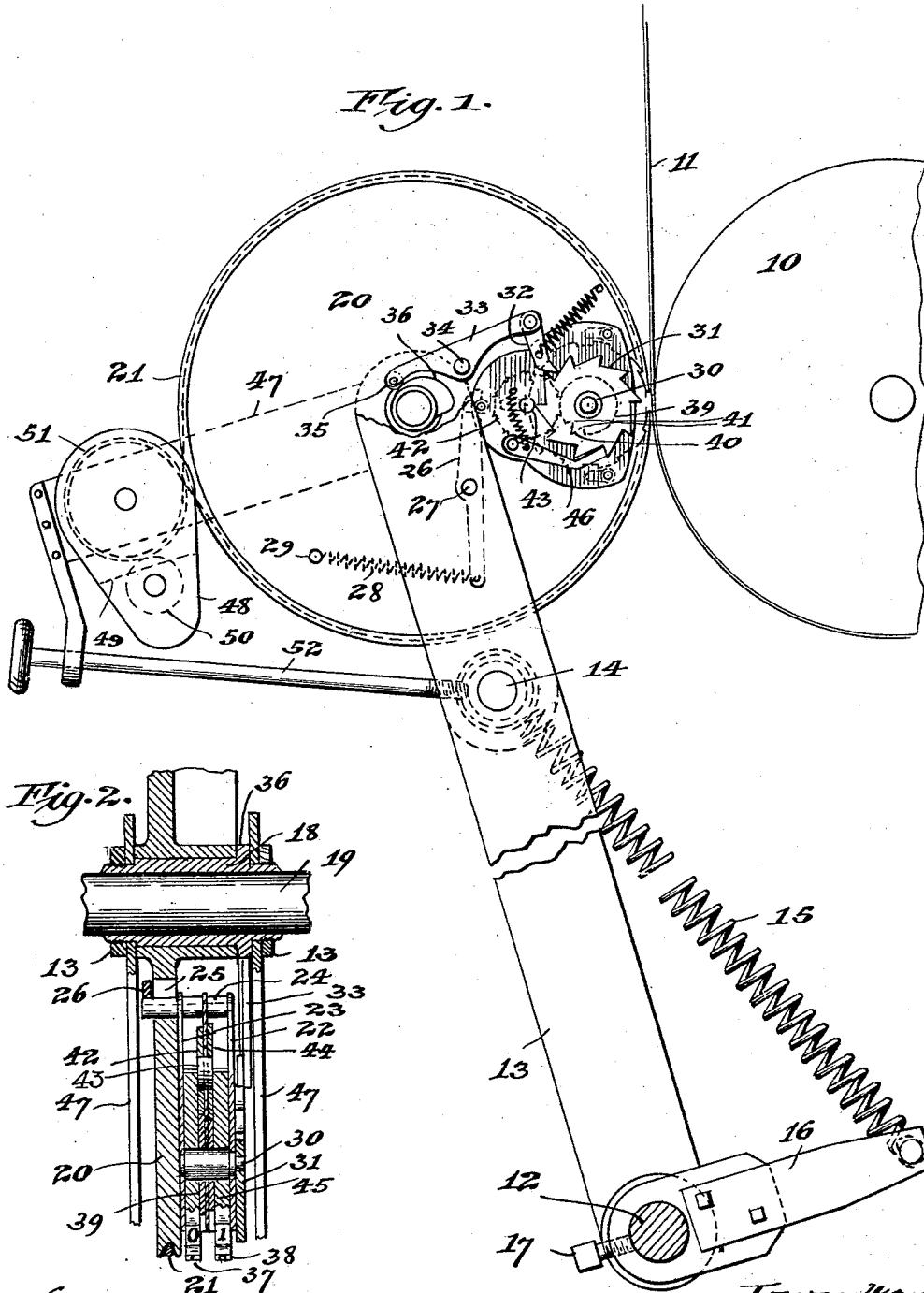


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CLOTH MEASURER AND MARKER.  
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Patented Nov. 23, 1909.



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# UNITED STATES PATENT OFFICE.

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CLOTH MEASURER AND MARKER.

941,110.

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*To all whom it may concern:*

Be it known that I, CHARLES J. SYKES, 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 Cloth Measurers and Markers, of which the following is a specification.

My invention concerns appliances for measuring and marking by successive numerals the yards in bolts of cloth so that by examining the numeral on the last yard the observer will know the total number of yards or other units of length in the whole bolt. In one specific embodiment of my invention I provide a wheel with a circumference of unit length, such as a yard, and so mount the same that its periphery is in frictional contact with the traveling cloth on a bolting machine, this wheel being rotated by the cloth and carrying a combination counter and marker which prints the successive yards of the cloth with successive numerals, means being provided, as will be readily understood, for actuating the counter-marker after each imprint on the cloth.

On the accompanying sheet of drawings I have shown an improved form of embodiment of my invention, and on this drawing—Figure 1 is a side elevation of my improved device, certain parts being broken away and others omitted; and Fig. 2 is a section, on an enlarged scale, through the counting and marking mechanism.

