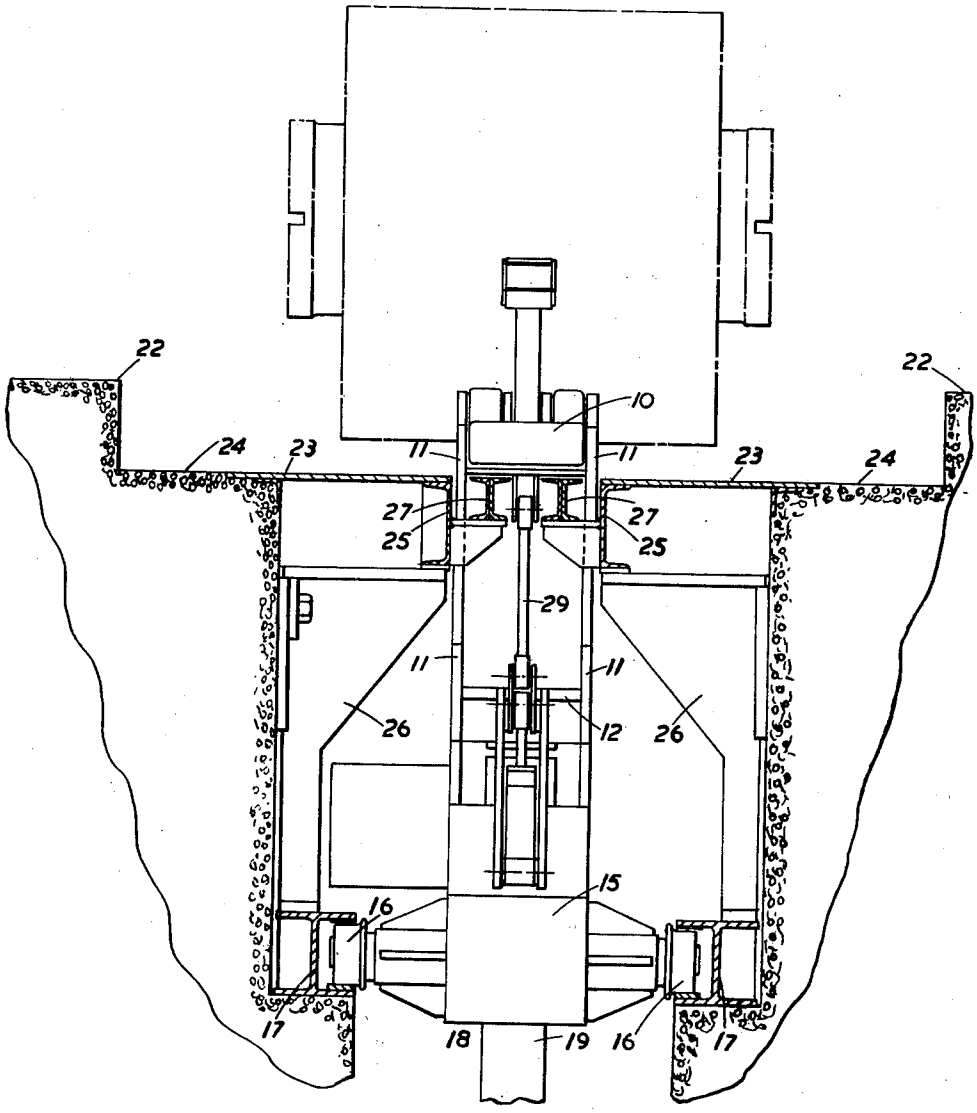
May 6, 1952 R. G. RUSSELL 2,595,707

TRAVELING COIL LIFTING GEAR

Filed Jan. 16, 1950 2 SHEETS—SHEET 1

FIG. 1.



