

SUPERSEDED BY
AMENDED SPECIFICATION.

127,783

PATENT



SPECIFICATION

Application Date, Nov. 29, 1918. No. 19,718/18.

Complete Left, Dec. 10, 1918.

Complete Accepted, June 12, 1919.

PROVISIONAL SPECIFICATION.

Revolving Screen and Separator.

I, JOHN THOMPSON, 8, Rows Terrace, South Gosforth, Newcastle-upon-Tyne, Contractor and Screen Builder, do hereby declare the nature of this invention to be as follows:—

A round drum with four floors dividing the interior of the drum into four parts with worm blades for the continuous motion of the materials. The drum is encircled within a drum making same dust proof.

For the screening of materials such as coke, coke breeze sand and gravel, Whinstone clinker slag coals ballast, etc.

Any materials can be separated by the fixing of meshes on drum to suit the size.

Dated the 28th day of November, 1918.

JOHN THOMPSON.

COMPLETE SPECIFICATION.

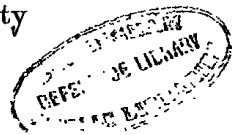
Revolving Screen and Separator.

15 I, JOHN THOMPSON, 8, Rows Terrace, South Gosforth, Newcastle-upon-Tyne, Contractor and Screen Builder, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

20 To screen any materials and to any size required, composed of a round drum with wheels forming each section; these wheels are keyed on to a driving shaft at distances shown, each wheel having rim bands to fasten down the mesh on each section. Any number of these wheels may be added according to the number of sizes required in the screening.

25 Referring to the accompanying drawings which show an embodiment of my invention—Fig. 1 is an end view of the drum, also of conical wheel A, such wheel having flat spokes with turned up lips P, two inches high at neck, running to nothing in the centre, which feed the material into the drum, also prevent over-charging; as the wheel will only take in the quantity

[Price 6d.]



the drum can deal with. Straps R are to fasten down the mesh on each section.

Fig. 2—a sectional elevation showing the flat spokes of wheels, A. B. C. D., also radial partitions F, which are imperforate plates bolted to the spokes of each wheel which divide the drum into four equal parts; each part contains 5 vanes G; such vanes guide the material through the drum and are secured to each radial partition set at an angle of 60° . As the drum revolves the material rolls down behind the vanes G on the radial partitions F, travelling along the drum, rolling to and from centre to the outer walls of the drum, which is composed of mesh, and as soon as the material reaches the mesh it rolls 10 the opposite way over such mesh and is screened.

Fig. 3—Sectional elevation of wheel A, with turned up lips P, being the feed wheel to drum.

Fig. 4—Elevation of drum showing mesh S; secured to drum wheels, A, B, C, D. with straps R, which secure the mesh to the wheel rims and 15 radial partitions.

Fig. 5—Section of wheels, B. C. D.

Fig. 6—End view of wheel, B. C. D. with mesh straps R, secured to wheel rims.

Fig. 7—Sectional elevation of feed chute E, leading into drum having tube 20 cover T around shaft. Material being fed into this chute E passes into feed wheel A, then to radial partitions and vanes.

Fig. 8—End view of radial partitions F and vanes G, secured together. Material on the partitions and between the vanes as the drum revolves is 25 guided through the drum by the vanes, as the shaft is level, until discharged into the allotted hoppers.

Fig. 9—Side view of hoppers and drum in position, and as the drum revolves the finest of the material in first chamber of drum is discharged through the mesh S into hopper H. The remainder then passes into second chamber of drum, travelling along by the vanes and second grade is discharged into 30 hopper I; the remainder then passes into third chamber of drum and third grade is discharged into hopper J; remainder then passes out of end of drum into hopper K.

Fig. 10—End view of divisions L, keeping the material separated after 35 being screened.

Fig. 11—Side view N of hopper parts.

Fig. 12—End view M, being the end portions of hoppers.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that 40 what I claim is:—

1. A revolving screen, comprising a circular drum, divided into longitudinal sections by wheels whose bosses or sleeves are attached to a circular shaft, and into radial sections by imperforate plates which are equally spread around the shaft and extend to the outer walls of the drum, each plate being at right angles to the previous one, looking from end of shaft and having secured to it 45 vanes, which guide the material through the drum.

