T. F. TYLER.

PUNCHING MACHINE MEASURING ATTACHMENT

APPLICATION FILED FEB. 20, 1917.

1,295,239.

Patented Feb. 25, 1919.

2 SHEETS—SHEET 1.

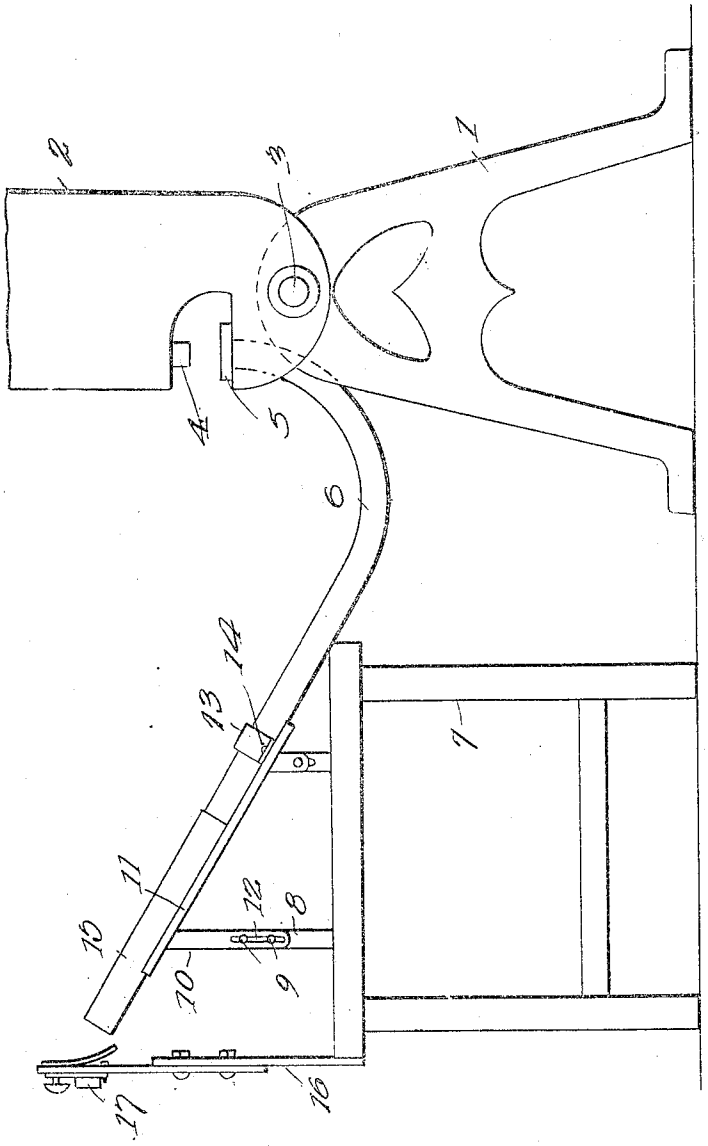


Fig. 1.

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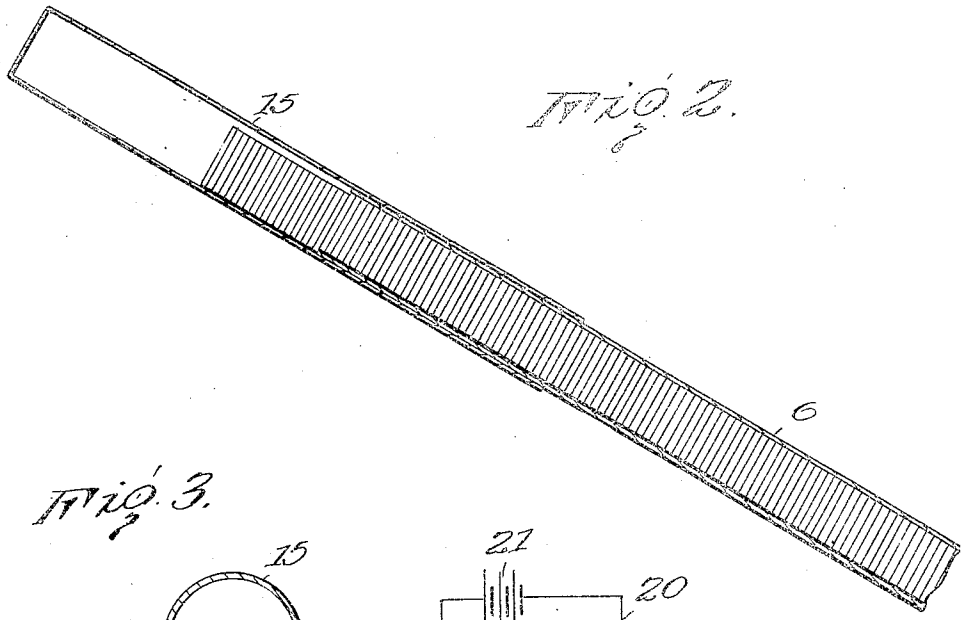
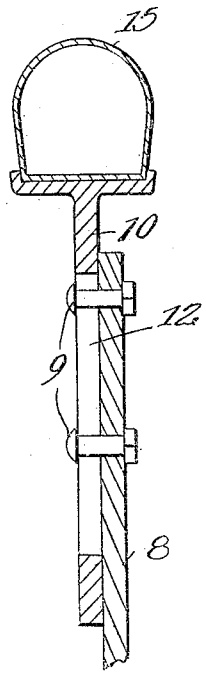


