

thus taken by guess in a rough draft, they will be exact enough, being only to look at; except it be such as are at any remarkable places, as at the ends of hedges, at stiles, gates, &c., and these must be measured or taken with the plane table, or some other instrument. But all this need not be done till the draft is finished. And observe, in all hedges, what side the gutter or ditch is on, and to whom the fence belongs.

PROBLEM XI.

To survey a town or city.

To survey a town or city, it will be proper to have an instrument for taking angles, such as a theodolite or plane table; the latter is a very convenient instrument, because the minute parts may be drawn upon it on the spot. A chain of 50 feet long, divided into 50 links, will be more convenient than the common surveying chain, and an offset staff of 10 feet long will be very useful. Begin at the meeting of two or more of the principal streets, through which you can have the longest prospects, to get the longest station lines. There having fixed the instruments, draw lines of direction along these streets, using two men as marks, or poles set in wooden pedestals, or perhaps some remarkable places in the houses at the farther ends, as windows, doors, corners, &c. Measure these lines with the chain, taking offsets with the staff, at all corners of streets, bendings, or windings, and to all remarkable objects, as churches, markets, halls, colleges, eminent buildings, &c. Then remove the instrument to another station along one of these lines, and there repeat the same process as before. And so continue until the whole is finished.

Thus, fix the instrument at A, and draw lines in the directions of all the streets meeting there; then measure A C, noting the street at x. At the second station C, draw the directions of all the streets meeting there; measure from C to D, noting the place of the street K, as you pass by it. A.