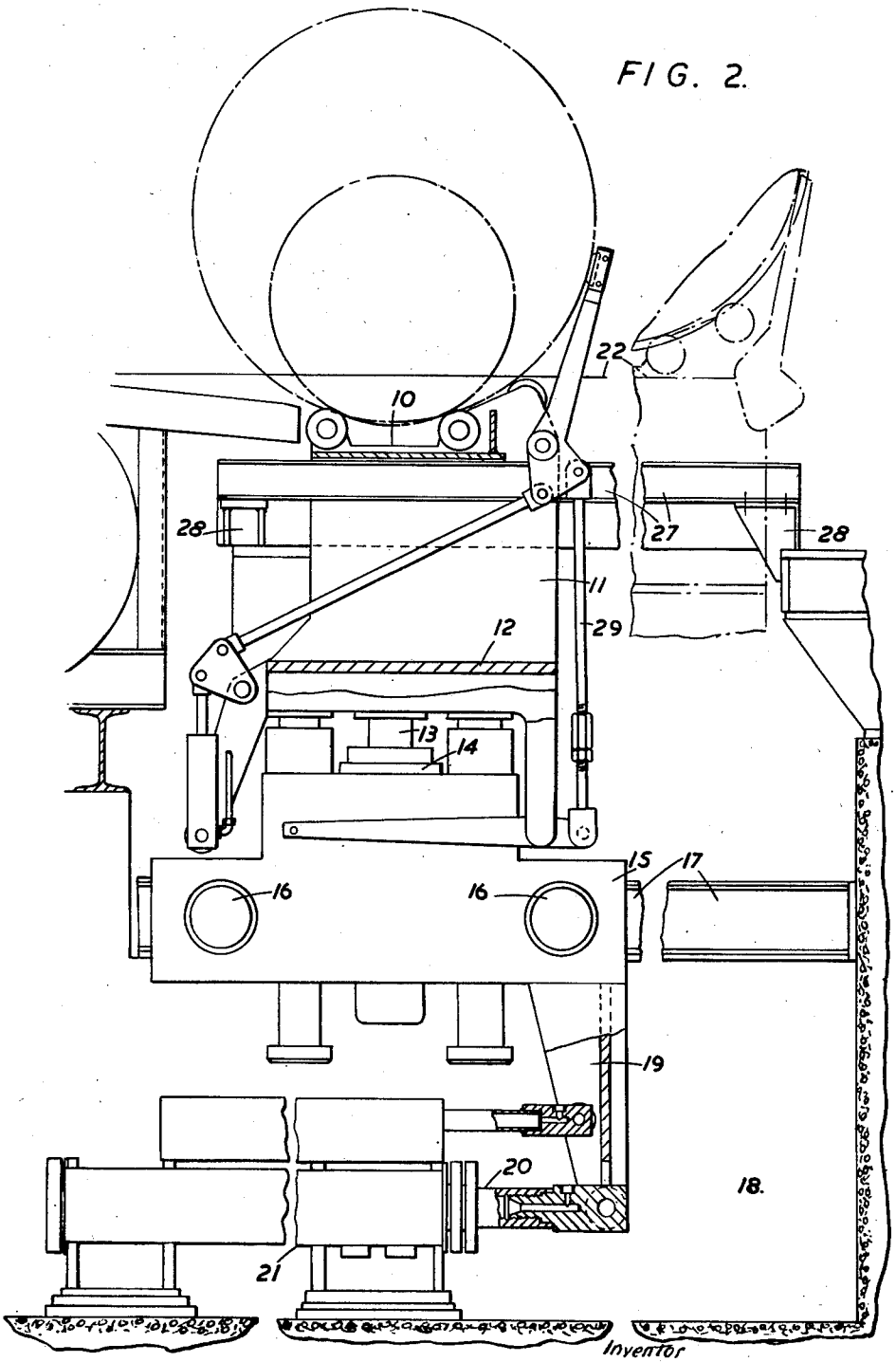
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FIG. 2.



