Sept. 6, 1932. F. B. POST 1,875,653

RECORDER

Filed March 14, 1930 3 Sheets-Sheet 1

Fig. 1.

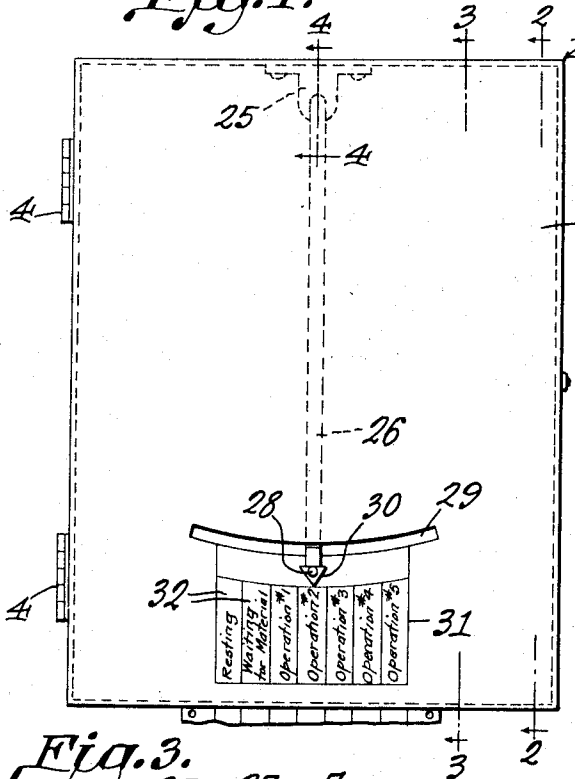


Fig. 2.

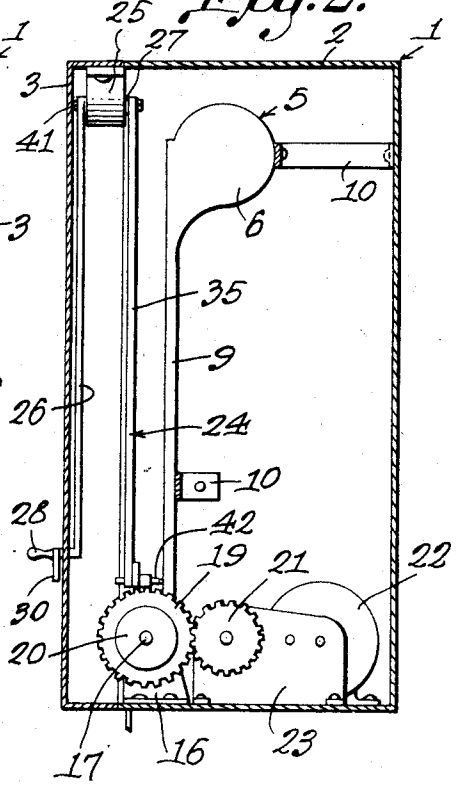


Fig. 3.

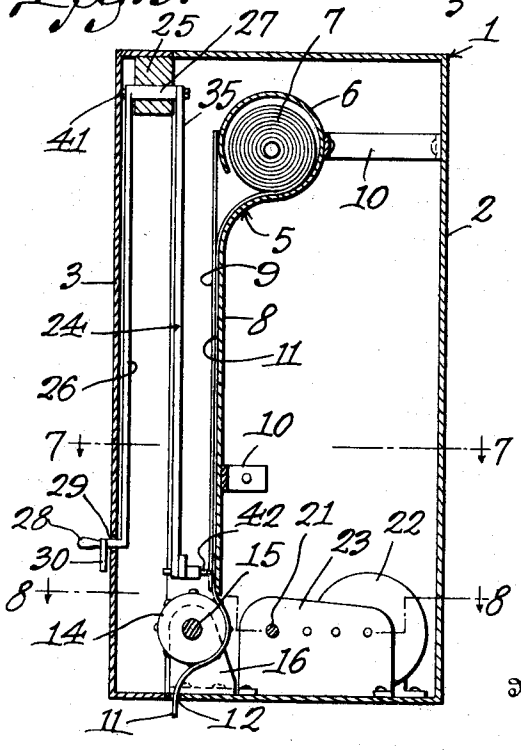
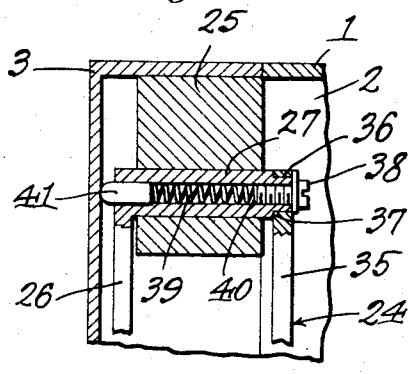


Fig. 4.