On the drawing 10 represents a rotary drum of a bolting machine around which the cloth 11 passes in being bolted. Below the drum 10 the device is supplied with a shaft 12, loosely mounted on which is a pair of arms 13, 13 connected together at 14 between their ends and yieldingly pulled toward the drum 10 and cloth 11 by a coil contractile spring 15, the upper end of which is suitably connected to the cross-pin 14, while its lower end is joined to an inwardly-extended arm 16 fixed to the stationary shaft 12 by a set-screw 17 or other equivalent means.

A bearing or sleeve 18 is mounted on the upper ends of the arms 13 and internally accommodates a shaft 19, while it affords externally a cylindrical bearing for a rotary wheel 20, one yard in circumference and grooved on its circular periphery to accommodate a cord or round driving belt 21. This wheel, as will be observed from the

illustration in Fig. 1, yieldingly bears on the outer surface of the cloth 11 as it passes around the drum or pulley 10. It will, therefore, be apparent that the wheel 20 will make one complete revolution for each passage of one yard of cloth between it and the drum 10.

A frame composed of inner and outer plates 22, 23 connected together at suitable points by pins or rods 24 extended through slots 25 in the wheel 20 forms a movable support for a combined counting and marking mechanism, the frame and its associated parts being yieldingly pressed outwardly by a lever 26 fulcrumed at 27 on the wheel and pulled at one end by a spring 28 connected at its opposite ends to the lever and to a pin 29 on the wheel, and at its other end abutting against the protruding end of one of the pins 24, as is clearly shown in Fig. 2.

A rotatable marker-shaft 30 has bearings in the plates 22, 23 of the frame, as shown in Fig. 2, and is equipped at its outer end with a ratchet wheel 31 fixed thereto, the ratchet being operated by means of a spring-actuated pawl 32 on the end of a lever 33, fulcrumed at 34 on the wheel 20, and having at its inner end a roller 35 traveling on the periphery of a fixed cam 36 forming part of the sleeve or bearing 18. The counter located between the two plates 22 and 23 consists of a unit wheel 37 fixed to the counter-shaft 30 and a tens wheel 38 located beside the unit wheel 37 and loosely rotatable on the same shaft, the two wheels being connected together by any suitable carrying mechanism, in the present instance comprising a disk 39 rigid with the wheel 37 and shaft 30 and having a single tooth 40 with notches 41 at each side thereof, the tooth being adapted to cooperate with a notched disk 42, the sections of which between the notches are concave so as to conform in curvature to the circular periphery of the disk or wheel 39, this construction being well known in the arts for transmitting an intermittent rotary motion. Disk 42 is fixed to a short jack-shaft 43 connected to the tens wheel 38 by the intermeshing gears 44 and 45. To prevent backward movement of the ratchet 31 the usual spring-actuated stop pawl 46 is employed, the same being pivoted on the outer face of the plate 22.

It will be obvious from this construction, therefore, that for each revolution of the wheel 20 the combined counter and marker

will be actuated so as to modify the marking number one numeral, it being understood that this marker comes in contact with the cloth as the wheel 20 revolves once during each revolution of the wheel.

For an inking appliance I mount on the bearing 18 the pair of arms 47 between which, at their outer ends, is positioned a casing or tank 48 containing a supply of marking liquid 49 partially immersed in which is a revoluble feeding wheel 50 in contact with the surface of an inking wheel 51 revolved, as will be readily understood, by the cord or cable 21; that is, the rotation of the two wheels 50 and 51 is transmitted from the larger measuring wheel 20 by the cable or cord 21 encircling the two wheels 20 and 51. The wheel 51 is so positioned that the numerals on the marker which do the printing receive as they revolve a sufficient quantity of marking fluid. In order to maintain the arms 47 in proper position they are connected at their outer end to the rod or pin 14 by another supporting rod or shaft 52.

The operation of this mechanism is substantially as follows: Assuming that the long strip of cloth 11 is passing around the drum or pulley 10 to the bolting machine, it will be apparent that the wheel 20 is revolved at the same time, owing to its frictional contact with the cloth, the wheel 20 being pressed against the cloth and drum 10 by the coil contractile spring 15. At the completion of each revolution of this wheel, which corresponds to one yard, a number will be printed on the cloth by the combined counter and marker, and during the next revolution of the wheel 20 this counter and marker will be actuated by the cam 36 and the connecting mechanism so as to change the marker one numeral, whereby the suc-

cessive yards of cloth will be printed with successive numerals, so that the last numeral on the cloth will indicate the total number of yards in the bolt, provided the mechanism has been started so as to print the numeral 1 at the end of the first yard.

Various changes may be made in the structure shown and described without sacrificing the benefits and advantages of this invention and without departure from its substance and essence.

I claim:

In a device of the character described, the combination of a swinging supporting frame, a rotary wheel of unit length circumference mounted in said frame, the periphery of said wheel being adapted to bear against the traveling cloth and be rotated thereby, a spring acting on said frame yieldingly pressing said wheel against said cloth, a slidable combined counter and marker mounted on said wheel so as to print a numeral on the cloth at the completion of each revolution of said wheel, a spring acting on said marker tending to shift the same outwardly of said wheel, a ratchet connected to said combined counter and marker, a pawl coöperating with said ratchet, a stationary cam co-acting with said pawl and adapted to actuate said combined counter and marker during each revolution of said wheel to change the numeral next to be printed one unit, whereby the units of length of one bolt of cloth will be consecutively numbered, and an inking device on said frame coöperating with said counter and marker to supply a printing fluid to the same, substantially as described.

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