(No Model.) 2 Sheets—Sheet 1.

J. E. COLEMAN.

HACK SAW FRAME.

No. 453,994. Patented June 9, 1891.

Fig. I.

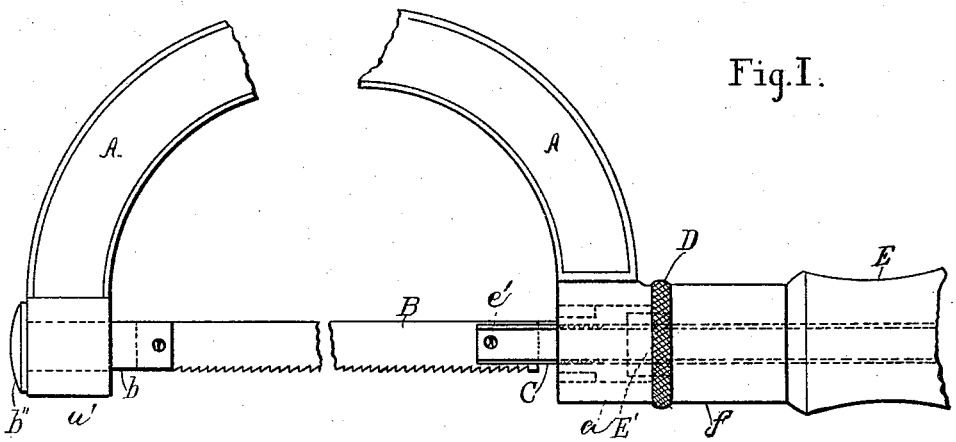


Fig. 2.

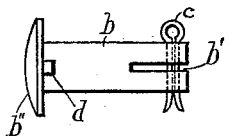


Fig. 3.

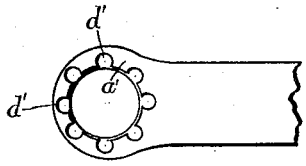


Fig. 4.

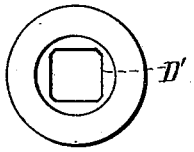


Fig. 5.

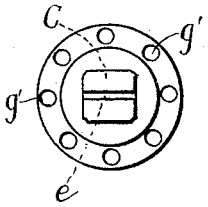


Fig. 6.

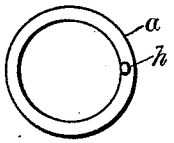
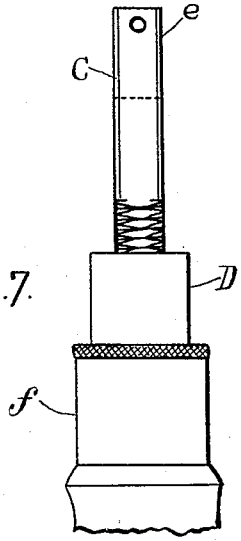


Fig. 7.



Witnesses
J. W. Anderson.
Phil. E. Masi.

Inventor
Joseph E. Coleman
by E. W. Anderson
his Attorney

(No Model.) 2 Sheets—Sheet 2.

J. E. COLEMAN.

HACK SAW FRAME.

No. 453,994. Patented June 9, 1891.

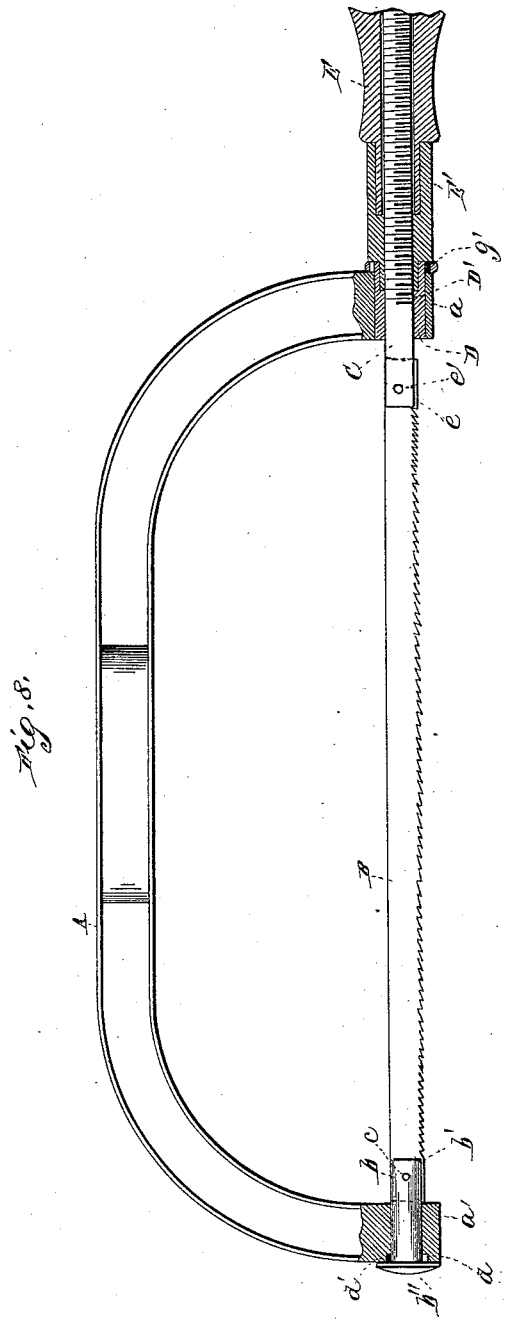


Fig. 8.

