

(No Model.)

2 Sheets—Sheet 1.

G. W. COONSE.

ADJUSTABLE BORING MACHINE.

No. 372,120.

Patented Oct. 25, 1887.

Fig. 1.

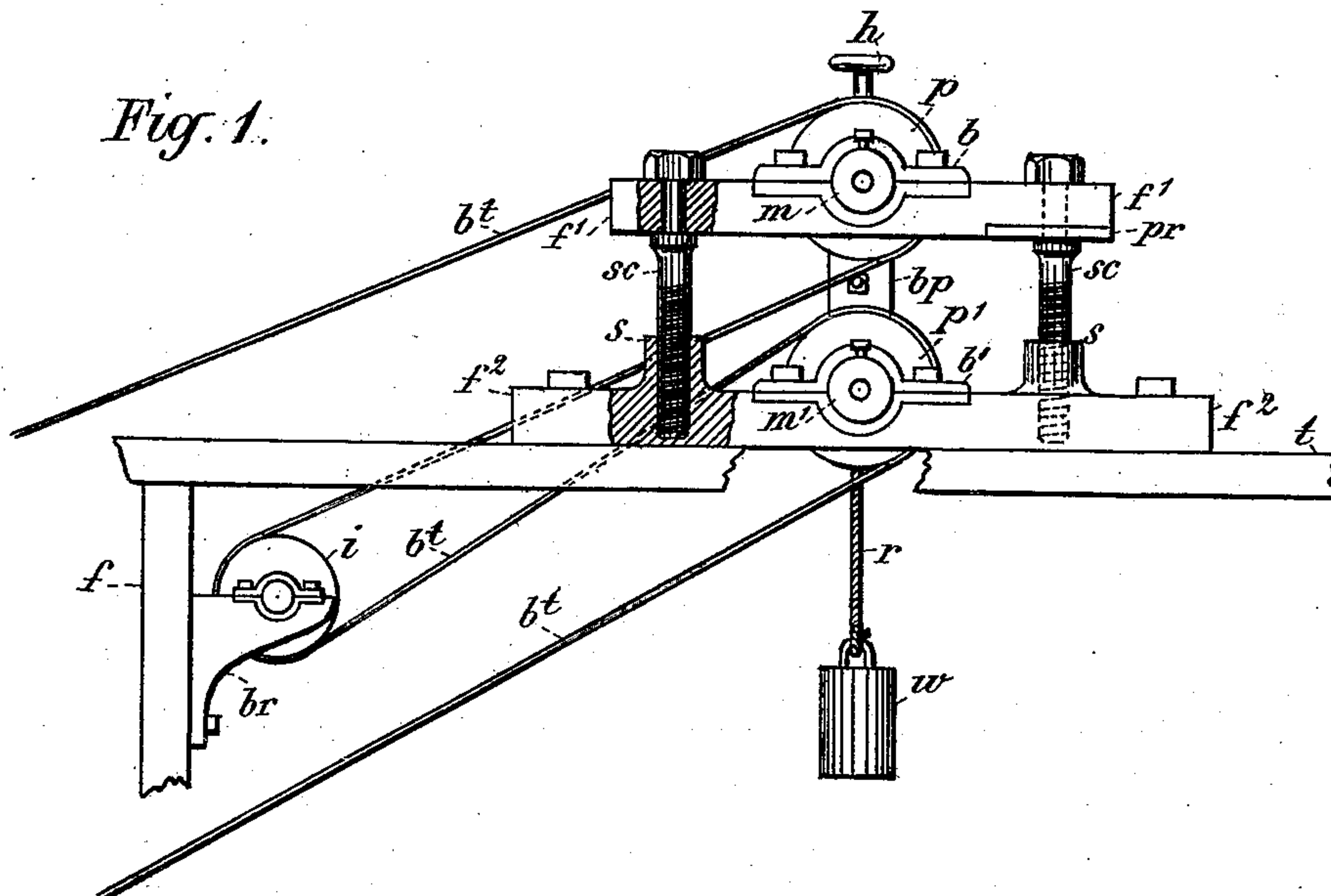
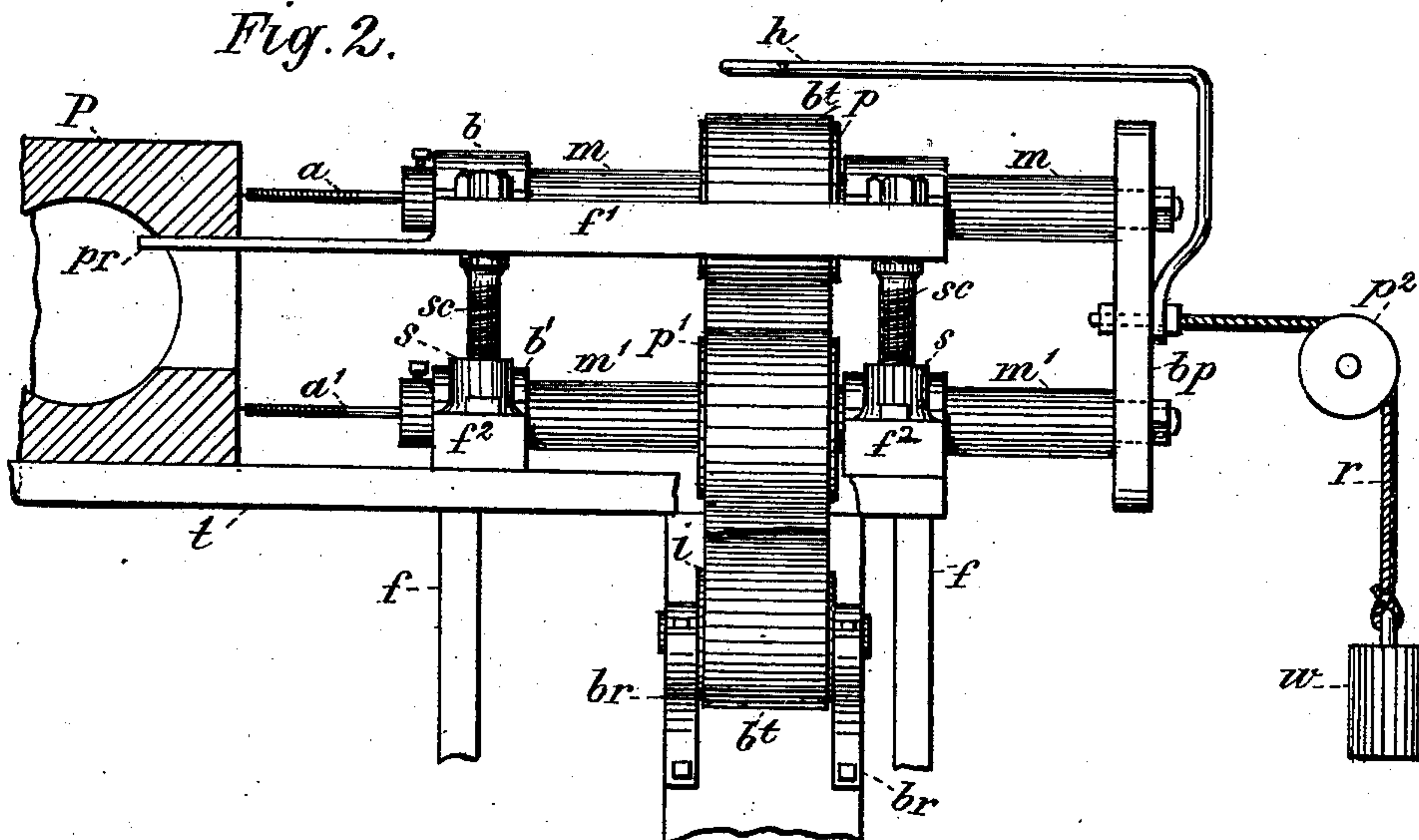


