

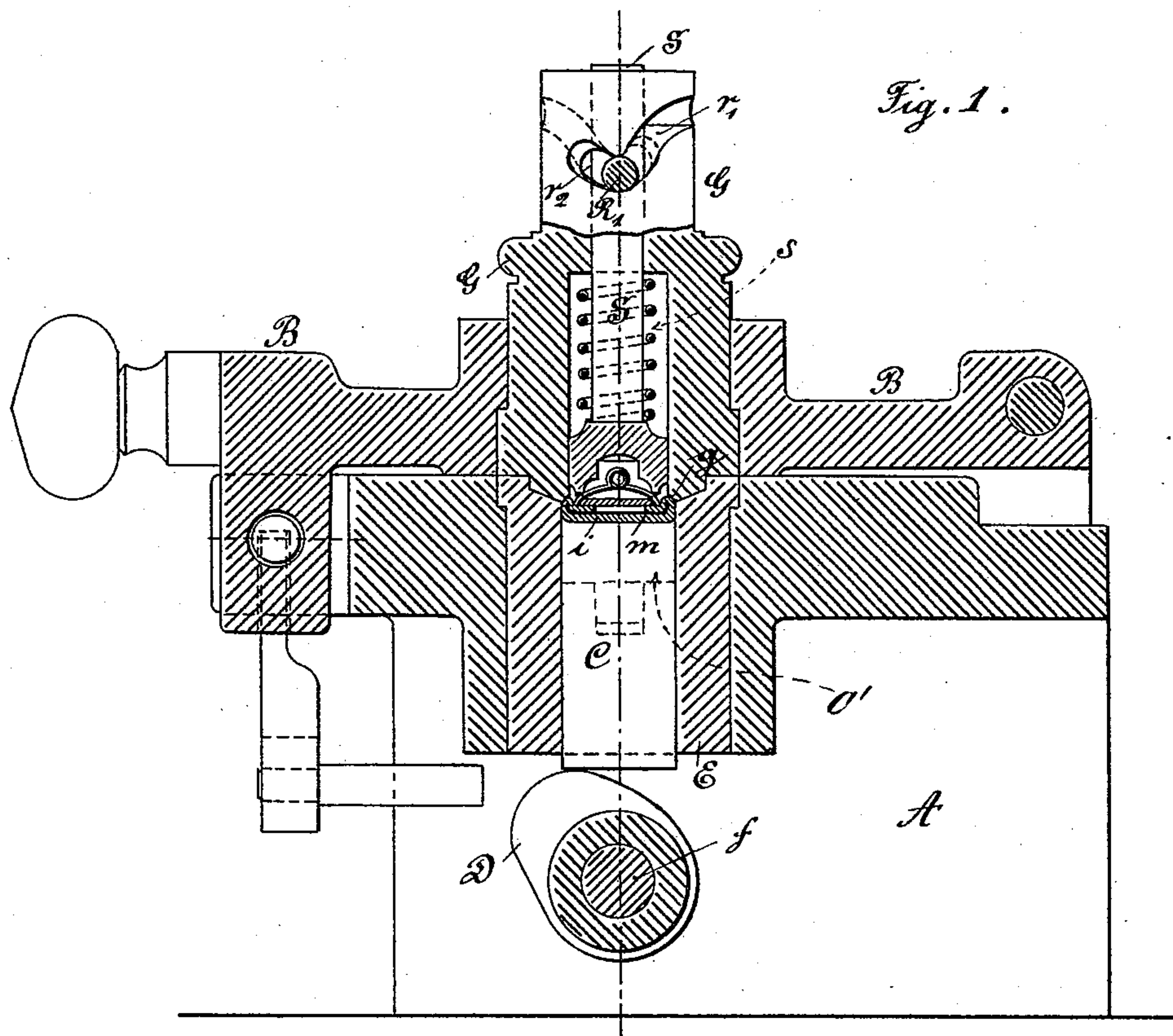
(No Model.)

3 Sheets—Sheet 1.

C. A. PFENNING.
BUTTON MACHINE.

No. 396,425.

Patented Jan. 22, 1889.



Witnesses:

Geo. H. Miatt

W. S. McArthur

Inventor:

Carl August Pfennig

By his Attorney

Dickerson Foster & Freeman

(No Model.)

