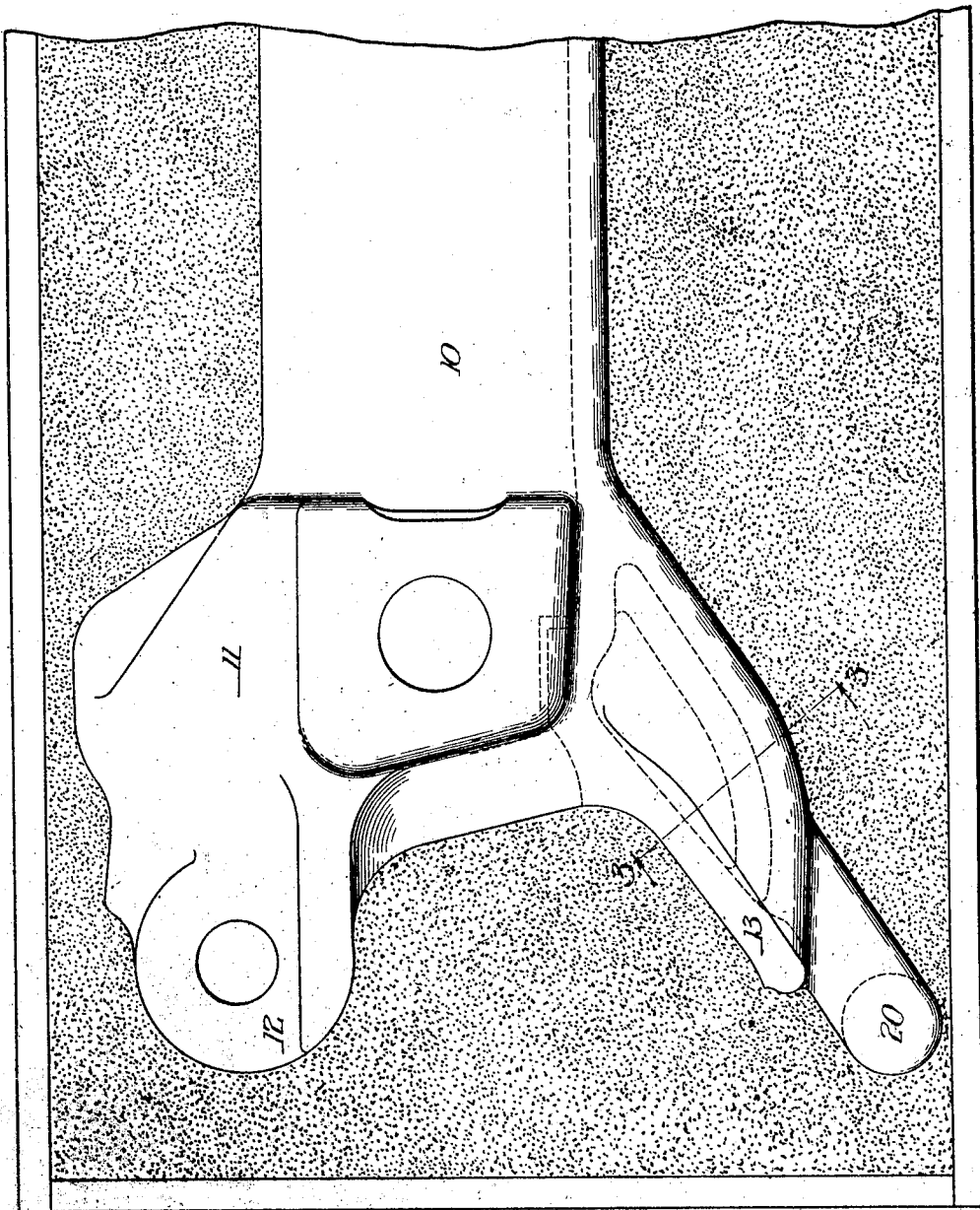


E. P. KINNE.
COUPLING GUARD ARM.
APPLICATION FILED AUG. 23, 1912.

1,058,760.

Patented Apr. 15, 1913.

