J. R. McWANE.

PIPE PIT.

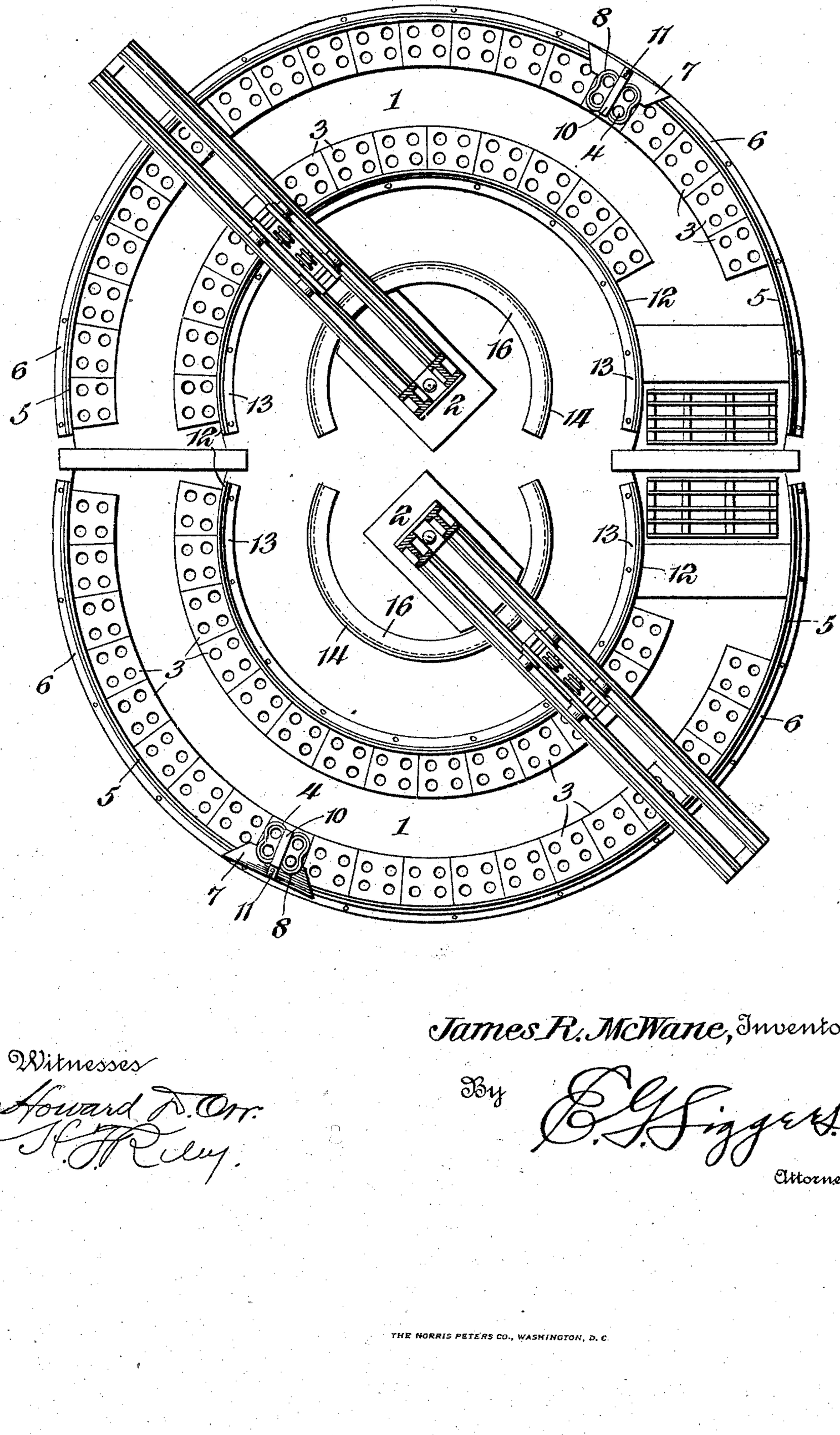
APPLICATION FILED NOV. 18, 1909.

