disc-harrow is one of Messrs. Reid and Gray's; the discs themselves are very much smaller, consequently not so effective, and no provision is made for road-travelling. It is fitted with a screw to equalize the pressure of each wing and a lever to regulate the angle, and is decidedly inferior to the first-mentioned machine.

Drills.—The sowing of grain by means of drills has become much more general in the last few seasons, partly because this system provides a much better protection against the depredations of the small birds and partly, no doubt, a better style of farming is gradually being practised, and the more extended use of the drill marks a distinct advance in our method of cultivation. Messrs. Duncan show a grain-drill with a broadcast sower for grass-seed placed in front. The grain is taken up in small cups fixed in revolving discs, after the English pattern, delivered into the hopper, and so down the tube to the ground. The coulters are fifteen in number and can be regulated to deposit the seed at a depth of from 1in. to 4in. The same makers show their patent screw manure-drill, which will sow rape or turnips as well as such seeds as peas. The box to hold the artificial manure is placed in front, and has a spindle set with a series of screw-propellers; smaller screws are placed underneath and at right angles to the large one, over the mouth of each tube, so that the manure is kept in a constant stream flowing steadily down the tubes, where it mixes with the seed, and both are drilled in together; the seed itself is delivered by the revolving cups in the same manner as in the first machine. This style of drill is most exact in sowing the required quantity of seed, as the cups will only hold a few grains at a time, but it is only on fairly level ground that it will work to the best advantage. Separate spindles with cups of different sizes are used according to the nature of the seed to be sown, and also the cog-wheels have to be changed for the same purpose. A drill on quite a different principle, and of a smaller size than those of Duncan's, is exhibited by Messrs. Reid and Gray. The manure is driven out of the holes, the size of which can be regulated by a slide, by cogs of much the same pattern as those in an ordinary broadcast sower. This arrangement is certainly lighter but hardly so effective as the patent screw; the grain is sown by this firm's force-feeder, and the turnips by the ordinary turnip tins placed in the grain-box. When sowing the last-named seed, hoppers are placed under the tins and the seed carried down every alternate tube. The machine can sow grain or turnips with or without manure, and either box can be thrown out of gear if necessary, and has a register to measure the area sown, which only works when the machine is actually sowing. This drill will sow as evenly on hilly ground as on the flat, and thus has a decided advantage in this respect, but is inferior in the method used to force out the manure to the patent screw. Messrs. Reid and Gray exhibit a broadcast sower fitted with the force-feeders, the same as on their drill. This should be a useful machine, as the boxes have a strong grip at their inner ends, and the frame is broad, so that the boxes should bear the strain at their outer ends better than some of the other makes. The seed-boxes can be removed and two spindles with tins for sowing turnips fixed on the frame, making a light and really useful machine. The other broadcast is or a very different style, made by the New Zealand Implement Company. The seed-box is nearly square, and placed between the wheels and rather high, from which the seed runs into a 4in. iron pipe 16ft. or 18ft. long, with holes punched in it at equal distances. Inside this pipe is a slide worked by a nut at each end of the pipe to alter the size of the holes, and inside the slide is an archimedean screw the length of the pipe, which forces the seed out of each hole evenly as the pipe itself revolves. This arrangement of placing the seed in the centre makes the draught very much lighter than in others where the seed is distributed the whole length of the machine, and the strain on the machine itself is reduced to a minimum. If the seed is sown as well by this as by the more common machines it must be a very valuable implement, and should come into extensive use.

Reaper-and-Binder.—The only reaping-and-binding machine in the Exhibition was made by Messrs. Reid and Gray, of the pattern they have been turning out of their factories for the last two or three years, and which have proved themselves to be capable of making just as good work in the harvest-field as any of the imported machines. It is a string-binder, fitted with all the latest improvements, including a sway-bar of steel plate, instead of wood, usually found in other machines; a new segment on the main frame, in which a cog-wheel, worked from the rear of the machine, raises or lowers the height of the machine from the ground, either for the purpose of cutting long or short crops, or travelling on the roads, for which latter purpose two travelling-wheels are fixed on the frame under the elevator, and another takes the place of the grain-wheel. This latter is fastened on by a bolt placed in a very awkward position, and ought to be easily improved on; while the grain-wheel itself can be put in position with very little trouble. The machine is well built and braced together, as light as is consistent with strength, the oil-holes are easily got at—a very important thing in the field—and, taken altogether, does great credit to the makers, and as long as they can turn out such machines as these, imported ones ought to find a limited market.

Chaff-cutters.—That chaff-cutters are becoming a very important machine in the economy of the farm is fast becoming recognized both by the farmers themselves and the manufacturers. They are proving year by year a great aid to the efficient management of sheep during the winter months in the Middle Island, and in several instances it has been proved a more payable manner of disposing of a crop of oats to cut it in chaff and feed to sheep than to thresh out the grain and sell in the market. There were more chaff-cutters shown than any other kind of machine or implement except ploughs, showing that the manufacturers are quite alive to the value of this class of machine. Messrs. Andrews and Beaven show a duplex screw pressing machine, capable of cutting from sixty to a hundred bags per hour, and pressing the bags up to a weight of 75lb. each. The machine is mounted on wheels for road-travelling, and has a lock on the fore-carriage, for convenience in setting it exactly; it has improved feed-rollers compressed by powerful springs, instead of the old lever and weight, which would be cumbrous and in the way on a machine of this kind; the mouth-plate is corrugated, which prevents the straw from slipping away, and enables the knives to make a clean cut without leaving any long straws; and all the gearing is covered. The chaff falls from the