

No. 734,264.

PATENTED JULY 21, 1903.

H. W. & J. A. HOCK.
PIPE SOCKET EXPANDER.
APPLICATION FILED NOV. 3, 1902.

NO MODEL.

Fig. 1.

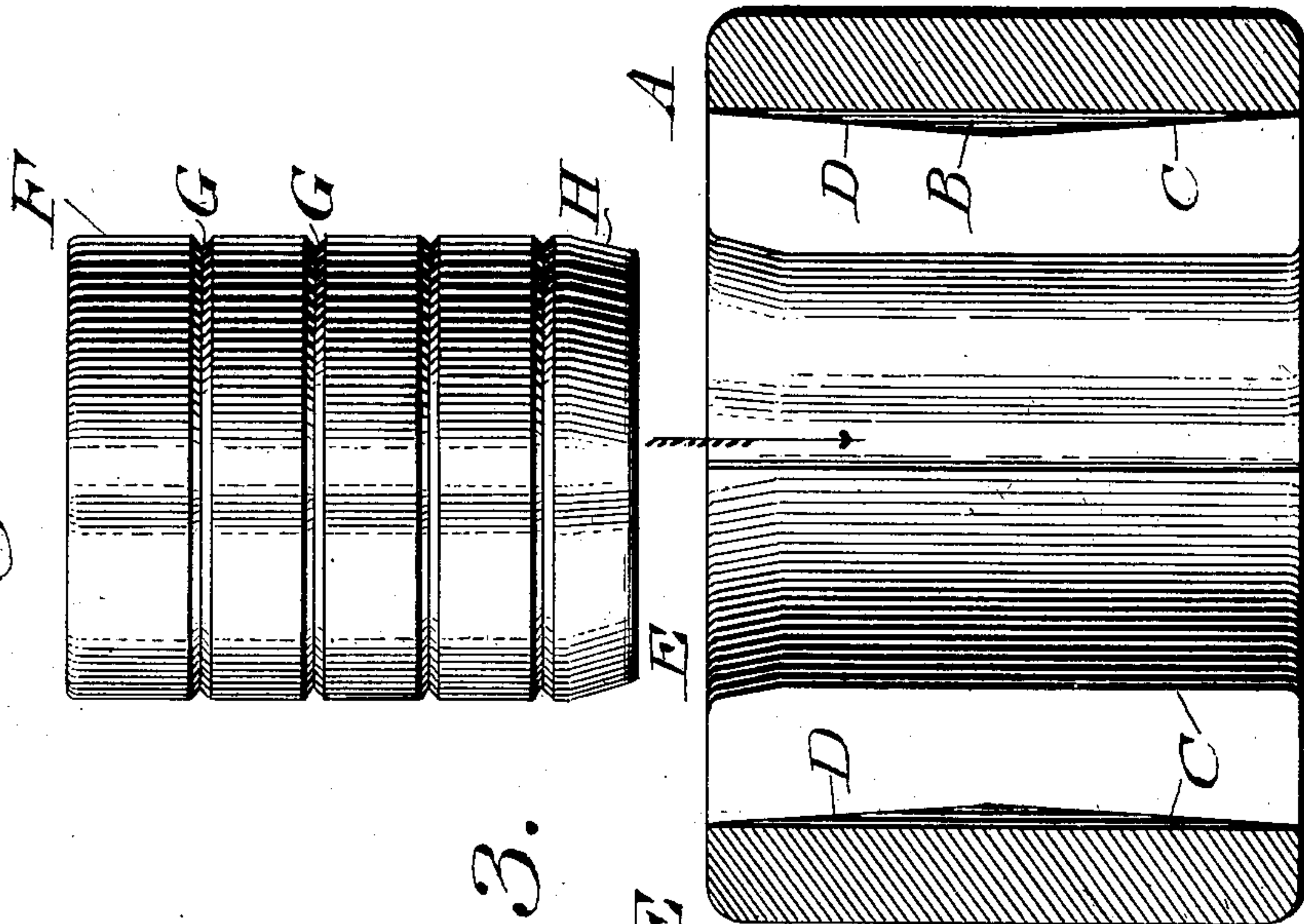


Fig. 3.

