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Dr. Elmer Gate claims to have invented a new instrument which will revolutionize the study of astronomy. It is said to be a combination of telescope, microscope and photographic apparatus, and is thus explained:

The ordinary telescope has a glass at each end. The glass at the large end is called the objective glass or plane, because the object looked at is caught upon it. The glass at the small end is the eye-piece or the ocular plane, because the eye is placed to it when looking through the telescope.

Dr. Gates' invention consists in substituting a microscope for a part of the eye-piece of the telescope, with the result that he magnifies a great many times the object seen through the telescope. Thus, with the microscope he vastly enlarges the telescopic picture or image. For instance, he has already, with an ordinary telescope and microscope attached, attained this result, namely: He has increased the magnifying power of the telescope twenty-five times. Thus, if the ordinary telescope would reveal at a mile's distance an object twenty-five feet broad, the telemicroscope, as the doctor calls it, would reveal an object one foot broad.

As the new invention is only in its initial stage, and has never been coupled with any of the great instruments like the Lick or Yerkes telescopes, it can be readily seen that the astronomical probabilities are practically unlimited. The big telescopes now in use bring the moon within a distance of 500 miles. Dr. Gates estimates that the telemicroscope will bring it within a distance of twenty to fifty miles, and that objects thirty feet wide can be seen upon it.

The inventor says of it.

"The new telescope, if it accomplishes no more than I have already illustrated will enable us to see objects one twenty-fifth the size which the present telescope makes possible. I have shown experiments to a number of people in my laboratory wherein I secured a magnification at least 200 times greater! It must be remembered that even this lies at the very threshold of the new domain now open. The magnification will be limited only by our power to photograph with light of extreme faintness, and if there be no nearer limit than this a million diameters can be easily obtained, and even much greater, and objects the size of a man can be easily seen upon the planets.

"I am satisfied, however, that the limit will not be a photographic one. I think the limit will be due to the shaking of the instrument caused by a trembling of the earth and of the clock mechanism which moves the telescope."