(No Model.)

E. D. MORGAN.

VISE.

No. 395,661. Patented Jan. 1, 1889.

Fig. 1.

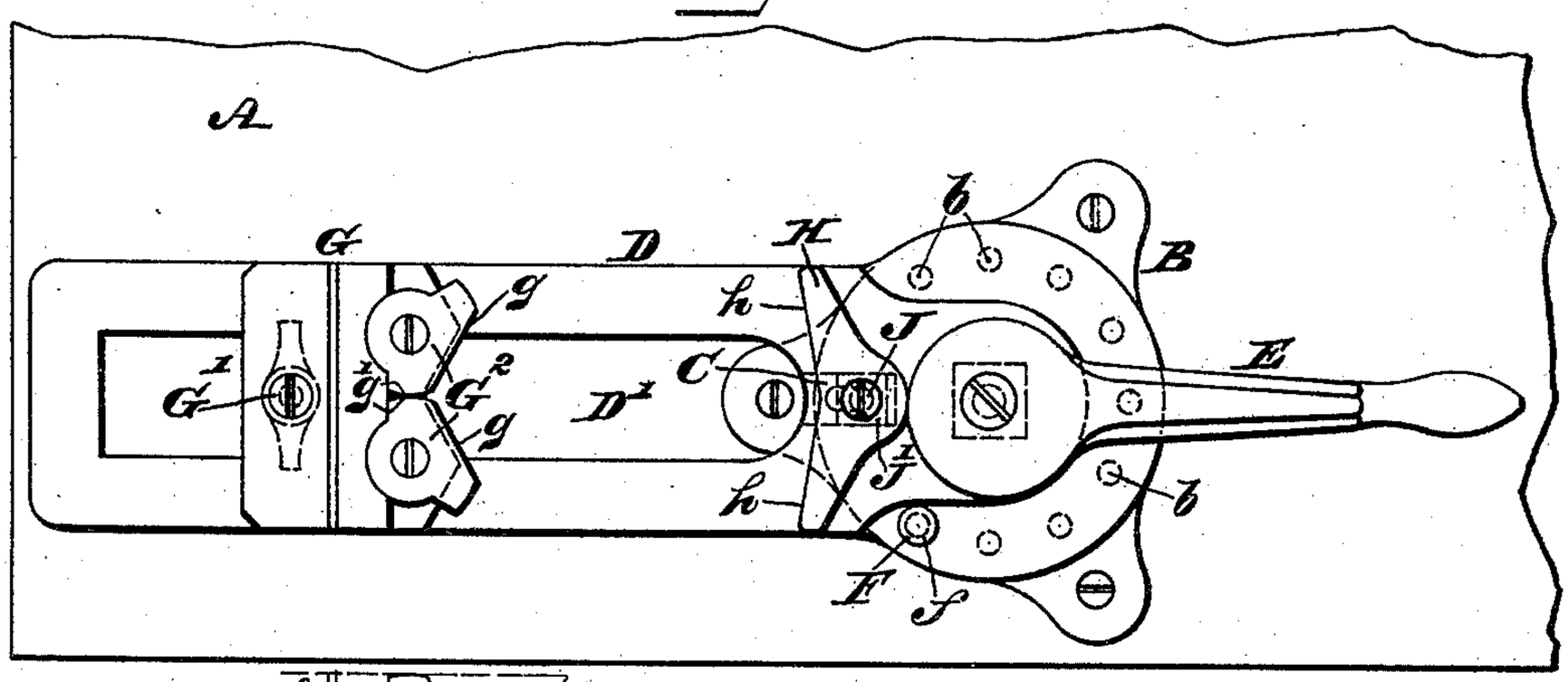


Fig. 4.

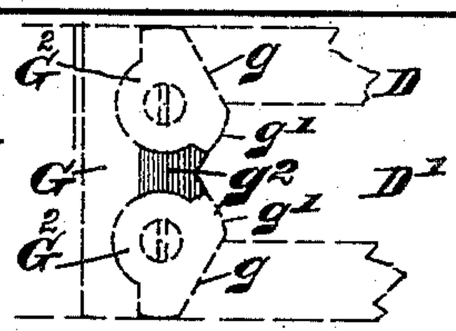


Fig. 2.