967,038.

Patented Aug. 9, 1910.

2 SHEETS—SHEET 1.

Fig. 1.




Witnesses
Howard D. Orr.
H. J. Riley.

James R. McWane, Inventor
By E. G. Siggers.
Attorney

J. R. McWANE.

PIPE PIT.

APPLICATION FILED NOV. 18, 1909.

967,038.

Patented Aug. 9, 1910.

2 SHEETS—SHEET 2.

Fig. 2.

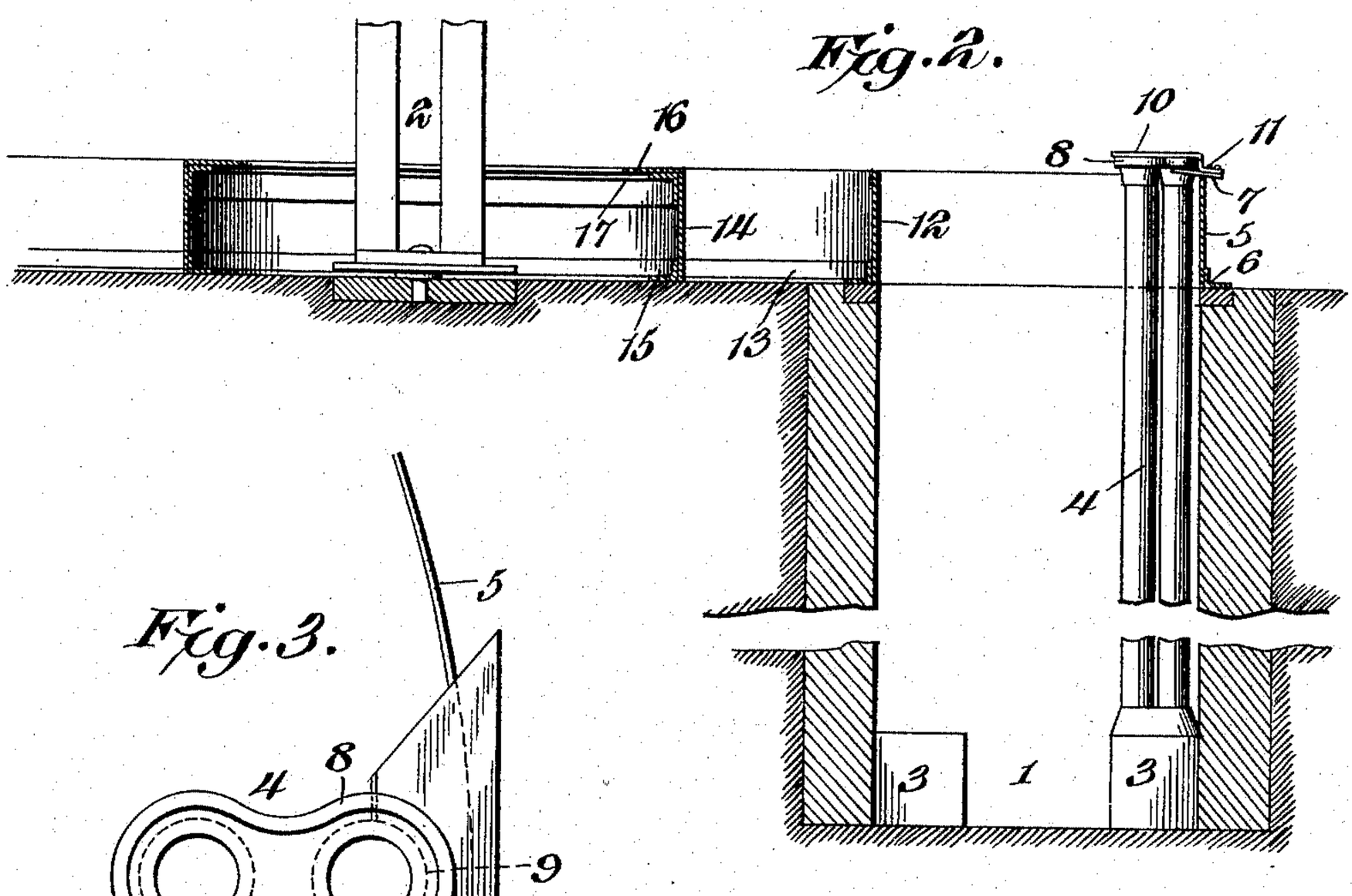



Fig. 3.




