

(No Model.)

P. GRIFFIN.
STEAM ROAD ROLLER.

No. 430,575.

Patented June 17, 1890.

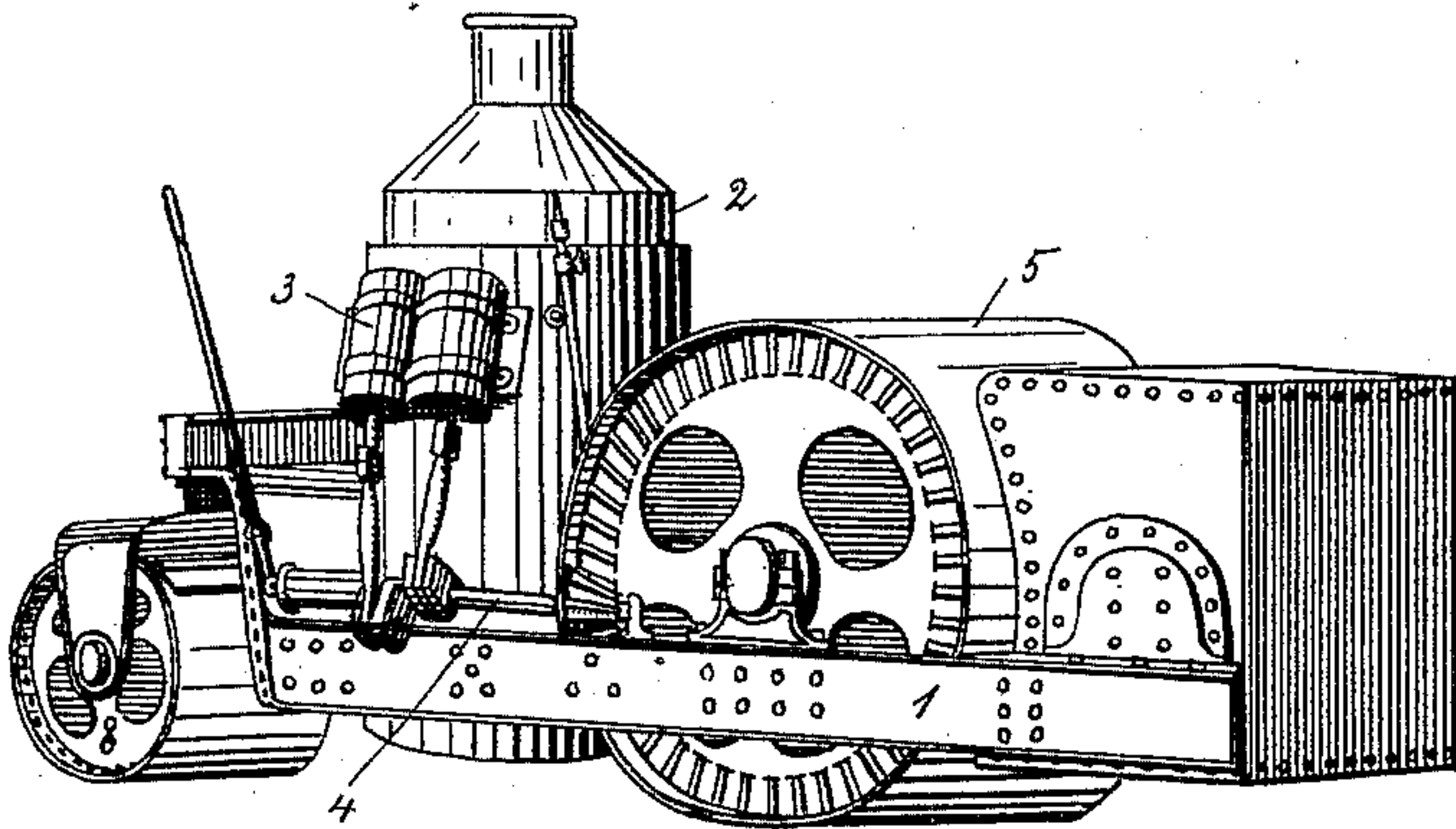


Fig. 1.

