April 16, 1935. H. THOMASON 1,997,609

BRAKE LINING MACHINE

Filed July 30, 1931 2 Sheets-Sheet 1

FIG. 1

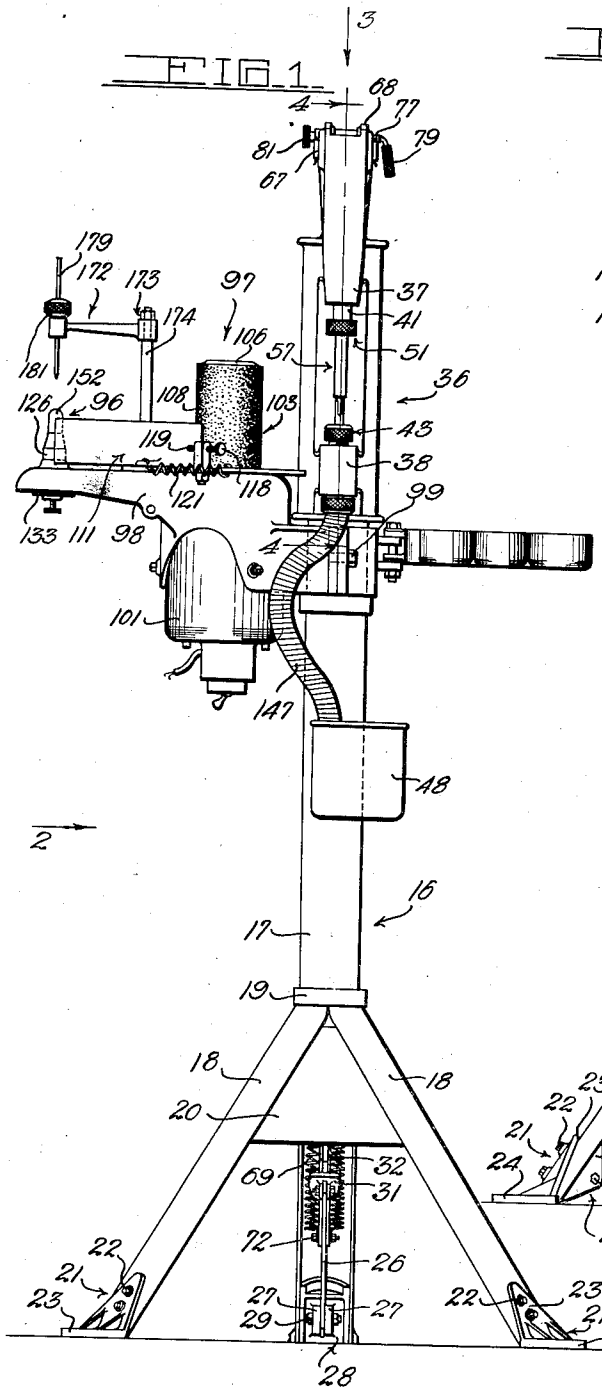
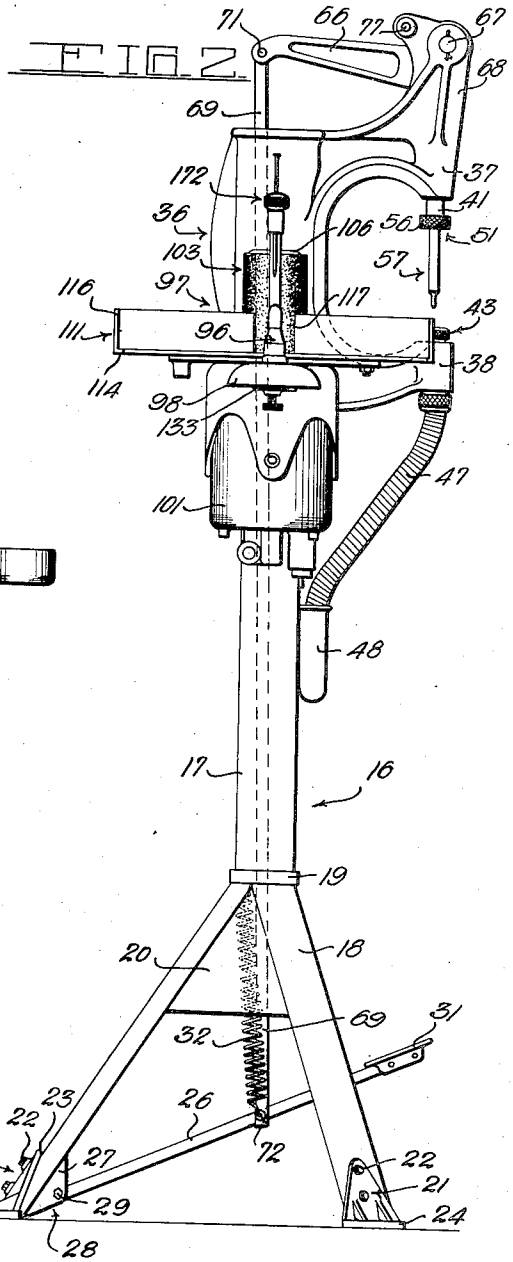


FIG. 2



INVENTOR
H. THOMASON
BY Hazard and Miller
ATTORNEYS.

