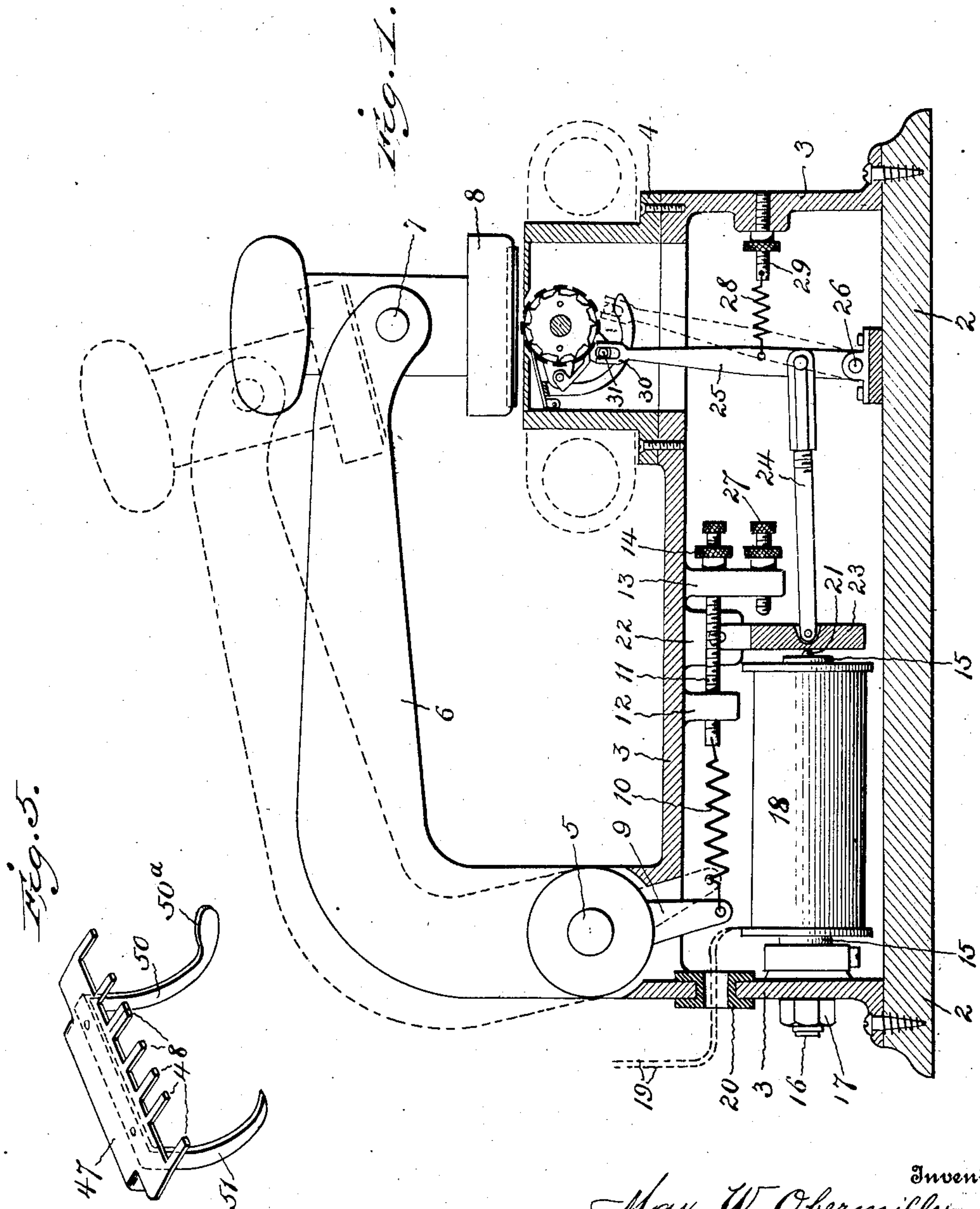


916,001.

Patented Mar. 23, 1909.
2 SHEETS—SHEET 1.



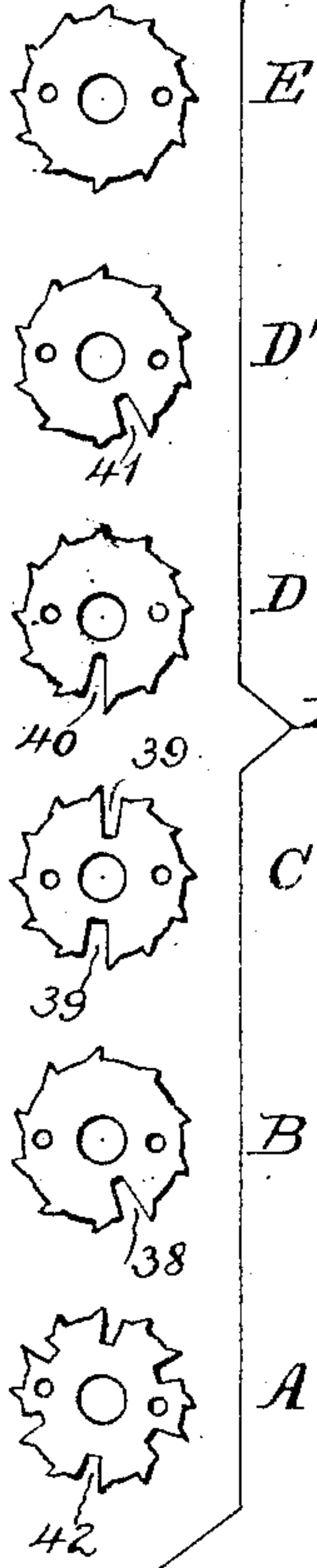
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APPLICATION FILED NOV. 18, 1908.

