(No Model.)

2 Sheets—Sheet 1.

S. J. WISDOM.

JACK.

No. 292,725. Patented Jan. 29, 1884.

Fig. 1.

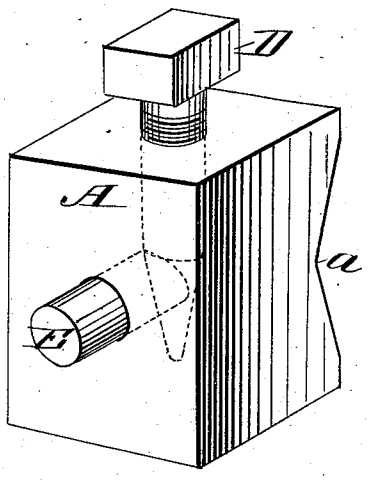
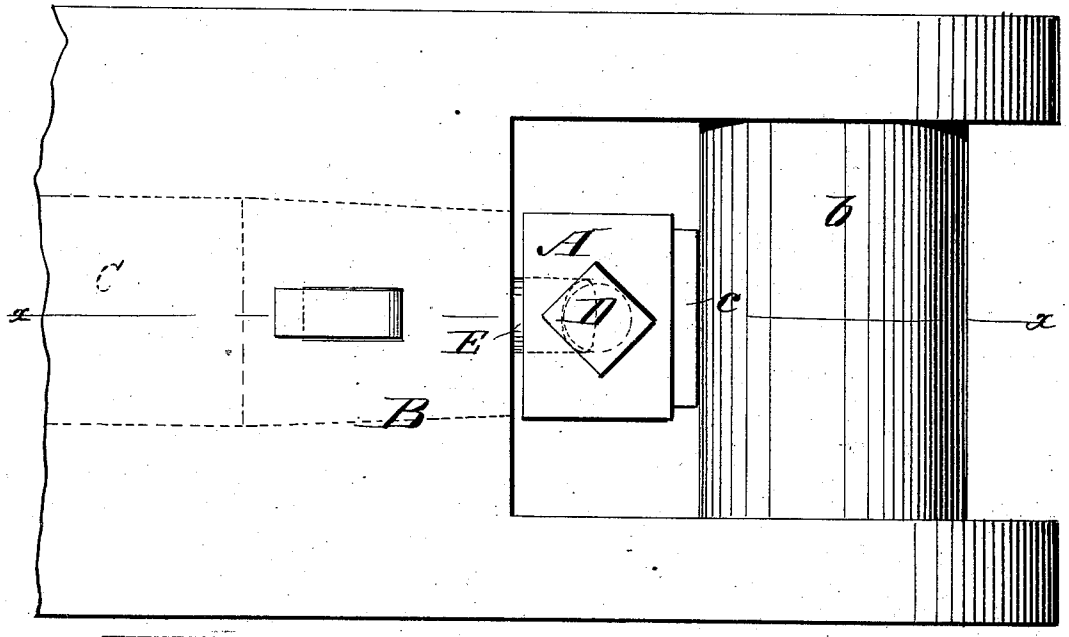


Fig. 2.



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(No Model.) 2 Sheets—Sheet 2.

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Fig. 3.

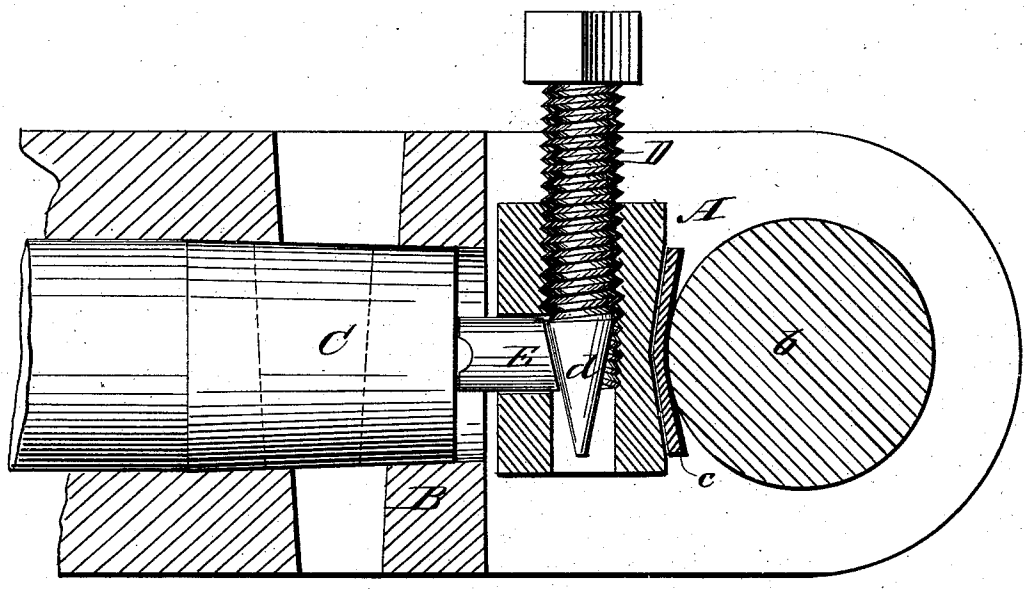
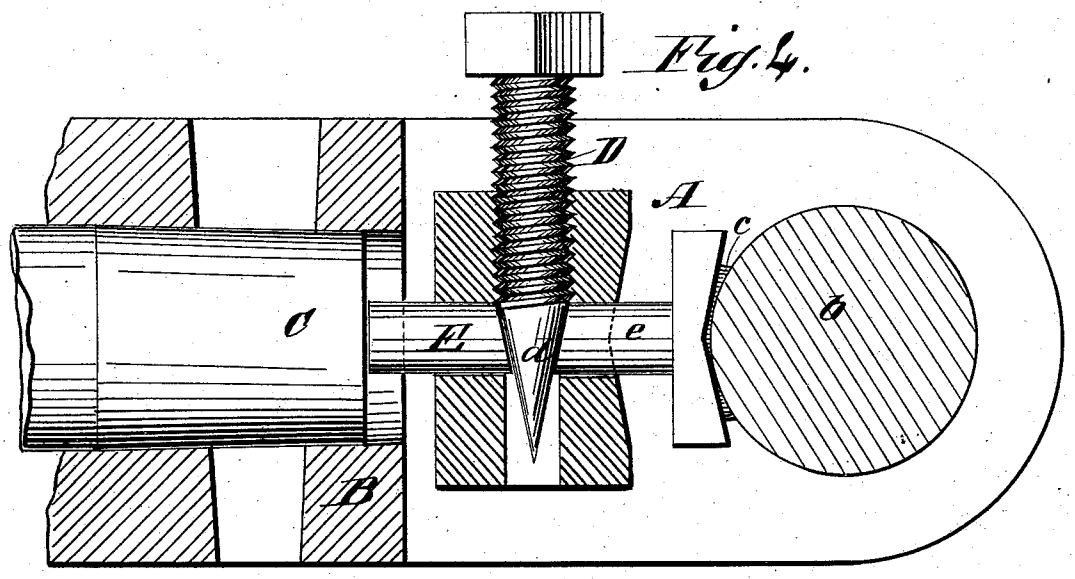


