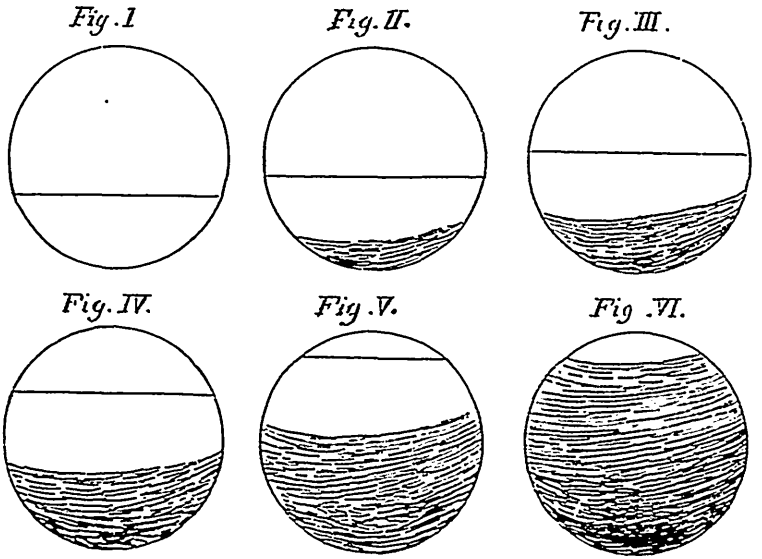
of electricity, styled electrolysis, which is also fully described, but time precludes me from giving a description of them in the present paper.

III. Under the third head I wish to point out some general defects in the sewerage and sewage disposal works of towns and cities. The first defect relates to the size and fall required by sewers. These should be considered with a view to the amount of sewage required to be carried by them. They should be regulated to such a size that they will run from ½ to ⅔ or ¾ full. Let me illustrate what takes place when a sewer is too large. We will suppose a-sewer is constructed 4 feet in diameter, and that the depth of sewage flowing in it is one foot,—much less than this is very common. I was informed that on Perth street a sewer 4 feet in diameter was being constructed, and I am satisfied that the depth of sewage flowing in it will not average one foot.



Owing to the small volume of sewage coming in contact with the comparatively large surface of sewer pipe as in Fig. I., the friction will be comparatively greater, and though the fall might be sufficient to produce a scouring action were the sewer running full or half full, the motion will be retarded till deposits begin to take place as in Fig. II. This, you will observe, increases the frictional surface and still more retards the flow; when sedimentation will go on more rapidly as in Fig III., IV. and V. Here you might suppose that the evil would begin to cure itself, as the restriction of the passage, as in Fig. VI., would cause an increased velocity, but not so; increased velocity cannot be obtained