

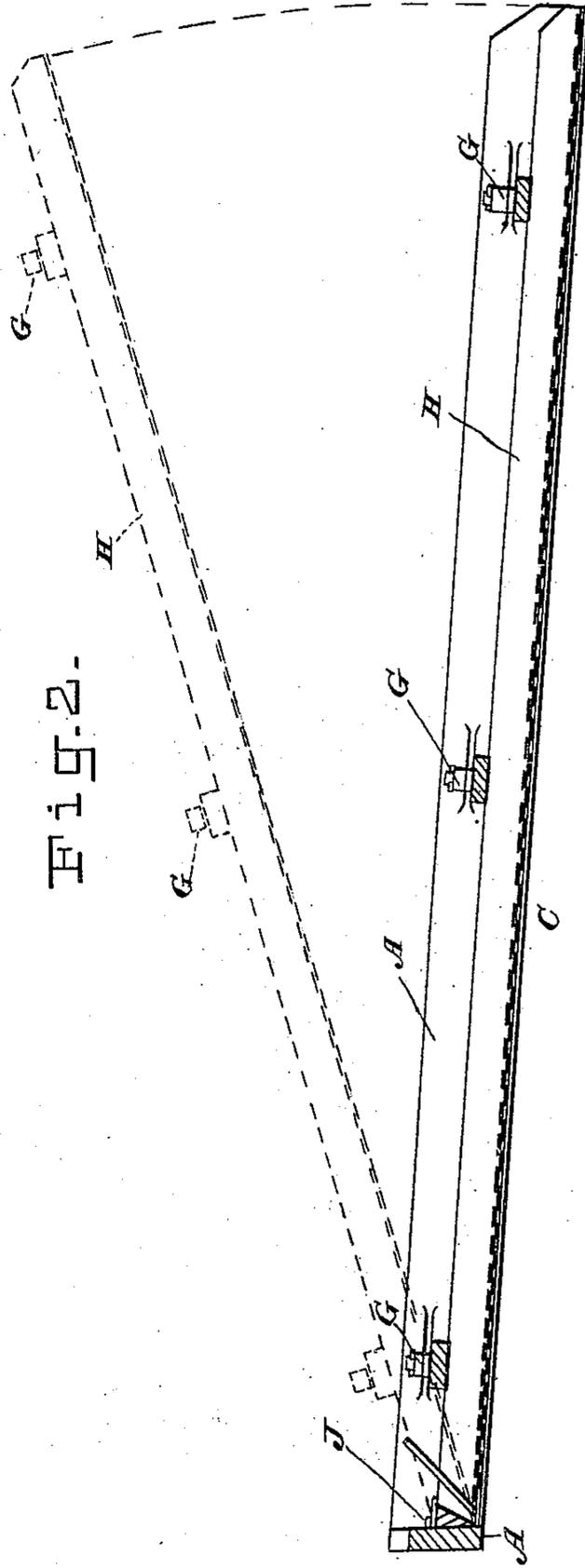
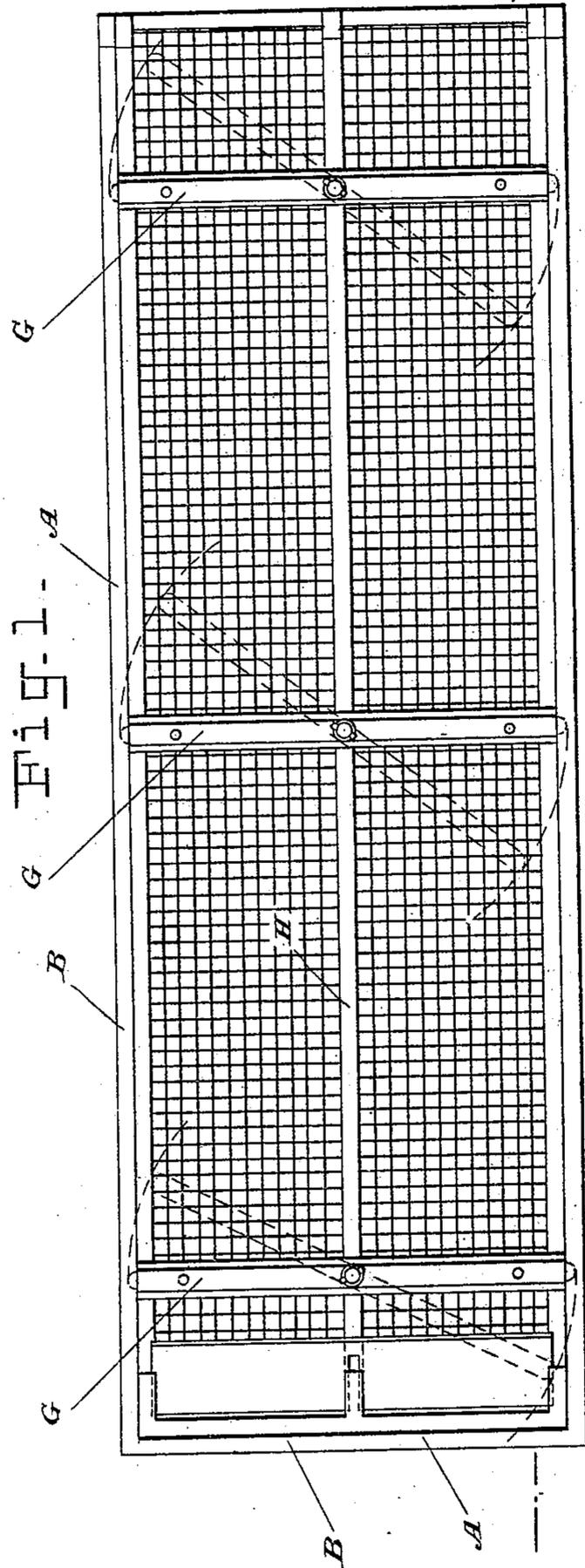
(No Model.)

