Jan. 24, 1933. F. K. BENEDICT 1,895,122

TRAVELING WHEEL GRINDER

Filed March 31, 1930

Fig 1.

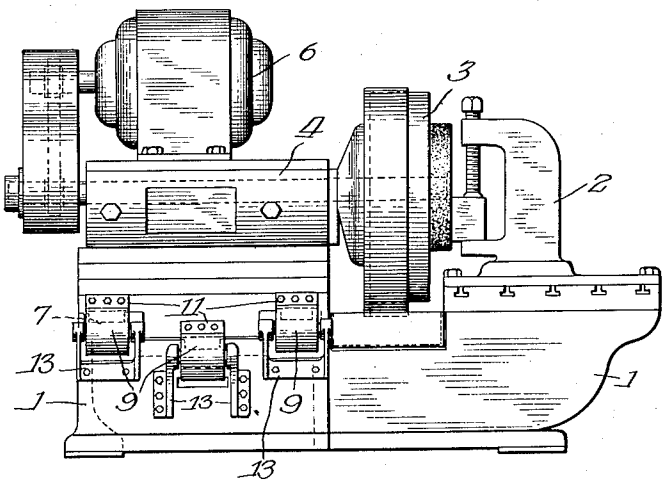


Fig 2.

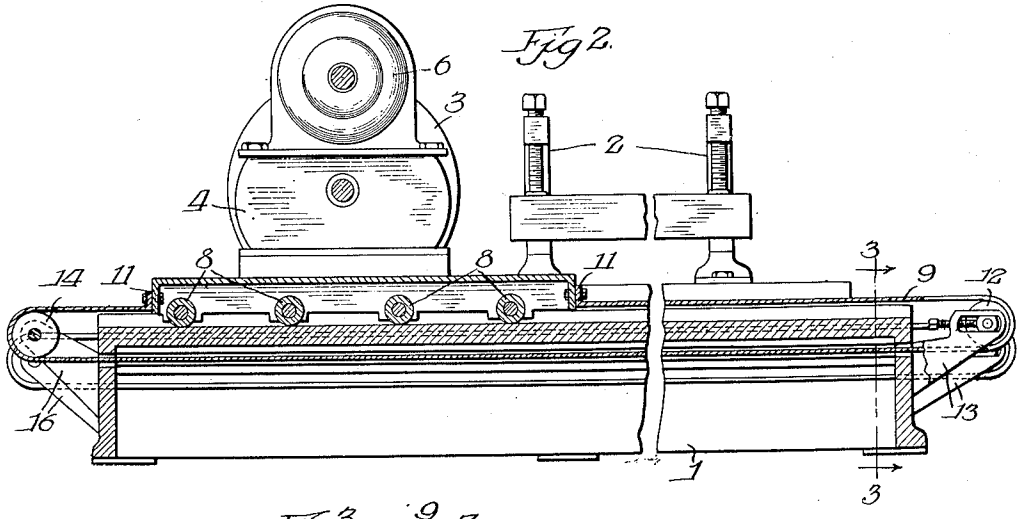
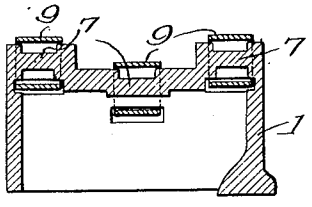


Fig 3



Witness:

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UNITED STATES PATENT OFFICE

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TRAVELING WHEEL GRINDER

Application filed March 31, 1930. Serial No. 440,186.

This invention relates to machines such as grinders, planers, etc. for operating upon materials such as metal objects.

In machines of this type either the work support or the operating tool is mounted for sliding movement relatively to the other in order that the entire surface of the material being operated upon may be engaged by the tool. Due to the very nature of the operations, that is, the removing of particles from the material, these particles become lodged on the guideways over which the moving element travels and interfere with the movements of the moving element.

Various attempts have been made to construct suitable protective coverings for the guideways including among others the placing of covering strips over the guideways. Such guideways, however, have in the past been cumbersome stationary structures which necessarily have had to be secured in spaced relation to the guideways in order that the traveling member could pass therebetween.

It is the purpose of this invention to provide an improved covering for the guideways which will prevent foreign matter from dropping upon them and interfering with the proper movements of the movable element.

It is also an object of this invention to provide an improved covering that is particularly well adapted to a traveling wheel grinding machine.

In accordance with my invention I provide movable flexible band-like covers for the guideways which cover those portions of the guideways not occupied by the moving element and which are secured to the moving element in such a way that the portions not occupied thereby are always covered.

A better understanding will be had of this invention from a consideration of the following description given in connection with the drawing. In the illustrated embodiment this invention is illustrated as being applied to a grinding machine employing a traveling grinding head arranged to operate upon an article supported in a relatively stationary work support.

Fig. 1 is an end elevation of such a machine constructed in accordance with this invention.

Fig. 2 is a longitudinal section taken through one of the guideways, and

Fig. 3 is a section on line 3—3 of Fig. 2.

Referring to the drawing which as has been heretofore said, shows the invention as applied to traveling wheel grinders, for purposes of illustration, the entire machine is shown as being supported upon a bed 1 upon which the work support 2 is rigidly but adjustably secured and upon which the traveling grinding head 3 is mounted. The grinding head is mounted upon a carriage 4 and is driven by a motor 6. The carriage travels upon guideways 7 formed in the bed 1, rollers 8 may be mounted in the carriage 4 to reduce friction if desired. The structure so far described is the usual construction of this type grinder.

In order to keep those portions of the guideways not occupied by the carriage protected, there are provided flexible covers for each of the ways in the form of fabric belts 9 of a little greater width than the guideways. One end of each of the belts is secured to one end of the carriage as at 11 from which point the belts extend to the adjacent ends of the guideways, pass over rollers 12 adjustably carried in brackets 13, pass under the guideways and up over rollers 14 journalled in brackets 16 at the opposite end of the bed and overlie the guideways upon the other side of the carriage. The opposite ends of the belts are secured to the other end of the carriage. It can be seen that by this arrangement movable or traveling covers are provided for the guideways which will maintain the unoccupied part of the ways covered at all times. By means of the adjustable pulleys or rollers 12 the belts may be maintained tightly stretched.

It is believed the operation of these covering belts is apparent from the foregoing description and that further explanation is therefore not necessary.

It is obvious that although this invention is particularly well adapted to a traveling wheel grinder such as is illustrated in the

drawing, the invention is not limited to this application. It is further apparent that minor changes may be made in the details of construction without departing from the spirit and scope of this invention as defined in the claim appended hereto.

I claim:

In a machine for operating upon material, a bed, a work support mounted on said bed, an operating head supported upon said bed, said head and support being movable with respect to each other, guideways formed on said bed for said movable member and flexible covers for said ways arranged to protect those portions of the ways not covered by the movable member as the latter changes its position during operation of the machine, said covers being secured at one end to one end of the movable member and extending over the exposed portion of said ways adjacent the latter end of said movable member and continuing beneath the ways and over the other exposed portion of the ways, the opposite ends of said covers being secured to the opposite end of said movable member whereby the covers move with said movable member to maintain the exposed portions of said ways protected during operation of the machine.

In witness of the foregoing I affix my signature.

FREDERIC K. BENEDICT.