Cody Problem 45. Make a Palindrome Number

Some numbers like 323 are palindromes. Other numbers like 124 are not. But look what happens when we add that number to a reversed copy of itself.

```
%   124
% + 421
%  ----
%   545
```

Let's try another.

```
%   150
% + 051
%  ----
%   201
```

No, that didn't work, but what if we keep going?

```
%   201
% + 102
%  ----
%   303
```

There, it became a palindrome again. Given a, return b = find_palindrome(a) such that b is the palindrome number that eventually results from repeated reversals and additions of a.

Example:

```
% Input  a = 150
% Output b is 303
```

Scratch Pad

```
a = 124;

b = find_palindrome(a)
```

```
b = 545
```

```


a = 150;

b = find_palindrome(a)
```

```
b = 303
```

Solution

```
function b = find_palindrome(a)
```

```
    b = a;
    while ~isequal(num2str(b), fliplr(num2str(b)))
        b = b + str2double(fliplr(num2str(b)));
    end
end
```