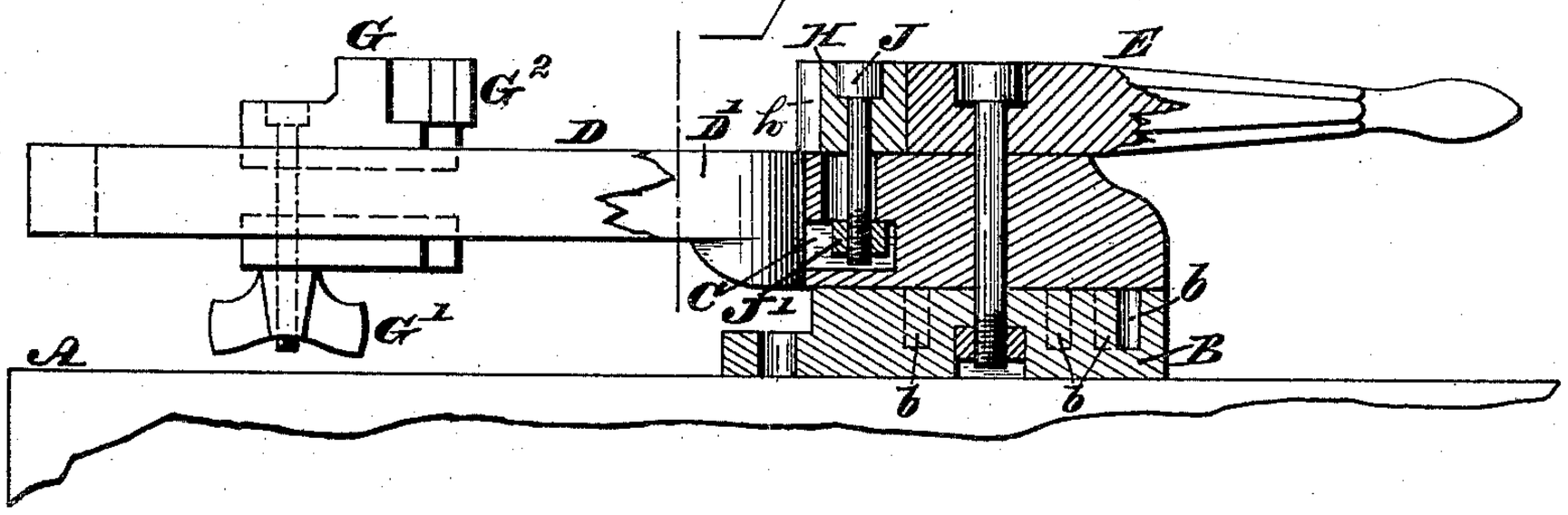
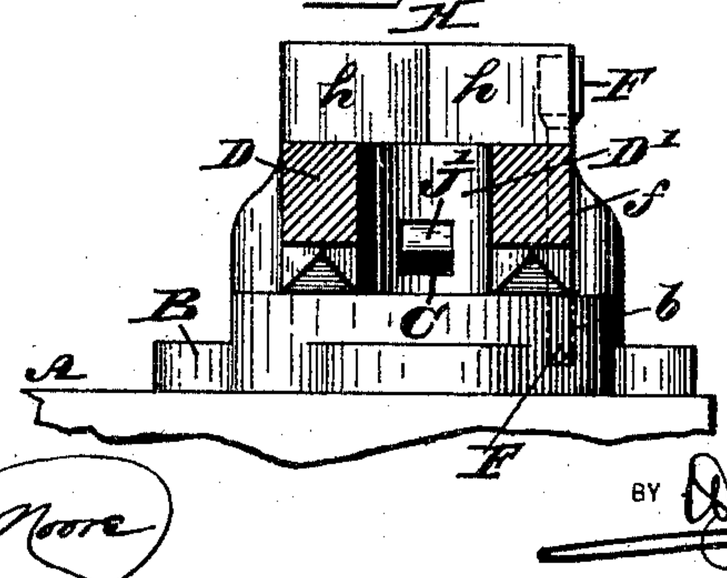


Fig. 3.



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VISE.

SPECIFICATION forming part of Letters Patent No. 395,661, dated January 1, 1889.

Application filed June 11, 1888. Serial No. 276,674. (No model.)

To all whom it may concern:

Be it known that I, EDWARD D. MORGAN, a citizen of the United States, residing at Delair, in the county of Camden and State of New Jersey, have invented a new and useful Improvement in Vises, which improvement is fully set forth in the following specification and accompanying drawings.

My invention relates to improvements in vises, and the design of the invention is to provide a vise by means of which objects of an irregular shape, whether composed of metal or wood, may be firmly held while being operated upon.

A further object is to provide a vise which is capable of a swinging or circular movement to adjust the vise to any desired and convenient position.

