

(No Model.)

2 Sheets—Sheet 1

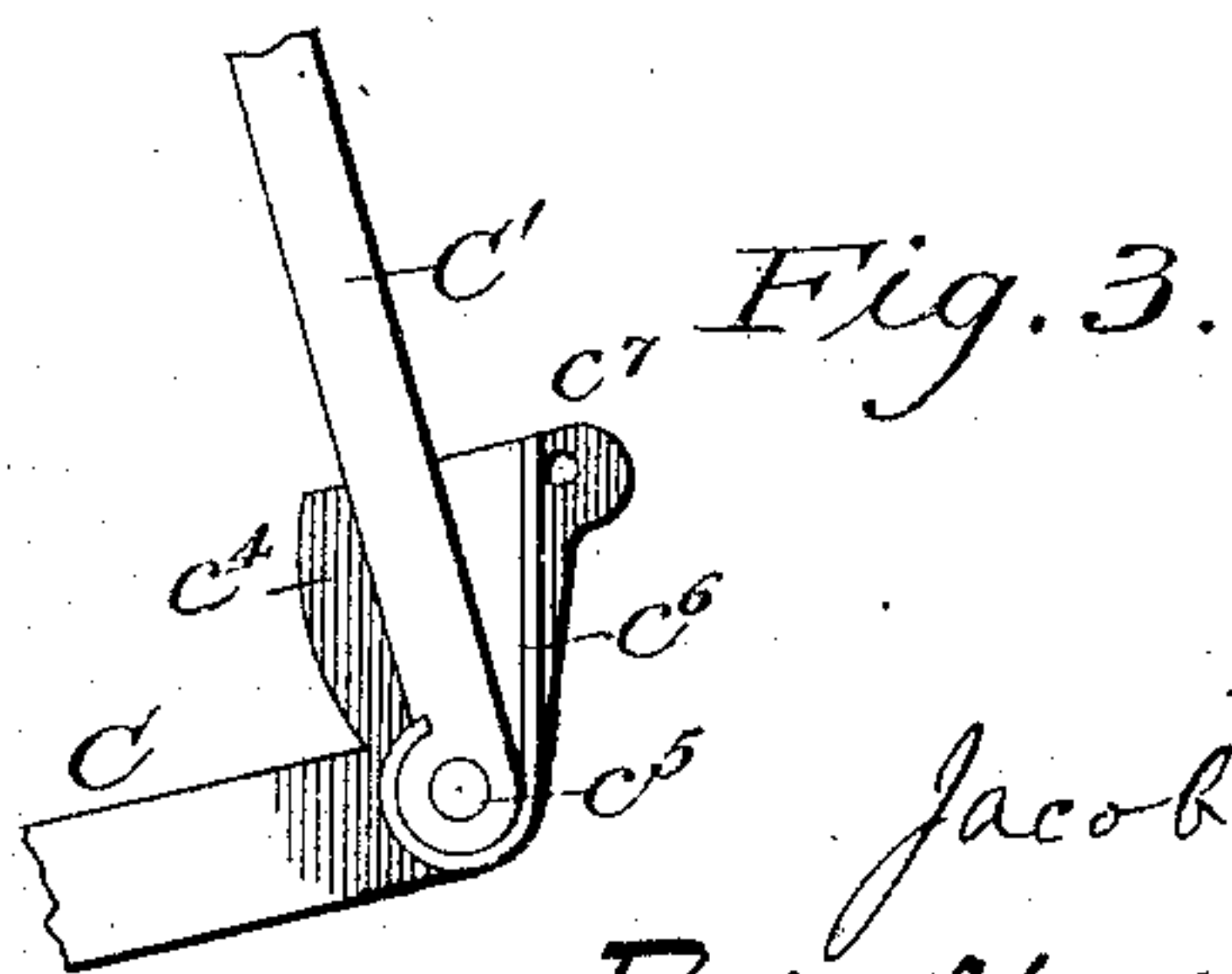
