E. A. ROBINSON.

ERASER CLEANER.

APPLICATION FILED MAY 10, 1909.

951,338.

Patented Mar. 8, 1910.

2 SHEETS—SHEET 1.

Fig. 1.

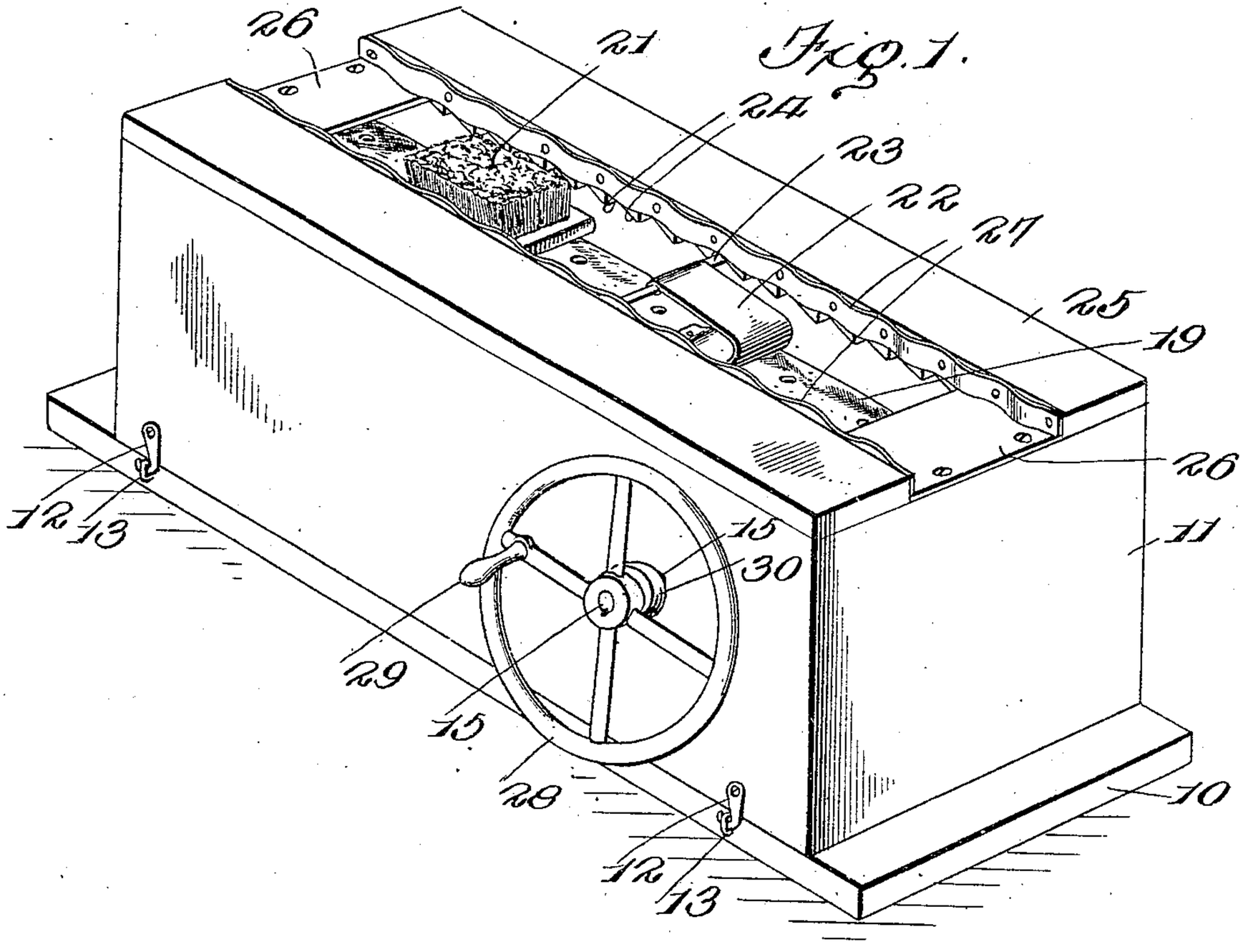
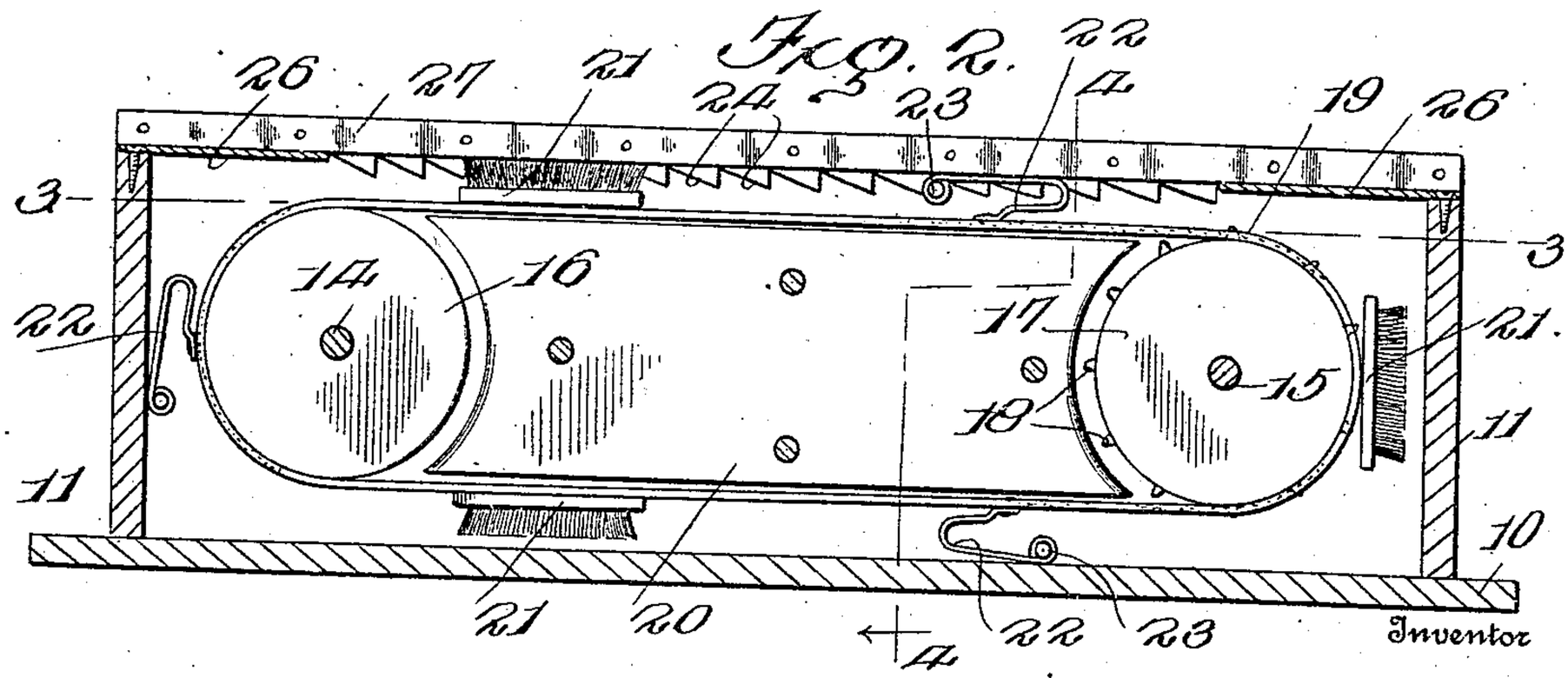



