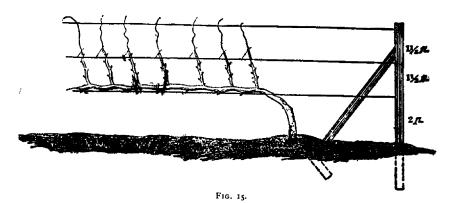
be a little more troublesome in the matter of summer tying, it has, in other ways, every advantage. For winter protection, it is best because the main arms are so near the ground that they may be easily loosened, and laid down; for fruit bearing, it is best because the horizontal is the best position for bearing wood, and because the latter is thus kept near to the roots, the source of nourishment; and for the shapely appearance of the vineyard as it increases in age, this mode is also best, for evident reasons. Mr. Thos. Beall, of Lindsay, says he has employed, with much success, a modification of this system, using only one arm instead of two, as shown in Fig. 15, in which only one arm is grown instead of two, in which case, of course, it may grow seven or eight feet long instead of four. He claims



that, in this way, the vine is much easier laid down for winter protection, and therefore this mode is better, at least for colder sections.

The two-arm method of grape pruning was well described at our Windsor Meeting, in a practical manual, by Mr.O. Neill, and his address will appear in the Annual Report for 1890. We will give here, in advance, the following six principles, which, in his opinion, should govern all systems of grape pruning:

"Any correct system of pruning the vine must accommodate itself to the following observed facts:

- (1) The growth tends to divide itself among many small and weak stems.
- (2) There is a strong tendency to develop the highest buds.
- (3) Other things being equal, the most vigorous buds are found neither at the base nor at the top of the cane, but midway.
  - (4) A short bend in the cane tends to develop the buds just above the bend.
- (5) The destruction of the terminal bud during the growing season checks the growth in length, but hastens the maturity and development of all the tissues and buds below it, the effect decreasing with the distance from the terminal bud.
  - (6) A strong growth in one cane arrests the growth and development of the other canes."