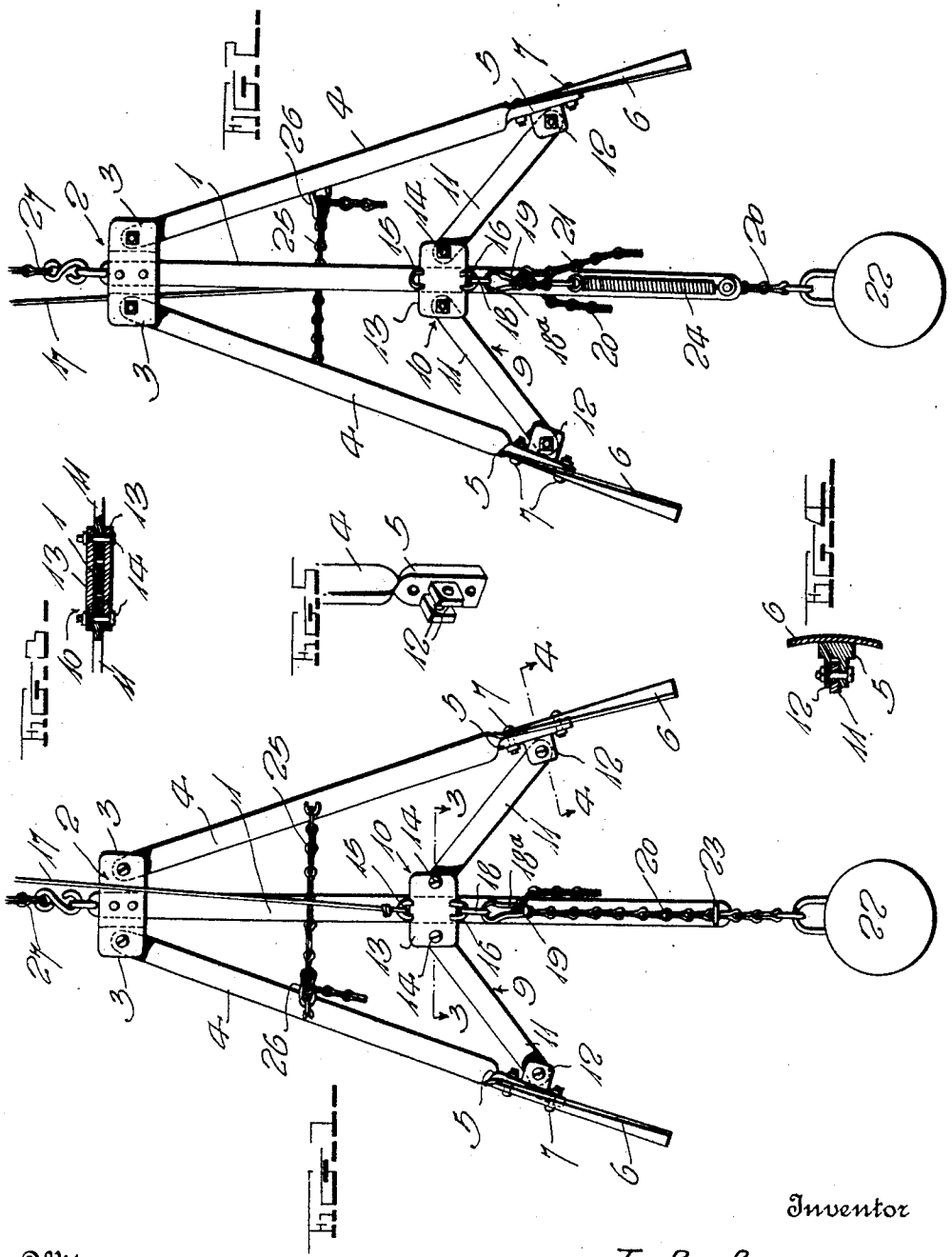
J. B. RORK.

CHIMNEY CLEANER.

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CHIMNEY-CLEANER.

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To all whom it may concern:

Be it known that I, JAMES B. RORK, a citizen of the United States, residing at Tacoma, in the county of Pierce and State of Washington, have invented certain new and useful Improvements in Chimney-Cleaners; and I do 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.

This invention relates to an improved chimney cleaner and it has for its object to generally improve upon devices of this class by producing one of extreme simplicity and durability, which is easy to manipulate, extremely effective in operation, and of such construction that it may be adjusted to effectively operate in chimneys of various sizes and shapes.

Another object of the invention is to provide a device of this class which embodies means for quickly and easily securing the detachable scraper-blades in place, thus enabling blades of different sizes and shapes to be used.

Other objects and advantages of the invention will be apparent during the course of the following description.

In the accompanying drawings forming a part of this specification and in which like numerals are employed to designate like parts throughout the same:

Figure 1 is an elevational view of a chimney cleaner constructed in accordance with this invention, looking at one side of the same.

Fig. 2 is a view like Fig. 1 looking at the reverse side thereof.

Figs. 3 and 4 are sections taken on the planes of the lines 3—3 and 4—4 of Fig. 1, looking in the direction of the arrows.

Fig. 5 is an enlarged detail perspective view of the lower end of one of the expansible arms of the device.

In carrying out the invention, I make use of a centrally disposed guide-bar to which the hoisting and lowering chain or cable is connected, downwardly diverging arms being pivoted to this bar in any suitable way and carrying, at their lower ends, detachable scraper blades. A toggle is slidably engaged with the bar and acts on said arms to force them into effective engagement with the wall of the chimney to scrape all movable matter therefrom. Suitable means is employed to limit the separation of said arms, and a weight and spring or just a weight alone is employed to render the aforesaid toggle effective.

