

No. 837,887.

PATENTED DEC. 4, 1906.

S. RÖCK.  
AUTOMATIC FUEL FEEDING FURNACE.

APPLICATION FILED MAY 25, 1906.

2 SHEETS—SHEET 1.

Fig. 1

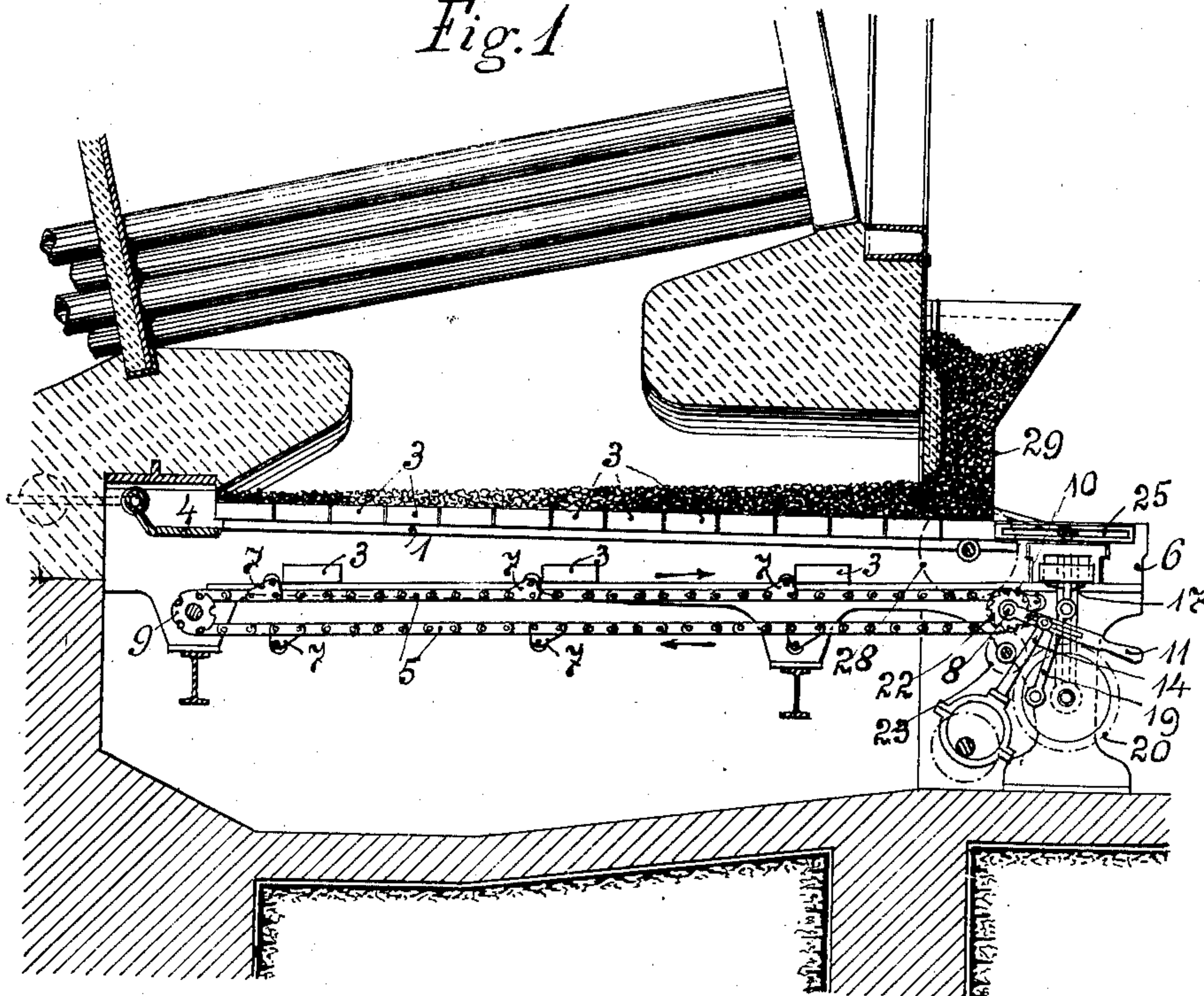