F. B. Post Inventor

By C. A. Snow & Co.

Attorneys.

Sept. 6, 1932. F. B. POST 1,875,653

RECORDER

Filed March 14, 1930 3 Sheets-Sheet 2

Fig. 5.

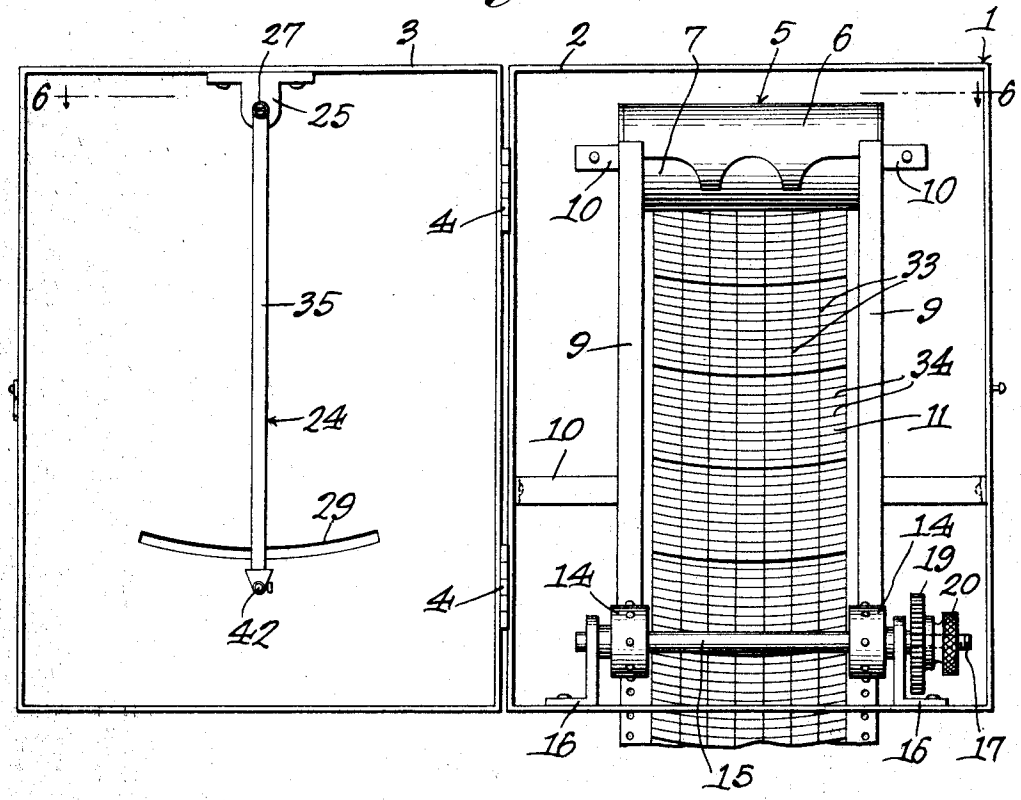
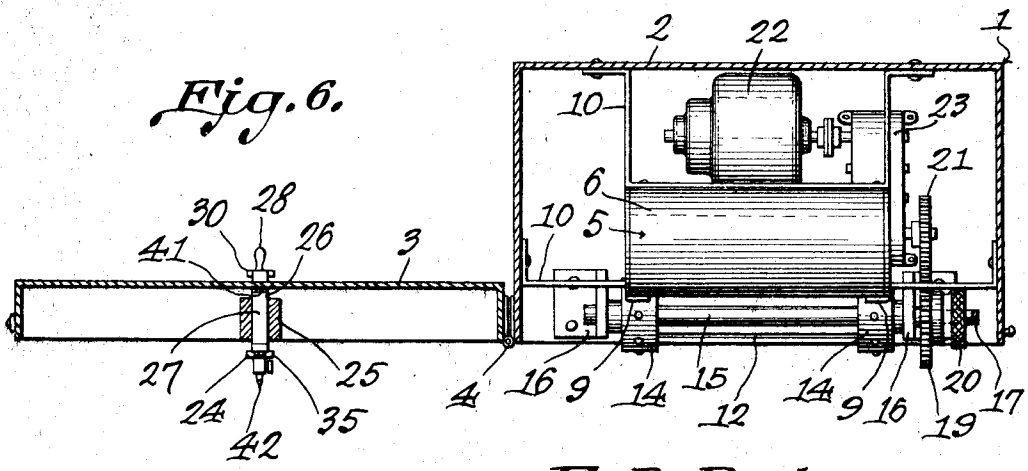


