

- [54] CONTROL CIRCUIT FOR VIBRATORY DEVICES
- [75] Inventor: Gerald L. Buchas, Bristol, Conn.
- [73] Assignee: The Arthur G. Russell Company, Incorporated, Bristol, Conn.
- [21] Appl. No.: 503,028
- [22] Filed: Jun. 10, 1983
- [51] Int. Cl.³ H02K 33/02
- [52] U.S. Cl. 318/130; 318/132
- [58] Field of Search 318/114, 124, 125, 130, 318/132, 812, 345 C, 345 G

2489615 3/1982 France 318/114
 1263718 2/1972 United Kingdom 318/124
 783936 11/1980 U.S.S.R. 318/114

Primary Examiner—Stanley J. Witkowski
 Assistant Examiner—Bentsu Ro
 Attorney, Agent, or Firm—McCormick, Paulding & Huber

- [56] **References Cited**
- U.S. PATENT DOCUMENTS
- 2,297,084 9/1942 Swallow 318/132 X
 - 3,122,690 2/1964 Dion et al. 318/128
 - 3,826,993 7/1974 White 318/130 X
 - 3,840,789 10/1974 Dion 318/128
 - 4,152,758 5/1979 Bailey et al. 318/345 G X
 - 4,220,900 9/1980 Mintz 318/447 X
 - 4,291,258 9/1981 Clark et al. 318/124

[57] **ABSTRACT**

A vibratory amplitude controller for vibratory mechanisms such as a vibratory feeder having in addition to a parts container, an electromagnetic drive unit operated from an A.C. current source for imparting oscillatory motion to the parts container. The controller includes a sensing means for sampling the electromagnetic drive unit current during a specific predetermined interval each A.C. current cycle to produce a vibratory amplitude representing signal. Means responsive to the vibratory amplitude representing signal controls the amount of power delivered from the A.C. current source to the electromagnetic drive unit to maintain a desired vibratory amplitude under varying load and A.C. line voltage conditions.

FOREIGN PATENT DOCUMENTS

2430827 3/1980 France 318/114

10 Claims, 12 Drawing Figures