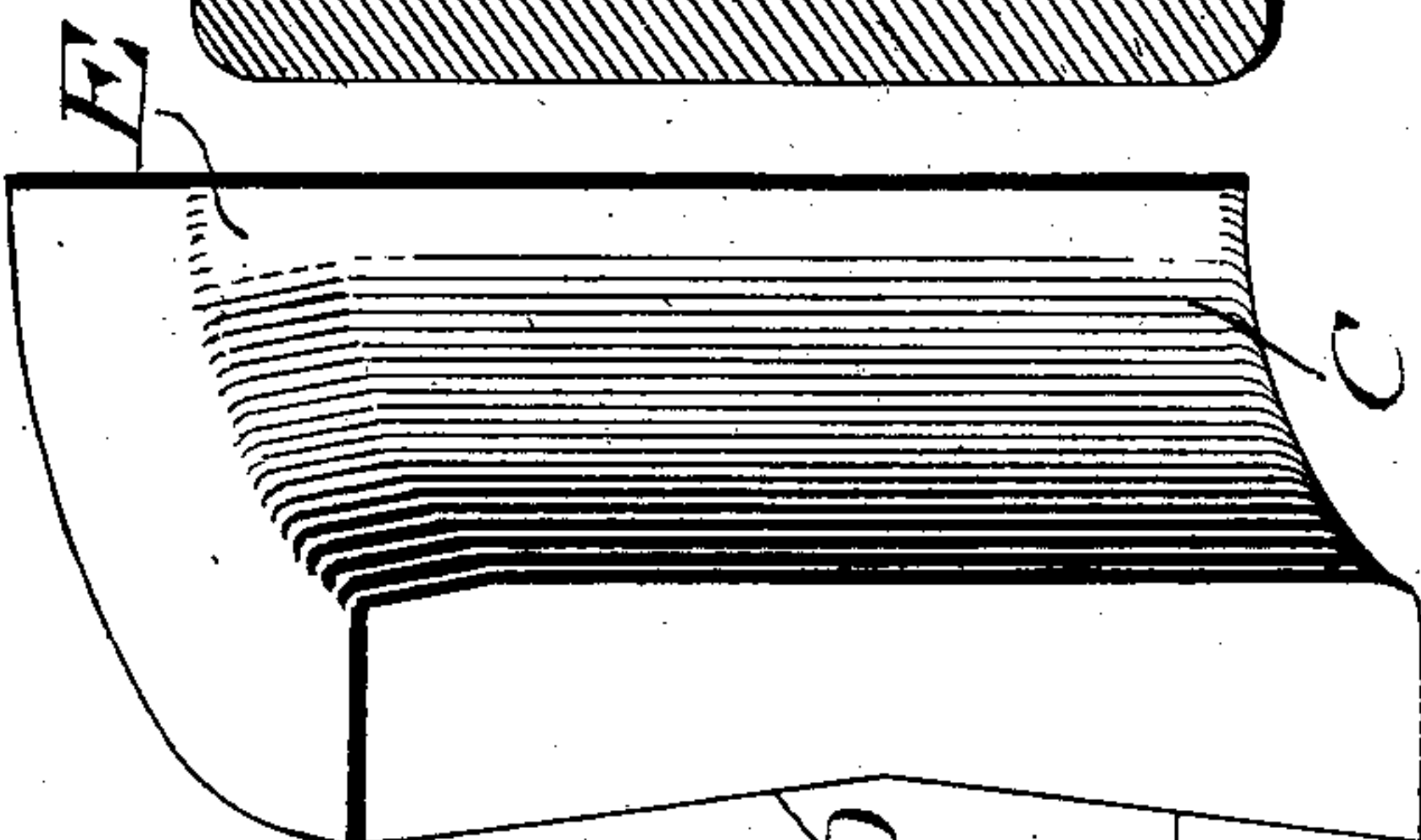
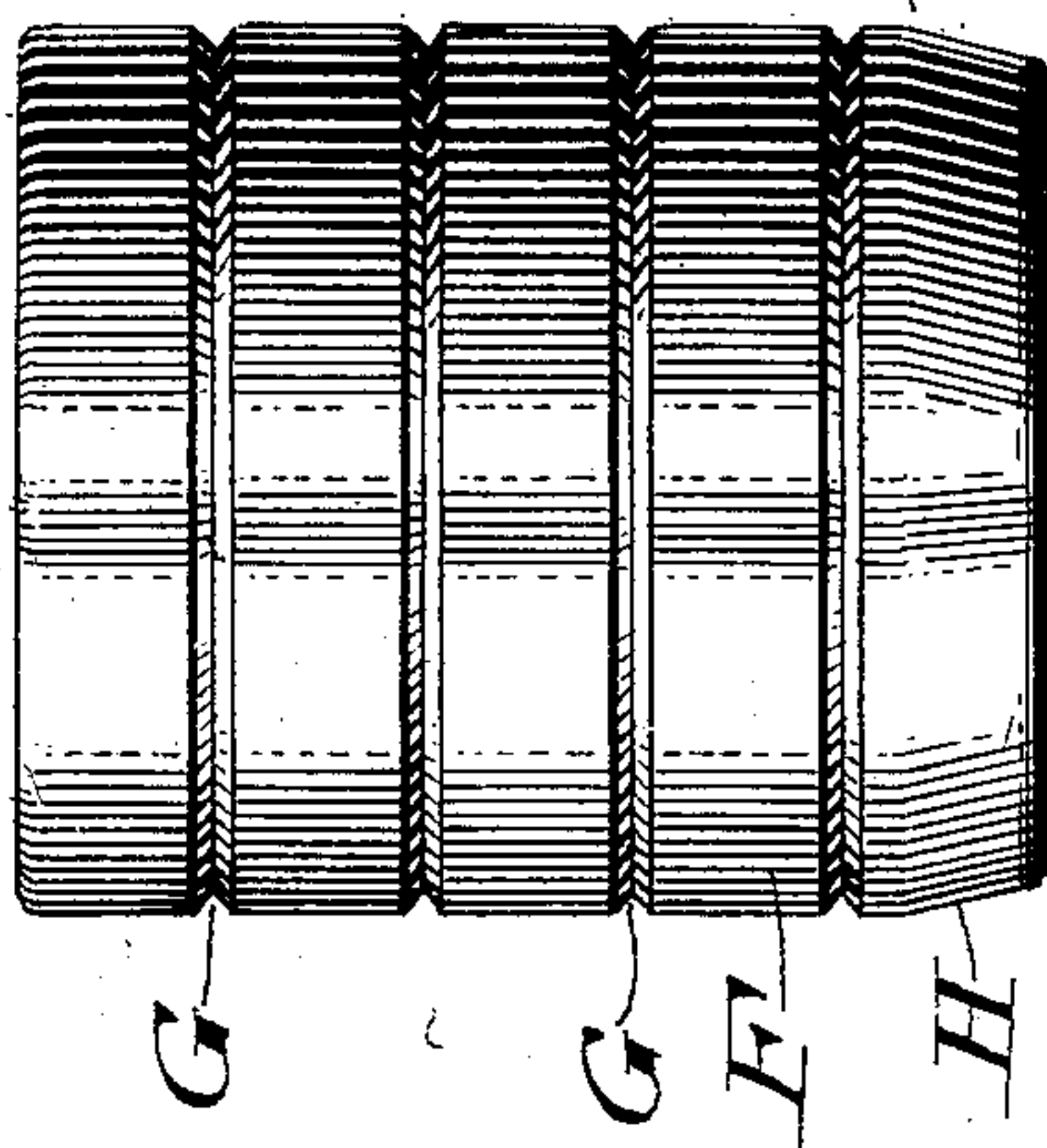
