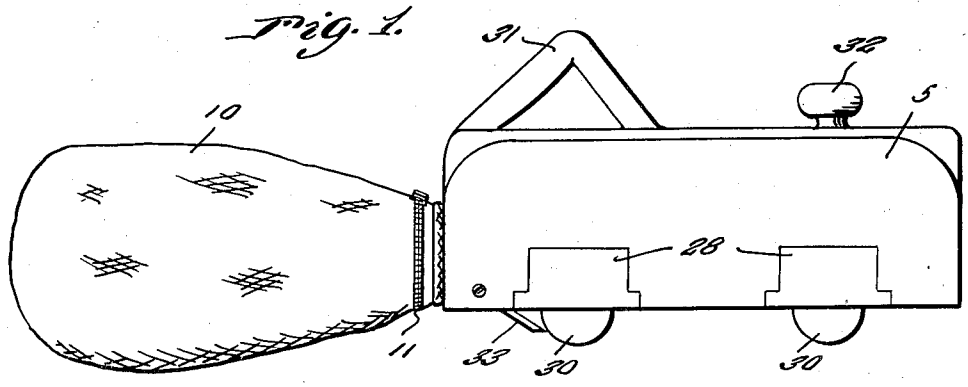
Feb. 9, 1937. E. E. OLSON 2,069,923

CHANNELING MACHINE

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Fig. 1.



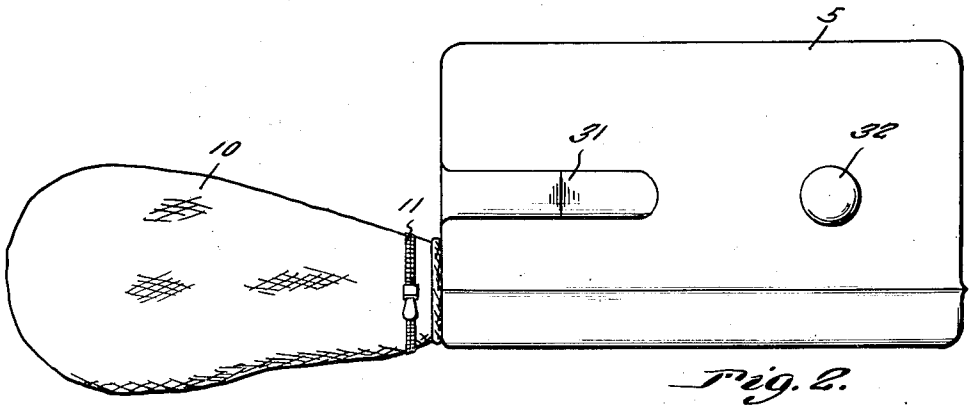




Fig. 2.

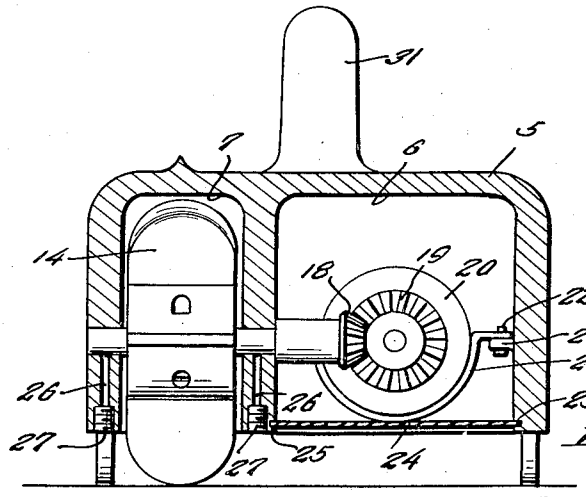



Fig. 3.

