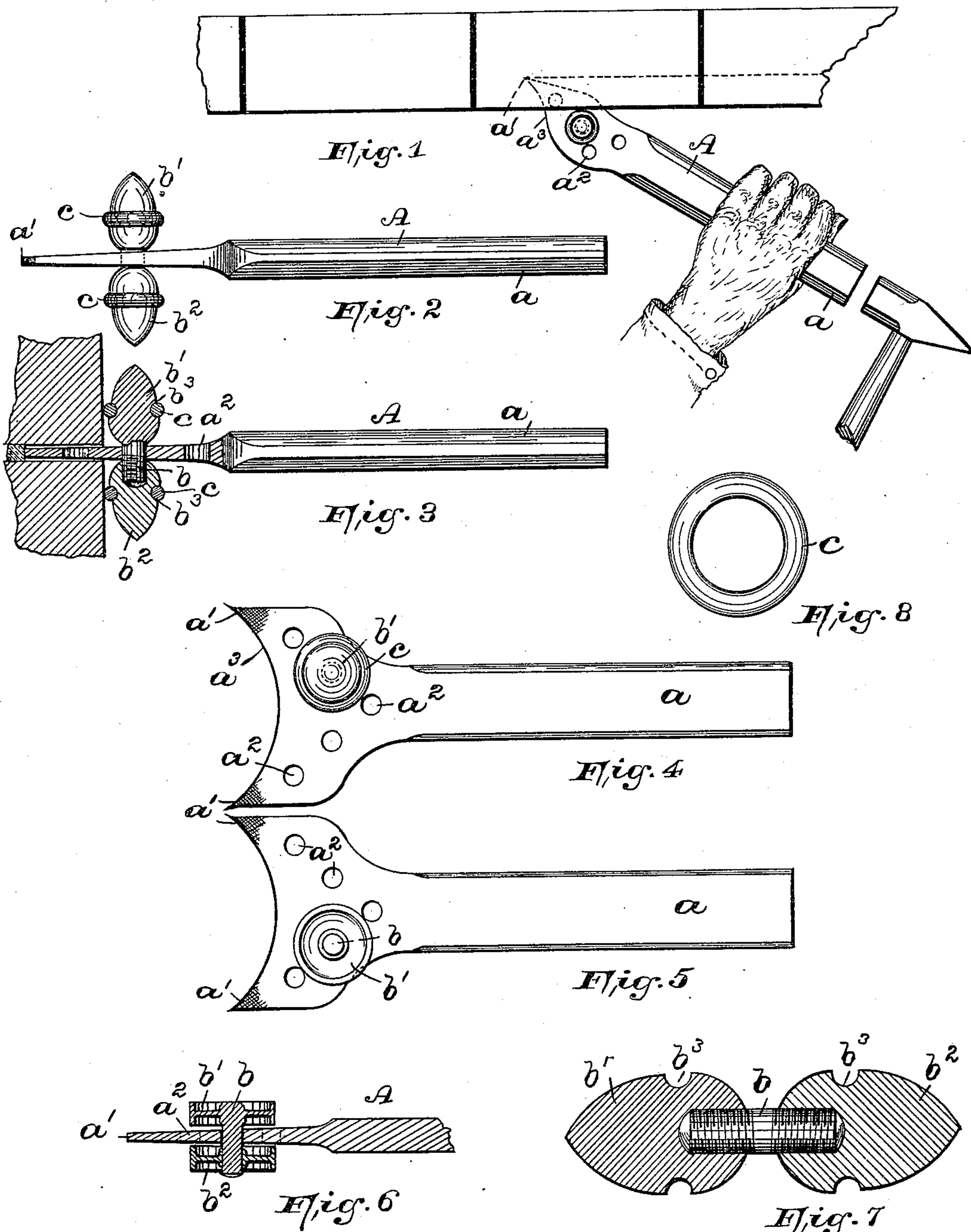


(No Model.)

J. F. KOELLHOFFER.
EXCAVATING CHISEL.

No. 470,940.

Patented Mar. 15, 1892.



WITNESSES:

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EXCAVATING-CHISEL.

SPECIFICATION forming part of Letters Patent No. 470,940, dated March 15, 1892.

Application filed February 25, 1891. Serial No. 382,813. (No model.)

To all whom it may concern:

Be it known that I, JULIUS F. KOELLHOFFER, a citizen of the United States, residing at Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Excavating-Chisels; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

The present invention relates to improvements in brick-layers' tools, and has for its object to provide a chisel for partly excavating the mortar between bricks; and the tool consists of a handle provided with a chisel or cutting edge and rollers adjustably secured thereto, whereby the tool can be used for partially cleaning the joint or the cutting-edge can be made to be inserted between the bricks, whereby an entire brick can be removed in a cleaned condition without breaking in the same.