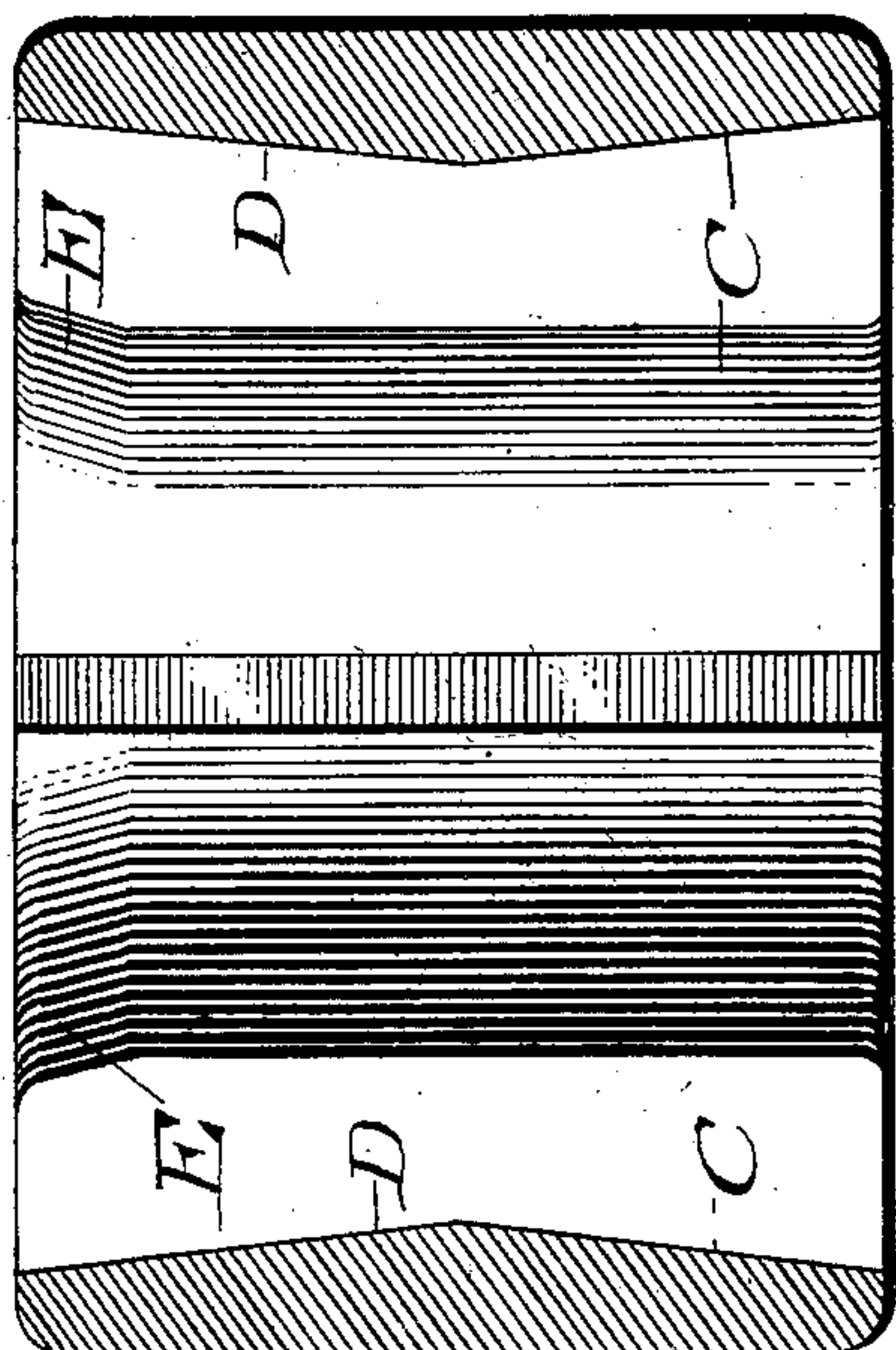