Fig. 4.



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UNITED STATES PATENT OFFICE.

SAMUEL J. WISDOM, OF MONTGOMERY, ALABAMA.

JACK.

SPECIFICATION forming part of Letters Patent No. 292,725, dated January 29, 1884.

Application filed October 3, 1883. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL J. WISDOM, of Montgomery, in the county of Montgomery and State of Alabama, have invented a new and Improved Jack, of which the following is a full, clear, and exact description.

The object of my invention is to obtain a compact and powerful jack or purchase for removing piston-rods from the cross-heads of steam-engines and for other purposes.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a perspective view of my jack. Fig. 2 is a view of part of a cross-head with the jack in position as in operation. Fig. 3 is a sectional view taken on line *x x* of Fig. 2, and showing part of a cross-head with the jack in position as in operation. Fig. 4 is another sectional view similar to Fig. 3, but showing another form of jack adapted to longer distances.

My invention consists of a convenient mechanism for applying great power in contracted spaces without danger of damage from hammering or bruising the finished parts of the machinery. I use a block of steel or iron, A, in which is fitted a screw-bolt, D, having a head by which it can be turned, and a pointed, inclined, or rounded end, *d*. At right angles to this bolt is fitted a movable pin or plug, E, which is inclined or rounded upon its inner end, where it comes in contact with the end of the bolt D, so that when the bolt D is screwed down the plug E is forced out. The side of the block A opposite to the plug is hollowed or forked, so that it may rest firmly against the cross-head pin *b*, while the plug E bears against the end of the piston-rod C, as shown in Fig. 3. Several plugs may be used in one block, all operated by one screw in the same manner as the plug E. In some cases—as, for example, where the distance between the end of the piston-rod and the cross-head pin will permit—I use also another plug, *e*, similar to E, the plug *e* having a forked head to bear against the cross-head pin, and the inner end inclined or rounded, so as to be acted upon by the bolt D in the same manner as the plug E, as shown in Fig. 4.

The operation of my jack is as follows: The bolt D is screwed back, so that the plug E can be pushed in. The block A is placed, as shown in Figs. 2 and 3, between the ends of the piston-rod C and the cross-head pin *b*. A piece of copper or other soft metal, *c*, is inserted between the fork of the block and the finished surface of the pin *b*, to protect the latter from being bruised. The bolt D is then screwed in and the plug E forced out against the end of the piston-rod C, and the latter forced out of its socket, as shown in Fig. 3. If the plug E proves too short for its purpose, or the space will permit, the arrangement shown in Fig. 4 can be used. The bolt D is screwed back, and the two plugs E and *e* pushed in, and the whole adjusted so as to bring the fork of the plug *e* against the copper *c* and cross-head pin *b*, and the plug E against the piston-rod C, when, upon screwing in the bolt D, both plugs E and *e* are simultaneously driven out, forcing the piston-rod twice as far out as can be done with the single plug E, as described.

This jack can also be applied to a lathe for straightening rods or shafting, and will be found very useful for many other purposes.

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

1. The combination, with a cone-pointed screw, a nut in which it works, and means to take the wedge-strain, substantially as described.

2. The combination of the screw D, having the conical point *d*, the internally-threaded metallic block A, having a hole in one side, and the movable plug E, fitting in said hole, whereby the whole device may be arranged between the cross-head pin and piston-rod of a steam-engine, to operate as described.

SAMUEL J. WISDOM.

Witnesses:
K. J. DUGGAN,
H. E. STRINGFELLOW.