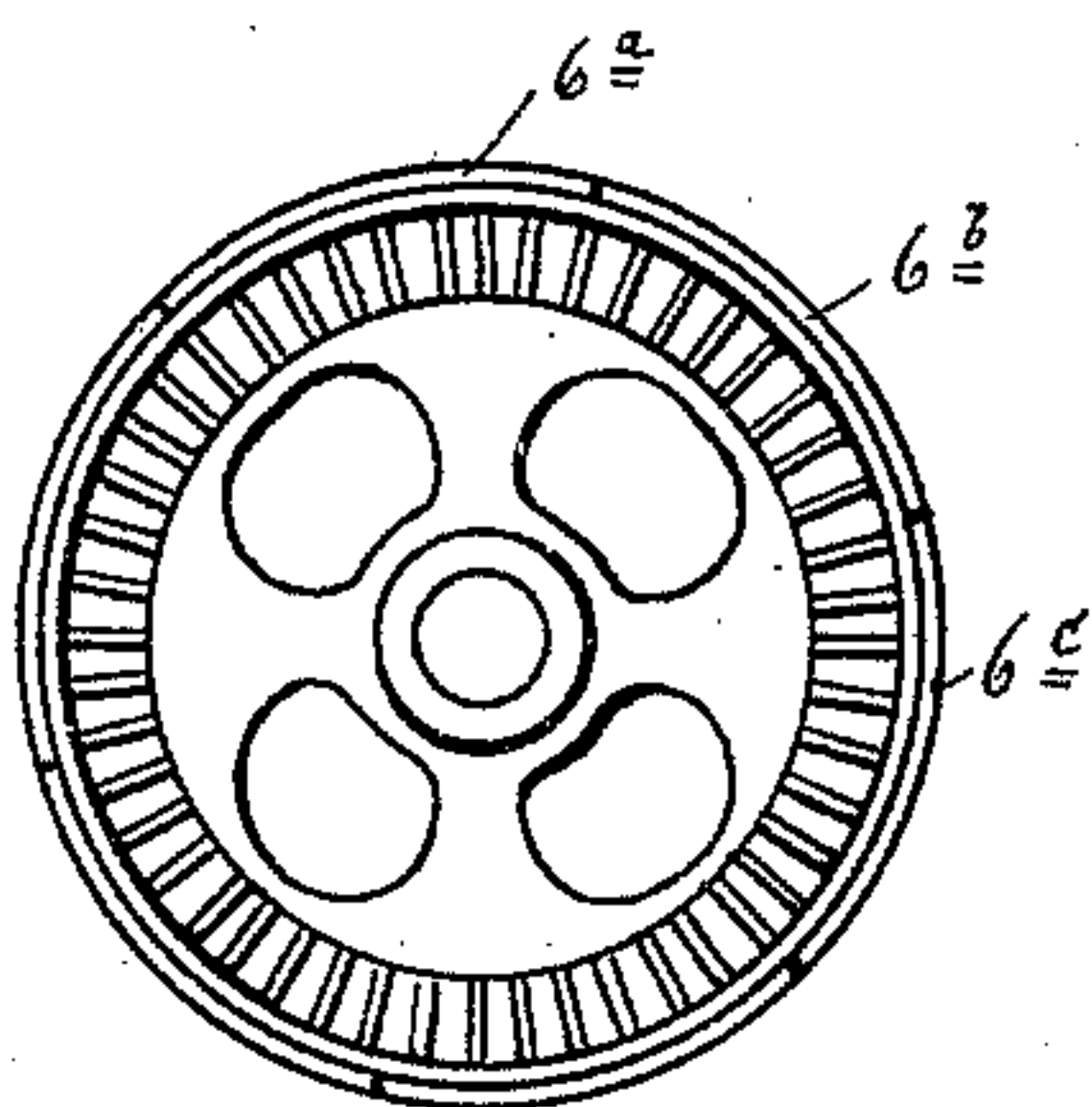


Fig. 2.

