

No. 737,540.

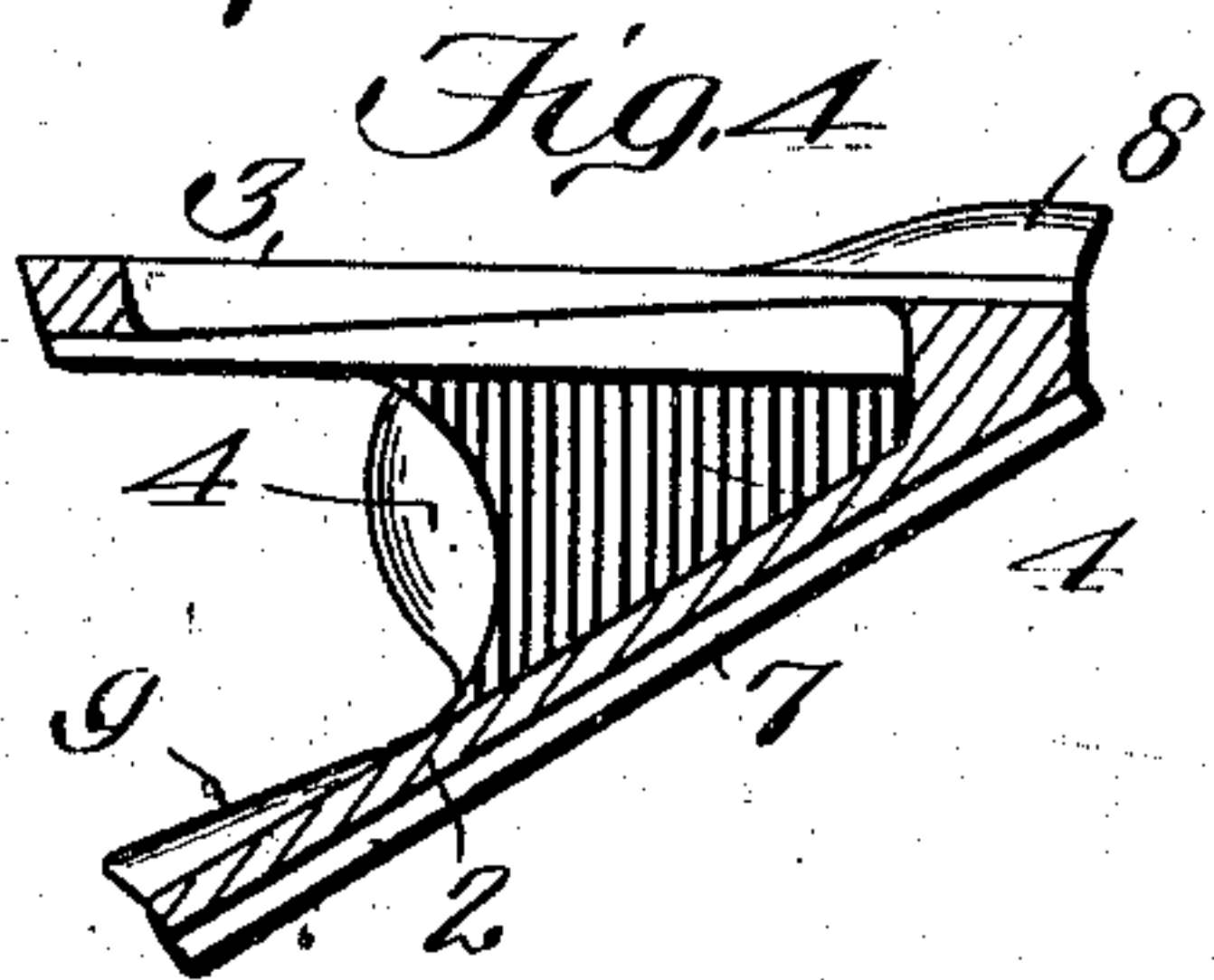
