k their juices. The plant suffers, its energies weakened, the leaves and other parts shri l bl ster, and an inroad is formed for other iseases.

In the present case, the fly, as yet, presents itlf chiefly in the wingless form, the individuals ssing like rather large crawling mites of a wish-yellow colour varying to apple-green. some cases, where the whole ears were cover with the insects, the total destruction of the p seemed inevitable, yet there is not much se for concern. Undoubtedly, the yield will lessened by their presence, and the quality of grain, perhaps, slightly deteriorated, but it not likely that the injurious effects will prove formidable in extent as the appearance of the ct is apt to indicate. In Britain, the bean p is annually liable to the attacks of an allied ck species (*Aphis Fabæ.*) which appears in h numbers that, in autumn, when they acquire gs, hey leave the bean fields and darken the osphere with living clouds—yet farmers do find their bean crop very light. This is the called "Cholera-fly" of Europe, which, alough ominous in aspect and name, is practily felt to be injurious only from its troublee habit of flying over the country in clouds, ering the roads with a shower of living, crawl forms, and filling the eyes, nose, and mouth weary travellers as they pass along the dusty ds in autumn.

The rapid reproduction of Aphides is one of most singular features in their history, and es to explain their apparently sudden apance in vast numbers. In these insects the inary laws of development appears to be deted from; but the researches of Bonnet are strengthened by the observations of phenena of a similar kind in certain other insects. spring and summer, the Aphides are all females, d wingless—there being no male individuals, aterer—yet, many generations of living young almost weekly produced throughout the sum; these are likewise females. The males are born until the end of summer or autumn. ne of these have wings, but their comparaly heavy bodies render their powers of flight feeble, so that when they leave the plants which they are parasitic, they are carried er and thither by the atmospheric currents.

Reaping Machines.

The reader will find much interesting infortion in the following letters written by Lord aird, addressed to Mr. Wilson, who read it he course of his able lecture on reaping by hinery, at a recent meeting of the Newcastle gland) Farmers' Club.]

'I consider that we are indebted to the Rev. Bell, and to his brother, Mr. G. Bell, for the ing machines at present in use, and I would you for further details to the *Journal of Agriculture* of the Highland Society, published by Blackwood & Sons, Edinburgh, for January, 1854, in which is a very interesting account, headed 'Bell's Reaping Machine.'

"My reason for giving Mr. Bell and his brother credit is, that, although several patents had been formerly taken out during many previous years, nothing of any note had resulted from them—and the American machines forwarded to this country, the original of those now in use, were constructed subsequently to Mr. Bell's—a larger number of which were sent to America, and there imitated.

I got one at the time, but was obliged to lay it aside, in consequence of the weight, iron being almost wholly used in its construction. Mr. G. Bell, however, naturally feeling a parental affection for this his own creation, persevered with it, and brought it at lenghth to great perfection. He made an arrangement for its manufacture with Mr. Crosskill, and it is known in England as 'Crosskill's Bell,' but at present it is manufactured by Mr. Watson, of Errol, North Britain, and it is very frequently used by farmers in Scotland. There is an account of the 'Expenses in cutting and stooking white crop of 1860 with Bell's Reaping Machine in the number for April 3rd, 1861, of the *Scottish Farmer and Horticulturist*, which is worth your looking at.

Amongst the first, if not the first machines which came from America, was Hussey's, and I immediately procured one of them; it cut the corn—depositing it behind, the driver walking at the side. The necessity for lifting the corn at once, so as to allow the horses to pass on coming round again, is objectionable; but the great defect was that it choked.

Mr. McCormick's was, I believe, the next machine which reached us from America—to this was attached Bell's reel for drawing the corn towards the knives, and a man sat on a bar at the back with a rake, and put it into sheaves. The great merit of this machine was the serrated cutter, which, with some slight modification only is adopted in every machine at the present day, thus doing away with Bell's shears and scissors and Hussey's smooth knife. I was so much pleased with McCormick's plan of cutter that I bought the machine, and establ hed a private work for the manufacture of reaping machines, being satisfied that, to bring them to perfection, much time and ingenuity would be requisite, and that the self-delivery was indispensable. I engaged a very ingenious blacksmith, since, I regret to say, dead, and by dint of carrrying out not only my own ideas, but the very valuable suggestions I received from practical men, I succeeded in producing a very workable implement, but I found, by practice, that there were so many contingencies to be provided against—such as hard, soft, unequal ground, grain laid, &c.—that the machine would require many improvements, especially in its simplification, before any ploughman would be able to work it, or an ordi-