Fig. 4.

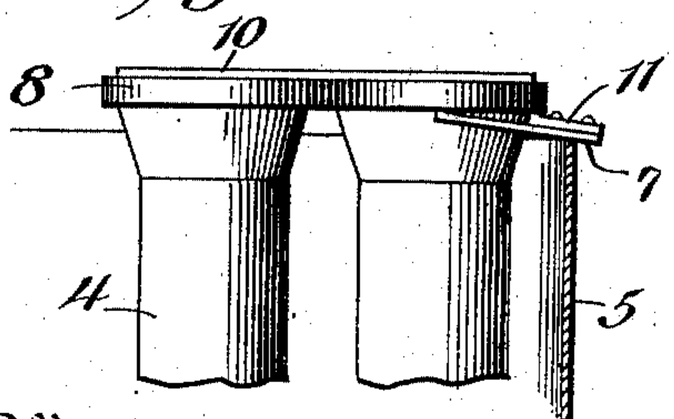
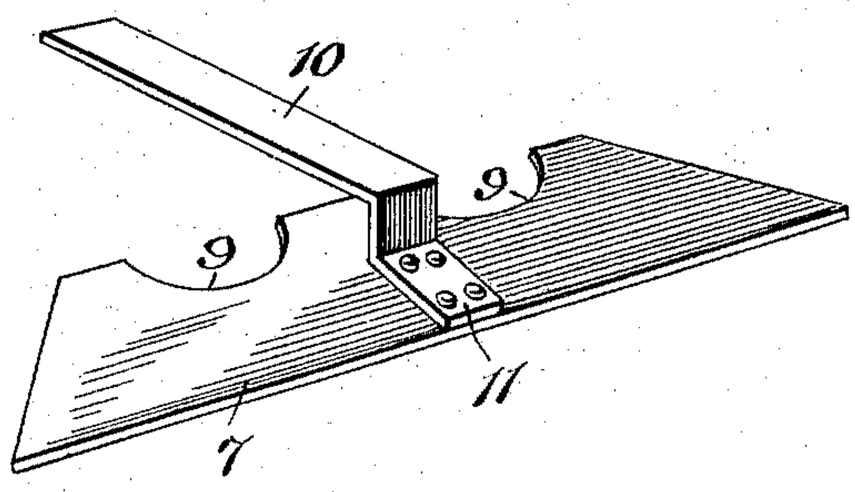



Fig. 5.




Witnesses

Howard P. Orr.

H. H. Riley.

James R. McWane, Inventor,

By E. G. Siggers.

Attorney

# UNITED STATES PATENT OFFICE.

JAMES R. McWANE, OF BIRMINGHAM, ALABAMA.

## PIPE-PIT.

967,038. Specification of Letters Patent. Patented Aug. 9, 1910.

Application filed November 18, 1909. Serial No. 528,749.

*To all whom it may concern:*

Be it known that I, JAMES R. McWANE, a citizen of the United States, residing at Birmingham, in the county of Jefferson and State of Alabama, have invented a new and useful Pipe-Pit, of which the following is a specification.

The invention relates to improvements in pipe pits.

The crane limits the capacity of the pit, and in ordinary practice the flasks are taken to a common point to be rammed and are then removed to the drying ovens or heaters.

The object of the present invention is to enable the flasks to be rammed over the heaters, thereby saving one handling of the flasks by the crane, and to this extent increasing the capacity of the pit. This has been attempted before, but has usually been abandoned as impracticable as the sand falls into the pit upon the heaters, gets mixed with the ashes and is wasted.

It is also an object of the invention to reduce the waste of the sand, so that the amount wasted will be absolutely immaterial.

