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(12) **United States Patent**  
**Bonacini**

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(54) **MACHINE FOR FITTING AND REMOVING VEHICLE WHEELS**

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(57) **ABSTRACT**

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A machine for fitting and removing vehicle wheels includes a base frame, a clamping and rotating device for clamping and rotating the rim of a vehicle wheel around a horizontal rotation axis, which are fitted on the base frame by interposing straight first guide means along a vertical sliding direction and at least one operating arm which is associated with the base frame along an oblique direction with respect to the position plane of the rotation axis and of the sliding direction and which has a work tool for fitting and removing a tire onto and from the rim. The operating arm is positionable in an operating position in which it is arranged at right angles and incidental to the rotation axis and the work tool is positioned near the circumferential edge of the rim. The machine also includes a transformation device for transforming the sliding movement of the clamping and rotating device into a movement of variation of the inclination of the operating arm in which the arm itself is kept continuously in the operating position as the position of the clamping and rotating device changes along the sliding direction.

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(52) **U.S. Cl.** ..... 157/1.24; 157/1.17; 157/1.22

(58) **Field of Classification Search** ..... 157/1.17,  
157/1.22, 1.24

See application file for complete search history.

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**17 Claims, 4 Drawing Sheets**

