

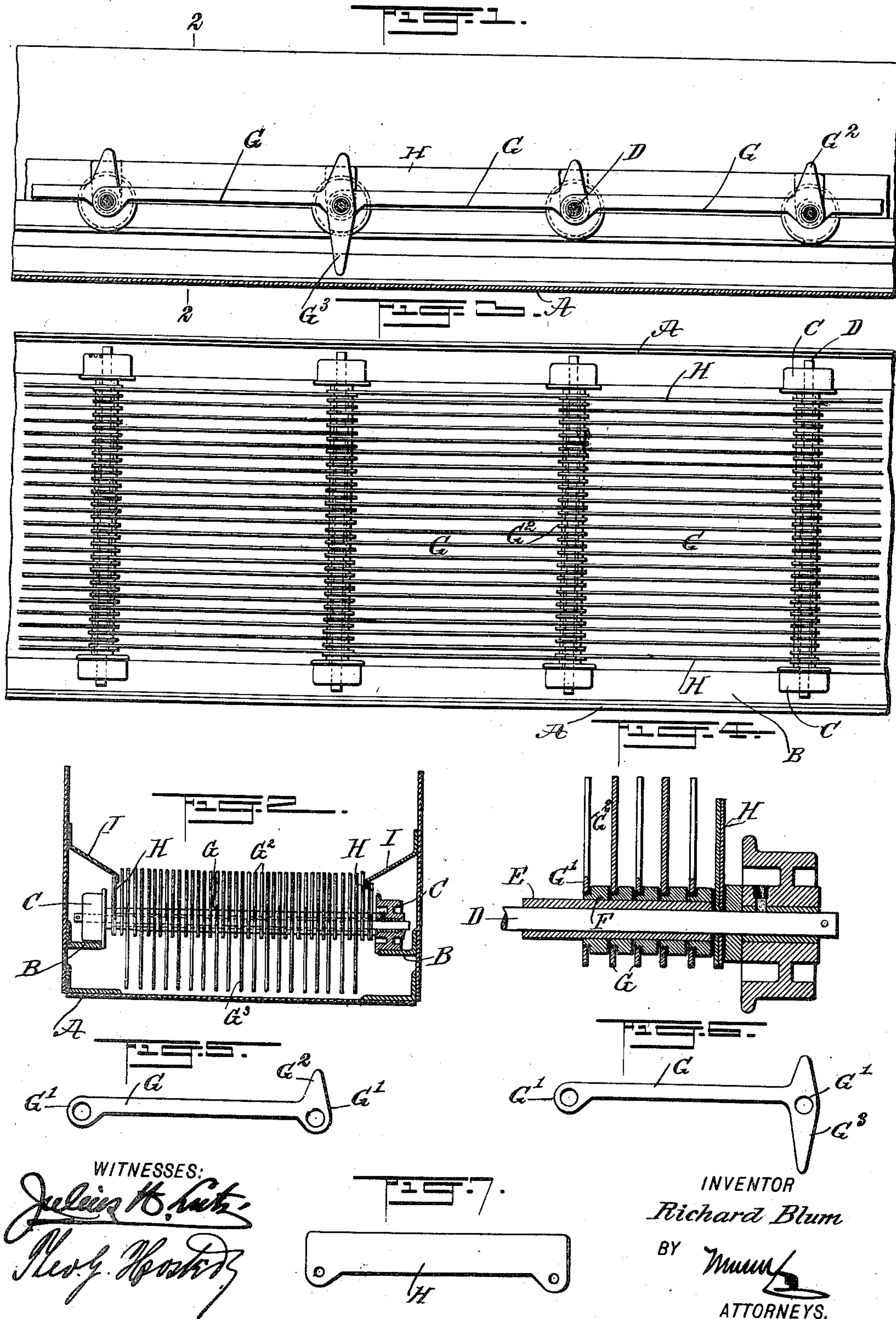
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PATENTED JAN. 27, 1903.

R. BLUM.
CONVEYER.

APPLICATION FILED JULY 17, 1902.

NO MODEL.



UNITED STATES PATENT OFFICE.

RICHARD BLUM, OF BERLIN, GERMANY.

CONVEYER.

SPECIFICATION forming part of Letters Patent No. 719,178, dated January 27, 1903.

Application filed July 17, 1902. Serial No. 115,938. (No model.)

To all whom it may concern:

Be it known that I, RICHARD BLUM, a subject of the Emperor of Germany, and a resident of Berlin, Germany, have invented a new and Improved Conveyer, of which the following is a full, clear, and exact description.

The invention relates to conveyers for moving coke and other lumpy material along in a trough or a channel from one place to another; and its object is to provide a new and improved conveyer which is simple and durable in construction, very effective in operation, and arranged to insure proper cooling of the material while moving the same bodily without bringing it in contact with the channel-walls and without danger of crushing or pulverizing the material.