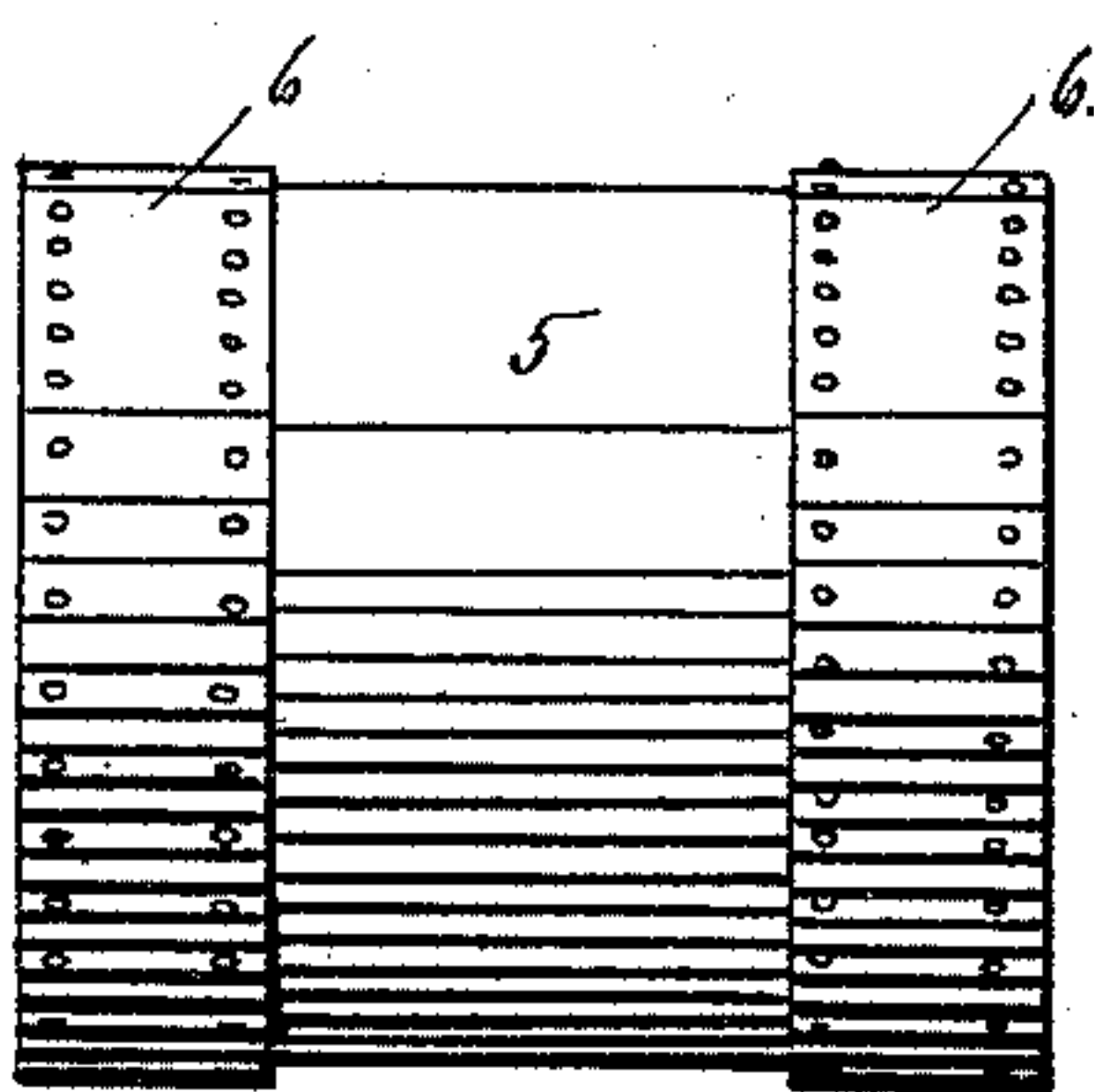


Fig. 3.