With these and other objects in view, the invention consists in the construction and novel combination of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended; it being understood that various changes in the form, proportion, size and minor details of construction, within the scope of the claims, may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawings:—Figure 1 is a plan view, partly in section, illustrating the lay-out of a pair of pipe pits, constructed in accordance with this invention. Fig. 2 is a transverse sectional view of the same. Fig. 3 is an enlarged plan view, illustrating the construction of the apron and showing the same applied to a flask. Fig. 4 is a side elevation of the same, partly in section. Fig. 5 is a detail perspective view of the apron.

Like numerals of reference designate corresponding parts in all the figures of the drawings.

The pipe pits 1, which are curved, are each equipped with a centrally arranged crane 2 of the ordinary construction, and as the particular construction thereof does not constitute any portion of the present invention, a detail description thereof is deemed unnecessary. The pit 1 is provided adjacent to its inner and outer walls with curved series of heaters 3, forming drying tables and adapted to dry the flasks 4 after the sand molds have been made. The flasks 4, which in this drawing are quadruple or four-way flasks, form the subject-matter of my co-pending application, filed June 22, 1909, Serial No. 503,704.

In order to enable the flasks to be rammed over the heaters and thereby reduce the number of movements of the crane and the consequent capacity of the pipe pit, the latter is equipped at its outer wall with an upwardly extending curbing 5, constructed of heavy sheet metal, such as boiler iron. The curbing 5, which is arranged in flush relation with the outer wall of the pit, preferably extends throughout the entire length of the same, and it is provided at its lower edge with an exterior horizontal flange 6, suitably secured at the outer wall of the pit.

The horizontally projecting attaching flange is preferably formed by a curved strip of angle iron, or other suitable material, secured to the metal of the curbing at the lower portion thereof. The curbing, which forms a continuation of the wall of the pit, extends upward a sufficient distance to prevent the sand from falling into the pit between the outer wall and the heaters, and it terminates short of the tops of the flask and in order to prevent waste of the sand while the flasks are being rammed, the pit is equipped with an apron 7.

The apron 7, which is set at a slight inclination, is constructed of boiler iron, or other suitable material, and it extends downward from the top of the flask 4 to the upper edge of the curbing, and projects outward beyond the same a slight distance, so that there will be no liability of any sand falling down between the apron and the curbing, which forms a support for the outer portion of the apron. The apron tapers upwardly, and its upper edge fits beneath the top flange 8 of the flask and is provided with approximately segmental recesses 9, which receive and conform to the configuration of the outer portion of the multiple flask.

The apron is equipped with a centrally arranged inwardly extending supporting bar 10, located over the space between the members of the multiple flask and forming a cover or closure for the said space besides supporting the apron. The supporting bar

10, which is horizontal, has its outer portion angularly bent to form an approximately L-shaped arm 11, which is secured by rivets or other suitable fastening devices to the upper face of the apron. The upper portion of the L-shaped arm 11 is vertical, and the outer portion is arranged at the same inclination as the apron.

The pit is also equipped at its inner wall with an inner curbing 12, adapted to support the apron 7 and arranged concentric with the outer curbing and having an inner attaching flange 13, preferably consisting of a strip of angle iron, like the flange 6 heretofore described. The attaching flange is suitably secured at the inner wall of the pit, which is provided with a crane-protecting curbing 14, arranged within the space and closed by the inner wall or curbing in parallelism with the same, and provided at its concave face with a lower arranged flange 15 and having a supporting shelf or ledge 16 at its upper edge. The lower attaching flange 15 is constructed similar to those heretofore described, and the ledge or shelf 16 is supported in a horizontal position by an angle strip 17, arranged beneath the ledge or shelf, which is adapted to support clamps, wedges and other removable parts of the pit equipment to prevent such parts from becoming lost in the sand. The curved flange or curbing 14 keeps the sand from the crane, and the inner and outer vertical flanges or curbing 5 and 12 not only prevent the sand from falling into the pit, but operate as a guard to protect the workmen while pouring the metal into the molds.

