

A. M. HOWE.

Manufacture of Cutter-Stocks.

No. 155,088.

Patented Sept. 15, 1874.

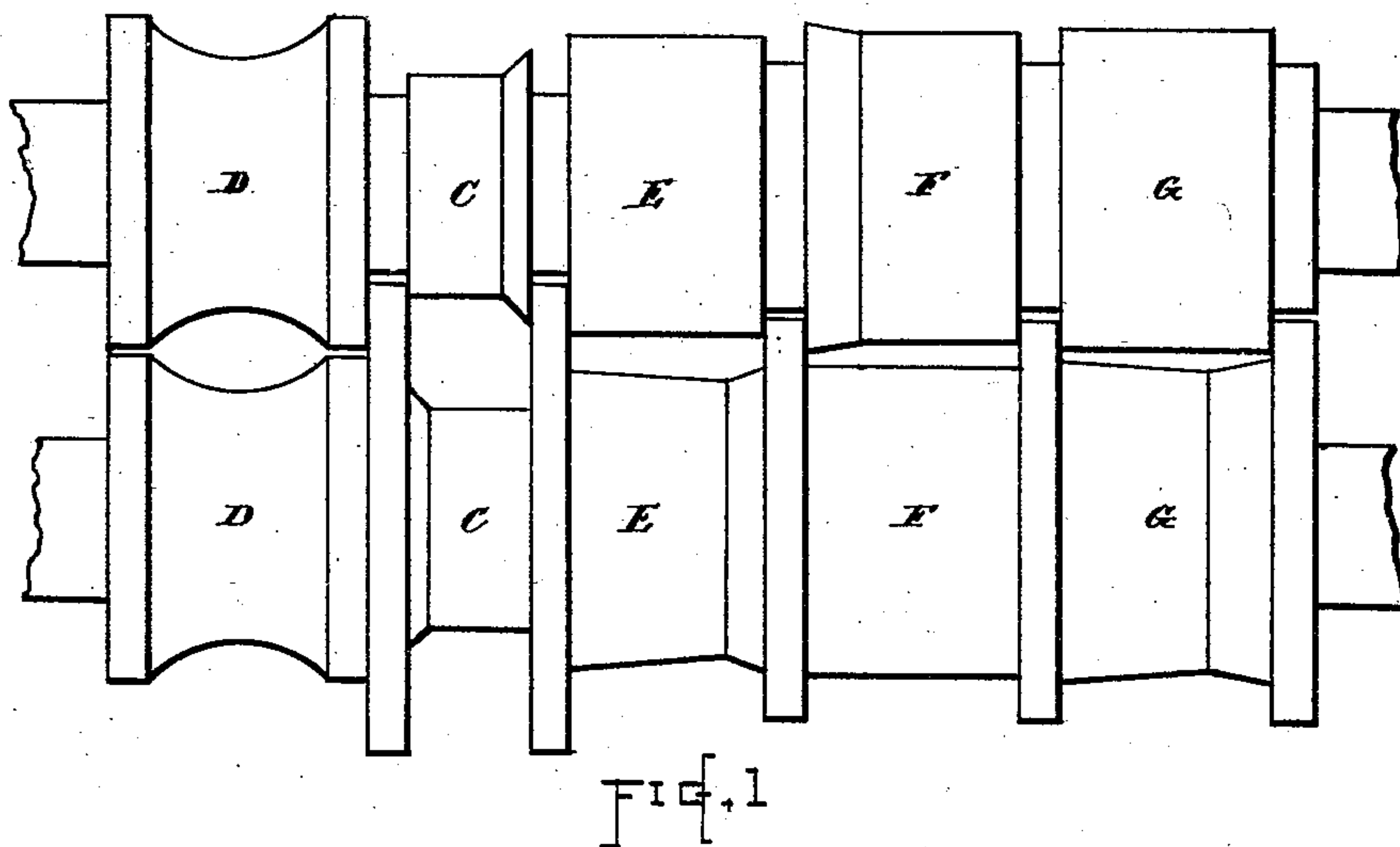


FIG. 1