Fig. 2.

Fig. 3.



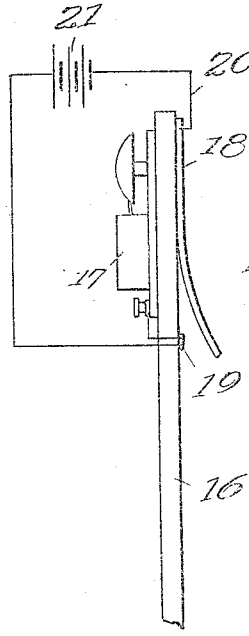
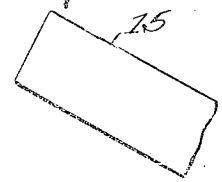


Fig. 4.



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UNITED STATES PATENT OFFICE.

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PUNCHING-MACHINE MEASURING ATTACHMENT.

1,295,239. Specification of Letters Patent. **Patented Feb. 25, 1919.**

Application filed February 20, 1917. Serial No. 149,976.

To all whom it may concern:

Be it known that I, THADDEUS F. TYLER, a citizen of the United States, and resident of Haverhill, in the county of Essex and State of Massachusetts, have invented certain new and useful Improvements in Punching-Machine Measuring Attachments, of which the following is a specification.

This invention relates to die punching machines and has more especial reference to an improved heel lift punching machine measuring attachment.

The invention has for its dominant object to provide an attachment for heel lift punching machines, whereby, the various lifts as punched or stamped out by the same will be received in nested relation and measured, thus, enabling the packaging of predetermined bulks for shipping.

It is also an object of the invention to provide an automatic signal means for the machine, which will be actuated when the desired number of lifts have been punched and passed into the receiving means.

Another object of the invention is to provide an adjustable receiving means for the punched heel lift in order that the length of the same may be varied to increase or decrease the capacity thereof.

Other objects relate to considerations of economy of production, installation and maintenance, durability in use and convenience and operation of the several mechanisms or parts entering into the construction of elements and the above defined general organization of the said elements.

All of the foregoing together with additional advantageous details and arrangements of parts of the preferred embodiment of my invention will be clear from the specific description hereinafter contained, when read in connection with the accompanying drawings forming a part thereof wherein said embodiment of the invention is illustrated for the purpose of facilitating a full understanding of the present improvements.

In the drawings:

Figure 1 is a side elevation of my improved punching machine measuring attachment;

Fig. 2 is a fragmentary longitudinal section through the improved adjustable receiving means;

Fig. 3 is a vertical transverse section through the same showing the manner of mounting; and

Fig. 4 is a fragmentary detail in elevation of the electric signaling and circuit closing means together with a diagrammatic view of the signaling circuit.

Similar characters of reference are employed in all of the above described views to indicate corresponding parts.

Referring now more specifically to the several figures of the said drawings, reference will be first had to the die punching machine which includes a stand 1 comprising suitable leg portions having laterally offset seats formed upon their lower extremities thereof and curved upper portions, which upper portions have arranged therein bearing openings, the purpose of which will be subsequently apparent. A die bed 2 is pivotally mounted upon the stand 1 through the medium of a transversely arranged pivot bolt 3, the said pivot bolt passing through the bearing openings in the curved upper portions of the stand and being secured against lateral displacement therein by any suitable means. A reciprocal punch 4 is arranged within the die bed 2 in suitable bearings and has disposed directly therebeneath a suitable die plate 5, the die plate as will be noted, being arranged over an opening as formed in the lower portion of the die bed 2, the opening conforming to the shape or configuration of the product to be stamped or punched by the machine.

Engaged with the product receiving opening formed in the lower portion of the die bed 2 is the curved extremity of a tubular receiving member 6, the opposite extremity of which is extended into engagement with supporting means arranged upon a bench 7.

