M. SHERAS.

TIME STAMP.

APPLICATION FILED DEC. 12, 1918.

**1,332,959.** Patented Mar. 9, 1920.

Fig. 1.

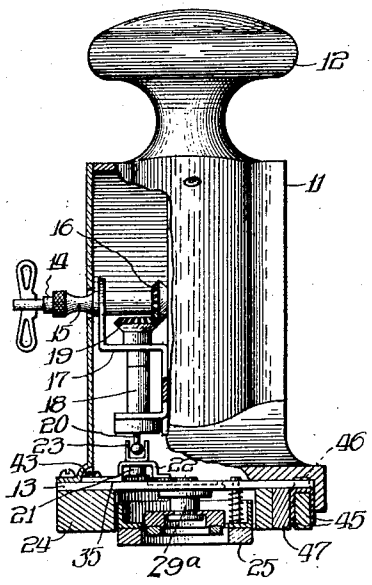



Fig. 2.

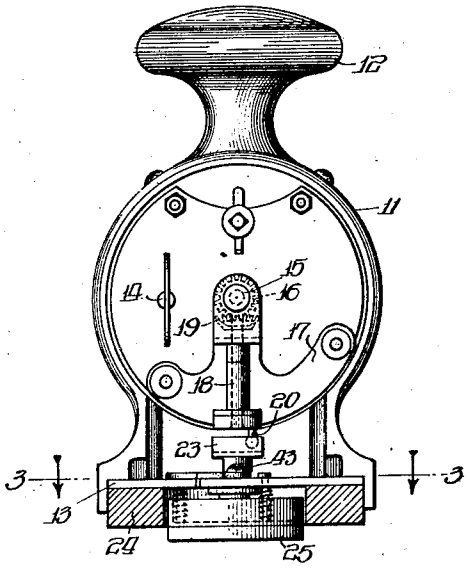



Fig. 4.

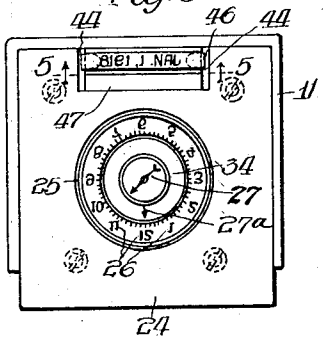



Fig. 3.

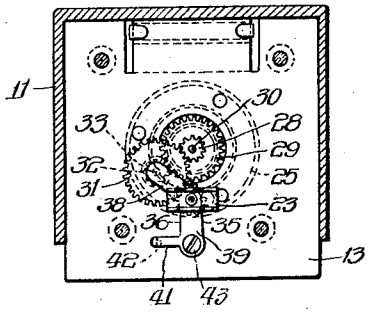



Fig. 5.

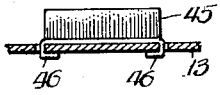
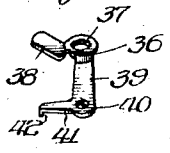



Fig. 6.




Witnesses:
A. J. Sauser.

Inventor:
Morris Sheras
By Cromwell, Greist & Warden
Attys.

# UNITED STATES PATENT OFFICE.

MORRIS SHERAS, OF CHICAGO, ILLINOIS.

## TIME-STAMP.

1,332,959. Specification of Letters Patent. Patented Mar. 9, 1920.

Application filed December 12, 1918. Serial No. 266,414.

*To all whom it may concern:*

Be it known that I, MORRIS SHERAS, 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-Stamps, of which the following is a specification.

This invention relates to impression stamps and particularly time stamps characteristic features of which are the horological or time train, the impression train, the driving connection between the two trains, permutation impression elements, a permanent impression pad, and a changeable date line.

Ordinarily considerable difficulty is experienced in so constituting the drive connection between the two gear trains as to avoid impairment of the mechanism by reason of the vertical blows incident to the use of such a stamp. This difficulty is met herein by the provision of a coupling in the drive which leaves the parts free for vertical relative movement without affecting the rotary engagement.

Another source of trouble in such stamps is the inconvenience of cleaning the gear elements of the impression train from the ink and other gumming agents which creep up about the permutation time impression elements into the gears. This is overcome according to the present invention by providing for the easy quick removal of such gear elements by means of a simplified form of mounting.

A further limitation of the usual hand stamp is due to the fact that the relation of all the component parts of the impression elements, time, permanent and date line, is fixed as to location; whereas some users would have a choice, for instance, as to the date being above or below certain other given data imprinted to the stamp. I provide for such preference by making the date line, for instance, adjustable as to position on the die plate, cutting out the pad to provide a space for range of placement and, after locating the date line, inserting a filler pad to complement the inserted date line in filling out the space.