Fig. 6.



F. B. Post Inventor

By Cushman & Co.

Attorneys.

Sept. 6, 1932. F. B. POST 1,875,653

RECORDER

Filed March 14, 1930 3 Sheets-Sheet 3

Fig. 7.

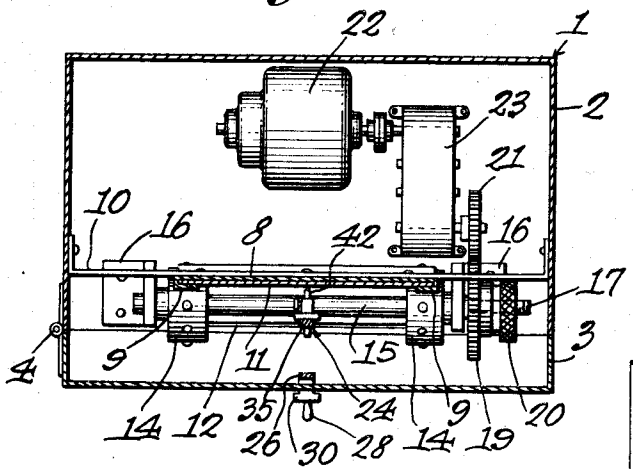


Fig. 10.

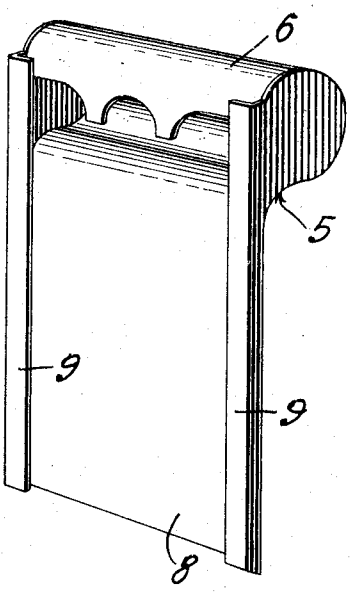


Fig. 8.

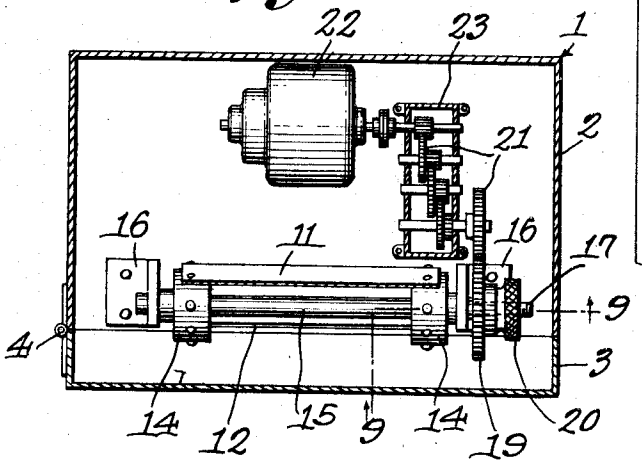
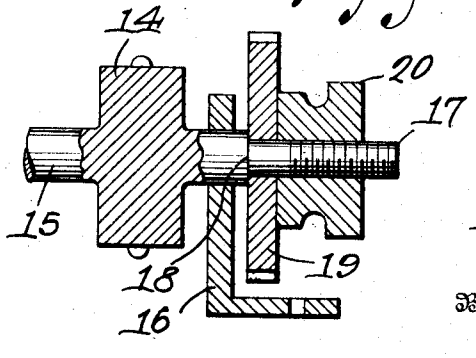


Fig. 9.