Fig. 2.

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2 SHEETS—SHEET 2.

Fig. 3.

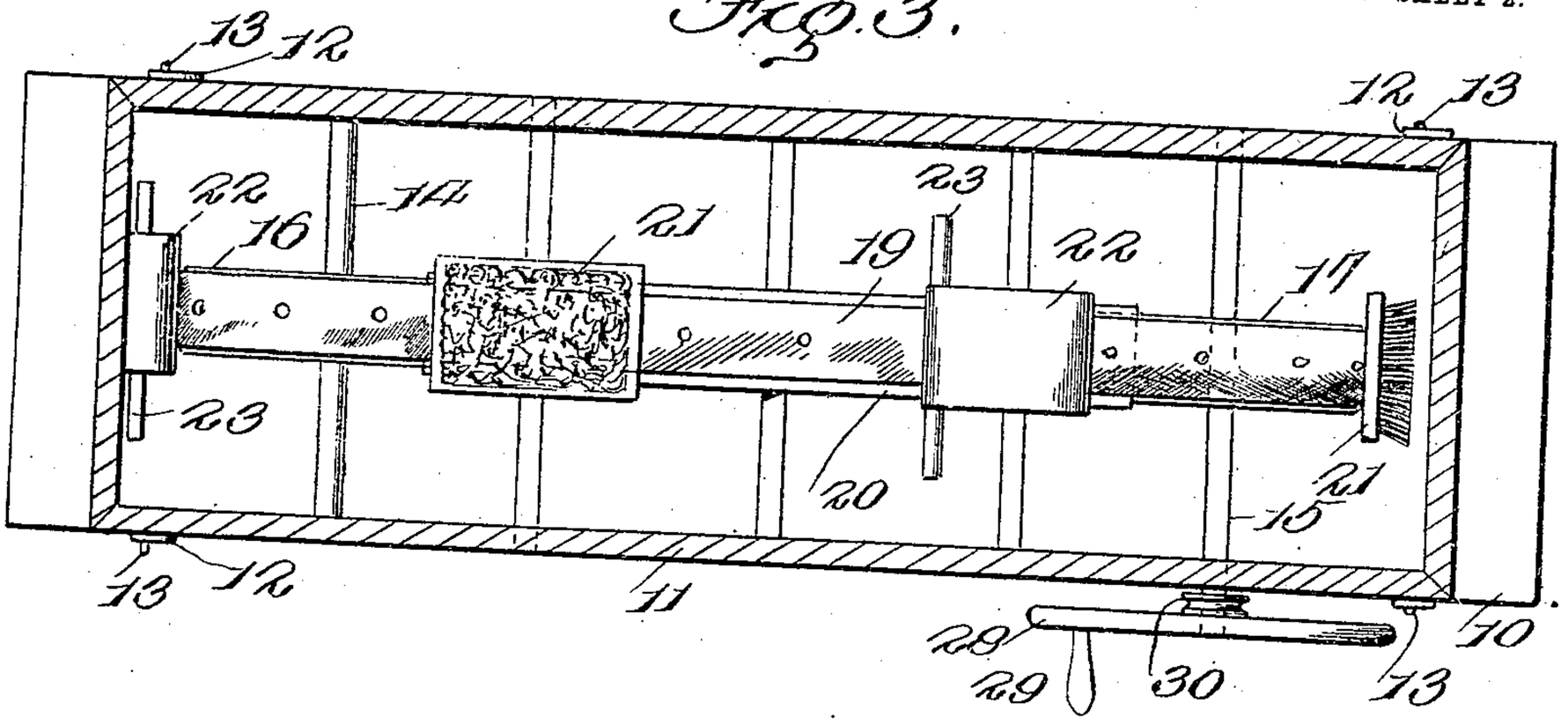



Fig. 4.

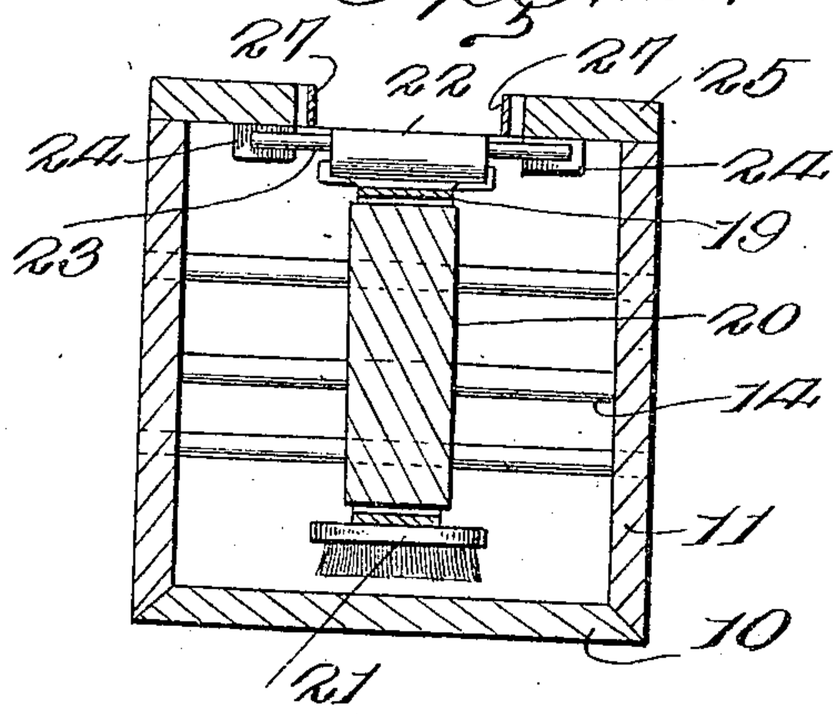
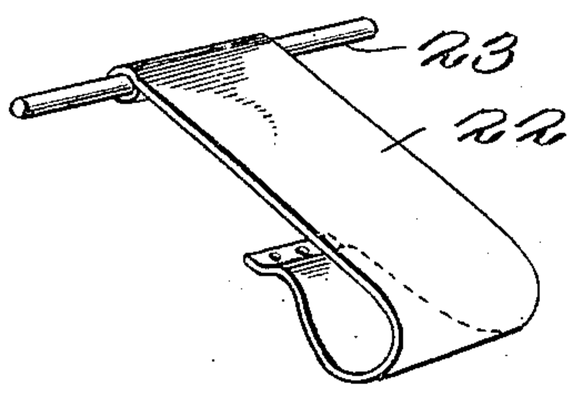



Fig. 5.