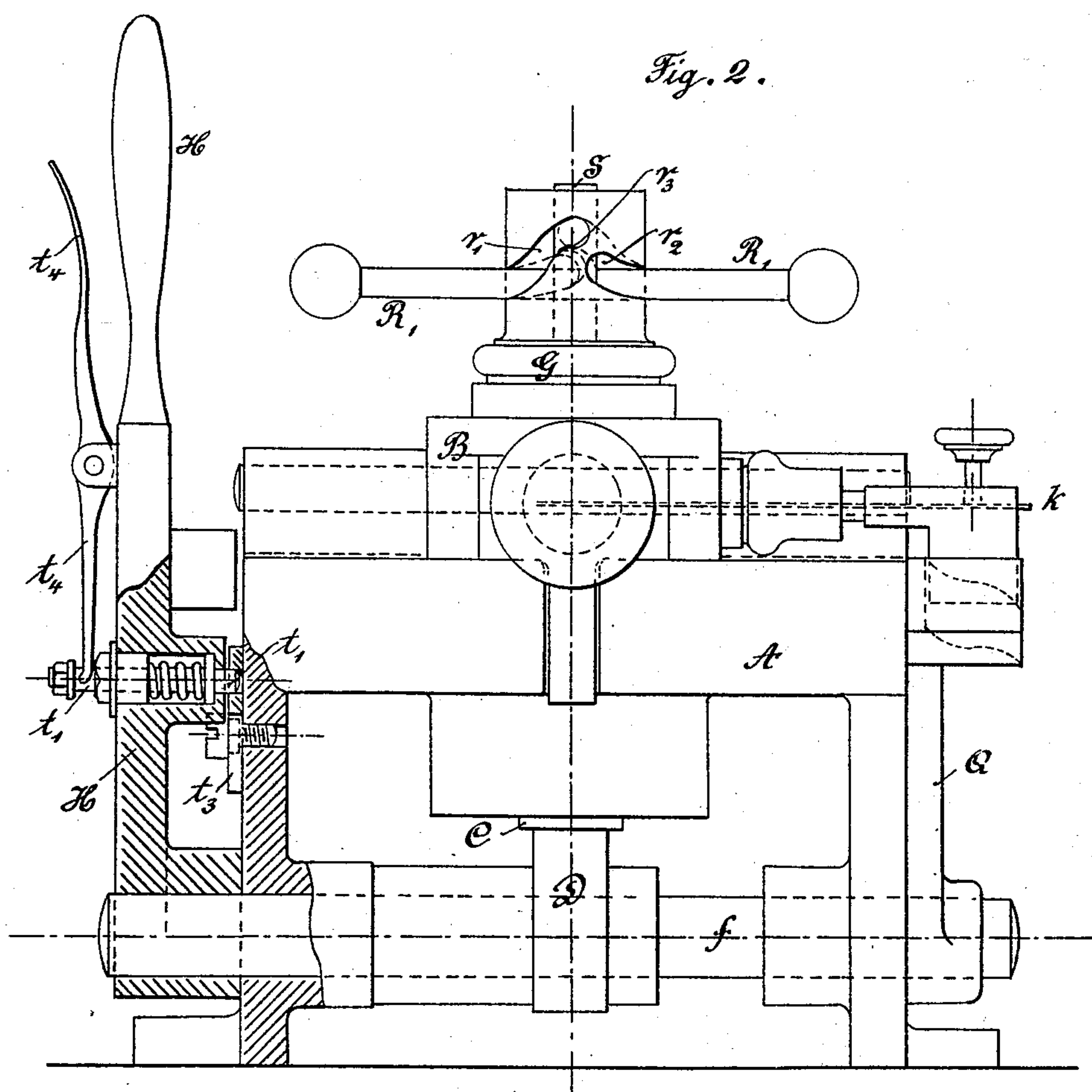
3 Sheets—Sheet 2.

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BUTTON MACHINE.

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Patented Jan. 22, 1889.



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Inventor:

Carl August Jensen

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Dickinson Foster & Freeman

(No Model.)