Fig. 2.



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Fig. 3.

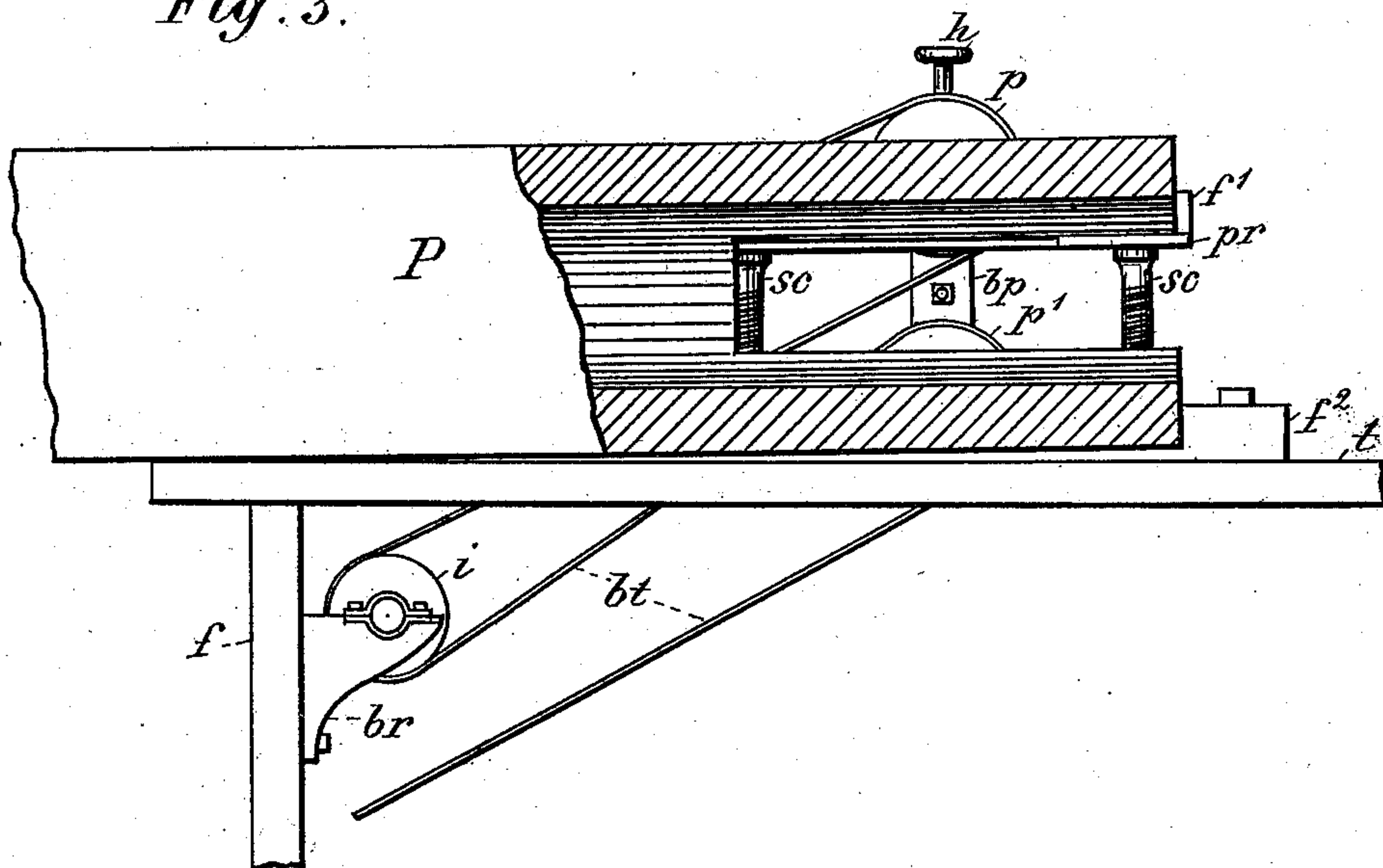
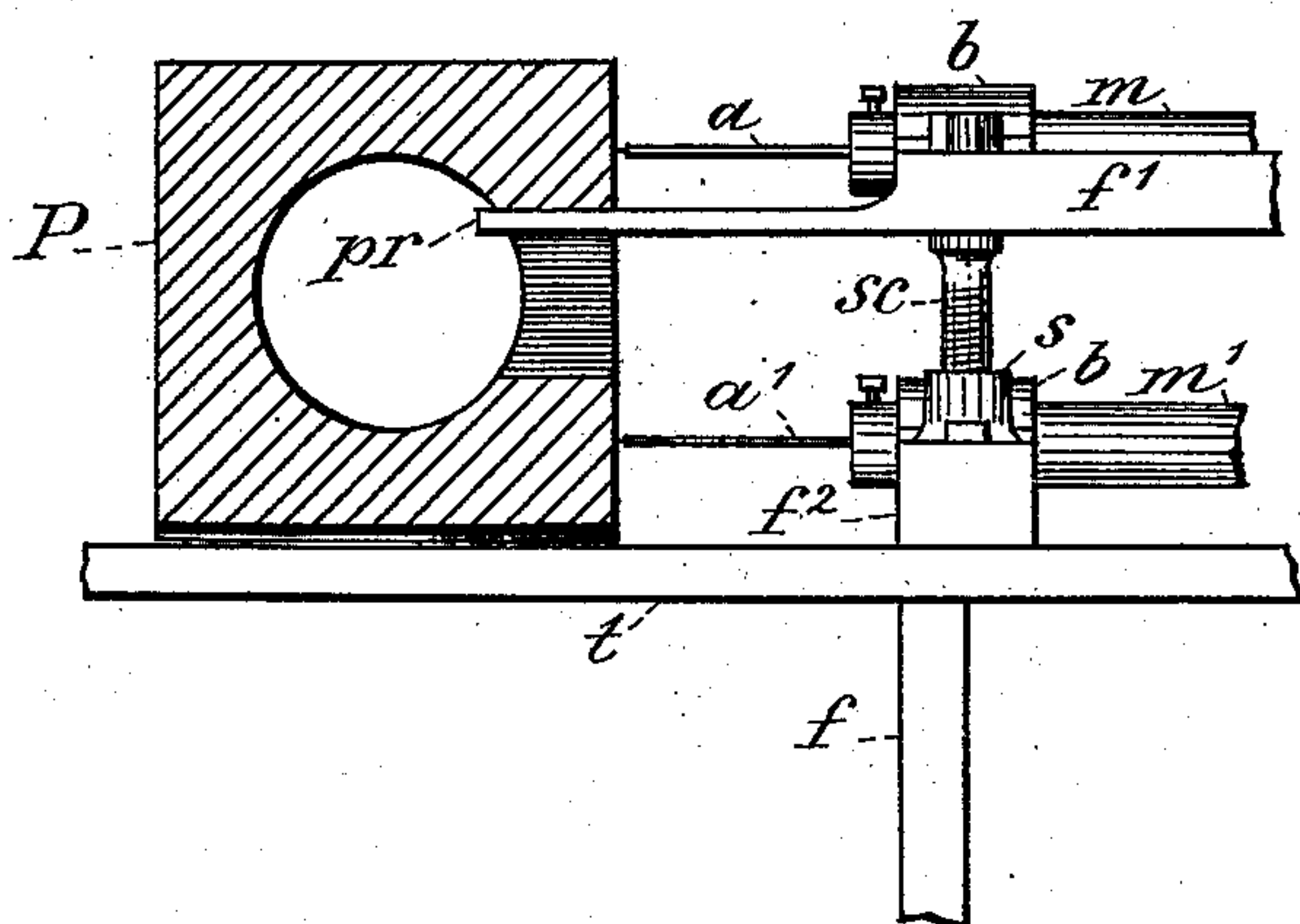


