

(Model.)

W. E. JONES.  
SHEET METAL MACHINE.

No. 288,575.

Patented Nov. 13, 1883.

Fig. 1.

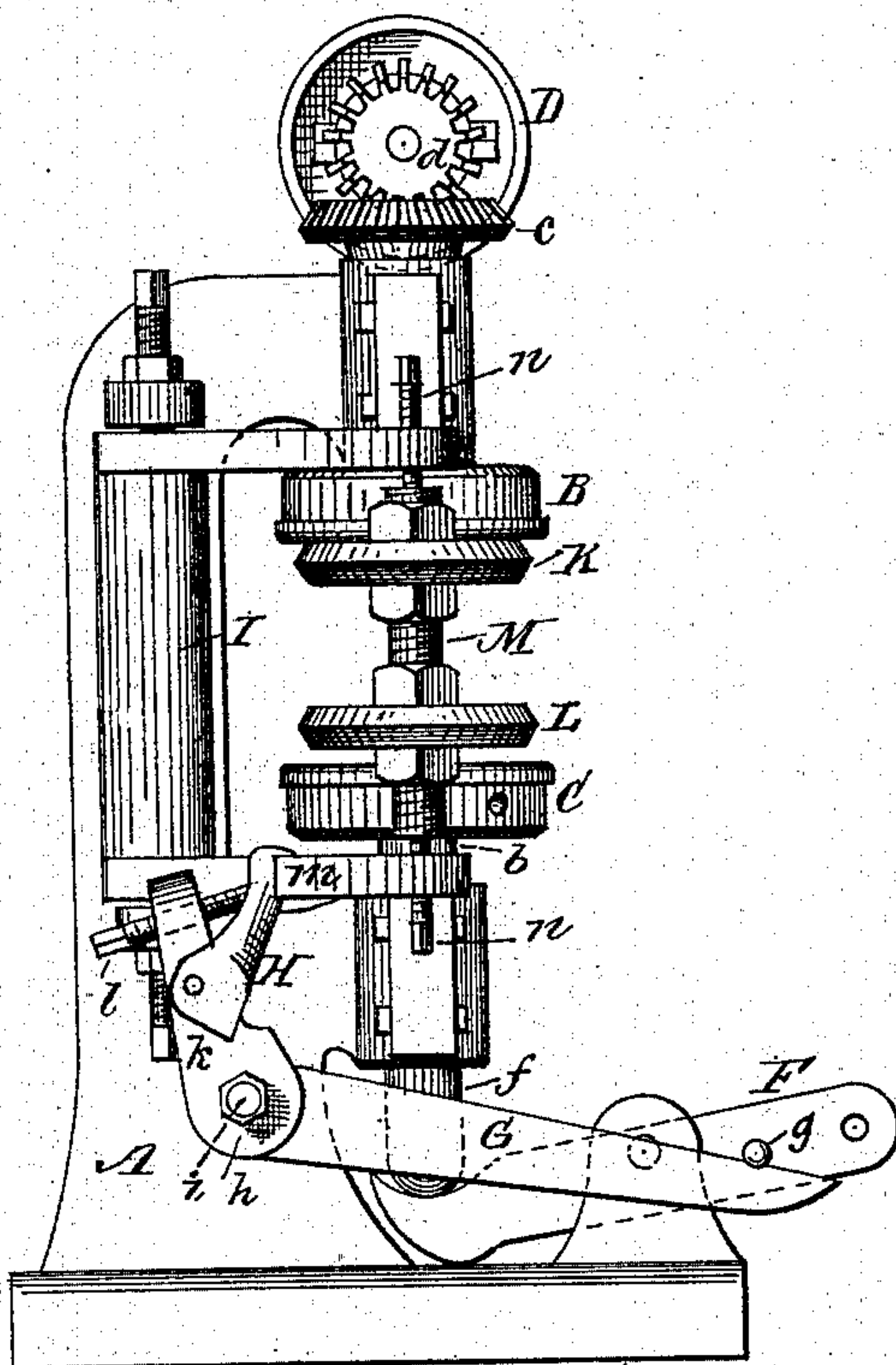


Fig. 2.