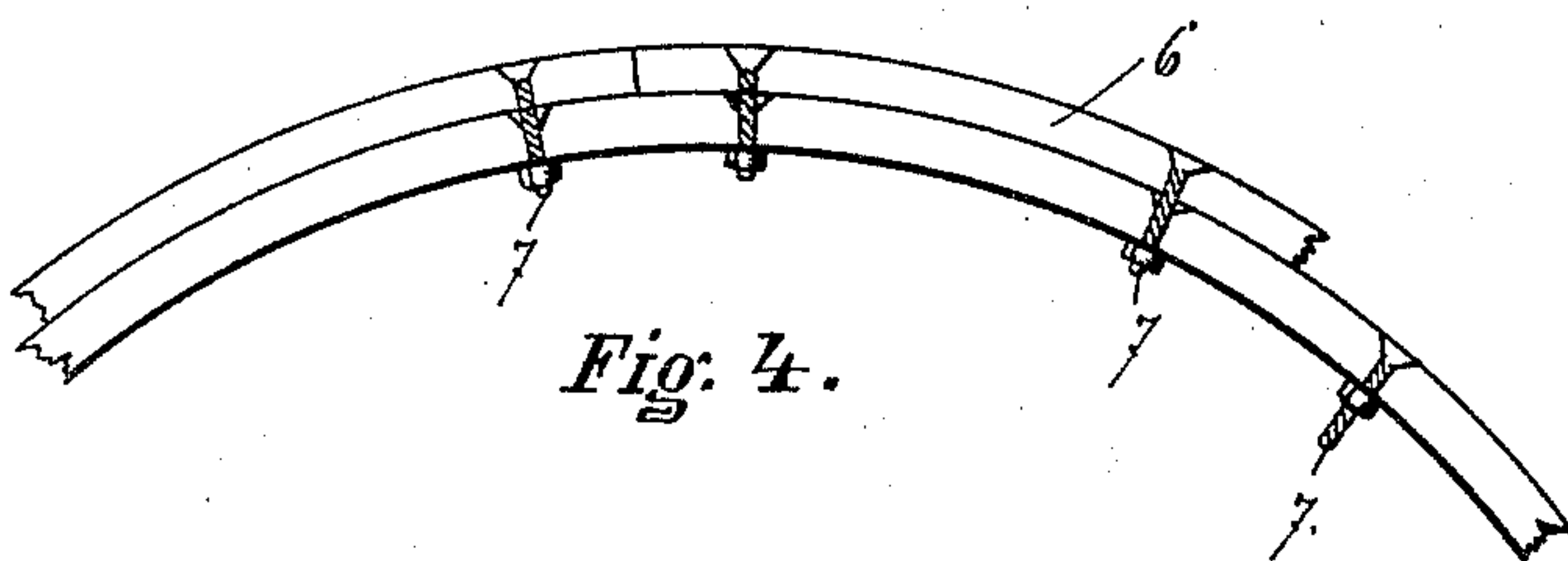


Fig. 4.

WITNESSES.

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PATRICK GRIFFIN, OF UTICA, NEW YORK, ASSIGNOR OF FIVE-SIXTHS TO
JAMES F. LEAHY, JOHN HACKETT, EDWARD CALLAHAN, JOHN L. MAHER,
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STEAM ROAD-ROLLER.

SPECIFICATION forming part of Letters Patent No. 430,575, dated June 17, 1890.

Application filed November 9, 1889. Serial No. 329,724. (No model.)

To all whom it may concern:

Be it known that I, PATRICK GRIFFIN, of Utica, in the county of Oneida and State of New York, have invented certain new and
5 useful Improvements in Steam Road-Rollers; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and
10 use the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form part of this specification.

