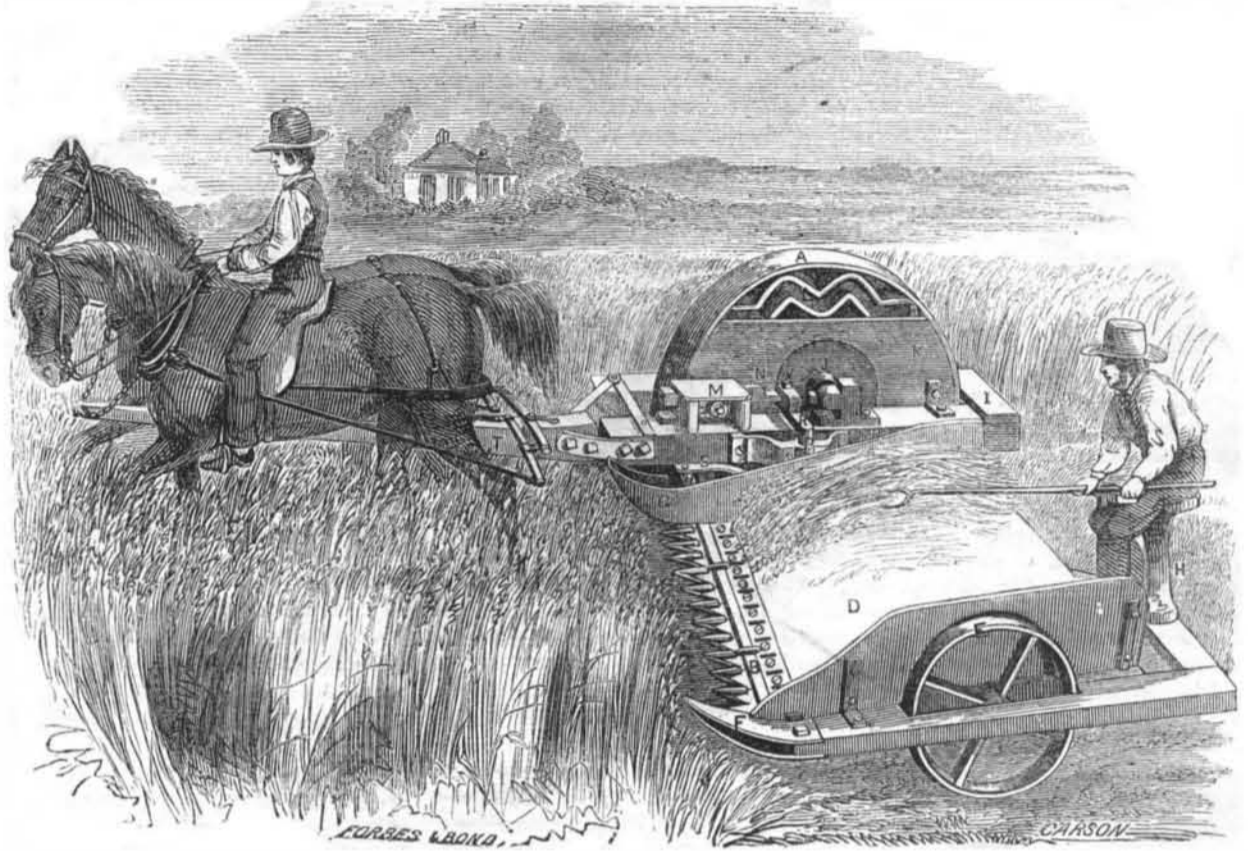
A is the stout driving wheel, which supports a large portion of the weight, and, as is common in all harvesters, by its revolution works the cutter bar, B. These features, as also the light supporting wheel, E, on the opposite side of the platform, D, the shoes, F and G, the seat, H, for the raker, and the stout frame, I, surrounding the driving wheel, are common to most machines for this purpose. The chief merits peculiar to this invention lie in the means by which the motion is communicated from A to B, and in the means by which the interior of A is protected from the presence of dirt, straw, and the like. A is mounted on a short fixed axle, one extremity of which is seen at J. A broad light plate, K, is provided which is supported partly upon J, and partly by brackets fixed for the purpose on I; and as this plate covers nearly the whole of the wheel within the rim, it effectually protects it from any injury. In the engraving it is represented as open near the top, a construction which is not objectionable, as the danger of injury from substances falling in at so great an elevation is very slight; but the only necessary opening in the plate is to allow the taking off of the reciprocating motion, the means for which we will now describe. A deep and broad continuous groove, L, curved as represented, is formed within the wheel, and extending quite around it. The stout casting, M, which is fixed on the frame, I, supports a stout slide, N, on the opposite sides of which are projecting pins. These pins carry anti-friction rollers—the one on this side being plainly represented. The stud and roller on the opposite side of N, reaches through a suitable opening in K, (not represented) and stands in the groove, L, so that as the driving wheel, A, revolves by its adhesion to the earth, the slide, N, is rapidly reciprocated forward and backward; the roller seen on this side simply serving, by its contact with the under surface of M, to defend it from any injurious twisting strain. P is a short upright shaft, with two arms, R and S, extending at right angles each to the other. R extends toward the driving wheel, and connects, either directly or through the intervention of a short link, to the hinder extremity of N. S extends forward, and connects to the cutter bar, so that the latter is thus reciprocated without the intervention of any gearing or complex devices for the purpose. The only delicate parts, if such they may be called, in the train which conveys motion to the cutter bar, are the shaft,

P, and arms, R and S, which together constitute in effect a bell crank lever, and are effectually protected from injury by the shoe,

G, which precedes it in passing into the grain. The tongue, T, of the machine, is fitted in the usual manner, to allow the machine to

ride over inequalities in the earth, and the whole is well balanced and adjusted to reduce the side draught, etc. For traveling, when it

RAY'S REAPER AND MOWER.



