

F. G. WILLSON'S PATENT DUPLEX FAN-MILL.

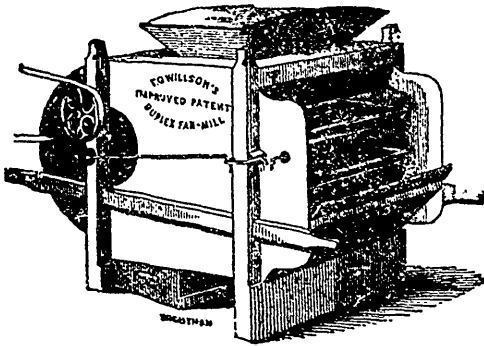


FIG. 1, PERSPECTIVE VIEW.

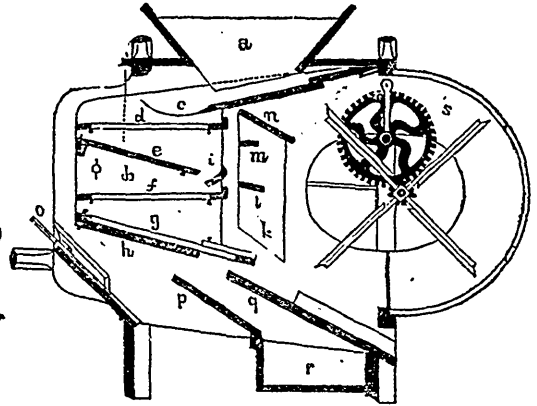


FIG. 2, LONGITUDINAL VIEW.

Saltsfleet, 22nd July, 1850.

MR. EDITOR,—As you promised, in your first number, to take notice of any new and useful inventions in Agricultural Implements and Machines, I send you the following description of my "PATENT DUPLEX FAN-MILL." It has been much improved in construction since it first appeared in the *Cultivator*. The above engravings have some few errors: the bracket should extend over the wheel, and only one handle is shown in the section. The mill is now still more improved in construction: the top is made even, and sunk, which forms the hopper. It is now as perfect as can be desired, every part being adjusted according to practical experience; and it has been well tested by numbers of farmers, who have expressed their entire satisfaction.

Fig. 1, perspective view; fig. 2, longitudinal section, showing the inside arrangements; a, represents the hopper; b, the shoe; c, wire rake; d, riddle; e, shoe slide; i, return; f, fine sieve; g, screen; h, bottom apron; o, tail slide; p, screen slide; q, head slide; r, screen drawer; s, wheels and fans; k, side wind conductor; l, m, n, three conductors, for producing as many distinct currents of wind.

Operation.—The grain thrown in at the top falls on the top apron of the shoe, runs on the rake c, where a sharp current of wind, thrown from the conductor n, takes out most of the chaff; it then drops through the riddle d, runs down the slide e, while a second current meets it from the conductor m, taking off the remaining chaff; it is then returned on the fine sieve, by the return i, and has the advantage of its whole surface, and falls through on the chess screen g, which is an excellent and peculiar one, and runs down, being thoroughly cleansed for market. The screenings fall off the bottom apron n, on the slide p, into the drawer r. A variety of sieves may be used, according to the grain. They are all woven in a peculiar manner, being bet-

ter than wrought ones, and less liable to sag down. This mill makes less offal and less wastage than other mills.

The shoe is made of half-inch baswood, battened at both edges, without grooves. The sieves, resting on wire pins and hooks, can be raised or depressed, as wanted. The screen may be placed more or less level, by pins in the shoe. Should wheat be half chess, the slide e may be taken out; the grain falling the whole distance, and the three currents of wind acting upon it, sweeps the chess overboard.

The largest size, No. 1, is three feet inside; the frames and the sieves 26 inches. A cast-iron pulley is made to attach the mill to a threshing machine. We have had one in operation some three or four years attached to a machine, which has invariably cleaned the various kinds of grain at one operation, since it has been erected. It will clean by hand, fit for market, at once through, as fast as two men will throw in by shovels.

Farmers will find it much to their advantage to purchase these mills, in preference to any other whatsoever; and in order that they may have an opportunity of being supplied soon, *County Rights* will be sold to manufacturers in Western Canada, upon reasonable terms. Let them invariably inquire for these mills, and their wants will soon be supplied. Fifteen minutes' trial will convince the most sceptical.

An opportunity is now offered to manufacturers and mechanics to engage in a very profitable business, as I shall dispose of *County Rights* for these Mills, upon reasonable terms, on furnishing good, approved notes. As the patent secures a new and valuable principle of double action, &c., it cannot be superceded. The patent is recorded 15th March, 1850.

In some old settlements, where a farmer has two or three common mills, a good cash business can be done; in altering such mills, by putting in a new shoe and wind conductors, when they may be war-