

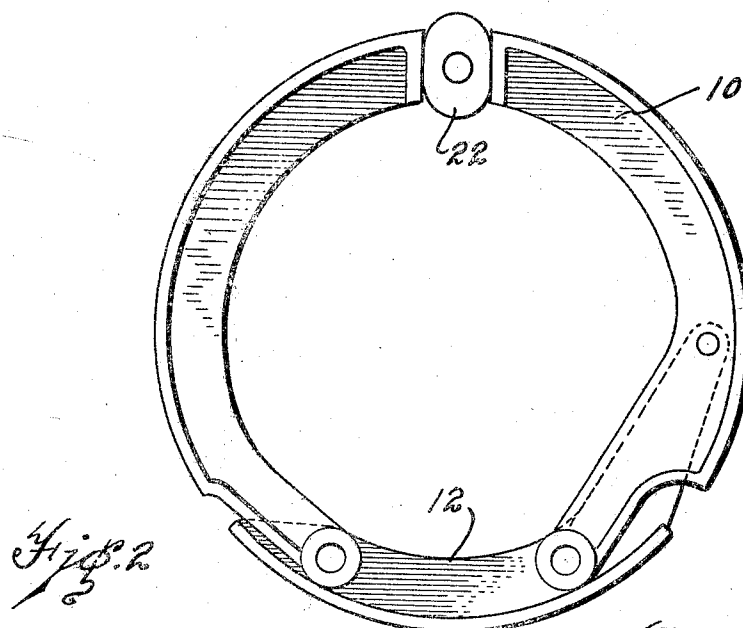
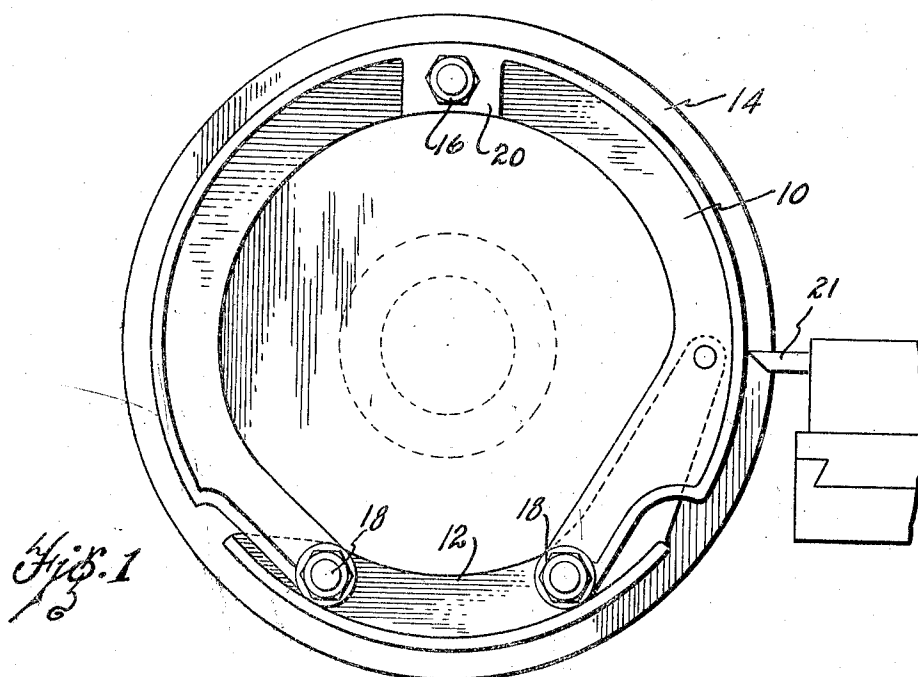
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S. WHITWORTH

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METHOD OF MANUFACTURING BRAKE SHOES

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INVENTOR.

STANLEY WHITWORTH

BY

Burton & McConkey.
ATTORNEY

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STANLEY WHITWORTH, OF SOUTH BEND, INDIANA, ASSIGNOR TO BENDIX BRAKE COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS.

METHOD OF MANUFACTURING BRAKE SHOES.

Application filed November 15, 1926. Serial No. 148,372.

My invention relates to an improved method of manufacturing brake shoes.