Referring to the drawings, wherein the preferred construction and arrangement is more specifically shown, it will be seen that the numeral 1 designates the guide-bar which is vertically disposed and carries at its upper end a rigid transverse head 2, the latter being equipped at its opposite ends with spaced ears 3 between which the upper ends of the downwardly diverging arms 4 are pivoted. These arms are arranged on opposite sides of the bar as shown and have their lower ends twisted laterally as shown at 5. (See Fig. 5.) It is the purpose in twisting the ends of the arms in this way, to permit the removable scraper blades 6 to be detachably secured thereto by means of bolts 7. At this point, I wish to state that the scraper blades will be of various shapes to accommodate the particular kind of chimney wall which they engage and it is for this reason that they are detachably connected with the arms 4. As before intimated, a toggle 9 has slidable engagement with the bar 1 and this toggle as shown is composed of a central head 10 slidable on the bar 1, and a pair of links or arms 11, the latter being pivoted at their inner ends to said head 10 and their opposite ends to the ears 12 carried by the arms 4. The head 10 is preferably made up of a pair of spaced plates 13 connected together by bolts 14 which have the additional function of forming the pivots for the inner ends of the links 11. These plates are provided on their opposite edges with attaching eyes 15 and 16. Connected to the eye 15 is a cable or other like element 17 which serves a purpose to be hereinafter set forth. Ordinarily, only one of these eyes 15 is to be used. On the other hand, the eyes 16 carry a pair of rings 18 and 18ª, the lower ones of which are reduced at their lower ends as indicated at 19. It is obvious that links of the chains 20 and 21 are adapted to be held in this restricted portion of these rings 18ª. The chain 20 carries at its lower end a ball weight 22 and this weight assists in lowering the device in the chimney and insures effective engagement of the scraper blades with the wall of the latter. If desired, a guide-eye 23 may be provided for passage of the chain 20. The chain 21 on the other hand is connected at its lower end

with a coiled spring 24 and the lower end of this coiled spring in turn is connected with the bar 1. The spring 24 and weight 22 act in conjunction with each other to render the toggle 9 effective but if desired, the spring 24 may be omitted.

Previously, I have indicated that the distance which the arms 4 may be moved apart can be limited. To this end, I employ a chain 25 and permanently connect one end to one of the arms 4 and the detachably connected other end to the remaining arm, a ring 26 like the one 18[a] being used to accomplish this. For the purpose of raising and lowering the device, I use a chain or the like 27 and connect it to the bar 1 in the manner shown.

The operation of the device is as follows: The cable 17 is first grasped and an upward pull is exerted thereon to slide the head 10 upwardly on the bar 1. In so doing, the toggle 9 is acted on in such a way as to draw the arms 4 inwardly toward each other and render the device of such a size as to permit it to be placed into the chimney and dropped down into the latter to the desired point. Before the device is inserted into the chimney, the chain 25 is adjusted in order to limit the separation of the arms 4. In this way, the device is adjusted to be used effectively in various sizes of chimneys. The operator may now grasp the hoisting chain 27 and at the same time release the chain 17. The weight 22 and the spring 24 now come into play and slide the head 10 downwardly on the bar 1 and straighten out the links 11 of the toggle in such a way as to move the arms 4 on their pivots and bring the scraper blades 6 into effective engagement with the walls of the chimney. Still holding the chain 27, the device may be reciprocated in the chimney until all movable matter such as soot and dirt is scraped from the chimney wall. Should an obstruction or irregularity be encountered during the operation of the device, and prevent downward movement of the device in the chimney, the cable 17 is again grasped in order to move the arms 4 together and permit this irregularity to be passed.

While I have shown and described my chimney cleaner as including an additional rope or chain 17 for contracting the arms 4, that is, moving them toward each other in order to permit passage of the device by irregularities in a chimney wall, I wish it to be understood that this rope, in some instances, can be entirely omitted as the device will operate effectively without it. When this additional rope is omitted, irregularities and internal projections may be passed by simply raising up on the hoisting chain 27 and permitting the device to drop quickly, before the scraper blades can come into engagement with such irregularities and projections.

From the foregoing description, it will be seen that I have provided a chimney cleaner which is adjustable for effective use in various sizes of chimneys. Since the scraper blades may be easily and readily attached and detached, various sizes and shapes of blades may be used and for this reason, the device will work effectively in various shapes of chimneys. If desired, the ball weight may be detached to permit convenient carrying of the device. Furthermore, my construction and arrangement enables me to vary the tension of the coiled spring which acts in conjunction with this ball weight. Then again, the construction and arrangement of parts as a whole is extremely simple and inexpensive and practically all parts are easily accessible for the purpose of making necessary repairs or replacing any of the parts. These and other advantages and features of the invention have, no doubt, become apparent from the foregoing description and drawings.

Since probably the best results may be obtained with the construction and arrangement herein shown and described, this construction and arrangement is taken as a preferred embodiment of the invention. However, I wish it to be understood that within the scope of the subjoined claim various minor changes may be made.

I claim:

A chimney cleaner comprising a vertical bar, a transversely disposed head rigidly secured to the upper end of the bar, being equipped at its opposite ends with spaced ears, arms pivoted at their upper ends between these ears, the lower ends of said arms being twisted to extend laterally with respect to the body portions, said lateral ends being apertured and carrying ears, scraper-blades, bolts passing through the latter and said aperture in the laterally bent ends of the arms and detachably securing these blades in place, a second head slidably mounted on said bar, toggle links pivoted to this head and to the second named ears, a weight, a chain connected at one of its ends to the latter, having detachable and adjustable connection at its opposite end with the sliding head, a guide on said bar through which the chain passes, and another chain carried by one of said arms and having adjustable connection with said other arm, serving to limit the expansion of said arms.

In testimony whereof I have hereunto set my hand.

JAMES B. RORK.