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# UNITED STATES PATENT OFFICE.

EARL A. ROBINSON, OF EMPORIA, KANSAS.

## ERASER-CLEANER.

951,338. Specification of Letters Patent. **Patented Mar. 8, 1910.**

Application filed May 10, 1909. Serial No. 494,983.

*To all whom it may concern:*

Be it known that I, EARL A. ROBINSON, citizen of the United States, residing at Emporia, in the county of Lyon and State of Kansas, have invented certain new and useful Improvements in Eraser-Cleaners, of which the following is a specification.

This invention relates to black board eraser cleaners and has particular reference to a device for cleaning the erasers when the same have become filled with chalk dust.

The invention provides a machine of this character which is adapted to clean the erasers and to confine the dust from the same within a chamber provided therefor, the cleaning being thoroughly accomplished by beating and brushing the erasers during the operation of the machine.

The invention further provides a machine of simple construction which may be operated either manually or by a small motor and which comprises but few operative parts and which will be strong and durable and one which comprises many practical advantages.

For a full understanding of the invention reference is to be had to the following description and accompanying drawings, in which:—

Figure 1 is a perspective view of the complete device. Fig. 2 is a longitudinal vertical section through the same. Fig. 3 is a sectional plan view of the device. Fig. 4 is a transverse section on the line 4—4 of Fig. 2, and Fig. 5 is a detailed perspective view of one of the leaf springs employed.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawing by the same reference characters.

Referring to the drawings in which is disclosed an embodiment of the invention the numeral 10 designates a base upon which a boxing 11 is positioned which forms the body of the device and which is detachably secured upon the base 10 by suitable hooks 12 engaged upon the sides of the boxing 11 and secured to pins 13 or the like which are extended laterally from the opposite edges of the base 10.

Within the boxing 11 are positioned shafts 14 and 15 which are transversely mounted in spaced relation from the opposite ends of the boxing 11 and which support intermediately thereof pulleys 16 and 17. The pulley 17 is provided with a plurality of radially disposed pins 18 which engage through apertures formed in an endless belt 19 disposed over the pulleys 16 and 17. The boxing 11 is further provided with a block 20 which is positioned between the pulleys 16 and 17 and is provided with arcuate recesses in its opposite ends in order to space the block 20 from the peripheries of the pulleys 16 and 17 and to present upper and lower straight edges for the reception of the endless belt 19 during its operation over the pulleys 16 and 17 to maintain the same in direct alinement with the highest point of the pulleys.

The endless belt 19 is provided with a plurality of brushes 21 which are disposed in spaced relation upon the outer face of the belt 19 and are disposed in alternate arrangement upon the belt 19 to leaf springs 22 which are likewise carried upon the outer face of the belt. The leaf springs 22 are secured at their inner extremities to the belt and are looped and have their outer extremities extended backwardly parallel with the belt 19 in which are positioned transverse abutments 23 which extend laterally from the same and are engaged with a plurality of inclined blocks 24 positioned against the under face of the cover 25 of the boxing 11.

The cover 25 is longitudinally slotted for the purpose of admitting of the insertion of erasers therein which are engaged by the brushes 21 and springs 22 during the operation of the belt 19, the springs 22 being vibrated as the abutments 23 pass over the notched surfaces formed by the blocks 24. The opposite ends of the boxing 11 are provided with plates 26 which are positioned beneath the cover 25 and which extend partially over the pulleys 16 and 17 and prevent the rising of the dust from the lower part of the boxing 11 during the operation of the brushes and springs therein.

The cover 25 is provided with strips 27 along the edges of the slot therein which are crimped throughout their length for the purpose of forming springs for engaging the erasers which are inserted between the springs and are thus retained adjacent the

outer face of the belt 19. The boxing 11 may be made in various lengths to accommodate any number of erasers so that a plurality of the same may be cleaned during one operation of the device. The pulley 17, which is the drive pulley for operating the device, is actuated by the provision of a balance wheel 28 positioned upon the outer extremity of the shaft 15 against the side of the boxing 11 and which is provided with a suitable handle 29. The hub of the balance wheel 28 is grooved as at 30 for the reception of a belt or the like when the shaft 15 is to be driven by a motor. The block 20 is retained in position through the medium of a plurality of arms which are transversely disposed within the boxing 11 and terminated in the sides of the same in any suitable manner.