Fig. 2.



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PIPE-SOCKET EXPANDER.

SPECIFICATION forming part of Letters Patent No. 734,264, dated July 21, 1903.

Application filed November 3, 1902. Serial No. 129,842. (No model.)

To all whom it may concern:

Be it known that we, HENRY W. HOCK and JOHN A. HOCK, citizens of the United States, residing in the city of Youngstown, in the county of Mahoning, State of Ohio, have invented a new and useful Improvement in Pipe-Socket Expanders, of which the following is a specification.

Our invention consists of an improvement in pipe socket or coupling expanders, all as will be hereinafter set forth.

Figure 1 represents a vertical sectional view of a pipe-coupling with the expander in position and a side elevation of a plug above the same. Fig. 2 represents a vertical sectional view of the pipe-coupling with the expander in position and a side elevation of a plug of larger size than the one shown in Fig. 1, said plug being shown after passing between the expander. Fig. 3 represents a perspective view of one of the portions of the expander employed.

Similar letters of reference indicate corresponding parts in the figures.

Referring to the drawings, A designates a pipe-coupling, the inner wall B of which is straight. It has been found that it is of advantage to have the inner wall of the coupling reversely inclined from substantially the center, and in order to accomplish this we employ an expander C, which is formed of four equal parts or pieces of suitable size as to fill the bore of the coupling A. Said expander is curved and formed with the outer wall D tapered from each end, forming a V shape in cross-section, and the upper portion of the inner walls are beveled, as at E.

F designates plugs which we employ, it being seen that the same are of different sizes, and we may use any number of said plugs of varying sizes to accomplish our purpose, the same being provided with circumferential grooves G, and the entering edge of the said plugs are beveled, as at H.

The operation is as follows: The expander C is placed in position in the bore of the coupling A and the smallest-sized plug F forced between the expander by any suitable means. This separates the parts D of the expanders somewhat, and the inner wall B of the coup-

ling begins to conform to the shape of the outer wall D of the expander E. Then the next-sized plug F is forced through, and so on until the last sized plug, when the expander C will assume the position substantially as seen in Fig. 2, and the inner wall B of the coupling or socket will be of the shape as seen in cross-section in said Fig. 2. The grooves G in the plugs will take up the oil, grease, dirt, &c., during the passage of the plugs F through and between said expander C.

From the above it will be understood that we make a plain expander without threads, the said expander being formed or cut into four equal parts, thus making the outside surface of each part in the same proportion, thereby increasing the life of the expander and making a more perfect socket, while at the same time it does not take the same care and skill in producing a socket as is now required, whereby the production is increased.

It will be evident that various changes may be made by those skilled in the art which may come within the scope of our invention, and we do not, therefore, desire to be limited in every instance to the exact construction herein shown and described.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. A pipe-socket expander consisting of a plurality of equal parts having their outer walls tapered from each end and adapted to be inserted in the socket, and a plug adapted to be passed between said parts and provided with means for taking up the oil, &c., during the passage of the plug through and between said parts.

2. A pipe-socket expander consisting of a plurality of equal unthreaded parts adapted to be inserted in the socket, and the plurality of plugs of various sizes adapted to be passed between said parts and provided upon their exterior with a plurality of grooves.

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Witnesses:

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