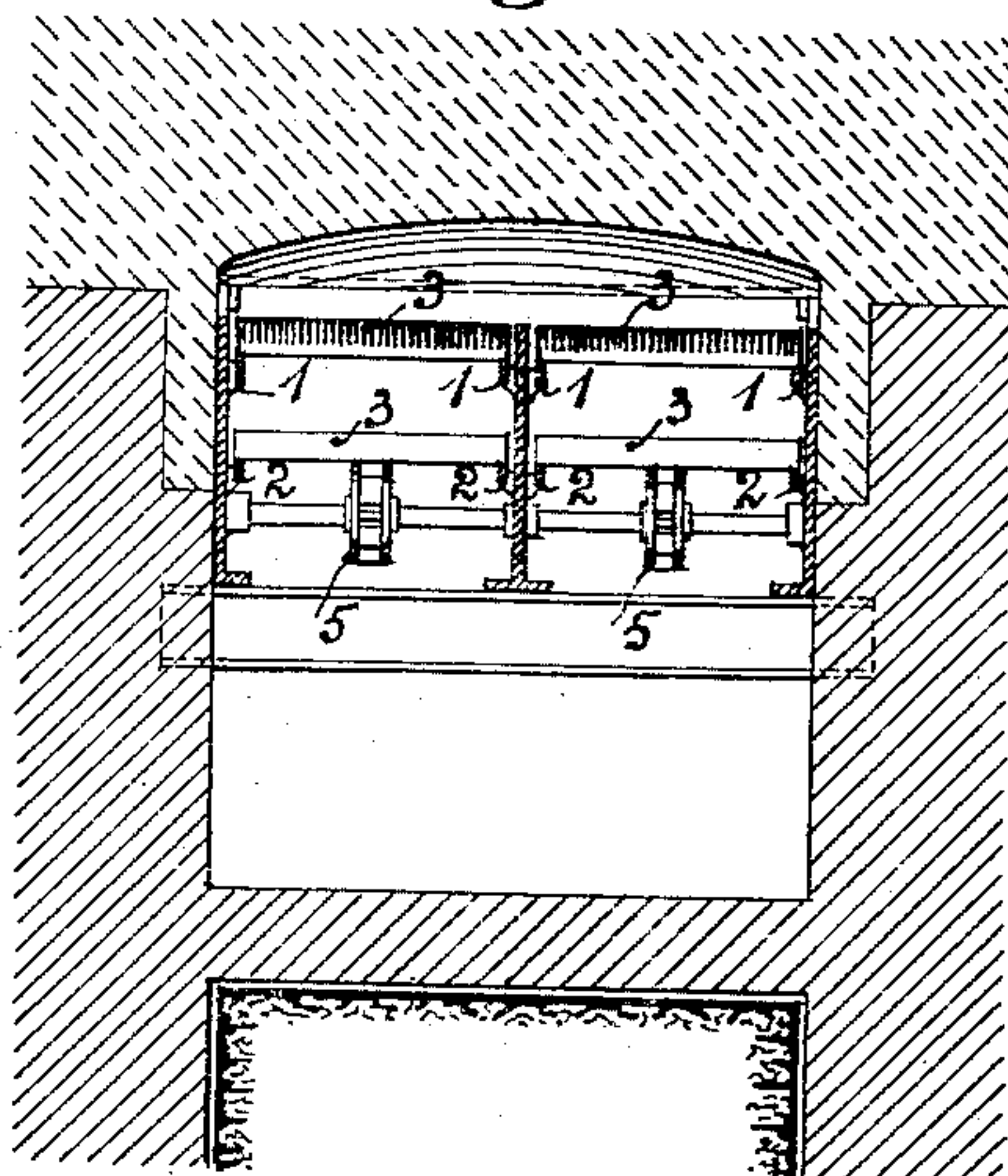


Fig. 2



WITNESSES

W. P. Burke  
D. J. Callaghan

INVENTOR

Stefan Röck

By *Richardson*

ATTYS

No. 837,887.

PATENTED DEC. 4, 1906.