2. Screening apparatus substantially as described and illustrated.

Dated this Tenth day of February, 1919.

JOHN THOMPSON.

ERRATUM.

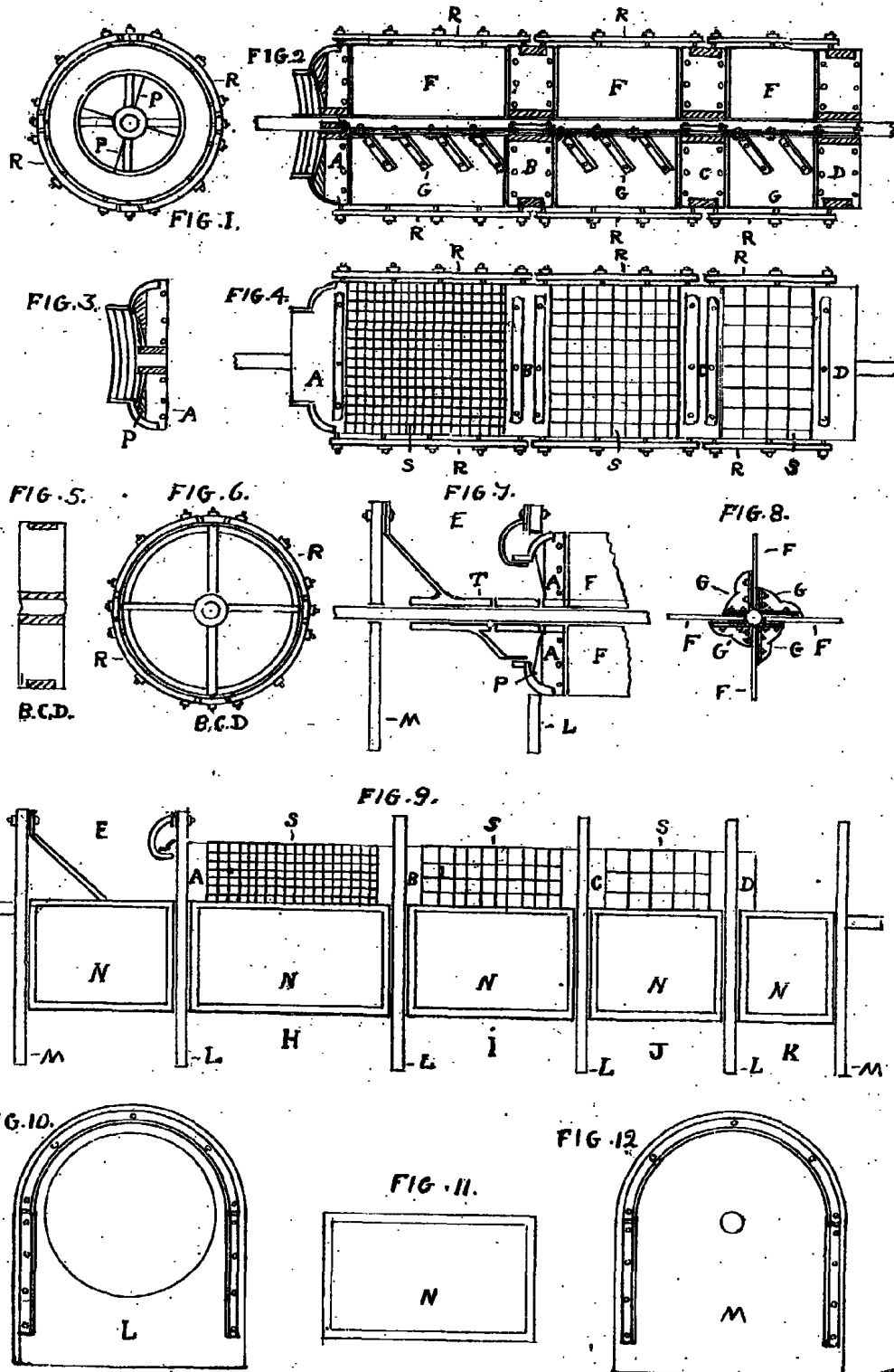
SPECIFICATION No. 127,783.

Page 2, line 18, for "wheel B.C.D." read "wheels B.C.D."

PATENT OFFICE,

June 1st, 1920.