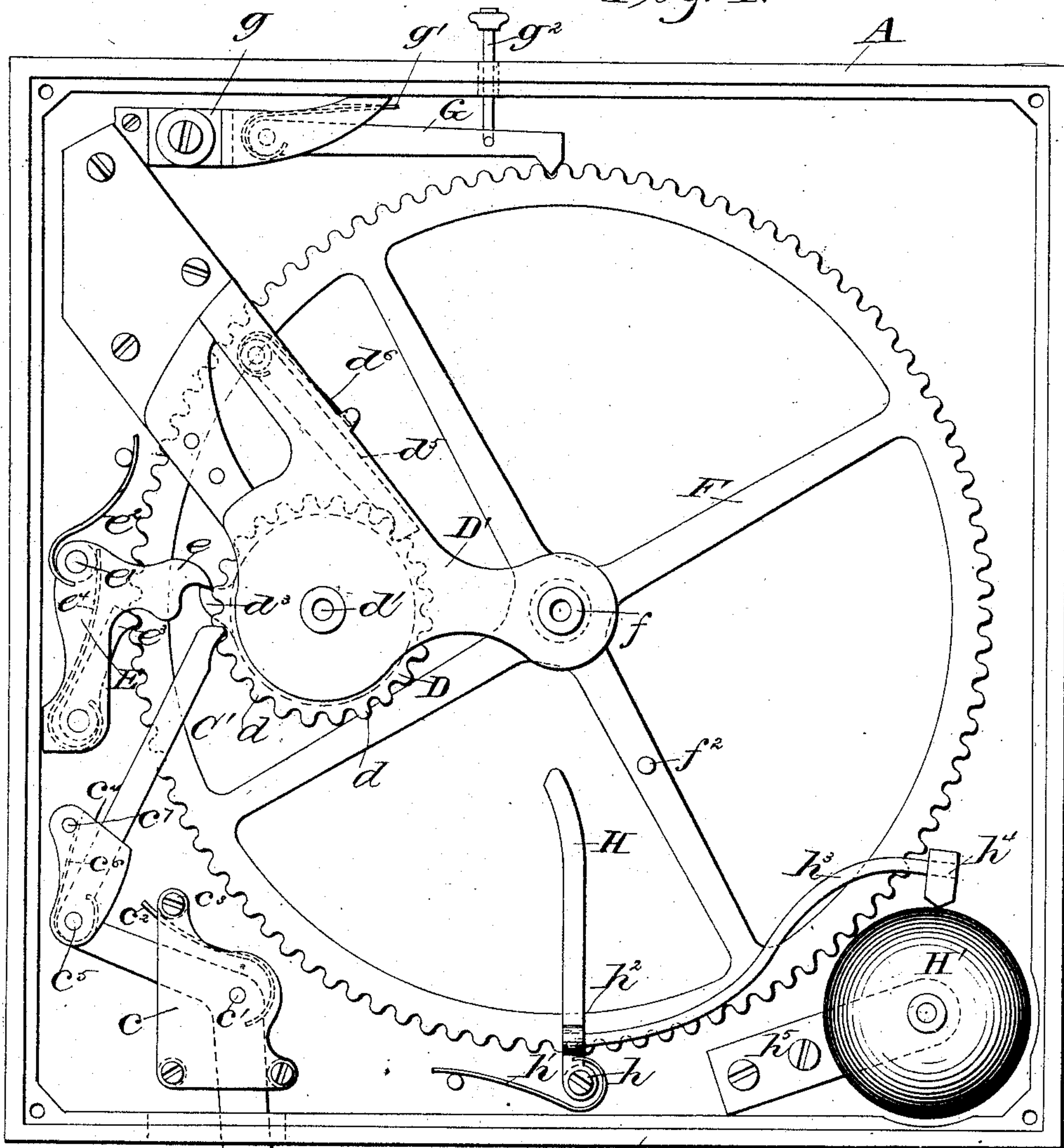
J. RUESCH.

