

F. WOSINSKI.  
 NUMBERING MACHINE.  
 APPLICATION FILED JUNE 19, 1908.

943,210.

Patented Dec. 14, 1909.

Fig. 1

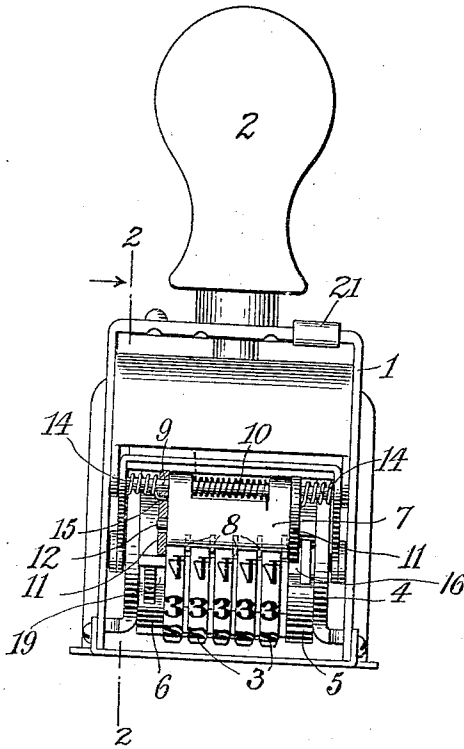


Fig. 2

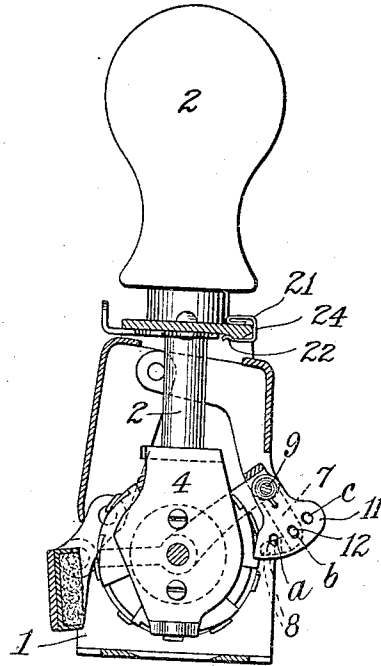


Fig. 4

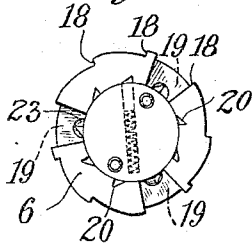


Fig. 3

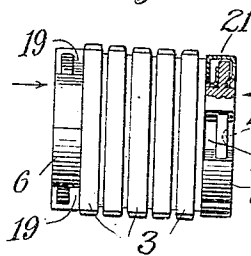


Fig. 5

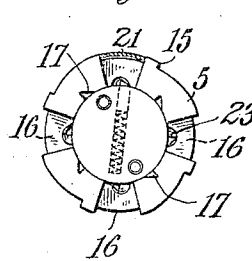
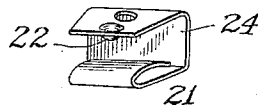


Fig. 6



Witnesses:  
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*Frank Wosinski* Inventor  
*By his Attorney* *W. Schenck*

# UNITED STATES PATENT OFFICE.

FRANK WOSINSKI, OF BROOKLYN, NEW YORK.

## NUMBERING-MACHINE.

943,210.

Specification of Letters Patent.

Patented Dec. 14, 1909.

Application filed June 19, 1908. Serial No. 439,343.

*To all whom it may concern:*

Be it known that I, FRANK WOSINSKI, a subject of the Emperor of Germany, and a resident of the borough of Brooklyn, county of Kings, and State of New York, have invented certain new and useful Improvements in Numbering-Machines, of which the following is a specification.

My present invention relates in general to numbering machines and more particularly to a numbering machine adapted to number consecutively, to duplicate and repeat, also if desired to perform many other combinations and has for its object, first, improved means for adjusting the idle pawl or pawls in setting the machine to execute the desired combination, second, an improved idle wheel, or attachment therefor, adapted to modify at will the number of spaces in said wheel to bring about additional effects or combinations; and third, a plurality of idle wheels combined so as to make possible still further new effects or combinations.

