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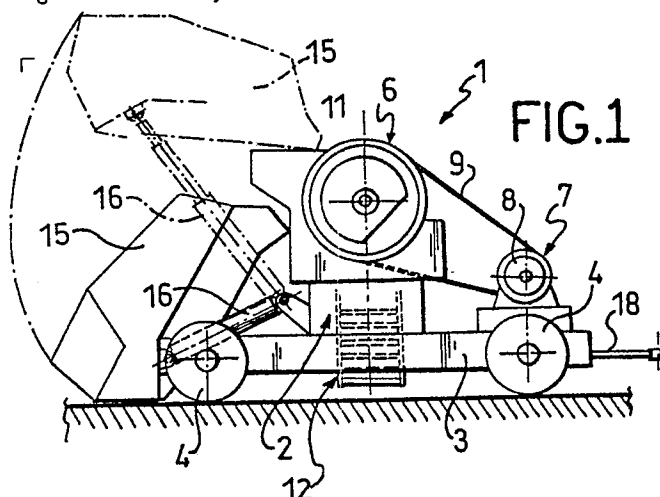
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A Compact-size rubble crusher machine.

A compact-size machine (1) for crushing rubble, in particular rubble from refurbished masonry works, comprises a frame (2) supporting a hopper (5) and a jaw crusher (6) which is fed with the rubble from the hopper and driven by a motive means (7), as well as a conveyor belt (12) extending from a delivery outlet of the crusher.



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This invention relates to a compact-size crusher machine for rubble, in particular rubble from refurbished masonry works.

As is well known, on the occasion of restoration and reclaiming operations performed on buildings and generic masonry works, the need arises to dispose of the rubble and demolition materials.

This need becomes specially acute in the historical areas of cities, or more generally in downtown areas, where it is practically impossible to redestine the unwieldy wreck material which must be removed from the job site.

One of the most widely adopted solutions to the problem of how to dispose of rubble from such reclaiming operations is, in fact, that of taking the rubble to a public dumping site.

However, a drawback of such a solution is that, according to the applicable regulations, only urban solid refuse can be so disposed of which does not exceed a given size, or else, a surcharge applies for permission to dump out whatever has been conveyed to the dump.

A carrier who has not been authorized to this extra payment, or is refused permission to dump out on account of the size of the material carried, may be tempted to get rid of it anyhow at the first opportunity, for example by leaving his load in some isolated area, thus contributing to downgrading the environment.

In addition, in view of public dumps being few and located far away from the central areas of cities, an ability to dispose on the spot of any materials recovered from refurbishing operations is highly desirable.

The technical problem that underlies this invention is to meet the above demand by providing such a compact-size machine having suitable construction and performance characteristics to enable rubble from masonry works refurbishing to be crushed on the job site, thus obviating a deficiency of the prior art.

This problem is solved by a machine as indicated being characterized in that it comprises, mounted on a supporting frame, a hopper and a jaw crusher fed with rubble from the hopper and being driven by a motive means, as well as a conveyor belt extending from a delivery outlet of the crusher.

In a preferred embodiment, the conveyor belt is a bucket elevator extending laterally of the machine from said crusher delivery outlet to a selected height level.

The features and advantages of a machine according to the invention will become apparent from the following detailed description of an embodiment thereof, to be taken by way of illustration and not of limitation in conjunction with the accompanying drawing.

In the drawing:

Figure 1 is a schematical side view of a machine according to the invention;

Figure 2 is a further schematical side view of the machine shown in Figure 1;

Figure 3 is a top plan view of the machine shown in Figure 1.

With reference to the drawing views, generally and schematically indicated at 1 is a machine according to the invention for crushing rubble from operations of masonry works refurbishing, restoration, and reclaiming.

The machine 1 comprises a supporting frame 2 standing on a main frame 3 of metal construction and mounted on wheels 4.

Mounted at the top of the supporting frame 2 is a hopper 5 intended for receiving said rubble to be crushed. The hopper 5 is in communication with a jaw crusher 6 of conventional design and construction, carried centrally on the supporting frame 2.

The crusher 6 is driven by a motive means 7, such as comprising an electric motor 8 and a belt drive composed of a belt 9 and a pulley 10. The motor 8 is supported on the main frame 3, and a flywheel 11 is mounted coaxially with the crusher 6 at the remote end from the pulley 10.

