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W. T. BENTZ & M. F. CAPRON.

TYPE CLEANING DEVICE.

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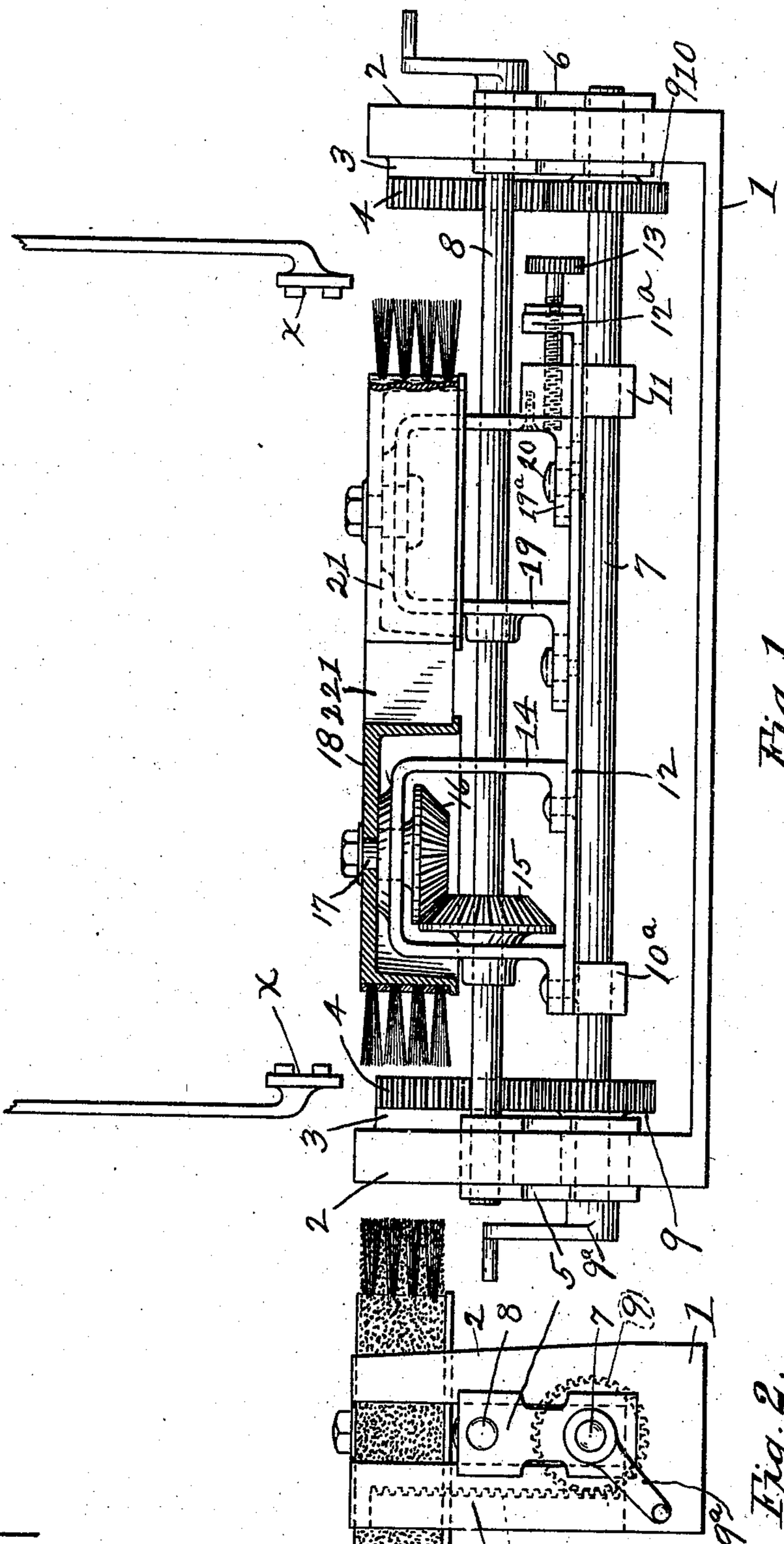

Fig. 1.