2 Sheets—Sheet 1.

J. ALVES.
CONCENTRATING TABLE.

No. 471,412.

Patented Mar. 22, 1892.



WITNESSES:

E. R. Bolton
C. L. Richards

INVENTOR.

John Alves
Richards & P.
his Attorneys.

By

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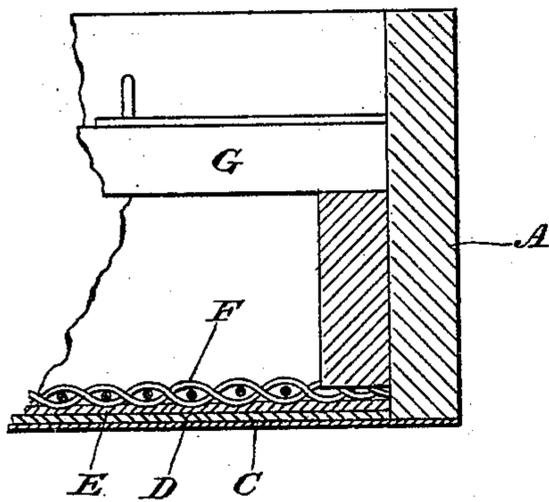
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Fig. 3.



WITNESSES

E. B. Bolton

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UNITED STATES PATENT OFFICE.

JOHN ALVES, OF MELBOURNE, VICTORIA.

CONCENTRATING-TABLE.

SPECIFICATION forming part of Letters Patent No. 471,412, dated March 22, 1892.

Application filed September 30, 1889. Serial No. 325,621. (No model.)

To all whom it may concern:

Be it known that I, JOHN ALVES, engineer, a subject of the Queen of Great Britain, residing at City Bank Chambers, Elizabeth Street, Melbourne, in the British Colony of Victoria, have invented a new and useful Improved Concentrating-Table, of which the following is a specification.

This invention has been designed for concentrating all kinds of metalliferous material, but principally that which contains gold.

It consists of a table made of rigid material—such as wood or metal—and of any suitable size—say, for instance, six feet long and two feet broad, with a rim at each side and at one end six inches deep. The other end (which is the discharge end) is open and has no rim. Upon this table I lay a bed of compressible material, such as baize, blanketing, or india-rubber, although I prefer to lay india-rubber upon blanketing for this purpose, the object in either case being to provide a comparatively soft and yielding bed. I cover the whole of this yielding bed with wire-netting stretched on a frame, and I press the netting slightly into the bed and fasten it in position by clamps or any other contrivance which will hold it firmly. The concentrating-table thus formed is set at an angle, the degree of which is determined by the nature of the material to be treated. This material is fed into its upper end, together with a supply of water, with the result that eddies are formed by the meshes of the wire-netting, which cause the heavier particles to deposit themselves and allow the lighter to be washed away toward and over the end of the table, from whence they may be allowed to run to waste or be subjected to further treatment. When the table is well charged with concentrates, the wire-netting is lifted and a stream or streams of water directed onto the upper end of the table, sufficiently strong to carry the concentrates down the table and cause them to be discharged into any receptacle provided for the purpose. In order to make the removal of the concentrates more convenient, the frame on which the wire-netting is stretched may be hinged to the up-

per end of the table, so as to enable it to be raised at one end instead of lifting it off altogether.

A less effective method of constructing my table would be to substitute wood, metal, or other hard material for the soft and yielding bed which I have described, and, indeed, the wire netting, which is the essential feature of my invention, may be applied to ordinary amalgamating-tables, so as to concentrate the material passing over them, and thus assist the amalgamation, which is in effect a concentrating operation itself. The netting can be made of other material than wire, so long as it is of a rigid nature, but wire is the most suitable; and, furthermore, this netting may be substituted by perforated plates made of some rigid material, such as metal, but I prefer the netting.

The material to be treated by my table may be fed by means of any convenient form of feeding contrivance which will distribute it tolerably even over the whole of its width. The table may be supported on any suitable framing.

Referring to my drawings, Figure 1 shows a plan of one of my tables, and Fig. 2 a longitudinal section thereof. Fig. 3 is a cross-section of a small portion of one side of my table, on a larger scale than the other figures in order to show more clearly the construction of its bed.

A is the outer case or frame of the table; B, its rims; C, its bottom; D, the blanketing; E, the india-rubber, and F the wire-netting.

G are catches or lock-bars, which are centered to the bars H of the frame upon which the wire-netting is stretched, and which enter inclined recesses in the inner side of the rims B.

J is the hinge of the wire-netting frame, by which it is connected to the upper end rim of the table.

Having now particularly described and explained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is—

1. In a concentrating-table, the combination, with the bottom of the table, of a soft

and yielding bed of india-rubber or the like thereon and a wire-netting upon the said yielding bed, substantially as set forth.

5 2. In a concentrating-table, the combination, with the bottom of the table, of a bed laid thereon, wire-netting or the like upon said bed, and bar H and catches G for stretch-

ing and holding the wire-netting, substantially as set forth.

JOHN ALVES.

Witnesses:

WALTER SMYTHE BAYSTON,
WILLIAM GUEST HOLDEN.