The operation of the device is as follows:—The erasers which are to be cleaned are inserted through the opening in the cover 25 against the strips 27 and the balance wheel 28 is rotated. This action causes the pulley 17 to rotate and to actuate the endless belt 19 through the medium of the pins 18 which cause the belt to travel over both of the pulleys 16 and 17 and to slide across the upper edge of the block 20. By this operation the brushes 21 are brought into engagement with the erasers and are caused to carry off the chalk dust which has accumulated in the erasers. The projections 23 travel along the under face of the cover 25 and are drawn downwardly by the blocks 24 and released suddenly, whereby the springs strike the erasers to cause a beating action on the same to loosen the chalk dust and to enable the adjacent brush to carry off the same as it is wiped across the erasers.

The plates 26 prevent the rising of the chalk dust from the boxing 11 and thereby prevent the same from accumulating about the machine.

Having thus described the invention what is claimed as new is:—

1. A device as specified comprising a base, a boxing positioned on said base, pulleys mounted in the opposite ends of said boxing, an endless belt disposed over said pulleys, a cover for said boxing provided with means to hold erasers adjacent said belt, means for operating one of said pulleys and thereby said belt, a plurality of brushes carried by said endless belt and adapted for engagement against the erasers, a plurality of springs carried by said belt and means for contracting and releasing said springs for producing a beating action against the erasers.

2. In a machine for cleansing erasers the combination of a boxing having a slot in the upper side thereof for the reception of a plurality of erasers, an endless belt disposed in said boxing adjacent the slot, means carried by said boxing for actuating said endless belt and means carried by said endless belt for brushing and beating the erasers.

3. In a machine as specified the combination of a boxing provided with a slot adapted to receive and hold a plurality of erasers, an endless belt mounted in said boxing adjacent said slot, a plurality of springs disposed on said endless belt, inclined blocks disposed in said boxing for engagement with said springs to cause the beating of the same against the erasers, a plurality of brushes carried by said endless belt for producing a wiping action across the faces of said erasers and means for actuating said belt.

4. A machine as specified comprising a boxing, a cover having a longitudinal slot formed therethrough disposed on said boxing, a pair of crimped strips positioned along the inner opposite edges of the slot for frictional engagement with erasers, a plurality of inclined blocks carried upon the inner face of said cover, an endless belt mounted in said boxing adjacent said slot, a plurality of springs carried by said endless belt, abutments disposed upon the outer ends of said springs for engagement with said blocks to produce a beating action of the same against the erasers and a plurality of brushes carried by said belt for engagement against the erasers.

5. A device as specified comprising a boxing, pulleys mounted in the opposite ends of said boxing, an endless belt disposed over said pulleys, brushes disposed on said endless belt, leaf springs mounted on said endless belt, a cover having a longitudinal slot formed therethrough mounted on said boxing, strips disposed upon the opposite inner faces of the slot for engagement with erasers, means carried by said boxing to produce a beating action of the springs, a block having arcuate recesses formed in the opposite ends thereof positioned between said pulleys for maintaining said belt in a straight line and means for actuating said belt.

6. A machine as specified comprising a boxing, an endless belt mounted in said boxing, a slotted cover disposed upon said boxing, a pair of strips disposed upon the inner opposite faces of the slot in said cover, said strips being crimped for tensionally holding a plurality of erasers in the slot, a plurality of brushes mounted on said belt for engagement with the erasers and a plurality of vibrating springs alternately disposed with said brushes on said belt for engagement with the erasers.

7. An eraser cleaner including a boxing for supporting a number of erasers, an endless belt located in said boxing adjacent the erasers, means for actuating said endless belt, beaters located upon said belt, brushes located upon said belt, said beaters and said brushes being arranged in alternate relation

and adapted for engagement against the erasers and yielding means carried by said boxing for holding said erasers.

8. An eraser cleaner including a boxing having a longitudinal slot formed in the upper face thereof for the reception of a plurality of erasers, an endless belt located in said boxing beneath the erasers, beaters carried by said belt, brushes carried by said belt and arranged in alternate relation to said beaters and means for actuating said belt to operate said brushes and said beaters.

In testimony whereof I affix my signature in presence of two witnesses.

EARL A. ROBINSON. [L. S.]

Witnesses:

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