Patented Mar. 23, 1909.

2 SHEETS—SHEET 2.



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UNITED STATES PATENT OFFICE.

MAX W. OBERMILLER, OF NEW YORK, N. Y.

TIME-STAMP.

No. 916,001.

Specification of Letters Patent.

Patented March 23, 1909.

Application filed November 18, 1908. Serial No. 463,258.

To all whom it may concern:

Be it known that I, MAX W. OBERMILLER, a citizen of the United States, residing at New York city, in the county and State of New York, have invented certain new and useful Improvements in Time-Stamped; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

My invention relates to time stamps, and has for its object to provide such a stamp which can be connected to any suitable electrically operated clock system, and in which the type wheels cannot be accidentally moved during use.

Referring to the drawings, in which like parts are similarly designated—Figure 1 is a vertical longitudinal section through the case showing the main operative parts in elevation. Fig. 2 is a section through the type wheel mechanism on line $x-x$ of Fig. 4, showing the type wheels in locked position. Fig. 3 is an end view. Fig. 4 is a bottom view. Fig. 5 is a perspective view of the locking pawls and their actuating levers. Fig. 6 is a view of the various ratchet wheels, and Fig. 7 views of the pawls that operate said ratchet wheels.

Referring more particularly to Fig. 1, 2 is the base plate to which is secured the substantially rectangular base frame 3 in which is contained the parts for operating the type wheel mechanism and on which is secured a casing or printing frame 4 containing the type wheel mechanism, the type when in printing position projecting through an opening in the top of frame 4, as is customary. In the usual and well known manner I pivot at 5 in the base frame 3 a swinging platen arm 6 in whose free end is pivoted or otherwise secured, as at 7, a platen head 8. Depending from the platen arm 6 is a limiting lug 9 to which is connected one end of a retracting spring 10 whose other end is connected to an adjusting screw 11 mounted in lugs 12 and 13 depending from the top of the base frame. This spring normally holds the arm 6 in the dotted line position. The screw 11 is locked by lock-nut 14. The core 15 of the solenoid is threaded at one end, 16, which threaded end passes through the rear of base

frame 3 and is rigidly held thereto by a nut 17. The other end of the core 15 supports the solenoid 18. The electric conductor wires 19 to which the ends of the solenoid winding are secured pass through an insulating bushing 20. On the other end of the core 15 is an ivory, bone, or other suitable point 21 to prevent the armature from sticking to the core after the current has ceased passing through the solenoid. At the sides of the base frame 3 are lugs 22 in which is pivotally mounted the swinging armature 23. This armature has pivoted to it one end of an adjustable connecting rod 24 whose opposite end is pivotally connected to an actuating lever 25 pivoted at its lower end at 26 in a suitable bearing connected to the base 2. In a lug 13 depending from the top of the base frame 3 is a set screw 27 to limit the movement or swing of the armature 23. The lever 25 is urged against the pull of the armature by a spring 28 connected to an adjustable screw 29. The lever 25 carries at its upper end a fork 30 which engages a rod 31 mounted to swing about the center of the type wheels mounted in the printing frame 4.

Referring now to Figs. 2, 3 and 4, I have shown a plurality of type wheels independently movable about a shaft 32, and, for the purposes of illustration, I have shown type wheels for the month, the units and the tens of the days of the month, for the hours, for the units and for the tens of the minutes, for time of day, whether A. M. or P. M., and for the year. The two end type wheels, *i. e.*, those containing the months and the year, are not automatically movable, but are set by hand; the remaining wheels operate automatically by means of mechanism to be described. The rod 31 that is actuated by the lever 25, is mounted in arms 33 of an oscillating frame 34. In the frame 34 is pivoted on a pin 35 a set of pawls 36, Fig. 7, urged by a coil spring 37 against the ratchet wheels pertaining to the several type wheels that are to be automatically actuated. Connected to each of the type wheels or forming a part thereof there is a ratchet wheel. These ratchet wheels are shown in Fig. 6 while the respective pawls for actuating them are shown in Fig. 7. The longest pawl, *i. e.*, the pawl that is to operate the units of the minutes, is the pawl *b* cooperating with its ratchet wheel B that is provided with a notch 38, so that when the pawl enters this notch it allows the next longest pawl *c* to

