

**AN AUTOMATIC VENDING MACHINE.**

A slot machine designed to afford unusual facilities for vending a wide variety of articles, particularly such as are commonly supplied in elongated sized packages, is shown in the accompanying illustration, and has been patented by Charles W. Goldsmith, of New York. It is now being introduced in many places throughout the city. As shown in the illustration, the machine is arranged to deliver stamped envelopes and note paper of different kinds, various samples of which are shown in the vertical glass-covered case at the rear, the top of the machine casing being formed for use as a desk. The merchandise receptacle, as shown in the small view, is sustained centrally in the casing, and projections therefrom form bearings for rock shafts which operate frames to deliver the goods, a single package at a time, the mechanism being set in operation by a lever, an arm of which projects into an orifice of the coinway.

When the merchandise with which the machine is supplied has been exhausted, a stop lever comes automatically into operation to close the end of the coinway and prevent the insertion of additional coins. The machine, as manufactured, is easily operated, and does not seem liable to get out of order. The merchandise to be delivered, on the insertion of the proper coin, drops from the central receptacle through a guide, falling upon a chute, by means of which it is passed out through the delivery opening.

**RECENT OBSERVATIONS OF MARS.**

—An American astronomer wishes to speak to you, sir. There are two visitors, and here are their cards:

“Percival Lowell.”—“Alvan Clark.”

—Ask them to walk in.

—I am highly delighted to meet you, Mr. Lowell. We are familiar in France with your splendid work. Have you come to see a little of Europe?

—I arrived this morning at Saint Lazare station and shall be off again from Lyons station.

—What, so soon? The Americans are always meteors!

—I am going to the Sahara to find out whether there is a particle of atmosphere that is perfectly calm; but, in the first place, I am anxious to show you what we have already accomplished upon our Arizona Mountains. It was your work upon the planet Mars that gave us the impetus; but we no longer agree with you. You will utter a loud protest, perhaps?

—On the contrary, dear sir. You well know that I am looking for progress only, and no one was as happy as I to see you dedicate a special observatory to our friend the planet Mars. You know that independent science receives but little support in France. On the



**GOLDSMITH'S COIN CONTROLLED VENDING APPARATUS.**

contrary, you make quick progress in your country. Have you anything new? So much the better. Mr. Alvan Clark is the leading optician of the world, and he must have constructed a perfect instrument for you.

—Yes; as you remark, a perfect one.

—And of what dimensions?

—Of seventeen and a half inches diameter.

—At what altitude are you situated upon Flagstaff Mountain?

—At seven thousand, two hundred and fifteen feet. The atmosphere is excellent and the images are of perfect distinctness. We have been able to carry our magnifications up to 800 and 900 diameters.

—Mars transits at about thirty-eight million miles, but you have diminished its distance to forty-eight thousand miles, and even a little less. That is five times nearer than the moon seen by the naked eye. And you have seen . . . ? I believe you in advance.

—No; you are much too academical, and, I shall dare to say, timorous. You are afraid to cut loose from the leading strings of the school.

—Do you think so? Ask the astronomers of the Institute what they think of it.

—You are stopping by the way.

—That is in order to afford you the pleasure of going further.

—Well! the famous canals, you know. Of these you have but 79 upon your map, while we have 183, that is to say, 104 new ones. Several are as fine as hairs. And your lakes! We have 45 of these, almost all of which are exactly round. And as for the changes that you have described, they are not inundations.

—What then?

—All that is vegetation.

—And our seas?

—Prairies.

—And our lakes?

—O yes.

—“However,” added the able observer, “I also have written a book about Mars, and have brought you the proof sheets of it, along with an impression of the new map. You will conclude, as I do, that these are not seas here, since they are traversed by the so-called canals.”