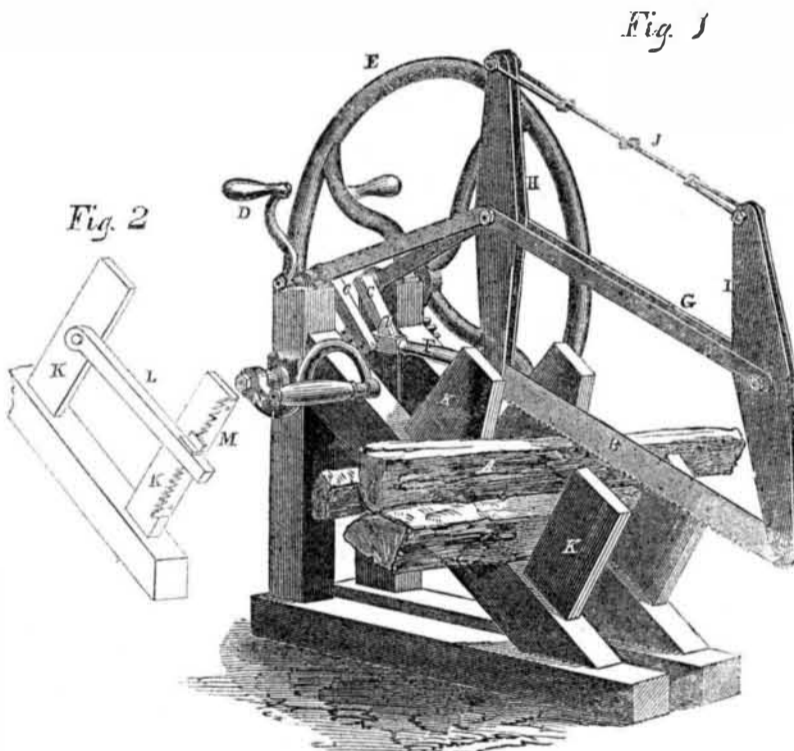
is not desired to cut, the pin, V, which connects N to R, may be removed, and in this condition the slide, N, reciprocates alone,

without conveying any corresponding motion to the cutters. We consider this, in every important respect, one of the best reaping and

mowing machines yet introduced.

For further information address John S. Tough, 13 Exchange Place, Baltimore, Md.

WILLSON'S SAWING MACHINE.



This is one of the many devices brought forward to facilitate the labor of sawing, by connecting the saw to a crank worked either by hand or by power. Its simplicity and obvious freedom from the difficulties attending many other plans for this purpose recommend it especially to attention. The saw is mounted in an extremely simple frame, which is hinged at one end to the crank shaft. The saw is held between two levers mounted in this frame, and reciprocated by a simple connecting rod extending to the crank pin. The frame is, in fact, merely two bent pieces of wood or metal, and the saw and levers, when at mid-stroke (the position represented in the drawing) resemble an ordinary wood saw. The machine has been put to practical use on a large scale, driven by power, and is said to be very convenient and effective.

Fig. 1 is a perspective view of the machine as constructed for use on a small scale, and

Fig. 2 is an outline of the manner by which the wood is confined in the buck, K K, and prevented from moving or rolling under the action of the saw.

A is the wood to be sawed, piled in between uprights, K, and held down by a binder, L. B is the saw, and C the crank which gives it motion. D is a hand-crank connected to the same shaft, to provide for working the saw by hand. E is a balance wheel to steady the motion, and F a connecting rod which communicates the motion of the crank, C, to the saw, B. G G represents the two parts of the frame referred to, and H I the reciprocating beams which support the saw. J is a tie or straining rod, by which the saw is stretched, and which may be lengthened or shortened by any of the ordinary means. M is a rack to aid in confining the binder, which holds the wood firmly in place. N is a crank which may be fitted at pleasure on a shaft geared to

the cranked shaft before described. When it is employed, the upper hand crank, D, must be removed. Either crank, D or N, therefore, may be employed to give motion to the saw, according to the velocity with which it is desired to vibrate the saw, or according to the strength of the men employed.

The weight of the frame and attachments holds the saw to its work, but should it be desired either to increase or lessen this force, the frame may be partially supported or urged down by a cord and chain attached to the crank, D, is, of course, replaced by a pulley to receive a belt, when it is desired to drive the machine by steam or horse power.

It is obvious that this device possesses several advantages over many which have been brought forward for the purpose for which it is intended. One of these is its simplicity, and another is the fact that the saw is efficiently strained, and that therefore a thin saw may be made to serve, and thus, by diminishing the amount of wood removed at a cut, cause it to require less power.

The patentee affirms that a power saw, eight feet long, thus mounted, and driven at the rate of 600 strokes per minute, has sawed half a cord of wood in five minutes and twenty seconds.

The inventor of this arrangement is H. F. Willson, of Elyria, Ohio. It was patented June 30, 1857. For further information, address Messrs. Willson & West, Elyria, Loraine county, Ohio, who are constructing the machines, and are prepared to receive orders for them.

Fire-place Shutters.

It is stated that in some of the first class houses recently erected in England, fire-place shutters are provided, which, when partly down, act as powerful blowers, and when wholly drawn down, so as to touch the hearth-stone, entirely close up the fire-place, and rapidly put an end to the combustion of the fuel in the grate, or that of the soot in the chimney, should the latter accidentally take fire.—*Exchange.*

[This is a very old affair. It ranks among the oldest and most expensive inventions known for the purpose]