By the provision above stated for adjustable relation of the date line to the permanent expression elements, the stamp-maker is enabled to accommodate the wishes of his customers in that regard and yet not be required to keep in stock a plurality of styles of die plates and impression pads, the adjustability of the type-retaining channel in the plate and the radial open space in the pad with the filler portion enabling him to meet all requirements in the make-up of stamps.

The features of the invention as herein above generally outlined and their coöperation to produce a stamp of signal superiority will be readily understood and appreciated by those skilled in the art as revealed in the accompanying drawing and in the following detailed description based thereon. It is obvious that the features of construction are susceptible to modification within a considerable range without the sacrifice of material advantages, and without departure from the essence of the invention, wherefore the drawing and description are to be taken in an illustrative rather than in an unnecessarily limiting sense. In the drawing—

Figure 1 is an edge elevation of the stamp having a portion thereof shown in vertical section;

Fig. 2 is a rear elevation of the stamp with the wall of the casing removed;

Fig. 3 is a plan section on the line 3—3 of Fig. 2;

Fig. 4 is a bottom plan view, omitting the impression pad except as to the permutation time impression elements and the date line.

Fig. 5 is a section on the line 5—5 of Fig. 4 and

Fig. 6 is a detailed perspective of the gear-retaining plate.

Having reference to the drawing in detail, the stamp case is indicated generally at 11 provided with the operating handle 12 and a base plate 13. The constructional details of the chronological or time motor have nothing to do with the invention and they are not herein illustrated. The winding arbor is indicated at 14 and the setting arbor at 15, the latter carrying a pinion 16 forming one of the elements of the time train. Suitably journaled in the bracket 17 is the vertical drive shaft 18 carrying the pinion 19 geared with the pinion 16 at its upper end, and, at its lower end the crank or wrist pin 20 concentrically disposed with reference to said shaft axis. The second vertically disposed drive shaft 21 has a footstep bearing in the face plate 13 and is journaled also in the bracket 22. This drive shaft 21 carries at its upper end a trough-like upwardly concave channel member 23, transversely fixed

to said shaft, the walls of which channel member are suitably spaced apart to provide therebetween slots within which the lower end of the wrist pin 20 engages loosely. It will be observed that the two head transmission shafts 18 and 21 are approximately alined vertically. The connection between the engaged ends of the two shafts by means of the wrist pin 20 and the channel member 23 is such as to render unnecessary an absolute alinement of the two shafts. The revolution of the wrist pin about the axis of the upper shaft causes a corresponding revolution of the channel member and a rotation of the lower shaft, the end of the wrist pin traveling from end to end of the channel member. This operation will be clear from an inspection of Figs. 1 and 2 of the drawing. Moreover, the loose engagement of the wrist pin 20 within the channel member 23 provides for a vertical movement of the two shafts, the wrist pin 20 being enabled to move up and down within the trough 23.

Upon the lower base of the face plate 13 is mounted the impression pad 24 for carrying the usual permanent impression elements such as the name and address of the user and such appropriate legends as "Received" or "Paid." Centrally of this pad 24 are mounted the permutation time impression elements indicated generally at 25, and including the hour indicating minute numerals 26 and the revoluble indicating hand 27 and hour hand $27^a$. The hands 27 and $27^a$ are driven by the impression gear train suitably mounted upon the upper face of the base plate 13 within the stamp case. As herein illustrated this train consists of the relatively movable pinions 28 and 29 on the shaft 30 and the relatively fixed pinions 31 and 32 upon the shaft 33. Shaft 30 extends through the plate 13 and carries the minute hand 27, whereas pinion 29 has a boss $29^a$ extending through said face plate and carries the hour hand $27^a$ within the space indicated by the reference numeral 34 in Fig. 4.

Shaft 21 carrying the channel member 23 at one end has mounted upon its opposite end the pinion 35 which is in mesh with the pinion 31 of the impression gear train, whereby the transmission drive connection constituted of the shafts 18 and 21 and their coupling 20—23 serves to drive the impression gear train from the horological train.