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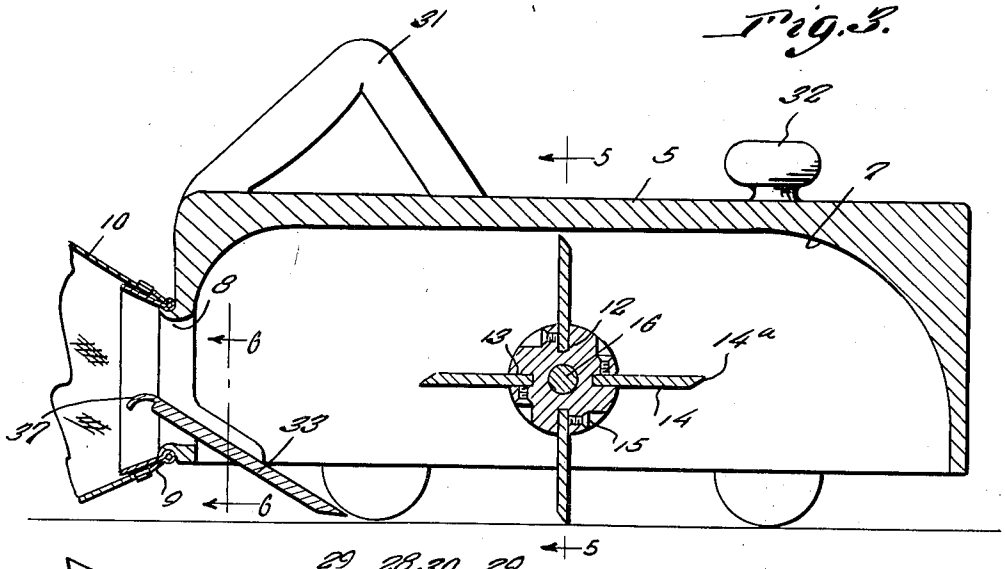
Attorneys

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CHANNELING MACHINE

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Fig. 5.



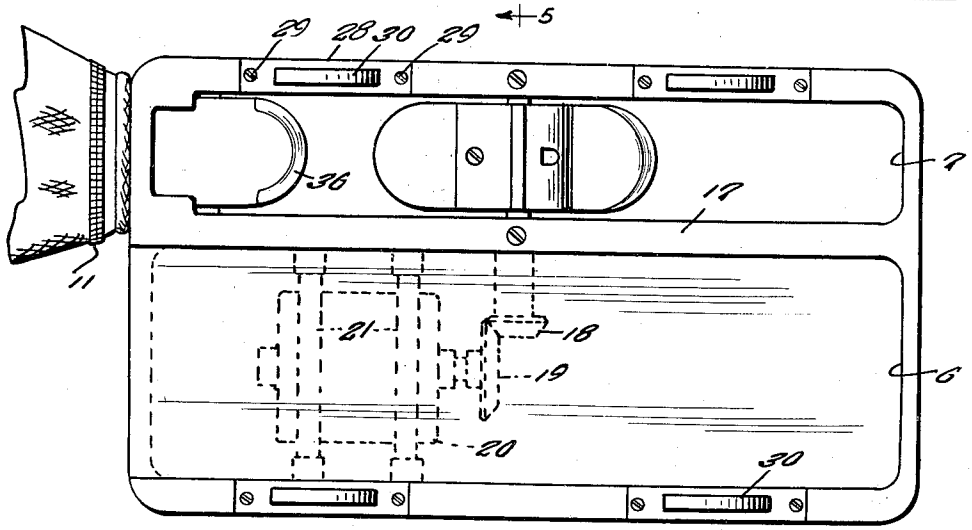




Fig. 4.

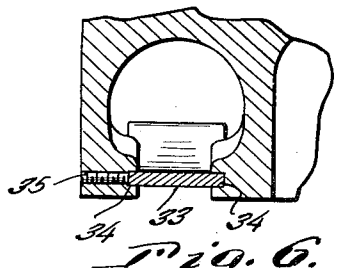



Fig. 6.

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# UNITED STATES PATENT OFFICE

2,069,923

## CHANNELING MACHINE

Eric E. Olson, New York, N. Y.

Application June 27, 1936, Serial No. 87,795

5 Claims. (Cl. 262—20)

This invention relates to machines or devices for channeling work and more particularly for channeling concrete structures, building units and the like.

An object of the present invention is to provide a hand machine of the character above mentioned that will be found especially useful in channeling building units for the laying of electrical cables, and the like.

The present invention involves certain new and useful improvements over that type of channeling machine shown, described and claimed in my co-pending application Serial No. 68,945, filed March 14, 1936, and entitled "Channeling machine".

The present invention together with its objects and advantages will be best understood from a study of the following description taken in connection with the accompanying drawings:—

Figure 1 is a side elevational view of the channeling machine.