In the drawings which show only one of the forms which my present improvements in each instance may take, Figure 1 is a front elevation of a hand numbering machine embodying my improvements; Fig. 2 is a view partly in elevation and partly in vertical section on the line 2—2 in Fig. 1 looking in the direction of the arrow; Fig. 3 is a front elevation partly in section of the numbering wheels and idle wheels assembled on their supporting barrel and detached from the rest of the machine, same showing a clip 21, hereinafter described; Fig. 4 is an end elevation looking at the left hand end of Fig. 3; Fig. 5 is an end elevation looking at the right hand end of Fig. 3; and Fig. 6 is a perspective view of the clip forming part of my present improvements.

Describing now my invention with particular reference to the devices of the drawings, it may be prefaced at the start that my several improvements may be applied to numbering machines of varying type, that shown being merely one particular form of numbering machine selected as convenient for the purpose of illustrating my improvements in combination therewith. Thus the machine shown is a well known type, requiring in consequence only brief description, as comprising a frame 1, a normally elevated connected handle and plunger 2,

adapted to be down-pressed to carry with it the numbering wheels 3 and to cause operation of said wheels and the printing of the number at the bottom of its stroke. For this purpose the lower end of the plunger is provided with a yoke 4 between the sides of which are operatively supported in well known manner the rotating numbering wheels 3. At either end of the row of numbering wheels is an idle wheel 5 and 6 rotatably mounted in suitable manner as well known.

7 is a pawl frame, carrying as usual pawls 8 of graduated length to properly operate the numbering wheels. The pawl frame shown is pivotally supported on rod 9 and is spring-pressed by spring 10 to carry its pawls toward the numbering wheels.

At each end of the pawl frame in position to engage the idle wheels is an idle pawl 11. Each idle pawl has a series of openings *a*, *b* and *c*, into any one of which is adapted to be adjusted a projection 12 from either end of the pawl frame.

No novelty is claimed for the mechanism thus far described, except as follows. First, the mounting of the idle pawl or pawls 11 is new, whereby their adjustment is facilitated to locate one or other of the openings *a*, *b*, and *c* over the projections 12 on the pawl frame, and second, it is new to have a plurality of idle wheels working in combination, all as hereinafter described.

Taking up first the improved mounting of the idle pawl, same consists in so mounting the pawl on the rod 9 that its outer end may be pivoted about its inner end as a center to and away from the pawl frame projection 12. This is accomplished in convenient manner by making the opening through the pawl which receives the rod 9 suitably larger than said rod to permit the pawl to rock sidewise thereon as if on a pivot, whereby the outer end of the pawl can be moved sufficiently far to clear the end of the pawl-frame projection 12 and can then be shifted to receive said projection in another opening in the pawl. To give the pawl a normal tendency toward the pawl-frame, a spiral spring 14 is provided surrounding the rod 9 and having one of its ends 15 inserted or locked in an opening in the pawl, whereby the pawl automatically snaps into engagement with the projection 12 on the pawl frame whenever one of its openings *a*, *b* or *c* is presented to said projection. The described mechanism

for securing the pivotal operation of the idle pawls to effect their adjustment is found most convenient and advantageous for the purpose.

5 Describing next the plural idle wheel feature of my invention, in the particular device shown there are two idle wheels differing from each other as follows. The idle wheel 5 has eight equi-distant ratchet-teeth 15 with  
10 four equi-distant spaces 16. Moreover it has eight hub-pin engaging notches 17 whereby eight partial turns cause the wheel to make one complete revolution. The idle wheel 6 differs in having nine ratchet teeth  
15 18 and three equi-distant teeth spaces 19 and has nine hub-pin engaging recesses 20, whereby nine partial turns cause the wheel to make one complete revolution. Each of these idle wheels if allowed to act independently, functions the same as the heretofore  
20 known idle wheel in the respect that when the idle pawl is adjusted into its duplicate or corresponding position relative to the pawl-frame, the idle wheel permits said pawl whenever a tooth space is presented, to drop  
25 into it, and so permits the pawls of the pawl frame to engage and operate the numbering wheels to shift them to the next number, whereas as long as the idle pawl rides on the high part of the idle wheel intermediate the  
30 tooth spaces, the pawls of the frame are held out of operative contact with the numbering wheels, which accordingly remain unchanged and consequently the same number is repeated for as many times as there are ratchet  
35 teeth on the idle wheel between adjacent spaces. Thus the four-space idle wheel 5 with two intermediate ratchet teeth between adjacent spaces will give a series of numbers in duplicate when operated by itself as usual.  
40 Similarly the other idle wheel 6 having three spaces with three ratchet teeth intermediate adjacent spaces will give numbers in triplicate. To obtain these results with the single idle wheel and pawl is of course well known,  
45 but my present invention differs in combining a plurality of different idle wheels, whereby results are obtained not possible with either wheel acting separately. Thus  
50 with the four and three space wheels shown, it is possible to obtain repetitions in sixes by adjusting both idle pawls to their middle position so that they are both in action. Thus  
55 assuming that both wheels start even with each a space opposite a space in the other wheel, and both wheels having received two partial turns, the idle pawl of the four-space wheel 5 will be opposite a space in said  
60 wheel, but cannot drop into it to operate the number wheels because the pawl of the other idle-wheel 6 is still on an elevated part of that wheel and will not reach a space until a third partial turn has been given to the wheel. Similarly even after the third partial  
65 turn has been given to the three space

