

R. GOLZE.  
FORGE.

APPLICATION FILED DEC. 24, 1902.

NO MODEL.

2 SHEETS—SHEET 1.

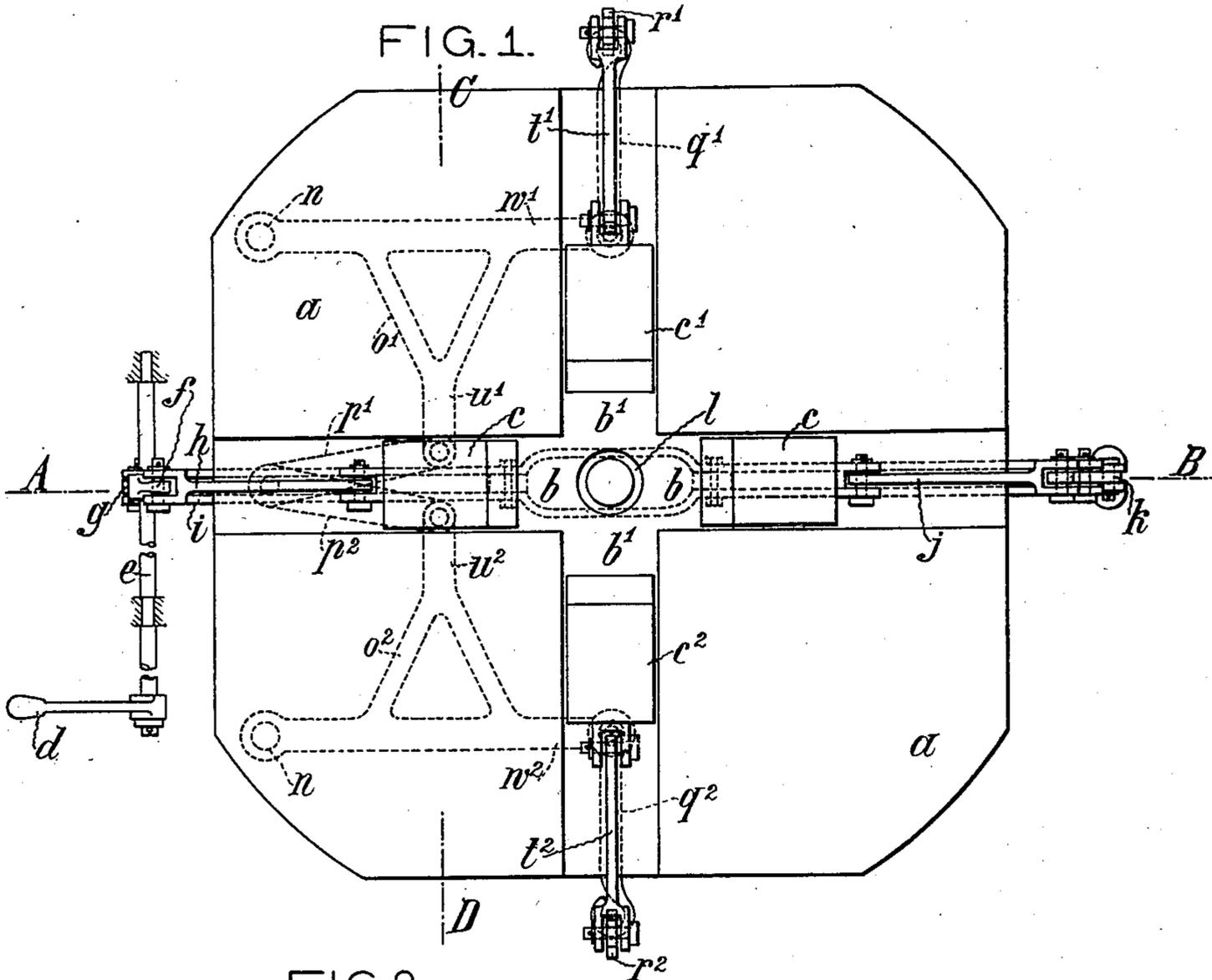
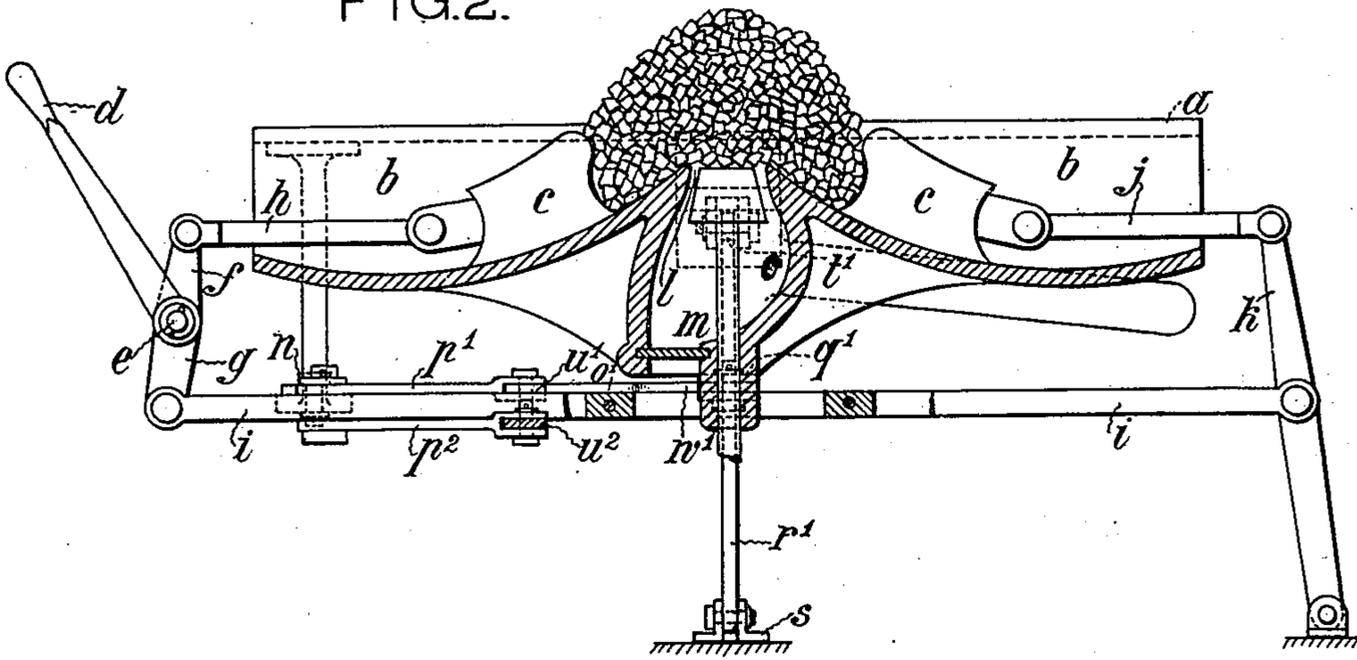