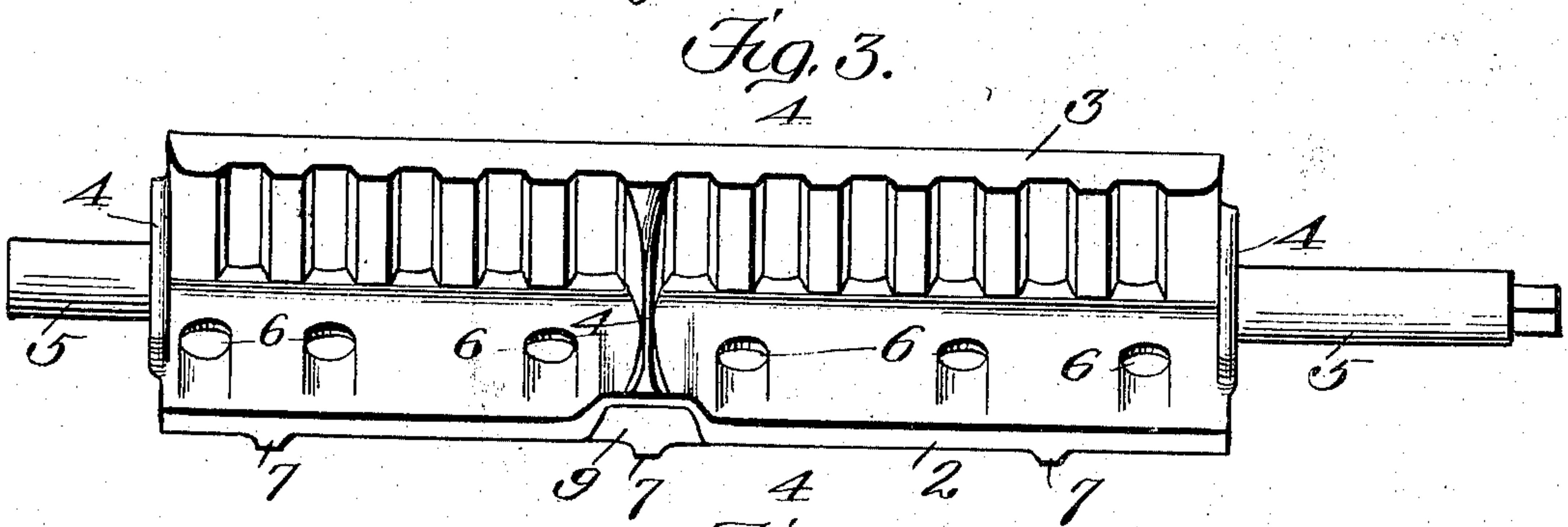
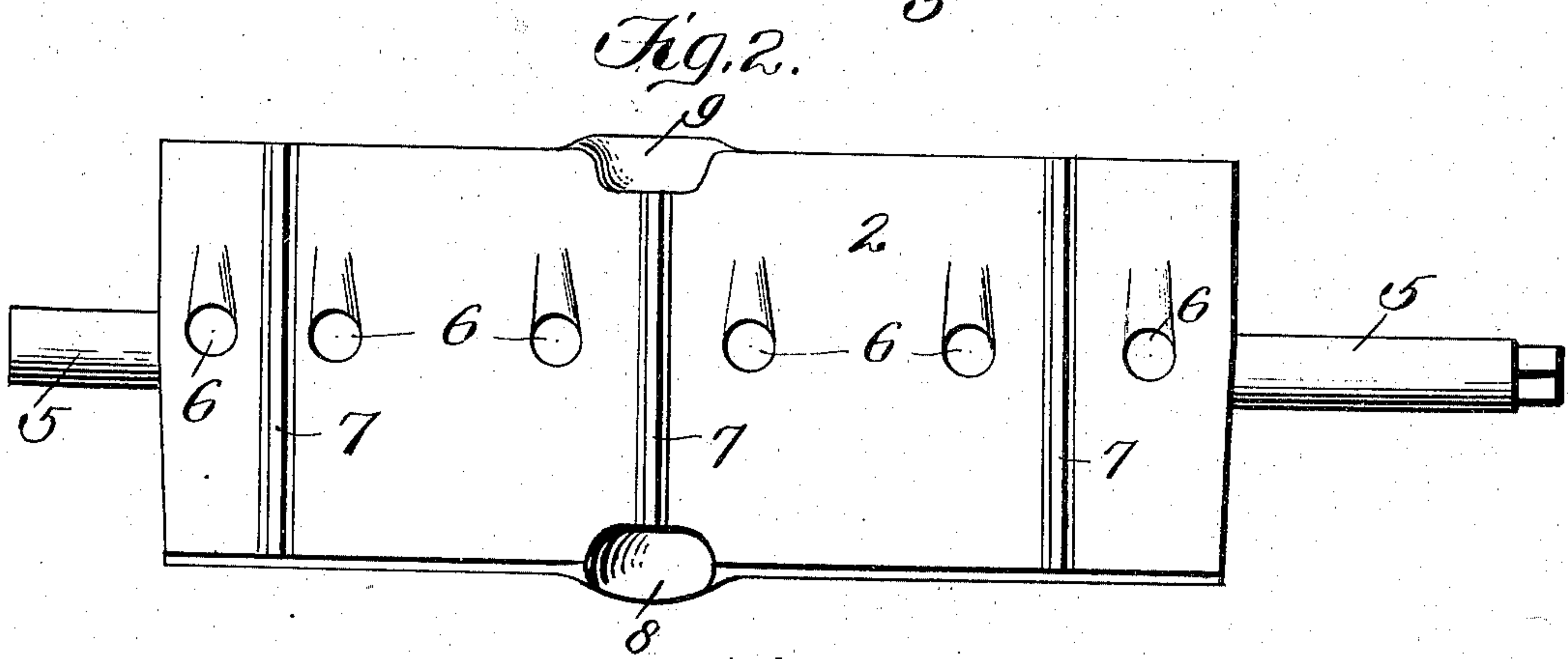