wheel, its pawl cannot drop into the space of that wheel because the pawl of the other wheel is now on a raised portion of the four space wheel, since the four space wheel must receive four partial turns before a space is  
70 presented to the idle pawl and as a matter of fact has only received three. Similarly even when four partial turns have been given to both wheels, the pawl frame cannot come into engagement with the numbering wheels  
75 because, although a space in the four space wheel is presented to its idle pawl, a high place in the third space wheel is presented to its pawl and a space in said last named wheel will not be presented until said wheel has  
80 been given two more partial turns. In other words, until it has made six partial turns or has passed through two-thirds of a revolution. When this happens, the four space wheel will also present a space to its pawl because  
85 said wheel, like the three space wheel, will also have made six partial turns and when this happens will have turned through three-fourths of a revolution and will therefore likewise present a space to its idle pawl.  
90 Consequently for the first time from the beginning, which is after six partial turns, both wheels will present spaces to their idle pawls and consequently will permit for the first time the pawl frame to come into oper-  
95 ating contact with the numbering wheels to change them to the next higher number. Thereafter the same condition will continue indefinitely, which is that spaces on both idle-wheels will be presented simultaneously  
100 to the idle pawls only after each six partial turns of said wheels,—in other words, after each six down-strokes of the handle and plunger 2, whereby the numbers will be printed in repetitions of six. Thus the two  
105 idle wheels of different kind, one odd and the other even, act in combination to give a result not possible with either wheel acting alone, although the mechanism is such that either wheel can be permitted to act alone by  
110 adjusting the idle-pawl of the other wheel to its "a" or "consecutive" position, thereby throwing said other pawl out of operation.

An additional feature of my present improvements comprises means whereby the  
115 spaces in a given idle wheel may be filled in to obtain additional combinations. Said space filling means may take a variety of forms, which it is my object to cover broadly, the form thereof shown comprising a clip  
120 21 bent up out of sheet metal and adapted to straddle the web of the idle wheel in one of the spaces and to have a snap connection therewith by reason of a projection 22 on the clip snapping into a recess 23 in the idle  
125 wheel. When the clip is thus snapped into position, its top 24 bridges over the wheel-space to prevent the idle pawl from dropping into it when said pawl engages this part of the wheel. It follows that these  
130

clips can be manipulated in connection with the idle wheels to vary the number and arrangement of the spaces to bring about corresponding variations in effects possible with said wheels. Thus the four space wheel 5 with eight partial turns to the revolution thereby giving with properly adjusted idle pawl a series of numbers in duplicate can be changed to give a series of numbers in quadruplicate by the simple act of adjusting two clips 21 in opposite spaces on said wheel. Similarly a three space wheel 6 with nine partial turns to the revolution thereby giving with properly adjusted idle pawl a series of numbers in triplicate may be made to give numbers in repetitions of nine by filling in two of the spaces with clips. These clips in the particular form shown are separable from the wheels and when not in use are secured or clipped to the edge of the top of the frame 1 of the machine, but it will be understood that said clips so far as their function is concerned may just as well form a connected part of the idle wheels, any connection therewith being suitable which will permit the clips to be put into and out of space-occupying position at will. When the clips are employed with the plural combination of idle wheels forming part of this invention as heretofore described, many additional effects are easily obtainable. For example in a machine fitted like that shown with the three and four space idle wheels 5 and 6, numbers in repetitions of twelve can be obtained by adjusting clips into two opposite spaces on the four space wheel and adjusting the idle pawls into their "b" or "duplicating" position, whereby both pawls are in action. This combination gives repetitions of twelve, because it takes twelve partial turns of each wheel before they both present spaces to their pawls to permit same to drop to allow the number-wheel pawls to operate to change said wheels to the next higher number, and since each partial turn of the idle wheels represents one down-thrust of the handle and plunger 2, it follows that the same number will be printed twelve times and then changed to the next higher, which in turn will be repeated twelve times, and so on. Similarly the four space wheel with clips filling two opposite spaces when operated in combination with the three space wheel with two of its spaces occupied by clips, gives the same combination as a two space wheel with eight partial turns to the revolution acting in combination with a one space wheel with nine partial turns to the revolution, which is that numbers are repeated in repetitions of thirty-six at a time. Similarly operating the two wheels in the same combination just named with the exception that the two clips are removed from the four space wheel gives repetitions of the same number eighteen at a time. Similarly