FIG. 2.



Witnesses:  
 William Schuk  
 Arthur Zuepp

Inventor:  
 Rudolf Golze  
 by his attorney  
 Frankfort

R. GOLZE.

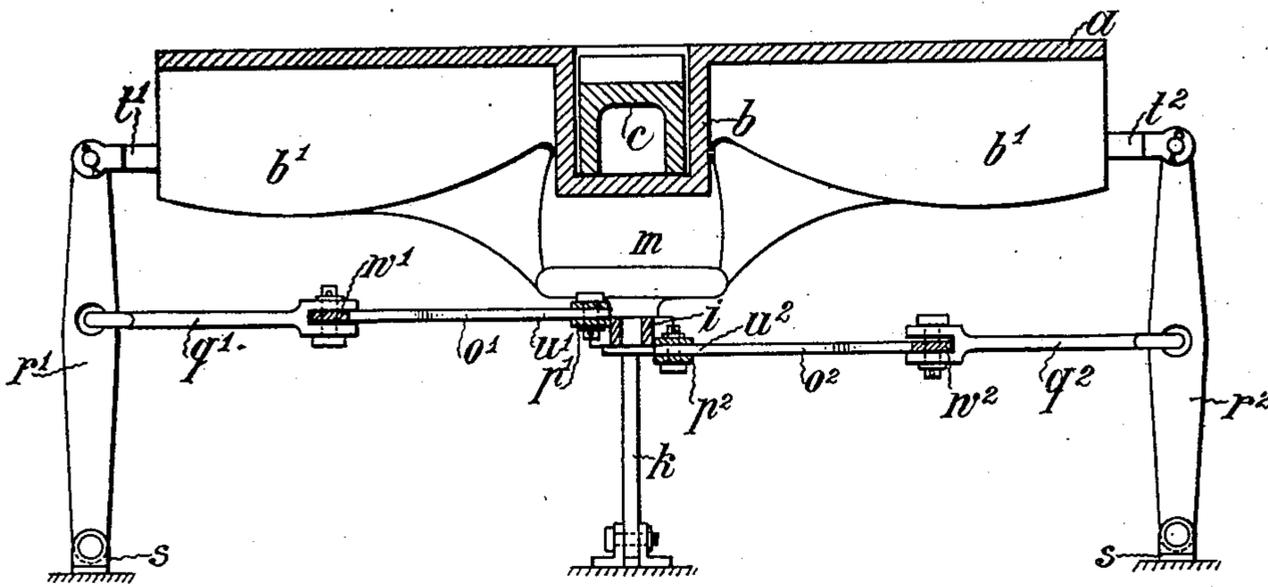
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NO MODEL.