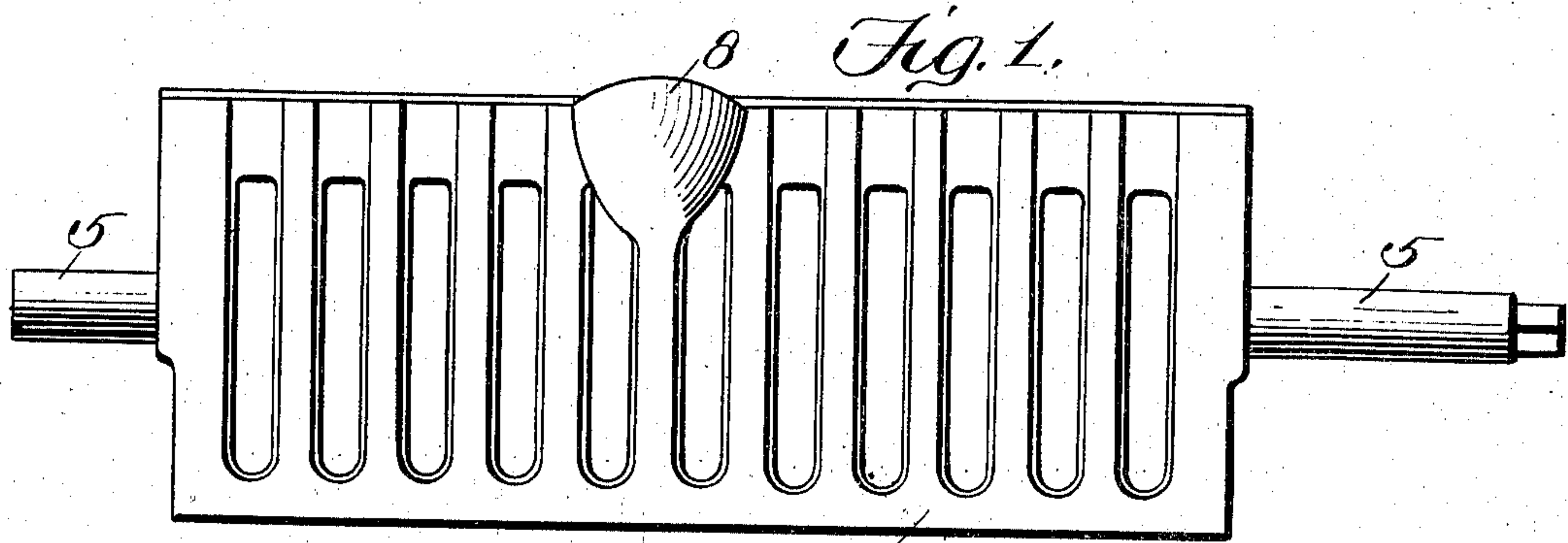
PATENTED AUG. 25, 1903.