3 Sheets—Sheet 3.

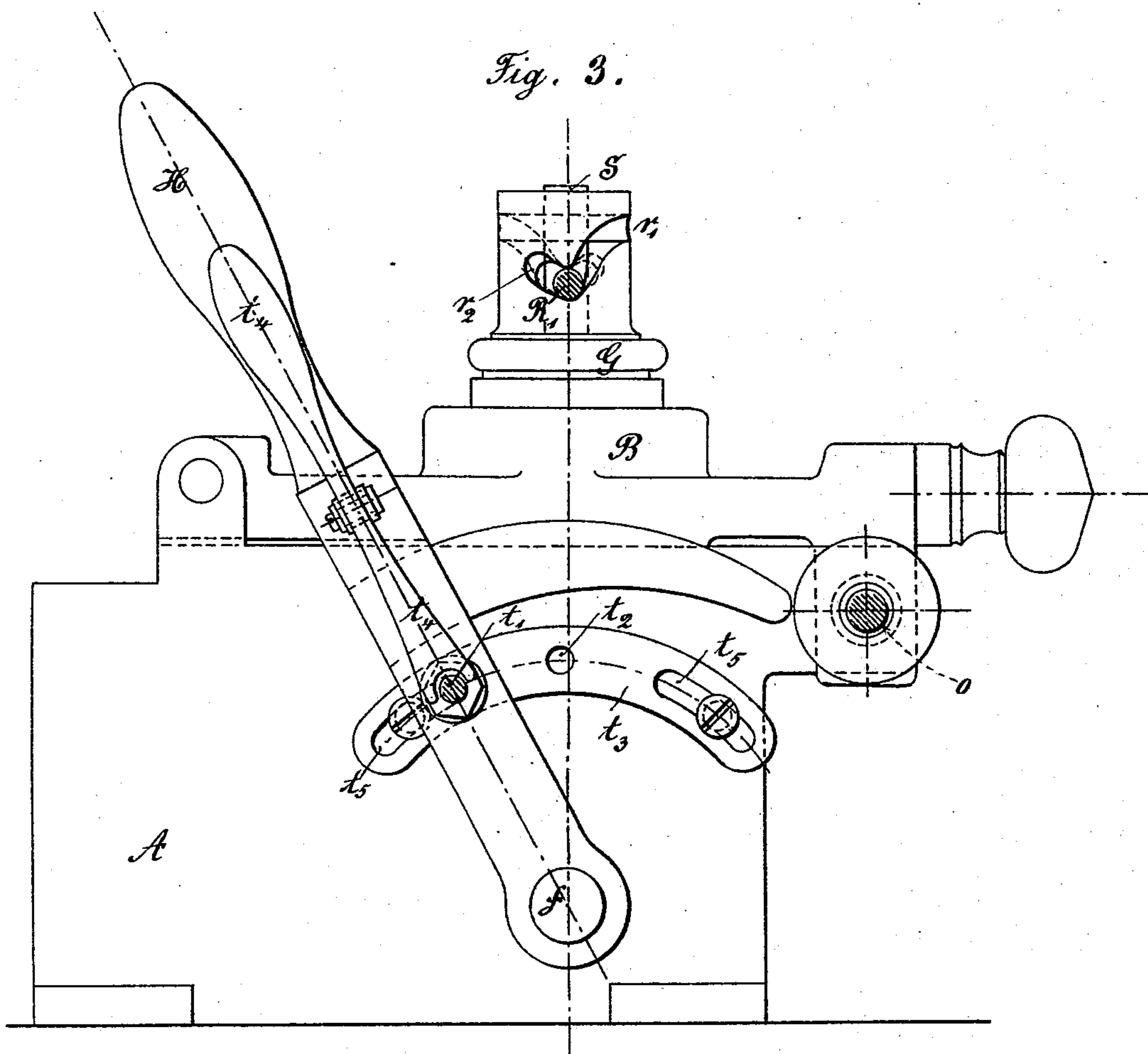
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Fig. 3.



Witnesses:

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UNITED STATES PATENT OFFICE.

CARL AUGUST PFENNING, OF BARMEN RITTERSHAUSEN, PRUSSIA, GERMANY.

BUTTON-MACHINE.

SPECIFICATION forming part of Letters Patent No. 396,425, dated January 22, 1889.

Application filed April 5, 1888. Serial No. 269,673. (No model.)

To all whom it may concern:

Be it known that I, CARL AUGUST PFENNING, a subject of the German Emperor, residing at Barmen Rittershausen, in Rhenish Prussia, Germany, have invented a new and useful Apparatus for the Manufacture of Buttons, of which the following is a full, true, and exact description, reference being had to the accompanying drawings.

10 This machine consists, generally, of an apparatus whereby buttons of varying thickness can be made cheaply and expeditiously.

In my drawings, Figure 1 represents an elevation, mostly in section, of my apparatus; 15 Fig. 2, an elevation at right angles to Fig. 1; and Fig. 3, an elevation at right angles to Fig. 2, showing the regulating mechanism.