The difficulty encountered in devices of this sort has been due to the creeping of ink upwardly about the shaft 30 and the boss of the pinion 29 by gumming the impression gear train. If the various elements of this gear train be secured in the usual manner much inconvenience is experienced in dismounting them for cleaning. I provide for quick easy disassemblage in the manner following:

The base plate 13 is provided at a point corresponding to the axis of the pinion 32 with a recess or an equivalent stud which serves to position the pinions 31 and 32 properly in mesh with the pinions 28 and 29 and with the pinion 35 of the drive shaft 21. As the pinion 31 overlies the pinion 29 the latter is held in its proper position thereby being prevented from jumping out of place. To hold the pinion 31 in place, I provide a retaining plate indicated generally at 36, and shown in detail in Fig. 6, this retaining plate being apertured at 37 to surround and serve as a journal bearing for the shaft 21. An arm 38 of the plate overlies the pinion 31 while another arm 39 of the retaining plate is apertured at 40 for the reception of a screw by means of which the retaining plate is held in fixed relation to the shaft 21 and the pinion 31, said screw taking into the base plate 13. In some cases the foot-step bearing in the shaft 21 in the base plate 13 may be omitted, in which event the retaining plate is provided with an additional arm 41 having a downturned end 42 adapted to engage in the recess in the base plate whereby angular shifting of the retaining plate 36 is prevented. Obviously, all of the arms 38, 39 and 41 may be consolidated by the employment of a date of considerable area instead of cutting the same out to provide lightness the essential feature being that there shall be a portion overlying the impression gear train element and also a point of attachment to the base plate eccentric of the shaft 21.

It will be observed that by reason of the construction outlined above, the elements of the impression gear train may be quickly removed for cleaning by merely removing the one screw 43 from engagement with the base plate at the aperture 40 and swinging the said retaining plate so as to bring the arm 38 from its overlying relation to the pinion 31, the shaft 21 serving as an axis upon which the retaining plate is shifted. It is equally clear that if it is desired to remove the retaining plate and the shaft 21 with the channel member 23 it can be done in a lateral direction after removing the screw 43.

Oftentimes the data carried by the pad 24 is required to be substituted by other matter, using the same stamp. In rearranging of the matter upon the stamp it may be desired to change certain portions, as for instance, the date line, to bring the same above or below other matter as, for instance, the legend "Paid" or "Received." In order to effect this, I provide herein an arrangement whereby the date line may be changed as to position. The base plate 13 is provided with parallel approximately radial slots 44, and a form of known channel member for holding the date type, indicated

herein at 45, the same having lips at each end for entering the slot and advantageously flanged over as indicated at 46 in Fig. 5, whereby the said type retaining channel may be moved backward and forward in the slot to a greater or less distance from the center of the pad. In order to permit of such adjustable relation, the pad 24 is cut away to provide a considerable open space corresponding to that embraced between the slots 44 as clearly shown in Fig. 4, and a removable filler pad member 47 is provided, which, together with the type-retaining member 45, serves to fill out said space. If the date line is desired at a point of the stamp farthest removed from the center the arrangement would be that indicated in Fig. 4, whereas if the user desires to bring the date line nearer the center of the pad the relative positions of the filler pad 47 and the type-retaining member 45 would be reversed. The legends "Paid" or "Received" may be advantageously mounted upon this filler pad member 47 thus providing for the placing of the date above or below such legends.

It will thus be appreciated that I have provided in a hand stamp a device simple in construction and inexpensive in character; a drive connection between the horological motor and the impression gear train which does away with the requirement for exactitude in the alining of the two shafts and also guards against impairment of the mechanism by means of vertically transmitted blows; also a simplified mounting of the gear elements of the impression train whereby the same may be readily removed for cleaning and easily reassembled; also a mounting of the date line on the pad which enables it to be readily adjusted in its relation to the other elements of the impression.

I claim:

1. In a time stamp, the combination with a horological motor, its gear train, and the impression gear train, of a driving connection therebetween comprising two approximately alined shafts, two pinions carried one by each of the shafts and in mesh with one of the trains, the two shafts carrying at their adjacent ends one a transversely disposed member providing a slot and the other an eccentrically disposed wrist pin engaging within the slot.

2. In a time stamp, the combination with a horological motor, its gear train, and the impression gear train, of a driving connection therebetween comprising two approximately alined vertical shafts, two pinions carried one by each of the shafts and in mesh with one of the trains, a concave channel member fixed on the end of one of the shafts transversely thereof, and a wrist pin eccentrically mounted on the end of the other shaft and engaging within the channel member.

3. A mounting for gear train elements comprising a base plate, the said plate and certain of the gear elements having coöperating positioning bosses and recesses, a retaining plate pivoted at the axis of one of the gear elements and having an arm overlying the others of the gear elements to retain them in the interlocked bearing engagement with the base, and means eccentrically disposed relative to the pivot point to secure the plate to the base.

