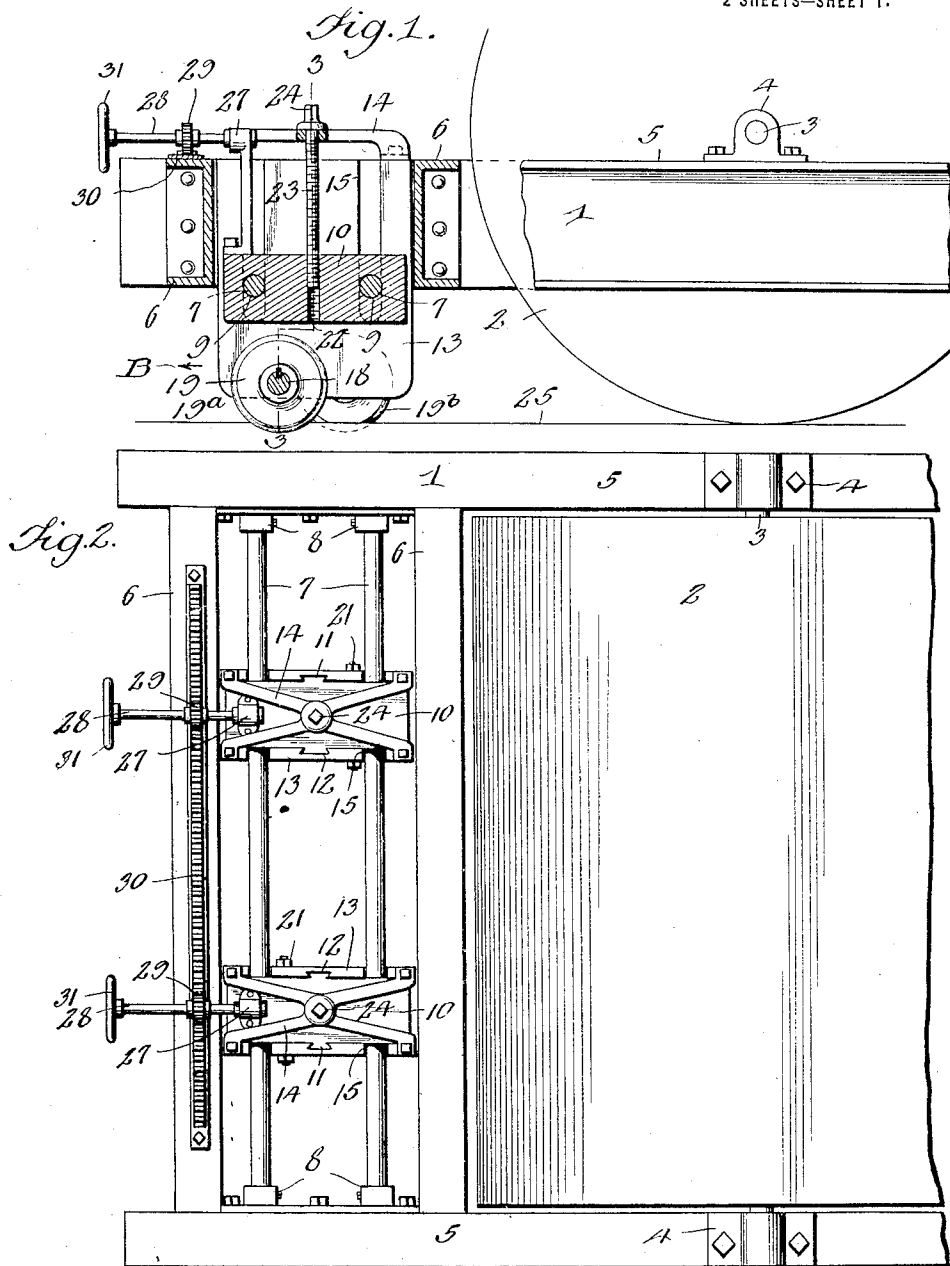


J. PETERMANN.
 ASPHALT CUTTER MECHANISM.
 APPLICATION FILED SEPT. 14, 1917.

1,331,367.

Patented Feb. 17, 1920.

2 SHEETS—SHEET 1.



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2 SHEETS—SHEET 2.

Fig. 3.