April 16, 1935. H. THOMASON 1,997,609

BRAKE LINING MACHINE

Filed July 30, 1931 2 Sheets-Sheet 2

FIG. 3.

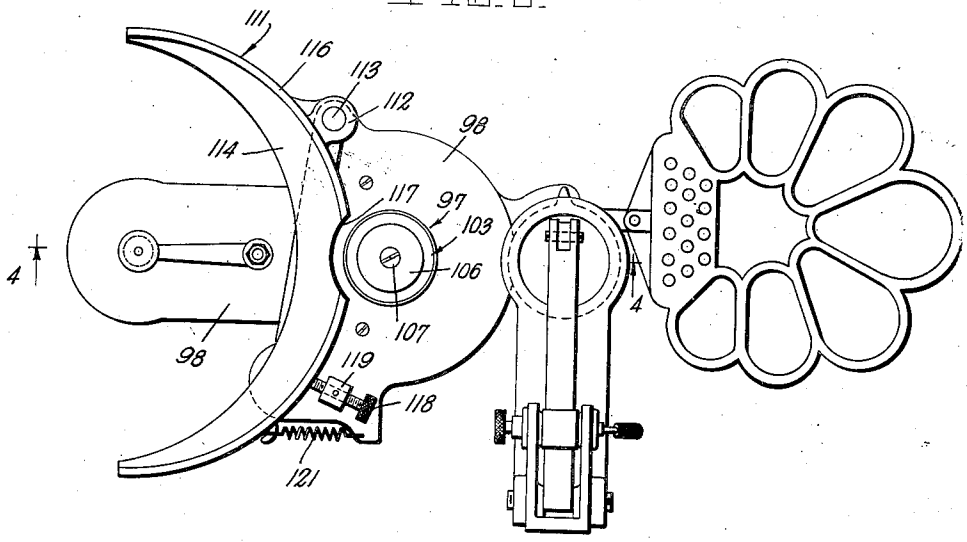
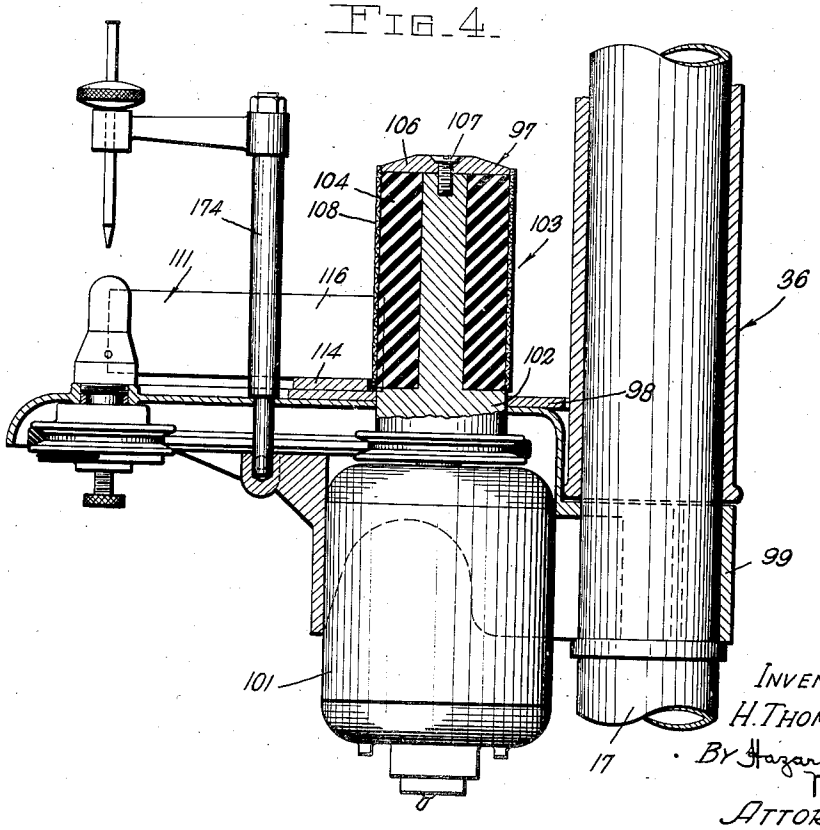


FIG. 4.



INVENTOR
H. THOMASON
BY Hazard and Miller
ATTORNEYS.

Patented Apr. 16, 1935 1,997,609

UNITED STATES PATENT OFFICE

1,997,609

BRAKE LINING MACHINE

Hjalmar Thomason, Los Angeles, Calif.

Application July 30, 1931, Serial No. 554,007

4 Claims. (Cl. 51—102)

This invention relates to automobile brakes, and more particularly to machinery for use in relining brake shoes, bands, or similar elements used in brakes of this general class.

It is an object to provide a brake lining machine, which is provided with preferably a plurality of interchangeable guides of different size, whereby the relined brake shoes may be guided in rotary motion about their own axes and against a suitable grinder to prepare the outer surface of the lining for use.