ALARM COUNTER FOR PRINTING PRESSES, &c.

No. 354,024.

Patented Dec. 7, 1886.

Fig. 1.



Witnesses:

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R. Platz

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Jacob Ruesch

By Stout & Underwood

Attorneys.

(No Model.)

2 Sheets—Sheet 2.

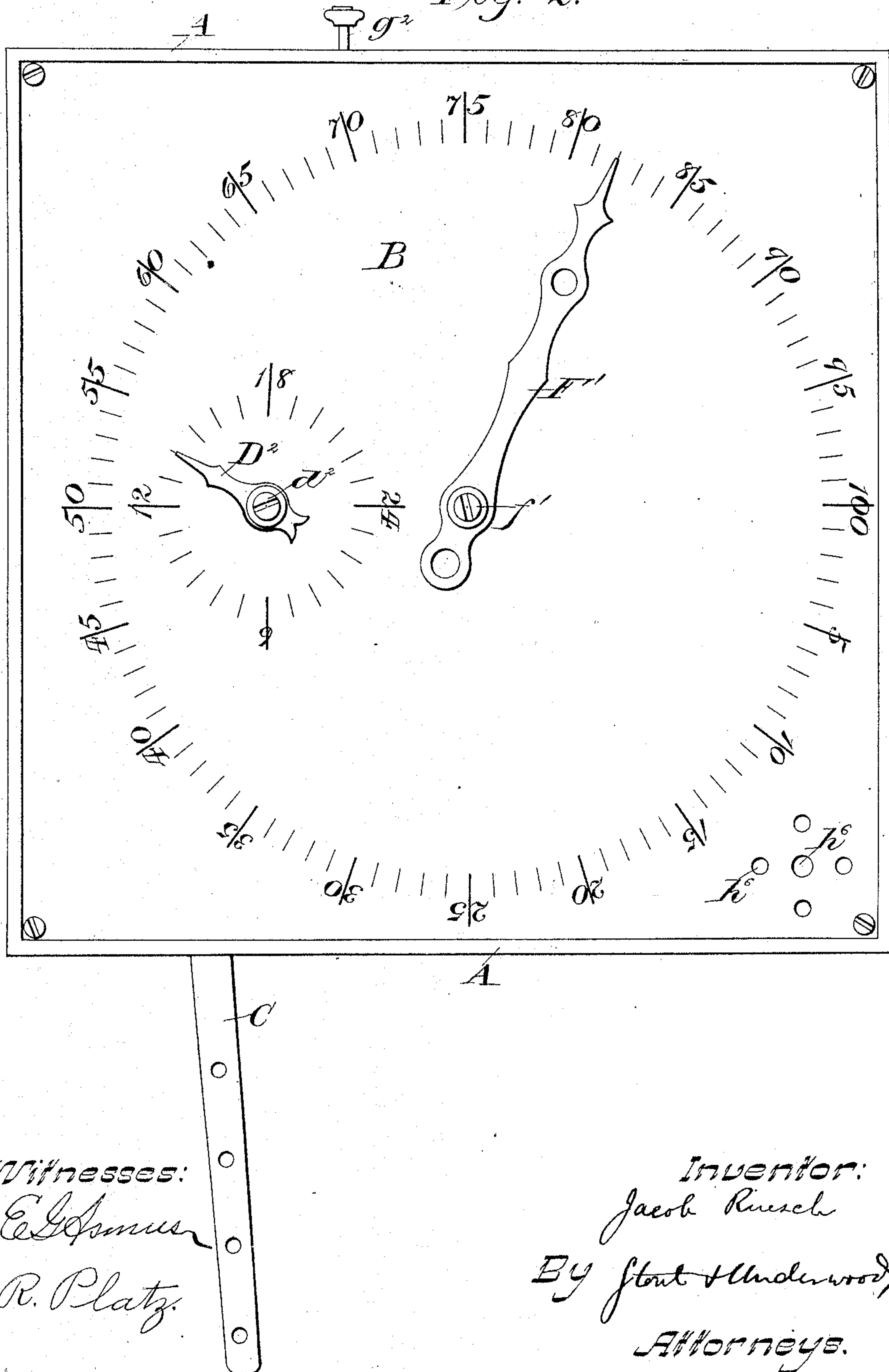
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Fig. 2.