Fig. 4.



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# UNITED STATES PATENT OFFICE.

GEORGE W. COONSE, OF INDIANAPOLIS, INDIANA.

## ADJUSTABLE BORING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 372,120, dated October 25, 1887.

Application filed March 23, 1887. Serial No. 232,760. (No. model.)

*To all whom it may concern:*

Be it known that I, GEORGE W. COONSE, of Indianapolis, county of Marion, and State of Indiana, have invented certain new and useful Improvements in Adjustable Boring-Machines; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, in which like letters refer to like parts.

My invention relates to the construction of adjustable boring-machines, and is intended to bore two holes at once, on the opposite sides of the throat, in a pump-stock, and is provided with a centering device and an adjusting mechanism, by means of which different sizes of pump-stocks may be bored with the same machine, and will be understood from the following description.

In the drawings, Figure 1 represents an end view, partly in section, of my device. Fig. 2 is a side view of the same. Fig. 3 is an end view showing the pump-stock resting upon the frame and supported at its upper end by the projection *pr*, a part of the pump-stock being in section. Fig. 4 is a side view of the same.

The machine rests upon the frame-work *f*, to which are bolted brackets *br*, providing bearings for an idler, *i*, over which the belt *bt* is passed between the driving-pulleys *p p'*, so as to cause them and the mandrels *m m'*, carrying the augers *a a'*, to revolve in the same direction at the same time. The driving-pulleys *p p'* are mounted upon the ends of the mandrels *m m'*, which are journaled in upper and lower boxings, *b b'*, upon an auxiliary frame-work composed of upper and lower sills, *f' f''*, which are connected together by means of screws *sc*, passing through the upper sills and entering the threaded sockets *s*, bolted on the lower sills, *f''*, and by means of these screws the sills of this auxiliary frame-work may be brought nearer together or forced farther apart, and this movement determines the distance of the augers *a a'* from each other, which are set into the ends of the mandrels *m m'* and secured by a set-screw, as shown in Fig. 2. The outer ends of the mandrels are shouldered and pass through a back piece, *bp*, being secured by nuts, as shown in Fig. 2. To this back piece is connected the handle *h*, by means of which the mandrels and their

augers may be drawn to the pump-stock *P*, to be bored, so as to keep up the desired pressure and enable the cutting part of the auger to enter the wood, and the same handle, of course, is available for withdrawing the augers from the pump-stock when the holes are bored. The rope *r*, passing over the sheave-pulley *p''*, is also connected to this back piece at one end, and to the other end of this rope is fastened a weight, *w*, which operates to withdraw the augers when the operator loosens his pull on the handle *h*.