A further object is to provide a vise which will be of simple, strong, and durable construction, which will comprise few working parts, and which can be produced at a small cost.

To attain the desired objects, the invention consists of a bed, a slotted arm, and a clamp-operating lever pivoted to said bed, a head adjustable in said slotted arm, jaws connected with said head, and a cam-clamping device operated by said pivoted lever.

It further consists in the combination of parts herein set forth and claimed.

Figure 1 represents a top plan view of a vise constructed in accordance with and embodying my invention. Fig. 2 represents a side elevation thereof, partly broken away to disclose interior details of construction. Fig. 3 represents a detail sectional view of a portion of the vise. Fig. 4 represents a top view of a portion of the device, showing a block inserted between the jaws of the sliding head.

Similar letters of reference indicate corresponding parts in the several figures.

Referring to the drawings, A designates a portion of a table or bench to which the bed B of the vise is secured. To the bed B is pivoted the stock or arm D and the eccentric or cam lever E. From this construction it is evident that the stock or arm can be turned to any desired angle, and in order to retain the same in the proper position I provide a pin, F, which passes through an opening, *f*, in the stock and engages one of a series of openings, *b*, in the bed B.

The stock or arm D is provided with a slot or passage, D′, and in said slot is received the head G, provided with the clamping or retaining screw G′. This construction permits of the head being adjusted in the stock or arm.

G^2 designates jaws pivoted to the sliding head, and these jaws are similarly shaped, each having the contact-faces *g* and *g′*.

H designates the clamping or biting jaw, adapted to be operated upon by the eccentric or cam lever E, and said jaw is provided with a double inclined contact-face, *h*, as shown in Fig. 1.

The jaw H is capable of a circular movement by means of the rock-pivot J, and said pivot is connected at its lower end to a block, J′; or the pivot may have an enlarged head, adapted to slide or move in the groove or passage C in the stock or arm D, said block J′ being in the form of a nut. From this construction it is evident that the jaw H can be turned to present its contact-faces as desired, and is adjustable.

The operation is as follows: The sliding head is adjusted to the proper position to fit the object to be clamped, and the jaws thereof are turned to present the desired contact-faces to the object. The clamping-jaw is adjusted to the proper position and the cam-lever is then operated, causing the clamping-jaw to bite or clamp the object and hold the same firmly in the vise. In most cases, if the object to be clamped is of an angular shape, the contact-faces *g′* of the jaws G^2 will be presented, and if the object be round the contact-face *g* thereof will be presented, although it will be understood that by reason of the jaws being adjustable they will accommodate themselves to any-shaped object which it is desired to clamp in the vise. When it is desired to clamp a round surface of small dimensions, a block, g^2, is inserted between the jaws G^2, as shown in Fig. 1.

From this construction it will be seen that I provide a vise by means of which objects of irregular shape can be firmly held, which is adjustable to objects of different sizes, and

which is capable of a circular adjustment to place the vise in the most convenient position for operating upon the object.

It will be observed that by reason of the jaws being arranged and constructed as described there are always four points of contact presented to the object, and it is evident that the said object is thereby held firmly and securely.

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

1. A vise consisting of a bed, a slotted stock or arm adjustably connected with said bed, a head having jaws and arranged in the slot of the stock, a clamping-jaw pivoted to the stock, and an eccentric or cam lever for operating upon the said clamping-jaw, all arranged and operating in the manner described.

2. A vise consisting of a bed, a slotted arm or stock pivoted thereto, an adjustable head carried by the slotted stock, jaws having variable contact-faces pivoted to the head, a clamping-jaw carried by the stock and having a sliding and circular adjustment, and an eccentric or cam lever for operating upon said clamping-jaw, said parts being combined and operating in the manner and for the purpose described.

3. A vise consisting of a bed, a slotted stock adjustable thereon, an adjustable head in said stock-carrying jaws, a clamping-jaw pivoted in the stock, a nut carried by the pivot of said jaw and in a channel or groove in the stock, and an eccentric or cam lever for operating upon the clamping-jaw, said parts being combined and operating in the manner described.

4. A vise consisting of a bed, a slotted arm and a cam-lever, both pivotally connected to said bed, a head adjustable in said slotted arm and carrying two pivoted jaws, and a jaw pivotally connected with said slotted arm and in contact with and operated by said cam-lever, said parts being combined substantially as described.

5. In a vise, a slotted arm having a head secured in said slot and provided with two pivotal jaws, and a block adapted to be placed between said jaws, whereby the same are secured in position, substantially as described.

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