The invention consists of novel features and parts and combinations of the same, as will be more fully described hereinafter and then pointed out in the claims.

A practical embodiment of the invention is represented in the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a longitudinal sectional elevation of the improvement. Fig. 2 is a transverse section of the same on the line 2 2 of Fig. 1. Fig. 3 is a plan view of the same with the protecting-covers for the wheels removed. Fig. 4 is an enlarged transverse section of part of the improvement. Fig. 5 is a side elevation of one of the links. Fig. 6 is a similar view of another link, and Fig. 7 is a like view of one of the side protecting links.

The improved conveyer is provided with a trough or channel A, preferably made U shape in cross-section and supporting on its sides above the bottom of the channel longitudinally-extending track-rails B, on which are mounted to travel wheels C, of which two opposite wheels are secured on the ends of a transversely-extending shaft D. The several shafts D are spaced suitable distances apart, and on each of the shafts is fitted a sleeve E, on which are mounted spacers or washers F, each having one end formed with a reduced portion for engaging an eye G' in a longitudinally-extending link G, provided on its other end with a similar eye G', engaging a corresponding washer F on the sleeve

E of the next following shaft D, as will be readily understood by reference to the drawings. The several links G are spaced apart short distances, so as to form a grate, bodily movable through the channel and adapted to carry on its upper surface the material to be conveyed from one place to another. Each of the links G is provided at one end with an upwardly-extending arm G² to support the material at the time the movable grate moves up an incline to prevent the material from sliding down the grate.

The links G in some of the transverse rows are provided at the end opposite the arm G² with depending arms G³, reaching within a short distance of the bottom of the channel A, so that any material that falls between the links G down into the bottom of the channel is carried along by the arms G³ when the grate is in motion.

It is understood that the grate consists of the links, the shafts, and the wheels traveling on the track-rails B, is made in endless shape, and is set in motion by any of the well-known methods, such as sprocket-wheels and the like, and the material is discharged onto the links at one end of the channel and is then subjected to sprays of water for cooling the material, the water standing in the channel to assist in reducing the temperature of the material while the same is carried forward in the channel.

In order to protect the wheels C and track-rails B from the material, I provide links H adjacent to the wheels C, the links H being extended upwardly to prevent the material sliding from the grate to the wheels and track-rails B. The links H connect adjacent shafts D with each other, and in order to prevent the material from falling onto the wheels and track from the top of the channel I provide the sides thereof with longitudinally-extending covers I, preferably made of sheet metal, and secured to the inner faces of the sides of the channel, as plainly indicated in Fig. 2. The covers I extend downwardly and inwardly over the top edges of the side links H, so as to prevent material from passing to the track-wheels C and rails B.

Now by the arrangement described the links G do not come in contact with the walls of the channel A, and consequently the side

links move bodily through the channel without touching the same, so that resistance to the forward movement of the grate by friction is greatly reduced and comparatively little power is required to impart a traveling motion to the grate. By having the links spaced apart the water for cooling the coke can readily percolate through the material and pass between the links into the channel to accumulate therein.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. A conveyer comprising a track, wheels mounted to travel on the track, transverse shafts carrying the wheels and spaced apart, and links connecting adjacent shafts with each other and spaced apart transversely, to form a grate for carrying material, the grate being movable lengthwise in a channel above the bottom thereof, as set forth.

2. A conveyer comprising a track, wheels mounted to travel on the track, transverse shafts carrying the wheels and spaced apart, and links connecting adjacent shafts with each other and spaced apart transversely, to form a grate for carrying material, the grate being movable lengthwise in a channel above the bottom thereof, the said links being provided at one end with upwardly-extending retaining-arms, as set forth.

3. A conveyer comprising a track, wheels mounted to travel on the track, transverse

shafts carrying the wheels and spaced apart, and links connecting adjacent shafts with each other and spaced apart transversely, to form a grate for carrying material, the grate being movable lengthwise in a channel above the bottom thereof, the said links being provided at one end with upwardly-extending retaining-arms, and sundry of the links being provided with downwardly-extending arms, reaching close to the bottom of the channel, as set forth.

4. A conveyer comprising a channel provided with a track, wheels mounted to travel on the track in pairs, transverse shafts, each carrying on its ends a pair of the wheels, links connecting adjacent shafts with each other, the links being spaced apart to form a grate for carrying material, the grate being movable lengthwise in the channel, above the bottom thereof, and means for protecting the wheels from the material, consisting of protecting side links on the shafts and covers fixed to the casing at the sides thereof and extending downwardly and inwardly over the top edges of the said side links, as set forth.

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

RICHARD BLUM.

Witnesses:

HENRY HASPER,
WOLDEMAR HAUPT.