W. WEWERS.

GRATE.

APPLICATION FILED OCT. 9, 1902.

NO MODEL.



Witnesses:
C. D. Kessler
J. B. Kessler

Inventor
William Wewers
BY
James L. Norrie
Atty.

UNITED STATES PATENT OFFICE.

WILLIAM WEWERS, OF QUINCY, ILLINOIS, ASSIGNOR TO GEM CITY
STOVE MANUFACTURING CO., OF QUINCY, ILLINOIS, A CORPORA-
TION OF ILLINOIS.

GRATE.

SPECIFICATION forming part of Letters Patent No. 737,540, dated August 25, 1903.

Application filed October 9, 1902. Serial No. 126,509. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM WEWERS, a citizen of the United States, residing at Quincy, in the county of Adams and State of Illinois, have invented new and useful Improvements in Grates, of which the following is a specification.

This invention relates to grates, and it is capable of use in connection with various kinds of stoves, furnaces, and like apparatus, the object of the invention being to provide a simple article of this character which is adapted effectively to burn either wood or coal or their equivalents, the grate being adapted to be shiftably mounted in the fire-box of a stove, furnace, or the like in order that the wood and coal burning sections thereof can be alternately and readily brought into position for use.

The wood and coal burning sections of the grate are arranged at an acute angle with respect to each other, by virtue of which said grate as a whole occupies but a very small space within the fire-box of a stove or its equivalent, and said sections are of approximately the same width, in order that when either one of them is shifted into use to occupy a horizontal position it will accurately fill the space between the front and rear of the fire-box. The wood-burning section of the grate has openings for the passage of the draft and also for the discharge of ashes, and it has upon its working face means for holding the wood or analogous combustible out of direct contact with said face, and hence away from the ashes that accumulate on the latter in use. The said means also permit the circulation of air under the wood in order to secure the highest degree of combustion. The coal-burning section of the grate is of barred construction.

In the drawings accompanying and forming a part of this specification, Figure 1 is a plan view of the grate, showing the coal-burning section thereof up and in position for use. Fig. 2 is a similar view showing the wood-burning section of said grate in position for use. Fig. 3 is an edge view of said grate; and Fig. 4 is a transverse sectional elevation, the section being taken in the line 4-4, Fig. 3.

Like characters refer to like parts in the several figures.

The duplex grate includes in its construction wood and coal burning sections denoted, respectively, by 2 and 3 and shown as located at an acute angle to each other. The sections are united upon their inner faces substantially centrally thereof and also at their ends by the webs 4, which strengthen the compound grate, and the end webs are provided with laterally-extending journals or gudgeons 5, upon their outer faces adapted to be sustained for rocking motion by suitable bearings on or in a stove, furnace, or equivalent device, it being seen that said journals or gudgeons are located substantially centrally of the width of the grate-sections.

