This invention relates to new and useful improvements in furnace radiator cleaners and relates more particularly to furnaces employed for heating dwelling houses or the like.

An important object of this invention is to provide a cleaner which may be employed for removing soot from the various pathways or flues in a heating plant.

A further object of the invention is to provide a cleaner which may be operated within a circular passageway or flue and may be employed for removing soot therefrom by either drawing the same outwardly of the flue or passageway or by pushing the soot from said passageway.

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

In the accompanying drawing forming a part of this specification and in which like numerals are employed for designating like parts throughout the same,

Figure 1 is a transverse sectional view of a furnace, shown in dotted lines, and a plan view of the improved cleaner embodying this invention, shown in full lines in operation.

Figure 2 is a fragmentary view of the improved cleaner embodying this invention shown partly in elevation and partly in section.

Figure 3 is an elevational view of the form of scraper illustrated in Figs. 1 and 2, and

Figure 4 is a modified form of scraper shown in elevation.

In the drawing, wherein for the purpose of illustration is shown a preferred embodiment of this invention, the numeral 5 designates a furnace in its entirety which has a heat conducting passageway or flue 5a which is in communication with a clean-out opening 6 having a door 7, as illustrated.

The improved cleaner embodying this invention consists of a handle 8 which is suitably secured to one end of a link 9, as best illustrated in Fig. 2. This link 9 is intended to have pivotally secured to its free end a pair of links 10. It is to be understood that by employing the types of links 9 and 10 and by pivotally connecting the ends of such links, a flexible rod may be formed. The opposite end of this rod preferably consists of a pair of links 10 to which is rigidly secured an arm 11 which is provided with a threaded end 12, the threaded end being reduced in diameter to the arm 11. Removably secured to this threaded end 12 is a cone-shaped scraping element 13 which is retained in the position illustrated in Figs. 1 and 2 by the pair of nuts 14 which are threaded upon the reduced end 12.

In Fig. 4 there is illustrated a scraper 15 which is in the form of a pyramid and is provided with an aperture 15a, in its apex, which is intended to receive the reduced threaded end 12 of the arm 11.

It will be seen by inspecting Fig. 1 that this cleaner may be inserted into the heat conducting flue or passageway 5a of a furnace by employing the clean-out opening 6. The flexible rod, formed by the links 9 and 10, will permit the scraper 13 to be moved through the flue or passageway until it arrives at a point slightly greater than half of the length of the passageway or flue 5a. The conical shape of the scraper will permit the same to be moved through this passageway or flue without disturbing, to any great extent, the soot positioned therewith. After the scraper has been operated to assume the position illustrated in Fig. 1, the same may be withdrawn from the passageway or flue 5a and the scraper element 13 will withdraw the soot from the furnace. This operation may be repeated until the flue is clean on that side whereupon the scraper may be inserted into the other side of the passageway or flue for cleaning the same. The conical-shaped scraper element 13 is preferably used in round flues while the pyramid-shaped scraper 15 may be used to advantage in square or rectangular flues.

It is now believed that the construction and operation of this cleaner will be understood from the above detailed description, also that the forms of this invention herewith shown and described are to be taken as preferred examples of the same, and that various changes in the shape, size, and arrangement of parts may be resorted to without departing from the spirit of the invention or the scope of the subjoined claim.

Having thus described the invention, I claim:

In a cleaner, a rod formed of pivotally
2. - 1,584,481 connected links with each alternate link formed of parallel link members and with the remaining links formed of single link members, a handle rigidly connected to one end link which is of the single link member type, a relatively short arm rigidly connected to the remaining end link which is of the parallel link member type, said arm having its free end reduced, a conoid scraper having its apex flattened and apertured to reversibly receive the reduced end of said arm, and means for holding the scraper in place.

In testimony whereof I affix my signature.

JOHN L. SKUTTLE.