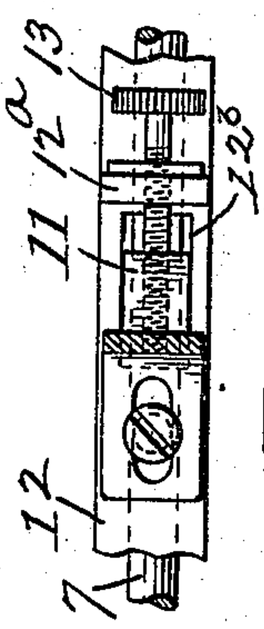

Fig. 3.

Fig. 2.

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UNITED STATES PATENT OFFICE.

WILLIAM T. BENTZ AND MARSHALL F. CAPRON, OF ELYRIA, OHIO.

TYPE-CLEANING DEVICE.

No. 848,151. Specification of Letters Patent. Patented March 26, 1907.

Application filed December 22, 1905. Serial No. 292,983.

To all whom it may concern:

Be it known that we, WILLIAM T. BENTZ and MARSHALL F. CAPRON, residing at Elyria, in the county of Lorain and State of Ohio, have invented a certain new and useful Improvement in Type-Cleaning Devices, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings.

This invention relates to an attachment for use upon type-writers, and is designed for the purpose of providing a suitable means for cleaning the type.

More specifically, the invention relates to a movable belt provided with bristles and adapted to normally remain out of the range of the type and type-bars and to be shifted into a position where the bristles may be brought into engagement with the type thereof.

The invention further resides in the embodiment of suitable mechanism for driving the belt and to the specific mechanism for raising it, as above stated.

The invention still further relates to the construction and combination of parts hereinafter set forth in the following description, drawings, and claims.

Referring to the drawings, Figure 1 is a side elevation of the device, showing some of the parts in section to more clearly bring out the construction thereof. Fig. 2 is an end elevation of the device, and Fig. 3 is a detail view of the mechanism whereby the belt is adjusted.

Any suitable form and construction of parts may be employed in the carrying out of our invention; but we have shown one form in the drawings which very effectively meets the necessary requirements, and in such embodiment 1 represents the frame, which is secured to the framework of the type-writer and is provided with a pair of guideways 2 and 3 at each end thereof. One of the guideways of each pair is provided with a rack 4. These guideways are for the purpose of guiding the operating mechanism to be described, and the racks assist in the raising of the belt and its operating mechanism.

Slidably mounted in the guideways 2 and 3 are a pair of blocks 5 and 6, having suitable recesses in their edges for the reception of the edges of the guideways. Rotatably mounted in these blocks 5 and 6 are a pair of shafts 7 and 8, the lower one, 7, of which is provided with a pair of spur-gears 9 and 10, engaging with the racks 4 and adapted when rotated by the shaft 7 to raise the same, together with the blocks 5 and 6. A crank 9^a is keyed to the projected end of the lower shaft 7 for the purpose of rotating the same.

Loosely mounted upon the shaft 7 is a pair of clips 10^a and 11, which carry a cross member 12, having an upwardly-turned end portion 12^a, in which an adjusting-screw 13 is swiveled. This screw takes into a threaded portion of the clip 11, projecting through a slot 12^b in the member 12. Secured upon this member 12 is a bracket 14, rigid with the same and having a suitable opening for the passage of the shaft 8. Between the side members of the bracket 14 the shaft 8 is provided with a beveled gear 15, in mesh with a beveled gear 16, having a shaft 17, extending through a suitable bearing in the top of said bracket and out at the top, where it is provided with a crown belt-wheel 18. It will be seen from the foregoing construction that upon the rotation of the shaft 8 the belt-wheel 18 will be driven also. The member 12 is further provided with another bracket 19, similar to the bracket 14, and provided with slots 19^a, (shown in dotted lines in Fig. 1,) which fit snugly about the pins 20, rigid in the member 12, but have sufficient play about said pins to permit of the movement of the bracket 19. The bracket 19 is further provided with a belt-wheel 21, loosely mounted thereon, and this wheel, together with the other belt-wheel 18, serve to support the belt 22, provided with bristles for the purpose of cleaning the type. The bracket 19 is secured to the upper portion of the clip 11, whereby any adjustment of the screw 13 will affect the position of the belt-wheel 21 and the tightness or looseness of the belt 22.