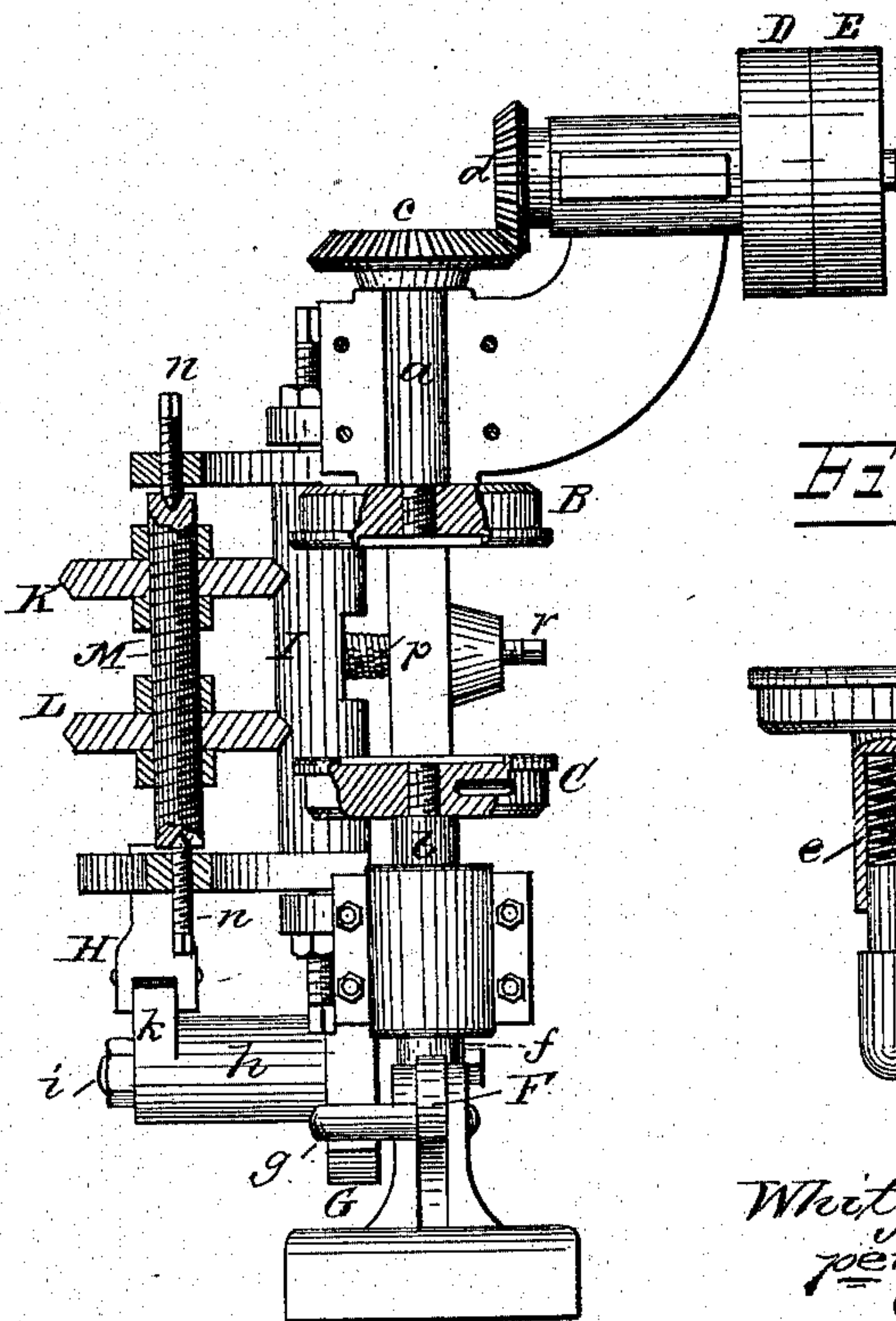
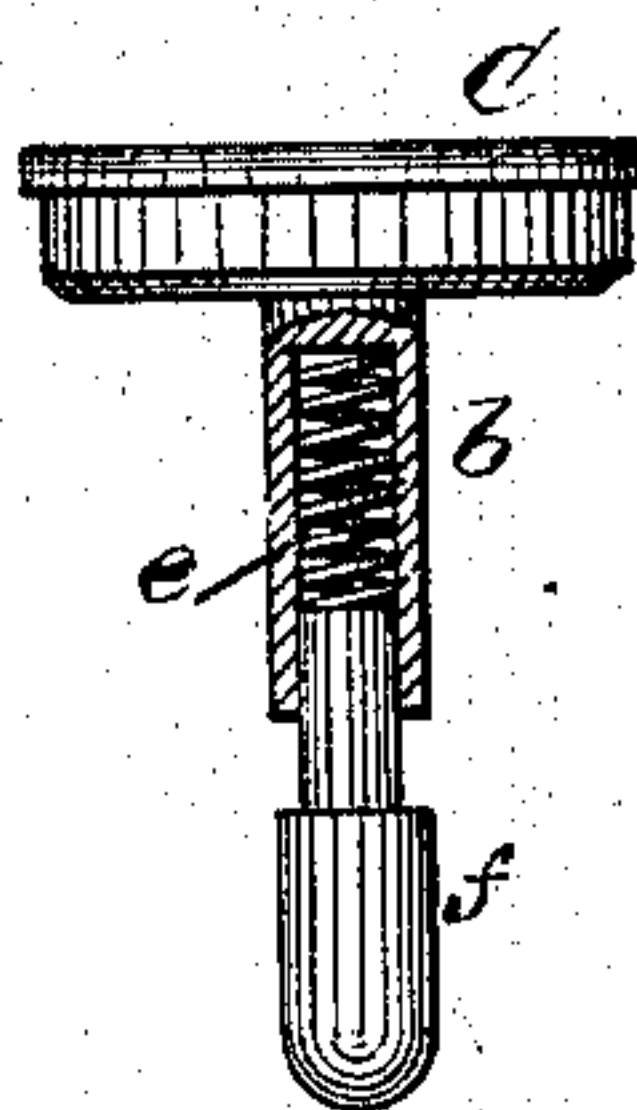