F. B. Post Inventor

By C. A. Snow & Co.

Attorneys.

Patented Sept. 6, 1932 1,875,653

UNITED STATES PATENT OFFICE

FRANK BURDETTE POST, OF LOS ANGELES, CALIFORNIA

RECORDER

Application filed March 14, 1930. Serial No. 435,850.

This invention aims to provide a means whereby an efficiency expert, or other person interested in the conduct of workmen, can record the amount of time required for various operations.

It is within the province of the disclosure to improve generally and to enhance the utility of devices of that type to which the present invention appertains.

With the foregoing and other objects in view, which will appear as the description proceeds, the invention resides in the combination and arrangement of parts and in the details of construction hereinafter described, and claimed, it being understood that changes may be made in the precise embodiment of the invention herein disclosed, within the scope of what is claimed, without departing from the spirit of the invention.

In the accompanying drawings:

Figure 1 shows in front elevation, a device constructed in accordance with the invention;

Figure 2 is a section on the line 2—2 of Figure 1;

Figure 3 is a section on the line 3—3 of Figure 1;

Figure 4 is a fragmental section on the line 4—4 of Figure 1;

Figure 5 is a front elevation with the door open;

Figure 6 is a transverse section on the line 6—6 of Figure 5;

Figure 7 is a cross section on the line 7—7 of Figure 3;

Figure 8 is a transverse section on the line 8—8 of Figure 3;

Figure 9 is a fragmental section on the line 9—9 of Figure 8;

Figure 10 is a perspective view of the paper holder.

The device forming the subject matter of this application comprises a support 1 made up of a box-like body 2 and a door 3 connected by hinges 4. Within the support 1 is located a paper holder that is denoted generally by the numeral 5 and shown in detail in Figure 10. The paper holder 5 is connected by brackets 10 to the body 2 of the support 1. The paper holder 5 is provided at its upper end with a compartment 6 adapted to hold a roll 7 of paper, the paper being marked by the numeral 11. The paper holder 5 comprises a substantially vertical table 8 having guides 9 at its sides. The paper 11 extends downwardly along the table 8 and outwardly through an opening 12 in the bottom of the body 2, the edges of the paper 11 sliding beneath the guides 9.

The paper 11 is carried downwardly by feed rolls 14 wherewith the paper is engaged, as shown in Figures 8 and 3 of the drawings. The feed rolls 14 are mounted on a shaft 15 journaled in bearings 16 carried by the bottom of the body 2. The shaft 15 has a reduced end 17 (Figure 5) defining a shoulder 18. A gear wheel 19 is mounted on the reduced end 17 of the shaft 15, and is bound against the shoulder 18 by a nut 20 which is threaded on the reduced end 17 of the shaft 15. The gear wheel 19, therefore, is connected releasably to the shaft 15 for rotation with the shaft.

The gear wheel 19 is driven by a gear train 21 actuated by a motor 22. The motor 22 may be an electrical motor mounted on the bottom of the body 2. The gear train 21 is housed within a casing 23. The motor 22 operates at a uniform speed, since the time element enters into the operation of the device, as will be explained hereinafter.

The machine includes a marker which, in Figure 5, is denoted by the numeral 24. The marker 24 is in the form of a pendulum, and is U-shaped when viewed sidewise as in Figure 3. There is a bearing 25 mounted on the upper portion of the door 3. The pendulum or marker 24 comprises a first arm 26 carrying a sleeve 27 (Figure 4) mounted to rock and to slide endwise in the bearing 25. The first arm 26 has a handle 28 that moves in an arcuate slot 29 in the door 3, the handle 28 carrying a pointer 30 cooperating with a table 31 on the outer surface of the door 3 (Figure 1). The table 31 is made up of a plurality of legends or marks 32 which indicate how a workman will be likely to spend his time. The paper 11 is lined with longitudinal lines 33 forming longitudinal spaces which are equal in width to the legends 32 on the table

