

945,154.

Patented Jan. 4, 1910.

Fig. 1.

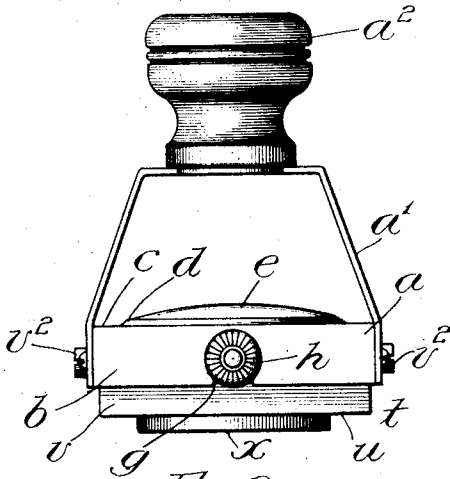


Fig. 2.

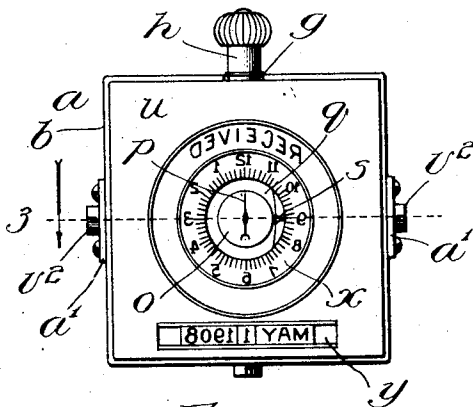
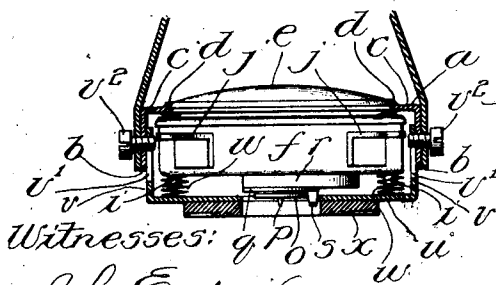


Fig. 3.



Witnesses: John Enders,
Chas. H. Bull.

Fig. 4.

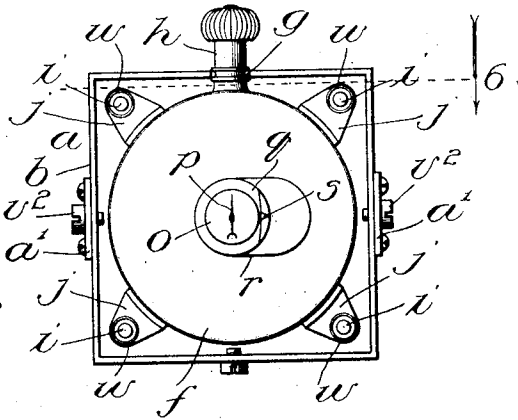


Fig. 5.

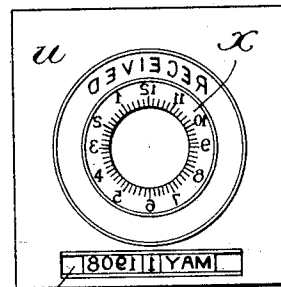
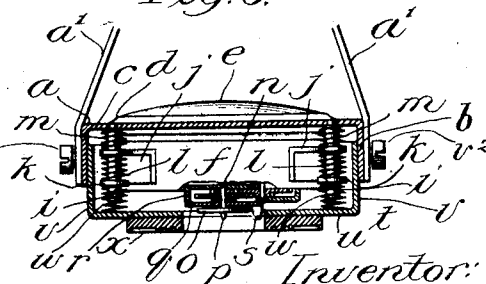


Fig. 6.



Inventor:
Charles S. Ellis.
By David H. Fletcher,
Atty.

UNITED STATES PATENT OFFICE.

CHARLES S. ELLIS, OF CHICAGO, ILLINOIS, ASSIGNOR TO ELLIS TIME STAMP COMPANY, A CORPORATION OF ILLINOIS.

TIME-STAMP.

945,154.

Specification of Letters Patent.

Patented Jan. 4, 1910.

Application filed June 2, 1908. Serial No. 436,623.

To all whom it may concern:

Be it known that I, CHARLES S. ELLIS, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Time-Stamp, of which the following is a description, reference being had to the accompanying drawings, forming a part of this specification, in which corresponding letters of reference in the different figures indicate like parts.

The object of my invention is to provide a simple, cheap and compact form of time-stamp in which the works of an ordinary watch may be so utilized as to enable the movable stamping-dies to be connected to the hour and minute hand arbors at the back of the case.

A further object is to utilize the dial printing die as a shield to protect the movable dies from injury by enabling them to be normally withdrawn out of the plane of the latter at all times except during the instant of making an impression.

Moreover, it is my purpose to cushion the several parts from shock and especially to protect the arbors upon which the movable dies are placed, from injurious or positive stress during the operation of stamping.

I accomplish said objects in the manner hereinafter more particularly described and particularly pointed out in the claims.

In the drawings, Figure 1 is a side elevation of a device embodying the features of my invention, Fig. 2 is a bottom view thereof, Fig. 3 is a view in which the outer case and the annular die are shown in section taken upon the line 3, Fig. 2, viewed in the direction of the arrow there shown, Fig. 4 is a bottom view showing the back of the watch case and movable dies, the annular die portion with its yielding frame being removed, Fig. 5 is a bottom view of said annular die portion, and Fig. 6 is a vertical sectional view of the outer frame taken upon line 6, Fig. 4, the inner or watch case proper, being shown partly in central section.

