



FIG. 4.



Fig. 1 of the accompanying engravings is a partial side elevation, and Fig. 2 a plan of the machine.

a, a, is the revolving drum or cylinder mounted on a shaft or spindle *g*, and fitted with a comb *h*, and with beaters *s, s*, round its periphery. One comb and five beaters, are found to act well, but the number of either may be altered. Figs. 3 and 4 are views on an enlarged scale in front elevation, and plan, of a comb detached. *B* is a side or framework enclosing the upper part of the drum; *C, C*, are louvre plates inclining downwards to allow of the broken boon or woody particles detached from the flax or other fibre under treatment passing off freely, and being blown down to the floor by a current of air passing from the cylinder through the louvres. The object of the louvres is to prevent the boon getting embedded with the fibre. *D* is the feeding board; it is made as shewn to enable the attendant to feed and handle the straw and flax during the operation with safety. A set screw is connected to the plate *b* for the purpose of regulating the distance thereof from the comb and beaters, which distance requires to be modified according to the nature of the fibres being operated on. *F* is the front plate of the louvre casings, *c, c*, are passages or channels by which the boon is led to the openings *e, e*, through which it falls to the ground; *f, f* are fast and loose pulleys mounted on the spindle *g*. The flax, hemp, or other material to be scutched is fed by the hands of an attendant to the drum or cylinder by means of the board *D*, and is submitted to the action of the comb and beaters; the material is allowed to pass on into the machine until one hand of the attendant comes nearly in contact with the front plate *F*, when the materials is withdrawn, turned upside down, re-inserted, and submitted to the same operation, and so on until it is sufficiently scutched.—*Mech. Mag.*

Importance of Birds to Growing Crops

20, DANIEL ST., BATH, Jan. 29, 1862.

To George Buckland, Esq., Professor of Agriculture, Toronto.

DEAR SIR,—In looking over my memorandum book the following slips respecting the usefulness of birds in destroying insects, cut from newspapers, is sent for your information. If the information be not in your possession, please give it a corner in the Upper Canada Agriculturalist.

1st slip.—*Birds and Insects.*—At the late Agricultural meeting at St. Gallen, Switzerland, Baron Von Tschudi, the celebrated Swiss naturalist, dwelt on the important services of birds in the destruction of insects. Without birds, said he, no agriculture and vegetation are possible. They accomplish in a few months the profitable work of destruction which millions of human hands could not do half so well in as many years; and the sage, therefore, blamed in severe terms the foolish practice of shooting at destroying birds, which prevails more especially in Italy, recommending on the contrary the process of alluring birds into gardens and cornfields. Among the most deserving birds he counts swallows, finches, titmice, redtails, &c. The naturalist then cites numerous instances in support of his assertion:—In a flower garden of one of his neighbours, the trees, all rose-trees, had been suddenly covered with about 2000 tree lice. On his recommendation a marsh titmouse was introduced into the garden, which in a few hours consumed the whole brood, and left the roses perfectly clean. A redtail in a room was observed to catch about 900 flies in an hour. A colony of night swallows have been known to destroy whole swarms of grubs in 15 minutes. A pair of golden crested wrens carry insects as food