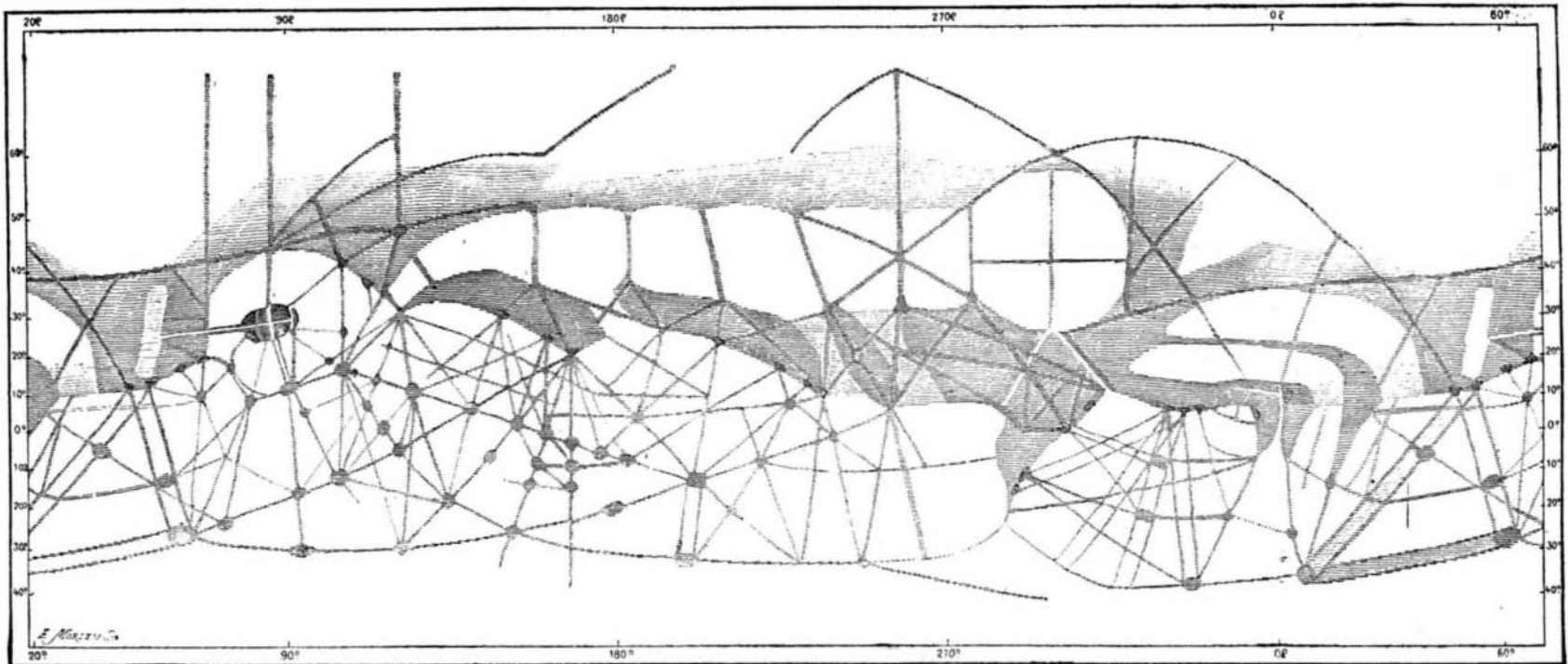
And Mr. Lowell unfolded before my eyes the map that is reproduced herewith.

—This is very remarkable. But are you sure of the accuracy of your observations? At the limit of visibility, one may be the victim of illusions, and even afterward see again what he thought he saw the first time.

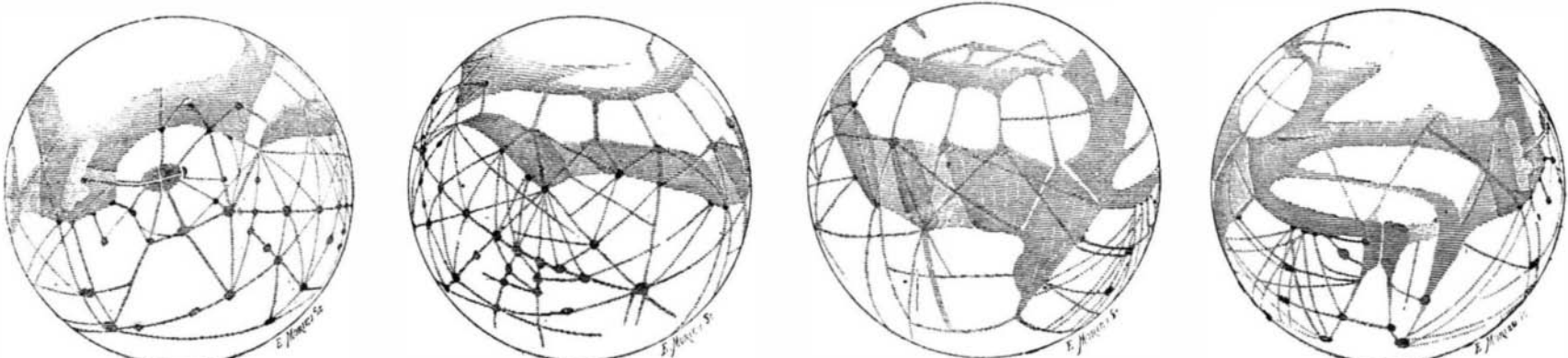
You know as well as I that the dumbbell figure, for example, drawn by Cassini two centuries ago does not exist, and yet every one thought he saw it.

—Mr. Pickering and Mr. Douglass, like myself, are perfectly sure. And now we confidently submit our observations to the criticism of astronomers. I call your attention especially to the geometrical pattern of the canals. See these meeting points. This arrangement is intentional and is for the express purpose of draining off the water.

The conversation between Mr. Lowell, Mr. Clark and myself upon this interesting subject expanded. I was not far from admitting (and I have already written) that we do not truly see the canals. All those who



**NEW PLANISPHERE OF THE PLANET MARS.**



**FOUR TELESCOPIC ASPECTS OF THE PLANET MARS.**