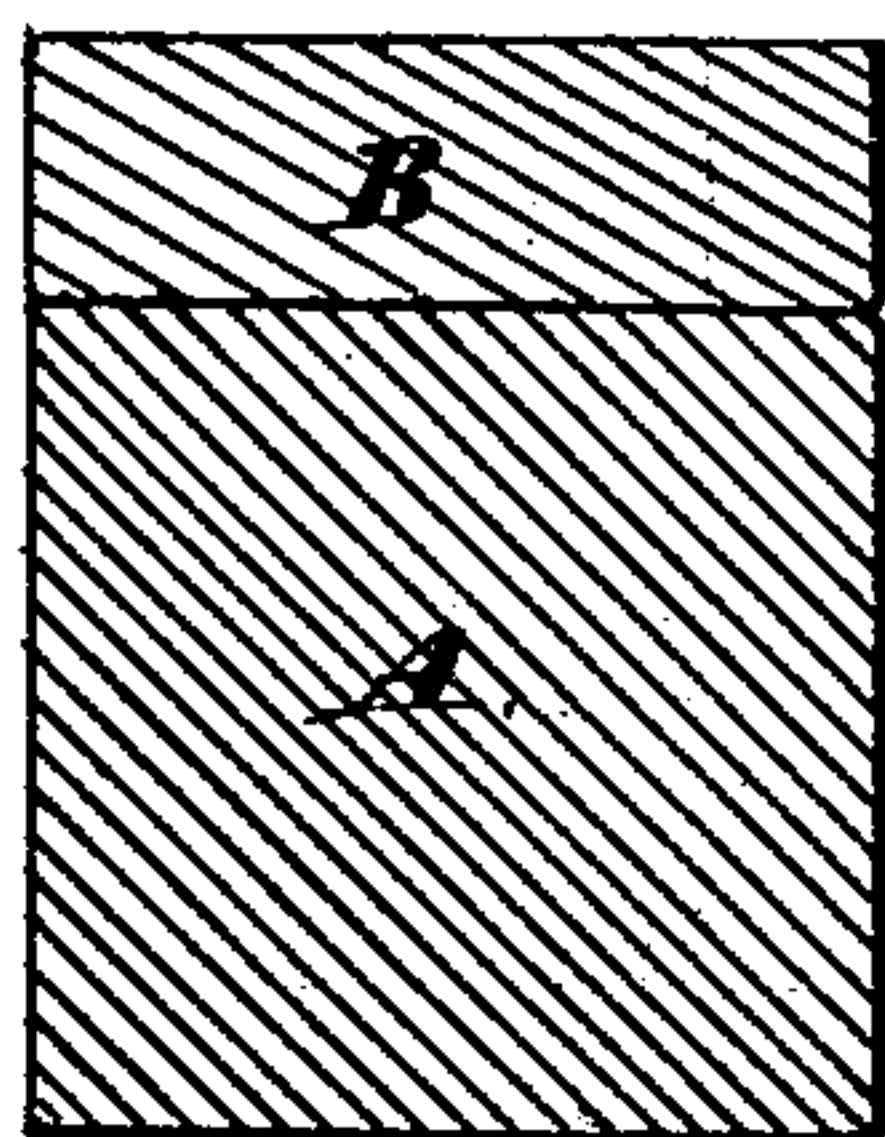


FIG. 2

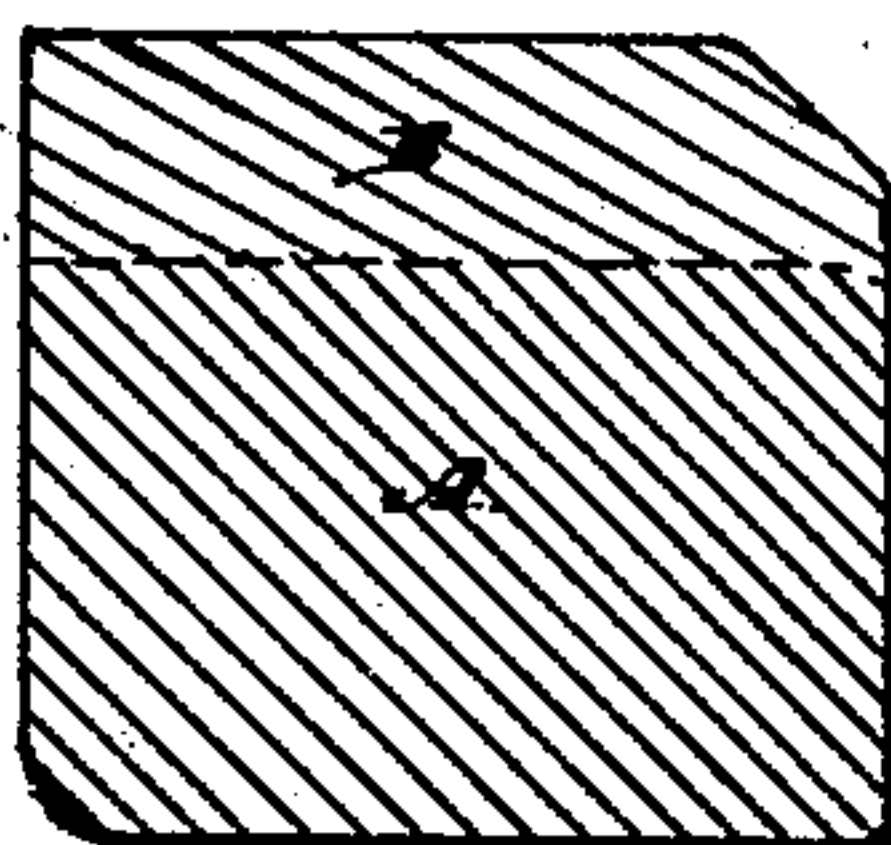


FIG. 3

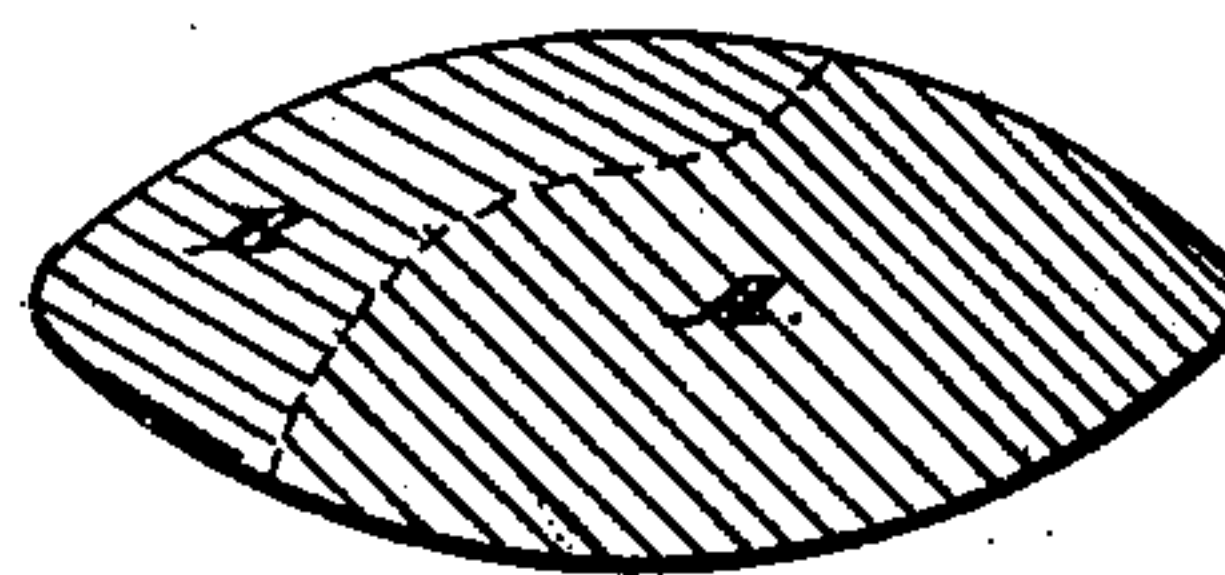


FIG. 4



FIG. 5



FIG. 6

Witnesses

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IMPROVEMENT IN THE MANUFACTURE OF CUTTER-STOCKS.