Referring to the drawings, *a* represents generally a frame portion formed from sheet metal and preferably rectangular in shape having a peripheral depending flange *b* and a flat upper face portion *c*, in which is formed a circular bezel *d*, Figs. 1, 3 and 6, for the reception of the usual watch crystal *e*. The watch case *f*, Figs. 3, 4 and 6, is in-

closed within the outer frame *a*, a notch *g*, Figs. 1, 2 and 4 being formed in the latter to receive the usual winding-stem *h* which projects therefrom. Four studs *i*, Figs. 3, 4 and 6 are rigidly attached to the inner face of the plate *c* and depend therefrom. These studs project loosely through perforations in laterally extended brackets *j* which are attached rigidly to the periphery of the watch case *f*. Shoulders *k*, Fig. 6, are rigidly attached to the studs *i* near their lower ends, and between said shoulders and the brackets *j* are interposed coiled springs *l*, while like springs *m* are interposed between said brackets and the plate *c*. This construction not only serves to hold the watch-case *f* away from the plate *c* but yieldingly suspended beneath the crystal *e* so that the hands may be seen the same as in any watch.

The minute hand arbor *n*, Fig. 6, is extended outwardly through the back of the case and has rigidly attached thereto a disk *o*, likewise shown in Figs. 2 and 4, to the face of which is secured a minute hand or stamping die *p* formed from rubber or other yielding material. The inner face of the disk *o* rests loosely against a disk *q*, Figs. 2, 3, 4 and 6, the perimeter of which bears loosely against a flange or casing *r* projecting downwardly from the lower plate of the watch case *f* and attached thereto. The disk *q* is provided with a projection *s* which forms a movable printing die intended to indicate the hour. Said disk *q* is connected by means of a train of gears, as indicated in Fig. 6, to the minute hand arbor, said gears corresponding to the usual train at the front of the watch and which are interposed between the hour and minute hand arbors. As a result of the action of said train, the die *s* is caused to complete its cycle once in twelve hours, while the die *p* corresponds in its movement to the minute-hand of the watch.

Loosely inserted within the casing *a*, from beneath, is a rectangular sheet metal casing, generally designated by *t*, which is provided with a flat bottom portion *u* having a central opening therein and upwardly extended flanges or side walls *v*. The latter are provided with vertical slots *v'*, Fig. 3, through which are loosely projected retaining screws *v''* which are tapped into the flanges *b*, and also pass through a rigid bail *a'* forming a support for a handle *a''*.

Coiled springs *w* are placed upon the lower ends of the studs *i* and bear against the plate *u* as well as against the shoulders *k*, thus serving to push the plate *u* downwardly in the position shown in Figs. 1, 3 and 6, the extent of downward movement being limited by the slots *v*.

An annular die *x*, Figs. 1, 2, 3, 5 and 6, is formed upon the lower face of the plate *u*, which die is formed from a suitable yielding material, such, for example as india rubber, and is intended to indicate the hours, minutes and such other matter as may be desired. Removable rubber type showing the day, month and year, may be inserted in a suitable slot *y*.

The operation of said device is as follows: The stamp is placed in the position shown in Fig. 1 with the annular die *x*, previously inked, resting upon the surface to be stamped. Upon applying a downward pressure to the handle, the annular die, with the case *v*, is caused to yield against the action of the springs *w* until its movement with reference to the case *a* is arrested by the shoulders *k*, which are so placed as to cause said arrest when the face of the die *w* and that of the dies *p* and *s* are in substantially the same plane; it being understood that said movement should be sufficient to permit a proper impression to be made by said dies *p* and *s*. The latter, being located directly upon the minute-hand arbor, it is of the utmost importance that provision should be made to protect said arbor from shock or undue stress, not only during the time of making an impression, but at all other times. Should the dies *p* and *s* tend to protrude too far when the movement of the plate *u* is arrested by the stops *k*, the stress which might otherwise be excessive, will be relieved by the springs *m*, which permit a sufficient yielding of the case *f* to provide for any variation which might otherwise occur. This also prevents pressure against the crystal. The springs *l* merely serve to hold the brackets

j against the springs *m*, thereby yieldingly maintaining the watch case in a normal position. The fact that the annular die *x* is normally held in a plane below that of the hour and minute marking dies, not only serves to protect the latter from injurious contact when the device is not in use, but, by its outward movement, tends to prevent the ink from accumulating in the space between the annular die and the others and clogging the latter, thereby tending to stop the watch.

By placing the moving dies directly upon the minute hand arbor, I am enabled to greatly simplify the construction and reduce the cost of the device while providing a very small compact and effective stamp.

Having thus described my invention, I claim:

1. In a time-stamp, the combination of a watch movement, hour and minute marking dies mounted upon the minute hand arbor at the back of the watch, gears for connecting said hour marking die with said minute hand arbor to cause an hourly rotation of said die, a dial stamping die having hour and minute divisions, and means for cushioning said hour and minute marking dies upon making an impression.

2. In a time-stamp, the combination of a watch-movement, hour and minute marking dies mounted upon the minute-hand arbor at the back of the watch, a dial stamping die having hour and minute divisions, said die being free to be moved in and out of a plane common to that of the other dies, and means for cushioning said last named dies upon making an impression.

In testimony whereof, I have signed this specification in the presence of two subscribing witnesses, this 29th day of May 1908.

CHARLES S. ELLIS.

Witnesses:

D. H. FLETCHER,
C. E. JORDAN.