In the drawings herewith accompanying, Figure 1 represents a side view of the tool, the cutting-edge being inserted in the joint between the bricks. Fig. 2 is a plan view of the tool, and Fig. 3 is a similar view, the front part of the tool and the guide-rollers being represented in section. Fig. 4 is a side view of my tool provided with two cutting-edges. Fig. 5 is a like view of the tool provided with a modified form of roller, and Fig. 6 is a vertical section through Fig. 5 of the tool and one of its rollers. Fig. 7 is an enlarged vertical section of the guide-rollers, showing still another way in securing them together. Fig. 8 is an enlarged plan view of one of the rings for the guide-rollers.

Similar letters of reference are employed to indicate corresponding parts in each of the several views.

In the drawings, A is my brick-excavating chisel, of which *a* indicates the handle portion, which is provided with the cutting or chisel edge *a'* and which is also slightly flattened, as will be seen from Figs. 2 and 3. This end, which is preferably made much wider than the handle portion of the tool, is

provided with any desirable number of holes *a²*, which are scattered in different positions through said flattened portion. In any one of said holes is arranged an axle or pin *b*, provided on one end with a roller *b'*, formed integral therewith, and screwed upon its opposite end another roller *b²*, as will be seen from Fig. 3, or said pin or axle can be provided on its opposite ends with the right and left threads, as shown in Fig. 7, upon which are screwed said rollers *b'* and *b²*. Thus, as will be evident from the figures, said rollers are placed on opposite sides of the tool, and by placing the pin into any one of the holes in the forward end of the tool it enables the adjustment of the guide-rollers to almost any desirable distance from the cutting-edge, whereby the mortar can be excavated to any required depth between the bricks, or by placing the rollers opposite the hole the greatest distance from the point the tool adapts itself for the removing of the mortar the entire depth of the brick. As will be seen more especially from Figs. 2, 3, 7, and 8, each roller can be provided with a groove *b³*, encircling the periphery thereof, into which can be forced a flexible and soft ring *c* of any suitable material, preferably rubber. In using the tool said rings *c* bear against the surface of the brick, as illustrated in Figs. 1 and 3, and owing to the soft material of which said rings are made they serve to break the force of the blow from the hammer upon the end of the tool, and therefore prevent the splitting or chipping off of pieces from the edge of the bricks. The screw-threads upon the end or ends of the pin *b* are cut in such a manner that when the rollers move along the joint between the bricks said rollers tend to be screwed upon the ends of the pin even more tightly, which prevents the rollers from becoming unscrewed from the blows from the hammer upon the end of the chisel.

In Figs. 4 and 5 is illustrated a different form of tool, in which I have provided the flattened end of the tool with two cutting-edges, in which when one edge has become dull the rollers and axle can be secured in an oppositely-arranged hole and the other cutting-edge used, as will be evident.

Of course it will be evident that the rollers may be shaped like an acorn, as shown, and

the ring *c* can be entirely dispensed with, and I can use the form of roller or small wheels shown in Figs. 5 and 6. The rollers provided with the flexible rings, however, are the preferred form which I contemplate using for the reasons above stated.

As will be evident from Fig. 1, the flattened end of the tool is formed with a backwardly and inwardly extending curve portion *a*³, which when the tool is being used in the manner of a chisel forces the mortar out of the joint in front of the curve and leaves a clear and clean surface directly behind the cutting-edge.

In pointing up the bricks in old buildings it is very essential that the mortar shall be excavated to a certain depth, leaving the remaining surfaces of the mortar and brick clean, for if this has not been done the fresh mortar will in a short time crumble, owing to the fact that the new mortar does not get the proper hold upon the brick, and will loosen between the layers of brick.

By the use of my tool the old mortar can be removed to any desirable depth and the fresh mortar made to remain in the joint, or the mortar can be removed the entire depth

of the brick without the breaking of the latter, as is now the case, when it becomes necessary to remove one or more bricks.

Having thus described my invention, what I claim is—

1. An excavating-chisel consisting of a handle provided with a cutting or chisel edge and rollers on each side thereof adjustable to or from said cutting-edge, for the purposes set forth.

2. An excavating-chisel consisting of a handle provided with a flattened end having a cutting-edge and holes in said end, a pin or axle in one of said holes formed on one end integral with a roller and provided on the other end with a second roller screwed thereon, whereby said rollers are adjustable to or from said cutting-edge, and flexible rings arranged in grooves in said rollers, for the purposes set forth.

In testimony that I claim the invention set forth above I have hereunto set my hand this 21st day of February, 1891.

JULIUS F. KOELLHOFFER.

Witnesses:

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WM. H. CAMFIELD, Jr.