S. RÖCK.  
AUTOMATIC FUEL FEEDING FURNACE.  
APPLICATION FILED MAY 25, 1906.

2 SHEETS—SHEET 2.

Fig. 3.

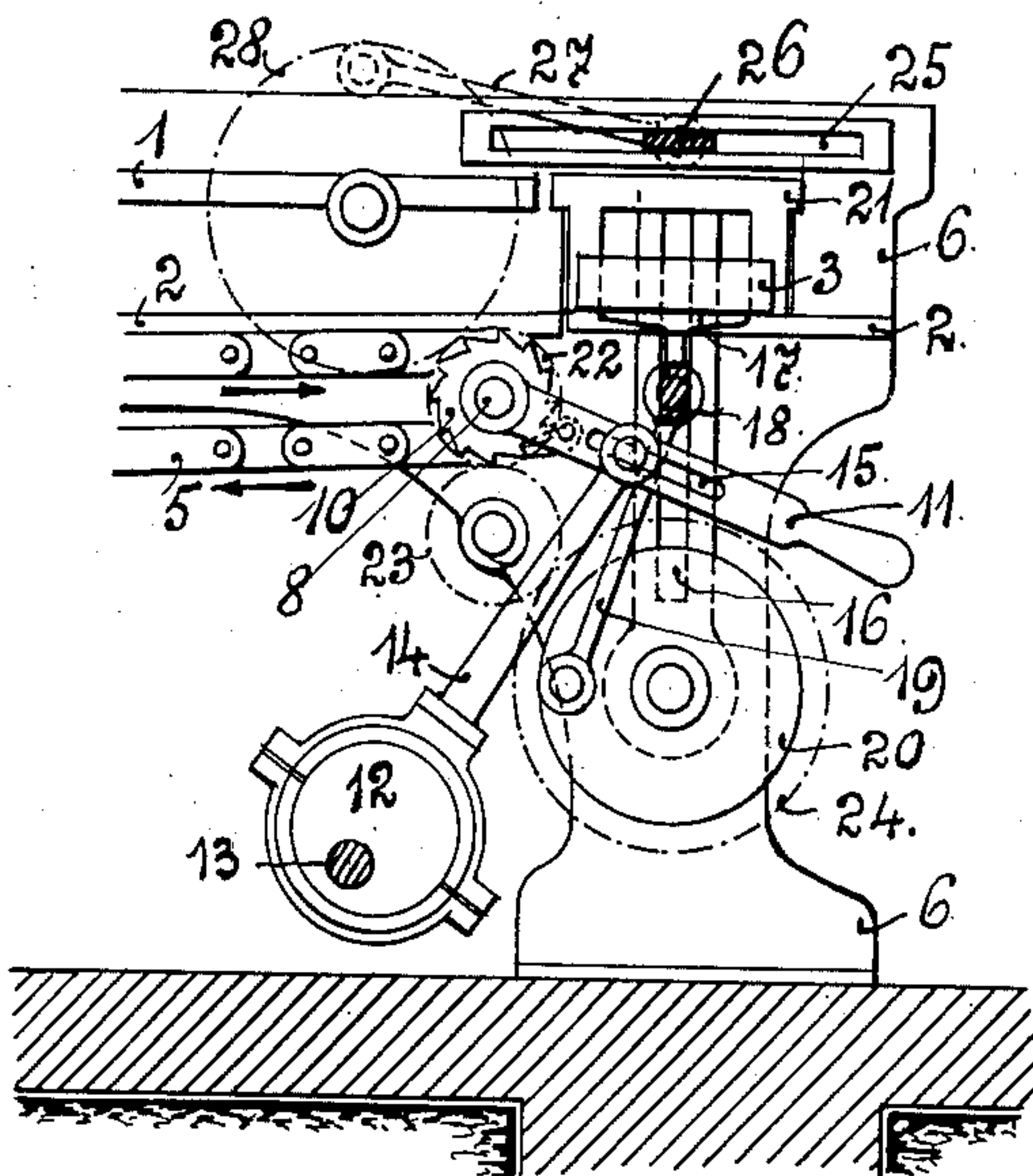
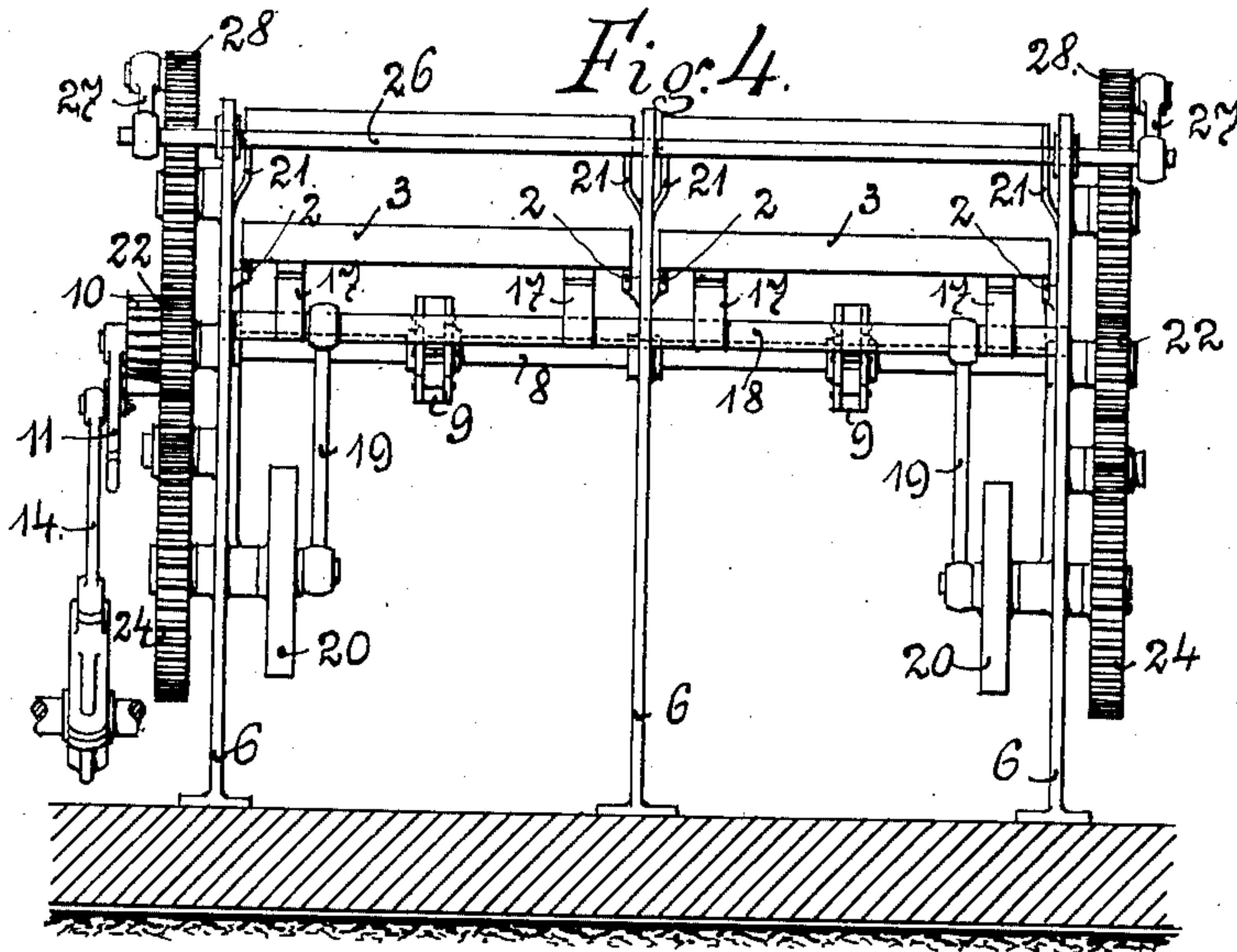