My machine consists, generally, of two parts—the base or framing A and the cover 20 B pivoted thereto. The base contains a core, C, sliding in cylindrical sleeve E, within which the button is formed. The core C may be made adjustable in length by dropping a short piece of varying thickness in 25 a suitable recess at its upper end, as shown clearly at c' in Fig. 1 in dotted lines. This core C is raised by the cam D, operated by the shaft f , which in turn is driven from the handle H. The stamp or button- 30 forming plunger S is driven downward by a spring, s , all carried in the cover B. This spring is raised by the handle R' sliding through similar slots, as shown in Fig. 2. These slots are of peculiar shape. Commenc- 35 ing on the left, as shown in Fig. 1, they descend somewhat, as at r^2 . They then rise, as at r' , which slot r' terminates in a recess or socket, r^3 , within which the handle R' may rest. The cover B is provided with a suitable 40 bolt, o , for locking it when closed. The handle H is provided with a spring-bolt, t' , with a spring driving it inward. This bolt t' can be thrown outward by the supplemental handle t . It rides upon the surface of the segment 45 t^3 , (shown in Fig. 3,) in the center of which is the hole t^2 . This segment t^3 is adjustable by means of the slots t^5 and bolts, as shown, so as to vary the position of the hole t^2 , for purposes hereinafter to be described. A bolt, k , 50 operated by a cam, Q, is described in another application, Serial No. 269,672, and forms no part of the present application.

For the manufacture of a button, the shank R' in the head of the cover part G is so placed in the machine that it is locked in the 55 raised—*i. e.*, the higher—position, together with the stamp S. If, now, the button upper part, m , and stuff i are pressed on the core and the button lower part placed in the cavity of the stamp, and if then the cover is 60 closed and the hand-lever H has been moved to about its middle position, then the handle R' is turned in the parts r' of the slot, and thereby the downward movement of the stamp is caused. By the partial movement of the 65 hand-lever H the eccentric D, fastened to the axis f , has pushed the core C so far upward that the button upper part, with the stuff folded around it, is brought against the beveled ring of the cover part G. The stamp S, brought 70 downward by the turning of the handle R', will therefore drive into the button upper part the button lower part, after which the parts are lying one in another, as shown in Fig. 1. Simultaneously with a further move- 75 ment of the hand-lever H, by which the bending of the rim of the button upper part is effected, the handle R' is still turned a little, whereby the same, entering the parts r^2 of the slot, lifts the stamp a little, so that the latter 80 leaves the button lower part in order to make room for the upward movement of the button, which takes place at the joining of the latter. In order that the hand-lever H may be auto- 85 matically adjusted in the position which it occupies when the button upper part and the stuff are lying before the rim of the cover- part G—which must happen to prevent too far an advancing of the core and with it a prema- 90 ture bending of the rim of the button upper part surrounded by the stuff—the lever is provided with a pin, t' , pressed forward by a spring. This pin falls with its end project- ing from the lever into an aperture, t^2 , which latter is arranged in a segment, t^3 , fastened to 95 the framing of the machine. A two-armed lever, t , which is put on the hand-lever, serves to move the pin t' and disengage the hand-lever H. As in using material of unequal thickness the distance of the core C from the 100 rim g of the cover part G will not be alike when the stuff and button upper part is pressed against the rim g —which is especially the case when button upper parts with a higher up-

ward rim are used for thicker material—the position of the hand-lever H should be made adjustable.

In order to be able to exactly fix on the machine the position of the hand-lever required for the thickness of each material, the segment-shaped piece t^3 is provided, with the slots t^5 . These slots have likewise a curved shape, and have a common center with the axis. Therefore, in moving the segment-piece the distance of the hole t^2 from the middle of the axis f always remains the same, so that the position of the hand-lever is adjustable according to the position of the segment-piece or of the cavity t^2 , and the difference of the core C from the rim g can be adapted to the materials to be used and to the relative sizes of the button upper parts. This change of said distance could also be produced by the use of several long cores or by heads C' of different heights, to be placed into the cores. (Fig. 1, indicated by dots.)

I do not in this application claim the subject-matter claimed in my application simultaneously filed, No. 269,675.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The combination, in a button-forming machine, of a base, a longitudinally-movable core supported thereon, a cam arranged in the path of the core, an operating-handle for the cam, and a latch for temporarily securing the handle intermediate of the limits of its swinging movement, substantially as and for the purpose described.

2. The combination, in a button-forming mechanism, of the base A, containing a longitudinally-movable core, C, an axis, f , and cam D, for operating the same, a lever, H, carrying a latch, t' , locking in the segment t^3 , which itself is capable of longitudinal adjustment by means of the slots t^5 , substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

CARL AUGUST PFENNING.

Witnesses:

CARL KRÜGER,

F. J. FALKENBACH.