My invention relates to an improvement in
15 rollers, and more especially to that class of rollers used in constructing road-beds and streets.

In the drawings which accompany and form part of this specification, and in which similar numerals of reference refer to like parts
20 in the several figures, Figure 1 shows a steam-roller to which features of my invention may be applied. Fig. 2 shows an end view of the main roller. Fig. 3 shows a side view of the
25 same, and Fig. 4 a sectional view showing details of construction.

Referring to the drawings, 1 indicates the roller-frame, upon which is mounted the steam generator or boiler 2, which furnishes steam
30 for compound or double-cylinder engine 3, which drives shaft 4, geared into cogs on the end of the main roller 5.

6 indicates a steering or guiding roller.

My improvement consists in providing upon
35 the main roller 5, which carries the greater portion of the weight of the mechanism, the segmental ring or bands 6. The bands are preferably constructed in sections 6^a, 6^b, 6^c, &c., and, as shown in Fig. 2, in six sections,
40 which are secured to the roller proper by bolts 7, which pass through perforations in band 6 and corresponding perforations in the shell of the roller proper. The perforations in the band 6 and in the shell-roller 5 are
45 each countersunk on the outside, so that the head of the bolt will be even or flushed with the surface of the roller or of the band when they are used to secure the band in position, and thus always presenting a smooth bear-

ing-surface. When the bolt 7 is not used in
50 securing the band, as shown in the left-hand side of Fig. 4, it is placed in the hole in the shell of the cylinder and the nut set up, as shown in the right-hand side of Fig. 4. The relative width of the bands to the length of
55 the cylinder may be varied at pleasure; but I prefer to construct them so that the width of the two bands together will equal about one-half the length of the cylinder.

The purpose and use of my improvements
60 are as follows: The roller is used in compressing the material for a road-bed or other purpose, having its normal straight surface, as shown in Fig. 1, until the material acted upon
65 has become so compact that the roller fails to make much impression or have much effect. Then I apply my bands 6 to each end of the roller by removing the bolts 7 from the shell and placing a section in position on the
70 roller, replacing the bolt 7, and moving the roller ahead as the sections are applied until the bands are completed entirely around. The roller is then put to use upon the same surface that had been previously compressed,
75 and the same amount of weight being brought to bear upon substantially half or less of the same surface at the same time a double amount of pressure is obtained and a greater compression of the material effected.

It is evident that a single band, as 6, may
80 be used upon the roller, either centrally or otherwise, although I prefer the construction described, as the roller is then effective at the ends and can be worked close up to a curb-stone or other confining limits. It is also
85 evident that the construction and arrangement might be varied without departing from the spirit or equivalents of my invention.

In showing the construction of steam-roller shown in Fig. 1 I do not mean to limit myself in any wise thereto, (merely illustrate,) but intend to apply my improvements to any roller used, as described.

What I claim as new, and desire to secure by Letters Patent, is—

1. The combination, with a compression-roller having countersunk perforations, sectional bands having countersunk perfora-

tions corresponding with those of the roller, and bolts adapted to pass through the perforations and secure the band to the roller, substantially as set forth.

5 2. The combination, with a compression road-roller, of removable sectional projecting compression-bands adapted to be secured upon the bearing-face of the roller at each end, and together less in width than the length
10 of the face of the roller, and means for removably securing the bands to the roller, substantially as set forth.

3. The combination, with a compression road-roller, of a removable sectional project-
15 ing compression-band adapted to be secured

upon the bearing-face of the roller, and of less width than the length of the roller-face, and means for removably securing the band to the roller, substantially as set forth.

4. A compression road-roller having a 20 straight face in the direction of its length, and a raised band portion having a straight face in the direction of its width, parallel with the true face of the roller.

In witness whereof I have affixed my signa- 25
ture in presence of two witnesses.

PATRICK GRIFFIN.

Witnesses:

M. E. ROBINSON,
JOSIAH PERRY.