

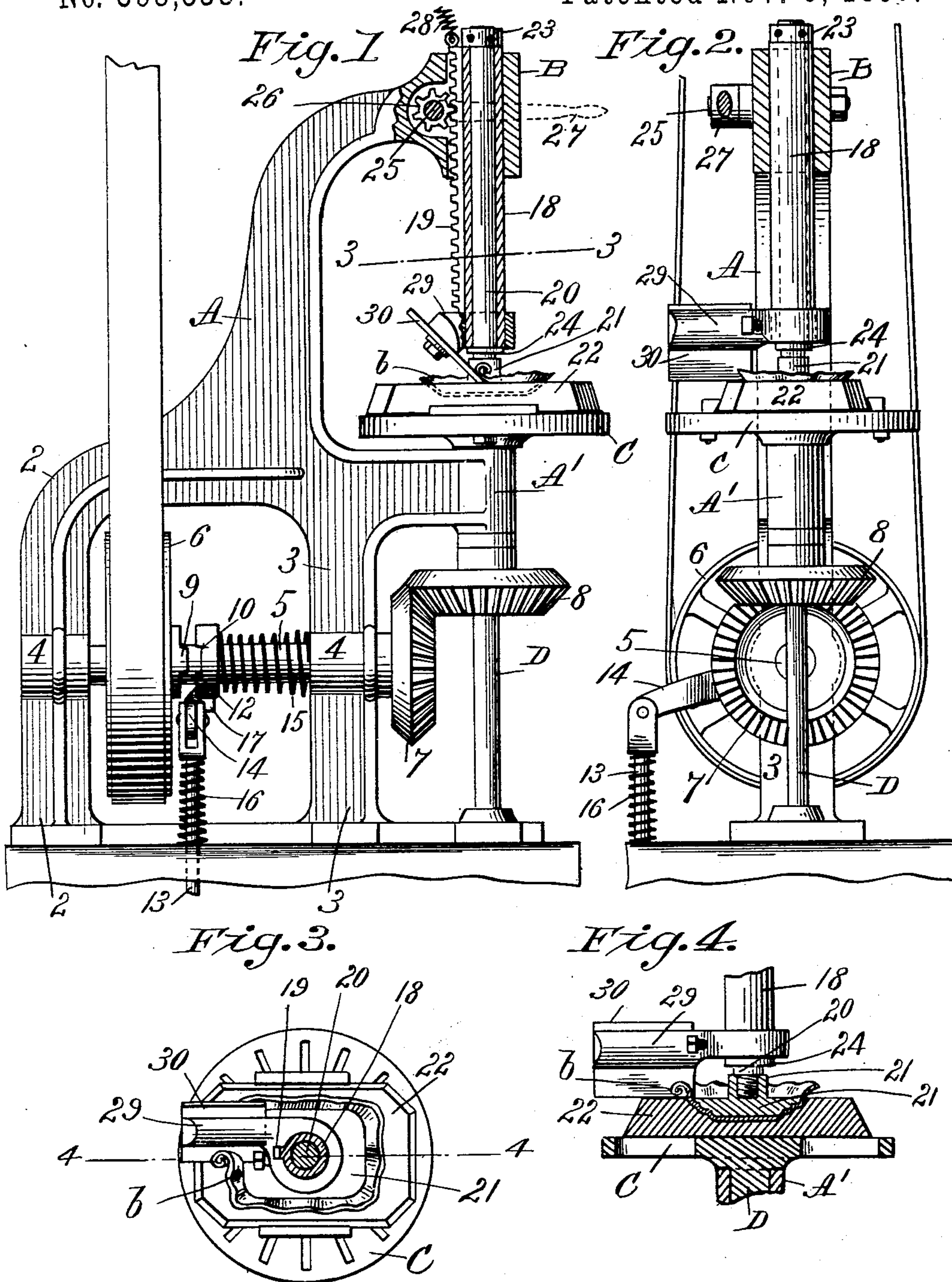
(No Model.)

S. B. CAMPBELL.

TRIMMING DEVICE FOR STRUCK UP METAL WORK.

No. 593,533.

Patented Nov. 9, 1897.