Figure 2 is a top plan view thereof.

Figure 3 is a longitudinal sectional view through the machine.

Figure 4 is a bottom plan view of the machine.

Figures 5 and 6 are detail sectional views taken substantially on the lines 5—5 and 6—6 respectively of Figure 3.

Referring to the drawings by reference numerals it will be seen that in the preferred embodiment thereof the channeling machine, which is of the hand type, comprises a casing 5 of suitable shape and dimension and preferably formed from a single casting to provide a relatively wide compartment 6 and a relatively narrow compartment 7, the compartments as clearly shown in Figure 4 running for substantially the full length of the casing and opening through the bottom of the latter. At one end of the hood or casing 5 there is provided for the compartment 7 a discharge neck 8 to which is detachably secured in any suitable manner a mouth section 9 of a bag 10 provided for the collection of the dust and cuttings resulting from the channeling operation. In this connection it will be noted that the bag 10 is connected with its mouth extension 9 in a detachable manner preferably through the medium of a slide or separable fastener 11 of a well-known construction and now commonly referred to in the art as a "zipper" fastener. By reason of such a construction it will be seen that the bag 10 may be readily removed for emptying the contents thereof and as quickly attached to the device, as found desirable.

Arranged within the chamber or compartment 7 is a cutting or channeling wheel which consists of a hub member 12 having radial slots 13 which receive the butt ends of blades 14 secured to the hub through the medium of set screws 15 in a manner clearly shown in Figure 3.

The hub 9 of the channeling wheel is fixedly secured to a shaft 16 that extends transversely of the chamber or compartment 7 and has its respective opposite ends suitably journaled in an outer side wall of the hood or casing 5 and the partition wall 17 common to the chambers 6 and 7.

One end of the shaft 16 extends into the compartment 6 and secured to said end of the shaft 16 is a bevel gear 18 which is in constant mesh with a bevel gear 19 on the armature shaft of an electric motor 20.

The electric motor 20 is suspended within the chamber 6 through the medium of saddle straps or brackets 21 which at their respective ends are bolted or otherwise secured as at 22 to lugs or the like 23 provided on the opposite walls of the chamber 6.

From the above it will be seen that drive will be transmitted from the motor 20 through the gearing 19, 18 to the shaft 16 for revolving the cutting or channeling wheel, and obviously as the wheel revolves the working edges of the blades will cut into the work for cutting a channel or groove into the work.

To protect the motor 20 and the gearing there is provided for the bottom open side of the chamber or compartment 6 a broad flat closure plate 24 the edges of which are slidably received in grooves 25 provided therefor in the opposed walls of the compartment 6 so that the cover plate 24 may be readily slid into and out of position as will be clear from a study of Figure 5.

For lubricating purposes there are provided in the lower edges of the walls in which the ends of shaft 15 are journaled grease sockets 26 provided with closure plugs 27 as also clearly shown in Figure 5.

The outer side walls of the hood or casing 5 are notched and removably secured within the notches are frames or housings 28 secured through the medium of screws 29 as shown in Figures 1 and 4.

Skids 30 have a working fit within the casings or housings 28 and the skids are normally urged outwardly and into engagement with the surface of the work. Outward or downward movement of the skids 30 is suitably limited so that as thought to be apparent the skids 30 support the hood 5 above the work and at the same time will permit the tool to be easily slid along the work during the cutting or channeling operation.

By pressing downwardly on the tool the hood 5 and associated parts will move downwardly relative to the skids 30 and in this way the cutting depth of the blades 14 may be regulated at will and in accordance with the hand pressure on the tool.

To facilitate the handling of the tool there is provided on the top of the hood 5 adjacent one end thereof a longitudinally disposed hand grip

31, and at a relatively opposite end thereof a hand grip post or knob 32. (See Figures 1 and 2.)

The invention as above described is substantially the same as that shown, described and claimed in my co-pending application herein referred to; with the exception that the structure as herein described is characterized by having the slide plate 24 flat throughout its entire width; while the handle member 31 is of a different shape from the handle member shown in the co-pending application; and further the present invention as hereinabove described materially differentiates from the invention as set out in the aforementioned co-pending application by the provision of the bag 10 having the separable mouth 9 detachably connected with the body of the bag 10 through the medium of the separable fastener 11.