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TRAVELING COIL LIFTING GEAR

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Application January 16, 1950, Serial No. 138,723
In Great Britain January 21, 1949

1 Claim. (Cl. 214—1)

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This invention relates to improvements in travelling coil lifting gear. The usual disposition of such gear is in an open pit in the mill floor, so that the coil is approximately at ground level, the lifting and travelling gear being below ground level, and a hand-rail is provided around the edge of the pit for the safety of personnel. While this is an effective safety measure in that it protects the operators from being trapped and injured by the mechanism, it prevents access to the travelling and lifting gear. It is an object of the invention to provide means whereby access may be had all round the mechanism while yet maintaining adequate safety measures.

According to the present invention a travelling coil lifting gear comprises a vertically movable cradle, mounted on a carriage movable horizontally in a pit and arranged to support a coil at substantially floor level, wherein the pit is covered by a false floor having two parallel slots therein extending in the direction of the horizontal travel of the cradle, and the cradle is supported by two arms passing through the slots and movable vertically or horizontally therein.

The cradle may be provided with controlling mechanism located between the arms, and the false floor may be formed with a third slot between and parallel with the other two slots to permit the passage of said controlling mechanism.

One embodiment of the invention will be described with reference to the accompanying drawings, in which:

Figure 1 is a diagrammatic end elevation, partly sectioned, of a lifting gear located in a pit in the mill floor, and

Figure 2 is a diagrammatic side elevation, partly sectioned, of the lifting gear.

Referring to the drawings, the cradle 10 is supported by two vertical parallel plates 11 constituting arms, the lower ends of which are united by a cross-member 12 secured to the upper end of a vertical hydraulic ram 13 located in a cylinder 14 mounted on a carriage 15. The carriage 15 is provided with wheels 16 running in guides 17 located horizontally along the pit 18 near the bottom thereof, and has a dependent arm 19 coupled to the piston rod 20 of a horizontal hydraulic ram 21 located below the guides 17, whereby the carriage 15 and cradle 10 are movable across the pit 18. In the lowest position of the vertical ram 13 the cradle 10 is just below the level of the mill floor 22.

Extending across the mouth of the pit 18 is a false floor formed of two steel plates 23 laid alongside the supporting arms 11 of the cradle 10 at a level just below that of the cradle when it is in its lowest position. The mill floor is formed with a depression 24, the margin of which

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supports the outer edges of the plates 23, while their inner edges are supported by joists 25, which in turn are supported by brackets 26 extending up the walls of the pit 18. Between the arms 11 of the cradle 10, there extend joists 27 the upper flanges of which are at the same level as the steel plates 23 and constitute part of the floor and lie between the adjacent edges of the steel plates 23. The joists 27 are supported at the ends of the pit 18 by brackets 28 secured to the joists 25. The floor so formed extends over the entire mouth of the pit 18, except for the two parallel side slots formed by the gaps between the joists 27 and the plates 23, and the central slot between the joists 27.

While this floor allows free access to the cradle 10 from all sides, it does not interfere either with its vertical movement or with its horizontal movement, the slots giving passage to the two plate-like supporting arms 11 of the cradle, as well as to a link 29 extending downwardly to the carriage 15, and forming part of a controlling mechanism for the cradle 10. In the event of such a controlling mechanism not being provided, the central slot is not required, and a single joist, equal in width to the two joists 27 and the central slot, may be arranged to be supported on the brackets 28.

I claim:

A travelling coil lifting gear for location in a pit, comprising a cradle, a carriage, vertical supporting means for said cradle on said carriage, means for moving the cradle vertically, guides serving to support the carriage during horizontal travel along the pit, means to move said carriage horizontally, and a false floor for the pit having two slots therein extending parallel with said guides, said slots receiving and permitting the passage of said supporting means during vertical movement of the cradle and horizontal movement of the carriage, and spaced beams forming a third slot intermediate and parallel to said two slots, and said third slot forming a passageway for said controlling means during vertical movement of said cradle and horizontal movement of said carriage.

ROBERT GORDON RUSSELL.

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