The two grate-sections 2 and 3, the webs 4, and the journals 5 are usually made integral and can be inexpensively produced by casting. One of the journals is shown as longer than the other, so that the outer end of the same can extend beyond the stove to receive a suitable implement for operating the grate.

The wood-burning section 2 of the grate has perforations 6 of a desired number, through which atmospheric air can ascend when said section is in use, it being understood that during such operation the said section 2 is horizontally disposed, such air promoting combustion of the wood fuel. Wood-ashes can be discharged through these perforations. The wood-burning section is provided with means for holding the wood thereon out of contact with the working face thereof, and consequently away from or above the ashes that accumulate thereon, and in the present case the said section is shown as provided with ribs 7 for this purpose. Said ribs extend entirely across the outer face of the section 2 and are separated a suitable distance apart longitudinally of the latter and project from said face the desired distance. When the section 2 is in use, it is in a horizontal position and the wood is laid upon these transverse ribs, which latter hold the wood above what is for the time being the upper face of said section 2 for the purpose just set forth, and also to permit the circulation of the draft under such wood.

The coal-burning section 3 is of barred construction, the coal being laid upon the cross-bars thereof for consumption in the well-known manner.

5 Upon the outer side of the grate, at the junction of the two sections of the same, is a lug 8, against which a suitable instrument can be placed to facilitate the turning of said grate, while the section 2 of the latter is
10 equipped with a like lug 9 for a like purpose.

When the wood-burning section 2 is horizontally disposed, the draft enters the fire-box of the stove, in which the grate is installed, through the usual damper-controlled openings of said stove, and passes into the space
15 between said section 2 and the companion section 3 and rises through the draft openings or perforations 6 in the former in order to secure the proper combustion of the wood
20 fuel. The ashes from the wood are discharged through the said openings 6 and fall through the spaces between the bars of the section 3 into the ash-pit of said stove. By tilting the section 2 the mass supported thereon can be
25 emptied into the ash-pit. If it be desired to employ the coal-burning section, the grate is tipped a distance sufficient to bring the same into horizontal position. By rocking the grate the separation of the ashes from the live fuel
30 on the section 3 can be readily accomplished.

My improved grate, it will therefore be seen, is of substantially V form, the parts thereof being capable of supporting, respectively,
35 wood and coal and being adapted to be readily brought into position alternately for use when desired. It is strong and is adapted to secure the proper consumption of the respective fuels and disposition of the ashes in each case.

40 I do not limit myself to the exact construction hereinbefore described, for many variations may be adopted within the scope of my claims.

Having described the invention, what I claim is—

45 1. A grate consisting of wood and coal burning sections of substantially the same width

disposed at an acute angle to each other, and means located substantially centrally of the width of said sections for supporting said grate for shifting movement.

2. A grate consisting of wood and coal burning sections of substantially the same width disposed at an acute angle to each other, and journals connected with the ends of the grate extending outward therefrom and located
55 substantially centrally of the width of said sections.

3. A grate consisting of wood and coal burning sections of substantially the same width disposed at an acute angle to each other, webs
60 uniting the sections at their ends, and journals extending laterally from the outer faces of said webs, located approximately centrally of the width of said sections.

4. A grate consisting of wood and coal burning sections of substantially the same width disposed at an acute angle to each other, webs
65 uniting the sections at their ends and intermediate such ends, and journals extending laterally from the outer faces of the end webs, located substantially centrally of the width
70 of said sections and one of the journals being longer than the other.

5. A grate consisting of wood and coal burning sections of substantially the same width
75 disposed at an acute angle to each other, the wood-burning section being of plate form and perforated and having transverse ribs upon its outer face, and the coal-burning section being of barred form, webs uniting said sections
80 upon their inner sides at the ends thereof, and journals extending laterally from the outer faces of said webs, one of said journals being longer than the other.

In testimony whereof I have hereunto set
85 my hand in presence of two subscribing witnesses.

WILLIAM WEWERS.

Witnesses:

WM. H. HEIDBREder,
J. H. LIECKMANN.