2 SHEETS—SHEET 1.



Witnesses
Geo. C. Darrow
Chas. F. Murray

Fig. 1

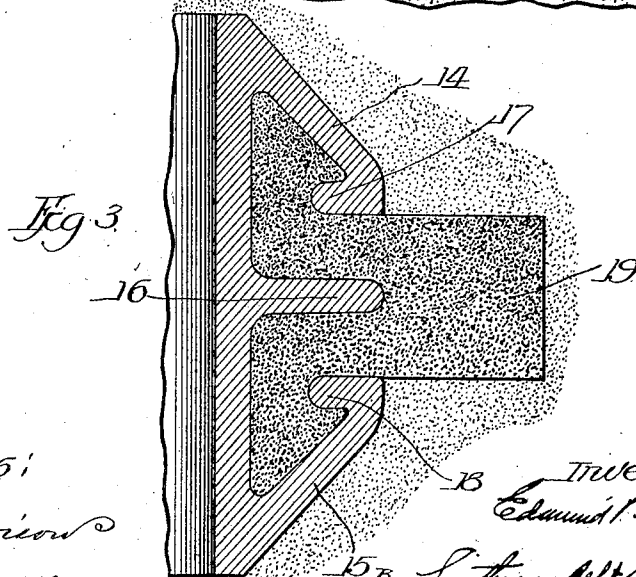
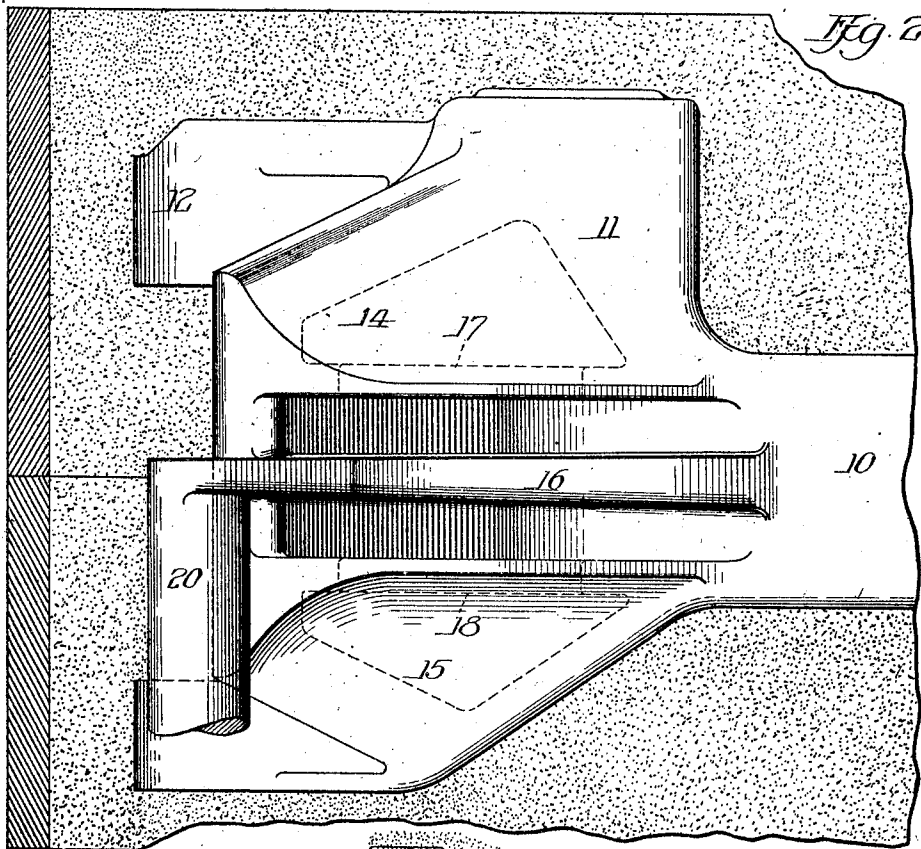
Inventor:
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By Lenthicum B. H. Miller
Attys

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Witnesses:
 Geo. A. Dwyer
 Chas. W. Murray

Inventor:
 Edmund P. Kinne
 By Luther C. Dyer, Att'y.