The invention possesses other objects and advantageous features, some of which, with those enumerated, will be set forth in the following description of the invention's particular embodiment which is illustrated in the drawings accompanying and forming a part of the specification.

Referring to the drawings:

Fig. 1 is a front elevation of a brake lining machine embodying the principles of the present invention.

Fig. 2 is a side elevation, the direction of view being indicated by the arrow 2 of Fig. 1.

Fig. 3 is a top plan view, the direction of view being indicated by the arrow 3 of Fig. 1, and a portion of the figure being broken away to reduce its size.

Fig. 4 is an enlarged vertical sectional view taken through the grinding and drilling mechanism upon the line 4—4 of Fig. 3, with the direction of view as indicated.

My improved brake lining machine is mounted upon a single standard, indicated in its entirety at 16. This standard comprises a tubular body portion 17 which is split upwards from its lower end to provide three legs 18 which are sprung outwards away from each other so that they diverge downwards from the lower end of the body 17. Gusset plates 20 are rigidly attached to the legs 18 adjacent the body 17.

A grinding mechanism 97, is supported upon a laterally extending table 98 which is rigidly clamped upon the body portion 17 of the standard 16 by a releasable clamp 99 (see Fig. 1). An electric motor 101 is rigidly mounted upon the under side of the table 98, with the shaft of the motor 101 disposed vertically. The spindle 102 of a grinder 103 is secured coaxially to the shaft of the motor 101, and extends upwards through the table 98. A tubular head 104 is removably receivable upon the spindle 102 and is adapted to be clamped rigidly thereupon by means of a disk 106 having a screw 107 extending therethrough. The outer surface of the head 104 is covered with suitable abrasive such as a sheet of emery cloth 108.

Means are provided for guiding a brake shoe against the grinder 103. A brake shoe guide 111 having a boss 112 is adapted to be mounted for pivotal movement upon the table 98 by means of a pivot pin 113 rigid with the table 98 which is adapted to be received within a suitable hole in the boss 112. The guide 111 comprises a flat arcuate plate 114 having a flange or guide wall 116 extending upwards from the outer edge thereof. An opening 117 is provided in the flange 116 in registry with the grinder 103, so that the grinder 103 may be caused to enter the notch 117 by swinging the guide 111 toward the grinder. Preferably, a plurality of guides 111 of assorted sizes is provided, it being intended that a guide be selected whose curvature coincides with that of the brake shoe to be ground. This permits the brake shoe with the newly applied lining thereupon to be supported upon the plate 114, and pressing against the inner surface of the flange 116. The shoe should then be rotated about the center of its own arc so as to cause its entire length to come into engagement with the grinder 103 while the grinder is being rapidly rotated as a result of the energization of the motor 101. The depth to which the grinder 103 enters the notch 117 is adjustable by means of a screw 118 threaded through a boss 119 upon the table 98, and a coil spring 121 under tension between the table 98 and the guide 111 holds the guide against the screw 118.

The flange 116 of any particular arcuate template guide 111 represents the true cylindrical surface that the wearing surface of a brake band to be tested and ground should have. When the brake band is fitted against this flange the high spots contact with the flange and when the brake lining with the shoe on which it is attached is moved in an arc and kept pressed against the flange 116 the high spots may be ground off by the grinder. The arcuate guide is readily adjustable to grind either small or large sections from the brake band, then as the band is properly shaped it will have a close contact fit with the flange 116.

It is to be understood that the details of the invention as herein disclosed, are subject to alteration within the spirit or scope of the appended claims.

I claim:

1. In a brake grinding machine, a grinder, an arcuate guide wall for guiding an arcuate brake shoe in rotary motion about the center of its own

arc, said guide wall having an opening and said grinder being disposed partially within said opening to engage a brake shoe within said guide wall, said guide wall being movable whereby that portion of the guide wall having the opening therein may be moved towards and away from said grinder, and means for holding said guide wall in selected position.

2. In a brake grinding machine a rotatable grinder, an arcuate guide wall for guiding an arcuate brake shoe in rotary motion about the center of its own arc, said guide wall having an opening and said grinder being disposed partially within said opening to engage a brake shoe within said guide wall, a pivot for said guide wall, said pivot being parallel to the axis of the grinder and located at one side of the opening and means for holding said guide wall in selected positions.

3. In a brake grinding machine, as claimed in claim 2, the means for holding the guide wall in selected position comprising an adjusting screw positioned to contact with the outside of the guide wall and a spring connected to the guide wall and pulling said wall into contact with said screw.

4. In a brake grinding machine a flat plate, an arcuate guide flange extending upwardly from one end thereof to guide an arcuate brake shoe resting on the plate in rotary motion above the center of the arc described thereby, said flange having an opening, a cylindrical grinder having its axis concentric to that of the flange and disposed partly within said opening to engage a brake shoe within said guide, means to rotate the grinder, a pivot for the plate parallel to the axis of the grinder and means to turn the arcuate plate and guide flange on its pivot to vary the depth to which the grinder extends into said opening.

HJALMAR THOMASON.