4. A mounting for gear train elements comprising a base plate, the base plate and certain of the gear elements having coöperating positioning bosses and recesses, a retaining plate overlying the gear elements to retain them in bearing relation with the base, means to secure the plate to the base at a single point eccentric to the gear elements, and an interlocked engagement between the plate and base at yet another point.

5. A mounting for gear train elements comprising a base plate, the base plate and certain of the gear elements having coöperating positioning bosses and recesses, certain of the gear elements overlying others of the said elements to retain them in bearing engagement with the base, a retaining plate having one portion overlying the uppermost gear element to prevent disengagement thereof from the base, said retaining plate having interlocked engagement with the plate at another point to prevent angular shifting, and means for removably securing the plate to the base at yet another point.

6. In a time stamp, the combination with a horological motor, its gear train, and the impression gear train, of a driving connection therebetween comprising two approximately alined shafts, two pinions carried one by each of the shafts and in mesh with one of the trains, the two shafts carrying at their adjacent ends one a transversely disposed member providing a slot and the other an eccentrically disposed wrist pin engaging within the slot, a mounting for the impression gear train elements comprising a base plate, the said plate and certain of the gear elements having coöperating positioning bosses and recesses, a retaining plate overlying the gear elements to retain them in the interlocked bearing engagement with the base, and eccentrically disposed means to secure the plate to the base.

7. In a time stamp, the combination with a horological motor, its gear train, and the impression gear train, of a driving connection therebetween comprising two approximately alined vertical shafts, two pinions carried one by each of the shafts and in mesh with one of the trains, a concave channel member fixed on the end of one of the shafts transversely thereof, and a wrist pin eccentrically mounted on the end of the

other shaft and engaging within the channel member, a mounting for the impression gear train elements comprising a base plate, the base plate and certain of the gear elements having coöperating positioning bosses and recesses, a retaining plate overlying the gear elements to retain them in bearing relation with the base, means to secure the plate to the base at a single point eccentric to the gear elements, and an interlocked engagement between the plate and base at yet another point.

8. In a time stamp, the combination with a horological motor, its gear train, and the impression gear train, of a driving connection therebetween comprising two approximately alined vertical shafts, two pinions carried one by each of the shafts and in mesh with one of the trains, a concave channel member fixed on the end of the lower shaft transversely thereof, and a wrist pin eccentrically mounted on the end of the other shaft and engaging loosely within the channel member, a mounting for the impression gear train elements comprising a base plate, the base plate and certain of the gear elements having coöperating positioning bosses and recesses, certain of the gear elements overlying others of the said elements to retain them in bearing engagement with the base, a retaining plate having one portion overlying the uppermost gear element to prevent disengagement thereof from the base, said retaining plate having interlocked engagement with the plate at another point to prevent angular shifting, and means for removably securing the plate to the base at yet another point.

9. In a time stamp, the combination with a horological motor, its gear train, and the impression gear train, of a driving connection therebetween comprising two approximately alined vertical shafts, two pinions carried one by each of the shafts and in mesh with one of the trains, a concave channel member fixed on the end of the lower shaft transversely thereof, and a wrist pin eccentrically mounted on the end of the other shaft and engaging loosely within the channel member, a mounting for the impression gear train comprising a base therefor having a recess, that gear element of the impression train in mesh with the drive pinion having a concentric boss seated within the recess, a retaining plate providing a journal bearing for the lower drive shaft and having an eccentrically disposed portion overlying the said impression train gear elements, means securing the plate to the base eccentrically of the drive shaft bearing, and means consisting of a stud on the plate engaging a recess in the base to prevent angular shifting of the retaining plate.

10. In a stamp, a die plate to carry a permanent impression pad, said pad cut away to provide a considerable open space extending in a substantially radial direction from the central portion thereof, a mounting for changeable impression elements adjustable radially within the space, and a second permanent impression pad portion complementing the said mounting to fill out said space whereby to impart to the changeable impression element an adjustable relation to the two permanent portions of the impression pad.

11. In a stamp, a die plate to carry a permanent impression pad, said pad cut away to provide a considerable open space extending in a substantially radial direction from the central portion thereof, the die plate provided with radial parallel slots within the pad open space, a type-retaining channel member having lips slidably engaging within the slots, and a second permanent impression pad portion complementing the said mounting to fill out said space whereby to impart to the type-retaining channel member an adjustable relation to the two portions of the impression pad.

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

MORRIS SHERAS.

Witnesses:
L. T. GREIST,
MARY C. BROWER.