UNITED STATES PATENT OFFICE.

JACOB RUESCH, OF MILWAUKEE, WISCONSIN.

ALARM-COUNTER FOR PRINTING-PRESSES, &c.

SPECIFICATION forming part of Letters Patent No. 354,024, dated December 7, 1886.

Application filed May 21, 1884. Serial No. 132,237. (No model.)

To all whom it may concern:

Be it known that I, JACOB RUESCH, of Milwaukee, in the county of Milwaukee, and in the State of Wisconsin, have invented certain new and useful Improvements in Alarm-Counters for Printing-Presses, &c.; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention relates to improvements in alarm-counters, and will be fully described hereinafter.

In the drawings, Figure 1 is a top view of my improved counter after its dial and hands have been taken off. Fig. 2 is a like view of my device with the dial and hands in place. Fig. 3 is a partial detail view of the actuating-lever and a portion of the pawl connected thereto.

The object of my invention is to provide a simple mechanism which can be connected with any of the moving parts of a machine—such as a printing-press—so as to register every stroke or revolution of the same, and to sound an alarm after a predetermined number of strokes or revolutions have been accomplished.

A is the box inclosing the counting mechanism and alarm.

B is the dial, which may be divided or graduated in any manner desired.

C is the actuating-lever, which is adapted to oscillate with every revolution of a press, or of any other machine, by connecting its outer end projecting through the slotted side of the box with any of the moving parts of said press or machine. This actuating-lever is pivoted at a suitable point in the bottom of the box A, and in the bracket-plate *c* on the fulcrum-pin *c'*, journaled therein, a spring, *c''*, suitably attached to the lever, and the free end of which spring presses against the bracket-fastening screw *c'''*, serves to keep said lever in its normal position. The short arm of the lever C is provided with an extension, *c''''*, that is suitably hollowed on one side to receive the pawl C', supported therein on the pivoting-pin *c'''''*. The free end of this pawl is suitably notched on its inner face, so as to fit in either one of the notches formed by the teeth *d d d* of the ratchet-wheel D, a spring, *c''''''*, suitably fastened to the pawl C', and the free end of

which presses against the pin *c'''''''*, serves to maintain the pawl in position, as shown.

The wheel D has its trunnions suitably journaled in the bottom of the box A, and in the multiform bracket D' its upper side trunnion, *d'*, is made to project slightly above the upper face of the dial B, and carries the unit-hand D², fastened thereon by means of the screw *d''*. Below the ratcheted rim of the wheel D a tooth, *d'''*, is provided in said wheel, and this tooth at every revolution of the wheel D will come in contact with the tooth *e*, formed on the inner end of the lever E. This latter, which is pivoted on the fulcrum-pin *e'*, projecting from the box-bottom, is kept in its normal position by means of the spring *e''*, and carries, hinged on the end of its long arm, the spring-pawl *e'''*. The free end of this pawl *e'''* is kept by its spring *e''''* against the ratcheted rim of the wheel F, suitably journaled in the bottom of the box and in the inner end of the bracket D'.

The upper end of the stem *f* is made to project sufficiently above the dial B to enable the hand F', which is fastened on its end by the screw *f'*, to clear the unit-hand D² as said hand F' revolves around the dial. A detent-lever, *d⁵*, provided with the spring *d⁶* and pivoted in the bracket D', serves to secure the wheel D against backward motion.

Another detent, G, pivoted in the bracket *g*, is provided with a spring, *g'*, that holds its detent in engagement with the toothed periphery of the wheel F. This detent G is provided with a hand-lever, *g''*, which serves to raise said detent when it is necessary to adjust the hand F'. This detent being lifted, the wheel F, to which said hand F' is fastened, can be turned with ease to any figure of the dial B. The wheel F, which is provided with one hundred teeth, has also a pin, *f''*, that projects upward from one of its arms, and when the device is put together the pin is made to coincide with the starting-point or figure 100 of the dial B.