As heretofore mentioned, the belt from the driving-pulley of the engine passes over the upper pulley, *p*, then back over the idler *i*, and then forward again over the lower pulley, *p'*, in order that the two pulleys carrying the mandrels may be made to revolve in the same direction and at the same time. The upper sill, *f'*, has an extension, *pr*, which enters the throat of the pump-stock, the latter resting thereon as a support, and, this projection being secured to the upper sill, the distance between it and the upper auger remains the same while the machine is in operation, and the increasing and decreasing of the distance between the augers by means of the screws *sc* does not affect the distance between this projection and the upper auger at all. The pump-stock *P* while being operated upon by my machine rests midway or near its farther end upon a table, *t*, while the throat end of the pump-stock is supported only by the projection *pr* entering the throat. It therefore makes no difference whether the walls of the pump-stock on either side of the throat are of the same thickness or not, or whether one side is uneven or not, for, as the centering is accomplished by the projection *pr* entering the throat and supporting that end of the pump-stock, the holes bored by the augers *a a'* will therefore be equidistant on each side of the throat-opening. The object of this mechanism is to make the distance between either side of the throat of the pump-stock and the holes to be bored by the auger, above or below, the same, whatever the distance between the augers may be.

If desired, the projection *pr* may be made in a separate piece and adjustably connected to the sill *f''* by a set-screw. The object of this device is to bore holes by means of the augers



5 *a a'* through the head of the pump-stock on each side of the throat or opening in which the handle is placed, and these holes thus bored are intended to receive bolts, by means of which iron brackets are secured upon either side of the throat of the pump-stock to provide bearings for a pin, upon which the handle is mounted, these bolts being secured by nuts on the opposite side of the pump-stock.

10 It has been found by experience that when the brackets are attached to the pump-stock by screws or nails they are liable to work loose and the operation of the pump is seriously interfered with, while by securing the brackets to the pump by bolts that pass clear through the stock on each side of the throat, if the brackets become loose they may be tightened up by means of the nuts on the opposite ends of these bolts. Heretofore these holes have been bored by hand or by single boring-machines; but the difficulty has been to get the holes centered on either side of the stock when different sizes of material are used. For this purpose I employ the auxiliary frame and an adjusting mechanism connected therewith for regulating the distances between the augers at will, and the projection *pr* for entering the throat of the pump-stock, in order to assist in centering the bits, and it will require but little time for a careful operator, after boring with one size of pump-stock, to adjust the machine so that it will accurately center and readily bore holes for brackets on either side of the throat of a pump-stock of a different size, and by means of the handle *h*, or its equivalent—such as a weight or other device—the mandrels may be drawn either way in a horizontal plane in their boxings, so as to carry the augers into the stock when boring or withdraw them whenever it is necessary, and the result is that the bolt-holes bored by this machine will be at uniform distances from each other at all times, whatever the size of the pump-stock may be.

45 Of course this device may be used to center bolt-holes on either side the spout, the same as it does on either side the throat.

What I claim as my invention, and desire to secure by Letters Patent, is the following:

1. A boring-machine comprising, in combination, a supporting frame-work, an auxiliary frame-work with bearings for a pair of upper and lower mandrels carrying the bits for boring, the upper and lower sills of the frame adjustably connected by screws, whereby they may be drawn together or apart and thus regulate the distance between the boring-bits, an extension connected with the upper sill for entering an opening in the material to be bored, to support the same while being operated upon, and driving-pulleys mounted on such mandrels, with means for operating the same, substantially as described. 50 55 60

2. A boring-machine comprising, in combination, a pair of mandrels carrying pulleys mounted in a frame one above another, the parts of the frame connected by screws which allow an adjustment of the distance between the mandrels, and an extension connected to an adjustable part of the frame for entering and supporting the material to be bored, whereby the boring-bits connected to the mandrels are centered for boring on either side of the opening, with means for operating the same, substantially as shown and described. 65 70

3. In a boring-machine, a supporting frame-work whose upper and lower parts are connected by screws, allowing an adjustment of their distance from one another, a pair of mandrels mounted one above another in the parts of such frame and carrying belt-pulleys near their centers and boring-bits in one end, an extension attached to an adjustable part of such frame for entering an opening in the stock to be bored, whereby the boring-bits are centered uniformly on either side of such opening, with means, such as a handle, for forcing the bits into the wood, and a weight-and-pulley mechanism for withdrawing the bits when pressure thereon is released, all combined substantially as described. 75 80 85 90

In witness whereof I have hereunto set my hand this 24th day of March, 1887.

GEORGE W. COONSE.

Witnesses:

C. P. JACOBS,

E. B. GRIFFITH.