Fig. 4.



WITNESSES

W. P. Burke  
D. J. Callaghan

INVENTOR

Stefan Röck

BY *Richardson*  
ATTYS



# UNITED STATES PATENT OFFICE

STEFAN RÖCK, OF BUDAPEST, AUSTRIA-HUNGARY.

## AUTOMATIC FUEL-FEEDING FURNACE.

No. 837,887.

Specification of Letters Patent.

Patented Dec. 4, 1906.

Application filed May 25, 1906. Serial No. 318,761.

*To all whom it may concern:*

Be it known that I, STEFAN RÖCK, a citizen of Austria-Hungary, residing at Budapest, Austria-Hungary, have invented new and useful Improvements in Automatic Fuel-Feeding Furnaces, of which the following is a specification.

This invention relates to a smokeless furnace in which the fuel is transported slowly to the fire-bridge on fire-grates constructed as trolleys or sliding cradles, the grates on which the fuel has been consumed being returned on a lower track.

In order that this invention may be the better understood, I now proceed to describe the same with reference to the accompanying drawings and to the figures marked thereon.

Figures 1 and 2 show a form of construction of such a furnace in section in side and front elevation, respectively. Figs. 3 and 4 illustrate, on an enlarged scale, the transporting device by which the grates are lifted to the feeding-place in side view and front view, respectively.

1 and 2 are upper and lower tracks.

3 represents grates formed as trolleys or sliding cradles and adapted to be transported on the tracks.

4 is a hinged flap which tilts downward under the weight of the grate and allows the latter to pass onto the lower track 2.

5 is an endless chain moving under the lower track 2 in the direction of the arrow, Fig. 1, and has projections 7 at certain intervals which engage with the grates 3 and push the same along the framework.

9 represents the sprocket-wheels for the chain 5.

A horizontal rail 18, provided with carriers 17, is guided in vertical slots 16 and is moved up and down by connecting-rods 19 and cams 20. At each upward stroke the rail 18, by means of the carriers 17, lifts the grate 3, which has arrived above the carriers 17, from the lower track to the level of the upper track 1. The upper track 1 is here provided with spring-pressed flaps 21, Figs. 3 and 4, between which the grates are forced through while being lifted and which engage in catches after the lifting and support the grates at the level of the upper track 1 while the rail 18 descends again.

A transverse rail 26 is arranged in horizontal slots 25 above the spring-pressed flaps 21 and adapted to be reciprocated by means of

connecting-rods 27 and cams 28. All movements are effected from a driving-axle 8 through the gearing 22, 23, and 24. The cams 28 are operated in such a manner that the rail 26 occupies its foremost position when a grate 3 has been brought by the rail 18 to the level of the upper track 1. During its return movement the rail 26 engages the corresponding grate, pushes it onto the track 1, and thereby moves the other grates 3, situated on the track 1, correspondingly farther, so that the rearmost grate passes onto the flap 4 and thence to the lower track 2 in order to be moved forward again by the chain. Therefore the grates 3 prescribe an uninterrupted circuit, being constantly pushed into the furnace on the upper track and filled with fuel during such travel in known manner below the fuel-receptacle 29, Fig. 1, the grates from which the fuel has been consumed being returned by the chain on the lower track. The fire can be regulated according to requirement by the adjustment of the velocity of the moving parts, which can be effected by the connecting-rod 14, which transmits the movement of shaft 13 to the axle 8 by means of levers 11 and a ratchet device 10, being suitably adjusted in the slot 15 of the lever 11. Rod 14 is actuated by the cam 12 on shaft 13.

6 represents supports for the various parts.

Having now described my invention, what I claim, and desire to secure by Letters Patent, is—

An automatic fuel-feeding furnace comprising a series of movable hearth-sections, upper and lower tracks, an oscillating flap at the end of the upper section for delivering the hearth-sections to the lower track, an endless chain situated below the lower track and having projections thereon engaging with the hearth-sections to move the same, a vertically-reciprocating carrier for raising the hearth-sections from the lower track to the horizontal plane of the upper track, spring-pressed flaps for holding the hearth-sections in this position, independent of the carrier, and a horizontally-reciprocating bar for forcing the hearth-sections onto the upper track.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

STEFAN RÖCK.

Witnesses:

SUNDAY V. BEOLSEI,  
F. E. MALLETT.