Specification forming part of Letters Patent No. **155,088**, dated September 15, 1874; application filed July 25, 1874.

To all whom it may concern:

Be it known that I, ARCHELAUS M. HOWE, of the city and county of Worcester and State of Massachusetts, have invented a certain new and useful Process of Making Cutter-Stocks or Forming-Plates from which to Manufacture Dies and Cutters; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, which form a part of this specification, and in which—

Figure 1 represents a view of the forming-rolls, (on a small scale.) Fig. 2 represents a view of the fagot for producing my improved cutter-stock. Figs. 3, 4, and 5 represent sectional views of the plates at different stages of the operation; and Fig. 6 represents a sectional view of the finished stock.

The method heretofore practiced for forming stock or plates for cutters or dies has been to weld the steel to the corner of the bar of iron by means of hammers, and afterward to draw and flatten the plates by rolls.

This operation requires that the stock be heated several times during the process of forming the plates, while the bars from which the stock is formed require to be made of a peculiar shape expressly adapted for the purpose.

The object of my present invention is to reduce the required amount of labor and to facilitate the operation of forming the plates, while at the same time improving the quality and uniformity of the stock produced.

My improved process is as follows: I form a fagot of a bar of iron, A, about one and one-half or two inches square, and some twelve inches in length, and a bar of steel, B, of the same width, or about one-fourth inch less width than the iron, nearly or quite the same length, and about one-quarter of the thickness of the iron. These bars A and B are placed in a furnace and properly heated, a suitable flux applied to their faces, and the two pieces placed together in the manner shown in Fig. 2. The bars thus placed together are heated to a proper welding-heat, when the fagot is taken from the furnace and

passed through between welding-rolls C C, Fig. 1, which roll and weld the steel and iron to each other, and give to the bar the sectional form indicated in Fig. 3. The bar is then turned in a diagonal position and passed between concave-faced rolls, of the shape indicated at D D, which impart to it a cuni-form section, as illustrated by Fig. 4. It is next passed between rolls of the form E E, giving to the bar the sectional form seen in Fig. 5, then through roll F F, and finally between the rolls of form G G, by means of which the plate is reduced to the desired finished form and size, as illustrated in Fig. 6.

This entire operation is performed with but a single heating of the fagot, and in about one-third of the time required by the usual process of forming the plates.

By my improved process of making the cutter-stock, I am enabled to use ordinary square bars of iron and steel without requiring such bars to be rolled especially for the purpose, and the fagot being put up in short pieces the welding of the steel to the iron is rendered more certain and uniform, while the metal can be heated in a comparatively small furnace, and to a more equal degree with less liability of burning or overheating, and the bars can be handled with much greater facility and convenience than long bars.

By first rolling the fagot flat, I obtain a firm weld between the parts A B, and by then passing it through between concaved rolls in a diagonal position, the steel B is pressed to the side of the plate in such a manner that the subsequent forming-rolls leave the finished plate with the line of junction between the steel B and iron A in a diagonal position, the body of the steel being laid to the edge of the plate in a proper manner to produce the cutting-edge of the knife or die, as indicated in Fig. 6.

The plates or stock thus formed can be used for the manufacture of cutting-dies of various kinds, as well as for straight knives and cutters for planing-machines, hay-cutters, and other machines.

By using a wider or narrower bar of steel, B, for forming the fagot, the width of the steel

facing on the finished stock can be varied as may be desired, or to suit the particular class of cutters to be made therefrom.

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

The process of forming cutter stock or plates as above described, whereby the parts A and

B are welded squarely together and then rolled in such a manner as to carry the steel to one edge of the plate, substantially as set forth.

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Witnesses:

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