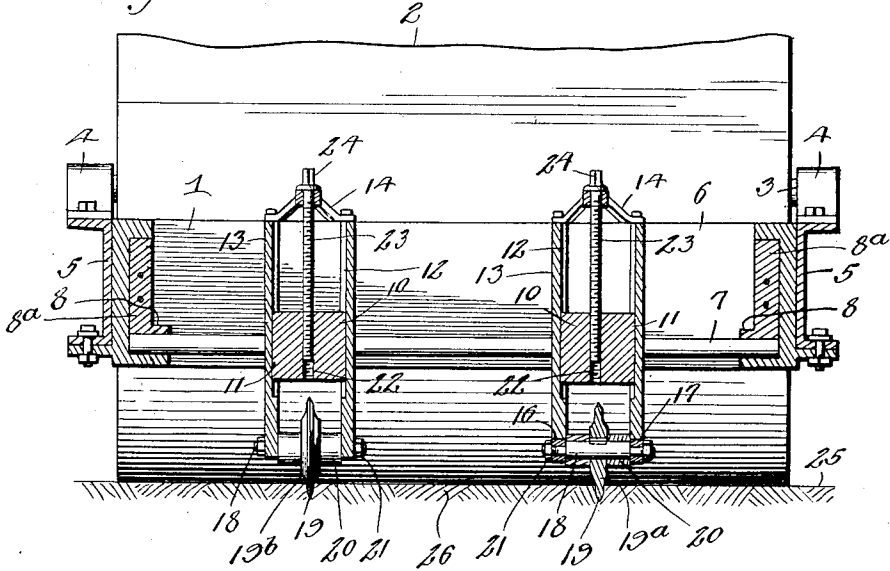


Fig. 4.

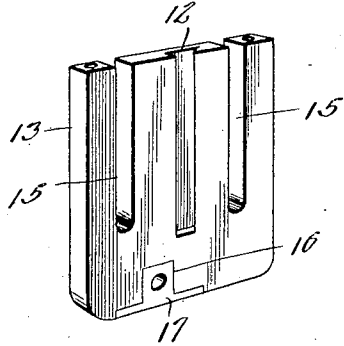
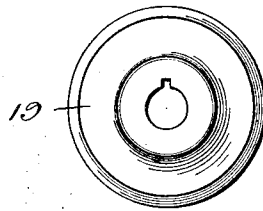


Fig. 5.



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ASPHALT-CUTTER MECHANISM.

1,331,367.

Specification of Letters Patent. Patented Feb. 17, 1920.

Application filed September 14, 1917. Serial No. 191,457.

To all whom it may concern:

Be it known that I, JOSEPH PETERMANN, a citizen of the United States, residing at 6149 Walnut St., Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented new and useful Improvements in Asphalt-Cutter Mechanism, of which the following is a specification.

This invention relates to asphalt or concrete cutting mechanism, and has for its primary object to provide efficient and reliable means for cutting asphalt surfaces into strips, whereby the latter may be readily taken up to permit of repaving or relaying surfaces.

Another object of the invention is to improve and simplify the construction disclosed in my co-pending application, filed June 20, 1917, bearing Serial No. 175941, by providing the asphalt cutter with a plurality of spaced cutting disks, one located in advance of the other and having independent regulating devices, the arrangement of the cutting disks being such as to cut asphalt or analogous surfaces into strips and to simultaneously loosen the same to effect their convenient removal from the bed therefor.

A further object is to provide means for transversely varying the spaces between the cutting disks, so as to enable the machine to cut asphalt in different sized strips, and to provide further vertical adjustable means for regulating the depth of cuts of the disks, or to raise the latter to inactive positions.

A still further object is to provide asphalt-cutting mechanism of the above character, which may be formed in connection with an ordinary power-driven roller of the type employed for finishing and smoothing asphalt surfaces, and including means for positioning the cutting disks thereof above a street surface when the roller is being employed in its common capacity.

With these and other objects in view, as will appear as the description proceeds, the invention consists in the novel features of construction, combination of elements and arrangement of parts to be hereinafter fully described, and having the scope thereof indicated in the appended claims.

In the drawings wherein has been shown

one of the preferred embodiments of the invention—

Figure 1 is a vertical longitudinal sectional view taken through the asphalt cutting mechanism, and illustrating the same applied to a street roller.

Fig. 2 is a top plan view thereof.

Fig. 3 is a transverse sectional view taken along the line 3—3 of Fig. 1.

Fig. 4 is a detail perspective view of one of the disk-supporting plates.

Fig. 5 is an elevation of one of the cutting disks.

Similar characters of reference denote corresponding parts throughout the several views of the drawings.

In carrying out my invention, the same is preferably employed in conjunction with a street roller 1, the latter being of conventional construction including a roller 2, having an axle 3; the latter being journaled in bearings 4 mounted upon the side beams 5 of the roller. The beams are preferably extended a suitable distance beyond the forward part of the roller 2, and secured to the beams at points in advance of the roller 2 are a plurality of transversely extending channel beams 6.