31. The paper 11 has transverse lines 34 defining time intervals.

The pendulum or marker 24 comprises a second arm 35 disposed parallel to the first arm 26 and carrying a stylus 42 by means of which a mark can be made on the paper 11, as the paper moves downwardly over the table 8. The sleeve 27 (Figure 4) has a reduced end 36 defining a shoulder 37. The second arm 35 is mounted on the reduced end 36 of the sleeve 27 and is held in abutment with the shoulder 37 by a securing element 38, such as a screw, threaded into the bore 40 of the sleeve 27. The arms 26 and 35 are held rigidly together, for movement as one piece. A compression spring 39 is located in the bore 40. One end of the compression spring presses against the securing element 38, the securing element 38, therefore, serving as an abutment for the spring 39. The other end of the spring 39 bears against a round ended slide 41, mounted for reciprocation in the bore 40 of the sleeve 27. The spring 39 presses the slide 41 against the front of the door 3, and slides the sleeve 27 rearwardly in the bearing 25, so that the stylus 42 at all times is kept in contact with the paper 11, as the paper is moved downwardly.

In practical operation, rotation is imparted to the shaft 15, and the feed rolls 14 by means of the gear wheel 19, the gear train 21, and the motor 22, the paper 11 being moved downwardly at a uniform speed. The paper 11 passes downwardly and out of the support 1 through the opening 12 of Figure 3, and the operator, at any time, can tear off the protruding end of the paper, across the edge of the opening.

The operator observes the workman whose efforts he is investigating, and, by means of the handle 28, swings the marker 24, so that the pointer 30 will cooperate with the appropriate one of the parts 32 (Figure 1) on the door 3. When the marker 24 is swung as aforesaid, the stylus 42 moves transversely of the paper 11 (Figure 5) and the line which the stylus traces on the paper is shifted laterally, accordingly. The result is that when a complete record is examined, one may ascertain at a glance how much time has been consumed in a particular operation, and whether or not the workman is soldiering on the job.

The device forming the subject matter of this application is simple in construction, but it will be found efficient for preparing a recording showing how the time of a workman is expended, or how the time consumed in any operation whatsoever is parceled out.

Having thus described the invention, what is claimed is:—

1. A recording means for use in connection with a paper-feed, the recording means comprising a support, a marker including a stylus, means for mounting the marker movably on the support, means carried by the marker whereby it may be shifted by an operator to assume different positions with respect to the paper which is being fed, and a single self-adjusting and automatically-acting mechanism independent of the stylus, for pressing the marker stylus against the paper, holding the marker in any position to which it has been shifted by an operator, and restraining the marker against movement, under the action of the moving paper, away from the position to which the marker has been shifted by an operator.

2. The recording means of claim 1 further characterized by the fact that said mechanism is carried by the marker and has contact at a fixed place with the support in spaced relation to the paper whereon the recording is done.

3. A recording means comprising a support, a pendulum marker, means for mounting the marker for swinging movement on the support, transversely of an axis, and for sliding movement longitudinally of said axis, and mechanism for automatically moving the marker longitudinally of said axis to cause the marker to cooperate with the material on which a mark is to be made.

4. The recording means of claim 3, further characterized by the fact that said mechanism embodies a spring-pressed member carried by the marker and engaging the support, the spring-pressed member being located in said axis.

5. A recording means comprising a support, a U-shaped marker comprising arms and a shaft connecting the arms, a bearing on the support, the shaft being mounted to rock in the bearing, whereby the marker can swing pendulum-wise, means on one arm whereby the marker can be swung by an operator, a stylus carried by the other arm, the shaft having longitudinal movement in the bearing, and means for automatically moving the shaft longitudinally in the bearing, to cause the stylus to cooperate with the surface to be marked.

6. A recording means comprising a support, a U-shaped marker comprising arms and a shaft connecting the arms, a bearing on the support, the shaft being mounted to rock in the bearing, whereby the marker can swing pendulum-wise, means on one arm whereby the marker can be swung by an operator, a stylus carried by the other arm, the shaft having longitudinal movement in the bearing, and spring-pressed means substantially housed in the shaft and engaging the support to impart longitudinal movement to the shaft and to cause the stylus to cooperate with the surface to be marked.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature.

FRANK BURDETTE POST.