A plurality of vertically disposed standards 8 are fixedly arranged in spaced apart relation upon the top of the bench 7, it being noted that the standards are of different lengths and are arranged in vertical alinement. Upon the upper portions of the standards there is arranged a plurality of bolts, indicated by the numeral 9. Depending arms 10 of different lengths are arranged upon the under face of a table 11 and have the lower extremities thereof slotted as at 12, whereby to receive the various bolts 9 as carried upon the standards 8 therethrough. Obviously, by tightening the bolts 9 upon

the slotted extremities of the arms 10, the table 11 as carried thereby may be readily maintained in rigid adjusted position. A stop 13 is secured to one portion of the table at 14 and encircles that portion of the tubular receiving member 6 adjacent the free end thereof, it being noted that the said tubular receiving member extends longitudinally of the table 11.

A telescopic tubular member 15 is arranged about the free end of the receiving member 6 and as is shown in the Fig. 2 has the rear extremity thereof closed. It may be here noted, that the tubular receiving member 6 together with the telescopic member 15 corresponds in shape, thus, permitting ready relative movement thereof and also insertion of the same, that is, one extremity of the receiving member 6 into the opening formed within the lower portion of the die bed 2 to permit the passage of the punched heel disk into the same.

A sectional supporting post 16 is secured to the rear side of the bench top and has the opposite extremities of its several sections slotted to permit relative movement of the same and as a consequence, varying of the height thereof. To maintain the sectional post in its adjusted position, suitable clamping means are passed through the alined slots and are adapted to be tightened for binding the same in position. An electrical bell 17 is arranged upon the upper extremity of the adjustable supporting post and has one of the contact terminals thereof connected to a resilient circuit closing element 18, which element is affixed at one extremity to the rear side of the supporting post 16 while the remaining extremity is bent outwardly and normally lies in spaced apart relation from a contact point 19 also affixed to the supporting post and connected to the remaining contact terminal of the bell. Electric conductors 20 are engaged with the circuit closing arm 18 and the contact point 19 and are then extended into engagement with the opposite poles of a suitable source of continuous energy 21, thus completing an electric circuit whereby to normally energize the coöperating circuit closing elements. If desired, a single point switch may be interposed in one of the conductors 20 to control the passage of energy therethrough into the circuit closing element and the bell.

In operation the die bed 2 is pivotally adjusted upon the stand 1 to allow the tubular receiving member 6 together with its telescopic member 15 to extend to a predetermined length, whereupon the same is then fixedly secured in its adjusted position. The table 11 is now properly positioned upon its respective standard 8 to fully support the adjacent portions of the tubular member 6 and the telescopic member 15, whereupon, the bolts 9 are of course tightened. The punch operating means is now started, causing a reciprocal movement to be imparted to the same and thereby causing the same to be intermittently engaged with the die plate 5. Leather in sheets is now spread over the die plate 5 to permit the punching of heel disks from the same, by reason of the engagement of the said punch 4 therewith. As the lifts are punched from the sheet of leather, they are passed downwardly into the curved extremity of the receiving member 6 and are successively advanced by the continued introduction of other lifts thereinto. As will be understood, the lifts within the tubular member 6 will be gradually passed into its telescopic member 15, which by reason of its closed rear wall will be extended and gradually forced into engagement with the outwardly bent portion of the circuit closing arm 18, thus forcing the same into engagement with the contact head 19 and closing the electrical circuit whereupon the bell 17 will be operated. Upon the ringing of the bell 17, the operator will of course be informed that the desired bulk of heel lift is within the tubular receiving member and accordingly, may discontinue operation of the punch 4. The heel lift may now be removed from the tubular receiving members and tied in packages for shipping. To vary the length of the tubular receiving members, the pivotal die bed is moved to different positions upon the pivot bolt 3 whereby to allow the said receiving member a greater or less receiving capacity. Obviously, when the machine bed has been adjusted to the desired position, the table 11 is properly positioned upon its several standards 8 to fully support the adjacent portions of the receiving members thereon.

Instead of employing my improved heel lift receiving and measuring attachments in conjunction with an adjustable type of punching machine, the same may be equally as well adapted for use upon the non-adjustable type of punching machine and may also be varied in configuration, such as conditions or preference may dictate.

As hereinbefore indicated, I do not wish to be understood as confining the invention to the particular embodiments chosen for illustration herein, nor to the exact construction, arrangement and adaption of the parts shown and described, but I reserve the right to make any changes and alterations that fairly fall within the spirit and scope of the invention.

I claim:

In combination, a bed, a punching mechanism pivotally supported on said bed, a receiving device communicating with said punching mechanism including a tubular member having one end thereof curved and detachably engaged with the punching

mechanism, a second tubular member having its outer end closed telescopically engaged with said first tubular member adapted to be moved with relation to the first tubular member by the movement of articles from the punching mechanism thereinto, and means for supporting the free end of said first tubular member and said second tubular member in adjusted position with relation to the punching mechanism.

In testimony whereof, I affix my signature hereto.

THADDEUS F. TYLER.