Advantageously, the machine 1 further comprises a belt conveyor 12 and bucket elevator 13 which extends from a delivery outlet of the crusher 6 up to a selected height level, laterally of the machine 1.

The machine 1 is also provided at the front with a loading bucket 15 operated by means of lift arms 14 formed by hydraulic jacks 16. The bucket 15 can be operated toward and away from the hopper 5 for the purpose of loading rubble to be crushed thereinto as shown in Figure 1.

The main frame 3 of the machine 1 is provided with a tow hook 18 for towing the machine.

The machine 1 may also be loaded manually by discharging the rubble material directly into the hopper 5, alternatively, and especially where heavy large size rubble is to be handled, the loading bucket 15 may be used.

In the rest condition, the bucket 15 would be laid onto the ground surface to facilitate picking up the rubble as well as to make the machine 1 steadier. According to necessity, the bucket 15 is then lifted up by means of the arms 14 to load the hopper 5 with rubble to be crushed.

The crushing operation is performed in a conventional fashion within the crusher 6 until a near-homogeneous product is obtained which lends itself to backfilling applications or the maintenance of roads, parking areas, etc.

In an advantageous way, the crushed product is discharged onto the belt 12 which will convey and elevate the product laterally of the machine, to

possibly load a hauler.

The inventive machine is quite compact in size, and when in use, may be left in attendance beside the job site like any small concrete mixer or air compressor.

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Its small size, moreover, enables it to be readily taken into tow by a power driven vehicle.

Another advantage is that the noise emission from the machine has shown to be quite low, which makes it appropriate for use in town areas.

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It is understood that the machine described hereinabove may be altered and modified by the skilled one in the art contingent on specific demands, without departing from the true scope of the invention as set forth in the appended claims.

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Claims

1. A compact-size crusher machine (1) for rubble, in particular rubble from refurbished masonry works, characterized in that it comprises, mounted on a supporting frame (2), a hopper (5) and a jaw crusher (6) fed with rubble from the hopper and being driven by a motive means (7), as well as a conveyor belt (12) extending from a delivery outlet of the crusher.

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2. A machine according to Claim 1, characterized in that said conveyor belt (12) is a bucket elevator (13).

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3. A machine according to Claim 1, characterized in that said supporting frame (2) is mounted on wheels (4).

4. A machine according to Claim 1, characterized in that it comprises a loading bucket (15) operated by means of hydraulic jacks toward and away from said hopper (5) to load it with the rubble.

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5. A machine according to Claim 2, characterized in that said belt conveyor (12) extends from said outlet up to a selected height level laterally of the machine (1).

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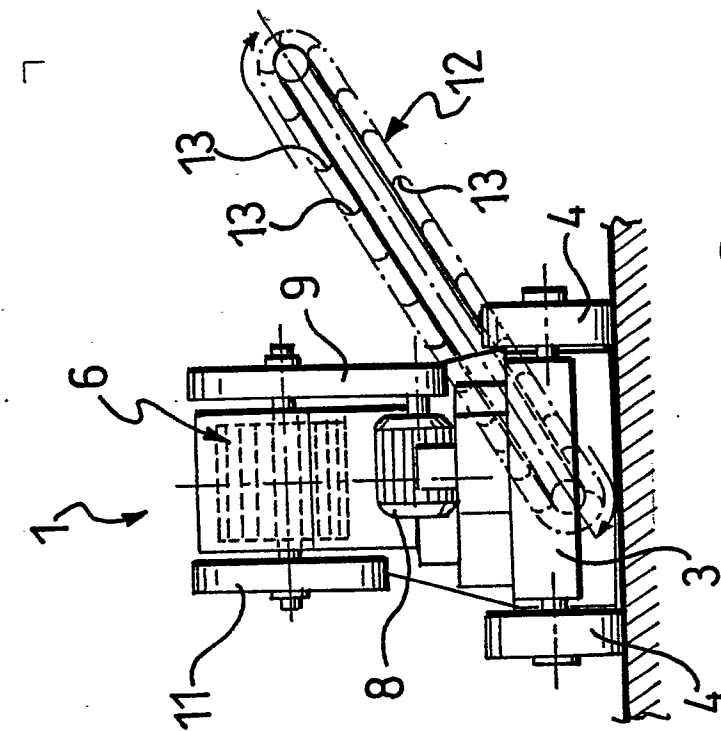


FIG.1

FIG.2

FIG.3