WITNESSES:

INVENTOR

Joseph E. Coleman

BY

his ATTORNEY.

UNITED STATES PATENT OFFICE.

JOSEPH E. COLEMAN, OF ELMIRA, NEW YORK, ASSIGNOR OF ONE-HALF TO BARNEY HARRIS, OF SAME PLACE.

HACK-SAW FRAME.

SPECIFICATION forming part of Letters Patent No. 453,994, dated June 9, 1891.

Application filed September 16, 1890. Serial No. 365,150. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH E. COLEMAN, a citizen of the United States, and a resident of Elmira, in the county of Chemung and State of New York, have invented certain new and useful Improvements in Hack-Saw Frames; and I do 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.

Figure 1 of the drawings is a side view, and Figs. 2, 3, 4, 5, 6, and 7 are detail views showing the clamping, locking, and adjusting devices for the respective ends of the saw-blade. Fig. 8 is a longitudinal section showing said devices in position.

This invention relates to certain improvements in saw-frames, and more particularly to that class of such devices known as "hack-saw frames," such as are used for scroll and other fine work; and it consists in the novel construction and combination of parts as hereinafter described.

A represents the back or bow, having at each end a cylindrical eye *a a'*.

B represents the saw-blade, one end of which is let into and keyed or pinned in a slot *b'* in a cylindrical stud *b*, loosely fitting and held in the eye *a'*, its endwise movement therein being limited by its flanged head *b''* and the pin or key *c*, said pin also securing the saw-blade in the slot *b'* of the stud *b*. The flanged head of the cylindric stud *b* is provided with a downwardly-projecting pin or catch *d*, adapted to engage one of several recesses *d'*, formed in the outer end of the inner circumference of the eye *a'*, and, when so engaged, preventing the turning of the stud in said eye. The other end of the saw-blade is let into a slot *e* in a squared stud or shank C and secured by a pin or key *e'*. This stud C carries a collar or sleeve D, loosely fitted in the eye *a*, and this sleeve is provided with a longitudinal central aperture or slot D', squared and contracted at its inner end to fit the stud or shank C and allow its movement thereon. The opposite or outer portion of the aperture or slot D' is of larger size and cylindric in form and is adapted to form a seat for the ferrule or guide E' of the handle E. After passing through the squared portion of the aperture D' the stud or shank C is formed with a screw-thread adapted to engage a corresponding thread in the guide or ferrule E' of the hollow handle E, into which said shank or stud extends.

The outer end of the sleeve D is formed with an annular flanged head of a diameter slightly in excess of that of the cylindric eye *a* and the collar or ferrule *f* of the handle, between which two parts it rests when the parts are in working position. The outer edge of this flange is milled in order that it may be more readily operated by the fingers.

When it is desired to adjust the blade so as to present its cutting-edge at any desired angle, the handle E is unscrewed a sufficient distance to allow the shank or stud C a slight endwise movement, thereby giving the stud *b* in the eye *a'* a similar movement sufficient to disengage the pin or catch of the said stud from the recess in the eye. The flanged head of the sleeve D may then be operated to turn the saw-blade so as to present its teeth either to the right or left or in a vertical or horizontal plane, as may be desired.

The sleeve D is prevented normally from turning in the cylindric eye *a* by means of a small pin or stud *h*, formed on the outer rim of the eye which engages one of a series of recesses *g'*, formed on the under side of the flanged head of the sleeve, when the parts are in locked position.

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

1. The saw-frame having its back or bow formed at each end with a cylindric eye, the slotted cylindric stud fitting in one of said eyes, and a pin on said stud adapted to engage a recess in said eye and normally prevent its turning therein, the slotted squared stud carrying the sleeve engaging the other eye, said stud having a screw-threaded extension engaging a ferrule or guide of the handle, said sleeve having a series of recesses adapted to

engage a projection on said eye and prevent its turning therein when the parts are in locked position, substantially as described.

2. In a saw-frame, the sleeve fitting in an eye formed at one end of the bow or back, said sleeve having a central longitudinal aperture or slot squared at one end to receive the squared stud and of enlarged and cylindric form at its opposite end to form a seat for the threaded guide or ferrule of the handle engaged by the said stud, substantially as set forth.

3. The saw-frame, comprising the back or bow having at each end a cylindric eye, the stud slotted to receive the saw-blade fitting in the said eyes, one of said studs having a catch or pin normally engaging a recess in the corresponding eye, the other stud having a screw-threaded extension engaging a ferrule or guide of the handle, and a sleeve on said stud fitting in the corresponding eye and forming a seat for said ferrule or guide, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

JOSEPH E. COLEMAN.

Witnesses:
GEORGE K. LEACH,
CHAUNCEY H. MOORE.