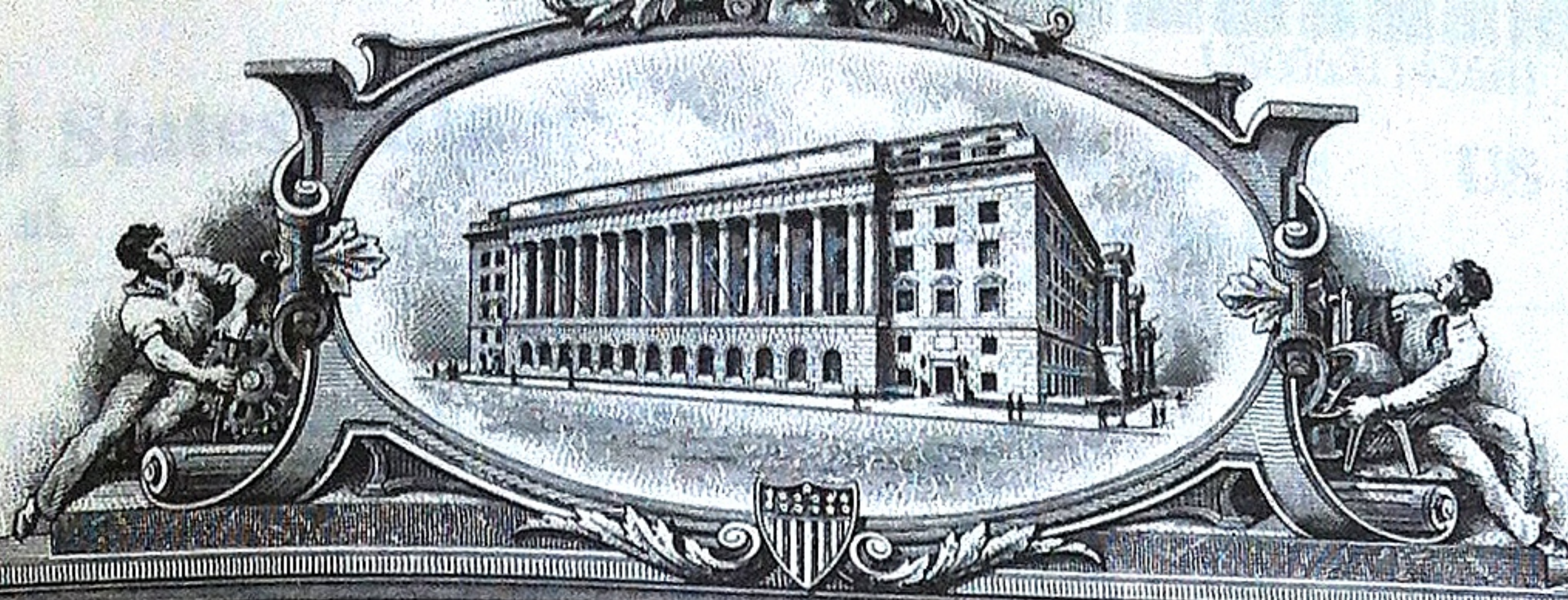


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(12) **United States Patent**
Mehta et al.

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(45) **Date of Patent:** **Nov. 6, 2001**

(54) **DIATOMACEOUS EARTH-BIOCHEMICAL FERTILIZER COMPOSITIONS**

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(*) **Notice:** Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

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Related U.S. Application Data

(63) Continuation-in-part of application No. 09/170,027, filed on Oct. 13, 1998, now abandoned.

(51) **Int. Cl.⁷** **C09K 17/40; C05C 11/00**

(52) **U.S. Cl.** **47/1.01 F; 71/6; 71/16**

(58) **Field of Search** **71/6, 16, 28, 32; 47/1.01 F, 58.1**

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(57) **ABSTRACT**

Soil treatment and fertilizer compositions comprising:

- A) a calcined diatomaceous earth;
- B) an effective quantity of beneficial microorganisms that
 - a) enhance plant growth and, where applicable, crop production, and/or
 - b) control various types of pathogens in the soil, optionally in combination with nutrients selected to maintain the viability of the microorganisms and/or increase their population; and
- C) at least one nitrogen-containing compound compatible with soil and with plants and which can be utilized by the plants either directly or in the form of products obtained by the action of soil microbes.

17 Claims, No Drawings