Further, the present invention defines over that shown and described in my co-pending application in that in the present invention the working or cutting edges 14a of the blades 14 are rounded as clearly shown in Figure 3 as distinguished from the pointed working ends of the blades forming part of the structure set out in the co-pending application. Thus with blades such as shown in 14 of this application a channel substantially semi-cylindrical in cross section may be and is provided.

Further the present invention distinguishes over that illustrated, described and claimed in my co-pending application in the provision of an adjustable and inclined chute 33 disposed, as clearly shown in Figures 3 and 4, in operative position to the outlet neck 8 and having opposite side edges working in channels or guide grooves 34 provided therefor at opposite sides of the neck 8 and disposed at an incline. For securing the chute 33 at the desired adjustment there is provided a set screw 35 as clearly shown in Figure 6. At its lower end the chute 33 is bevelled to a knife edge which edge is also rounded and indicated at 36. At its upper end the chute 33 is provided with a curved lip 37 which projects laterally beyond opposite edges of the chute 33 to engage the neck 8 in a manner to limit downward movement of the chute 33 incidental to a proper adjustment of the chute. The chute 33, as is thought apparent, will serve to direct the dust and cuttings through the neck 8 and into the bag 10.

In actual practice it will be found that the structure embodying the subject matter of the present application will have certain features of advantage over the structure forming the subject matter of my co-pending application.

It is thought that the utility and advantages of an invention of this character will be had without a more detailed description.

Having thus described the invention what is claimed as new is:—

1. A channeling tool of the character described comprising a hollow hood having its open side facing downwardly, said hood being provided with a longitudinal partition dividing the hood into two chambers, one of said chambers having an outlet neck at one end thereof, and a flexible bag having separable body and neck sections, said neck section being sleeved on said outlet and detachable fastener means connecting said neck section with the body section of the bag; a channeling device rotatably mounted within said one compartment, and a power device for said channeling device mounted in the other of said compartments and having driving connection with said channeling device.

2. A channeling tool of the character described comprising a hollow hood having its open side facing downwardly, said hood being provided with a longitudinal partition dividing the hood into two chambers, one of said chambers having an outlet neck at one end thereof, and a flexible bag having separable body and neck sections, said neck section being sleeved on said outlet and detachable fastener means connecting said neck section with the body section of the bag; a channeling device rotatably mounted within said one compartment, and a power device for said channeling device mounted in the other of said compartments and having driving connection with said channeling device, and an inclined chute mounted in the first named compartment in operative position to said outlet neck.

3. A channeling tool of the character described comprising a hollow hood having its open side facing downwardly, said hood being provided with a longitudinal partition dividing the hood into two chambers, one of said chambers having an outlet neck at one end thereof, and a flexible bag having separable body and neck sections, said neck section being sleeved on said outlet and detachable fastener means connecting said neck section with the body section of the bag; a channeling device rotatably mounted within said one compartment, and a power device for said channeling device mounted in the other of said compartments and having driving connection with said channeling device, and an inclined chute mounted in the first named compartment in operative position to said outlet neck, and means for supporting said inclined chute at the desired adjustment including means for slidably supporting the chute and for securing the chute at the desired adjustment.

4. A channeling tool of the character described comprising a hollow hood having an open side facing downwardly, skids resiliently supporting the hood, said hook interiorly being provided with a pair of chambers one of which is provided at one end with an outlet neck, a channeling wheel rotatably mounted in said one chamber, driving means for the channeling wheel mounted in the other of said chambers, a bag having a detachable neck section sleeved on said outlet neck, and separable fastening means detachably connecting the bag with said detachable neck section.

5. A channeling tool of the character described comprising a hollow hood having an open side facing downwardly, skids resiliently supporting the hood, said hook interiorly being provided with a pair of chambers one of which is provided at one end with an outlet neck, a channeling wheel rotatably mounted in said one chamber, driving means for the channeling wheel mounted in the other of said chambers, a bag having a detachable neck section sleeved on said outlet neck, and separable fastening means detachably connecting the bag with said detachable neck section, and chute means mounted in the first mentioned compartment at said one end thereof for directing the cutting and dust through the outlet neck and into said bag.

ERIC E. OLSON.