Fig. 3.



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## SHEET-METAL MACHINE.

SPECIFICATION forming part of Letters Patent No. 288,575, dated November 13, 1883.

Application filed September 21, 1883. (Model.)

*To all whom it may concern:*

Be it known that I, WHITFIELD E. JONES, a citizen of the United States, residing at Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Sheet-Metal Machines; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a side elevation of my improved machine; Fig. 2, a front elevation, partly in section; and Fig. 3, a detail view, partly in section, showing the manner of supporting the lower clamping-disk.

The present invention has relation to new and useful machines for seaming the top and bottom of sheet-metal cans to the body thereof, and refers more particularly to that class in which are employed two revolving disks for supporting and holding the can and rollers for pressing down the seams.

The object of the invention is to improve the construction of the above class of machines, whereby its effectiveness will be increased, the operation of seaming both the top and bottom of the cans or connecting them to the body thereof greatly simplified, and the machine, in the several details of construction, materially improved. These objects I attain by the construction substantially as shown in the drawings and hereinafter described and claimed.

In the accompanying drawings, A represents a suitable cast-metal frame for supporting, by suitable boxing, the spindles *a b* of disks B C. The spindle of the upper disk, B, has keyed to it a bevel-gear wheel, *c*, the teeth of which mesh with the teeth upon a smaller but similar wheel, *d*, secured to the end of a horizontal shaft, having mounted thereon loose and fixed belt-pulleys D E. The spindle *b* of the disk C is formed hollow, and contains a rubber or spiral spring, *e*, which forms a cushion and gives a yielding pressure to the disk against the bottom of the can, which is held between the disks B C and revolved with them. A spindle, *f*, rests upon the inner end of a pivoted lever, F, the upper end of said spindle being reduced and entering the hollow