The adjustment of the hand F' is effected by loosening the screw *f'*, by means of which the said hand is fastened onto the outward-projecting stem *f* of the wheel F, and by turning the said hand so that it points to the figure of the dial corresponding to the number of quires of paper it is desired to pass through the

press, the screw f' being then turned to secure the hand in position, the detent G is disengaged from the wheel F , and the said wheel and its hand F' are turned around so as to bring the hand F' to the starting-point of the dial.

In the path of the pin f^2 lies the outer end of the lever H , which is pivoted on the fulcrum-screw h , and is kept in its normal position, as shown, by means of the spring h' . A stud, h^2 , formed on the upper face of the lever H , close to its pivoted end, is horizontally perforated to receive the inner end of the lever h^3 , fastened therein, and carrying on its outer end the striking-hammer h^4 .

H' is the bell or gong against which this latter strikes. It is suitably mounted on the bracket h^5 , fastened in the bottom of box A , and the dial B is perforated, as shown at h^6 h^6 , opposite the bell or gong to allow the sound of the striking-hammer to be distinctly heard.

The operation of the alarm-counter, as applied to indicate the number of sheets of paper printed on a press, is as follows: The box A having been set in a suitable place, and the actuating lever C being suitably connected to any of the moving parts of the press, the hand D^2 is turned so as to point to the figure 24, or the starting-point of the unit-dial. The hand F' is then loosened and turned to the figure of the dial B which corresponds to the number of quires of paper to be printed. The screw f' is turned and the hand made fast with its wheel. The hand-lever g^2 is drawn out to disengage the detent G from the ratcheted rim of the wheel F , which is then moved around with its hand F' till the point of this hand is opposite the figure 100, or the starting-point of the counter. At every revolution of the press the lever C will push the pawl C' against the toothed periphery of the unit-wheel D , which will thus be moved one step, the same to be secured against backward motion by the pawl or detent d^5 . When the unit-wheel D , which is provided with twenty-four teeth, will in this manner have moved twenty-three steps, the tooth d^3 will have been brought in contact with the tooth e of the lever E , and at the next stroke or revolution of the press and of the pawl C' the said tooth e will be pressed out, and the pawl e^3 , carried by said le-

ver E , will be moved with it against the ratcheted rim of the wheel F , moving this wheel one step for every complete revolution of the wheel D , or for every twenty-four revolutions or strokes of the press. When a sufficient number of the revolutions of the unit-wheel D has been reached to bring the hand F' opposite the figure of the dial B at which the said hand has been at first adjusted, as above mentioned, the vertical pin f^2 , carried on the upper face of one of said wheel-arms, will have been brought in contact with the lever H , which, when released from the same, is pushed back by its spring, causing the hammer h^4 to strike against the bell or gong H' .

Although I have herein particularly described my device as connected with counting sheets of paper as printed on a press, it will be understood that I do not limit myself to such use, as the device is adapted for use in connection with any machine in registering the number of its revolutions or strokes.

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

1. In an alarm counter, the lever C , having the hollowed-out extension e^4 , and the pawl C' , pivotally connected to said extension, in combination with the wheel D , having the tooth d^3 , the lever E , pawl e^3 , detent d^5 , wheel F , and a suitable actuating mechanism, substantially as and for the purpose set forth.

2. In an alarm-counter, the combination of the inclosing-box A , provided with an alarm, and a striker for the latter, the wheel F , having the pin f^2 on one of its arms, the detent G , the lever C , having the hollowed-out extension e^4 , pawl C' , pivotally connected to said extension, the wheel D , having the tooth d^3 , the lever E , spring-pawl e^3 , detent d^5 , and a suitable actuating mechanism, substantially as and for the purpose set forth.

In testimony that I claim the foregoing I have hereunto set my hand, at Milwaukee, in the county of Milwaukee and State of Wisconsin, in the presence of two witnesses.

JACOB RUESCH.

Witnesses:

H. G. UNDERWOOD,
H. J. FORSYTHE.