THE SCIENTIFIC CANADIAN.

[June, 1879.



MILL FOR GRINDING MAIZE.

In the usual operation of grinding maize, the stones have to be set so far apart that the meal is not delivered of sufficient fineness for human food at one operation, and therefore a double grinding is required.

In a mill constructed by Messrs. Ransomes, Sims, and Head, of Ipswich, as shown in the engraving, the maize is first cracked quite fine by the corn cracker which is placed over the mill, and therefore when it enters into the mill, being in pieces about the size of an ordinary kernel of wheat, the stones can be suitably dressed and set sufficiently close for producing meal for household purposes at one operation. The barrel of the corn cracker is hollow, and is formed by a number of separate triangular steel cutters arranged round the circumference of two end rings, and so they can never choke; each tooth having three edges they can easily be successively used. The corn is cracked or cut between the edges of these teeth and a cutting plate, the edge of which is adjusted by a screw until it is sufficiently close to produce the required degree of fineness in the maize.

These mills have been largely used and are very economical in their operation. They will grind wheat equally as well as maize; they are specially adapted for those districts where the food of the country consists of both maize and wheat.—Engineering.

AN IMPROVEMENT IN SHIFTING CARRIAGE TOPS.

The accompanying illustration represents a new invention lately patented by Messrs. Gillespie & True, of Laclede, Missouri. It relates to certain improvements in shifting tops for carriages, buggies, &c.; and it consists in a horizontal bottom rail, to which the top frame is attached, which said rail is slid into grooves, around the top edge of the seat and held therein by s locking.key. It also consists in a double set of vertical supporting-props for the top, whereby the latter is more securely held in an elevated position.

Around the top edge of the buggy seat is formed, by horizontal flanges, a groove. The frame of the buggy top is constructed upon, and attached to, a bottom rail, which slides into the groove of the seat. Said rail is made preferably square, but may be of any other shape, and is alided from the rear of the buggy into its groove. A spring-locking key passes through two extensions of flanges of the buggy seat, and locks the horizontal rail security in its position in the groove, the ends of said rail being firmly in its position in the groove, the ends of said rail being firmly and prevent its falling from the wind or accidental contact with trees, the inventors construct upon the bottom rail two knuckies jointed props, instead of one, each bending in an opposite direction from the other, so that the top is braced in both directions in the most thorough and substantial manner.

The advantages claimed for this shifting top are, ease of construction, convenience of adjustment, and general adaptation to buggies already in use, with but little alteration.

buggies already in use, with but little alteration. To remove the top, all that is necessary is to take out the locking key and slide the top to rear, so as to withdraw the rail from the groove, thus affording a much more convenient adjust ment than the old form of unscrewing the top.



SHIFTING CARRIAGE TOP.

IMPROVED ROOFING TONGS.

Our illustration represents an improvement in roofing tong, recently patented by Thomas Beeson, of Wilmington, Del. It is claimed for these tongs that they are unusually easy to work with, and that they hook and close sheets securely without the use of the mallet.

The construction is quite simple, and readily understood by any mechanic at a glance. The lower jaw, X, is V-shaped where it bears against the edge of the sheet, and the upper is pivoted with it on the line (i G, and carries a journaled roller, which slides down over the V when actuated by the handles E E, carrying the sheet tin down with it to an acute angle. By reversing the position of the jaws, end for end, and closing them again, the sheet is laid home and the job done without a touch of the mallet.