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# UNITED STATES PATENT OFFICE.

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## TRIMMING DEVICE FOR STRUCK-UP METAL-WORK.

SPECIFICATION forming part of Letters Patent No. 593,533, dated November 9, 1897.

Application filed February 9, 1897. Serial No. 622,691. (No model.)

*To all whom it may concern:*

Be it known that I, SUMNER B. CAMPBELL, a citizen of the United States of America, residing at Westfield, in the county of Hampden and State of Massachusetts, have invented new and useful Improvements in Trimming Devices for Struck-Up Metal-Work, of which the following is a specification.

This invention relates to improvements in metal-trimming machines, and particularly in trimming devices for struck-up metal-work, whereby the edges of an article stamped in a press may be completely and properly trimmed while so held in said machine.

The invention consists in the peculiar construction and arrangement of the parts of said machine, all as hereinafter fully described and claimed.

In the drawings forming part of this specification, Figure 1 is a side elevation of a metal-trimming machine embodying my improvements. Fig. 2 is a front elevation of the machine shown in Fig. 1. Fig. 3 is a plan view of the rotatable bed-plate of the machine, showing the plunger in cross-section, which section is substantially on line 3 3, Fig. 1. Fig. 4 is a vertical section of the bed-plate substantially on line 4 4, Fig. 3, and shows also a portion of the plunger with the trimming-knife secured thereto in an operative position relative to an article which is to be trimmed thereby.

Referring to the drawings, A represents the frame of the machine, having a head B overhanging the bed-plate C, the latter being supported on the upper end of a shaft D, which is supported for rotation in an arm A' of the frame A and by a step-bearing in the base of said frame. In the two vertical parts 2 and 3 of the frame is located in suitable bearings 4 the shaft 5, having a suitable pulley 6 thereon for rotating it. Said shaft, on the end thereof projecting through the part 3 of the frame, has a bevel-gear 7 thereon in mesh with a second bevel-gear 8 on the shaft D, which is at right angles to said shaft 5. Said gear 8 is secured in any convenient manner to the shaft D. The pulley 6 above mentioned runs loose on the shaft 5, and is provided with lugs 9 on its hub, which lugs are engaged by the slot 10 in the clutch-collar 12

when the latter is released by the foot of the operator by means of a connection 13 between the clutch-lever 14 and a treadle located convenient to the foot of the operator, but not shown in the drawings. Upon the release of said collar 12 the spring 15 on the shaft 5 throws said collar toward said hub of the pulley 6, and as said collar has a spline-and-groove connection with the shaft 5 the latter is rotated by the said pulley. As soon as the foot of the operator is removed from the treadle a spring 16 on the connection 13 moves the clutch-lever up in the path of the rotating collar 12, and the lug 17 thereon engages with a cam-surface on said lever 14, (not shown,) and the clutch-collar is thrown out of engagement with the rotating pulley. Thus a quick operation and release of the treadle will operate to impart to the bed-plate one revolution, said bed-plate stopping always at the same point, if desired.

From the description of the operation of the clutch mechanism it is obvious that as gears 7 and 8 are of equal diameter, one revolution of the shaft 5, on which is secured the gear 7, will result in one revolution of the gear 8, which in turn will rotate the bed-plate C, to which it is connected through the shaft D in the bearing A'. Now by operating the treadle connection 13 to draw the clutch-lever 14 out of engagement, as set forth, with the collar 12, whereby the latter is moved to engage with the hub of the pulley 6 and rotated, and by releasing said treadle again immediately, said clutch-lever is again moved up by the spring 16 on the treadle connection 13 into the path of the rotating lug 17 on said collar 12 before the latter has completed one revolution, and said lug 17 as it approaches the end of its revolution engages the cam-surfaced clutch-lever 14, and the collar 12 becomes thereby disengaged from the hub of the pulley 6 at substantially the same point from which it started, and the bed-plate is therefore stopped at the same point.

Located in the head B is the vertically-movable plunger, consisting of the sleeve 18, having a rack 19 thereon, (which sleeve is non-rotatable,) and the shaft 20, rotatable within the sleeve 18. On the lower end of said shaft is secured in any desirable manner