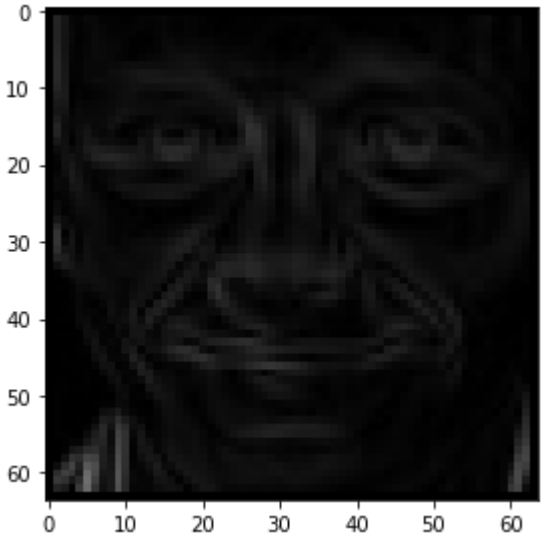
In [53]:
```
#practical-9 AdaBoost
#By Shubham S Kale
import numpy as np
from sklearn.model_selection import train_test_split
from sklearn.preprocessing import StandardScaler
from sklearn.ensemble import AdaBoostClassifier
```

In [54]:
```
from numpy.random import RandomState
from sklearn.datasets import fetch_olivetti_faces
rng = RandomState(0)
dataset = fetch_olivetti_faces(shuffle=True, random_state=rng)
X = dataset.data
X = StandardScaler().fit_transform(X)
faces=dataset.images
y=dataset.target
n_samples, n_features = X.shape
print("Dataset consists of %d faces" % n_samples)
```

```
Dataset consists of 400 faces
```

In [55]:
```
from skimage import data, io, filters
n=300
edges = filters.sobel(faces[n])
io.imshow(edges)
io.show()
print(y[n])
```




```
20
```

In [58]:
```
X_train,X_test,y_train,y_test=cross_validation.train_test_split(X,y,test_size=
0.2)
clf = AdaBoostClassifier()
clf.fit(X_train, y_train)
accuracy=clf.score(X_test,y_test)
print (accuracy*100),"%"
```

```
13.75 %
```

In [ ]:
```

```