Secured to the side beams 5 and located between and extending parallel with the channel beams 6 are a plurality of cross rods 7, the extremities of the latter being mounted within bearings 8 carrying suitable holding blocks 8^a, the bearings 8 being secured in any suitable manner to the side beams 5. The rods 7 are adapted to extend through openings 9 formed in spaced blocks 10, so that the blocks will be supported against vertical movement by means of the side beams 5, said blocks of course being shiftable transversely with regard to the rods 7. Each of the blocks 10 have certain sides thereof provided with dovetailed projections or flanges 11, which are adapted to be positioned within dovetailed grooves 12, formed in disk-supporting plates 13, said plates being arranged in pairs and connected at their upper edges by means of web members 14 which maintain the plates in their proper respective positions. Vertical slots 15 are formed in the plates 13, to accommodate the rods 7 and to permit of vertical adjustment of said plates.

Formed in the lower edges of the plates 13 are recesses 16, which are adapted to receive bearing blocks 17, the latter being provided with openings for the reception of the reduced ends of disk-carrying shafts 18, the said shafts being positioned between the plates and extending transversely of the latter. Rotatable with the shafts 18 are cutting disks 19, and carried by the shafts 18 and positioned between the disks 19 and the plates 13 are rollers 20, the latter being sufficiently large to extend below the lower edge of the plates 13, so as to prevent the latter from engaging with concrete surfaces. Nuts 21 are threaded upon the outer ends of said shafts to retain the latter in proper positions with regard to the plates 13.

In order to regulate the cutting depth of the disks 19, the blocks 10 are provided with threaded openings 22, which are adapted to receive vertically extending feed screws 23, the upper ends of the latter being journaled within the web members 14, and are further provided with squared extremities 24, for the reception of a suitable wrench or wheel (not shown) to effect the rotation of the screws. It will be seen that by rotating the screws the latter will be vertically adjusted with regard to the blocks 10, and due to the connection between the screws and the plates, the latter will also be regulated or adjusted to a similar degree, thereby effecting the raising and lowering of the cutting disks.

It will be noted that the disks 19 are not located on the same axis, that is, the disk 19^a is positioned in advance of the disk 19^b, and the purpose of this construction is to facilitate the cutting of asphalt, and to permit the same to be conveniently taken up in strips. Thus when the mechanism is moving in the direction of the arrow B, the disk 19^a will cut an incision into the asphalt 25, then by reason of the rearward location of the disk 19^b, the strip of asphalt thus cut will be shifted transversely of its bed 26 so as to loosen the strip from said bed, this movement of the asphalt being effected by the incision cut by the disk 19^a and by the lateral thrust imparted to the strip by the following disk 19^b. It will of course be understood that the roller can travel in a forward or rearward direction, and the cutting action of the disks 19 will be precisely the same in both instances.

In order to vary the width of cut of the disks 19, the blocks 10 are provided with bearings 27, which are adapted to receive shafts 28, the free extremities of the latter having secured thereto fixed pinions 29, which mesh with a tooth rack 30 secured to the upper surface of one of the channel beams 6. The shafts 28 are further provided with manipulating wheels 31, whereby

when the latter are rotated the blocks 10 and their associated plates 13 will be capable of being moved to varying transversely situated positions.

From the foregoing it will be seen that I have generally improved the construction of my apparatus, and have widened the scope of its utility, by providing the duplex arrangement of the cutting disks 19. Also the arrangement of the latter is a salient feature of the present invention, as it enables the machine to cut the concrete or asphalt into strips, and at the same time to generally loosen the same from its bed, thereby permitting of the convenient removal of the cut strips without resorting to the use of picks, chisels, wedges and similar means.

Having described my invention what is claimed as new is:

1. An asphalt cutter comprising supporting means, wheeled means carrying said supporting means, plates held to and adjustable vertically on opposite sides of said supporting means, journaled cutters carried by the plates and disposed between the plates and below the supporting means, a web member disposed above the supporting means and fixed to said plates, and an adjusting screw threaded in said supporting means and bearing on said web member.

2. An asphalt cutting apparatus comprising side beams, a transverse beam, a transverse rack on said beam, transverse rods spaced apart in parallelism to said rack and interposed between and carried by the side beams, supporting means movable transversely of the apparatus on said transverse rods and having an upright, a longitudinally disposed shaft journaled in said upright and having a pinion intermeshed with said rack, plates held to and adjustable vertically at opposite sides of the supporting means and having vertical slots receiving said transverse rods, a web member disposed above the supporting means and fixed to said plates, an adjusting screw threaded in the supporting means and bearing on the web member, and rolling cutters carried by the plates and disposed between the same and below said supporting means.

3. An apparatus for cutting asphalt paving surfaces into strips, comprising a portable carrier movable rectilinearly over a paving surface, and vertically disposed rotary cutting disks mounted in spaced and parallel relation in the carrying means and disposed longitudinally thereof and located one in advance of the other, whereby the rear disk will serve the two-fold function of cutting an asphalt strip and moving the same laterally.

In testimony whereof I affix my signature.

JOSEPH PETERMANN.