2 SHEETS—SHEET 2.

FIG. 3.



Witnesses:  
 William Schuly.  
 Arthur Jumps.

Inventor:  
 Rudolf Golze  
 by his attorney  
 Draubert & Niemann

# UNITED STATES PATENT OFFICE.

RUDOLF GOLZE, OF DESSAU, GERMANY.

## FORGE.

SPECIFICATION forming part of Letters Patent No. 730,761, dated June 9, 1903.

Application filed December 24, 1902. Serial No. 136,505. (No model.)

*To all whom it may concern:*

Be it known that I, RUDOLF GOLZE, a subject of the Duke of Anhalt, residing at Dessau, in the Dukedom of Anhalt and Empire of Germany, have invented new and useful Improvements in Forges, of which the following is a specification.

My invention relates to a forge wherein the fresh coal is not put on the fire or by its side, but conveyed to the same obliquely from below, so as to compel the gases developed from the unburned coal to pass through the incandescent layer of fuel and burn up for the purpose of obviating as far as practicable the production of smoke.

In the accompanying-drawings I have represented the improved forge.

Figure 1 is a plan; Fig. 2, a transverse section on the line A B, Fig. 1; and Fig. 3, a section on line C D of Fig. 1.

The hearth-plate *a* has a plurality of channels *b* and *b'* extending radially from the center and in which the slides *c*, *c'*, and *c<sup>2</sup>* are provided. These slides *c* are so connected with each other that on operating a hand-lever *d* they will be moved simultaneously toward or away from the center of the fire. The connection of the slides with each other may be of any desired kind. In the constructional form shown the shaft *e* of the hand-lever *d* carries a two-armed lever *f g*, the upper arm *f* of which is connected by a draw-rod *h* with one slide *c*, while the lower arm *g* sets the opposite slide *c* in motion through the intervention of the rods *i j* and the one-armed lever *k*.

The operation of the slides *c' c<sup>2</sup>*, which are adapted to be moved in the channels *b'*, arranged parallel to the shaft *e*, takes place as follows: On the hearth-plate *a* are the fixed pivots *n* for bell-crank levers *o' o<sup>2</sup>*, arranged to swing in the horizontal plane, one of their ends *w' w<sup>2</sup>* being connected by draw-rods *p' p<sup>2</sup>* with the rod *i*, and their other ends, *w' w<sup>2</sup>*, being connected by rods *q' q<sup>2</sup>* with two-armed levers *r' r<sup>2</sup>*. These levers are fulcrumed at their lower ends to a fixed block *s*, their upper ends being connected by draw-rods *t' t<sup>2</sup>* with the slides *c' c<sup>2</sup>*. Thus in the operation

of the hand-lever *d* all the four slides *c*, *c'*, and *c<sup>2</sup>* will be displaced at the same time.

The bottoms of the channels *b* and *b'* gradually rise at their ends directed toward the center of the hearth-plate and meet in proximity to the twyer *l*, below which is arranged the air-chamber *m*, which in the well-known manner permits of the discharge of the cinders.

In order to fill the channels *b* and *b'* with fresh coal, the slides *c*, *c'*, and *c<sup>2</sup>* are drawn outward with the aid of the hand-lever *d*, so that on the gradual movement of these slides toward the center of the hearth-plate the coal will pass from below to the twyer *l* and raise the incandescent coal. Thus the fresh coal is gradually coked and the gases developed are induced to rise through the incandescent layer and to mix with the air coming from the twyer in order to be burned.

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

1. In a forge of the character described, a hearth-plate having a central twyer and channels extending radially from such twyer, the bottoms of the inner parts of the channels forming inclines, slides arranged in the said channels, and means for simultaneously moving the slides therein, substantially as and for the purpose set forth.

2. In a forge of the character described, a hearth-plate having a central twyer, an air-chamber arranged below such plate, channels formed on the plate and extending radially from the said twyer, the bottoms of the inner parts of these channels forming inclines, slides arranged in the said channels and connected with each other, and means for simultaneously moving the same toward or away from the said twyers, substantially as set forth.

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

RUDOLF GOLZE.

Witnesses:

P. H. DUNN,  
RUDOLPH FRICKE.