In practice the sand for making the molds will be arranged outside of the pit at both the inner and outer walls thereof, and the flasks will be rammed while upon the heaters, the sand pitchers standing in front of the flask operated on and the rammers standing upon the adjacent flasks. This will obviate the necessity of providing ramming platforms and carrying the flasks to the same to form the sand molds, and the work of the crane will be lessened and the output of the pit correspondingly increased.

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

1. A pipe pit including heaters and flasks and provided with an upwardly extending flange or curbing located at the wall of the pit and adapted to prevent the sand from falling into the pit between the said wall and the heaters, whereby the flasks may be rammed over the heaters without wasting the sand, said flange or curbing also forming a guard to protect the workmen in pouring the material.

2. A pipe pit including heaters arranged at the inner and outer walls of the pit, flasks, and inner and outer flanges or curbing extending upward from the walls of the pit and arranged to prevent the sand from falling into the same, whereby the flanges may be rammed over the heaters.

3. A pipe pit including a crane, heaters, flasks, an inner curbing extending upward from the inner wall of the pit to prevent the sand from falling into the same and to provide a guard to protect the workmen in pouring the metal, and a flange or curbing arranged in spaced relation with the said flange or curbing in position to keep the sand from the crane.

4. A pipe pit including a crane, heaters, flasks, an inner curbing extending upward from the inner wall of the pit to prevent the sand from falling into the same and to provide a guard to protect the workmen in pouring the metal, and a flange or curbing arranged in spaced relation with the said flange or curbing in position to keep the sand from the crane and provided at the top with a shelf or ledge adapted to support the removable parts of a pit equipment.

5. A pipe pit including heaters, flasks, an upwardly extending curbing arranged at the wall of the pit to prevent the sand from falling into the same upon the heaters, and an apron extending across the space between the flasks and the curbing to enable the flasks to be rammed over the heaters.

6. A pipe pit including heaters, flasks, an upwardly extending curbing arranged at the wall of the pit to prevent the sand from falling into the same, and an apron extending across the space between the flasks and the curbing and resting upon the latter.

7. A pipe pit incuding heaters, flasks, an upwardly extending curbing arranged at the wall of the pit to prevent the sand from falling into the same, and an inclined apron extending downwardly from the flasks across the space between the same and the curbing.

8. A pipe pit including heaters, flasks, an upwardly extending curbing arranged at the wall of the pit to prevent the sand from falling into the same, and an inclined apron extending across the space between the flasks and the curbing and supported by the said parts.

9. A pipe pit including heaters, flasks, an upwardly extending curbing arranged at the wall of the pit, and an upwardly tapered inclined apron extending across the space between the flasks and the curbing and arranged in front of the former to permit the flasks to be rammed over the heaters without wasting the sand.

10. A pipe pit including heaters, flasks, and an apron adapted to fit beneath the top flanges of the flasks and having recesses to conform to the configuration of the same and arranged over the space between the flasks and the wall of the pit to prevent sand from falling into the latter.

11. A pipe pit including heaters, a multiple flask, and an apron located at the front of the flask and provided with a supporting bar extending across the top of the flask and covering the space between the members of the same.

12. A pipe pit including heaters, a multiple flask, an inclined apron arranged at the front of the flask, and a supporting bar extending across the top of the flask and covering the space between the members of the same and provided with an arm having an inclined portion secured to the apron.

13. The combination with a pipe pit, of vertically disposed flasks arranged at the side of the pit and spaced from the same, and an apron located at the top of the pit and spanning the space between the flasks and the side of the pit.

14. The combination with a pipe pit, of a flask, an apron located at the top of the pit and spanning the space between the flask and the wall of the pit, and means for supporting the apron from the flask.

15. The combination with a pipe pit, of a vertically disposed flask arranged at the side of the pit and projecting above the wall of the same, a curbing arranged on the wall and forming a continuation of the same and terminating short of the upper end of the flask and an apron spanning the space between the flasks and the side of the pit.

In testimony, that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

JAMES R. McWANE.

Witnesses:
M. J. Blair,
D. W. Wallace.