

whose history presents us with actual anecdotes in point. With these I shall conclude.

And first, the Marquis of Worcester, (1650,) while a political prisoner, in the Tower, conceives from the dancing motion of the cover of the vessel in which he is cooking his dinner, the idea of a piston driven by steam—an idea that results at last in the perfect engine of James Watt.

Then, Capt. Savery, (1680,) flings into the fire a wine-flask from which he has just removed the contents; he perceives that steam is generated by a few drops which remain in it. Something prompts him at this moment to snatch it from the fire, and to plunge its neck into a bowl of water; the water rushes up into the body of the flask, a partial vacuum having been created therein. This leads him to the construction of the engine known by his name, useful for raising water from small depths.

Again, up to the time of Newcomen, (1705,) the condensation of the steam within the cylinder was effected by the external application of cold water. He observes on one occasion that the piston continued its movements after the external application had ceased; and the cause of this he finds to be a jet of water entering the cylinder through a small aperture which had escaped his notice. A well known simplification of the engine is the consequence.

Lastly, the boy Humphrey Potter, set to open and shut the steam valves, contrives by means of strings to make the working beam supply his place; thus originating arrangements by which the beam is made to execute several secondary offices.

The discoveries to which I have alluded, I have spoken of as accidental. This is a phraseology which we rather unreflectingly employ. Doubtless, all the capabilities of things—the agreeable as well as the useful—are intentional. They have existed from the beginning, and have been designed for the good of men; and when an individual is so fortunate as to detect any one of them, he is simply fulfilling the Divine will.

On looking back over history, I think too we can discern, in the case of several important discoveries at least, that the moment of their occurrence has not been utterly accidental. When the mariner's compass was invented, it was soon to be required. Columbus, Vasco de Gama and Cabot lived in the next age. When Lawrence Koster saw his initials impressed on paper from the piece of beech-bark, the intellect of the fifteenth century was heaving, fermenting—struggling for some means of embodying and circulating its aspirations, more rapid, more universal than the reed of the solitary scribe.

The disclosure of the continent of America itself, had it no connection at the time with the approaching overburdened condition of the population of the old world, with its social theories becoming obsolete and requiring a free field in which to be re-constructed?

If such a view of events be well-grounded, what are we to think of the present age? Is the curious accumulation of wonders, in the midst of which we