It will be readily seen from the foregoing construction that when the operator of the machine upon which one of these devices is arranged wishes to clean the type x the crank 9 is operated until the belt carrying the bristles is in alinement with the type, when any one of the type may be brought into engagement with it. The upper shaft 8 is then rotated while the belt is thus elevated, and the type are thoroughly cleaned. It is quite obvious that the belt may be moved in either direction in order to more readily get at the crevices of the type.

Having described our invention, we claim—

1. In a type-cleaning device, the combination with a type-writer, of a cleaning-belt

mounted in a suitable support, means for shifting said belt in its support and into the path of the type of the type-writer, and means for driving said belt.

2. In a type-cleaning device, the combination with a type-writer, of an endless belt mounted in a suitable support therein and normally out of the range of the type of the type-writer, means for shifting said belt into such range, and means for driving said belt.

3. In a type-cleaning device, the combination with a type-writer, of a pair of belt-wheels rotatably mounted in said type-writer and normally out of range of the type, a cleaning-belt driven thereby, means for shifting said belt into the range of said type, and means for driving said wheels and said belt.

4. In a type-cleaning device, the combination with a type-writer, of a frame mounted in said type-writer, a pair of belt-wheels carried by said frame and normally out of the range of the type, means for shifting said wheels in said frame to bring them into the range of said type, a cleaning-belt carried by said wheels, and means for driving said wheels.

5. In a type-cleaning device, the combination with a type-writer, of a frame mounted in the same, a pair of belt-wheels mounted in said frame and normally out of the range of the type, means slidably mounted in said frame for supporting said wheels, a cleaning-belt carried by said wheels, and means for driving said belt.

6. In a type-cleaning device, the combination with a type-writer, of a frame mounted within the same, sliding members mounted in said frame, a pair of belt-wheels carried by said sliding members, a cleaning-belt upon said belt-wheels said wheels and said belt being normally out of the range of the type, means for shifting said sliding members, and means for driving said belt.

7. In a type-cleaning device, the combination with the frame, of a sliding member mounted in the same, a pair of belt-wheels carried thereby, a belt mounted upon the same, said belt and said wheels being normally out of the range of the type, means for shifting said member to bring said belt into the range of said type, and means for driving said belt.

8. In a type-cleaning device, the combination with the frame, of a pair of sliding members mounted in the same, a pair of belt-wheels carried by said members, a cleaning-belt upon said wheels, means for shifting said members to raise and lower said cleaning-belt, and means for driving said belt.

9. In a type-cleaning device, the combination with the frame, of suitable guides upon said frame, sliding members operating in said guides, a pair of shafts mounted in said members, a pair of belt-wheels mounted upon said shafts, a cleaning-belt upon said belt-wheels, connections between one of said shafts and said wheels whereby the former will drive the latter, and suitable mechanism between the other one of said shafts and said sliding members whereby upon the operation of the former the latter will be raised or lowered.

10. In a type-cleaning device, the combination with the frame, of suitable guides upon said frame, sliding members operating in said guides, a pair of shafts mounted in said members, a pair of belt-wheels supported upon one of said shafts, a cleaning-belt upon said belt-wheels, beveled-gear connections between said shaft and the belt-wheels whereby the former drives the latter, and rack-and-pinion construction between the other one of said shafts and the frame whereby when the former is rotated the belt-wheels and the belt will be raised.

In testimony whereof we affix our signatures in the presence of two witnesses.

WILLIAM T. BENTZ.
MARSHALL F. CAPRON.

Witnesses:
J. C. CRISP,
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