engage its ratchet wheel C, so that both the units of minutes and the tens of minutes will be rotated one step simultaneously. The ratchet wheel C, pertaining to the tens of minutes, has two notches 39, and the periphery of the wheel between the notches is divided from zero to six. When the notches 38 and 39 are in alinement the pawls *b* and *c* enter them and permit the third longest pawl *d* to engage its ratchet wheel D, and thus rotate the hour wheel one step. The hour ratchet wheel D is provided with a notch 40, and when the notches 38, 39 and 40 are in alinement, the pawl D enters this notch and permits the pawl *d'* adjacent the pawl *d* to engage ratchet wheel D' and thus rotate the units of days one step. The ratchet wheel D' is also provided with a notch 41, which when in alinement with the other notches permits the pawl *e* to engage its ratchet wheel E and rotate the tens of days wheel one step. The pawl *a* engages the ratchet wheel A provided with notches 42, which ratchet wheel contains alternately the designations A. M. and P. M., and is moved one step every twelve hours. Riding on the several ratchet wheels are pawls 43, urged by leaf springs 44 that are held in place by a bar 45. These pawls prevent the ratchet wheels from being reversely turned. Mounted in the frame 4 is the rod 46 on which is pivoted a locking pawl frame 47 carrying locking pawls 48, one for each ratchet wheel. These pawls are simultaneously urged into engagement with their respective wheels by coil spring 49. The frame carries two cam arms 50 and 51, each acted upon by an end of the shaft or bar 31, which is directly moved by the actuating lever 25. The arm 50 curves beneath one end of the rod 31 and has an upper cam face 50^a so that when the bar 31 is swung to oscillate from 34 to the position shown in Fig. 2, this cam face is moved down to move and hold the detent pawls 48 into engagement with their respective ratchet wheels when the actuating pawls have completed or about completed their operative swinging, and upon a reverse motion, *i. e.*, to the position shown in Fig. 3, the other end of the rod 31 engages the lower faces of the cam arm 51 to positively lift these detent pawls to permit the actuating pawls 36 to move the respective ratchet wheels one step before locking the wheels against movement.

The detent pawls 43 prevent the reverse movement of the ratchet wheels at any time, but the pawls 48 lock the wheels into the position to which they have been moved by the pawls 36 and prevent any accidental movement of the type wheels between the periods of movement, *i. e.*, as here indicated, periods of one minute. Any other time interval may be chosen to suit the time interval of the particular clock system with which the stamp is to be connected.

The two end type wheels, for the months and for the years, and which are rotated by hand, are provided with ratchet wheels E' and E'', similar to the one E and are engaged by pawls 43 and 48 to prevent their accidental movement.

It will be observed that the locking pawls 48 and their frame 47 are positively moved into and out of locking position by the oscillation of the actuating pawl frame 34 that carries the rod 31.

I claim:—

1. In a time stamp the combination with the type wheels and their pertaining ratchet wheels, oscillating pawls cooperating with ratchet wheels to rotate them and a frame in which said pawls are mounted; of locking pawls and means operated by the movement of the oscillating pawl-frame to positively move the locking pawls into and out of locking position.

2. In a stamp the combination with the type wheels and their pertaining ratchet wheels, an oscillating pawl frame and progressing pawls therein cooperating with one or more of the ratchet wheels to rotate them; of locking pawls and means operated by the movement of the oscillating pawls and frame to positively move the locking pawls into and out of operative position and force the locking pawls against their respective wheels at the end of the travel of said pawl frame.

3. In a stamp the combination with the type wheels and their pertaining ratchet wheels, an oscillating pawl frame and pawls therein cooperating with one or more of the ratchet wheels to rotate them; of locking pawls, cams for operating said pawls, and means carried by the oscillating pawl frame to engage the cams to simultaneously and positively move the locking pawls into and out of engagement with the ratchet wheels.

4. In a time stamp the combination with the type wheels and their pertaining ratchet wheels and an oscillating pawl frame; of a rod carried in said frame, a locking pawl frame having locking pawls and cams thereon, said cams being located in the path of said rod whereby the locking pawl frame is positively moved by said rod to move the locking pawls into and out of locking position with respect to the ratchet wheels.

5. In a time stamp the combination with the type wheels and their pertaining ratchet wheels and an oscillating pawl frame having arms; of a rod carried in the arms of said frame and projecting there through a locking pawl frame having locking pawls and two cam arms extending in the path of the projecting ends of said rod, and a spring engaging the locking pawl frame to urge its pawls into engagement with the ratchet wheels.

6. In a time stamp, the combination with the type wheels, their pertaining ratchet

wheels and detent pawls, and an oscillating
progressing pawl frame; of a rod carried by
said frame, locking pawls movable as a unit,
two cam arms on said locking pawls located
5 in the path of said rod, the cam face of one of
said arms being above and the other below
said rod and one of the arms provided with an
enlarged cam face at its end, whereby the
locking pawls are forced into engagement

with their respective wheels at the end of the 10
progressing movement of the wheels.

In testimony that I claim the foregoing as
my invention, I have signed my name in
presence of two subscribing witnesses.

MAX W. OBERMILLER.

Witnesses:

W. HOMMEL,

GEORGE A. WARD.