UNITED STATES PATENT OFFICE.

EDMUND P. KINNE, OF ALLIANCE, OHIO, ASSIGNOR TO AMERICAN STEEL FOUNDRIES,
OF NEW YORK, N. Y., A CORPORATION OF NEW JERSEY.

COUPLING GUARD-ARM.

1,058,760.

Specification of Letters Patent.

Patented Apr. 15, 1913.

Application filed August 23, 1912. Serial No. 716,789.

To all whom it may concern:

Be it known that I, EDMUND P. KINNE, a citizen of the United States, and resident of Alliance, in the county of Stark and State of Ohio, have invented certain new and useful Improvements in Coupler Guard-Arms, of which the following is a specification.

My invention relates to car couplers and has particular reference to a novel guard arm therefor.

It has heretofore been customary to construct the guard arms of car couplers in one of two ways, namely, by making the guard arm hollow or by providing a plurality of horizontal ribs or webs. It will be understood that the guard arm receives very heavy shocks in buffing and must be constructed to withstand such blows. Therefore to avoid the necessity of forming the guard arm of solid metal much of which would be ineffective, either the box or ribbed construction is employed. It will be understood also by those familiar with coupler construction that the locking face of the car coupler adjoins the rear of the guard arm being separated therefrom by a vertical wall. The locking face has transmitted thereto all the strain in pulling and must therefore be of the requisite section in all cases. In the box form of guard arm a separate core must be used and such core is not easily maintained in place, the core frequently shifting with the result that the wall forming the locking face is too thin and breaks in service. In the ribbed guard arm construction the tendency in casting in steel is to produce rough and undesirable workmanship due to the formation of sand pockets, etc.

One of the objects of my design is to produce a guard arm which shall combine the advantages of the box and rib construction and with the difficulties of neither. In my construction the upper and lower ribs are angularly inclined the middle rib being constructed as heretofore. This permits the location of the pouring gate at a desirable point; that is, at the middle rib. The casting when gated in this manner provides for

a straight flow of metal from the head of the coupler directly in line with the shank, it being understood that the coupler is cast bottom up lying horizontally. The core in my construction is securely held, a portion thereof being embedded in the sand of the mold.

My invention will be more readily understood by reference to the accompanying drawings, wherein,

Figure 1 is a plan view of a coupler in a mold, the view being taken from the bottom of the mold; Fig. 2 is a side elevation showing the location of the pouring gate with relation to the ribs, the mold being shown with its bottom upward as in Fig. 1, and, Fig. 3 is a section on the line 3—3 of Fig. 1.

Referring more particularly to the drawings, it will be seen that the coupler contemplated is composed of a shank 10, head 11, knuckle lugs 12, and guard arm 13. The guard arm is provided with upper and lower inclined ribs 14, 15 and an intermediate horizontal rib 16. The upper and lower ribs are inclined toward each other and are provided on their edges with inturned flanges 17, 18. It will be seen that the core 19 used in casting may have a shank which extends into the sand surrounding the mold and be thereby securely held. The pouring gate is so located that the sprue 20 enters at a point at the end of the intermediate rib 16, as shown in Fig. 2. This provides a straight flow of metal to all points of the mold and very desirable castings are produced.

It is obvious that modifications may be made in the design shown and such modifications I consider within the scope of my invention.

I claim:

1. A car coupler having a guard arm provided with a vertical striking face and a plurality of strengthening ribs, the plane of one of said ribs being at an angle to the transverse horizontal axis of the coupler, substantially as described.

2. A car coupler having a guard arm provided with a vertical striking face, inclined

strengthening ribs and an intermediate horizontal rib, the plane of said inclined ribs being at an angle to the transverse horizontal axis of the coupler, substantially as described.

3 3. A car coupler having a guard arm provided with a vertical wall, upper and lower

inclined beaded strengthening ribs and an intermediate horizontal rib, substantially as described.

EDMUND P. KINNE.

Witnesses:

LAUNA CARLISLE,
J. E. RYAN.