[This Drawing is a reproduction of the Original on a reduced scale.]



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AMENDED SPECIFICATION.

Reprinted as amended in accordance with the decision of the Supervising Examiner, dated the 12th day of August, 1920.

(The Amendments are shown in erased type.)

PATENT SPECIFICATION

Application Date : Nov. 29, 1918. No. 19,718/18.

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PROVISIONAL SPECIFICATION.

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A round drum with four floors dividing the interior of the drum into four parts with worm blades for the continuous motion of the materials. The drum is

encircled within a drum making same dust proof.

For the screening of materials such as coke coke breeze sand and gravel whinstone clinker slag coals ballast, etc

Any materials can be separated by the fixing of meshes on drum to suit the size.

Dated the 28th day of November, 1918.

JOHN THOMPSON.

COMPLETE SPECIFICATION (AMENDED).

Revolving Screen and Separator.

I, JOHN THOMPSON, 8, Rows Terrace, South Gosforth, Newcastle-upon-Tyne, Contractor and Screen Builder, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

To screen any materials and to any size required, composed of a round drum with wheels forming each section; these wheels are keyed on to a driving shaft at distances shown, each wheel having rim

bands to fasten down the mesh on each section. Any number of these wheels may be added according to the number of sizes required in the screening.

Referring to the accompanying drawings which show an embodiment of my invention—Fig. 1 is an end view of the drum, also of conical wheel A, such wheel having flat spokes with turned up lips P, two inches high at neck, running to nothing in the centre, which feed the material into the drum, also prevent over-charging, as the wheel will only take in

[Price 1/-]



the quantity the drum can deal with. Straps R, are to fasten down the mesh on each section.

Fig. 2—a sectional elevation showing the flat spokes of wheels, A.B.C.D., also radial partitions F, which are imperforate plates bolted to the spokes of each wheel which divide the drum into four equal parts; each part contains vanes G; such vanes guide the material through the drum and are secured to each radial partition set at an angle of 60°. As the drum revolves the material rolls down behind the vanes G on the radial partitions F, travelling along the drum, rolling to and from centre to the outer walls of the drum, which is composed of mesh, and as soon as the material reaches the mesh it rolls the opposite way over such mesh and is screened.

Fig. 3—sectional elevation of wheel A, with turned up lips P, being the feed wheel to drum.

Fig. 4—elevation of drum showing mesh S, secured to drum wheels, A.B.C.D. with straps R, which secure the mesh to the wheel rims and radial partitions.

Fig. 5—section of wheels; B.C.D.

Fig. 6—end view of wheels, B.C.D. with mesh straps R, secured to wheel rims.

Fig. 7—sectional elevation of feed chute E, leading into drum having tube cover T around shaft. Material being fed into this chute E passes into feed wheel A, then to radial partitions and vanes.

Fig. 8—end view of radial partitions F and vanes G, secured together. Material on the partitions and between the vanes as the drum revolves is guided through the drum by the vanes, as the shaft is level, until discharged into the allotted hoppers.

Fig. 9—side view of hoppers and drum in position, and as the drum revolves the

finest of the material in first chamber of drum is discharged through the mesh S into hopper H. The remainder then passes into second chamber of drum, travelling along by the vanes and second grade is discharged into hopper I; the remainder then passes into third chamber of drum and third grade is discharged into hopper J; remainder then passes out of end of drum into hopper K.

Fig. 10—end view of divisions L, keeping the material separated after being screened.

Fig. 11—side view N of hopper parts.

Fig. 12—end view M, being the end portions of hoppers.

I do not claim as my invention *per se* the imperforate plates which divide the circular drum into sections nor do I claim vanes which are secured to each of the said plates as these elements of my screen are claimed in the Specification of Thomas Moffat Allison No. 4696 of 1914.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is:—

1. A revolving screen, comprising a circular drum, divided into longitudinal sections by wheels whose bosses or sleeves are attached to a circular shaft, and into radial sections by imperforate plates which are equally spread around the shaft and extend to the outer walls of the drum, each plate being at right angles to the previous one, looking from end of shaft and having secured to it vanes, which guide the material through the drum.

2. Screening apparatus substantially as described and illustrated.

Dated this 10th day of February, 1919.

JOHN THOMPSON. 90