by other adjustments of the clips to the numbering wheels, many other combinations and effects are possible.

Having thus described my invention, what I claim is:

1. In a numbering machine, the combination of numbering wheels, a pawl frame having pawls adapted to operate said numbering wheels, said frame being pivotally supported on a rod and having an end projection, an idle wheel, an idle pawl having an opening through its base through which it receives the aforesaid rod, said opening being adapted to permit the pawl to pivot about its basal end to and away from the projection on the pawl frame and in the direction of the length of said rod, said pawl having a series of adjustment apertures adapted severally to receive said projection, and a spiral spring surrounding said rod and having its end next the idle-pawl located in an opening in the side of the said pawl and toward its apertured end.
2. In a numbering machine, the combination of numbering wheels, a pawl frame having pawls adapted to operate said numbering wheels, said frame being pivotally mounted and having a projection therefrom, an idle wheel, an idle pawl adapted to engage said wheel and having apertures adapted to receive the pawl frame projection in different positions of adjustment, said idle pawl being pivotally supported to permit its apertured portion to be pivoted toward and away from the pawl frame projection to seat or unseat said projection into or out of an aperture of the pawl, said pawl being spring-pressed to give its apertured portion a normal tendency toward said projection.
3. In a numbering machine the combination of numbering wheels, a pawl frame carrying pawls adapted to operate said numbering wheels, a plurality of idle wheels of different nature, a plurality of idle pawls adapted to engage said idle wheels and through connection with the pawl frame to determine the action or non-action of the numbering wheel pawls on the numbering wheels.
4. In a numbering machine the combination of numbering wheels, a pawl frame having pawls adapted to contact with and operate said wheels, a plurality of idle wheels one having an odd number of spaces and requiring an odd number of partial turns to the revolution, and the other having an even number of spaces and an even number of partial turns to the revolution, idle pawls adapted to engage said idle wheels and adapted to be connected with the pawl frame to control the contact of the pawls of said frame with the numbering wheels, the idle pawls permitting said contact and the operation of the numbering

wheels only when the idle wheels simultaneously present spaces to the idle pawls.

5 5. In a numbering machine, the combination of numbering wheels, a pawl frame having pawls adapted when in engagement  
10 with the numbering wheels to operate them, a space-provided idle wheel, an idle pawl adapted to engage the idle wheel and to be connected with the pawl frame to permit  
15 the numbering wheel pawls to operate the numbering wheels depending upon whether the idle pawl is in or out of a space on the idle wheel, and a space-filling device removably insertible to fill a space in the idle wheel.

20 6. In a numbering machine, the combination of numbering wheels, a pawl frame having pawls adapted when in engagement with the numbering wheels to operate them, an idle wheel, an idle pawl adapted to engage the idle wheel and to be connected with the pawl frame to permit the numbering wheel pawls to operate the numbering

wheels depending upon whether the idle pawl is in or out of a space on the idle wheel, and a space-filling device adjustable to fill a space in the idle wheel, said device comprising a clip separable from the wheel and adapted to have resilient connection therewith in space filling location. 25 30

7. In a numbering machine, the combination of numbering wheels, a pawl frame carrying pawls adapted to operate said numbering wheels, an even spaced idle wheel, an odd spaced idle wheel, and idle pawls adapted to engage said idle wheels and to be connected with the pawl frame to determine the action or non-action of the numbering wheel pawls on the numbering wheels. 35

In witness whereof, I have signed my name to the foregoing specification in the presence of two subscribing witnesses. 40

FRANK WOSINSKI.

Witnesses:

FRANK E. CAMPBELL,  
GEORGE M. KIDDER.