spindle *b* to form a support for the spring *e*, and admitting the disk C, having a vertical motion independent of the spindle *f*, which is caused to be elevated by the action of the lever. The lever F is connected, by any suitable means, to a foot-treadle, by which it may be operated, and has projecting from its side a pin, *g*. This pin, when the outer end of the lever is depressed, bears down on a lever, G, said lever being cast with a hollow sleeve, *h*, by which it is mounted on a shaft, *i*, extending out horizontally from the side of the frame A, the sleeve being movable upon said shaft. The outer end of the sleeve *h* is cast with an arm, *k*, to which is pivoted a dog, H, a set-screw, *l*, extending through the arm to regulate the position of the dog. This dog H bears against a shoulder, *m*, upon a carrier, I, said carrier having connected thereto the seaming-rollers K L. The seaming-rollers are of the usual construction, and secured, by suitable jam-nuts, to a screw-threaded shaft, M, having its pivotal bearings on the ends of screws *n*, passing in opposite directions through the arms of the carrier I. The carrier I is pivoted to the frame A, similar in means to that employed in pivoting the screw-shaft M to the carrier, so that it may have the necessary lateral motion; but other means may be employed for pivoting both the screw-shaft and carrier, as this does not constitute any essential feature of my invention, and therefore any well-known means may be substituted.

A rubber or coiled spring, *p*, is interposed between the frame A and carrier I, the tension thereof being regulated by a screw, *r*, or any other well-known means.

When the sheet-metal can is placed on the disk C and the outer end of the lever is depressed, said disk will be elevated sufficiently to hold the can between the upper and lower disks, so that it will revolve with them. As the lever is thus operated the pin *g* thereon will bear down upon the lever G and depress its outer end, which forces the dog H against the shoulder *m* of the carrier I and causes it to move in a direction toward the disks B C sufficiently to bring the rollers K L in position for seaming.

By the above means it will be seen that by the action of the lever F the seaming-rollers



are brought into the required working position and automatically returned to their former position by the action of the spring *p*, thereby dispensing with the necessity of hand-levers or other like devices usually employed.

The seaming-rollers *K L* are adjustable upon the screw-threaded shaft *M* to adapt them to cans of different lengths, and may also be removed and other forms or shapes substituted to adapt the machine for crimping, beading, double-seaming, burring, or trimming sheet metal.

The heads or disks *B C* are detachably connected to their spindles by screw-threads, to admit of their removal, and others substituted for different diameters of cans, and for the above purpose the seaming-rollers are brought nearer to or farther from the disks by the set-screw *l*, which regulates the position of the carrier *I*.

A very important function of the spring *e* is that after the lower disk, *C*, has been pressed up its greatest distance against the bottom of the can the spring in connection with the spindle will admit the lever *F* to be further depressed to bring the pin *g* with sufficient force against the lever *G*, to bring the seaming-roller in working position, this taking place only after the sheet-metal can has been clamped sufficiently tight between the disks to revolve with them.

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

1. In a sheet-metal machine, two revolving disks, and a pivoted or swinging carrier provided with seaming-rollers or their equivalent,

a pivoted lever for pressing upward one of the disks, and intermediate means connecting said lever with the pivoted or swinging frame, whereby the rollers will be brought in contact with the can to be seamed simultaneously with the elevation of the disk by the action of the lever, substantially as and for the purpose set forth.

2. In a sheet-metal machine, the combination, with an upper revolving disk, of a lower disk provided with a spindle, a spring, a supplemental spindle, and a pivoted lever for operating it, substantially as and for the purpose specified.

3. In a sheet-metal machine, the combination, with an upper revolving disk, of a lower disk having a hollow spindle in which is seated a spring, and a supplemental spindle entering the hollow spindle, and operated substantially as and for the purpose described.

4. In a sheet-metal machine having two revolving disks between which the article to be operated upon is held, the combination, with a pivoted or swinging carrier provided with two revolving rollers, of a pivoted lever carrying an adjustable dog bearing against the carrier, and a second pivoted lever for operating the lower disk and lever carrying the dog, substantially as and for the purpose set forth.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

WHITFIELD E. JONES.

Witnesses:

FRANCIS GOTTSBERGER,  
SAML. O. ROCKWELL.