The object is to provide an improved method of manufacturing cast brake shoes which method is simple and inexpensive and which results in the production of accurately formed shoes at less cost, not only because of the simplicity of the operations involved, but also because of the minimum wastage of material.

It has heretofore been the practice to cast individual brake shoes as separate pieces and to machine them in the same manner. Accurate machining of the individual shoes was unsatisfactory and costly. Inaccurate shoes were not an uncommon occurrence when the process was used in production.

I propose to cast a plurality of brake shoes as a unit, assemble such unit with the cooperating shoe necessary to complete a single brake structure, machine the entire assembly as a single piece and then divide the casting comprising the plurality of shoes into its component shoe sections.

The several meritorious features and pronounced advantages of my improved process will more fully appear from the following specification and claims.

In the drawing used to illustrate my improved process:

Figure 1 is a side elevation illustrating one step in the process.

Figure 2 is a side elevation of the shoes when completed and assembled.

My invention relates to improvements in the manufacture of brake shoes wherein the shoes are accurately formed at a minimum cost and comprises casting a plurality of the shoes as a single unit, machining said shoes while a part of said unit and, after the machining operation has been completed, dividing the unit into its individual shoe sections. The invention particularly resides in casting the two primary shoes of a three shoe brake structure as a single arcuate piece of a length substantially greater than the combined length of the completed shoes and approximately that of the combined length of the completed shoes and operating cam when assembled in the brake mechanism.

This cast unit is indicated in Figure 1 as 10. It is assembled with the third shoe 12 of an individual brake structure upon a face plate 14 for the purpose of machining the assembled shoes. The face plate may be

provided with stud bolts 16 and 18, upon which the cast unit and the shoe 12 are mounted and secured in position with respect to the face plate. The assembled unit is then machined in a manner well known to the art. In Figure 1 is illustrated a cutting tool 21 suitable for accomplishing the machining operation.

Machining the several shoes which go to form a one brake structure as a unit in this manner produces shoes accurately formed to cooperate in a single brake structure and accomplishes the machining operation at a materially less cost than would be possible in the machining of the individual brake shoe members. Moreover, the shoes are formed in the required number for each brake mechanism without excess of one shoe over the other.

After the machining operation has been completed, the cast unit 10 is divided into the two primary shoes which compose it by removing from an intermediate part 20 such portion of the material as exceeds the combined length of the two primary shoes and as approximates in extent the dimension of the actuating cam adapted to be inserted between the two cam ends of the shoes as indicated at 22. In Figure 2 of the drawing the several shoes are shown in complete form.

What I claim is:

1. That method of manufacturing brake shoes which consists in casting as a unit two shoes adapted to be actuated by one cam, machining said shoes while a part of the unit and removing from the unit material approximating in extent the dimension of the cam adapted to be used to actuate the shoes.

2. That method of manufacturing brake shoes which consists in casting a pair of brake shoes as a unitary arcuate structure exceeding in length the combined length of the completed shoes by approximately the dimension of the cam adapted to be employed between the ends of the shoes to actuate them and approximating in extent the combined length of the completed shoes plus said cam, machining said shoes while in said cast unit, and dividing the unit to form the individual shoes by removing from an intermediate portion thereof material approximating said cam in extent.

3. That method of manufacturing brake

shoes which consists in casting a plurality of shoes adapted for employment in a single brake structure as a unit, assembling with said unit the cooperating shoe for said brake
5 structure, machining said assembled shoes as a unit and dividing the cast unit comprising the plurality of shoes to form the individual shoes.

4. That method of manufacturing a multiplicity of brake shoes which consists in
10 casting a pair of shoes as a unit, machining said shoes as a unit and dividing the unit to form the individual shoes of the pair.

5. That method of manufacturing brake
15 shoes which consists in casting as a unit a

pair of shoes adapted to be actuated by a single cam, machining said shoes while a part of said unit and removing from the unit that portion of material necessary to
accommodate said actuating cam.

6. That method of manufacturing brake shoes which consists in casting a plurality of the shoes adapted for employment in a single brake structure as a unit, machining
said shoes as a unitary piece and dividing
25 the unit to form the separate shoes.

In testimony whereof, I, STANLEY WHITWORTH, sign this specification.

STANLEY WHITWORTH.